

88 CHARACTER TYPE STYLES

"Selectric", "Selectric" II, Correcting "Selectric" II*, Mag Card II, Mag Card/A, Mag Card "Selectric" Typewriters, Memory Typewriters, Audio Typing Unit and MT/ST. (*To be discontinued April 6, 1981.)*

Correspondence and General Typing Applications, Photographic and Offset Masters

Only the type codes compatible with the 101, 002, 016, and 022 Keyboards can be specified with "Selectric" Typewriter, Model 721 orders. A complete list of these type codes is shown with those keyboard layouts in Chapter 4.

Adjutant

12 Pitch, 9 Point

Type Codes: 129, 030, 031

27 tooth ratchet

6 lines per inch

IBM "Selectric" Typewriters provide a wide variety of typing applications, using interchangeable typing elements. These elements are also compatible with

ABCDEFGHIJKLMNOPQRSTUVWXYZ [@\$%&*()_+°:",".?
 abcdefghijklmnopqrstuvwxyz]234567890-=_½;','./

Advocate

10 Pitch, 12 Point

Type Codes: 130, 003, 036, 050

27 tooth ratchet

6 lines per inch

Recommended for typing stencils

IBM "Selectric" Typewriters provide a wide variety of typing applications, using interchangeable typing elements. These elements

ABCDEFGHIJKLMNOPQRSTUVWXYZ ±@#%&*()_+¼:",".?
 abcdefghijklmnopqrstuvwxyz 1234567890-=_½;','./

AN3/360 Bold

10 Pitch, 8 & 6 Point

Type Code: 084

27 tooth ratchet

6 lines per inch

Cannot be specified on "Selectric" Typewriter Model 721 orders.

IBM SELECTRIC TYPEWRITERS PROVIDE A WIDE VARIETY OF TYPING APPLICATIONS, USING INTERCHANGEABLE TYPING ELEMENTS. THESE

ABCDEFGHIJKLMNOPQRSTUVWXYZ ±@#%&*()_+>:°",".?
 ABCDEFGHIJKLMNOPQRSTUVWXYZ 1234567890-=<;','./

AN3/360

10 Pitch, 8 & 6 Point

Type Code: 105

27 tooth ratchet

6 lines per inch

Cannot be specified on "Selectric" Typewriter Model 721 orders.

IBM SELECTRIC TYPEWRITERS PROVIDE A WIDE VARIETY OF TYPING APPLICATIONS, USING INTERCHANGEABLE TYPING ELEMENTS. THESE

ABCDEFGHIJKLMNOPQRSTUVWXYZ ±@#%&*()_+>:°",".?
 ABCDEFGHIJKLMNOPQRSTUVWXYZ 1234567890-=<;','./

Artisan 12-72*

12 Pitch, 10 Point

Type Codes: 131, 053, 055, 062

27 tooth ratchet

6 lines per inch

IBM "Selectric" Typewriters provide a wide variety of typing applications, using interchangeable typing elements. These elements are also compatible with

ABCDEFGHIJKLMNOPQRSTUVWXYZ ±@#%&*()_+¼:",".?
 abcdefghijklmnopqrstuvwxyz 1234567890-=_½;','./

Auto Elite

12 Pitch, 12 Point

Type Code: 208

27 tooth ratchet

6 lines per inch

IBM "Selectric" Typewriters provide a wide variety of typing applications, using interchangeable typing elements. These elements are also compatible with

ABCDEFGHIJKLMNOPQRSTUVWXYZ !@#%&*()_+¼:",".?
 abcdefghijklmnopqrstuvwxyz 1234567890-=_½;','./

Because of inherent differences between printed and typewritten impressions, these type styles are not representative of typewritten material and should be used as a guide to type design only.

*Primary Type Style - should be recommended to customers who wish to standardize on one type style, due to high probability that this type style will continue to be available in future.

88 Character Type Styles (cont'd)**Bookface Academic 72***

10 Pitch, 10 Point

Type Codes: 158, 174

27 tooth ratchet 6 lines per inch

IBM "Selectric" Typewriters provide a wide variety of typing applications, using interchangeable typing elements. These elements

ABCDEFGHIJKLMNOPQRSTUVWXYZ !@#%&*()_+½:",".?
 abcdefghijklmnopqrstuvwxyz 1234567890-½;','./

Courier 12*

12 Pitch, 8 Point

Type Codes: 132, 067, 068, 200

27 tooth ratchet

6 lines per inch

IBM "Selectric" Typewriters provide a wide variety of typing applications, using interchangeable typing elements. These elements are also compatible with

ABCDEFGHIJKLMNOPQRSTUVWXYZ !@#%&*()_+½:",".?
 abcdefghijklmnopqrstuvwxyz 1234567890-½;','./

Courier 12 Italic

12 Pitch, 8 Point

Type Codes: 133, 085, 086

27 tooth ratchet

6 lines per inch

IBM "Selectric" Typewriters provide a wide variety of typing applications, using interchangeable typing elements. These elements are also compatible with

ABCDEFGHIJKLMNOPQRSTUVWXYZ !@#%&()_+½:",".?
 abcdefghijklmnopqrstuvwxyz 1234567890-½;','./*

Courier 72*

10 Pitch, 10 Point

Type Codes: 134, 015, 029, 040, 043,

051, 052, 112, 113, 177, 178, 244

27 tooth ratchet

6 lines per inch

IBM "Selectric" Typewriters provide a wide variety of typing applications, using interchangeable typing elements. These elements

ABCDEFGHIJKLMNOPQRSTUVWXYZ !@#%&*()_+½:",".?
 abcdefghijklmnopqrstuvwxyz 1234567890-½;','./

Data 1

10 Pitch, 12 Point

Type Code: 527

27 tooth ratchet 6 lines per inch

Although not an exact match it functions satisfactorily with the 101 keyboard.

Cannot be specified on "Selectric" Typewriter Model 721 orders.

IBM "Selectric" Typewriters provide a wide variety of typing applications, using interchangeable typing elements. These elements

ABCDEFGHIJKLMNOPQRSTUVWXYZ =<;:%'>*()_+ç!"|~?
 abcdefghijklmnopqrstuvwxyz 1234567890-½;','./

Delegate

10 Pitch, 12 Point

Type Codes: 135, 002, 035, 070, 093

27 tooth ratchet

6 lines per inch

IBM "Selectric" Typewriters provide a wide variety of typing applications, using interchangeable typing elements. These elements

ABCDEFGHIJKLMNOPQRSTUVWXYZ ±@#%&*()_+½:",".?
 abcdefghijklmnopqrstuvwxyz 1234567890-½;','./

*Primary Type Style — should be recommended to customers who wish to standardize on one type style, due to high probability that this type style will continue to be available in future.

88 Character Type Styles (cont'd)

Dual Gothic*
 12 Pitch, 10 Point
 Type Codes: 136, 020, 021

27 tooth ratchet
 6 lines per inch

IBM "Selectric" Typewriters provide a wide variety of typing applications, using interchangeable typing elements. These elements are also compatible with

ABCDEFGHIJKLMNOPQRSTUVWXYZ [@# \$% & * () _ + ° : " , . ?
 abcdefghijklmnopqrstuvwxyz] 234567890 - = ! ; ' , . /

Elite 72*
 12 Pitch, 10 Point
 Type Codes: 137, 007, 026, 069, 074

27 tooth ratchet
 6 lines per inch

Recommended for typing stencils.

IBM "Selectric" Typewriters provide a wide variety of typing applications, using interchangeable typing elements. These elements are also compatible with

ABCDEFGHIJKLMNOPQRSTUVWXYZ ! @# \$% & * () _ + ¼ : " , . ?
 abcdefghijklmnopqrstuvwxyz 1234567890 - = ½ ; ' , . /

Large Elite 72*
 12 Pitch, 10 Point
 Type Code: 161

27 tooth ratchet
 6 lines per inch

Recommended for typing stencils.

IBM "Selectric" Typewriters provide a wide variety of typing applications, using interchangeable typing elements. These elements are also compatible with

ABCDEFGHIJKLMNOPQRSTUVWXYZ ! @# \$% & * () _ + ½ : " , . ?
 abcdefghijklmnopqrstuvwxyz 1234567890 - = ¾ ; ' , . /

Letter Gothic
 12 Pitch, 12 Point
 Type Codes: 138, 005, 039, 063

27 tooth ratchet
 6 lines per inch

IBM "Selectric" Typewriters provide a wide variety of typing applications, using interchangeable typing elements. These elements are also compatible with

ABCDEFGHIJKLMNOPQRSTUVWXYZ [@# \$% & * () _ + ° : " , . ?
 abcdefghijklmnopqrstuvwxyz] 234567890 - = ! ; ' , . /

Light Italic
 12 Pitch, 10 Point
 Type Codes: 139, 014, 032

27 tooth ratchet
 6 lines per inch

Recommended for typing stencils.

IBM "Selectric" Typewriters provide a wide variety of typing applications, using interchangeable typing elements. These elements are also compatible with

*ABCDEFGHIJKLMNOPQRSTUVWXYZ ! @# \$% & * () _ + ¼ : " , . ?
 abcdefghijklmnopqrstuvwxyz 1234567890 - = ½ ; ' , . /*

Manifold 72*
 10 Pitch, 10 Point
 Type Codes: 140, 006, 010, 019, 028, 087

27 tooth ratchet
 6 lines per inch

Recommended for typing stencils.

IBM "SELECTRIC" TYPEWRITERS PROVIDE A WIDE VARIETY OF TYPING APPLICATIONS, USING INTERCHANGEABLE TYPING ELEMENTS. THESE ELEMENTS

ABCDEFGHIJKLMNOPQRSTUVWXYZ ± @# \$% & * () _ + ° : " , . ?
 ABCDEFGHIJKLMNOPQRSTUVWXYZ 1234567890 - = ! ; ' , . /

*Primary Type Style -- should be recommended to customers who wish to standardize on one type style due to high probability that this type style will continue to be available in future.

88 Character Type Styles (cont'd)**Olde World**

12 Pitch, 11 Point
54 Tooth Ratchet
6 Lines Per Inch
Type Code 67250

IBM SELECTRIC TYPEWRITERS provide a wide variety of typing applications, using interchangeable typing elements.

ABCDEFGHIJKLMN OPQRSTUVWXYZ I@#%&*()_+¼:"',.?
abcdefghijklmnopqrstuvwxyz 1234567890-½;';',./

Orator

10 Pitch, 14 & 8 Point
Type Codes: 141, 059, 060

27 tooth ratchet
6 lines per inch

Recommended for typing original copy only; should be used with a 24-tooth ratchet.

IBM "SELECTRIC" TYPEWRITERS PROVIDE A WIDE VARIETY OF TYPING APPLICATIONS, USING INTER-CHANGEABLE TYPING ELEMENTS. THESE ELEMENTS

ABCDEFGHIJKLMN OPQRSTUVWXYZ ±@#%&*()_+°:"',.?
ABCDEFGHIJKLMN OPQRSTUVWXYZ 1234567890-!;';',./

Orator L/A

10 Pitch, 14 Point
Type Code: 236; 245
Orator Presenter**

27 tooth ratchet 6 lines per inch
Recommended for use in
Language Arts Program

Recommended for typing original copy only.

IBM "Selectric" Typewriters provide a wide variety of typing applications, using interchangeable typing elements. These elements

ABCDEFGHIJKLMN OPQRSTUVWXYZ ±@#%&*()_~:"',.?
abcdefghijklmnopqrstuvwxyz 1234567890-~;';',./

Pica 72*

10 Pitch, 12 Point
Type Codes: 142, 008, 017, 027, 046, 048, 121

27 tooth ratchet
6 lines per inch

Recommended for typing stencils.

IBM "Selectric" Typewriters provide a wide variety of typing applications, using interchangeable typing elements. These elements

ABCDEFGHIJKLMN OPQRSTUVWXYZ [@#%&*()_+°:"',.?
abcdefghijklmnopqrstuvwxyz]234567890-!;';',./

Prestige Elite 72*

12 Pitch, 10 Point
Type Codes: 143, 012, 033, 041, 049, 057, 110, 111, 120, 169, 179, 180, 235

27 tooth ratchet
6 lines per inch

IBM "Selectric" Typewriters provide a wide variety of typing applications, using interchangeable typing elements. These elements are also compatible with

ABCDEFGHIJKLMN OPQRSTUVWXYZ [@#%&*()_+°:"',.?
abcdefghijklmnopqrstuvwxyz]234567890-!;';',./

Prestige Pica 72*

10 Pitch, 12 Point
Type Codes: 123, 172, 181, 182, 198
27 tooth ratchet 6 lines per inch

Note: Customer Engineering modifications to "Selectric" Typewriters manufactured prior to September 1, 1972 and Magnetic Keyboard Typewriters must be made in order to accept elements with this type style.

IBM "Selectric" Typewriters provide a wide variety of typing applications, using interchangeable typing elements. These elements

ABCDEFGHIJKLMN OPQRSTUVWXYZ I@#%&*()_+½:"',.?
abcdefghijklmnopqrstuvwxyz 1234567890-½;';',./

*Primary Type Style should be recommended to customers who wish to standardize on one type style due to high probability that this type style will continue to be available in future.

** Position 19 is upper case ½; lower case 6; Position 41 is upper case 1; lower case 0.

88 Character Type Styles (cont'd)**Scribe**

12 Pitch, 10 Point

Type Codes: 144, 001, 018, 025

27 tooth ratchet

6 lines per inch

Recommended for typing stencils.

IBM "Selectric" Typewriters provide a wide variety of typing applications, using interchangeable typing elements. These elements are also compatible with

ABCDEFGHIJKLMNOPQRSTUVWXYZ !@#%&'()*+,-./:;<=>?@
 abcdefghijklmnopqrstuvwxyz 1234567890-='&';',./

Script

12 Pitch, 12 Point

Type Codes: 145, 034, 042, 090

27 tooth ratchet

6 lines per inch

IBM "Selectric" Typewriters provide a wide variety of typing applications, using interchangeable typing elements. These elements are also compatible with

ABCDEFGHIJKLMNOPQRSTUVWXYZ !@#%&'()*+,-./:;<=>?@
 abcdefghijklmnopqrstuvwxyz 1234567890-='&';',./

**Comparison Of Courier 72
 Type Style On 10 Pitch And 12
 Pitch**

Courier 72 (10 Pitch)

This is an example of the 10 pitch Courier 72 type style, illustrating how it appears when typing in 10 pitch, and how it would appear when typed on a unit set for 12 pitch.

Courier 72 (12 Pitch)

This is an example of the 10 pitch Courier 72 type style, illustrating how it appears when typing in 10 pitch, and how it would appear when typed on a unit set for 12 pitch.

**Comparison Of Prestige Elite
 Type Style On 10 Pitch And 12
 Pitch**

Prestige Elite (12 Pitch)

This is an example of the 12 pitch Prestige Elite 72 type style, illustrating how it appears when typed in 12 pitch and how it would appear when typed on a unit set for 10 pitch.

Prestige Elite (10 Pitch)

This is an example of the 12 pitch Prestige Elite 72 type style, illustrating how it appears when typed in 12 pitch and how it would appear when typed on a unit set for 10 pitch.

OCR

Cannot be specified on "Selectric" Typewriter Model 721 orders, except for as noted.

88 Character Type Styles (cont'd)

ANSI-OCR - A

10 Pitch, 10 Point

Type Codes: 170, 056, 091, 108, 160, 229

27 tooth ratchet

6 lines per inch

The Dual Pitch "Selectric" II Typewriter is the optimum for typing stations totally dedicated to OCR applications. The Dual

ABCDEFGHIJKLMN OPQRSTUVWXYZ 1234567890-=:;'. /

OCR-B

10 Pitch, 10 Point

Type Codes: 185, 210, 211, 215, 224, 228, 232

27 tooth ratchet

6 lines per inch

THE DUAL PITCH "SELECTRIC" II TYPEWRITER IS THE OPTIMUM FOR TYPING STATIONS TOTALLY DEDICATED TO OCR APPLICATIONS. THE DUAL

A, < [> G A E B R E M N O P Q] S ^ U ^ \ X Y Z ! @ # \$ % | & * () - + = : " ' , . /

Dataflow #2

10 Pitch, 10 Point

Type Code: 659

27 tooth ratchet

6 lines per inch

The Dual Pitch 'Selectric' Typewriter is the optimum for typing stations totally dedicated to OCR applications.

ABCDEFGHIJKLMN OPQRSTUVWXYZ > < # \$ % & * () - + = : ; ' , . /

915 OCR

10 Pitch, 10 Point

Type Codes: 065, 092, 106, 122

27 tooth ratchet

6 lines per inch

THE DUAL PITCH SELECTRIC II TYPEWRITER IS THE OPTIMUM FOR TYPING STATIONS TOTALLY DEDICATED TO OCR APPLICATIONS. THE DUAL

ABCDEFGHIJKLMN OPQRSTUVWXYZ 1234567890-=:;'. /

12L2/12F2

10 Pitch, 10 Point

Type Code: 023

27 tooth ratchet

6 lines per inch

THE DUAL PITCH "SELECTRIC" II TYPEWRITER IS OPTIMUM FOR TYPING STATIONS TOTALLY DEDICATED TO OCR APPLICATIONS. THE DUAL PITCH CORRECT

ABCDEFGHIJKLMN OPQRSTUVWXYZ * @ # () % & - 0 \$ " + ' : ; 8 9 7

1403 OCR

10 Pitch, 10 Point

Type Codes: 022, 064

Type Code 022 also available for "Selectric" Typewriter Model 721.

27 tooth ratchet

6 lines per inch

THE DUAL PITCH "SELECTRIC" II TYPEWRITER IS THE OPTIMUM FOR TYPING STATIONS TOTALLY DEDICATED TO OCR APPLICATIONS. THE DUAL

ABCDEFGHIJKLMN OPQRSTUVWXYZ * @ # \$ % & () _ = # : " ' , . /

88 Character Type Styles (cont'd)

1428 OCR

10 Pitch, 10 Point

Type Codes: 016

Type Code 016 also available for "Selectric" Typewriter Model 721.

27 tooth ratchet

6 lines per inch

THE DUAL PITCH SELECTRIC II TYPEWRITER IS THE OPTIMUM FOR TYPING STATIONS TOTALLY DEDICATED TO OCR APPLICATIONS. THE DUAL

245670300000100000 000000,-0000x+#89/ ABCDEFGHIJKLMNOPQRSTUVWXYZ 1234567890-=-x+#,./

Printing & Publishing No. 1 OCR (ANSI-OCR-A)

10 Pitch, 10 Point

Type Code: 170

27 tooth ratchet

6 lines per inch

The Dual Pitch "Selectric" II Typewriter is the optimum for typing stations totally dedicated to OCR applications. The Dual

ABCDEFGHIJKLMN0PQRSTUVWXYZ 4567890-=-x+#,./ abcdefghijklmnopqrstuvwxyz 1234567890-=-x+#,./

Printing & Publishing No. 2 OCR

10 Pitch, 10 Point

Type Code: 157

27 tooth ratchet

6 lines per inch

The Dual Pitch SELECTRIC II Typewriter is the optimum for typing stations totally dedicated to OCR applications. The Dual

ABCDEFGHIJKLMN0PQRSTUVWXYZ !@#\$%&*()-}Δ:+,.,? abcdefghijklmnopqrstuvwxyz 1234567890-{-;=,./

Printing & Publishing No. 2 OCR (Modified)

10 Pitch, 10 Point

Type Code: 199

27 tooth ratchet

6 lines per inch

The Dual Pitch SELECTRIC II Typewriter is the optimum for typing stations totally dedicated to OCR applications. The Dual

ABCDEFGHIJKLMN0PQRSTUVWXYZ !@#\$%&*()-}Δ:+,.,? abcdefghijklmnopqrstuvwxyz 1234567890-{-;=,./

Printing & Publishing No. 3 OCR

10 Pitch, 8 Point

Type Code: 173

27 tooth ratchet

6 lines per inch

The dual pitch "Selectric" II typewriter is the optimum for typing stations totally dedicated to OCR applications. The dual

ABCDEFGHIJKLMN0PQRSTUVWXYZ !@#\$%&*()Δ+[:",.,? abcdefghijklmnopqrstuvwxyz 1234567890-=-];',./

Symbol

Symbol 12

12 Pitch, 10 Point

Type Code: 004

27 tooth ratchet

6 lines per inch

V ∞ Ψ φ ← < Λ Π ↑ > § Ω θ ~ † ℓ Γ Θ Σ → Ξ α Δ ≡ T ≈ α β ψ φ ε (λ η ι j κ ω μ ν ο ρ γ θ σ τ ξ × δ χ υ ζ √ | { } ± ∇ f () j - j Π ^ • ~ † f 1 2 3 4 5 6 7 8 9 0 = L π ∴ ÷ ∼ 1

Symbol 10

10 Pitch, 12 Point

Type Code: 061

27 tooth ratchet

6 lines per inch

V ∞ Ψ φ ← < Λ Π ↑ > § Ω θ ~ † ℓ Γ Θ Σ → Ξ α Δ ≡ T ≈ α β ψ φ ε (λ η ι j κ ω μ ν ο ρ γ θ σ τ ξ × δ χ υ ζ √ | { } ± ∇ f () j - j Π ^ • ~ † f 1 2 3 4 5 6 7 8 9 0 = L π ∴ ÷ ∼ 1

88 Character Type Styles (cont'd)

Symbol II

12 Pitch, Variable Point Size
 Type Code: 243
 27 Tooth Ratchet
 6 lines per inch

• ◦ (● ≤ ‡ ▲ / | ▼ ~ % ★ < † ¶ | ■ √ ♀ | ® [¶
 ✓ ◦) ○ ≥ † △ R ‖ ▽ ~ () ☆ > , ¶ || □ ♂ | ©] §
 £ ² ³ ™ ◆ … - \ ¡ — — — — — — — — — — —
 μ ℓ ° X ◊ .. — | + ÷ — — — — — — — — — — —

END

88 AND 96 CHARACTER CUSTOM ELEMENTS

88 CHARACTER CUSTOM ELEMENTS

The 88 Character Custom Element program is offered in nine type styles – Prestige Elite 72, Courier 72, Elite 72, Pica 72, ANSI OCR, Data No. 1, Delegate, Letter Gothic, and Manifold. Refer to "Selectric" Typewriter Keyboards by Type Style for the type codes offered under this program.

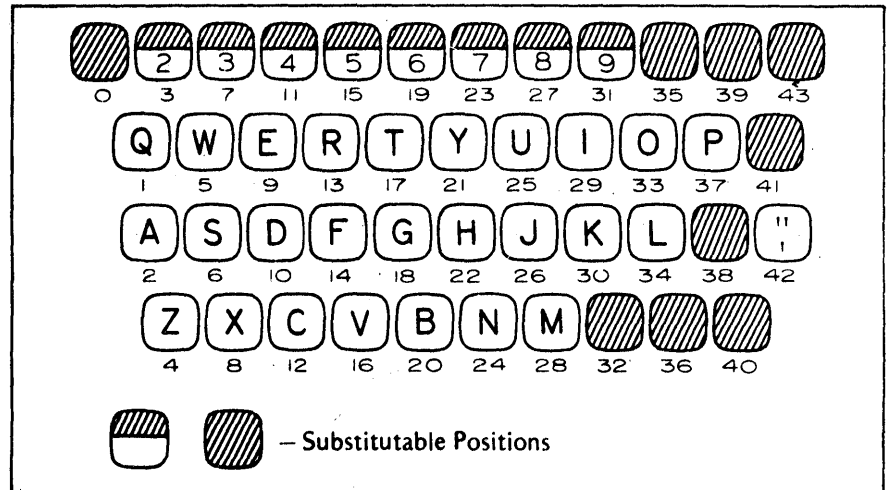
Character changes are possible in 26 locations. Special characters available, and the locations in which they can be substituted are illustrated below.

Keyboard Locations (88 Character Custom Elements)

To maintain print quality, physical character size and keyboard velocity must be taken into account when making character substitutions on the type elements. The following guide must be used in determining the keyboard positions available for each substitution.

Guide Number	Keyboard Locations
1	UC & LC 0; UC 3, 7, 11, 15, 19, 23, 27, 31; UC & LC 35
2	UC & LC 40, 43
3	UC & LC 41
4	UC & LC 32, 38 & 39
5	UC & LC 36

Custom Character Positions



Refer to appropriate keyboard layout in Chapter 4 for the characters which will be replaced by the custom characters. More than one of the guide numbers may apply to an individual symbol.

96 CHARACTER CUSTOM ELEMENTS

The 96 Character Custom Element program is offered in ten type styles - Arcadia, Boldface, Courier 10, Courier 12, Elite, Letter Gothic, Modern, Pica, Prestige Elite, and Prestige Pica. Refer to Type Styles:Keyboards, Chapter 18, for the type codes offered under this program.

Character changes are possible in twenty-seven keyboard locations.

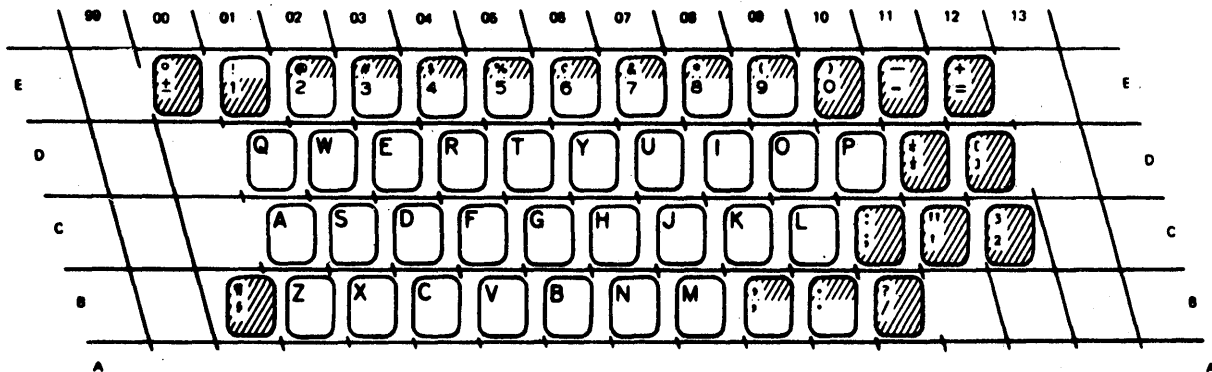
88 and 96 Character Custom Elements (cont'd)

Keyboard Locations (96 Character Custom Elements)

To maintain print quality, physical character size and keyboard velocity must be taken into account when making character substitutions on the type elements. The following guide must be used in determining the keyboard positions available for each substitution.

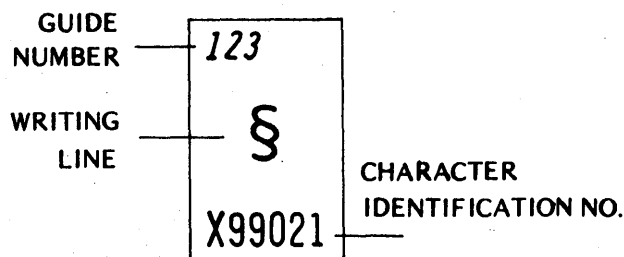
Guide Number	Keyboard Locations
1	UC E02, UC E03, UC E04, UC E05, UC E06, UC E07, UC E08, UC E09, UC&LC E10, UC&LC B10
2	UC E06, UC E08, UC E09, UC E10, UC&LC B10
3	UC&LC D12, LC E01
4	UC&LC C11, UC&LC C10, UC&LC D12, UC&LC E11, LC E01, UC B08, UC B09
5	LC E00, UC&LC D11
6	UC&LC E00
7	UC&LC E11, LC E01, UC&LC D12, UC B08, UC B09
8	UC B08
9	UC&LC C12
0	UC&LC B00, UC&LC E12

Custom Character Positions (96 Character Custom Elements)



Refer to the American Standard Keyboard in Chapter 19 for the characters which will be replaced by the custom characters. More than one of the guide number may apply to an individual symbol.

CUSTOM CHARACTER IDENTIFICATION (88 AND 96 CHARACTER)



ADDITIONAL SYMBOLS

Any additional symbols, keyboard locations, element part numbers or type styles other than those shown in this manual must be ordered on a SER basis.

LOCK-ON CAPS

Lock-on caps available only on primary element.

88 and 96 Character Custom Elements (cont'd)

Special Character Nomenclature

This list of characters and their most common description is intended as an aid to describing and ordering special symbols. It does not imply that the characters are available. Refer to this chapter for symbols available for each typestyle.

Typographical

- . period
- , comma
- : colon
- ; semi-colon
- dash
- _ underscore
- = double underscore
- ? question mark
- ! exclamation
- (left parenthesis
-) right parenthesis
- [left bracket
-] right bracket
- † dagger
- ‡ double dagger
- § section
- ¶ paragraph
- ' apostrophe
- " quotation
- & ampersand
- * asterisk
- ~ tilde
- ˆ circumflex
- ˉ macron
- ˘ breve
- ¨ dieresis
- ˘ cedilla
- ´ acute
- ˘ grave
- | vertical line
- through score

Language

- ¡ inverted exclamation
- ¿ inverted question
- Ñ n ya
- Æ ligature U.C.
- æ ligature L.C.
- Å angstrom
- Ä umlaut A
- Ö umlaut O
- Ü umlaut U

Currency

- \$ dollar
- ¢ cent
- £ pound sterling
- ¥ yen

Technical

- + plus
- x multiplication
- ÷ division
- = equals
- > greater than
- ≥ greater than or equal to
- < less than
- ≤ less than or equal to
- ∞ infinity
- √ radical
- ∫ integral
- π pi
- ° degree
- α alpha
- β beta
- Δ delta
- γ gamma
- multiplication
- ↑ arrow up
- ↓ arrow down
- ← arrow left
- arrow right
- ± plus or minus
- Ω ohm
- μ mu
- ∇ inverted delta
- ∅ cancelled zero
- 1 2 3 4 5 6 7 8 9 0
- Subscripts
- 1 2 3 4 5 6 7 8 9 0
- Exponents
- $\frac{1}{2}$ fraction
- $\frac{1}{2}$ fraction
- $\frac{1}{2}$ fraction
- ℒ script L — laplace

Legal

- Q, q period
- A, a period
- X plaintiff

OCR

- J hook
- Y fork
- h chair
- | vertical line
- minus
- blob

Miscellaneous

- @ commercial A
- # number
- % percent
- ® registry
- © copyright
- ™ trademark
- circle
- square
- ◆ diamond
- ♣ beaker
- ▲ triangle
- / slash
- ♀ female
- ♂ male
- n logical product
- u logical sum
- ⊂ contained in
- ⊃ excluded from
- ⊛ group mark
- ⊛ record mark
- ⊛ segment mark
- ◻ lozenge
- Ⓢ substituted
- \ reverse slant
- ¬ logical not
- ≡ identical with
- open box
- ℞ recipe

88 and 96 Character Custom Elements (cont'd)

88 Character Universal

Available for type codes 007, 008, 012, 015, 026, 027, 029, 033, 134, 135, 137, 138, 140, 142, 143, and 170.

123	23	23	123	23	23	23	123	123	23	23	123	123	23	123	123	1	23	123	123
↓	←	→	↑	●	⊙	⊗	†	‡	Δ	◆	+	>	∞	∫	<	|	ℓ	×	¶
X99001	X99002	X99003	X99004	X99005	X99006	X99007	X99008	X99009	X99010	X99011	X99012	X99013	X99014	X99015	X99016	X99017	X99018	X99019	X99020
123	23	23	23	23	123	2	123	12345	24	123	123	123	123	123	123	123	123	123	123
§	■	▲	Ω	α	β	μ	π	~	=	1	2	3	4	5	6	7	8	9	0
X99021	X99022	X99023	X99024	X99025	X99026	X99027	X99028	LC X99029	X99030	X99031	X99032	X99033	X99034	X99035	X99036	X99037	X99038	X99039	X99040
123	13	12345	12345	12345	12345	23	123	123	123	123	123	4	4	12345	123	123	23	23	12345
·	✓	˘	˙	˚	˛	∇	½	¼	¾	≥	≤	-	-	∩	∪	⊂	⊃	˜	-
X99041	X99042	LC X99043	LC X99044	LC X99045	LC X99046	X99047	X99048	X99049	X99050	X99051	X99052	X99053	UC X99054	UC X99055	X99056	X99057	X99058	X99059	UC X99060
12345	12345	12345	12345	4	12345	12345	123	123	23	123	123	123	123	123	123	123	123	123	123
-	-	-	-	-	-	-	¥	℥	©	1	2	3	4	5	6	7	8	9	0
UC X99061	UC X99062	LC X99063	LC X99064	X99065	UC X99066	UC X99067	X99068	X99069	X99070	X99071	X99072	X99073	X99074	X99075	X99076	X99077	X99078	X99079	X99080
3	3	3	23	23	3	123	123	23	23	23	3	3	123	123	123	23	23	123	3
™	♂	♀	≠	≠	≠	≠	∏	∖	♠	≡	℞	□	γ	1	1	●	♠	£	∴
X99081	X99082	X99083	X99084	X99085	X99086	X99087	X99088	X99089	X99090	X99091	X99092	X99093	X99094	X99095	X99096	X99007	X99098	X99102	X99103
123	24	23																	
~	~	©																	
X99104	X99105	X99106																	

88 Character ANSI-OCR

Available for type code 170.

45	45	45	45	123	4	123	123	123	45	3	123	123	123	123	123	123	123	123	123
.	:	˘	˙	'	ˆ	˚	{	}	-	-	¢	*	/	=	+	&	%	£	¤
X23063	X23064	X23065	X23066	X23067	X23079	X23068	X23076	X23077	X23069	X23091	X23070	X23078	X23071	X23075	X23072	X23073	X23074	X23107	X23101
123	123	123	123	123	123	123	123	1	1	1	45	123	123	1					
Æ	À	Ñ	Ö	Ü	¥	Ø	■	∏	∪	∩	ˆ	∇	∏	|					
X23102	X23103	X23105	X23109	X23104	X23108	X23106	X23086A	X23081	X23082	X23083	X23095	X23092	X23111	X23080					

88 and 96 Character Custom Elements (cont'd)

88 Character Courier 72

Available for type codes 015, 029, and 134.

45	45	45	45	45	45	123	123	123	123	45	4	123	123	123	123	123	123	123	123
.	:	,	;	'	"	?	!	()	-	_	@	#	\$	¢	*	/	=	+
X15062	X15063	X15064	X15065	X15066	X15067	X15068	X15069	X15070	X15071	X15072	X15073	X15074	X15075	X15076	X15077	X15078	X15079	X15080	X15081
123	1	123	123	123	123	123	123	123	23	23	123	3	3	3	3	23	23	123	23
&	€	§	[	]	°	¿	¡	±	½	¼	£	Æ	æ	É	é	Ñ	ñ	Ø	À
X15082	X15252	X15083	X15084	X15085	X15086	X15096	X15097	X15089	X15088	X15087	X15187	X15203	X15202	X15299	X15174	X15094	X15095	X15248	X15186
23	23	23	23	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Q	n	s	a	Ⓢ	Ⓣ	Ⓤ													
X15185	X15315	X15316	X15317	X15318	X15319	X15359													

88 Character Delegate

Available for type code 135.

45	45	45	45	45	45	123	123	123	123	45	4	123	123	123	123	123	123	123	123
.	:	,	;	'	"	?	!	()	-	_	@	#	\$	¢	*	/	=	+
X00124	X00140	X00139	X00141	X00143	X00142	X00069	X00070	X00071	X00072	X00073	X00133	X00075	X00076	X00077	X00078	X00079	X00080	X00081	X00082
123	123	123	123	123	123	123	123	3	3	123	3	3	23	23	1				
€	§	[	]	°	¿	¡	±	½	¼	£	Æ	æ	Ñ	ñ	Ø				
X00083	X00084	X00085	X00086	X00087	X00137	X00138	X00164	X00162	X00163	X00098	X00115	X00116	X00135	X00136	X00206				

88 Character Elite 72

Available for type codes 007, 026, and 137.

45	45	45	45	45	45	123	123	123	123	45	4	123	123	123	123	123	123	123	123
.	:	,	;	'	"	?	!	()	-	_	@	#	\$	¢	*	/	=	+
X08062	X08063	X08064	X08065	X08066	X08067	X08068	X08069	X08070	X08071	X08072	X08073	X08074	X08075	X08076	X08077	X08078	X08079	X08080	X08081
123	123	123	123	123	123	123	123	3	3	123	3	1	3	23	23	1			
&	%	[	]	°	¿	¡	±	½	¼	£	Æ	Æ	æ	Ñ	ñ	Ø			
X08082	X08083	X08084	X08085	X08086	X08154	X08155	X08139	X08137	X08138	X08097	X08114	X08169	X08115	X08152	X08153	X08159			

88 and 96 Character Custom Elements (cont'd)

88 Character Letter Gothic

Available for type code 138.

45	45	45	45	45	45	123	123	123	123	45	4	123	123	1	123	123	123	123	123
.	:	,	;	'	"	?	!	()	-	—	@	#	\$	¢	*	/	=	+
X14062	X14063	X14064	X14065	X14066	X14067	X14068	X14069	X14070	X14071	X14072	X14073	X14074	X14075	X14076	X14077	X14078	X14079	X14080	X14081
123	123	123	123	123	123	123	123	3	3	23	23	1	123						
&	%	[	]	°	¿	¡	±	½	¼	ñ	ñ	ø	£						
X14082	X14083	X14084	X14085	X14086	X14087	X14088	X14089	X14090	X14091	X14092	X14093	X14094	X14095	X14096	X14097	X14098	X14099	X14100	X14101

88 Character Manifold

Available for type code 140.

45	45	45	45	45	45	123	123	123	123	45	4	123	123	123	123	123	123	123	123
.	:	,	;	'	"	?	!	()	-	—	@	#	\$	¢	*	/	=	+
X12037	X12038	X12039	X12040	X12041	X12042	X12043	X12044	X12045	X12046	X12047	X12048	X12049	X12050	X12051	X12052	X12053	X12054	X12055	X12056
123	123	123	123	123	123	1													
£	%	[	]	°	±	ø													
X12057	X12058	X12059	X12060	X12061	X12062	X12063													

88 Character Pica 72

Available for type codes 008, 027 and 142.

45	45	45	45	45	45	123	123	123	123	45	4	123	123	1	123	123	123	123	123
.	:	,	;	'	"	?	!	()	-	—	@	#	\$	¢	*	/	=	+
X09062	X09063	X09064	X09065	X09066	X09067	X09068	X09069	X09070	X09071	X09072	X09073	X09074	X09075	X09076	X09077	X09078	X09079	X09080	X09081
123	123	123	123	123	123	3	3	123	3	3	1	23	23						
&	%	[	]	°	±	½	¾	£	Æ	æ	ø	À	Q						
X09082	X09083	X09084	X09085	X09086	X09087	X09088	X09089	X09090	X09091	X09092	X09093	X09094	X09095	X09096	X09097	X09098	X09099	X09100	X09101

88 and 96 Character Custom Elements (cont'd)

88 Character Prestige Elite 72

Available for type codes 012, 033 and 143.

45	45	45	45	45	45	123	123	123	123	45	4	123	123	123	123	123	123	123	123
.	:	,	;	'	"	?	!	()	-	--	@	#	\$	¢	*	/	=	+
X10062	X10063	X10064	X10065	X10066	X10067	X10068	X10069	X10070	X10071	X10072	X10073	X10074	X10075	X10076	X10077	X10078	X10079	X10080	X10081
123	123	123	123	123	123	123	123	23	23	23	123	23	23	3	3	1	1	23	23
&	%	[	]	°	¿	¡	±	½	¼	¾	£	Æ	æ	É	é	È	ē	Ñ	ñ
X10082	X10083	X10084	X10085	X10086	X10122	X10123	X10116	X10114	X10115	X10131	X10104	X10145	X10144	X10178	X10109	X10192	X10193	X10120	X10111
1	3	3	3																
∅	Ⓜ	←	●																
X10160	X10190	X10184	X10177																

96 Character Universal

Available for Type Codes 52903, 52915, 52002, 52908, 52913, 52909, 52901, 52907, 52003 and 52905

13590	350	350	13590	3590	35	3590	13590	13590	350	350	13590	13590	350	13590	13590	29	350	13590	13590
↓	←	→	↑	●	®	●	†	‡	Δ	◆	÷	>	∞	∫	<	|	ℓ	×	■
X99001	X99002	X99003	X99004	X99005	X99007	X99007	X99008	X99009	X99010	X99011	X99012	X99013	X99014	X99015	X99016	X99017	X99018	X99019	X99022
350	3590	3590	13590	13590	13590	7	1350	13590	13590	13590	13590	13590	13590	13590	13590	13590	1350	13590	13590
▲	Ω	α	β	μ	π	=	1	2	3	4	5	6	7	8	9	0	1	2	3
X99023	X99024	X99025	X99026	X99027	X99028	X99030	X99035	X99032	X99033	X99034	X99035	X99036	X99037	X99038	X99039	X99040	X99096	X99072	X99013
13590	13590	13590	13590	13590	13590	13590	28	28	28	28	28	28	28	246	246	246	246	246	246
4	5	6	7	8	9	0	-	-	-	-	-	-	-	-	-	-	-	-	-
X99074	X99075	X99076	X99077	X99078	X99079	X99080	UC X99066	UC X99067	UC X99055	UC X99060	UC X99061	UC X99062	UC X99054	LC X99045	LC X99046	LC X99044	LC X99029	LC X99043	LC X99063
246	7	24690	13590	3590	13590	1350	13590	13590	13590	13590	135	350	350	350	13590	46	35	35	13590
-	,	i	¿	∇	•	γ	≤	≥	£	¥	√	©	™	♂	♀	¬	□	R	∅
LC X99064	UC LC X99065	X99099	X99100	X99047	X99041	X99094	X99052	X99051	X99102	X99068	X99042	X99070	X99081	X99082	X99083	X99090	X99093	X99092	X99101
350																			
∅																			
X99098																			

**KEYBOARDS BY TYPE STYLE—
88 CHARACTER**

Elements described are for "Selectric", "Selectric" II*, Correcting "Selectric" II Typewriters*, Mag Card II, Mag Card/A, Mag Card "Selectric" Typewriters, Memory Typewriters, Audio Typing Unit and MT/ST. (*To be discontinued April 6, 1981.)

Note: Keyboard arrangements will be determined by the primary element. If any OCR type style is ordered, an OCR keyboard will be supplied.

IBM Mag Card II, Mag Card/A, and Mag Card "Selectric" Typewriters, and the IBM Audio Typing Unit are described in this chapter as Mag Keyboards. Mag Card "Executive" Typewriter Type Styles and Keyboards are described in Chapters 5, 6, and 7.

All elements shown for the 101 Keyboard, *except for those designated "American Standard" under Keyboard Description*, are compatible with the discontinued 001 Keyboard. Only elements compatible with the 101 Keyboard can be specified on Model 721 "Selectric" Typewriter orders.

All "Selectric" Typewriter elements are compatible for use on the IBM Memory Typewriters, MT/ST, and Mag Keyboards. Those elements designed for keyboards not available for the Model 721 "Selectric" Typewriter, IBM Memory Typewriters, MT/ST, and Mag Keyboards should not be specified on orders for this equipment. Refer to this table, footnotes and keyboard layouts for specific information concerning the availability of elements.

Only elements compatible with the following Keyboards should be specified for IBM Mag Card II, Mag Card/A, and Memory Typewriters equipped with the IBM Audio Typing Unit:

101 Keyboard	172 Keyboard
017 Keyboard	174 Keyboard
177 Keyboard	195 Keyboard
178 Keyboard	

Correspondence Keyboards

Type Code	Type Style	Pitch	Keyboard Description	101 Keyboard or Keyboard Reference		Part No.
				101-Pos. "0"	101-Pos. "41"	
129†	Adjutant	12	American Standard	! over 1	¼ over ½	1167129
030	Adjutant			| over |	° over !	1167030
031	Adjutant			+ over 1	¼ over ½	1167031
130†	Advocate	10	American Standard	! over 1	¼ over ½	1167130
050	Advocate			| over |	° over !	1167050
036	Advocate			+ over 1	¼ over ½	1167036
003	Advocate		Latin American	Refer to Keyboard 002		1167003
084+	AN3/360 Bold	10		Refer to Keyboard 105		1167084
105+	AN3/360			Refer to Keyboard 105		1167105
131†	Artisan 12-72	12	American Standard	! over 1	¼ over ½	1167131
053	Artisan 12-72			| over |	° over !	1167053
055	Artisan 12-72			+ over 1	¼ over ½	1167055
062	Artisan 12-72		Latin American	Refer to Keyboard 002		1167062

†Keyboards compatible with these elements are not available for Model 721, MT/ST, Mag Keyboards, and IBM Memory Typewriters.
 †Denotes type styles on which "Lock-on Heads" are available.

TYPE CATALOG

Keyboards by Type Style—88 Character (cont'd)

Type Code	Type Style	Pitch	Keyboard Description	101 Keyboard or Keyboard Reference		Part. No.
				101-Pos. "0"	101-Pos. "41"	
208	Auto Elite	12	American Standard	! over 1	¼ over ½	1167208
158†	Bookface Academic 72***	10	American Standard	! over 1	¼ over ½	1167158
174 (b)	Bookface Academic 72***		Accounting	Refer to Keyboard 174		1167174
132†	Courier 12	12	American Standard	! over 1	¼ over ½	1167132
067	Courier 12			[over]	° over !	1167067
068	Courier 12			+ over 1	¼ over ½	1167068
200	Courier 12		Latin American	Refer to Keyboard 002		1167200
217 (a)	Courier 12		Athabaskan	Refer to Keyboard 217		1167217
133†	Courier 12 Italic	12	American Standard	! over 1	¼ over ½	1167133
085	Courier 12 Italic			[over]	° over !	1167085
086	Courier 12 Italic			+ over 1	¼ over ½	1167086
134†*	Courier 72	10	American Standard	! over 1	¼ over ½	1167134
015*	Courier 72			[over]	° over !	1167015
029*	Courier 72			+ over 1	¼ over ½	1167029
040	Courier 72		Latin American	Refer to Keyboard 002		1167040
051++	Courier 72		Legal	Refer to Keyboard 017		1167051
052+++	Courier 72		Court Reporter	Refer to Keyboard 048		1167052
043**	Courier 72		DP Programs	**		1167043
177 (a)	Courier 72		Legal	Refer to Keyboard 177		1167177
178 (a)	Courier 72		Legal Fraction	Refer to Keyboard 177		1167178
113††	Courier 72			± over 1	° over !	1167113
112††	Courier 72		Legal (Basically 017 Kybd)	± over 1	° over !	1167112
218 (a)	Courier 72		Athabaskan	Refer to Keyboard 217		1167218
238	Courier 72		Metric	Refer to Keyboard 238		1167238
244+	Courier 72		Tri-Lingual	Refer to Keyboard 074		1167244
135†*	Delegate	10	American Standard	! over 1	¼ over ½	1167135
070	Delegate			[over]	° over !	1167070
035	Delgate			+ over 1	¼ over ½	1167035
093	Delegate			+ over 1	over !	1167093
002	Delegate		Latin American	Refer to Keyboard 002		1167002
136†	Dual Gothic	12	American Standard	! over 1	¼ over ½	1167136
020	Dual Gothic			[over]	° over !	1167020
021	Dual Gothic			+ over 1	¼ over ½	1167021

(a) Do not specify on Model 721 orders.

†† Identifies those Courier and Prestige Elite elements that provide a compatible character set between the MT/ST and MT/SC to support precons 340, 341, 342 and 343. Caps have letters MT in lower right hand corner for identification purposes.

† Denotes type styles on which "Lock-on Heads" are available.

* Denotes type styles for which custom elements are available.

++017 Keyboard not available for Model 721, MT/ST, Mag Keyboards, and IBM Memory Typewriters. Elements are available for installed machines. For customers who require the former 017 Keyboard for Mag Keyboard equipment or Memory Typewriters, the 177 Legal Keyboard will be furnished and field-converted by Customer Engineering to 017. The keybutton changes required for the conversion and the elements compatible with the 017 Keyboard are to be ordered locally. The 177 Keyboard will not be furnished for the Model 721.

** Designed for Mag Card "Selectric" Typewriter with the Communicating feature when used in conjunction with a computer. Keyboard Layouts are shown in Communicating Mag Card "Selectric" Typewriter User's Guide Program Sheets, Form No. S543-0610.

+Keyboards compatible with these elements are not available for Model 721, MT/ST, Mag Keyboards, and IBM Memory Typewriters.

+++Keyboards compatible with these elements are available for Mag Keyboards and the IBM Memory Typewriters, but not for MT/ST or Model 721.

(b) 174 Keyboard not available for Model 721, MT/ST, Mag Keyboards, and IBM Memory Typewriters. Elements are available for installed machines. For customers who require the 174 Keyboard for these models, the 101 Keyboard will be furnished and field-converted by Customer Engineering to 174. The keybutton changes required for the conversion are to be ordered locally.

***Refer to Customer Engineering for modifications necessary to accept these elements.

1. "Selectric" Typewriters manufactured prior to September 1, 1972.
2. Mag Keyboards and IBM Memory Typewriters, no charge.
3. MT/ST, on a parts plus labor basis.

Keyboards by Type Style—88 Character (cont'd)

Type Code	Type Style	Pitch	Keyboard Description	101 Keyboard or Keyboard Reference		Part. No.
				101-Pos. "0"	101-Pos. "41"	
137†*	Elite 72	12	American Standard	! over 1	¼ over ½	1167137
007*	Elite 72			| over |	° over !	1167007
026*	Elite 72			+ over 1	¼ over ½	1167026
069+	Elite 72		Library	Refer to Keyboard 069		1167069
074+	Elite 72		Tri-Lingual	Refer to Keyboard 074		1167074
161†	Large Elite 72	12	American Standard	! over 1	¼ over ½	1167161
138†*	Letter Gothic	12	American Standard	! over 1	¼ over ½	1167138
005	Letter Gothic			| over |	° over !	1167005
039	Letter Gothic			+ over 1	¼ over ½	1167039
063	Letter Gothic		Latin American	Refer to Keyboard 002		1167063
239	Letter Gothic		Metric	Refer to Keyboard 238		1167239
139†	Light Italic	12	American Standard	! over 1	¼ over ½	1167139
014	Light Italic			+ over 1	° over !	1167014
032	Light Italic			+ over 1	¼ over ½	1167032
140†*	Manifold 72	10	American Standard	! over 1	¼ over ½	1167140
006	Manifold 72		Pica Numerals	+ over 1	° over !	1167006
010	Manifold 72			+ over 1	° over !	1167010
019	Manifold 72	10	Cancelled Zero	+ over 1	° over !	1167019
028	Manifold 72			+ over 1	¼ over ½	1167028
087**	Manifold 72		DP Programs		**	1167087
141†	Orator	10	American Standard	! over 1	¼ over ½	1167141
059	Orator			+ over 1	° over !	1167059
060	Orator			+ over 1	¼ over ½	1167060
236† (c)	Orator L/A		Language Arts	Refer to Keyboard 236		1167236
245++++	Orator Presenter			! over 1	□ over ●	1167245
250	Olde World		American Standard	! over 1	¼ over ½	1167250
142†*	Pica 72	10	American Standard	! over 1	¼ over ½	1167142
008*	Pica 72			| over |	° over !	1167008
027*	Pica 72			+ over 1	¼ over ½	1167027
017++	Pica 72		Legal	Refer to Keyboard 017		1167017
046+	Pica 72		Registered	Refer to Keyboard 046		1167046
048+++	Pica 72		Court Reporter	Refer to Keyboard 048		1167048
121+	Pica 72		Chemical	Refer to Keyboard 120		1167121

†Denotes type styles on which "Lock-on Heads" are available.

*Denotes type styles for which custom elements are available.

** Designed for Mag Card "Selectric" Typewriter with the Communicating feature when used in conjunction with a computer. Keyboard Layouts are shown in Communicating Mag Card "Selectric" Typewriter User's Guide Program Sheets, Form No. S543-0610.

+Keyboards compatible with these elements are not available for Model 721, MT/ST, Mag Keyboards, IBM Memory Typewriters.

++017 Keyboard not available for Model 721, MT/ST, Mag Keyboards, and IBM Memory Typewriters. Elements are available for installed machines. For customers who require the former 017 Keyboard for Mag Keyboard equipment or the Memory Typewriters, the 177 Legal Keyboard will be furnished and field-converted by Customer Engineering to 017. The keyboard changes required for the conversion and the elements compatible with the 017 Keyboard are to be ordered locally. The 177 Keyboard will not be furnished for Model 721.

+++Keyboards compatible with these elements are available for Mag Keyboards and the IBM Memory Typewriters, but not for MT/ST or Model 721.

++++ Can be used on the American Standard and Keyboard 101. The following three positions are different: Position 19 upper case (°); Position 41 upper case (!) and lower case (●).

(c) Not available for Mag Keyboards or IBM Memory Typewriters.

TYPE CATALOG

Keyboards by Type Style-88 Character (cont'd)

Type Code	Type Style	Pitch	Keyboard Description	101 Keyboard or Keyboard Reference		Part No.
				101-Pos. "0"	101-Pos. "41"	
143†*	Prestige Elite 72	12	American Standard	! over 1	¼ over ½	1167143
012*	Prestige Elite 72			[over]	° over !	1167012
033*	Prestige Elite 72			+ over 1	¼ over ½	1167033
041	Prestige Elite 72		Latin American	Refer to Keyboard 002		1167041
049++	Prestige Elite 72		Legal	Refer to Keyboard 017		1167049
057+++	Prestige Elite 72		French/English	Refer to Keyboard 057		1167057
120+	Prestige Elite 72		Chemical	Refer to Keyboard 120		1167120
169**	Prestige Elite 72		DP Programs	**		1167169
179 (a)	Prestige Elite 72		Legal	Refer to Keyboard 177		1167179
180 (a)	Prestige Elite 72		Legal Fraction	Refer to Keyboard 177		1167180
111††	Prestige Elite 72			Refer to Composer Keyboard 000		1167111
110††	Prestige Elite 72		Legal	Refer to Composer Keyboard 000		1167110
195	Prestige Elite 72		Double Underscore, lc pos. 43	+ over 1	¼ over ½	1167195
235+	Prestige Elite 72		Tri-Lingual	Refer to Keyboard 074		1167235
123†	Prestige Pica 72***	10	American Standard	! over 1	¼ over ½	1167123
172+	Prestige Pica 72***		Accounting	Refer to Keyboard 172		1167172
181 (a)	Prestige Pica 72***		Legal	Refer to Keyboard 177		1167181
182 (a)	Prestige Pica 72***		Legal Fraction	Refer to Keyboard 177		1167182
198	Prestige Pica 72***		Latin American	Refer to Keyboard 002		1167198
144†	Scribe	12	American Standard	! over 1	¼ over ½	1167144
001	Scribe			[over]	° over !	1167001
025	Scribe			+ over 1	¼ over ½	1167025
018	Scribe		Latin American	Refer to Keyboard 002		1167018
145†	Script	12	American Standard	! over 1	¼ over ½	1167145
090	Script			± over 1	° over !	1167090
034	Script			± over 1	¼ over ½	1167034
042	Script		Latin American	Refer to Keyboard 002		1167042
OCR Keyboards						
056†+ (a)	ANSI-OCR-A	10	Keypunch Simulator	Refer to Keyboard 056		1167056
091+ (a)	ANSI-OCR-A			Refer to Keyboard 091		1167091
108+ (a)	ANSI-OCR-A			Refer to Keyboard 108		1167108
160+ (a)	ANSI-OCR-A			Refer to Keyboard 160		1167160
170+* (a)	ANSI-OCR-A		Prtg. & Publ. No. 1	Refer to Keyboard 170		1167170
185††† (a)	OCR B			†††		1167185

+++Keyboards compatible with these elements are available for Mag Keyboards and the IBM Memory Typewriters, but not for MT/ST.

† Denotes type styles on which "Lock-on Heads" are available.

+Keyboards compatible with these elements are not available for Model 721, MT/ST, Mag Keyboards, and IBM Memory Typewriters.

* Denotes type styles for which custom elements are available.

(a) Do not specify on Model 721 orders.

*** Refer to Customer Engineering for modifications necessary to accept these elements.

1. "Selectric" Typewriters manufactured prior to September 1, 1972.
2. Mag Keyboards and IBM Memory Typewriters, no charge.
3. MT/ST, on a parts plus labor basis.

++ 017 Keyboard not available for Model 721, MT/ST, Mag Keyboards, and IBM Memory Typewriters. Elements are available for installed machines. For customers who require the former 017 Keyboard for Mag Keyboard equipment or the Memory Typewriters, the 177 Legal Keyboard will be furnished and field-converted by Customer Engineering to 017. The keyboard changes required for the conversion and the elements compatible with the 017 Keyboard are to be ordered locally. The 177 Keyboard will not be furnished for Model 721.

** Designed for Mag Card "Selectric" Typewriter with the Communicating feature when used in conjunction with a computer. Keyboard Layouts are shown in Communicating Mag Card "Selectric" Typewriter User's Guide Program Sheets, Form No. 5543-0610.

†† Identifies those Courier and Prestige Elite elements that provide a compatible character set between the MT/ST and MT/SC to support precons 340, 341, 342 and 343. Caps have letters MT in lower right hand corner for identification purposes.

††† Intended for use with IBM 3886 Optical Reader. Meets ECMA-11 standards, 2nd Edition, established October, 1971. Although not an exact match, it functions satisfactorily with 101 Keyboard. Refer to type styles for character details.

Keyboards by Type Style-88 Character (cont'd)

Type Code	Type Style	Pitch	Keyboard Description	Keyboard Reference	Part No.
659+ (a)	Dataflow No. 2	10		Refer to Keyboard 159	1167659
672+ (a)	Dataflow No. 6			Refer to Keyboard 159	1167672
065+ (a)	915 OCR	10	Keypunch Simulator	Refer to Keyboard 065	1167065
092+ (a)	915 OCR		Keypunch Simulator	Refer to Keyboard 092	1167092
106+ (a)	915 OCR		Adding Machine Simulator	Refer to Keyboard 106	1167106
122+ (a)	915 OCR		Keypunch Simulator	Refer to Keyboard 122	1167122
023+ (a)	12L2/12F2	10	Keypunch Simulator	Refer to Keyboard 023	1167023
022+++	1403 OCR	10		Refer to Keyboard 022	1167022
064+ (a)	1403 OCR		Keypunch Simulator	Refer to Keyboard 064	1167064
009 (a)	1428 OCR	10		Keyboard 009 (discontinued)	1167009
016+	1428 OCR		Keypunch Simulator	Refer to Keyboard 016	1167016
170+*	Prtg. & Publ. No. 1 OCR	10	Prtg. & Publ. No. 1	Refer to Keyboard 170	1167170
157+	Prtg. & Publ. No. 2 OCR		Prtg. & Publ. No. 2	Refer to Keyboard 157	1167157
199+	Prtg. & Publ. No. 2 OCR (modified)		Prtg. & Publ. No. 2	Refer to Keyboard 157	1167199
173+	Prtg. & Publ. No. 3 OCR		Prtg. & Publ. No. 3	Refer to Keyboard 173	1167173

Symbol Keyboards

004	Symbol 12	12		Refer to Symbol Keyboard	1167004
06i	Symbol 10	10		Refer to Symbol Keyboard	1167061
243	Symbol II	12		Refer to Symbol Keyboard	1167243
206++	Labanotation	10		Refer to Labanotation Keyboard	1167206

+++ Keyboards compatible with these elements are available for Mag Keyboards and IBM Memory Typewriters, but not for MT/ST.

+Keyboards compatible with these elements are not available for Model 721, MT/ST, Mag Keyboards, and IBM Memory Typewriters.

++ Instruction Manual available through Dance Notation Bureau, 19 Union Square, New York. Can be used only on 10 pitch units equipped with 45 tooth ratchet and Manual Velocity Control.

+ Denotes type styles for which custom elements are available.

(a) Do not specify on Model 721 orders.

**Denotes type styles for which custom elements are available.

*Denotes type styles for which custom elements are available.



Keyboards by Type Style-88 Character (cont'd)

OCR - No Matching Keyboards

Type Code	Type Style	Pitch	Keyboard Description	Part No.
229	OCR-A	10	Same as Keyboard 108, except "Greater than" symbol appears in position 41, lower case.	1167229
210	OCR-B	10	Upper and Lower Case Arrangement Approximating Keyboard 101	1167210
211	OCR-B	10	Upper and Lower Case Arrangement Approximating Keyboard 002.	1167211
215	OCR-B	10	Upper and Lower Case Arrangement Approximating Keyboard 002.	1167215
224	OCR-B	10	French - Canadian	1167224
228	OCR-B	10	Brazilian	1167228
232	OCR-B	10	Capital Letters, both Upper and Lower Case Approximating Keyboard 101.	1167232

END

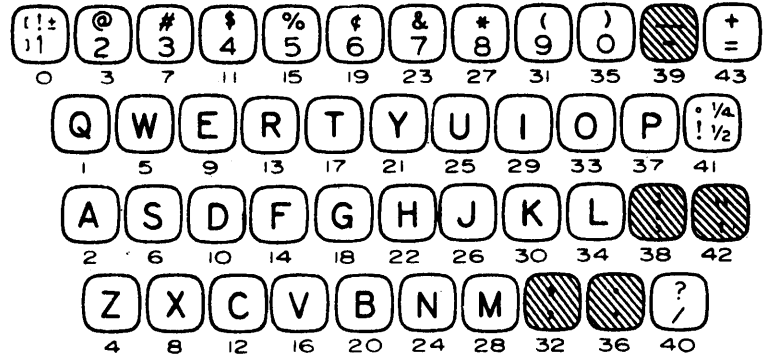
88 CHARACTER KEYBOARDS

"Selectric", "Selectric" II, Mag Card and Memory Typewriters (excluding Mag Card "Executive" Typewriter).*
 (*To be discontinued April 6, 1981.)

101 American Standard

Correspondence

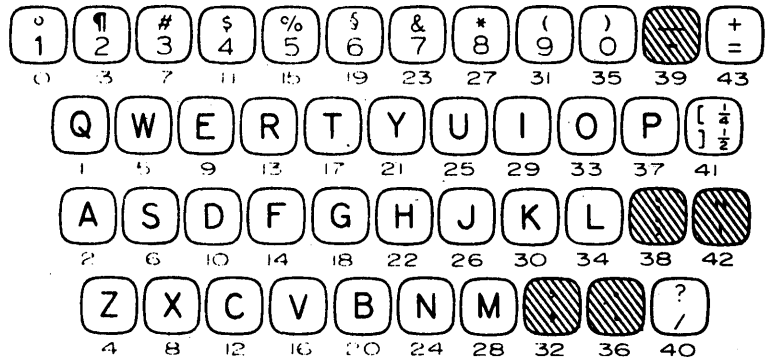
Standard arrangement. Available in type codes 001, 005, 006, 007, 008, 010, 012, 014, 015, 019, 020, 021, 025, 026, 027, 028, 029, 030, 031, 032, 033, 034, 035, 036, 039, 050, 053, 055, 059, 060, 067, 068, 070, 085, 086, 090, 093, 123, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 158, 161, 208, 245 and 250. Characters supplied in position "0" and position "41" are indicated on the pages under "Keyboards by Type Style."



177 Legal

Not available for Model 721.

Standard arrangement. Available in type codes 177, 178, 179, 180, 181, 182.



002 Latin American

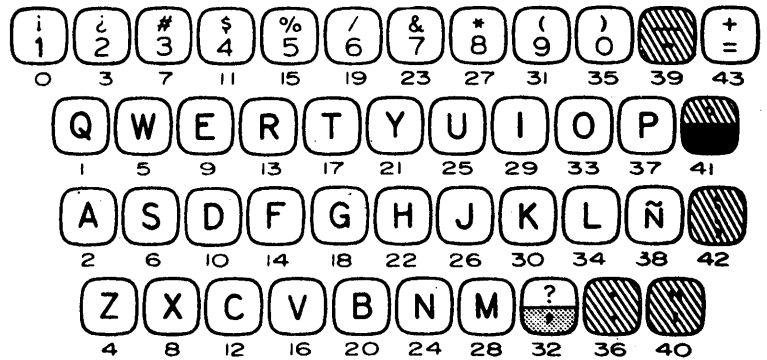
Correspondence

Available to Commercial Customers ordering Model 721 as a no-charge SER. Available to Model 721 Educational customers via normal ordering procedures.

Not compatible with the IBM Audio Typing Unit.

Standard arrangement. Available in Latin American type codes 002, 003, 018, 040, 041, 042, 062, 063, 198, 200.

Dead Key Disconnect Feature recommended with this keyboard if other elements are used.



Coding Key



-- Low Velocity



-- Shift Sensitive Feature only



-- Contrasting Keybutton Color



-- Contrasting Keybutton and Shift Sensitive Device or Velocity Control



Dead Key



-- Low Velocity and Dead Key

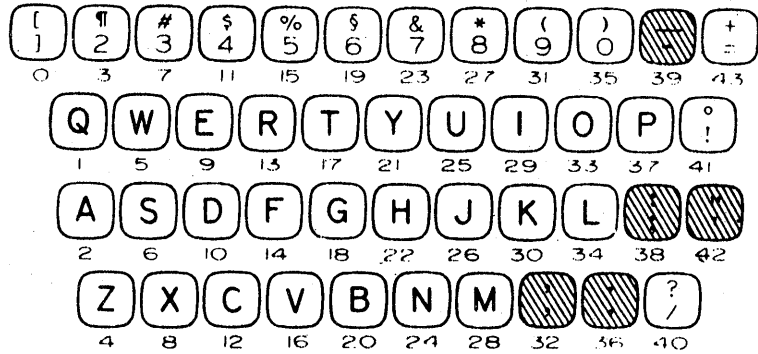
88 Character Keyboards (cont'd)

017 Legal

Not available for Mag Keyboards, Memory Typewriters or Model 721.

Standard arrangement. Available in type codes 017, 049 and 051.

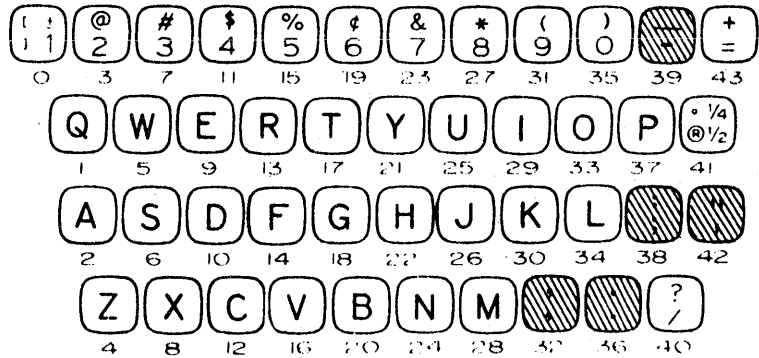
NOTE: If customers require this keyboard for Mag Keyboards and IBM Memory Typewriters, it is available through CE Field installation only.



046 Pica (Registered Trade Mark)

Not available for Mag Keyboards, Memory Typewriters or Model 721. Not compatible with IBM Audio Typing Unit.

Standard arrangement. Available in Pica 72 type code 046.

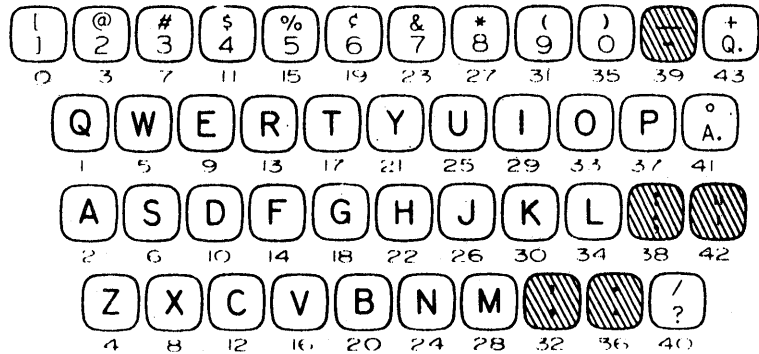


048 Court Reporter

Not available for Model 721.

Not compatible with the IBM Audio Typing Unit.

Standard arrangement. Available in type codes 048 and 052.



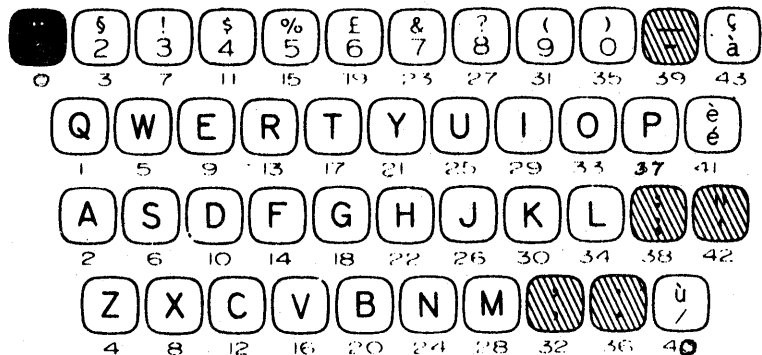
057 French/English Correspondence

Not available for Model 721.

Not compatible with the IBM Audio Typing Unit.

Standard arrangement. Available in Prestige Elite 72 type code 057.

Dead Key Disconnect Feature recommended with this keyboard if other elements are used.



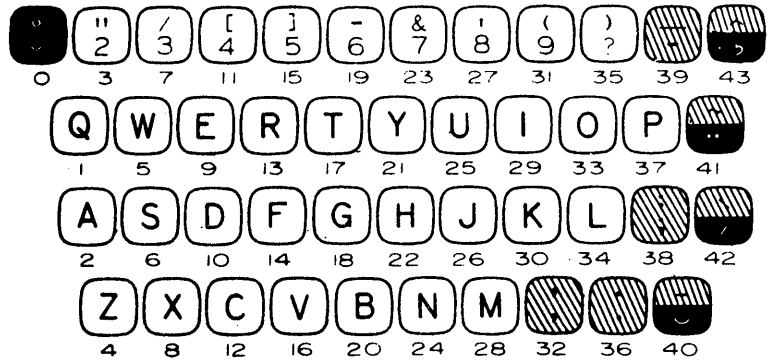
88 Character Keyboards (cont'd)

069 Library

Not available for Mag Keyboards, Memory Typewriters or Model 721. Not compatible with IBM Audio Typing Unit.

Standard arrangement. Available in Elite 72 type code 069.

Dead Key Disconnect Feature recommended with this keyboard if other elements are used.

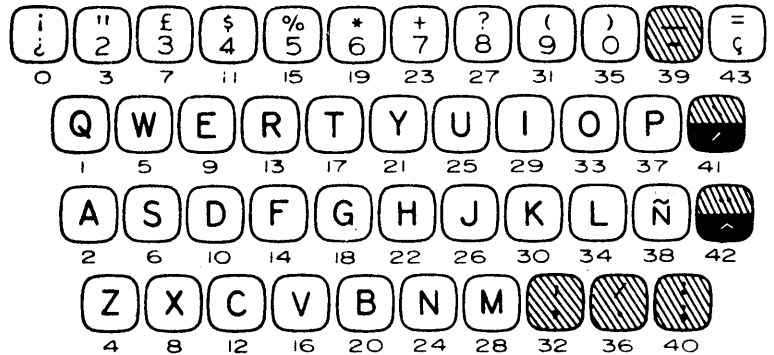


074 Tri-Lingual

Not available for Mag Keyboards, Memory Typewriters or Model 721. Not compatible with IBM Audio Typing Unit.

Standard arrangement. Available in Elite 72 type code 074, Prestige Elite type code 235 and Courier 72 type code 244. Types in French, English, and Spanish without changing the element.

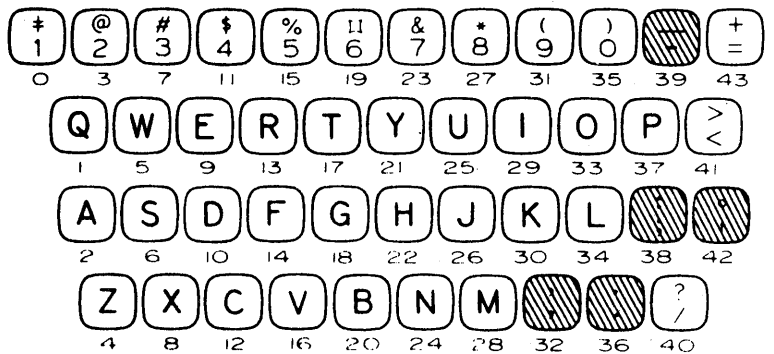
Dead Key Disconnect Feature recommended with this keyboard if other elements are used.



105 AN3/360

Not available for Mag Keyboards, Memory Typewriters or Model 721. Not compatible with IBM Audio Typing Unit.

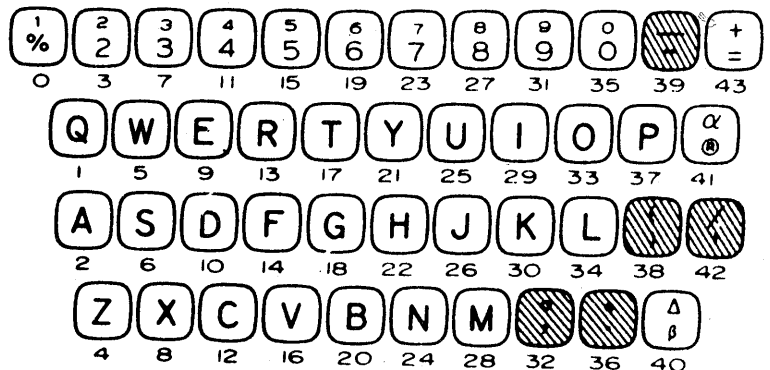
Standard arrangement. Available in type codes 084 and 105.



120 Chemical

Not available for Mag Keyboards, Memory Typewriters or Model 721. Not compatible with IBM Audio Typing Unit.

Standard arrangement. Available in Prestige Elite 72 type code 120 and Pica 72 type code 121. In the upper case numeric positions, numerals are 1/2 the size of conventional numerals and appear in the subscript position. With typewriters equipped with a 48 or 54-tooth ratchet, these numbers appear in the superscript position by moving the platen back one tooth. Not available with Accent Blue keybuttons and platen knobs.



TYPE CATALOG

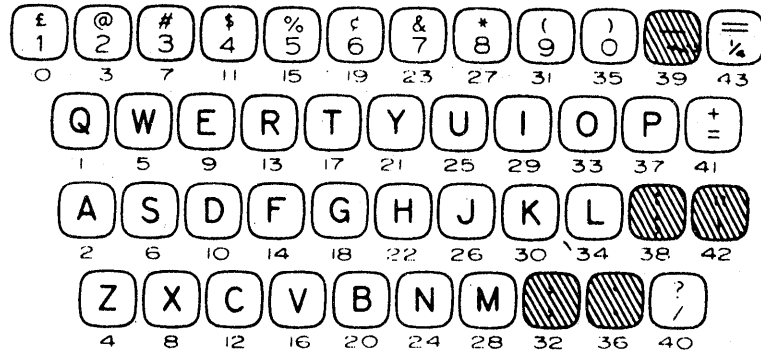
88 Character Keyboards (cont'd)

172 Accounting

Not available for Mag Keyboards, Memory Typewriters or Model 721.

Standard arrangement. Available in type code 172.

NOTE: If customers require this keyboard for Mag Keyboards and IBM Memory Typewriters, it is available through CE Field installation only.

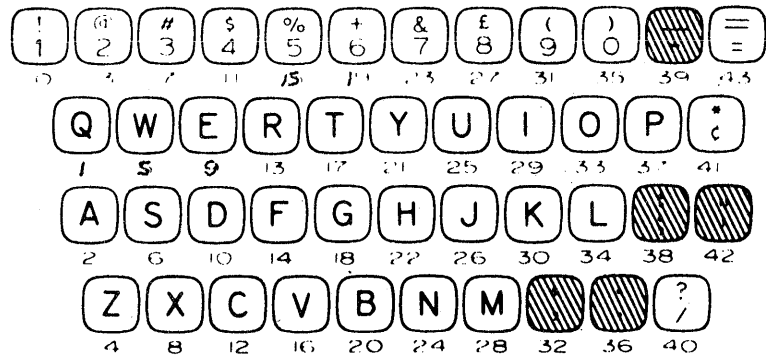


174 Accounting

Not available for Mag Keyboards, Memory Typewriters or Model 721.

Standard arrangement. Available in type code 174.

NOTE: If customers require this keyboard for Mag Keyboards and IBM Memory Typewriters, it is available through CE Field installation only.

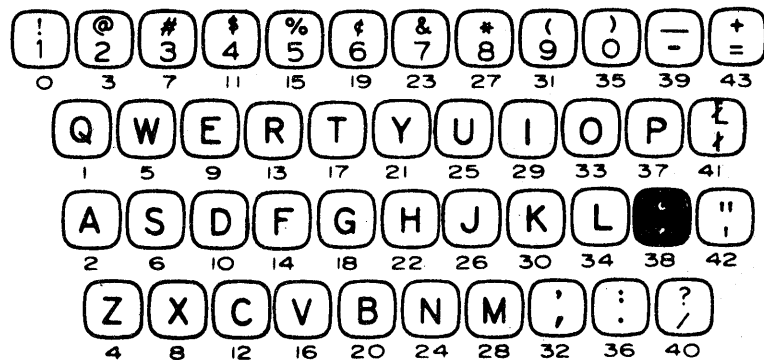


217 Athabasca

Not available for Mag Keyboards, Memory Typewriters or Model 721. Not compatible with IBM Audio Typing Unit.

Standard arrangement. Available in type codes 217 and 218.

Dead Key Disconnect Feature recommended with this keyboard if other elements are used.



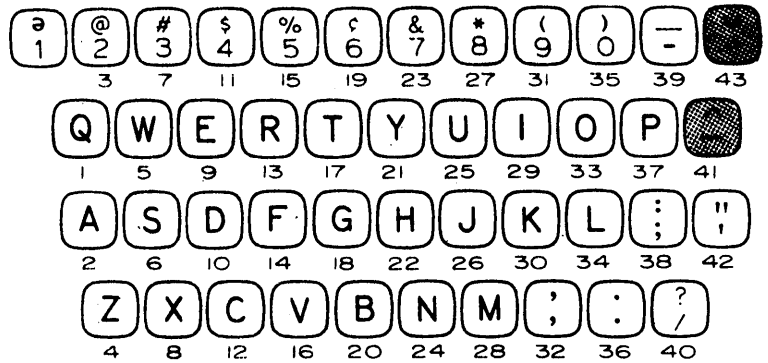
88 Character Keyboards (cont'd)

**236 Language Arts
Orator L/A**

Standard arrangement. Available in type code 236.

Dead Key Disconnect Feature recommended with this keyboard if other elements are used.

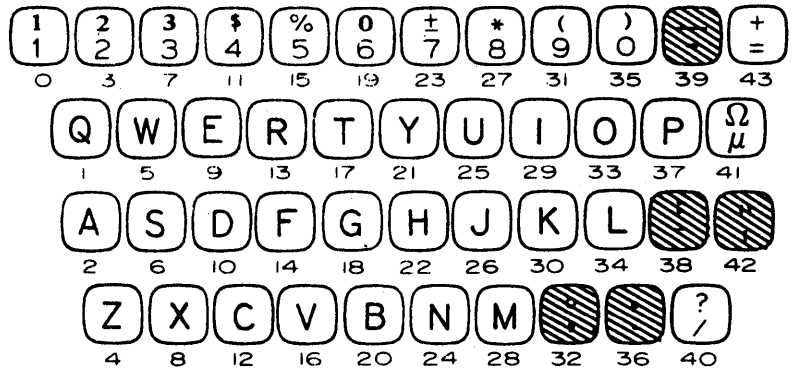
Not available for Mag Keyboard equipment or IBM Memory Typewriters. However, on Model 721 Typewriters, positions 41 and 43 remain functional. The Dead Key Disconnect is unavailable for Model 721. Not compatible with the IBM Audio Typing Unit.



238 Metric

Not available for Mag Keyboards, Memory Typewriters or Model 721. Not compatible with IBM Audio Typing Unit.

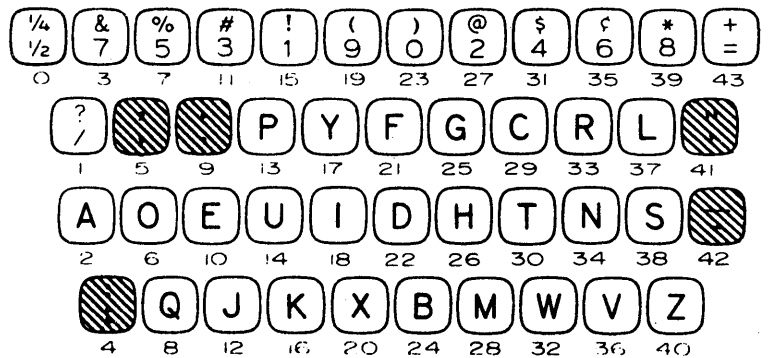
Standard arrangement available in type codes 238 and 239



043 Modified Dvorak

Not available for Mag Keyboards, Memory Typewriters or Model 721. Not compatible with IBM Audio Typing Unit.

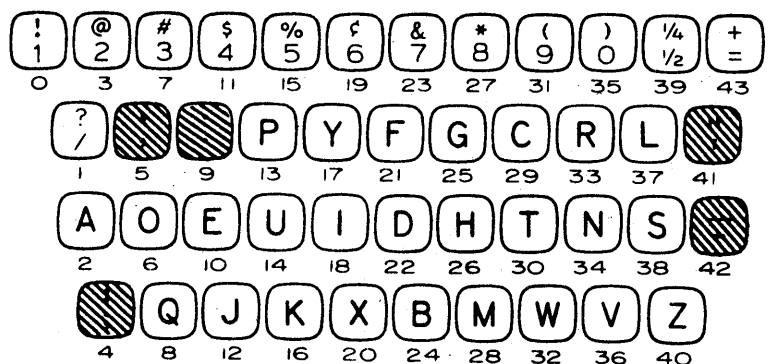
Designed to be used with all correspondence elements



151 American Simplified

Not available for Mag Keyboards, Memory Typewriters or Model 721. Not compatible with IBM Audio Typing Unit.

Designed to be used with all correspondence elements



88 Character Keyboards (cont'd)

OCR

Note: For details on the following OCR keyboards, refer to "OCR" an ET Sales Engineering publication. This is available from Department 980, Lexington Plant.

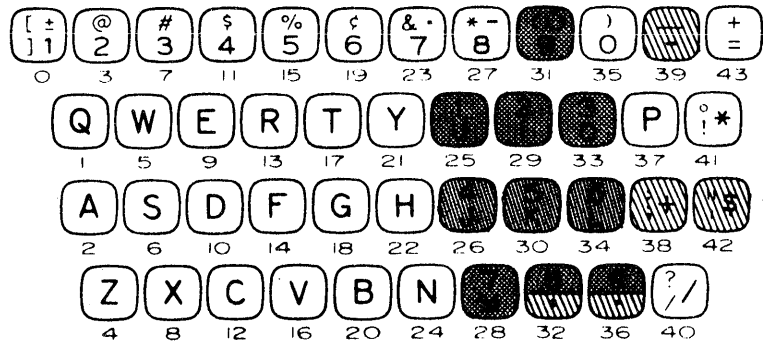
Where other than standard characters exist on the elements, multiple character keybuttons are on the actual keyboard. The characters shown at the right appear on these elements—standard arrangement is shown at the left for typist's information if a standard element is used.

016 1428 OCR Key punch

Simulator

Not available for Mag Keyboards or Memory Typewriters. Available to Commercial Customers ordering Model 721 as a no-charge SER. Available to Model 721 Educational customers via normal ordering procedures. Not compatible with the IBM Audio Typing Unit.

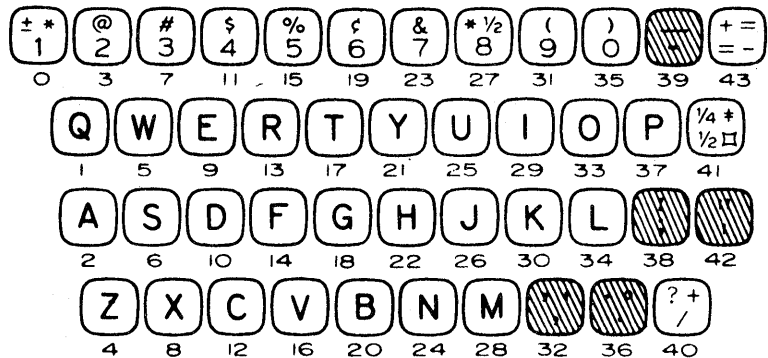
Standard arrangement. Available in type code 016. Designed for use with the IBM 1428 Scanner or card punch training. Only Accent Gray keybuttons and Charcoal Gray keypunch buttons are available.



022 1403 OCR

Available to Commercial Customers ordering Model 721 as a no-charge SER. Available to Model 721 Educational customers via normal ordering procedures. Not compatible with the IBM Audio Typing Unit.

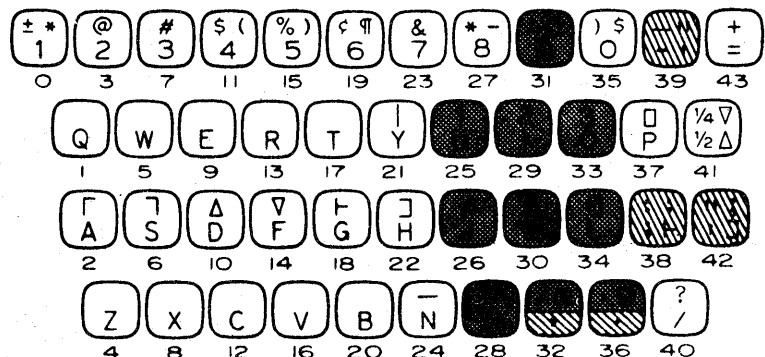
Standard arrangement. Available in type code 022.



023 12L2/12F2 OCR

Not available for Mag Keyboards, Memory Typewriters or Model 721. Not compatible with IBM Audio Typing Unit.

Standard arrangement. Available in type code 023. The type design is known as "12F2/12L2 Selfchek+." Only Accent Gray keybuttons and Charcoal Gray keypunch buttons are available.



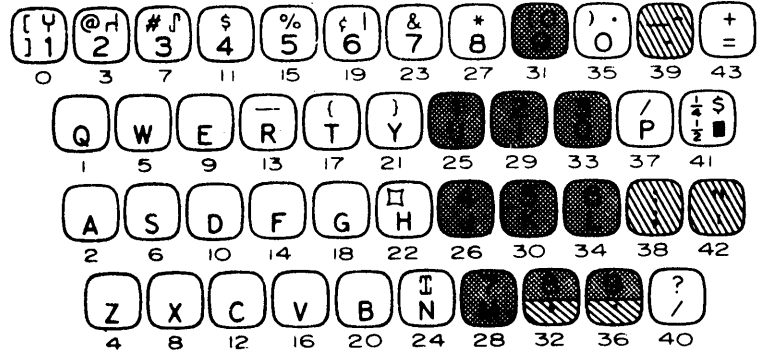
Velocity Control Feature supplied as standard at no extra charge.

88 Character Keyboards (cont'd)

056 American National Standards Institute - OCR

Not available for Mag Keyboards, Memory Typewriters or Model 721. Not compatible with IBM Audio Typing Unit.

Standard arrangement. Available in type code 056. Incorporates the official ANSI alpha-numeric character set for OCR.

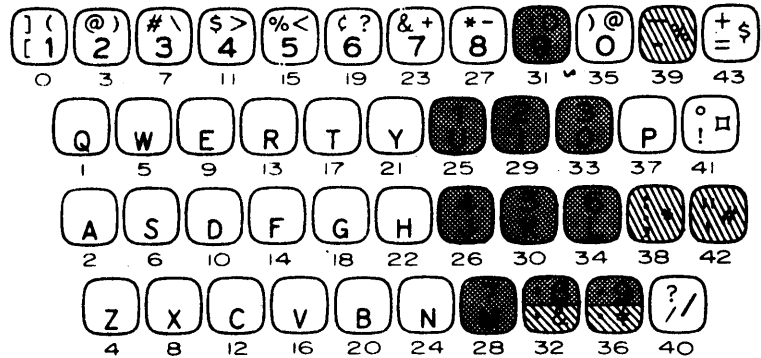


064 1403 OCR Keypunch Simulator

Not available for Mag Keyboards, Memory Typewriters or Model 721. Not compatible with IBM Audio Typing Unit.

Standard arrangement. Available in type code 064.

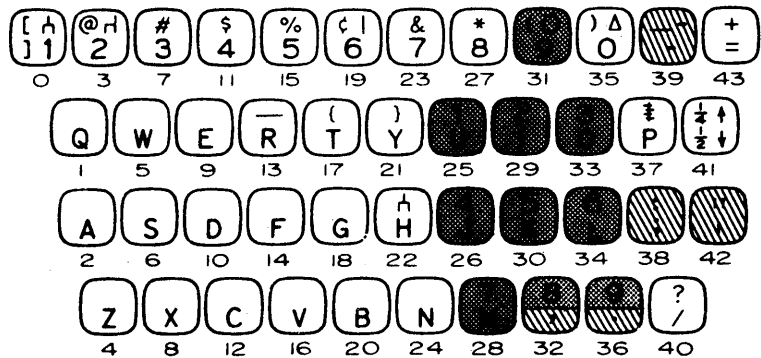
Velocity Control Feature supplied as standard at no extra charge.



065 915 - OCR

Not available for Mag Keyboards, Memory Typewriters or Model 721. Not compatible with IBM Audio Typing Unit.

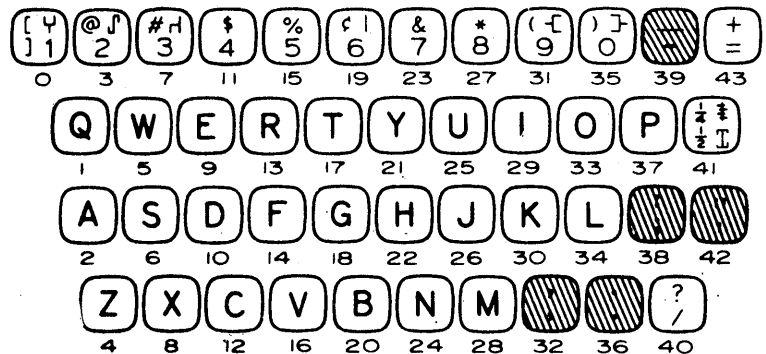
Standard arrangement. Available in type code 065. Meets the requirements of the CDC 915 Scanner.



091 Communications OCR

Not available for Mag Keyboards, Memory Typewriters or Model 721. Not compatible with IBM Audio Typing Unit.

Standard arrangement. Available in type code 091. This element provides the ANSI type style for the OCR in a correspondence keyboard arrangement.

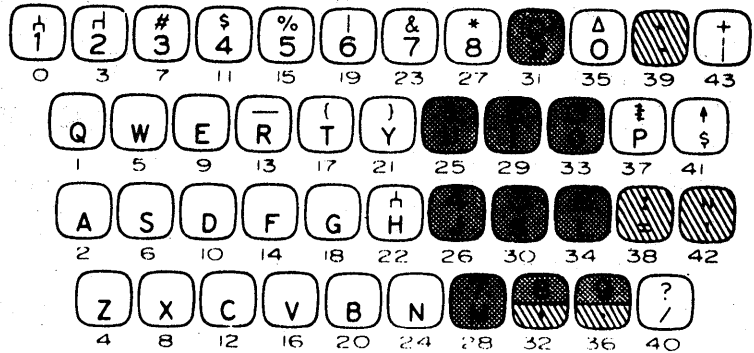


TYPE CATALOG

88 Character Keyboards (cont'd)
092 915 – OCR (Modified)

Not available for Mag Keyboards, Memory Typewriters or Model 721. Not compatible with IBM Audio Typing Unit.

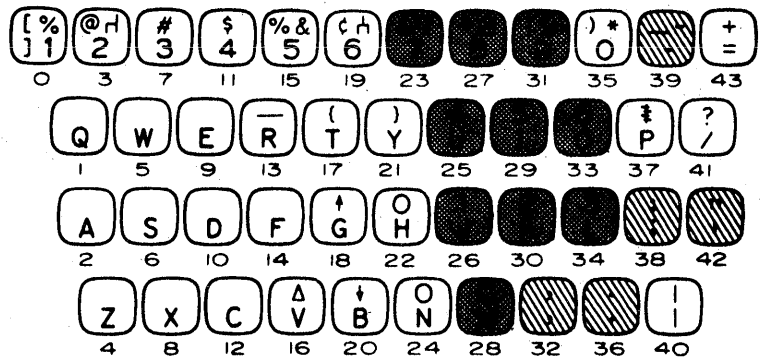
Standard arrangement. Available in type code 092. The keyboard and keypunch buttons are available only in contrasting light-dark colors, in combinations of Accent Gray key-buttons/Charcoal Gray keypunch buttons.



106 Adding Machine Simulator

Not available for Mag Keyboards, Memory Typewriters or Model 721. Not compatible with IBM Audio Typing Unit.

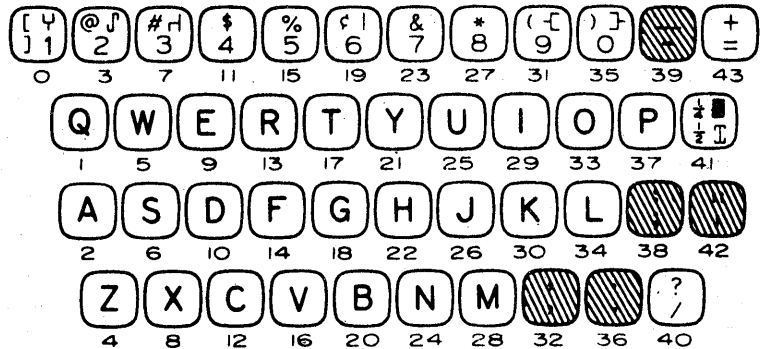
Standard arrangement. Available in type code 106. The keyboard and keypunch buttons are only available in contrasting light-dark colors, in combinations of Accent Gray key-buttons/Charcoal Gray keypunch buttons.



108 Communications OCR #2

Not available for Mag Keyboards, Memory Typewriters or Model 721. Not compatible with IBM Audio Typing Unit.

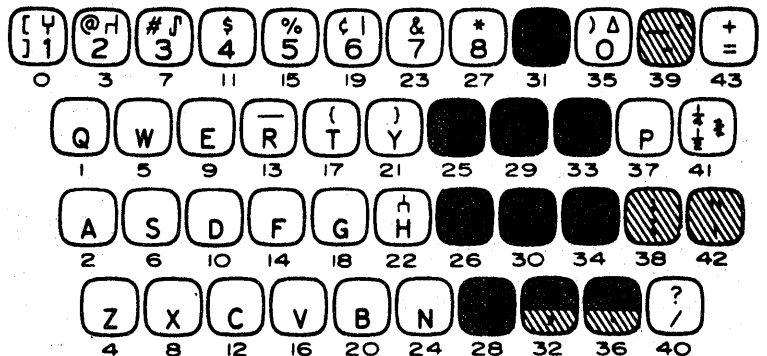
Standard arrangement. Available in type code 108.



122 915 OCR #2

Not available for Mag Keyboards, Memory Typewriters or Model 721. Not compatible with IBM Audio Typing Unit.

Standard arrangement. Available in type code 122.

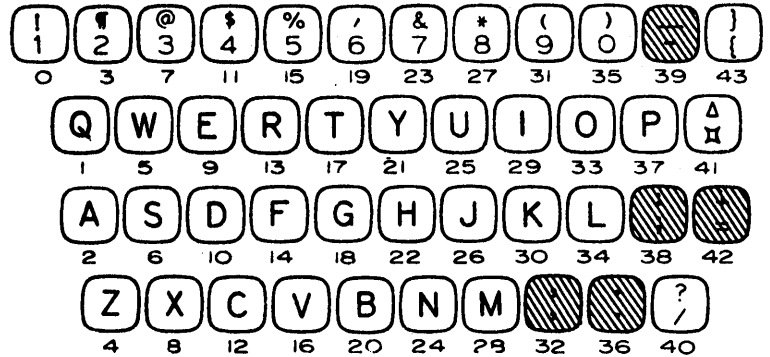


88 Character Keyboards (cont'd)

157 Printing & Publishing #2 OCR

Not available for Mag Keyboards, Memory Typewriters or Model 721. Not compatible with IBM Audio Typing Unit.

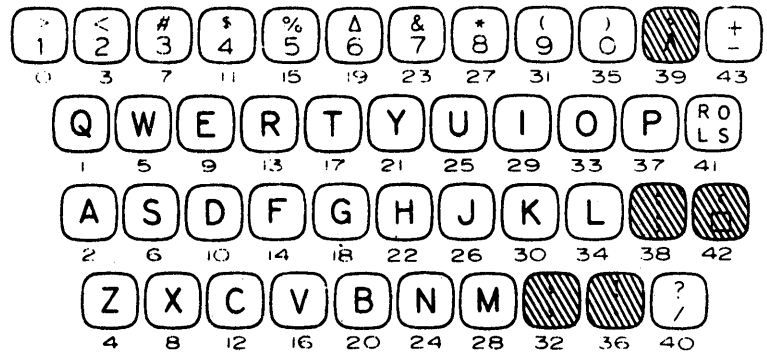
Standard arrangement. Available in type codes 157 and 199. (Type code 199 modified for Compuscan 170 Series Optical Readers).



159 Dataflow #2 – OCR

Not available for Mag Keyboards, Memory Typewriters or Model 721. Not compatible with IBM Audio Typing Unit.

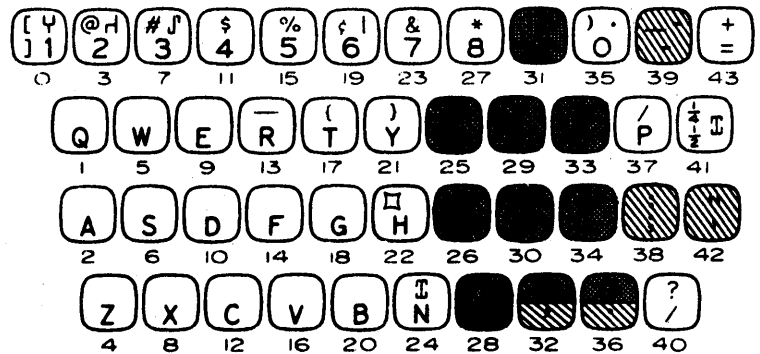
Standard arrangement. Available in type codes 659 and 672. Combines conventional characters with a bar code. Meets requirements of the Dataflow Optical Reading System. Available only with Charcoal Gray or Accent Gray keybuttons and platen knobs.



160 ANSI OCR

Not available for Mag Keyboards, Memory Typewriters or Model 721. Not compatible with IBM Audio Typing Unit.

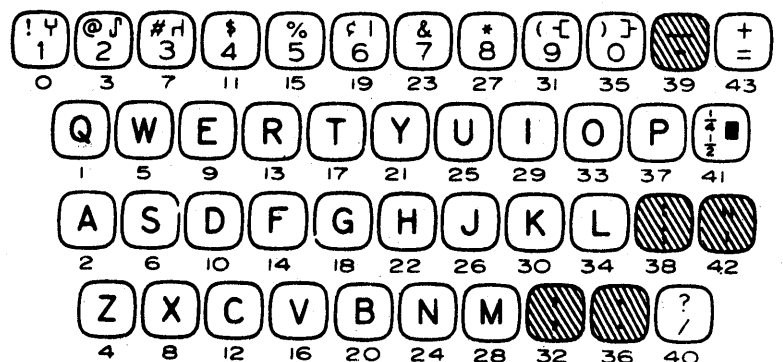
Same arrangement as the 056 keyboard, with the exception of the "belt-buckle" delete symbol in upper and lower cases, position 41 required by IBM 1287/88 Optical Readers.



170 Printing & Publishing #1 (ANSI-OCR-A)

Not available for Mag Keyboards, Memory Typewriters or Model 721. Not compatible with IBM Audio Typing Unit.

Standard arrangement. Available in type code 170. Includes all of the characters of the four ANSI-OCR elements plus the complete lower case alphabet. Not available with Accent Blue keybuttons and platen knobs.



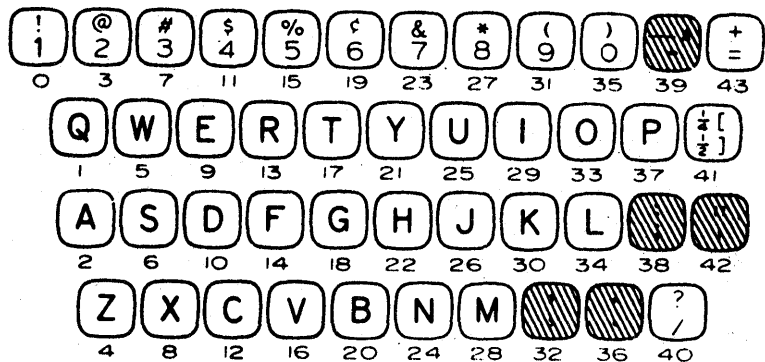
TYPE CATALOG

88 Character Keyboards (cont'd)

**173 Printing & Publishing #3
OCR**

Not available for Mag Keyboards, Memory Typewriters or Model 721. Not compatible with IBM Audio Typing Unit.

Standard arrangement. Available in type code 173. Meets requirements of the OCR "Auto-reader." Available only with Charcoal Gray or Accent Gray keybuttons and platen knobs.

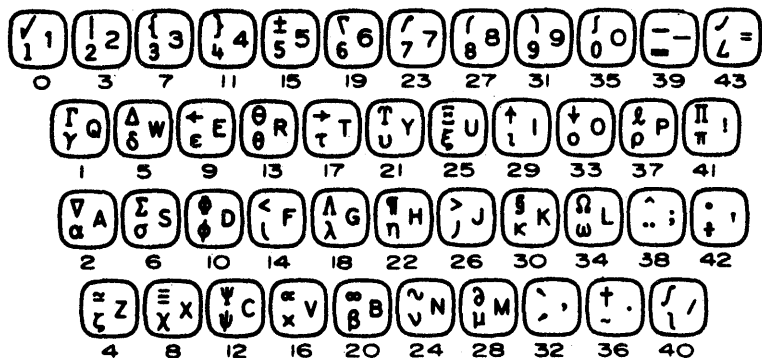


Symbol

Symbol Arrangement

Not available for Mag Keyboards or Memory Typewriters. Not compatible with IBM Audio Typing Unit

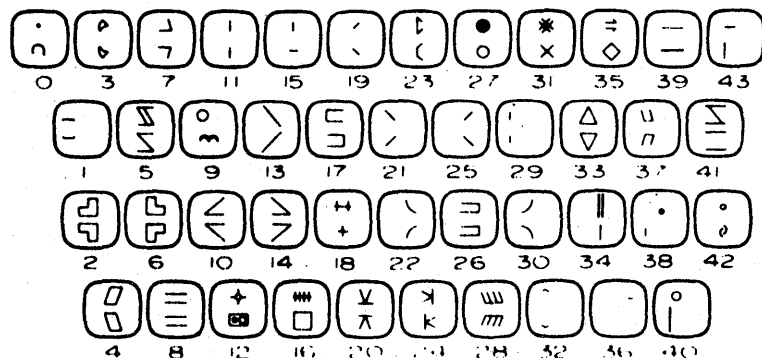
The keyboard arrangement shown only illustrates what characters are on the element – the standard keyboard arrangement is supplied. A half spacing ratchet is recommended. A Keyboard Reference Chart (Form No. 542-0037) aids in location of these characters on the standard keyboard. Available in type codes 004 and 061.



Labanotation

Not available for Mag Keyboards or Memory Typewriters. Not compatible with IBM Audio Typing Unit

The keyboard arrangement only illustrates what characters are on the element. The standard keyboard arrangement is supplied and matching keybuttons are not available. A keyboard reference chart (Form No. 542-0059) aids in location of these characters on the standard keyboard. The Labanotation element is designed for use only on a 10 pitch typewriter and requires 5 lines per inch (45 tooth ratchet) vertical line spacing and manual velocity control.

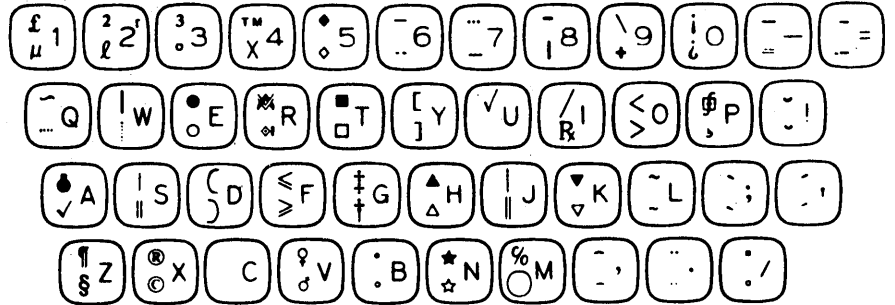


88 Character Keyboards (cont'd)

Symbol II Arrangement

Not available for Mag Keyboards or Memory Typewriters. Not compatible with IBM Audio Typing Unit

The keyboard arrangement only illustrates what characters are on the element. A keyboard reference chart, shown at right, (Form No. S544-0621) aids in location of these characters on the standard keyboard.



END

**MAG CARD EXECUTIVE® TYPEWRITER
TYPE STYLES**

<p>Arcadia 72* 10 Point Type Codes: 020, 021 24 tooth ratchet 5.33 lines per inch Recommended for typing stencils</p>	<p>The IBM Mag Card "Executive" Typewriter brings together three important technologies: proportional lettering, single-element typing, and the magnetic card.</p> <p>ABCDEFGHIJKLMN OPQRSTUVWXYZ !@#%&*() _+¼: ". . ? abcdefghijklmnopqr stuvwxyz 1234567890- =½; ', . /</p>
<p>Bold Face 72* 10 Point Type Codes: 003, 016, 025 24 tooth ratchet 5.33 lines per inch Recommended for printing media</p>	<p>The IBM Mag Card "Executive" Typewriter brings together three important technologies: proportional lettering, single-element typing, and the magnetic card.</p> <p>ABCDEFGHIJKLMN OPQRSTUVWXYZ !@#%&*() _+¼: ". . ? abcdefghijklmnopqr stuvwxyz 1234567890- =½; ', . /</p>
<p>Bold Face Italic 72 10 Point Type Codes: 008, 017 24 tooth ratchet 5.33 lines per inch Recommended for printing media</p>	<p><i>The IBM Mag Card "Executive" Typewriter brings together three important technologies: proportional lettering, single-element typing, and the magnetic card.</i></p> <p>ABCDEFGHIJKLMN OPQRSTUVWXYZ !@#%&*() _+¼: ". . ? abcdefghijklmnopqr stuvwxyz 1234567890- =½; ', . /</p>
<p>Document 72* 10 Point Type Codes: 015, 019 24 tooth ratchet 5.33 lines per inch Recommended for typing stencils</p>	<p>The IBM Mag Card "Executive" Typewriter brings together three important technologies: proportional lettering, single-element typing, and the magnetic card.</p> <p>ABCDEFGHIJKLMN OPQRSTUVWXYZ !@#%&*() _+¼: ". . ? abcdefghijklmnopqr stuvwxyz 1234567890- =½; ', . /</p>
<p>Essay 10 Point Type Codes: 002, 012 24 tooth ratchet 5.33 lines per inch</p>	<p>The IBM Mag Card "Executive" Typewriter brings together three important technologies: proportional lettering, single-element typing, and the magnetic card.</p> <p>ABCDEFGHIJKLMN OPQRSTUVWXYZ !@#%&*() _+¼: ". . ? abcdefghijklmnopqr stuvwxyz 1234567890- =½; ', . /</p>
<p>Essay Italic 10 Point Type Codes: 007, 014 24 tooth ratchet 5.33 lines per inch</p>	<p><i>The IBM Mag Card "Executive" Typewriter brings together three important technologies: proportional lettering, single-element typing, and the magnetic card.</i></p> <p>ABCDEFGHIJKLMN OPQRSTUVWXYZ !@#%&*() _+¼: ". . ? abcdefghijklmnopqr stuvwxyz 1234567890- =½; ', . /</p>

Because of inherent differences between printed and typewritten impressions, these type styles are not representative of typewritten material and should be used as a guide to type design only.

*Primary type style should be recommended to customers who wish to standardize on one type style due to high probability that this type style will continue to be available in future.

Mag Card EXECUTIVE® Typewriter Type Styles (cont'd)

Modern 72*
10 Point
Type Codes: 009, 010, 018
24 tooth ratchet
5.33 lines per inch
Recommended for typing stencils

The IBM Mag Card "Executive" Typewriter brings together three important technologies: proportional lettering, single-element typing, and the magnetic card.

ABCDEFGHIJKLMNOPQRSTUVWXYZ !@#\$\$%&*() _+¼: ", . . ?
abcdefghijklmnopqrstuvwxyz 1234567890 -=½; ' , . /

Thesis
10 Point
Type Codes: 005, 011
24 tooth ratchet
5.33 lines per inch

The IBM Mag Card "Executive" Typewriter brings together three important technologies: proportional lettering, single-element typing, and the magnetic card.

ABCDEFGHIJKLMNOPQRSTUVWXYZ !@#\$\$%&*() _+¼: ", . . ?
abcdefghijklmnopqrstuvwxyz 1234567890 -=½; ' , . /

Title
10 Point
Type Codes: 006, 013
24 tooth ratchet
5.33 lines per inch

The IBM Mag Card "Executive" Typewriter brings together three important technologies: proportional lettering, single-element typing, and the magnetic card.

ABCDEFGHIJKLMNOPQRSTUVWXYZ !@#\$\$%&*() _+¼: ", . . ?
abcdefghijklmnopqrstuvwxyz 1234567890 -=½; ' , . /

Symbol
10 Point
Type Code: 022
24 tooth ratchet
5.33 lines per inch

∫ π { } \$ † [] () √ φ θ @ ® ™ ° α ∏ ÷ □ Σ Δ ← Γ < ~ > ~ ~ ^ ~ Ψ ∃ Λ ∞ Θ Ω ` ^ ±
1 2 3 4 5 6 7 8 9 0 _ λ μ φ ε ρ τ υ θ ι ο π χ α σ δ ι γ η κ τ \ ' ζ ψ ξ λ β ν ω ´ ¨ χ

*Primary type style — should be recommended to customers who wish to standardize on one type style due to high probability that this type style will continue to be available in future.

**MAG CARD EXECUTIVE® TYPEWRITER
KEYBOARDS BY TYPE STYLE**

All proportional lettering elements are for use with the 101 American Standard, 149 Legal or 002 Latin American keyboards.

The 101 American Standard Keyboard arrangement has in position 0, ! over 1 and in position 41, ¼ over ½.

The 149 Legal Keyboard arrangement has in position 0, ° over 1; in position 3, ¶ over 2; in position 19, § over 6; in position 41, [over]. See the 002 keyboard for the character set of the Latin American elements.

Type Code	Type Style	Keyboard	Part Number
020	Arcadia 72	101	1246020
021	Arcadia 72	002	1246021
003	Bold Face 72	101	1246003
016	Bold Face 72	002	1246016
025	Bold Face 72	149	1246025
008	Bold Face Italic 72	101	1246008
017	Bold Face Italic 72	002	1246017
015	Document 72	101	1246015
019	Document 72	149	1246019
002	Essay	101	1246002
012	Essay	002	1246012
007	Essay Italic	101	1246007
014	Essay Italic	002	1246014
009	Modern 72	101	1246009
018	Modern 72	002	1246018
010	Modern 72	149	1246010
005	Thesis	101	1246005
011	Thesis	002	1246011
006	Title	101	1246006
013	Title	002	1246013
022	Symbol	101 or 149	1246022

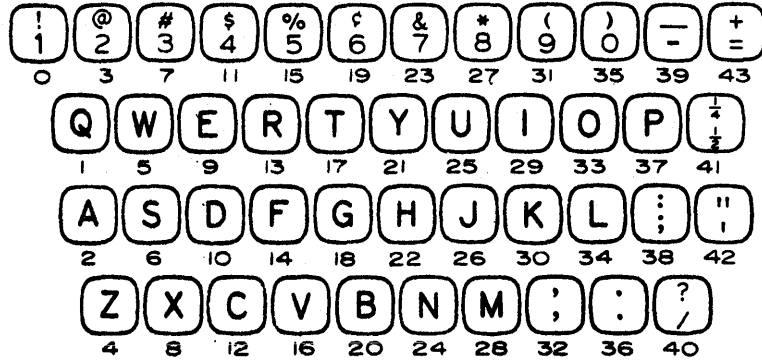
END

**MAG CARD EXECUTIVE® TYPEWRITER
KEYBOARDS**

Correspondence

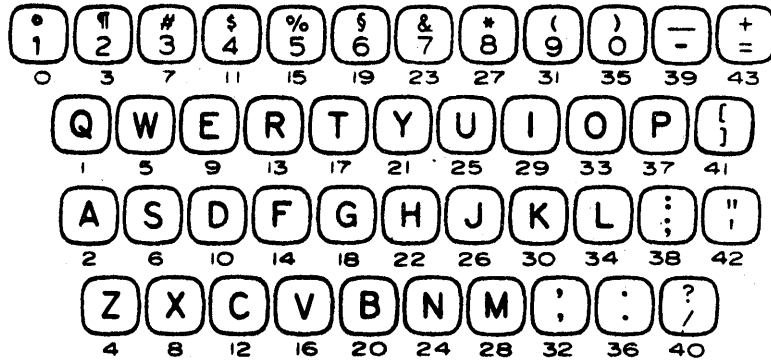
101 American Standard Keyboard

Standard arrangement. Available in type codes 002, 003, 005, 006, 007, 008, 009, 015, 020.



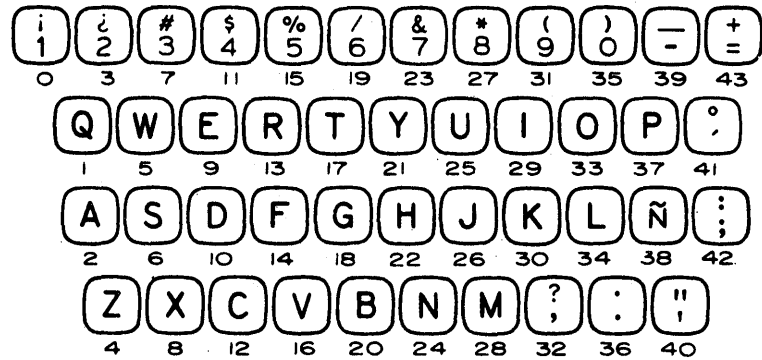
149 Legal

Standard arrangement. Available in type codes 010, 019, 025.



**002 Latin American
Correspondence**

Standard arrangement. Available in type codes 011, 012, 013, 014, 016, 017, 018 and 021.



**Mag Card EXECUTIVE® Typewriter
Keyboards (cont'd)**

Symbol

Symbol

The keyboard arrangement shown only illustrates what characters are on the element — the standard keyboard arrangement is supplied and matching keybuttons are not available. This element can be used only on machines equipped with the 101 American Standard or 149 Legal Keyboard. It is not compatible with any other keyboards, because of dead key, escapement and velocity differences.

√ ₁	∫ ₂	{ ₃	} ₄	§ ₅	† ₆	[₇	]₈	(₉	)₀	= ₋	₌
0	3	7	11	15	19	23	27	31	35	39	43
√ ₁ Q	∅ ₂ W	∂ ₃ E	⊙ ₄ R	⊕ ₅ T	∫ ₆ U	∅ ₇ I	∞ ₈ O	∏ ₉ P	‡ ₀ †		
1	5	9	13	17	21	25	29	33	37	41	
∅ ₁ A	∑ ₂ S	Δ ₃ D	‡ ₄ F	∫ ₅ G	< ₆ H	~ ₇ J	> ₈ K	‡ ₉ L	~ ₀ ;	"/ ₁ '	
2	6	10	14	18	22	26	30	34	38	42	
~ ₁ Z	∫ ₂ X	∑ ₃ C	∫ ₄ V	∅ ₅ B	∅ ₆ N	∅ ₇ M	∫ ₈ ,	∫ ₉ .	∫ ₀ /		
4	8	12	16	20	24	28	32	36	40		

A Keyboard Reference Chart (Form No. G543-0113) aids in location of these characters on the standard keyboard.

For maximum flexibility, the Symbol element should be used in conjunction with a half-spacing (48 tooth) ratchet. Using the 48 tooth ratchet, the superscript numbers can be used for subscripts by manually advancing the platen one tooth. If it is necessary for the vertical line on the radical sign to align with the underscore to create boxes or square root symbols, the use of a 27 or 54 tooth ratchet is suggested.

END

**MODEL D BRAILLE TYPEWRITER
TYPE STYLES/KEYBOARDS**

Braille
Code 102, 4 Pitch, Type mark – BR

100 Braille

Standard arrangement. Keyboard arrangement available at Lexington Plant. Available in type code 102 only.

1	2	3	\$	5	!	()	‘ ’	9	0	56 Ltr COM	GH BLE #
ER	WITH	EN	OF	OU	AND	ING	IN	OW	TH	45 Ccp 6	
EA	WH	DIS	TO	WERE	HIS	WAS	CH	456	:	;	4 ;
A	S	D	F	G	H	J	K	L			
AR	FOR	CON	THE	BE	ED	SH	5	46	?	ST	/
Z	X	C	V	B	N	M	?	*			

END

**COMPOSING EQUIPMENT
TYPE STYLES AND KEYBOARDS**

Description, Pitch*, Part No.

Aldine Roman

AR-12-M, Red, 1194018
AR-10-M, Yellow, 1194020
AR-8-M, Blue, 1194022

10 Point Medium (AR-10-M)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890-=|?[,.:!†+\$%/&*()-@¼¾½“:

AR-12-I, Red, 1194019
AR-10-I, Yellow, 1194021
AR-8-I, Blue, 1194023

10 Point Italic (AR-10-I)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890-=|?[,.:!†+\$%/&*()-@¼¾½“:

AR-12-B, Red, 1194053
AR-10-B, Yellow, 1194054
AR-8-B, Blue, 1194055

10 Point Bold (AR-10-B)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890-=|?[,.:!†+\$%/&*()-@¼¾½“:

Baskerville

BA-11-M, Red, 1194092
BA-9-M, Yellow, 1194095
BA-8-M, Blue, 1194098

9 Point Medium (BA-9-M)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890-=|?[,.:!†+\$%/&*()-@¼¾½“:

BA-11-I, Red, 1194093
BA-9-I, Yellow, 1194096
BA-8-I, Blue, 1194099

9 Point Italic (BA-9-I)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890-=|?[,.:!†+\$%/&*()-@¼¾½“:

*Red - 1/72" unit escapement
Yellow - 1/84" unit escapement
Blue - 1/96" unit escapement

Because of inherent differences between printed and typewritten impressions, these type styles are not representative of typewritten material and should be used as a guide to type design only.

Composing Equipment Type Styles and Keyboards (cont'd)**Description, Pitch, Part No.****Baskerville (continued)**

BA-11-B, Red, 1194094
 BA-9-B, Yellow, 1194097
 BA-8-B, Blue, 1194100

9 Point Bold (BA-9-B)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

ABCDEFGHIJKLMN**OP**QRSTUVWXYZ
 abcdefghijklmnopqrstuvwx**yz**
 1234567890=**] ?[,.:!†+\$/&*()-@%¼½''**:

Bodoni

B-12-M, Red, 1194024
 B-10-M, Yellow, 1194026
 B-8-M, Blue, 1194028

10 Point Medium (B-10-M)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

ABCDEFGHIJKLMN**OP**QRSTUVWXYZ
 abcdefghijklmnopqrstuvwx**yz**
 1234567890=**] ?[,.:!†+\$/&*()-@%¼½''**:

B-12-I, Red, 1194025
 B-10-I, Yellow, 1194027
 B-8-I, Blue, 1194029

10 Point Italic (B-10-I)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

*ABCDEFGHIJKLMN**OP**QRSTUVWXYZ
 abcdefghijklmnopqrstuvwx**yz**
 1234567890=**] ?[,.:!†+\$/&*()-@%¼½''**:*

B-12-B, Red, 1194061
 B-10-B, Yellow, 1194057
 B-8-B, Blue, 1194058

10 Point Bold (B-10-B)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

ABCDEFGHIJKLMN**OP**QRSTUVWXYZ
 abcdefghijklmnopqrstuvwx**yz**
 1234567890=**] ?[,.:!†+\$/&*()-@%¼½''**:

Century

C-11-M, Red, 1194115
 C-10-M, Red, 1194065
 C-9-M, Yellow, 1194066
 C-8-M, Yellow, 1194067
 C-6-M, Blue, 1194068

9 Point Medium (C-9-M)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

ABCDEFGHIJKLMN**OP**QRSTUVWXYZ
 abcdefghijklmnopqrstuvwx**yz**
 1234567890=**] ?[,.:!†+\$/&*()-@%¼½''**:

C-11-I, Red, 1194118
 C-10-I, Red, 1194069
 C-9-I, Yellow, 1194070
 C-8-I, Yellow, 1194071
 C-6-I, Blue, 1194072

9 Point Italic (C-9-I)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

*ABCDEFGHIJKLMN**OP**QRSTUVWXYZ
 abcdefghijklmnopqrstuvwx**yz**
 1234567890=**] ?[,.:!†+\$/&*()-@%¼½''**:*

Composing Equipment Type Styles and Keyboards (cont'd)**Description, Pitch, Part No.****Century (continued)**

C-11-B, Red, 1194124
 C-10-B, Red, 1194073
 C-9-B, Yellow, 1194074
 C-8-B, Yellow, 1194075
 C-6-B, Blue, 1194076

9 Point Bold (C-9-B)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 1234567890-] ? [, . : ! + % / & * () - @ 1/4 1/2 "

Century Presswire

C-9-MPW, Yellow, 1194212
 C-8-MPW, Yellow, 1194213
 C-6-MPW, Blue, 1194214

8 Point Medium (C-8-MPW)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 1234567890- @ 1 ? , . : ! % & \$ / 1/4 * () - 1/2 3 + "

C-9-BPW, Yellow, 1194215
 C-8-BPW, Yellow, 1194216

8 Point Bold (C-8-BPW)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 1234567890- @ 1 ? , . : ! % & \$ / 1/4 * () - 1/2 3 + "

Classified News

CN-10-M, Red, 1194059
 CN-8-M, Yellow, 1194060
 CN-6-M, Blue, 1194056

8 Point Medium (CN-8-M)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 1234567890-] ? [, . : ! + % / & * () - @ 1/4 1/2 "

CN-10-B, Red, 1194062
 CN-8-B, Yellow, 1194063
 CN-6-B, Blue, 1194064

8 Point Bold (CN-8-B)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 1234567890-] ? [, . : ! + % / & * () - @ 1/4 1/2 "

Classified News Presswire

CN-6-MPW, Blue, 1194211

6 Point Medium (CN-6-MPW)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 1234567890- @ 1 ? , . : ! % & \$ / 1/4 * () - 1/2 3 + "

Composing Equipment Type Styles and Keyboards (cont'd)

Description, Pitch, Part No.

Journal Roman

J-11-M, Red, 1194081
 J-10-M, Yellow, 1194084
 J-8-M, Blue, 1194087

10 Point Medium (J-10-M)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

ABCDEFGHIJKLMN**OP**QRSTUVWXYZ
 abcdefghijklmnopqrstuvwx**yz**
 1234567890=] ?[...!†+\$%/&*()-@¼½”:

J-11-I, Red, 1194082
 J-10-I, Yellow, 1194085
 J-8-I, Blue, 1194088

10 Point Italic (J-10-I)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

ABCDEFGHIJKLMN**OP**QRSTUVWXYZ
 abcdefghijklmnopqrstuvwx**yz**
 1234567890=] ?[...!†+\$%/&*()-@¼½”:

J-11-B, Red, 1194083
 J-10-B, Yellow, 1194086
 J-8-B, Blue, 1194089

10 Point Bold (J-10-B)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

ABCDEFGHIJKLMN**OP**QRSTUVWXYZ
 abcdefghijklmnopqrstuvwx**yz**
 1234567890=] ?[...!†+\$%/&*()-@¼½”:

J-11-BI, Red, 1194090
 J-10-BI, Yellow, 1194093
 J-8-BI, Blue, 1194135

10 Point Bold Italic (J-10-BI)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

ABCDEFGHIJKLMN**OP**QRSTUVWXYZ
 abcdefghijklmnopqrstuvwx**yz**
 1234567890=] ?[...!†+\$%/&*()-@¼½”:

Press Roman

PR-11-M, Red, 1194000**
 PR-11-M, Red, 1194101***
 PR-11-M, Legal, Red, 1194136***
 PR-10-M, Yellow, 1194003**
 PR-10-M, Yellow, 1194141***
 PR-10-M Legal, Yellow, 1194145***
 PR-9-M, Yellow, 1194077
 PR-8-M, Blue, 1194006
 PR-7-M, Blue, 1194009**

10 Point Medium (PR-10-M)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

ABCDEFGHIJKLMN**OP**QRSTUVWXYZ
 abcdefghijklmnopqrstuvwx**yz**
 1234567890=] ?[...!†+\$%/&*()-@¼½”:

PR-11-I, Red, 1194001
 PR-11-I, Red, 1194102***
 PR-11-I, Legal, Red, 1194137***
 PR-10-I, Yellow, 1194004
 PR-10-I, Yellow, 1194142***
 PR-10-I, Legal, Yellow, 1194146
 PR-9-I, Yellow, 1194078
 PR-8-I, Blue, 1194007
 PR-7-I, Blue, 1194010

10 Point Italic (PR-10-I)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

ABCDEFGHIJKLMN**OP**QRSTUVWXYZ
 abcdefghijklmnopqrstuvwx**yz**
 1234567890=] ?[...!†+\$%/&*()-@¼½”:

Composing Equipment Type Styles and Keyboards (cont'd)

Description, Pitch, Part No.

Press Roman (continued)

PR-11-B, Red, 1194002**
 PR-10-B, Yellow, 1194005**
 PR-9-B, Yellow, 1194079
 PR-8-B, Blue, 1194008
 PR-7-B, Blue, 1194153

10 Point Bold (PR-10-B)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

ABCDEFGHIJKLMN**OPQRSTUVWXYZ**
 abcdefghijklmnopqrstuv**wxyz**
 1234567890-=[?[:;!†+\$%/&*()-@¼¾½'":

PR-11-BI, Red, 1194116
 PR-10-BI, Yellow, 1194121
 PR-9-BI, Yellow, 1194127
 PR-8-BI, Blue, 1194132
 PR-7-BI, Blue, 1194150

10 Point Bold Italic (PR-10-BI)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

ABCDEFGHIJKLMN**OPQRSTUVWXYZ**
 abcdefghijklmnopqrstuv**wxyz**
 1234567890-=[?[:;!†+\$%/&*()-@¼¾½'":

Pyramid

P-12-M, Red, 1194030
 P-10-M, Yellow, 1194032
 P-8-M, Blue, 1194034

10 Point Medium (P-10-M)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

ABCDEFGHIJKLMN**OPQRSTUVWXYZ**
 abcdefghijklmnopqrstuv**wxyz**
 1234567890-=[?[:;!†+\$%/&*()-@¼¾½'":

P-12-I, Red, 1194031
 P-10-I, Yellow, 1194033
 P-8-I, Blue, 1194035

10 Point Italic (P-10-I)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

ABCDEFGHIJKLMN**OPQRSTUVWXYZ**
 abcdefghijklmnopqrstuv**wxyz**
 1234567890-=[?[:;!†+\$%/&*()-@¼¾½'":

Theme

T-11M, Red, 1194117
 T-10-M, Yellow, 1194126
 T-9-M, Yellow, 1194147
 T-8-M, Blue, 1194123

10 Point Medium (T-10-M)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

ABCDEFGHIJKLMN**OPQRSTUVWXYZ**
 abcdefghijklmnopqrstuv**wxyz**
 1234567890-=[?[:;!†+\$%/&*()-@¼¾½'":

**Can be customized

Composing Equipment Type Styles and Keyboards (cont'd)

Description, Pitch, Part No.

Theme (continued)

T-11-I, Red, 1194119
 T-10-I, Yellow, 1194130
 T-9-I, Yellow, 1194148
 T-8-I, Blue, 1194128

10 Point Italic (T-10-I)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

ABCDEFGHIJKLMN**OP**QRSTUVWXYZ
 abcdefghijklmnopqrstuvwxy
 1234567890=|?[,;:|!+\$%/&*()-@%¼½”:

T-11-B, Red, 1194122
 T-10-B, Yellow, 1194134
 T-9-B, Yellow, 1194149
 T-8-B, Blue, 1194131

10 Point Bold (T-10-B)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

ABCDEFGHIJKLMN**OP**QRSTUVWXYZ
 abcdefghijklmnopqrstuvwxy
 1234567890=|?[,;:|!+\$%/&*()-@%¼½”:

Univers (+)

UN-11-L, Red, 1194036
 UN-11-LC, Yellow, 1194040
 UN-10-L, Yellow, 1194044
 UN-8-L, Blue, 1194048

10 Point Light (UN-10-L)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

ABCDEFGHIJKLMN**OP**QRSTUVWXYZ
 abcdefghijklmnopqrstuvwxy
 1234567890=|?[,;:|!+\$%/&*()-@%¼½”:

UN-11-M, Red, 1194037**
 UN-11-M, Red, 1194103***
 UN-10-M, Yellow, 1194045**
 UN-10-M, Yellow, 1194143***
 UN-8-M, Blue, 1194049
 UN-7-M, Blue, 1194052**

10 Point Medium (UN-10-M)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

ABCDEFGHIJKLMN**OP**QRSTUVWXYZ
 abcdefghijklmnopqrstuvwxy
 1234567890=|?[,;:|!+\$%/&*()-@%¼½”:

UN-11-MC, Yellow, 1194041
 UN-10-MC, Blue, 1194080

10 Point Medium Condensed (UN-10-MC)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

ABCDEFGHIJKLMN**OP**QRSTUVWXYZ
 abcdefghijklmnopqrstuvwxy
 1234567890=|?[,;:|!+\$%/&*()-@%¼½”:

(+) In addition to the Univers type styles and part numbers shown here and under "Specialty Fonts," the UN-10/8-ABA font, part no. 1194162, is available for Composers equipped with an SER for use in the Banking Industry.

**Can be customized.

***MT/ST, MT/SC compatibility

Composing Equipment Type Styles and Keyboards (cont'd)**Description, Pitch, Part No.****Univers (continued)**

UN-11-MI, Red, 1194039
 UN-11-I, Red, 1194104***
 UN-10-MI, Yellow, 1194047
 UN-10-I, Yellow, 1194144***
 UN-8-MI, Blue, 1194051

10 Point Medium Italic (UN-10-MI)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

ABCDEFGHIJKLMN**OP**QRSTUVWXYZ
 abcdefghijklmnopqrstuv**wxyz**
 1234567890-=] ? [, . ; ! † + \$ % / & * () - @ % ‰ ′ ″ :

UN-11-MIC, Yellow, 1194043
 UN-10-MIC, Blue, 1194125

10 Point Medium Italic Condensed (UN-10-MIC)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

ABCDEFGHIJKLMN**OP**QRSTUVWXYZ
 abcdefghijklmnopqrstuv**wxyz**
 1234567890-=] ? [, . ; ! † + \$ % / & * () - @ % ‰ ′ ″ :

UN-11-B, Red, 1194038**
 UN-10-B, Yellow, 1194046**
 UN-8-B, Blue, 1194050

10 Point Bold (UN-10-B)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

ABCDEFGHIJKLMN**OP**QRSTUVWXYZ
 abcdefghijklmnopqrstuv**wxyz**
 1234567890-=] ? [, . ; ! † + \$ % / & * () - @ % ‰ ′ ″ :

UN-11-BC, Yellow, 1194042
 UN-10-BC, Blue, 1194120

10 Point Bold Condensed (UN-10-BC)

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

ABCDEFGHIJKLMN**OP**QRSTUVWXYZ
 abcdefghijklmnopqrstuv**wxyz**
 1234567890-=] ? [, . ; ! † + \$ % / & * () - @ % ‰ ′ ″ :

**Can be customized

***MT/ST, MT/SC compatibility



TYPE CATALOG

Composing Equipment Type Styles and Keyboards (cont'd)

Description, Pitch, Part No.

Specialty Fonts

Copperplate Gothic

8 Point Medium (CG-8-M)

CG-12-M, Red, 1194414
CG-10-M, Red, 1194415
CG-8-M, Yellow, 1194416
CG-6-M, Blue, 1194417

ABCDEFGHIJKLMNOPQRSTUVWXYZ
/ | | . * * * + ° [=] □ ▯ □ □ † + n - > | @ \$ C *
1 2 3 4 5 6 7 8 9 0 - \$ £ ? € ' . ! _ _ _ % / & = () © § ¶ * . . .

Copperplate Gothic Fractions

10 Point Fraction (CG-10-F)

CG-12-F, Red, 1194129
CG-10-F, Red, 1194133

THE IBM "SELECTRIC" COMPOSER OFFERS AN ECONOMICAL WAY TO PROVIDE QUALITY TYPOGRAPHY FOR ALL PRINTED MATERIAL. CAMERA-READY COPY CAN BE PREPARED WITH A MINIMUM OF EFFORT AND EXPENSE.

Gothic/Fraction Feature required if used on "Selectric" Composer.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
1 1/2 3/4 4 5 6 7 8 9 10 1/4 1/2 3/8 5/8 1/2 * 1/4 1/2
1 2 3 4 5 6 7 8 9 0 - =] ? [. . . ; 1 2 3 4 5 6 7 8 9 0 . . . * 0 . . .

Copperplate Gothic Double Case

8 Point Double Case (CG-8-DC)

CG-12-DC, Red, 1194111
CG-10-DC, Red, 1194112
CG-8-DC, Yellow, 1194113
CG-6-DC, Blue, 1194114

THE IBM "SELECTRIC" COMPOSER OFFERS AN ECONOMICAL WAY TO PROVIDE QUALITY TYPOGRAPHY FOR ALL PRINTED MATERIAL. CAMERA-READY COPY CAN BE PREPARED WITH A MINIMUM OF EFFORT AND EXPENSE.

Gothic/Fraction Feature required if used on "Selectric" Composer.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
ABCDEFGHIJKLMNOPQRSTUVWXYZ
1 2 3 4 5 6 7 8 9 0 - =] ? [. . . ; ! † + \$ % / & * () © ¼ * ½ ' ' :

Univers Bold/Light

10 Point Bold/ Light (UN-10-B/L)

UN-11-B/L, Red, 1194138
UN-10-B/L, Yellow, 1194139

The IBM "Selectric" Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

Bold/Light Feature required if used on "Selectric" Composer.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890-=] ? [. . . ; 1234567890--@¼¾½'' :

Univers Technical

10 Point Univers Technical (UN-10-T)

UN-11-T, Red, 1194107
UN-10-T, Yellow, 1194108

The IBM SELECTRIC Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

Technical Feature required if used on "Selectric" Composer.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890θ±()...1234567890-π∞◊⇒

Press Roman Technical

10 Point Press Roman Technical (PR-10-T)

PR-11-T, Red, 1194105
PR-10-T, Yellow, 1194106

The IBM SELECTRIC Composer offers an economical way to provide quality typography for all printed material. Camera-ready copy can be prepared with a minimum of effort and expense.

Technical Feature required if used on "Selectric" Composer.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890θ()...1234567890-π∞◊⇒

Composing Equipment Type Styles and Keyboards (cont'd)

Description, Pitch, Part No.

Press Roman Symbol

PRX-11-T, Red, 1194014
PRX-10-T, Yellow, 1194016
PRX-7-T, Blue, 1194110

10 Point Symbol Technical (PRX-10-T)

← ∈] → L E ↔ ⇌ √ h ⇒ □ √ A ⇔ ≠ ∩ N † † ⇒ R K + ⇐ Γ
⊙ γ † † ℓ / β λ (f ↓) ~ - p † α ^ \ *] \ U = [/
1 2 3 4 5 6 7 8 9 0 ^ b π ° " ' . : [φ θ φ &] ⊃ δ () ⇔ # C ⊙ ⊗ | ' ' .

10 Point Symbol Mathematical (PRX-10-M)

PRX-11-M, Red, 1194015
PRX-10-M, Yellow, 1194017
PRX-7-M, Blue, 1194109

≥ ≅ Δ ≈ ≈ ≅ ≅ ≅ < * . > α O X = ∂ ≤ ≠ ℓ ∇ † † ≥ □ ≤ † † †
→ ± ∫ ∫ ° / φ † † = † † √ † † : g † † f † † s ÷ † † Σ † † π °
1 2 3 4 5 6 7 8 9 0 / \ ∴ π † † . - [- ≅ ≅ ≅] ≅ - () - ~ + R ∞ : | \

10 Point Symbol Greek (PRX-10-G)

PRX-11-G, Red, 1194011
PRX-11-GJP, Red, 1194217
PRX-10-G, Yellow, 1194012
PRX-10-GJP, Yellow, 1194411
PRX-7-G, Blue, 1194013
PRX-7-GJP, Blue, 1194412

E Γ B Λ Ξ Θ N K I ς Π # Ω X Θ P A § φ † H O Ψ Σ Δ Z
ε γ β λ ξ ^ ν κ ι . π ^ ω χ θ ρ α [^] η ο ψ σ δ ζ
○ ⊕ ⊙ ☆ ■ ● ▲ ★ ◆ ♦ ^ μ φ τ υ ' . ' . Δ † † £ @ . ¶ ◇ () ... M Φ T T ' ' ' .

Ruling

RX-12, Red, 1194413

12 Point Ruling (RX-12)

Upper case "2"
Upper case "3"
Upper case "4"
Upper case "8"
Upper case "-."

Lower case "n" [Vertical bars]

Lower case "b" [Vertical bars]

Lower case "v" [Vertical bars]

Lower case "c" [Vertical bars]

Lower case "-." [Dotted line]

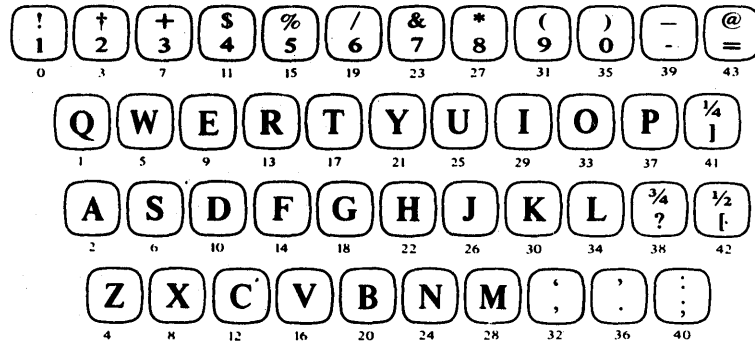
Lower case "." [Dotted line] (Square dot leader)

Upper case "." [Dotted line] (Round dot leader)

Composing Equipment Type Styles and Keyboards (cont'd)

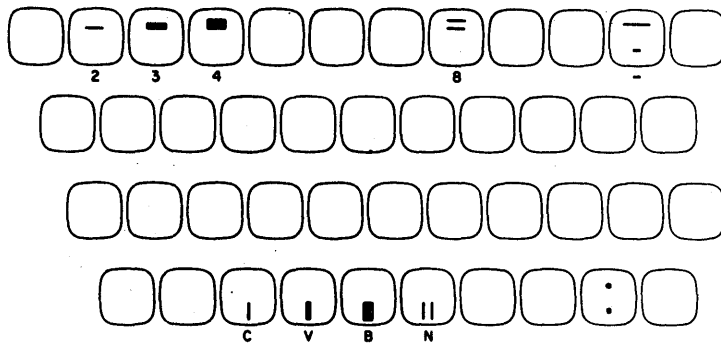
Keyboards

Domestic – 000



Ruling

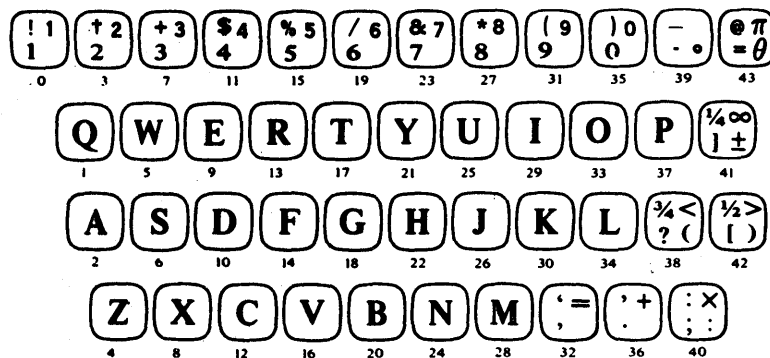
Mag Card Composer and Electronic
"Selectric" Composer - K000
"Selectric" Composer – 2556



Characters shown are in addition to
characters shown on Domestic
Keyboard.

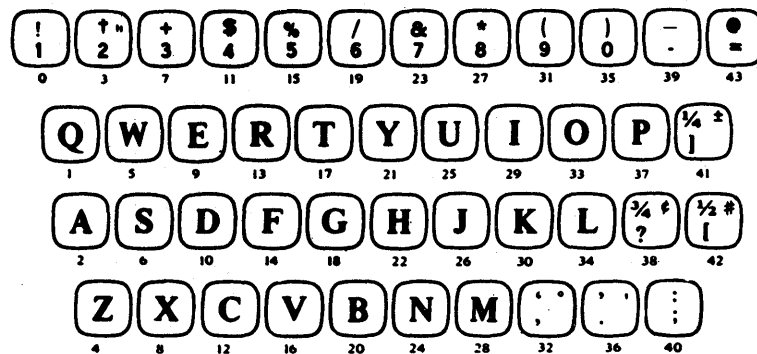
Technical Composition

Mag Card Composer and Electronic
"Selectric" Composer - K004
"Selectric" Composer – 1301



Typewriter Character

Mag Card Composer and Electronic
"Selectric" Composer - K008
"Selectric" Composer – keybuttons
available for field installation



Composing Equipment Type Styles and Keyboards (cont'd)**MT "Selectric" Recorder
Elements (With Composer
character set and arrangement)**

Description	Pitch	Part No.
Prestige Elite	12	1194198
Prestige Elite (Press Wire)	12	1194196
+Prestige Elite	12	1167111
+Prestige Elite (Legal)	12	1167110
++Prestige Elite (Technical)	12	1194195
Courier	10	1194197
+Courier	10	1167113
+Courier (Legal)	10	1167112

+Identifies those Courier and Prestige Elite elements that provide a compatible character set between the MT/ST and MT/SC to support precons 340, 341, 342 and 343. Caps have letters MT in lower right hand corner for identification purposes.

++For use with Technical Feature.

**OFFICE SYSTEM 6 INK JET PRINTERS
TYPE STYLES/KEYBOARDS**

<p>Bold Face 10 Point 1/60" unit escapement Part No. 1354759</p> <p>Part No. 1354760 (Extended)</p>	<p>Office System 6 provides the customer with modular capability to originate, process, and distribute information in a system environment. These products.</p> <p>ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz °!@#%&*()_+[$\frac{1}{4}$"³:?. , ¶±1234567890-=$\frac{1}{2}$"²;/.,§</p>
<p>Essay 10 Point 1/60" unit escapement Part No. 1354765</p> <p>Part No. 1354766 (Extended)</p>	<p>Office System 6 provides the customer with modular capability to originate, process, and distribute information in a system environment. These products</p> <p>ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz °!@#%&*()_+[$\frac{1}{4}$"³:?. , ¶±1234567890-=$\frac{1}{2}$"²;/.,§</p>
<p>Arcadia 10 Point 1/60" unit escapement Part No. 1354640</p> <p>Part No. 1354641 (Extended)</p>	<p>Office System 6 provides the customer with modular capability to originate, process, and distribute information in a system environment. These products</p> <p>ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz °!@#%&*()_+[$\frac{1}{4}$"³:?. , ¶±1234567890-=$\frac{1}{2}$"²;/.,§</p>
<p>Prestige Elite 12 Pitch 10 Point Note: Not a Selectable Type Style</p>	<p>Office System 6 provides the customer with modular capability to originate, process, and distribute information in a system environment. These products</p> <p>ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz °!@#%&*()_+[$\frac{1}{4}$"³:?. , ¶±1234567890-=$\frac{1}{2}$"²;/.,§</p>
<p>Letter Gothic 12 Pitch 12 Point Part No. 1354767 Part No. 1354768 (Extended)</p>	<p>Office System 6 provides the customer with modular capability to originate, process, and distribute information in a system environment. These products</p> <p>ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz °!@#%&*()_+[$\frac{1}{4}$"³:?. , ¶±1234567890-=$\frac{1}{2}$"²;/.,§</p>
<p>Courier 12 12 Pitch 8 Point Part No. 1354761 Part No. 1354762 (Extended)</p>	<p>Office System 6 provides the customer with modular capability to originate, process, and distribute information in a system environment. These products</p> <p>ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz °!@#%&*()_+[$\frac{1}{4}$"³:?. , ¶±1234567890-=$\frac{1}{2}$"²;/.,§</p>
<p>Courier 12 Italic 12 Pitch 8 Point Part No. 1355071 Part No. 1355073 (Extended)</p>	<p><i>Office System 6 provides the customer with modular capability to originate, process, and distribute information in a system environment. These products</i></p> <p>ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz °!@#%&*()_+[$\frac{1}{4}$"³:?. , ¶±1234567890-=$\frac{1}{2}$"²;/.,§</p>

Office System 6 Ink Jet Printers (cont'd)

Courier 10

10 Pitch

10 Point

Part No. 1354638

Part No. 1354639 (Extended)

Office System 6 provides the customer with modular capability to originate, process, and distribute information in a system

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

°!@#%&*()_+[¼³":?.,¶±1234567890-=]½²';/.,\$

Courier 10 Italic

10 Pitch

10 Point

Part No. 1355022

Part No. 1355010 (Extended)

Office System 6 provides the customer with modular capability to originate, process, and distribute information in a system

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

°!@#%&*()_+[¼³":?.,¶±1234567890-=]½²';/.,\$

Bookface Academic

10 Pitch

10 Point

Part No. 1355021

Office System 6 provides the customer with modular capability to originate, process, and distribute information in a system

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

Part No. 1354704 (Extended)

°!@#%&*()_+[¼³":?.,¶±1234567890-=]½²';/.,\$

Prestige Pica

10 Pitch 12 Point

Part No. 1354763

Office System 6 provides the customer with modular capability to originate, process, and distribute information in a system

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

Part No. 1354764 (Extended)

°!@#%&*()_+[¼³":?.,¶±1234567890-=]½²';/.,\$

Artisan

10 Pitch

10 Point

Part No. 1354769 (Sample Shown)

Part No. 1354770 (Extended)

Part No. 1354897 (All Caps)

Office System 6 provides the customer with modular capability to originate, process, and distribute information in a system

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

°!@#%&*()_+[¼³":?.,¶±1234567890-=]½²';/.,\$

Symbol

Part No. 1354642

↓□ιψε Συστημ⁶ ρθοξιφες της ψξστομεθ διτη μοφξωαθ ψαραβιωιτυ το οθιλινατε ρθοψεσσ' ανφ φισθιβεξε ιν□οθματιον ιν α συστημ ενχιθονμεντ~ ηεσε ρθοφξψτο

∇∞ψφ<∧¶↑>§Ωθ~↓ℓΓΘΣ→ΞαΔ≡Υ≅

αβψφε□ληιδκωμνοργθστξδχυζ

≥√°{±\[]() ©π-.-^†"≤1234567890 @φπ#÷"~''

Office System 6 Ink Jet Printers (cont'd)

The following type styles are only available on the IBM 6640 Dual Speed Document Printer.

**Courier 10/12
Production Speed**

10 Pitch
10 Point
Standard
6 lines per inch

The IBM 6640 Dual Speed Document Printer provides the capability to reduce the throughput time required for a document with the production speed printing mode.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
!@#%&*()_+¹/₂:"'.,? 1234567890-=¹/₂;' ,./

**Courier 10/12
Production Speed**

12 Pitch
10 Point
Standard
6 lines per inch

The IBM 6640 Dual Speed Document Printer provides the capability to reduce the throughput time required for a document with the production speed printing mode.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
!@#%&*()_+¹/₂:"'.,? 1234567890-=¹/₂;' ,./

**Essay
Production Speed**

1/60" Unit Escapement
Part No. 1355025 (Base)
1355026 (Extended)

The IBM 6640 Dual Speed Document Printer provides the capability to reduce the throughput time required for a document with the production speed printing mode.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
!@#%&*()_+¹/₂:"'.,? 1234567890-=¹/₂;' ,./

**Symbol
Production Speed**

Standard

≤ 1234567890 @ ≥ √ {} ± \ | | () ©
γ δ ε θ τ ο ξ ι ο ρ π ϑ Γ Δ ε θ γ π ε ι ρ π σ
α σ φ ι λ η δ κ ω ~ ≠ ∇ Σ φ < λ μ > § Ω ^ - -
' ζ χ ψ × β ν μ ~ ~ " ≡ ≡ ψ α α ω ω δ ~ † ‡

**Courier 10/12
Production Speed**

10 Pitch
10 Point
Part No. 1355905
Part No. 1355906 (Extended)

The IBM 6640 DUAL SPEED Document Printer provides the capability to reduce the throughput time required for a document with the production speed printing mode.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
!@#%&*()_+¹/₂:"'.,? ± 1234567890-=¹/₂² ; / . , \$

Machines equipped with this font must be equipped with at least one other 10 Pitch (Non-Production Speed) font.

Office System 6 Ink Jet Printers (cont'd)

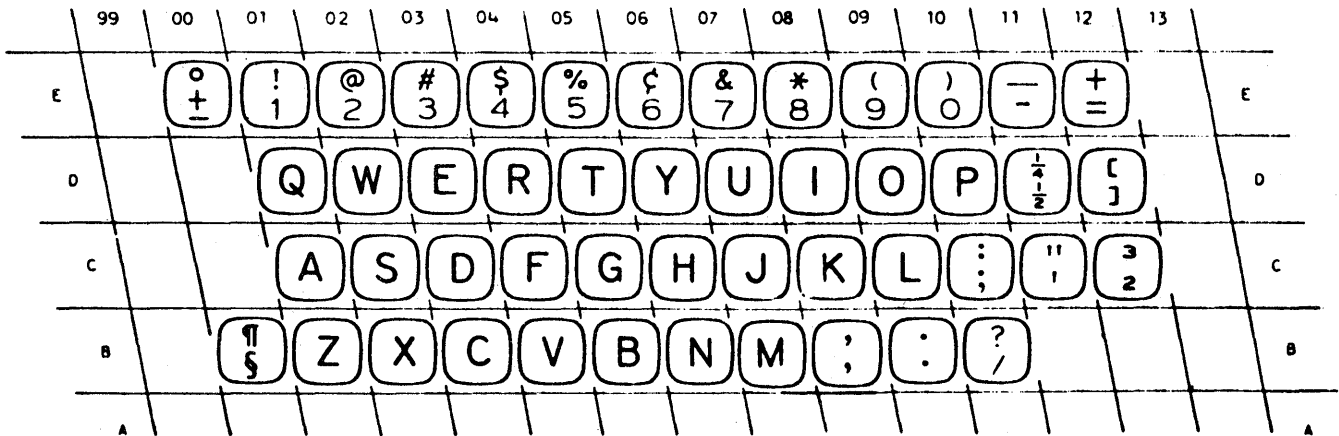
NOTE:

Unless specified otherwise, the IBM 6640 Document Printers will be manufactured to read magnetic cards recorded on any IBM Mag Card Typewriter equipped with a 101 (correspondence) keyboard, using an element with the American Standard Character set (!/1 in Pos. 0 and ¼/½ in Pos. 41). Any of the following standards may be specified to satisfy customer requirements (see "Keyboard Compatibility Groups" in the Order Entry Hand-book):

KEYBOARD	POS. 0	POS. 41
101 (Corr.)	+/1	¼/½
101 (Corr.)	|/1	?!/
101 (Corr.)	+/1	?!/
017 (Legal)	|/1	?!/
177 (Legal)	0/1	|/1
177 (Legal)	0/1	¼/½

A 92 character U.S. keyboard is standard on IBM 6/420, 6/430, 6/440, and 6/450 Information Processors with optional 94-96 character keyboards also available.

**Print Key Arrangement
(U.S. Keyboard)**



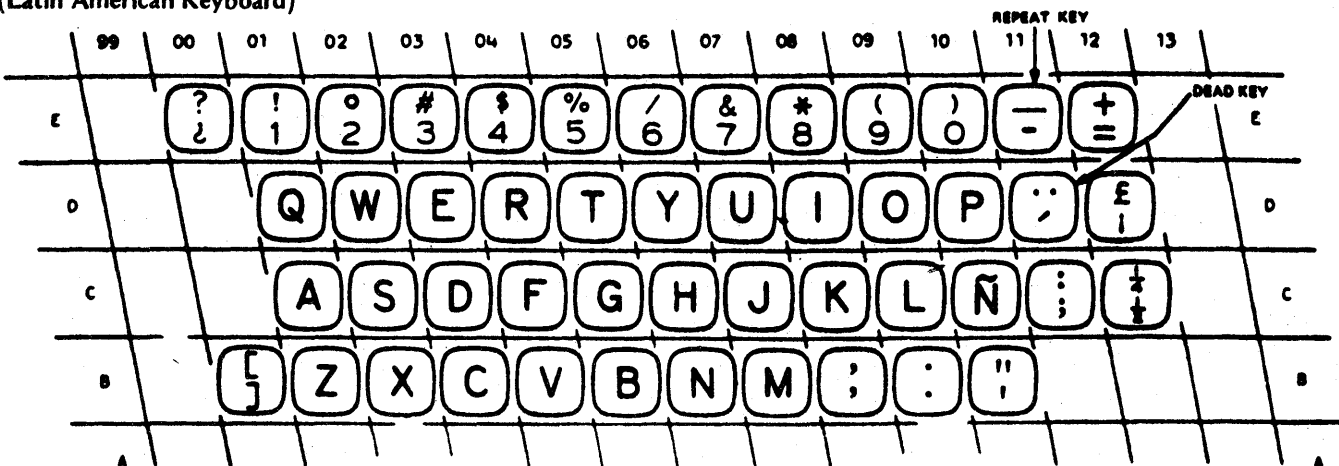
96 Character--As shown above (Correspondence)

92 Character--Position B00 & C12 covered (Correspondence)

94 Character--Position C12 covered (Legal/Correspondence)

A 96 character Latin American keyboard is available on IBM 6/420, 6/430, 6/440, 6/442, 6/450, and 6/452 Information Processors. This arrangement is provided only when "Puerto-Rican Requirement Group" is specified. Refer to Optional Features & Accessories section for description of "Puerto-Rican Requirement Group".

**Print Key Arrangement
(Latin American Keyboard)**



Office System 6 Ink Jet Printers (cont'd)

SYMBOL REFERENCE CHART

	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	
E		√	°	{	}	±	\	[	]	(	)	—	©			E
C		Γ	Δ	←	Θ	→	Τ	Ξ	↑	↓	ρ	Π	σ			D
C		∇	Σ	Φ	<	Λ	¶	>	§	Ω	^	•	—			C
B		˘	≈	≡	Ψ	α	∞	~	∂	˙	†	∫				B
A																A

96 Character—As shown above

93 Character—Excludes positions E00, B00, and D12

SYMBOL FONT CHARACTER NAMES

KEYBOARD POSITION	UPPER CASE	LOWER CASE
E00	GREATER THAN OR EQUAL TO	LESS THAN OR EQUAL TO
E01	RADICAL	SUPERSCRIP ONE
E02	DEGREE	SUPERSCRIP TWO
E03	LEFT BRACE	SUPERSCRIP THREE
E04	RIGHT BRACE	SUPERSCRIP FOUR
E05	PLUS OR MINUS	SUPERSCRIP FIVE
E06	REVERSED DIAGONAL	SUPERSCRIP SIX
E07	OPENING BRACKET (LEFT)	SUPERSCRIP SEVEN
E08	CLOSING BRACKET (RIGHT)	SUPERSCRIP EIGHT
E09	OPENING PARENTHESIS (LEFT)	SUPERSCRIP NINE
E10	CLOSING PARENTHESIS (RIGHT)	SUPERSCRIP ZERO
E11	SINGLE UNDERSCORE	DOUBLE
E12	COPYRIGHT	REGISTERED
D01	GAMMA (U.C.)	GAMMA (L.C.)
D02	DELTA (U.C.)	DELTA (L.C.)
D03	LEFT ARROW	EPSILON (L.C.)
D04	THETA (U.C.)	THETA (L.C.)
D05	RIGHT ARROW	TAU (L.C.)
D06	UPSILON (U.C.)	UPSILON (L.C.)
D07	XI (U.C.)	XI (L.C.)
D08	UP ARROW	IOTA (L.C.)
D09	DOWN ARROW	OMICRON (L.C.)
D10	LITER	RHO (L.C.)
D11	PI (U.C.)	PI (L.C.)
D12	MALE	FEMALE
C01	DELT OR NABLA	ALPHA (L.C.)
C02	SIGMA (U.C.)	SIGMA (L.C.)
C03	PHI (U.C.)	PHI (L.C.)
C04	LESS THAN	OPEN SQUARE
C05	LAMBDA (U.C.)	LAMBDA (L.C.)
C06	PARAGRAPH	ETA (L.C.)
C07	GREATER THAN SECTION	THETA (L.C.)—MODERN GREEK
C08	OMEGA (U.C.)	KAPPA (L.C.)
C09	CIRCUMFLEX	OMEGA (L.C.)
C10	MULTIPLIED BY	DIERESIS
C11	MINUS	DIVISION
B00	SECONDS	NOT EQUAL
B01	NEARLY EQUALS	MINUTES
B02	IDENTITY	ZETA (L.C.)
B03	PSI (U.C.)	CHI (L.C.)
B04	VARIAS AS	PSI (L.C.)
B05	INFINITY	MULTIPLY
B06	SINE WAVE	BETA (L.C.)
B07	PARTIAL DIFFERENTIAL	NU (L.C.)
B08	GRAVE	MU (L.C.)
B09	DAGGER	ACUTE
B10	INTEGRAL	TILDE
		CYCLE

OFFICE SYSTEM 6 IMPACT TYPE STYLES**TYPE STYLE SIMILARITIES**

ELEMENTS	PRINT WHEELS
10 Pitch	Modified to fit on wheel as close as possible
12 Pitch	Matches element
P.S.M.	Modified to large extent — does not match

MACHINE AND SUPPLIES VARIANCES

The higher impact of the element and lower impact of the print wheel will cause variances.

The carbon/Tech III ribbon as compared to multi-strike ribbons will cause variances.

Little element wear as compared to the broadening effects of wear on a print wheel will cause variances.

The customers should be made aware of these variances. The customer should make the decision on compatibility regarding quality.



Office System 6 Impact Type Styles (cont'd)

LETTER GOTHIC

12 Pitch
12 Point
Part No. 1257506
Style Code 087
Feature Code 7677
Six lines per inch

The IBM 6/442 and 6/452 Information Processors provide text, records, and communications capabilities with 55 cps bi-directional impact printing.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#\$\$%&*()_+½[:",.?.±1234567890-=½];',. ./

OS/6 SYMBOL

12 Pitch
12 Point
Part No. 1257616
Style Code 192
Feature Code 7793
Six lines per inch

→ηε ↑ωθ 6~442 ανφ 6~452 ↑ν□οθματιον ρθοψεσσοθσ
ρθοχιφε τεχτ θεψοθφσ ανφ ψομξνιψατιονσ ψαρ_
αβιωτιεσ διτη 55 ψρσ βι_φιθεψτιοναω ιμραψτ
ρθιντινλ~

∇∞ψφ←<Λπ↑>§Ωθ~+ℓΓΘΣ→ΞαΔΞT≡
αβψφε□ληιθκωμνοργθστξ×δχυζ
≥/°{ }±\ [] () _ σ π - . ^ f + ^ " ≤ 1 2 3 4 5 6 7 8 9 0 _ @ ♀ π ≠ † ~ ~ ^ /

COURIER 10

10 Pitch
10 Point
Part No. 1257503
Style Code 011
Feature Code 7675
Six lines per inch

The IBM 6/442 and 6/452 Information Processors provide text, records, and communications capabilities with 55 cps bi-directional impact printing.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#\$\$%&*()_+[½³":?.,¶±1234567890-=]½²';/.,\$

COURIER 10 EBCDIC

10 Pitch
10 Point
Part No. 1257613
Style Code 011
Feature Code 7740
Six lines per inch

The IBM 6/442 and 6/452 Information Processors provide text, records, and communications capabilities with 55 cps bi-directional impact printing.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
~|@#\$\$%-&*()_+|!}" :?.,>~1234567890-=\¢{';/.,<

COURIER 10 ASCII

10 Pitch
10 Point
Part No. 1257612
Style Code 011
Feature Code 7745
Six lines per inch

The IBM 6/442 and 6/452 Information Processors provide text, records, and communications capabilities with 55 cps bi-directional impact printing.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
~|@#\$\$%-&*()_+|!}" :?.,>~1234567890-=\¢{';/.,<



Office System 6 Impact Type Styles (cont'd)

PRESTIGE PICA ACCOUNTING 172
10 Pitch
12 Point
Part No. 1257697
Style Code 012
Feature Code 7789
Six lines per inch

The IBM 6/442 and 6/452 Information processors provide text records and communications capabilities with 55 cps bi-directional impact printing.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#%\$%&*()_+[½":?.,¶±1234567890-½]=!';/.,\$

BOLDFACE
1/60" Unit Escapement
10 Point
Part No. 1257508
Style Code 159
Feature 7716

The IBM 6/442 and 6/452 Information Processors provide text, records, and communications capabilities with 55 cps bi-directional impact printing.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#%\$%&*()_+[¼³":?.,¶±1234567890-==]½²';/.,\$

LATIN AMERICAN
PUERTO RICAN BOLDFACE
10 Point
Part No. 1257574
Style Code 159
Feature Code 7768

The IBM 6/442 and 6/452 Information Processors provide text, records, and communications capabilities with 55 cps bi-directional impact printing.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
~!°#\$%&*()_Ñ[+½¼":?.,"´1234567890-ñ]=i½;/.,'

MODERN
1/60" Unit Escapement
10 Point
Part No. 1257505
Style Code 158
Feature Code 7715

The IBM 6/442 and 6/452 Information Processors provide text, records, and communications capabilities with 55 cps bi-directional impact printing.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#%\$%&*()_+[¼³":?.,¶±1234567890-==]½²';/.,\$

PRESTIGE ELITE
12 Pitch
10 Point
Part No. 1257504
Style Code 086
Feature Code 7676
Six lines per inch

The IBM 6/442 and 6/452 Information Processors provide text, records, and communications capabilities with 55 cps bi-directional impact printing.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#%\$%&*()_+[½³":?.,¶±1234567890-==]½²';/.,\$

Office System 6 Impact Type Styles (cont'd)**PRESTIGE ELITE ACCOUNTING 172**

12 Pitch
 10 Point
 Part No. 1257611
 Style Code 086
 Feature Code 7739
 Six lines per inch

The IBM 6/442 and 6/452 Information Processors provide text, records, and communications capabilities with 55 cps bi-directional impact printing.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 °£@#\$\$%&*()_+½":?.,¶±1234567890-¼]=!';/.,\$

PRESTIGE ELITE ACCOUNTING 195

12 Pitch
 10 Point
 Part No. 1257614
 Style Code 086
 Feature Code 7788
 Six lines per inch

The IBM 6/442 and 6/452 Information Processors provide text, records, and communications capabilities with 55 cps bi-directional impact printing.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 °±@#\$\$%&*()_+½³":?.,¶±1234567890-½]²';/.,\$

COURIER 12

12 Pitch
 8 Point
 Part No. 1257638
 6 lines per inch

The IBM 6/442 and 6/452 Information Processors provide text, records, and communications capabilities with 55 cps bi-directional impact printing.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 °!@#\$\$%&*()_+½³":?.,¶±1234567890-]=½²';/.,\$

ESSAY

10 Point
 1/60" Unit Escapement
 Part No. 1257675
 6 lines per inch

The IBM 6/442 and 6/452 Information Processors provide text, records, and communications capabilities with 55 cps bi-directional impact printing.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 °!@#\$\$%&*()_+½³":?.,¶±1234567890-]=½²';/.,\$

LIGHT ITALIC

12 Pitch
 10 Point
 Style Code: 091
 Part No.: 1257654

The IBM 6/442 and 6/452 Information Processors provide text, records, and communications capabilities with 55 cps bi-directional impact printing.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxyz
 °!@#\$\$%&*()_+½³":?.,¶±1234567890-]=½²';/.,\$



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Jul 83
Major Revision

TYPE CATALOG

Office System 6 Impact Type Styles (cont'd)

RHETORIC

10 Pitch
13 Point (Upper Case)
10 Point (Lower Case)
Style Code 091
Part No. 1257722

THE IBM 6/442 AND 6/452 INFORMATION PROCESSORS
PROVIDE TEXT, RECORDS, AND COMMUNICATIONS CAP-
ABILITIES WITH 55 CPS BI-DIRECTIONAL IMPACT
PRINTING.

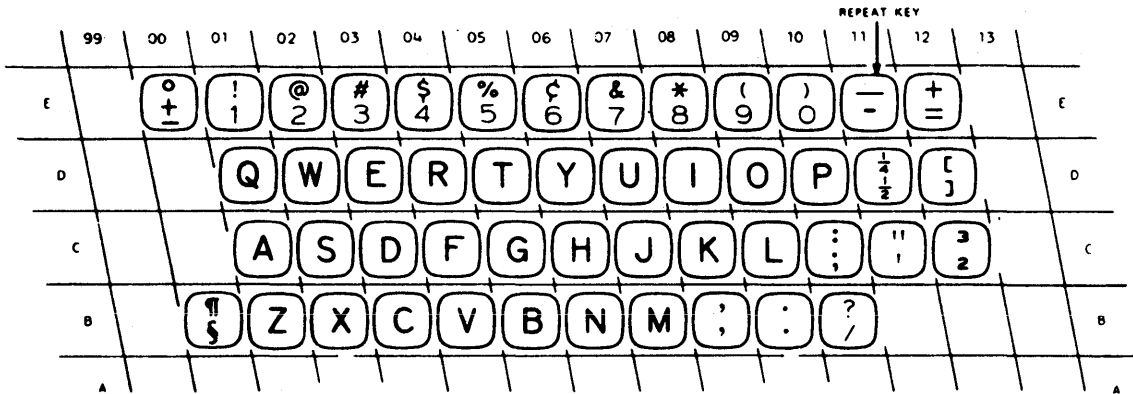
ABCDEFGHIJKLMNOPQRSTUVWXYZ
ABCDEFGHIJKLMNOPQRSTUVWXYZ
°!@#\$%&*()_+[³":?.,¶±1234567890-=]½²';/.,§

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Office System 6 Impact Type Styles (cont'd)

A 92 character U.S. keyboard is standard on IBM 6/442 and 6/452 Information Processors with optional 94-96 character keyboards also available.

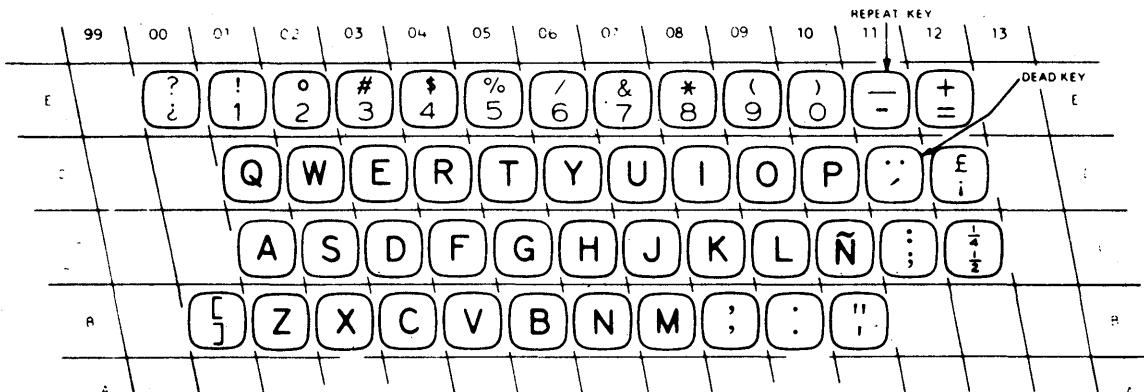
**Print Key Arrangement
(U.S. Keyboard)**



- 96 character - As shown above (Correspondence)
- 94 character - Position C12 covered (Legal/Correspondence)
- 92 character - Position B00 & C12 covered (Correspondence)

Latin American Keyboard

A 96 character Latin American Keyboard is available on IBM 6/442 and 6/452



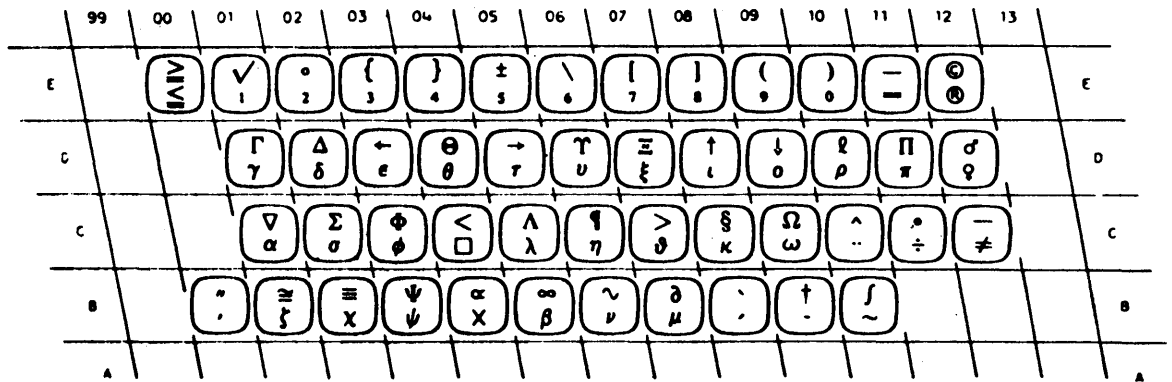
Latin American Keyboard - 96 Character

Symbol Print Wheel Considerations

Make our customers totally aware of the process involved in using the Symbol Print Wheel. To change a print wheel requires that the ribbon first be removed, the print wheel changed, and then the ribbon reinstated. The procedure is time-consuming and can cause annoyance if required frequently. Productivity losses can be expected with this procedure, especially with extensive formula generation. These facts must be made clear to our customers, so they don't expect the same productivity they receive with single elements and Ink Jet Printing.

Office System 6 Impact Type Styles (cont'd)

**OS Symbol Print Wheel
Keybutton Locations**



Keyboard Layout plaque is available, OPD form no. S544-0611.

96 character - As shown above (Correspondence)

94 character - Position C12 covered (Legal/Correspondence)

92 character - Position B00 & C12 covered (Correspondence)

SYMBOL FONT CHARACTER NAMES

KEYBOARD POSITION	UPPER CASE	LOWER CASE
E00	GREATER THAN OR EQUAL TO	LESS THAN OR EQUAL TO
E01	RADICAL	SUPERSCRIP ONE
E02	DEGREE	SUPERSCRIP TWO
E03	LEFT BRACE	SUPERSCRIP THREE
E04	RIGHT BRACE	SUPERSCRIP FOUR
E05	PLUS OR MINUS	SUPERSCRIP FIVE
E06	REVERSED DIAGONAL	SUPERSCRIP SIX
E07	OPENING BRACKET (LEFT)	SUPERSCRIP SEVEN
E08	CLOSING BRACKET (RIGHT)	SUPERSCRIP EIGHT
E09	OPENING PARENTHESIS (LEFT)	SUPERSCRIP NINE
E10	CLOSING PARENTHESIS (RIGHT)	SUPERSCRIP ZERO
E11	SINGLE UNDERSCORE	DOUBLE
E12	COPYRIGHT	REGISTERED
D01	GAMMA (U.C.)	GAMMA (L.C.)
D02	DELTA (U.C.)	DELTA (L.C.)
D03	LEFT ARROW	EPSILON (L.C.)
D04	THETA (U.C.)	THETA (L.C.)
D05	RIGHT ARROW	TAU (L.C.)
D06	UPSILON (U.C.)	UPSILON (L.C.)
D07	XI (U.C.)	XI (L.C.)
D08	UP ARROW	IOTA (L.C.)
D09	DOWN ARROW	OMICRON (L.C.)
D10	LITER	RHO (L.C.)
D11	PI (U.C.)	PI (L.C.)
D12	MALE	FEMALE
C01	DELTA OR NABLA	ALPHA (L.C.)
C02	SIGMA (U.C.)	SIGMA (L.C.)
C03	PHI (U.C.)	PHI (L.C.)
C04	LESS THAN	OPEN SQUARE
C05	LAMBDA (U.C.)	LAMBDA (L.C.)
C06	PARAGRAPH	ETA (L.C.)
C07	GREATER THAN	THETA (L.C.)--MODERN GREEK
C08	SECTION	KAPPA (L.C.)
C09	OMEGA (U.C.)	OMEGA (L.C.)
C10	CIRCUMFLEX	DIERESIS
C11	MULTIPLIED BY	DIVISION
C12	MINUS	NOT EQUAL
B00	SECONDS	MINUTES
B01	NEARLY EQUALS	ZETA (L.C.)
B02	IDENTITY	CHI (L.C.)
B03	PSI (U.C.)	PSI (L.C.)
B04	VARIES AS	MULTIPLY
B05	INFINITY	BETA (L.C.)
B06	SINE WAVE	NU (L.C.)
B07	PARTIAL DIFFERENTIAL	MU (L.C.)
B08	GRAVE	ACUTE
B09	DAGGER	TILDE
B10	INTEGRAL	CYCLE

**ELECTRONIC TYPEWRITERS
IBM SELECTRIC® III TYPEWRITERS
96 CHARACTER TYPE STYLES +**

+ The samples in this chapter were typed using a 96 character keyboard. They should be used as a guide for type design only. For an exact illustration of the characters on an element, refer to the Keyboards Section.

Adjutant
12 Pitch, 9 Point
54 Tooth Ratchet
6 Lines Per Inch
Type Code 52924

IBM ADJUTANT Type is recommended for the preparation of text copy and other similar typing applications. A weighted serif type design, it conveys the feeling of printed material.

ABCDEF GHIJKLMNOPQRSTUVWXYZ °!@#%&*()_+½[:'?,.¶³
abcdefghijklmnopqrstuvwxyz ±1234567890-½];',/.§²

Advocate
10 Pitch, 12 Point
54 Tooth Ratchet
6 Lines Per Inch
Type Codes 52007, 52011

IBM ADVOCATE Type is an open-spaced, square-serif design. It is well suited to all correspondence needs. Note the easy reading of its open-spaced design.

ABCDEF GHIJKLMNOPQRSTUVWXYZ °!@#%&*()_+½[:'?,.¶³
abcdefghijklmnopqrstuvwxyz ±1234567890-½];',/.§²

Artisan
12 Pitch, 10 Point
54 Tooth Ratchet
6 Lines Per Inch
Type Codes 52004, 52026

IBM ARTISAN Type is well suited for general correspondence and offset reproduction requiring the maximum utilization of space. Type is a clean, easy-to-read, sans-serif design.

ABCDEF GHIJKLMNOPQRSTUVWXYZ °!@#%&*()_+½[:'?,.¶³
abcdefghijklmnopqrstuvwxyz ±1234567890-½];',/.§²

Auto Elite
12 Pitch, 12 Point
54 Tooth Ratchet
6 Lines Per Inch
Type Code 52010

IBM AUTO ELITE Type is a taller version of ELITE Type with more conventional numerals. It is used for correspondence, offset reproduction, statistical reports and text material of high density.

ABCDEF GHIJKLMNOPQRSTUVWXYZ °!@#%&*()_+½[:'?,.¶³
abcdefghijklmnopqrstuvwxyz ±1234567890-½];',/.§²

Bookface Academic
10 Pitch, 10 Point
54 Tooth Ratchet
6 Lines Per Inch
Type Codes 52904, 52017
52020

IBM BOOKFACE ACADEMIC Type is ideal for executive correspondence, offset reproduction and statistical reports, with its large, bold serif design.

ABCDEF GHIJKLMNOPQRSTUVWXYZ °!@#%&*()_+½[:'?,.¶³
abcdefghijklmnopqrstuvwxyz ±1234567890-½];',/.§²

Courier 10
10 Pitch, 10 Point
54 Tooth Ratchet
6 Lines Per Inch
Type Codes 52002, 52021,
52019, 52012, 52030

IBM COURIER Type finds wide use in general correspondence, offset reproduction and manifolded. It is a square-serif design in the PICA family.

ABCDEF GHIJKLMNOPQRSTUVWXYZ °!@#%&*()_+½[:'?,.¶³
abcdefghijklmnopqrstuvwxyz ±1234567890-½];',/.§²

Courier 10*
Court Reporter
10 Pitch, 10 Point
24 Tooth Ratchet
5.33 Lines per Inch

IBM COURIER Type finds wide use in general correspondence, offset reproduction and manifolded. It is a square-serif design in the PICA family.

ABCDEF GHIJKLMNOPQRSTUVWXYZ [!@#%&*()_+°^:"',.?¶Δ
]1234567890-QA./; ',. ?\$π

*Not recommended for Electronic Typewriters



Electronic Typewriters
IBM Selectric® III Typewriters
96 Character Type Styles (cont'd)

Courier 12
12 Pitch, 8 Point
54 Tooth Ratchet
6 Lines Per Inch
Type Codes 52908, 52938, 52930

IBM COURIER 12 Type is ideal for general correspondence, offset reproduction and a wide variety of general applications which require the maximum use of typing space.

ABCDEF GHIJKLMNOPQRSTUVWXYZ °!@#%&*()_+[-:"?,.¶³
 abcdefghijklmnopqrstuvwxyz ±1234567890-½];',/.§²

Courier 12 Italic
12 Pitch, 8 Point
54 Tooth Ratchet
6 Lines Per Inch
Type Code. 52005

IBM COURIER 12 ITALIC Type is also widely used for general correspondence, offset reproduction and other applications requiring the maximum utilization of space.

ABCDEF GHIJKLMNOPQRSTUVWXYZ °!@#%&*()_+[-:"?,.¶³
 abcdefghijklmnopqrstuvwxyz ±1234567890-½];',/.§²

Delegate
10 Pitch, 12 Point
54 Tooth Ratchet
6 Lines Per Inch
Type Codes 52912, 52927

IBM DELEGATE Type is recommended for text copy and similar jobs, where a weighted type conveying the feeling of printed material is used.

ABCDEF GHIJKLMNOPQRSTUVWXYZ °!@#%&*()_+[-:"?,.¶³
 abcdefghijklmnopqrstuvwxyz ±1234567890-½];',/.§²

Dual Gothic
12 Pitch, 10 Point
54 Tooth Ratchet
6 Lines Per Inch
Type Code 52001

IBM DUAL GOTHIC Type is a fine-line, sans-serif type style used for credit reports and other financial typing applications.

ABCDEF GHIJKLMNOPQRSTUVWXYZ °!@#%&*()_+[-:"?,.¶³
 abcdefghijklmnopqrstuvwxyz ±1234567890-½];',/.§²

Elite
12 Pitch, 10 Point
54 Tooth Ratchet
6 Lines Per Inch
Type Codes 52913, 52936, 52916, 52931

IBM ELITE Type is used for correspondence, offset reproduction, statistical reports and text material of high density.

ABCDEF GHIJKLMNOPQRSTUVWXYZ °!@#%&*()_+[-:"?,.¶³
 abcdefghijklmnopqrstuvwxyz ±1234567890-½];',/.§²

Large Elite
12 Pitch, 10 Point
54 Tooth Ratchet
6 Lines Per Inch
Type Codes 52008, 52022

IBM LARGE ELITE Type is a taller version of ELITE Type with distinctive numerals. It is used for correspondence, offset reproduction, statistical reports and text material of high density.

ABCDEF GHIJKLMNOPQRSTUVWXYZ °!@#%&*()_+[-:"?,.¶³
 abcdefghijklmnopqrstuvwxyz ±1234567890-½];',/.§²

**Electronic Typewriters
IBM Selectric® III Typewriters
96 Character Type Styles (cont'd)**

<p>Letter Gothic 12 Pitch, 12 Point 54 Tooth Ratchet 6 Lines Per Inch Type Codes 52909, 52932</p>	<p>IBM LETTER GOTHIC Type is an ideal selection for invoices, statements and other typing applications where boldness is desired. It is a distinctive sans-serif type.</p> <p>ABCDEFGHIJKLMNOPQRSTUVWXYZ °!@#\$\$%&*()_+½[:"?,.¶³ abcdefghijklmnopqrstuvwxyz ±1234567890-=-½];'/.§²</p>
--	---

<p>Light Italic 12 Pitch, 10 Point 54 Tooth Ratchet 6 Lines Per Inch Type Codes 52922, 52933</p>	<p><i>IBM LIGHT ITALIC Type is recommended for use alone or in combination with PICA or ELITE type styles to add impact and emphasis to a wide variety of typing applications.</i></p> <p>ABCDEFGHIJKLMNOPQRSTUVWXYZ °!@#\$\$%&*()_+½[:"?,.¶³ abcdefghijklmnopqrstuvwxyz ±1234567890-=-½];'/.§²</p>
---	---

<p>Manifold 10 Pitch, 10 Point 54 Tooth Ratchet 6 Lines Per Inch Type Code 52914</p>	<p>IBM MANIFOLD TYPE IS A SANS-SERIF TYPE FOR BILLING AND FORMS PREPARATION.</p> <p>ABCDEFGHIJKLMNOPQRSTUVWXYZ °!@#\$\$%&*()_+½[:"?,.¶³ ABCDEFGHIJKLMNOPQRSTUVWXYZ ±1234567890-=-½];'/.§²</p>
---	---

<p>1403 OCR 10 Pitch, 10 Point 54 Tooth Ratchet 6 Lines Per Inch Type Code 52028*</p>	<p>IBM 1403 OCR TYPE IS DESIGNED FOR USE WITH OPTICAL SCANNERS WHICH READ IBM CHAIN PRINTER OUTPUT.</p> <p>ABCDEFGHIJKLMNOPQRSTUVWXYZ °!@#\$\$%&*()_+½[:"?,.Δ> ABCDEFGHIJKLMNOPQRSTUVWXYZ -1234567890-=-½□;'/.∇<</p>
--	--

*Not recommended for Electronic Typewriters.

<p>OCR-A 10 Pitch, 10 Point 54 Tooth Ratchet 6 Lines Per Inch Type Codes 52919, 52006*; 52027</p>	<p>IBM ANSI Type is ideal for the preparation of computer-readable documents. It is available in correspondence or keypunch simulator keyboard arrangements.</p> <p>ABCDEFGHIJKLMNOPQRSTUVWXYZ £¥ª«»|&*{}-+■^:"?.,.æü abcdefghijklmnopqrstuvwxyz ¥1234567890-=-■ø;'/.,äö</p>
--	--

*Not recommended for Electronic Typewriters.

<p>OCR-B 10 Pitch, 10 Point 54 Tooth Ratchet 6 Lines Per Inch Type Codes 52920, 52949</p>	<p>OCR B FONT is designed for the American National Standards Institute ECMA 11 - 1971 Specifications.</p> <p>ABCDEFGHIJKLMNOPQRSTUVWXYZ <!@#\$\$%|&*()-+■^:"?.,.\f abcdefghijklmnopqrstuvwxyz >1234567890-=-■_;'/.§¥</p>
--	---

<p>OCR-B (with Brackets) 10 Pitch, 10 Point 54 Tooth Ratchet 6 Lines Per Inch Type Code 52952</p>	<p>OCR B FONT is designed for the American National Standards Institute ECMA 11 - 1971 Specifications.</p> <p>ABCDEFGHIJKLMNOPQRSTUVWXYZ <!@#\$\$%|&*()-+■^:"?.,.\f abcdefghijklmnopqrstuvwxyz >1234567890-=-■_];'./§¥</p>
--	--

**Electronic Typewriters
IBM Selectric® III Typewriters
96 Character Type Styles (cont'd)**

Olde World
12 Pitch, 11 Point
54 Tooth Ratchet
6 Lines Per Inch
Type Code 52953

IBM SELECTRIC TYPEWRITERS provide a wide variety of typing applications, using interchangeable typing elements. interchangeable typing elements.

ABCDEFGHIJKLMN^oOPQR[!]STUVW[@]XYZ^{\$(} *^{%)} +[]][:["]?,.[¶]³
abc[±]def¹gh²ij³kl⁴mn⁵op⁶qr⁷st⁸uv⁹w⁰xyz⁻⁼½];',./[§]²

Orator
10 Pitch, 14 & 8 Point
54 Tooth Ratchet
6 Lines Per Inch
Type Codes 52906, 52928

IBM ORATOR TYPE IS A LARGE, SANS-SERIF TYPE STYLE. ITS BOLD, LEGIBLE CHARACTERS PROVIDE IMPACT AND COMMAND ATTENTION. ORATOR IS RECOMMENDED FOR SPEECHES AND

ABCDEFGHIJKLMN^oOPQR[!]STUVW[@]XYZ^{\$(} *^{%)} +[]][:["]?,.[¶]³
abc[±]def¹gh²ij³kl⁴mn⁵op⁶qr⁷st⁸uv⁹w⁰xyz⁻⁼½];',./[§]²

Orator Presentor
10 Pitch, 14 & 8 Point
54 Tooth Ratchet,
6 Lines Per Inch
Type Code 52029

IBM PRESENTOR Type is a large, sans-serif style with upper and lower case letter forms ideal for applications requiring maximum legibility and impact.

ABCDEFGHIJKLMN^oOPQR[!]STUVW[@]XYZ^{\$(} *^{%)} +[]][:["]?,.[¶]³
abc[±]def¹gh²ij³kl⁴mn⁵op⁶qr⁷st⁸uv⁹w⁰xyz⁻⁼½];',./[§]²

Pica
10 Pitch, 12 Point
54 Tooth Ratchet
6 Lines Per Inch
Type Codes 52907, 52016,
52929

IBM PICA Type is used for general correspondence, stencils and manifolding. It is also available in legal, court reporter and chemical versions.

ABCDEFGHIJKLMN^oOPQR[!]STUVW[@]XYZ^{\$(} *^{%)} +[]][:["]?,.[¶]³
abc[±]def¹gh²ij³kl⁴mn⁵op⁶qr⁷st⁸uv⁹w⁰xyz⁻⁼½];',./[§]²

Prestige Elite
12 Pitch, 10 Point
54 Tooth Ratchet,
6 Lines Per Inch
Type Codes 52003, 52024,
52013, 52937, 52917

IBM PRESTIGE ELITE Type is available for general and legal correspondence, offset reproduction, statistical reports, text material of high density.

ABCDEFGHIJKLMN^oOPQR[!]STUVW[@]XYZ^{\$(} *^{%)} +[]][:["]?,.[¶]³
abc[±]def¹gh²ij³kl⁴mn⁵op⁶qr⁷st⁸uv⁹w⁰xyz⁻⁼½];',./[§]²

**Prestige Elite
Tri-Lingual**
12 Pitch, 10 Point
54 Tooth Ratchet
6 Lines per Inch
Type Code 52917

IBM PRESTIGE ELITE TRI-LINGUAL Type is available for the same general and legal applications as Prestige Elite. It also contains common French and Spanish accent marks.

ABCDEFGHIJKLMN^oOPQR[!]STUVW[@]XYZ^{\$(} *^{%)} +[]][:["]?,.[¶]³
abc[±]def¹gh²ij³kl⁴mn⁵op⁶qr⁷st⁸uv⁹w⁰xyz⁻⁼½];',./[§]²

Prestige Pica
10 Pitch, 12 Point
54 Tooth Ratchet
6 Lines Per Inch
Type Codes 52905, 52018,
52025

IBM PRESTIGE PICA Type is ideal for legal correspondence, offset reproduction, statistical reports and manifolding. There is also an accounting version.

ABCDEFGHIJKLMN^oOPQR[!]STUVW[@]XYZ^{\$(} *^{%)} +[]][:["]?,.[¶]³
abc[±]def¹gh²ij³kl⁴mn⁵op⁶qr⁷st⁸uv⁹w⁰xyz⁻⁼½];',./[§]²

**Electronic Typewriters
IBM Selectric® III Typewriters
96 Character Type Styles (cont'd)**

Boldface
PS, 10 Point
54 Tooth Ratchet
6 Lines Per Inch
Type Codes 52915,
52940

The IBM Electronic Typewriter 50 offers the distinctive appearance of proportional spacing...which gives each character its proper space for a high-quality appearance

ABCDEFGHIJKLMNOPQRSTUVWXYZ °!@#%&*() +½[:"?,.π³
abcdefghijklmnopqrstuvwxyz ±1234567890-½];',.§²

Boldface Italic
PS, 10 Point
54 Tooth Ratchet
6 Lines Per Inch
Type Code 52925

The IBM Electronic Typewriter 50 offers the distinctive appearance of proportional spacing...which gives each character its proper space for a high-quality appearance

ABCDEFGHIJKLMNOPQRSTUVWXYZ °!@#%&() +½[:"?,.π³
abcdefghijklmnopqrstuvwxyz ±1234567890-½];',.§²*

Essay Italic
(Latin American)
PS, 10 Point
54 Tooth Ratchet
6 Lines per inch
Type Code 52943

The IBM Electronic Typewriter 50 offers the distinctive appearance of proportional spacing...which gives each character its proper space for a high-quality appearance

ABCDEFGHIJKLMNOPQRSTUVWXYZ Ñ!°#%&() +½[:"?,.~£
abcdefghijklmnopqrstuvwxyz ñ1234567890-½];',.~£*

Modern
PS, 10 Point
54 Tooth Ratchet, 6 lines per inch.
Type Codes 52901, 52944,
52946, 52950

The IBM Electronic Typewriter 50 offers the distinctive appearance of proportional spacing...which gives each character its proper space for a high-quality appearance

ABCDEFGHIJKLMNOPQRSTUVWXYZ °!@#%&*() +½[:"?,.π³
abcdefghijklmnopqrstuvwxyz ±1234567890-½];',.§²

Thesis
PS, 10 Point
54 Tooth Ratchet, 6 lines per inch.
Type Code 52926

The IBM Electronic Typewriter 50 offers the distinctive appearance of proportional spacing...which gives each character its proper space for a high-quality appearance

ABCDEFGHIJKLMNOPQRSTUVWXYZ °!@#%&*() +½[:"?,.π³
abcdefghijklmnopqrstuvwxyz ±1234567890-½];',.§²

Title
PS, 10 Point
54 Tooth Ratchet, 6 lines per inch.
Type Codes 52014, 52934

The IBM Electronic Typewriter 50 offers the distinctive appearance of proportional spacing...which gives each character its proper space for a high-quality appearance

ABCDEFGHIJKLMNOPQRSTUVWXYZ °!@#%&*() +½[:"?,.π³
abcdefghijklmnopqrstuvwxyz ±1234567890-½];',.§²

Essay Italic
(American Standard)
PS 10 Point
54 Tooth Ratchet
6 Lines per inch
Type code 1352911

The IBM Electronic Typewriter 50 offers the distinctive appearance of proportional spacing...which gives each character its proper space for a high-quality appearance.

ABCDEFGHIJKLMNOPQRSTUVWXYZ °!@#%&() +½[:"?,.π³
abcdefghijklmnopqrstuvwxyz ±1234567890-½];',./§²*

**Electronic Typewriters
IBM Selectric® III Typewriters
96 Character Type Styles (cont'd)**

Essay
PS, 10 Point
54 Tooth Ratchet
6 Lines Per Inch
Type Code 1352910

The IBM Electronic Typewriter 50 offers the distinctive appearance of proportional spacing... which gives each character its proper space for a high-quality appearance.
 ABCDEFGHIJKLMNOPQRSTUVWXYZ 0!@#\$%&*() +¹/₄ [: " , . ? ¶ ³
 abcdefghijklmnopqrstuvwxyz ±1234567890 - = ¹/₂] ; ' , . / § ²

Listed below are the step-by-step instructions for typing Benzene Rings.

Start type

1. Type upper case J (●)
2. Required Backspace, Reverse Index up ↑ , type uppercase M (|).
3. Required Backspace, Reverse Index up ↑ , type uppercase J (●).
4. Reverse Index up ↑ , type uppercase $\frac{0}{\pm}$ (/).
5. Reverse Index up ↑ , type uppercase J (●).
6. Reverse Index down ↓ , type lowercase $\frac{0}{\pm}$ (\).
7. Reverse Index down ↓ , type uppercase J (●).
8. Required Backspace, Reverse Index down ↓ , type uppercase M (|).
9. Required Backspace, Reverse Index down ↓ , type uppercase J (●).
10. Reverse Index down ↓ , Require Backspace 4 times, type lowercase $\frac{0}{\pm}$ (\).
11. Required Index down ↓ , type uppercase J (●).
12. Reverse index up ↑ , type uppercase $\frac{0}{\pm}$ (/).

This is the most basic ring. Variations of this are made by substituting the various slash lines.



**ELECTRONIC TYPEWRITERS
IBM SELECTRIC® III TYPEWRITERS
KEYBOARDS BY TYPE STYLE**

Note: Keyboard arrangements will be determined by the primary element. If any OCR type style is ordered, an OCR keyboard will be applied.

Part Number	Type Style	Pitch	Keyboard Description
1352924+	Adjutant	12	American Standard
1352007+	Advocate	10	American Standard
135201†	Advocate		Latin America
1352903+ ● *	Arcadia	PS	American Standard
1352947●	Arcadia	PS	Legal
1352004+	Artisan	12	American Standard
1352026	Artisan	12	Latin America
1352010+	Auto Elite	12	American Standard
1352915+ ● *	Boldface	PS	American Standard
1352940●	Boldface	PS	Latin America
1352925●	Boldface Italic	PS	American Standard
1352904	Bookface Academic	10	American Standard
1352017	Bookface Academic	10	Legal
1352020	Bookface Academic	10	Accounting
1352002+ *	Courier 10	10	American Standard
1352021	Courier 10	10	Accounting
1352019	Courier 10	10	Legal
1352012	Courier 10	10	Latin America
1352030	Courier 10	10	(Selectric III only) Court Reporter
1352908+ *	Courier 12	12	American Standard
1352938	Courier 12	12	Legal
1352930	Courier 12	12	Latin America
1352005+	Courier 12 Italic	12	American Standard
1352912+	Delegate	10	American Standard
1352927	Delegate		Latin America
1352001+	Dual Gothic	12	American Standard
1352913+ *	Elite	12	American Standard
1352936	Elite	12	Legal
1352916	Elite	12	Library
1352931	Elite	12	Latin America
1352910	Essay	PS	American Standard
1352911	Essay Italic	PS	American Standard
1352943●	Essay Italic	PS	Latin America
1352008+	Large Elite	12	American Standard
1352022	Large Elite	12	Accounting
1352909+ *	Letter Gothic	12	American Standard
1352932	Letter Gothic	12	Latin America

+ Denotes type styles for which "lock-on heads" are available.

● Denotes type styles available only for IBM Electronic Typewriter 50.

* Denotes type styles for which custom elements are available.

**Electronic Typewriters
IBM SELECTRIC® III Typewriters
Keyboards by Type Style (cont'd)**

Part Number	Type Style	Pitch	Keyboard Description
1352922+	Light Italic	12	American Standard
1352933	Light Italic		Latin America
1352914+	Manifold	10	American Standard
1352901+ • *	Modern	PS	American Standard
1352944●	Modern		Latin America
1352946●	Modern		Legal
1352950	Modern		Accounting
1352919	OCR-A	10	ANSI OCR-A
1352006	OCR-A	10	ANSI OCR-A Keypunch (Selectric III only)
1352027	OCR-A (UC)	10	ANSI-OCR-A
1352920	OCR-B	10	ANSI OCR-B
1352952	OCR-B (w/ Brackets)	10	ANSI OCR-B
1352949	OCR-B		Latin America OCR-B
1352028	1403 OCR	10	1403 OCR (Selectric III only)
1352906+	Orator	10	American Standard
1352928	Orator		Latin America
1352029	Orator Presentor	10	1403 OCR
1352953	Olde World	12	American Standard
1352907+ *	Pica	10	American Standard
1352016	Pica	10	Legal
1352929	Pica	10	Latin America
1352003+ *	Prestige Elite	12	American Standard
1352024	Prestige Elite	12	Accounting
1352013	Prestige Elite	12	Latin America
1352937	Prestige Elite	12	Legal
1352917	Prestige Elite	12	Trilingual
1352905+ *	Prestige Pica	10	American Standard
1352018	Prestige Pica	10	Legal
1352025	Prestige Pica	10	Accounting
1352921	Prnt. & Publ. #3 OCR	10	P&P #3
1352009+	Scribe	12	American Standard
1352923+	Script	12	American Standard
1352935	Script	12	Latin America
1352926+●	Thesis	PS	American Standard
1352902+●	Title	PS	American Standard
1352945●	Title	PS	Latin America
1352014	Symbol	10	Symbol Chart
1352934	Symbol	12	Symbol Chart
1352031	Symbol II	12	Symbol Chart

+Denotes type styles for which "lock-on heads" are available.

●Denotes type styles available only for IBM Electronic Typewriter 50.

*Denotes type styles for which custom elements are available.

END

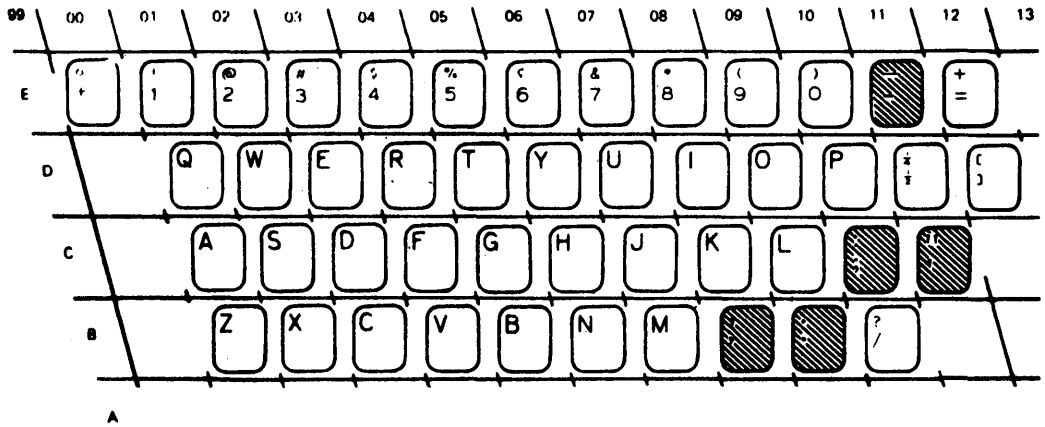
**ELECTRONIC TYPEWRITERS
IBM SELECTRIC® III TYPEWRITERS
KEYBOARDS**

Correspondence Keyboards

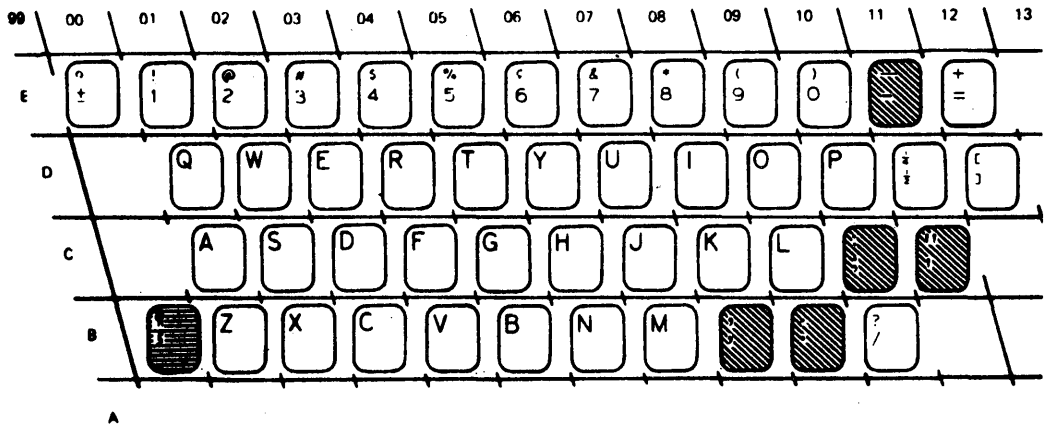
Note: For "Selectric" III Typewriter models, the desired keyboard must be ordered from the Plant. Field installation of 94 or 96 character options is not available.

American Standard

Available with type elements
1352001-005, 1352007-010
1352901-909, 1352911-915
1352922-926, 1352029,
1352031 and 1352953



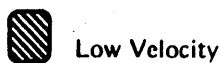
92 Character Keyboard



94 Character Keyboard



96 Character Keyboard



Low Velocity



Low Velocity and Dead Key



Dead Key



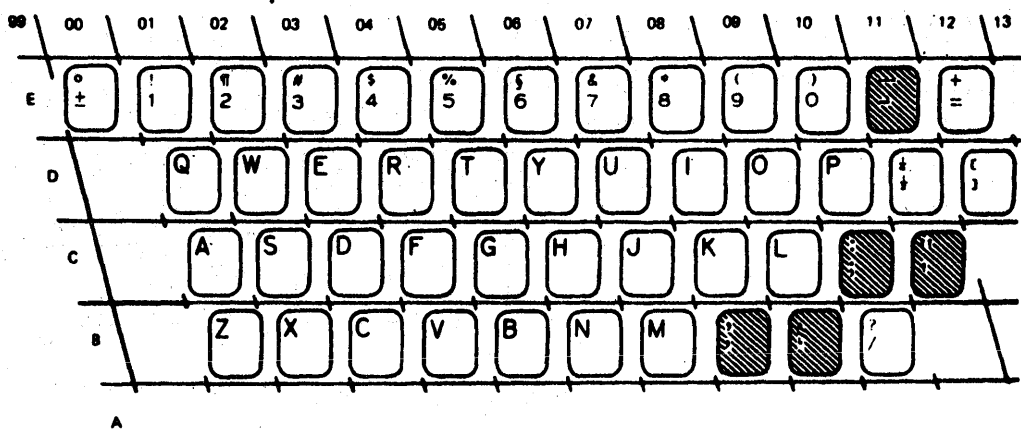
Extra Key Button

**Electronic Typewriters
IBM SELECTRIC® III Typewriters
Keyboards (cont'd)**

Note: For "Selectric" III Typewriter models, the desired keyboard must be ordered from the Plant. Field installation of 94 or 96 character options is not available.

Legal (92 Character)

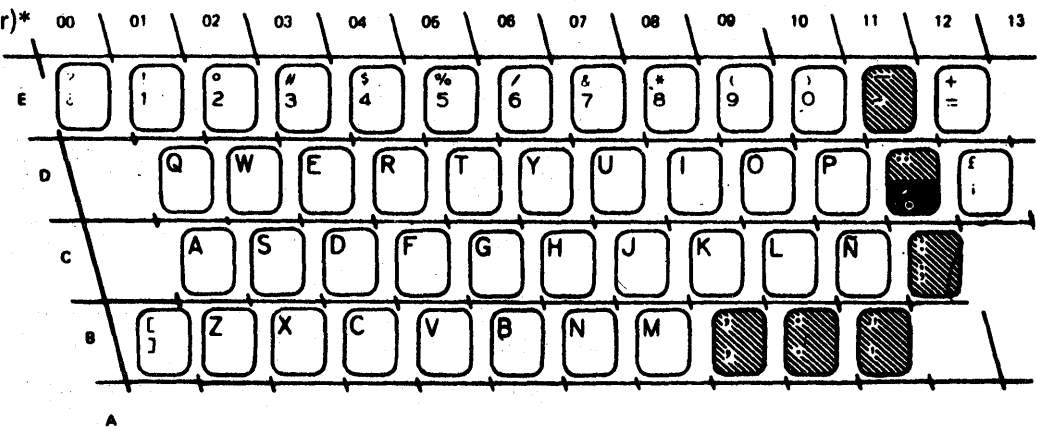
Available with type elements
1352016-019, 1352936-938,
and 1352946-947



Latin America (94 Character)*

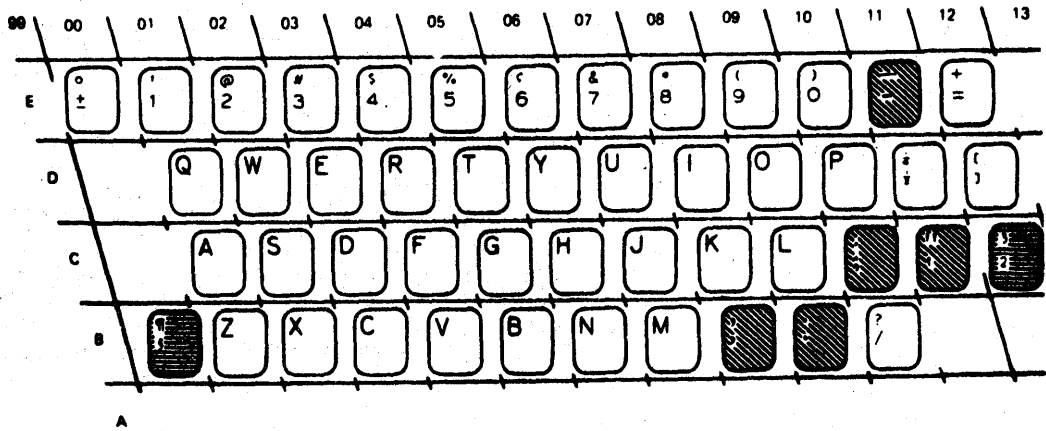
Available with type elements
1352011-013, 1352026,
1352927-933, 1352935,
1352940, and 1352943-945

Electronic Typewriter
Pull out instructions
in Latin America Spanish
(Keyboard Code 460)



Latin America/Puerto Rico

Electronic Typewriter
Pull out instructions
in Puerto Rico Spanish
(Keyboard Code 110)



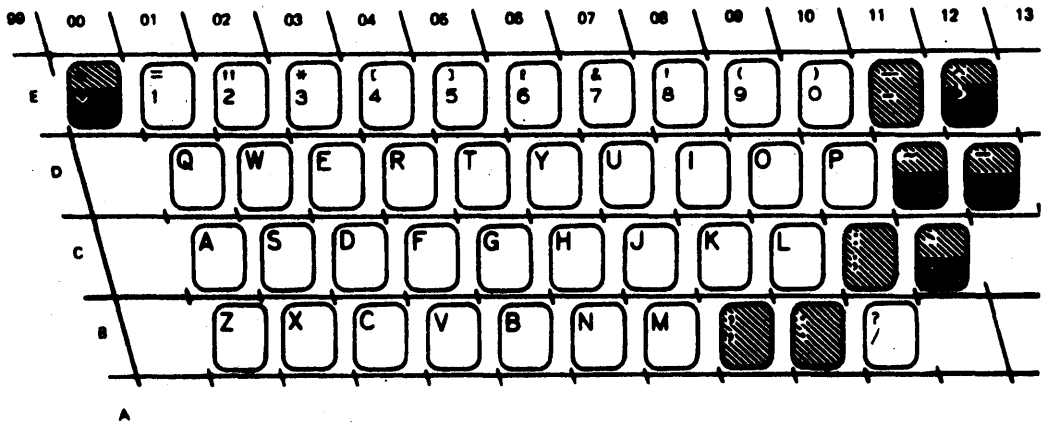
*When using Latin American elements on American Standard keyboards, all characters will print only on a 96 character keyboard.

**Electronic Typewriters
IBM SELECTRIC® III Typewriters
Keyboards (cont'd)**

Note: For "Selectric" III Typewriter models, the desired keyboard must be ordered from the Plant. Field installation of 94 or 96 character options is not available.

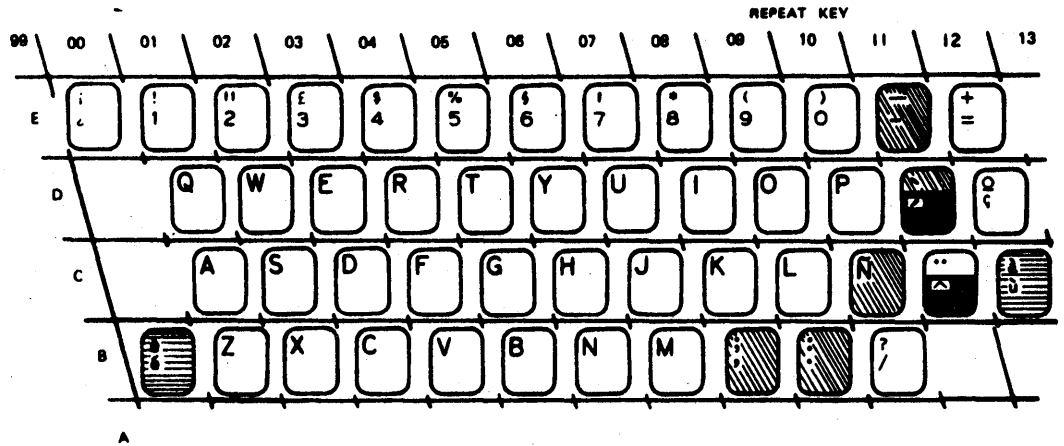
Library (92 Character)

Available with type element
1352916



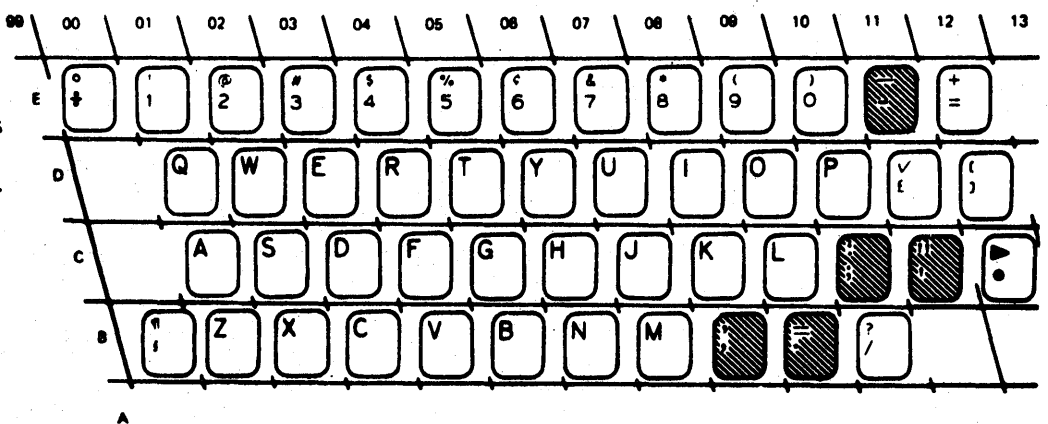
Tri-Lingual (96 Character)

Available with type element
1352917



Accounting (96 Character)

Available with type elements
1352021, 1352024.
Following additional elements
available 10/1/78: 1352020,
1352022, 1352025, 1352950.

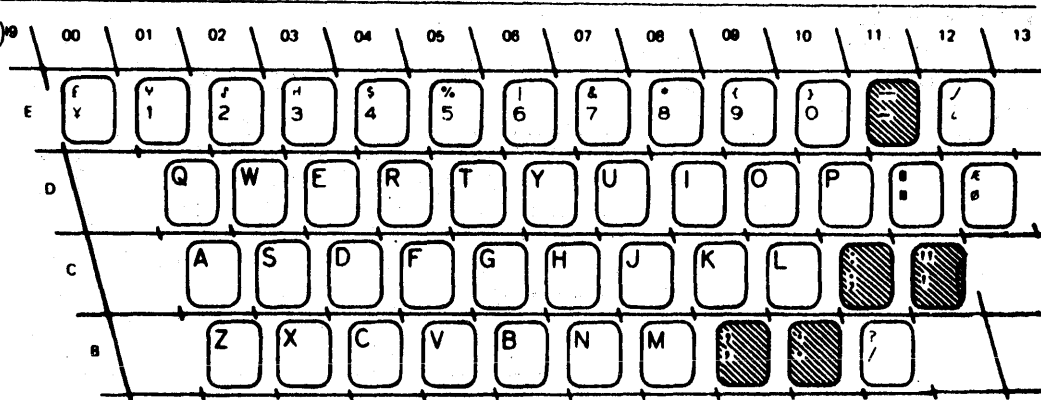


**Electronic Typewriters
IBM SELECTRIC® III Typewriters
Keyboards (cont'd)**

Note: For "Selectric" III Typewriter models, the desired keyboard must be ordered from the Plant. Field installation of 94 or 96 character options is not available.

ANSI-OCR A (92 Character)

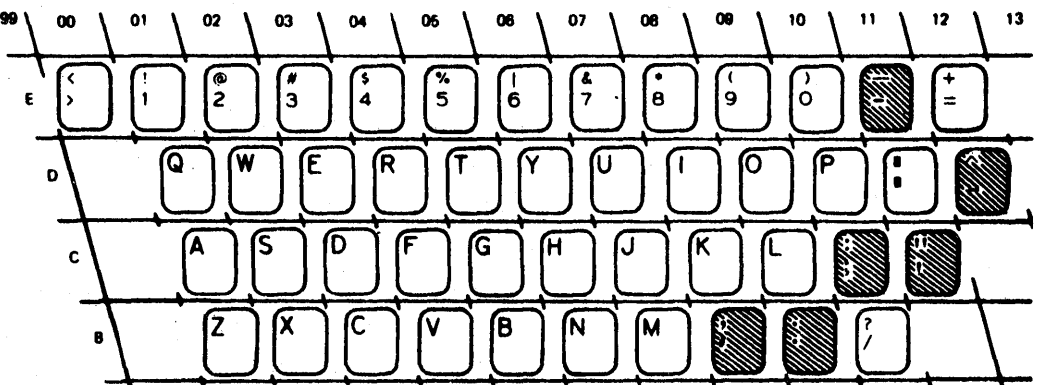
Available with type element
1352919, 1352027



A

OCR B Font (92 Character)

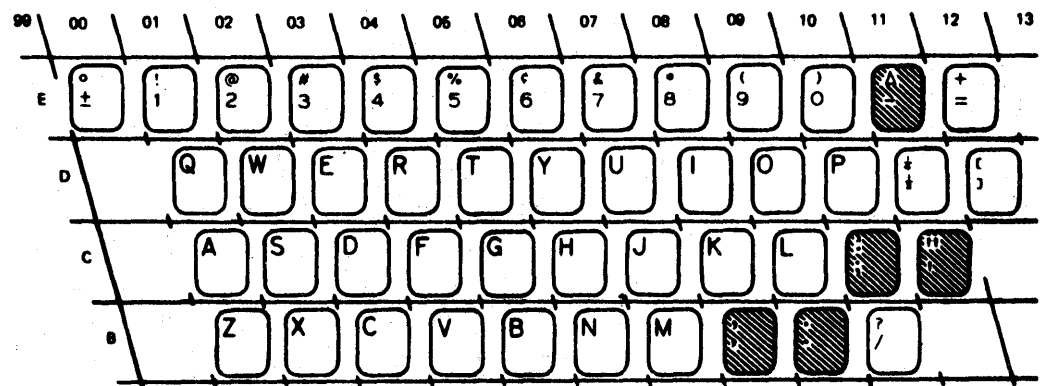
Available with type element
1352920



A

**Printing & Publishing
#3 OCR (92 Character)**

Available with type element
1352921



A

**Electronic Typewriters
IBM SELECTRIC® III Typewriters
Keyboards (cont'd)**

Note: For "Selectric" III Typewriter models, the desired keyboard must be ordered from the Plant. Field installation of 94 or 96 character options is not available.

**Latin America
OCR B Font
(96 Character)**
Available with type element
1352949



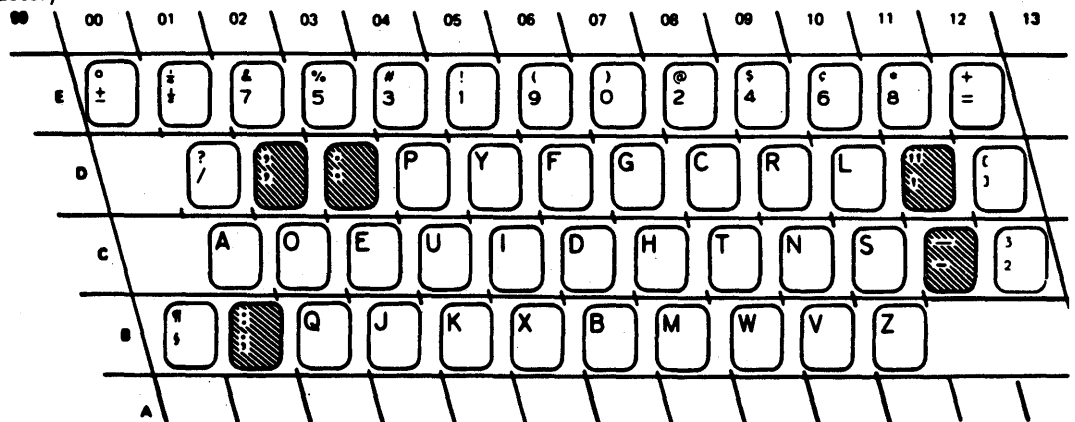
ANSI-OCR-A Keypunch (92 Character)*

Available with
type element
1352006



Modified Dvorak (96 Character)*

Available with
type element
1352001-005,
1352007-010,
1352904-909,
1352912-914,
1352922-924, and
1352029



*Not available for Electronic Typewriters

**Electronic Typewriters
IBM SELECTRIC® III Typewriters
Keyboards (cont'd)**

Note: For "Selectric" III Typewriter models, the desired keyboard must be ordered from the Plant. Field installation of 94 or 96 character options is not available.

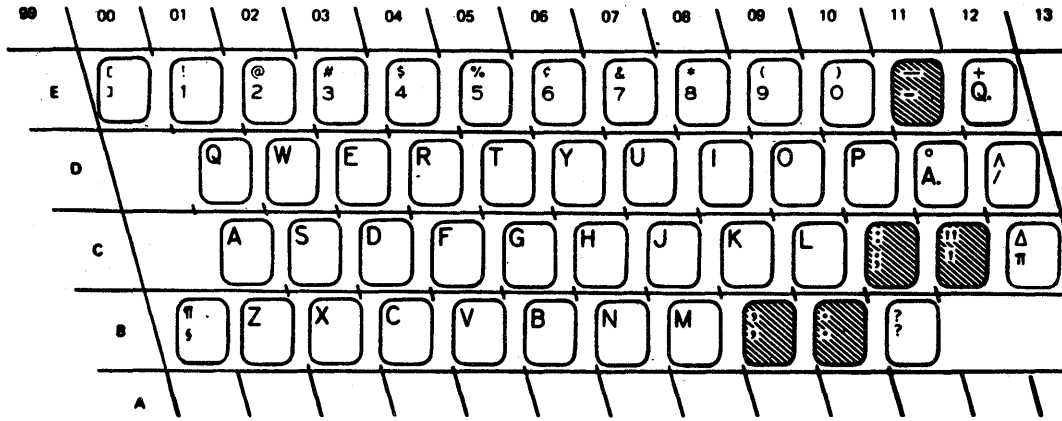
American Simplified (96 Character)*

Available with
type element
1352001-005,
1352007-010,
1352904-909,
1352912-914,
1352922-924, and
1352029



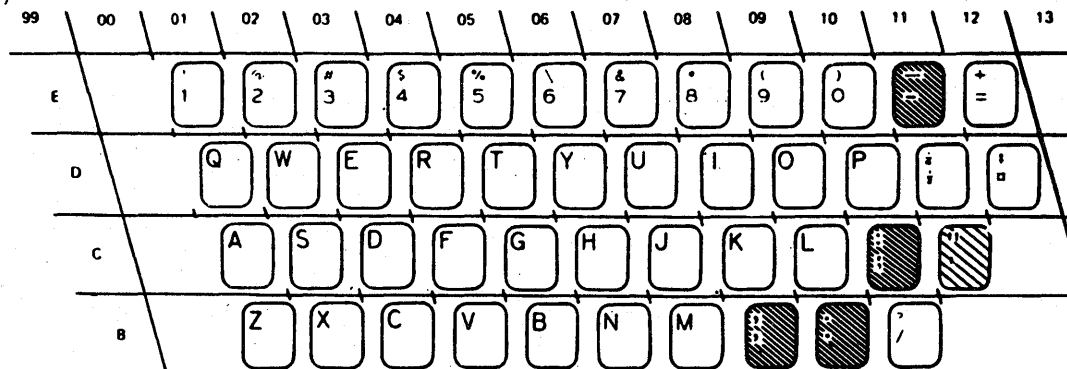
Court Reporter (96 Character)*

Available with
type element
1352030



1403 OCR (92 Character)*

Available with
type element
1352028



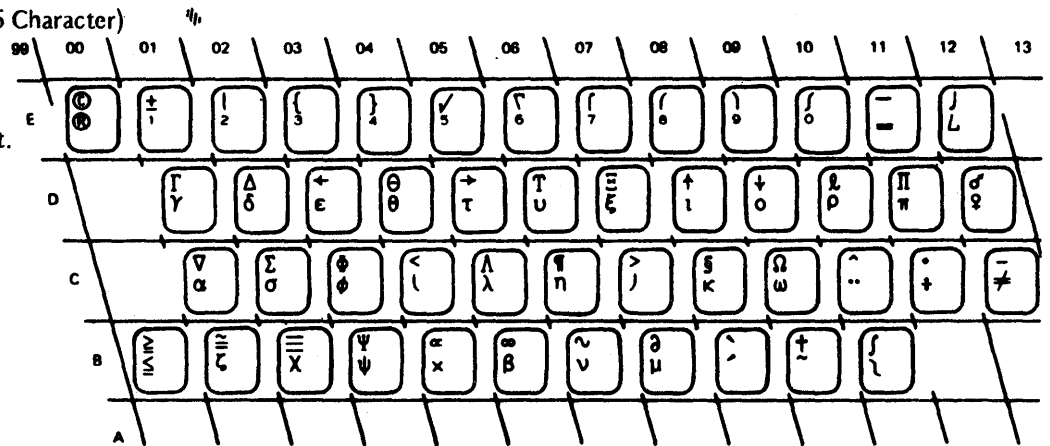
*Not available for Electronic Typewriters

Electronic Typewriters
IBM SELECTRIC® III Typewriters
Keyboards (cont'd)

Note: For "Selectric" III Typewriter models, the desired keyboard must be ordered from the Plant. Field installation of 94 or 96 character options is not available.

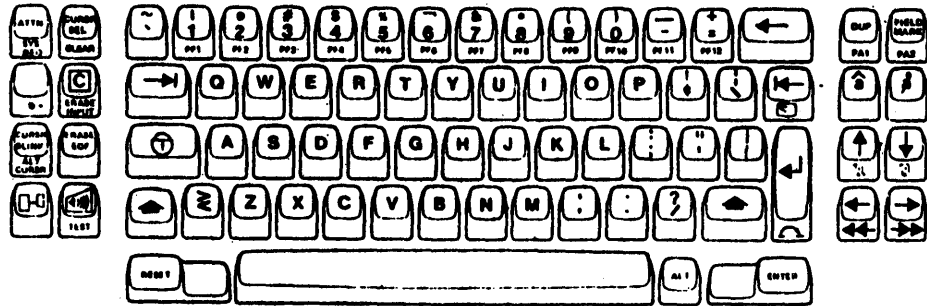
Symbol Arrangement (96 Character)

The keyboard arrangement shown only illustrates what characters are on the element. Available in type elements 1352014 and 1352934.

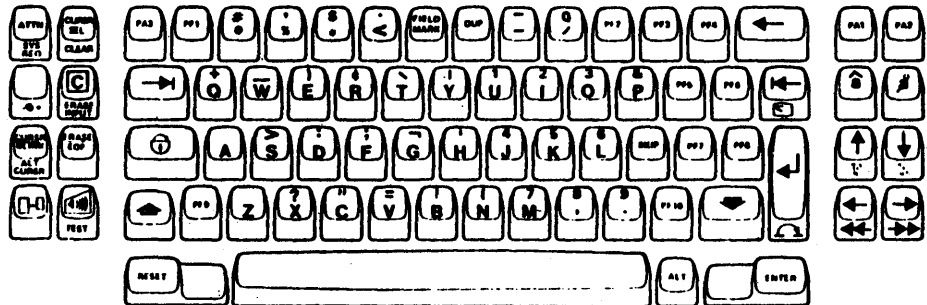


8775 KEYBOARD LAYOUT

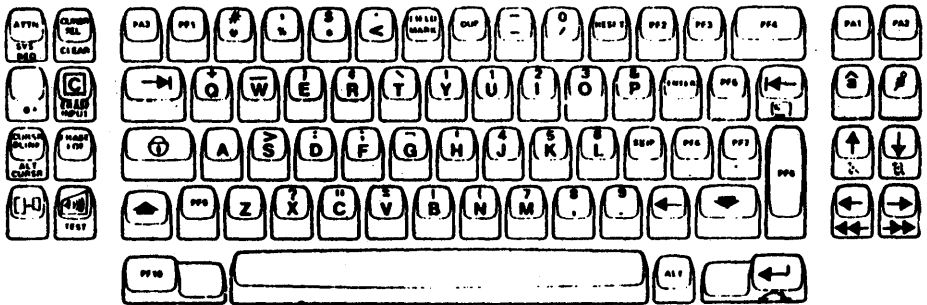
75 - KEY TYPEWRITER KEYBOARD
English (United States) Keyboards (Feature Code #4621)



75 - KEY DATA ENTRY KEYBOARD
English (United States) Keyboards (Feature Code #4622)



75 - KEY DATA ENTRY (HIGH VOLUME) KEYBOARD
English (United States) Keyboards (Feature Code #4623)

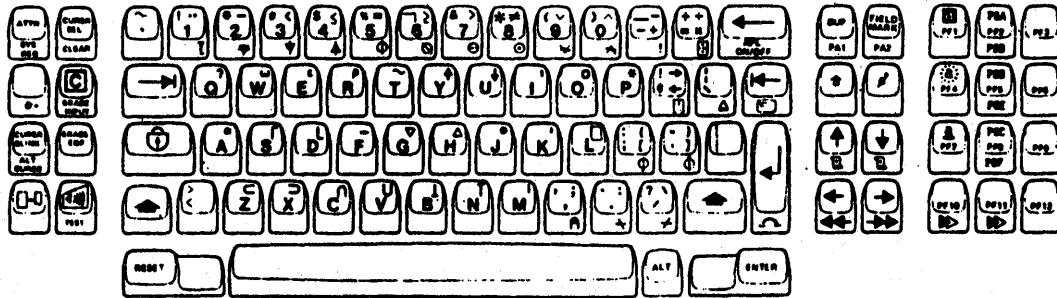


TYPE CATALOG

8775 Keyboard Layout (cont'd)

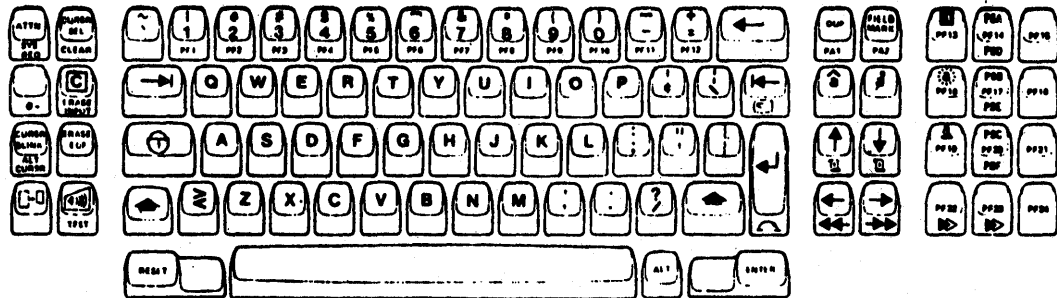
87 - KEY APL KEYBOARD

English (United States) Keyboards (Feature Code #4626)



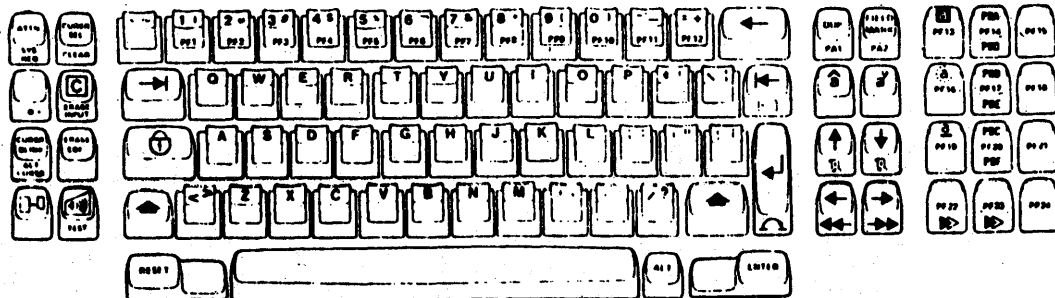
87 - KEY EBCDIC TYPEWRITER KEYBOARD

English (United States) Keyboards (Feature Code #4627)



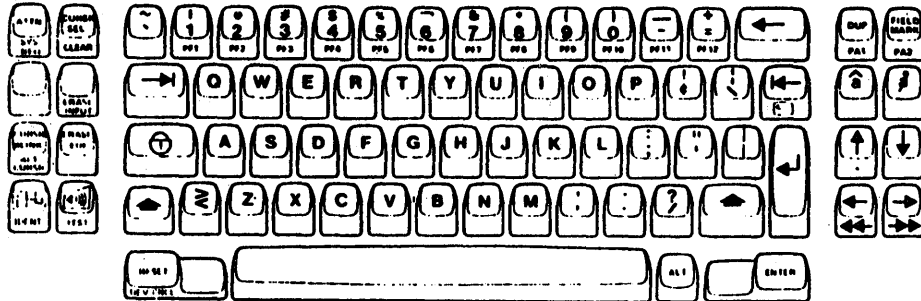
87 - KEY EBCDIC OVERLAY TYPEWRITER KEYBOARD

English (United States) Keyboards (Feature Code #4640)

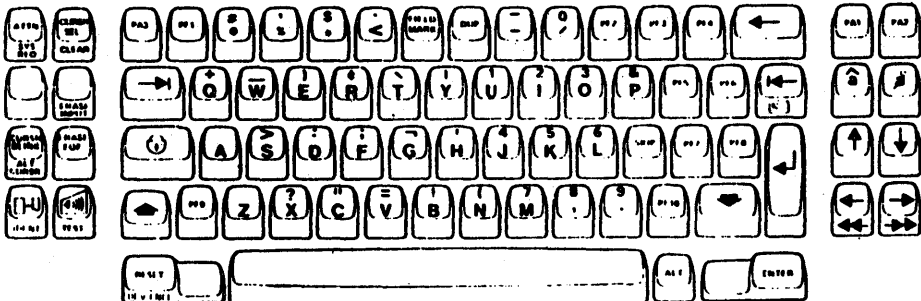


3276, 3278, 3279 KEYBOARD LAYOUT

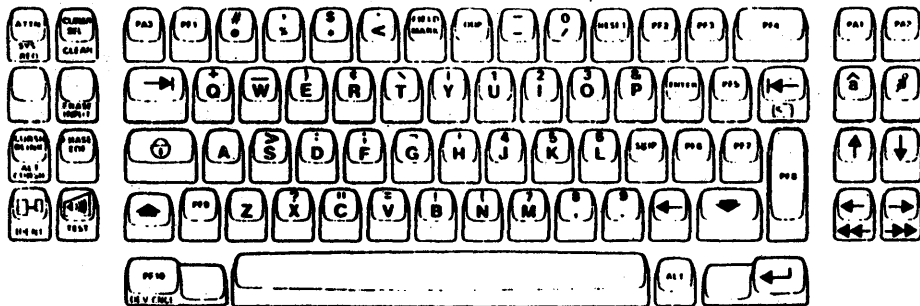
75 - KEY TYPEWRITER KEYBOARD
English (United States) Keyboards (Feature Code #4621)



75 - KEY DATA ENTRY KEYBOARD
English (United States) Keyboards (Feature Code #4622)



75 - KEY DATA ENTRY (HIGH VOLUME) KEYBOARD
English (United States) Keyboards (Feature Code #4623)

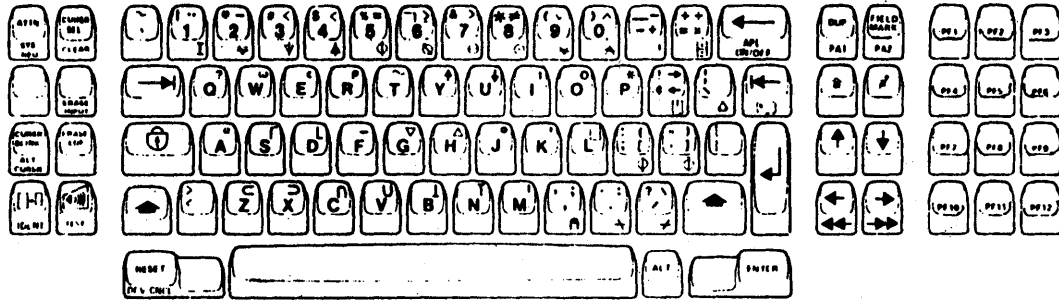


TYPE CATALOG

3276, 3278, 3279 Keyboard Layout (cont'd)

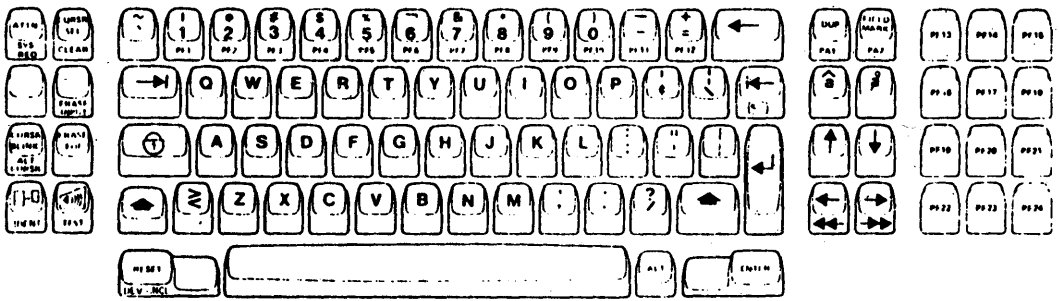
87 - KEY APL KEYBOARD

English (United States) Keyboards (Feature Code #4626)



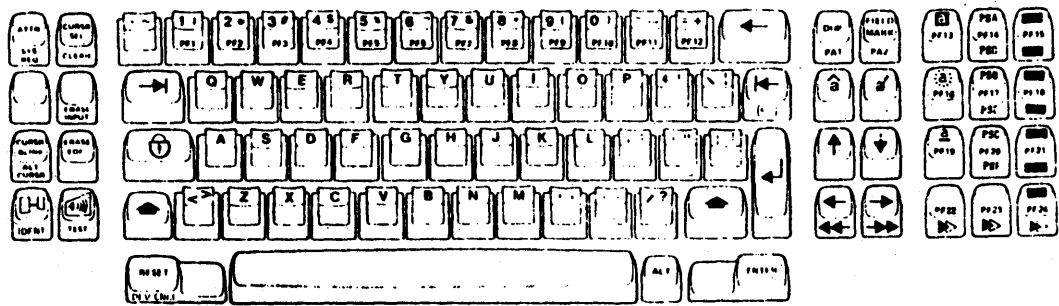
87 - KEY EBCDIC TYPEWRITER KEYBOARD

English (United States) Keyboards (Feature Code #4627)



87 - KEY EBCDIC OVERLAY TYPEWRITER KEYBOARD

English (United States) Keyboards (Feature Code #4640)
3278 and 3279 only

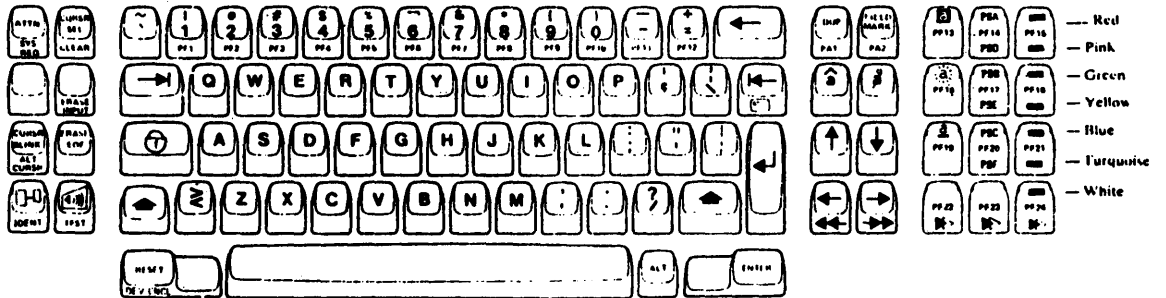


- Red
- Pink
- Green
- Yellow
- Blue
- Turquoise
- White

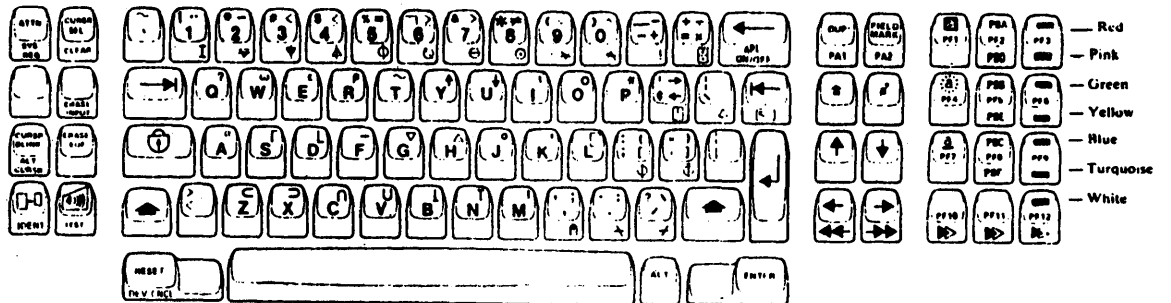
TYPE CATALOG

3276, 3278, 3279 Keyboard Layout (cont'd)

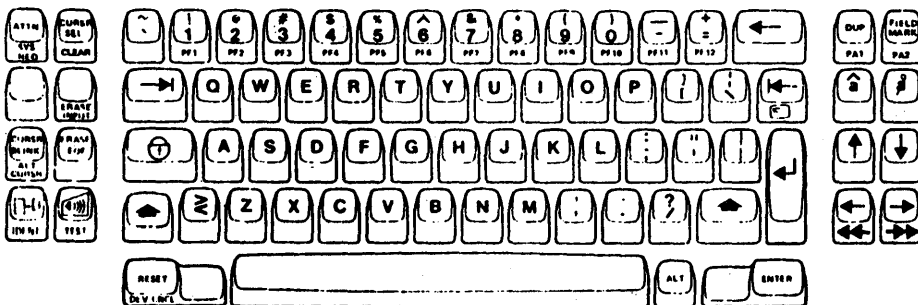
87 - KEY ATTRIBUTE SELECT TYPEWRITER
English (United States) Keyboards (Feature Code #4651)
3278 and 3279 only



87 - KEY ATTRIBUTE SELECT TYPEWRITER APL
English (United States) Keyboards (Feature Code #4652)
3278 and 3279 only



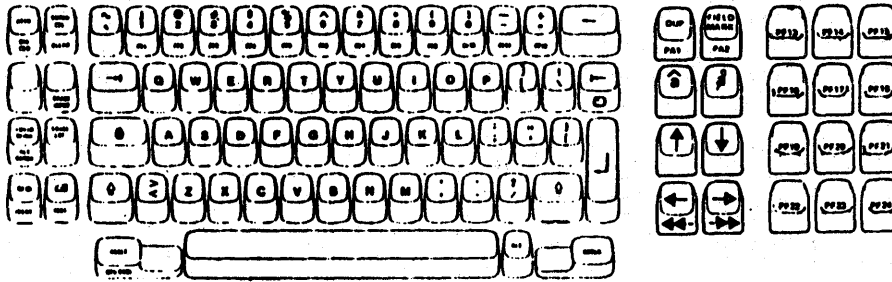
75 - KEY ASCII TYPEWRITER
English (United States) Keyboards (Feature Code #4624)



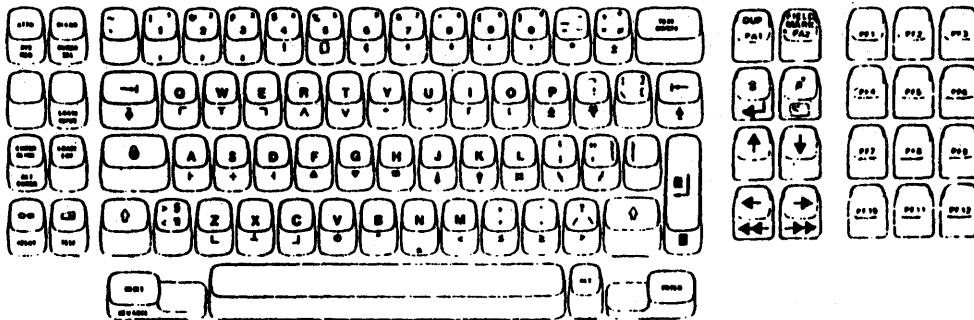
TYPE CATALOG

3276, 3278, 3279 Keyboard Layout (cont'd)

87 - KEY ASCII TYPEWRITER
English (United States) Keyboards (Feature Code #4628)



87 - KEY TYPEWRITER TEXT
English (United States) Keyboards (Feature Code #4629)



**1403 AND 1404 PRINTERS-
SYSTEM/360, SYSTEM/370, AND 4300
PROCESSORS**

Either an AN or HN arrangement (48-character set) is standard on the 1403 model 2 or 7, on the 1404, and on the 1416 (1403 model 3 or N1).

1403 model 2 -- All other arrangements except OAA, OAB, ODA and ONA require the Universal Character Set Feature (Multiple Character Set Feature if printer is attached to 2025 Processing Unit of System/360 model 25).

1403 model 7 -- The only other arrangements available are OAA, OAB, ODA and ONA.

1403 model 3 or N1 -- All other arrangements except ODA and ONA require the Universal Character Set Feature (Multiple Character Set Feature if 1403 N1 is natively attached to 2025 Processing Unit of System/360 model 25).

1404 -- No other arrangements are available.

The chart below shows EBCDIC card and bit codes assigned to special characters included in all print arrangements except SN, TN and ALA. For SN, TN and ALA graphics and their associated EBCDIC card and bit codes, see 1403 SRL (GA24-3073).

The graphics/codes assigned to the PN, QNC and QN arrangements constitute the PL/I language (59 characters) plus the quotation mark symbol.

EBCDIC		Arrangements and Number of Graphics									
BO-column Card Code	Bit Code	AN, ODA PCS-AN (48)	ONA (48)	OAA (48)	OAB (48)	HN PCS-HN (48)	PN, QN QNC (60)	RN (52)	XN (1403-2) (40)	YN (1416) (42)	GN (63)
12-8-2	0100 1010										[
12-8-3	1011	.	.	.	.	.	.	.	.	.	.
12-8-4	1100	"	'	<	<		<	"			<
12-8-5	1101					((((
12-8-6	1110	+	+	+	+	+	+	+			+
12-8-7	1111					|	|	|			|
12	0101 0000	€	€	€	€	€	€	€			€
11-8-2	1010]
11-8-3	1011	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
11-8-4	1100	*	*	*	*	*	*	*	*	*	*
11-8-5	1101))))
11-8-6	1110					!	!	!			!
11-8-7	1111					~	~	~			~
11	0110 0000	-	-	-	-	-	-	-	-	-	-
0-1	0001	/	/	/	/	/	/	/	/	/	/
0-8-3	1011	,	,	,	,	,	,	,	,	,	,
0-8-4	1100	%	%	%	%	%	%	%	%	%	%
0-8-5	1101										
0-8-6	1110					>	>	>			>
0-8-7	1111					?	?	?			?
8-2	0111 1010					:	:	:			:
8-3	1011	#	#	#	#	#	#	#	#	#	#
8-4	1100	@	@	@	@	@	@	@	@	@	@
8-5	1101					'	'	'			'
8-6	1110					"	"	"			"
8-7	1111					"	"	"			"
0-8-2	1110 0000										~

Nominal printing speeds for all available arrangements are listed below. "Nominal" speed is a weighted average of mean expected value when the train or chain arrangement is performing typical printing operations.

Arrangement	Character Set	Nominal Printing Speed - Lines per Minute			
		1403 model 2	1403 model 3 or N1	1403 model 7	1404 model 2
ALA	162 graphics, 78 preferred	---	560/310*	---	---
AN	48 "A" graphics	600	1100	600	600
HN	48 "H" graphics	600	1100	600	600
OAA (representative of OCR-A - alphameric)	5 "A" graphics + 43 OCR-A	600	1100	600	---
OAB (representative of OCR-B - alphameric)	48 (representative of OCR-B graphics)	600	1100	600	---
ODA (representative of OCR-A - numeric)	38 "A" graphics + OCR-A numeric	600	1100	600	---
ONA (representative of OCR-A - numeric)	35 "A" graphics + OCR-A numeric and 3 special characters	600	1100	600	---
GN (ASCII)	3-level set, 63 graphics	500/390/140	955/775/310	---	---
PCS-AN (Preferred Character Set)	3-level set, 48 "A" graphics	750/500/270	1400/955/560	---	---
PCS-HN (Preferred Character Set)	3-level set, 48 "H" graphics	750/500/270	1400/955/560	---	---
PN (PL/I)	60 graphics	500	955	---	---
QNC (PL/I - Commercially Preferred)	60 graphics, 45 preferred	---	1110/310	---	---
QN (PL/I - Scientifically Preferred)	60 graphics, 45 preferred	600/140	1110/310	---	---
RN (FORTRAN/COBOL Commercial)	52 graphics, 47 preferred	600/140	1110/310	---	---
SN (Text Printing - Commercial)	84 graphics, 78 preferred	390/140	775/310	---	---
TN (Text Printing - Scientific)	120 graphics	270	560	---	---
XN (High Speed Alphameric)	40 graphics	690	---	---	---
YN (High Speed Alphameric)	42 graphics, 39 preferred	---	1250/560	---	---

*When printing diacritical marks over or under alphabetic characters an additional print cycle is required, resulting in reduced throughput.

**1403 and 1404 Printers—
System/360, System/370, 4300 Processors
(cont'd)**

Universal

Character Set: See 1403 SRL (GA24-3073) for formulas which facilitate calculation of speeds for specific applications or custom designed character sets... including absolute minimum values. The nominal speed is dependent upon the frequency with which the various subsets in a preferred character set are printed. For example, the PCS-AN arrangement consists of 48 different graphics arranged in a sequence so that some of the characters occur more frequently than others:

<u>48 graphics -- 3-level preferred set</u>		<u>PCS-AN graphics</u>	
Characters of primary preference appearing 8 times	O-9 . , - *	A-2	□ # / +
Characters of secondary preference appearing 4 times	A-2	□ # / +	□ # / +
Characters of least preference appearing twice	□ # / +	□ # / +	□ # / +

The speeds at which graphics in each of the three levels of preference are printed are included in the table on the previous page.

The Universal Character Set Feature is required on the 1403 model 2 for use of any arrangement other than AN, HN, OAA, ODA and ONA. It is also required on the 1403 model 3 or N1 for any arrangement other than AN, HN, ODA and ONA. Note: With the UCS Feature, speeds of 750 lpm (1403 model 2) and 1400 lpm (1403 model 3 or N1) are theoretically achievable with any arrangement, depending on the data being printed.

AN and HN chains/trains have identical graphics except for four graphics which are exclusive to each arrangement as follows:

Chain/Train Character Position No.	AN Arrangement			HN Arrangement		
	Graphic	Card Code	Bit Code	Graphic	Card Code	Bit Code
48	□	12-8-4	0100 1100	)	11-8-5	0101 1101
24	□	0-8-4	0110 1100	(	12-8-5	0100 1101
12	□	8-4	0111 1100	'	8-5	0111 1101
11	#	8-3	0111 1011	=	8-6	0111 1110

With an HN chain/train installed, if a code for one of the above AN graphics is presented to the printer, the HN graphic of the associated character position will print. Conversely, if the code for an HN graphic is presented to a printer equipped with an AN chain/train, the AN graphic of the associated character position will print. In other words, these AN and HN graphics are dualated automatically.

It is recommended that the 12-8-4 (0100 1100) code be used for the □ only in arrangements not containing the < symbol. In EBCDIC, the < is assigned 12-8-4 (0100 1100). If a □ is to be used in an arrangement which also contains the < symbol, it is recommended that the □ be assigned a 12-11-8-4 (1011 1100) code. For Arrangement OAA or ONA, recommended coding of the hook, fork and chair graphics are shown under "OCR Fonts" below.

Multiple

Character Set: All arrangements listed on the previous page will operate with the Multiple Character Set Feature installed on a 1403 model 2 or N1 when natively attached to a 2025 (System/360 model 25). The Multiple Character Set Feature is required on the 1403 model 2 for use of any arrangement other than AN, HN, OAA, ODA and ONA. It is also required on the 1403 model N1 for any arrangement other than AN, HN, ODA and ONA. For each arrangement, the nominal printing speed is listed. (See S/360 model 25 SRL, GA24-3510, for formulas which facilitate calculation of speeds for specific applications or custom designed character sets... including absolute minimum values.)

Note: The Multiple Character Set Feature or the Universal Character Set Feature on the 1403 provides the same function when the printer is attached to the 2025 Processing Unit via the Integrated 1403 Attachment (#4590).

Only the AN, HN, OAA, ODA, ONA, PN, TN and XN arrangements will operate at speeds equivalent to those listed on the previous page. Other arrangements, with preferred graphics in non-repeatable sets, will result in speed degradation. In these other arrangements, characters of least preference dictate the printing speed. Consequently, only the lowest nominal printing speed applies to a 1403 model 2 or N1 natively attached to the 2025 Processing Unit; i.e., with an RN arrangement on a 1403 model 2, the nominal printing speed is 140 lines per minute... with RN on 1403 model N1, nominal printing speed is 310 lines per minute.

Printing for Optical Character Reading:

For Arrangement OAA or ONA, recommended coding of the hook, fork and chair graphics are shown under "OCR Fonts" below.

ECA No. 42, B/M 5870287, is required on any 1403 which will be equipped with a chain/train to prepare documents for optical reading by a 1282, 1287, 1288, 1418, 1428 or 3886.

OCR Fonts: OCR-A Font, Size 1 and OCR-B Font, Size 1 -- IBM print chains/trains are available for printing numeric, alphabetic and certain special characters which are representative of OCR-A and OCR-B Fonts. The optically readable characters of these arrays were designed to be representative of (but not always identical to) the mean character (shape) centerline described in the "United States of America Standard Character Set for Optical Character Recognition, Size A, USAS X3.17-1966" for OCR-A font (also referred to as ANSCS OCR) and the "European Computer Manufacturers Association's Standard ECMA-11 for Alphanumeric Character Set OCR-B for Optical Recognition 2nd Edition, October, 1971" for OCR-B font. Documents printed by a 1403 chain/train can be read by the 1287, 1288 and 3886 optical readers as indicated on the "Machines" pages. It must be recognized that parameters are subject to variations, and that deviations from specified limits may occur in bulk printing on 1403 printers.

Print speeds for the following arrangements are indicated on TC 71.1. No change to Programming Systems support is required.

Arrangement OAA (#9710) -- Contains letters A-Z, digits 0-9, and special characters / - . , # of OCR-A, Size 1, and # □ # + < of standard (.095") 1403 type style. Because of the repositioning of optical graphics (characters) on print trains (1416), the 1403 must be equipped with either the Universal Character Set Feature (#8640) or Multiple Character Set Feature (#5111) depending on the 1403 model and S/360 or S/370 model involved.

In the OAA arrangement, either one (but not both) of the following may be specified for the character substitution(s) indicated:

#9711 □ in place of <
 #9712 { f in place of <
 ψ in place of +
 d in place of %

If desired, #9728 (Timing Mark dash) may be specified in place of #.

Arrangement ODA (#9701) -- Contains the same graphics as the AN arrangement except digits 0-9 are replaced by the corresponding digits of OCR-A, Size 1.

Arrangement ONA (#9702) -- Same as ODA but □ + % are replaced by f ψ d (respectively) of OCR-A, Size 1.

When the Universal Character Set or Multiple Character Set Feature is used with the ONA arrangement, or OAA arrangement equipped with f ψ d graphics, it is recommended that these graphics be coded as follows:

Graphic	Card Code	Bit Code
f	12-0-9-8-4	1100 1100
ψ	12-0-9-8-6	1100 1110
d	11-0-9-8-4	1110 1100

Arrangement OAB (#9713) -- Contains letters A-Z, digits 0-9, and special characters . < + % \$ - / > ' = * of OCR-B font, Size 1. Because of repositioning of optical graphics (characters) in the print train (1416), the 1403 must be equipped with either the Universal Character Set Feature (#8640) or Multiple Character Set Feature (#5111) depending on the 1403 and the system involved.

In the OAB arrangement, the following may be specified for the character substitution indicated:

#9729 -- Timing Mark dash in place of > .

1403 and 1404 Printers—
System/360, System/370, 4300 Processors
(cont'd)

Print Chain/Train Arrangements

Print Arrangements are assigned an alphabetic designation (AN, HN, PCS-AN, etc.). Except for the OCR arrangements, the type size or style is designated by a numeric suffix (AN2, HN3, AN4, etc.), with 2 = .095" type size; 3 = .079" type size; 4 = 1428 Type Style; 5 = Text Type Style; and 6 = Library Type Style. Based on this coding, print chains, trains are assigned Feature #s as indicated below for each available arrangement.

S/360	S/370	Printer	Standard Type Style		Alternate Type Style		OCR-A Applications		OCR-B Applications		1428 Type Style		Text Type Style		Library Type Style		Reference		
			.095"	Feat.#	.079"	Feat.#	Size 1	Feat.#	Size 1	Feat.#	OCR	Feat.#	Text Prt.	Feat.#	Lib. Prt.	Feat.#			
25 thru 85 and 195	3031 thru 3195	1403 mdl 2	AN2	9612	AN3	9613					AN4	9621					Note 1		
			HN2	9614	HN3	9615												Note 2	
							OAA	9710	OAB	9713									
							ODA	9701											
							ONA	9702											
			GN2	9721	GN3	9720									SN5	9634			Note 3
PCS-AN2	9562	PCS-AN3	9622									TN5	9635						
PCS-HN2	9564	PCS-HN3	9624																
PN2	9631	PN3	9641																
QN2	9632	QN3	9642																
RN2	9633	RN3	9643																
XN2	9636	XN3	9646																
25 thru 85 (except 67) and 195	3031 thru 3195	1403 mdl 7	AN2	9612	AN3	9613					AN4	9621					Note 1		
			HN2	9614	HN3	9615													
							OAA	9710	OAB	9713							Notes 2, 4		
							ODA	9701											
							ONA	9702											
25 thru 85 and 195	3031 thru 3195	1416 (1403 mdl 3 or N1)	AN2	9612	AN3	9613					AN4	9621					Note 1		
			HN2	9614	HN3	9615													
							OAA	9710	OAB	9713									Note 2
							ODA	9701											
							ONA	9702											
			GN2	9721	GN3	9720									SN5	9634	ALA6	9735	
			PCS-AN2	9562	PCS-AN3	9622									TN5	9635			Notes 2, 5, 6
			PCS-HN2	9564	PCS-HN3	9624													
			PN2	9631	PN3	9641													
			QNC2	9638	QNC3	9648													
QN2	9632	QN3	9642																
RN2	9633	RN3	9643																
YN2	9637	YN3	9647																
25 thru 50 (except 44)	---	1404 mdl 2	AN2	9612	AN3	9613					AN4	9621					Note 7		
			HN2	9614	HN3	9615													

IMPORTANT -- Prerequisites for attachment of a 1403 or 1404 Printer to a System/360 Processing Unit or 2821 Control Unit are described on the 1403 and 1404 "Machines" pages. The 1403 "Machines" page also covers prerequisites for attachment to System/370: Certain print chain/train arrangements require additional features (i.e., Universal Character Set or Multiple Character Set) on the printer and processing unit or control unit. These additional prerequisites are covered by "Notes" indicated under "Reference" in the above chart.

In any case below where the Universal Character Set Feature (#8640/8641) or Multiple Character Set Feature (#5110/5111) is shown as a prerequisite, either feature on the applicable 1403 will function with the MCS Adapter (#5100) on the 2025 Processing Unit.

- Notes: (1) Arrangement AN4 can be used to prepare documents for optical reading by a 1428 Alphameric Optical Reader, 1282 Optical Reader Card Punch, or 1287 Optical Reader.
- (2) OCR Arrangement OAA, ODA or ONA can be used to prepare documents for optical reading by a 1287, 1288 or 3886 optical reader. The OAB arrangement can also be used to prepare input for the 3886. For specific graphics which can be read, see reader Component Description manuals. Graphics which comprise each character set are illustrated on one of the following pages. If the Universal Character Set Feature, or Multiple Character Set Feature in System/360 model 25, is used on the 1403, it is recommended that the hook, fork and chair of the ONA Arrangement (#9702) or OAA Arrangement (#9710 modified by #9712) be coded as described under "OCR Fonts" on the previous page. Also, see "Printing for Optical Character Reading" on page TC 71.2.
- (3) System/360 model 25 -- For natively attached 1403, Multiple Character Set Feature (#5110) and Interchangeable Chain Cartridge Adapter (#4740) are prerequisite on the 1403 and Multiple Character Set Adapter (#5100) is required on the 2025 Processing Unit. If 1403 is attached to 2025 via the Multiplexer Channel (#5248) or Selector Channel (#6960), 1403 must be equipped with Universal Character Set Feature (#8641) and Interchangeable Chain Cartridge Adapter (#4740), and 2821 Control Unit model 1, 2, 3 or 5 must be equipped with Universal Character Set Adapter (#8637, 8638 or 8639).
- S/360 mdl 22, 30 thru 85 and 195 and any S/370 Processor -- Universal Character Set Feature (#8641) and Interchangeable Chain Cartridge Adapter (#4740) are prerequisite on the 1403 and Universal Character Set Adapter (#8637, 8638 or 8639) is required on 2821 Control Unit mdl 1, 2, 3 or 5.
- (4) 1403 model 7 is not available for use with System/360 model 67.
- (5) 1403 model 3 is not available for use with System/360 model 22, 85 or 195, nor for System/370 model 195.
- (6) System/360 model 25 -- For natively attached 1403, Multiple Character Set Feature (#5111) is prerequisite on the 1403 and Multiple Character Set Adapter (#5100) is required on the 2025 Processing Unit. If 1403 is attached to 2025 via the Multiplexer Channel (#5248) or Selector Channel (#6960), 1403 must be equipped with Universal Character Set Feature (#8640) and 2821 Control Unit model 1, 2, 3 or 5 must be equipped with Universal Character Set Adapter (#8637, 8638 or 8639).
- S/360 mdl 22, 30 thru 85 and 195 and any S/370 Processor -- Universal Character Set Feature (#8640) is required on the 1403 and Universal Character Set Adapter (#8637, 8638 or 8639) on the 2821 Control Unit mdl 1, 2, 3 or 5.
- (7) A 2821 Control Unit model 4 is prerequisite. Arrangement AN4 can be used to prepare documents for optical reading by a 1282 Optical Reader Card Punch. Note: The 1404 is not available for use with System/360 model 44 nor with System/370.

In addition to the arrangements listed above for System/360, any standard chain/train previously used with a 1400 series system (including numeric chains... see "Limitations" on next page) can be used on a 1403 equipped with the Universal Character Set Feature (or Multiple Character Set Feature in System/360 model 25). See page TC 71.5.

Specify: See next page.

**1403 and 1404 Printers—
System/360, System/370, 4300 Processors
(cont'd)**

•Specify: [1] For 1403 model 2 or 7, or 1404 model 2 -- One print chain Feature # unless Interchangeable Chain Cartridge Adapter (#4740) is ordered ... with #4740, specify two Feature #s.

For 1416 (1403 model 3 or N1) -- one print train Feature # for each 1416 ordered.

[2] If desired, #9140 for enlarged dash (Character No. 732464) in lieu of standard dash for printing on documents to be read by IBM optical mark readers. Available as substitution in all arrangements except OAA, OAB, AN-4, PCS-AN, PCS-HN, QNC, SN, TN, ALA, XN and YN.

[3] If desired, #9549 for slashed zero in lieu of standard zero in any arrangement except AN-4, OAA, OAB, ODA, ONA, SN5 and TN5.

[4] If desired, #9676 for round alphabetic "O" in lieu of standard squared "O" in any arrangement except AN-4, OAA, OAB, ODA, ONA, SN5 and TN5.

[5] If desired, #9722 for ! (exclamation point) in lieu of | (logical (OR) in GN arrangement.

[6] If desired, #9723 for ^ (circumflex) in lieu of ¬ (logical NOT) in GN arrangement.

[7] If desired, #9728 for - (timing mark dash) in lieu of * in OAA arrangement for printing timing marks on documents for the 3886 Optical Character Reader. For field installation, order character number 2642392 in Train Slug No. 2642393 or Chain Slug No. 2633870.

[8] If desired, #9729 for - (timing mark dash) in lieu of > in OAB arrangement for printing timing marks on documents for the 3886 Optical Character Reader. For field installation, order character number 1798438 in Train Slug No. 1798437 or Chain Slug No. 2645792.

[9] If desired, #9670 -- so that the comma will appear five times and the pound sign only once in a QNC arrangement. Thus when printing commas on a line, the printer will maintain an output rate of 1110 lines per minute regardless of the frequency per line. There will be no throughput improvement when no commas are printed on a line. For field installation, order four type slug substitutions at the prices listed on page TC 34.

[10] If desired, #9690 for Non Standard Type Arrangement. See "Type Slug Substitutions" paragraph below.

Limitations: On a 1403 model 2 equipped with Universal Character Set Feature (#8641) or Multiple Character Set Feature (#5110), and using a numeric chain (#9484 or #9485), maximum speed is limited to 750 lines per minute. If machine is equipped with Numerical Print Feature (#5381) and is to be retained for use in System/360 or System/370, contact Special Product Marketing.

Alphabetic and numeric characters from Arrangement SN5 and TN5 cannot be substituted in any other arrangements, nor can characters from other arrangements be substituted in SN5 and TN5.

Because of lesser type face density of the SN5 and TN5 arrangements: (1) Ribbon life may be reduced when printing on continuous forms; (2) The number of normal print quality copies is limited to the original and first copy with the customer using additional copies at his own discretion.

The TN arrangement is limited to use at 6 lines per inch spacing due to the overlap otherwise created by exponent characters.

The ALA arrangement, available only for the 1416 Interchangeable Train Cartridge, has the following limitations: (1) Ribbon life may be reduced when printing on continuous forms because of greater type face density; (2) For optimum print quality, single part paper is recommended; (3) 6 lines per inch vertical spacing is recommended when under or over-printing (diacritical marks, etc.); (4) All special applications such as spirit, photo-offset, multilith, diazo, heat transfer or similar process should be tested to assure satisfactory results.

Notes: Arrangements AN2 and RN2 can be used to prepare documents to be read by a 1418 Optical Character Reader. See "Printing for Optical Character Reading" (page TC 71.2).

All standard 1403 chains/trains contain some ASCII characters. The GN arrangement provides a 63-character set consistent with the American Standard Code for Information Interchange (ANSI X3.4-1968).

It is important to select the arrangement which gives the highest print speed for the customer's applications. As a guide, the arrangement with the smallest character set should be selected. For example, the AN and HN 48-character sets have a nominal printing speed of 1100 lines per minute on the 1403 model N1, while the PN 60-character set runs at 955 lines per minute (nominal speed).

Feature #9690 (Non-standard Type Arrangement) will be specified for: (1) Rearrangement of standard type slugs; (2) Rearrangement of standard characters in one or more slugs; (3) Substitution of other available characters in slugs; (4) New design characters. #9690 should not be specified for the other substitutions allowed in the "Specify" list.

Arrangement RN is designed for FORTRAN/COBOL use. Any HN, PCS-HN, PN, QNC, QN and TN arrangement also has this capability.

Type Slug

Substitutions: Standard type slugs can be substituted for others in announced arrangements without charge. These slugs are furnished at no charge when properly ordered and plant installed on a chain, or in a train. See "Substitute Characters" on page TC 110. For field installation, see "Substitute Characters - Field Installation" on page TC 110 for ordering and charges. Also review "Limitations" above. The frequency of occurrence on the chain/train determines the quantity of identical slugs which must be ordered. See 1403 SRL (GA24-3073) for details of designing a custom chain or train.

Print Chains: Additional, spare, or replacement chains are available for either fixed or interchangeable cartridges used on the 1403 model 2 or 7, or 1404 model 2.

	Feature #	Rental	Purchase	MMMC	FIC
Any one chain arrangement listed on the previous page, chain only	5532	\$1,490SUC	\$1,335	NC	\$ 51

•Specify: #5532 and Feature # of desired chain. (Note: If both chains supplied with Interchangeable Chain Cartridge Adapter (#4740) are to be changed in the field, price applies to each chain. If more than two interchangeable cartridges are desired for a machine, or interchangeability with more than one machine is desired, consult Special Product Marketing.

Print Trains: Additional print trains (which are 1416s) are available by ordering additional 1416 Interchangeable Train Cartridges ... see 1416 in "Machines."

1403 and 1404 Printers—
System/360, System/370, 4300 Processors
(cont'd)

Use of 1400 Series

Chains/Trains: THIS CHART IS INCLUDED FOR INFORMATION PURPOSES ONLY. FOR A CUSTOMER WHO WILL BE CONVERTING TO SYSTEM/360 FROM AN INSTALLED 1400 SERIES SYSTEM, AND DESIRES TO RETAIN HIS 1403/1404 PRINTER FOR USE IN SYSTEM/360, THE 1400 SERIES PRINTING ARRANGEMENT CAN STILL BE USED. (PREREQUISITES FOR SYSTEM/360 USE ARE INCLUDED IN THE CHART.) WHENEVER REQUESTED BY THE CUSTOMER, THE 1400 SERIES CHAINS/TRAINS WILL BE CONVERTED TO SYSTEM/360 ARRANGEMENTS AT NO CHARGE IN ACCORDANCE WITH THE PROCEDURES UNDER "SPECIFY" ON THE 1403/1404/1416 "MACHINES" PAGES.

Prerequisites for attachment of a 1403 or 1404 Printer to a System/360 Processing Unit or 2821 Control Unit are described on the 1403 and 1404 "Machines" pages. Certain print chain/train arrangements require additional features (i.e., Universal Character Set or Multiple Character Set) on the printer and processing unit or control unit. These additional prerequisites are covered in the chart below.

	Std. Type Style		Alt. Type Style		1428 Type Style		Prerequisites for System/360 Use
	.095"	Feature #	.079"	Feature #	OCR	Feature #	
1400 Series Chain Arrangements -- 1403 model 2 (also see 1404 model 2, below)	A2	9601	A3	9581	A4	9591	<p>System/360 model 25 -- Printer can be either natively attached to 2025 Processing Unit or via the Multiplexer Channel or Selector Channel.</p> <p>For printer natively attached: Either (a) or (b) is required:</p> <p>(a) 1403 with fixed cartridge or Interchangeable Chain Cartridge Adapter (#4740) and 2025 Processing Unit equipped with 1400 Series Compatibility (#4440) and 1401/1460 Compatibility (#4441). This permits use of any arrangement A thru K.</p> <p>(b) 1403 with Interchangeable Chain Cartridge Adapter (#4740) and Multiple Character Set Feature (#5110) plus Multiple Character Set Adapter (#5100) on 2025 Processing Unit. Any arrangement A thru K and numeric chains (#9484 and #9485) can be used. With numeric chains, printing speed is limited to 750 lines per minute ... see "Note" included in (d), below.</p> <p>For printer attached via Multiplexer Channel (#5248) or Selector Channel (#6960) on 2025: Either (c) or (d) is required:</p> <p>(c) 1403 with fixed cartridge or Interchangeable Chain Cartridge Adapter (#4740) and 2025 equipped with 1400 Series Compatibility (#4440) and 1401/1460 Compatibility (#4441), plus 2821 model 1, 2, 3 or 5. This permits use of any arrangement A thru K.</p> <p>(d) 1403 with Interchangeable Chain Cartridge Adapter (#4740) and Universal Character Set Feature (#8641) plus Universal Character Set Adapter (#8637, #8638 or #8639) on 2821 Control Unit model 1, 2, 3 or 5. This permits use of any arrangement A thru K plus numeric chains (#9484 and #9485). With numeric chains, printing speed is limited to 750 lines per minute. Note: If 1403 model 2 with Numeric Print Feature (#5381), from a 1400 Series System, is to be retained for use in System/360, consult Regional Special Product Marketing.</p> <p>System/360 model 30 -- Either (e) or (f) is required:</p> <p>(e) 1403 with fixed cartridge or Interchangeable Chain Cartridge Adapter (#4740) and 1401/1440/1460 Basic Compatibility (#4456) on 2030 Processing Unit. This permits use of any arrangement A thru K.</p> <p>(f) Same as (d) listed above for System/360 model 25.</p> <p>System/360 model 40 -- Either (g) or (h) is required:</p> <p>(g) 1403 with fixed cartridge or Interchangeable Chain Cartridge Adapter (#4740) and 1401/1460 Compatibility (#4457) on 2040 Processing Unit. This permits use of any arrangement A thru K.</p> <p>(h) Same as (d) listed above for System/360 model 25.</p> <p>System/360 models 44 thru 85 and model 195 -- Same as (d) listed above for System/360 model 25.</p>
	B2	9602	B3	9582			
	C2	9603	C3	9583			
	D2	9604	D3	9584			
	E2	9605	E3	9585			
	F2	9606	F3	9586			
	G2	9607	G3	9587			
	H2	9608	H3	9588			
	J2	9609	J3	9589	J4	9599	
	K2	9610	K3	9590			
1400 Series Train Arrangements -- 1416 (1403 mdl 3)	A2	9611	A3	9616	A4	9591	<p>System/360 model 25 -- 1403 model 3 cannot be used; however, 1416 Interchangeable Train Cartridge may be retained for use on a 1403 model N1. Printer can be either natively attached to 2025 Processing Unit or via the Multiplexer Channel or Selector Channel.</p> <p>For printer natively attached: Either (i) or (j) is required:</p> <p>(i) 1400 Series Compatibility (#4440) and 1401/1460 Compatibility (#4441) on 2025 Processing Unit permit use of A2, H2, A3, H3, A4 or J4 only.</p> <p>(j) Multiple Character Set Feature (#5111) on 1403 and Multiple Character Set Adapter (#5100) on 2025 Processing Unit permit use of all print train arrangements listed in (i) above plus the PCS arrangements.</p> <p>For printer attached via Multiplexer Channel (#5248) or Selector Channel (#6960) on 2025: Either (k) or (l) is required:</p> <p>(k) Same as (i) listed above.</p> <p>(l) Universal Character Set Feature (#8640) on 1403 and Universal Character Set Adapter (#8637, #8638, or #8639) on 2821 Control Unit model 1, 2, 3 or 5 permit use of all print train arrangements listed in (i) above plus the PCS arrangements.</p> <p>System/360 model 30 -- 1416 Interchangeable Train Cartridge installed on 1403 model 3 or N1 and 2821 Control Unit model 1, 2, 3 or 5, plus (m) or (n) are required:</p> <p>(m) 1401/1440/1460 Basic Compatibility (#4456) on 2030 Processing Unit permits use of A2, H2, A3, H3, A4 or J4 only.</p> <p>(n) Universal Character Set Feature (#8640) on 1403 and Universal Character Set Adapter (#8637, #8638, or #8639) on 2821 permit use of all print train arrangements in (m) above plus the PCS arrangements.</p> <p>System/360 model 40 -- 1416 Interchangeable Train Cartridge installed on 1403 model 3 or N1 and 2821 Control Unit model 1, 2, 3 or 5, plus (o) or (p) are required:</p> <p>(o) 1401/1460 Compatibility (#4457) on 2040 Processing Unit permits use of A2, H2, A3, H3, A4 or J4 only.</p> <p>(p) Same as (n) listed above for System/360 model 30.</p> <p>System/360 models 44 thru 75 -- 1416 Interchangeable Train Cartridge and Universal Character Set Feature (#8640) on 1403 model 3 or N1, plus Universal Character Set Adapter (#8637, #8638 or #8639) on 2821 Control Unit model 1, 2, 3 or 5. All A, H, J and PCS arrangements can be used.</p>
	H2	9618	H3	9617			
	PCS-A2	9561	PCS-A3	9623			
	PCS-H2	9563	PCS-H3	9625			
					J4	9599	
1404 model 2 Printer							System/360 model 30 -- 2821 Control Unit model 4 plus (e) as listed above for 1403 model 2 in System/360 model 30. Compatibility is achievable only on the continuous form side of the 1404.

1403 and 1404 Printers—
System/360, System/370, 4300 Processors
(cont'd)

Print Chains: 1403 models 2 and 7, and 1404 model 2: Print chains consist of multiple arrays of type slugs placed end to end, with 2 characters per slug. The number of slugs in an array, and the number of different characters (graphics) in that array, will vary depending upon the print arrangement selected. Each print chain has a total of 120 slugs (240 character-positions).

In the illustrations below, the characters are depicted as printed out. Where multiple arrays are shown, only the differences from the previous array are indicated.

Standard Chains: For 1403 models 2 and 7, and 1404 model 2: Arrangements AN and HN consist of 5 identical arrays of 24 slugs each. Only the first array is illustrated for each.

AN - 1st Array [12 34 56 78 90 # @ / S TU VW XY Z & , % JK LM NO PQ R- \$ * AB CD EF GH I+ . &]

HN - 1st Array [12 34 56 78 90 = ' / S TU VW XY Z & ; (JK LM NO PQ R- \$ * AB CD EF GH I+ .)]

OCR Chains: For 1403 models 2 and 7: Arrangements OAA, OAB, ODA and ONA consist of 5 identical arrays of 24 slugs each. Only the first array is illustrated for each.

Note: See "Printing for Optical Character Reading" and "OCR Fonts" on page TC 71.2. When a 1403 model 2 with Universal Character Set Feature (#8641) or Multiple Character Set Feature (#5110) is used with the ONA arrangement, or OAA arrangement with JYH graphics, it is recommended that the JYH be coded as described under "OCR Fonts" on page TC 71.2. The Universal Character Set or Multiple Character Set is a prerequisite for the OAB arrangement on the 1403.

OAA - 1st Array [12 34 56 78 90 # @ / S TU VW XY Z & - & JK LM NO PQ R- * AB CD EF GH I+ . <

OAB - 1st Array [12 34 56 78 90 = ' / S TU VW XY Z & , > JK LM NO PQ R- \$ * AB CD EF GH I+ . <

ODA - 1st Array [12 34 56 78 90 # @ / S TU VW XY Z & , % JK LM NO PQ R- \$ * AB CD EF GH I+ . &]

ONA - 1st Array [12 34 56 78 90 # @ / S TU VW XY Z & , (JK LM NO PQ R- \$ * AB CD EF GH IY .)]

Universal Character Set Chains:

For 1403 model 2 only: Universal Character Set Chain arrangements vary as follows:

GN (ASCII - 63 graphics): Consists of 4 arrays of 30 slugs each. The first and third arrays are identical, as are the second and fourth, as illustrated below.

GN - 1st Array [12 34 56 78 90 XY / S TU VW | : " ' , = JK LM NO PQ R- Z (AB CD EF GH I+ .) \$ % * # & @ < ; - ' ? >

PCS-AN and PCS-HN (48 graphics, 3-level preferred set): Arrangements PCS-AN and PCS-HN consist of 4 arrays of 30 slugs each. The first and third arrays are identical, as are the second and fourth, as illustrated below.

PCS-AN - 1st Array [12 34 56 78 90 . - P Q R # \$ % / S TU VW XY Z & . * 12 34 56 78 90 , - JK LM NO AB CD EF GH I+ . *]

PCS-HN - 1st Array [12 34 56 78 90 . - P Q R = \$ ' / S TU VW XY Z) . * 12 34 56 78 90 , - JK LM NO AB CD EF GH I+ . *]

PN (PL/I - 60 graphics): Consists of 4 identical arrays of 30 slugs each. Only the first array is illustrated.

PN - 1st Array [12 34 56 78 90 XY / S TU VW | : " ' , = JK LM NO PQ R- Z (AB CD EF GH I+ .) % \$ * # & @ < ; - ' ? >

QN (PL/I - 60 graphics, 45 preferred): Consists of 5 arrays of 24 slugs each. Except for 2 slugs in each array, the 5 arrays are identical.

QN - 1st Array [12 34 56 78 90 XY / S TU VW _ " \$ % , = JK LM NO PQ R- Z (AB CD EF GH I+ .)]

RN (FORTRAN/COBOL/Commercial - 52 graphics, 47 preferred): Consists of 5 arrays of 24 slugs each. Except for one slug in each array, the 5 arrays are identical.

RN - 1st Array [12 34 56 78 90 XY / S TU VW ' @ \$ % , = JK LM NO PQ R- Z (AB CD EF GH I+ .)]

SN (Text Printing - 84 graphics, 78 preferred): Consists of 2 arrays of 39 slugs each plus one array of 42 slugs. The 39 slugs of the first and second arrays are identical. The first 39 slugs of the third array are identical to those of the other arrays.

[12 34 56 78 90 & . / S TU VW XY Z , \$ * JK LM NO PQ R- " : AB CD EF GH I+ ab cd ef gh ij kl mn op qr st uv wxyz @ ' () - | ? ! ; : " % &

**1403 and 1404 Printers—
System/360, System/370, 4300 Processors
(cont'd)**

**Universal Character Set Chains
(cont'd):**

TN (Text Printing - 120 graphics): Consists of 4 arrays of 30 slugs each. The first and third arrays are identical, as are the second and fourth, as illustrated.

TN - 1st Array	1234567890 . / STUVWXYZ, # @ J K L M N O P Q R - " : A B C D E F G H I + * % & ' () < > [] ^ _ ` ~
2nd Array	opqrstuvwxyz 2 3 4 5 6 7 8 9 0 - . / STUVWXYZ, # @ J K L M N O P Q R - " : A B C D E F G H I + * % & ' () < > [] ^ _ ` ~
3rd Array	1234567890 . / STUVWXYZ, # @ J K L M N O P Q R - " : A B C D E F G H I + * % & ' () < > [] ^ _ ` ~
4th Array	opqrstuvwxyz 2 3 4 5 6 7 8 9 0 - . / STUVWXYZ, # @ J K L M N O P Q R - " : A B C D E F G H I + * % & ' () < > [] ^ _ ` ~

XN (High Speed Alphanumeric - 40 graphics): Consists of 6 identical arrays of 20 slugs each. Only the first array is illustrated.

XN - 1st Array	1234567890 . A B C D E F G H I J K L M N O P Q R S T U V W X Y
----------------	--

Multiple Character Set:

For use of UCS Chains on a 1403 model 2 with MCS Feature, see "Multiple Character Set" on page TC 71.2.

Print Trains: 1416 (1403 models 3 and N1): Print trains consist of multiple arrays of type slugs placed end to end, with 3 characters per slug. The number of slugs in an array, and the number of different characters (graphics) in that array, will vary depending upon the print arrangement selected. Each print train has a total of 80 slugs (240 character-positions).

In the train layouts illustrated below, the characters are depicted as printed out. Where multiple arrays are shown, only the differences from the previous array are indicated.

Standard Trains:

Arrangements AN and HN consist of 5 identical arrays of 16 slugs each. Only the first array is illustrated for each arrangement.

AN - 1st Array	1234567890 # @ / STUVWXYZ, # @ J K L M N O P Q R - \$ * A B C D E F G H I + .
----------------	---

HN - 1st Array	1234567890 . / STUVWXYZ, # @ J K L M N O P Q R - \$ * A B C D E F G H I + .
----------------	---

OCR Trains: For 1416 (1403 model 3 or N1): Arrangements OAA, OAB, ODA and ONA consist of 5 identical arrays of 16 slugs each. Only the first array is illustrated for each.

Note: See "Printing for Optical Character Reading" and "OCR Fonts" on page TC 71.2. When the Universal Character Set Feature or Multiple Character Set Feature is used with the OAA arrangement, or OAA arrangement with PVI graphics, it is recommended that the PVI graphics be coded as described under "OCR Fonts" on page TC 71.2. The UCS or MCS Feature is a prerequisite for the OAA or OAB arrangement on the 1416.

OAA - 1st Array	L1 - n . o / 2Y R70 D8G F3J S8# B<@ C6V P7Z D+@ K5# E4X NAM X0 . 4TI
-----------------	--

OAB - 1st Array	L1Y N0K I2/ R9G T>H F3V S8# <OU C6# AMZ . +@ E5X P4J 'S# , 0 - MB7
-----------------	--

ODA - 1st Array	123 456 789 0# @ / ST UVW XYZ, # @ J K L M N O P Q R - \$ * A B C D E F G H I + .
-----------------	---

ONA - 1st Array	123 456 789 0# @ / ST UVW XYZ, # @ J K L M N O P Q R - \$ * A B C D E F G H I + .
-----------------	---

Universal Character Set Trains:

Universal Character Set arrangements vary as follows:

ALA (Library Printing - 162 graphics, 78 preferred): Consists of 4 arrays of 20 slugs each. The first and third arrays are identical, as are the second and fourth, except for the characters shown.

ALA - 1st Array	123 ABC DEF GHI JKL MNOPQR / STUVWXYZ, # @ J K L M N O P Q R - " : A B C D E F G H I + * % & ' () < > [] ^ _ ` ~
2nd Array	abc def ghi jkl mnopqr ? s t uvwxyz # @ J K L M N O P Q R - " : A B C D E F G H I + * % & ' () < > [] ^ _ ` ~
3rd Array	123 ABC DEF GHI JKL MNOPQR / STUVWXYZ, # @ J K L M N O P Q R - " : A B C D E F G H I + * % & ' () < > [] ^ _ ` ~
4th Array	abc def ghi jkl mnopqr ? s t uvwxyz # @ J K L M N O P Q R - " : A B C D E F G H I + * % & ' () < > [] ^ _ ` ~

GN (ASCII - 63 graphics): Consists of 4 arrays of 20 slugs each. The first and third arrays are identical, as are the second and fourth, as illustrated below.

GN - 1st Array	123 456 789 0XY / ST UVW | : , " = JKL MNO PQR - Z (ABC DEF GHI + .) % \$ * @ < > [] ^ _ ` ~
2nd Array	123 456 789 0XY / ST UVW | : , " = JKL MNO PQR - Z (ABC DEF GHI + .) % \$ * @ < > [] ^ _ ` ~
3rd Array	123 456 789 0XY / ST UVW | : , " = JKL MNO PQR - Z (ABC DEF GHI + .) % \$ * @ < > [] ^ _ ` ~
4th Array	123 456 789 0XY / ST UVW | : , " = JKL MNO PQR - Z (ABC DEF GHI + .) % \$ * @ < > [] ^ _ ` ~

PCS-AN and PCS-HN (48 graphics, 3-level preferred set): Arrangements PCS-AN and PCS-HN consist of 4 arrays of 20 slugs each. The first and third arrays are identical, as are the second and fourth, as illustrated below.

PCS-AN - 1st Array	123 456 789 0, - PQR # \$ @ / ST UVW XYZ, # @ J K L M N O P Q R - Z (ABC DEF GHI + .) % \$ * @ < > [] ^ _ ` ~
2nd Array	123 456 789 0, - PQR # \$ @ / ST UVW XYZ, # @ J K L M N O P Q R - Z (ABC DEF GHI + .) % \$ * @ < > [] ^ _ ` ~
3rd Array	123 456 789 0, - PQR # \$ @ / ST UVW XYZ, # @ J K L M N O P Q R - Z (ABC DEF GHI + .) % \$ * @ < > [] ^ _ ` ~
4th Array	123 456 789 0, - PQR # \$ @ / ST UVW XYZ, # @ J K L M N O P Q R - Z (ABC DEF GHI + .) % \$ * @ < > [] ^ _ ` ~

PCS-HN - 1st Array	123 456 789 0, - PQR # \$ @ / ST UVW XYZ, # @ J K L M N O P Q R - Z (ABC DEF GHI + .) % \$ * @ < > [] ^ _ ` ~
2nd Array	123 456 789 0, - PQR # \$ @ / ST UVW XYZ, # @ J K L M N O P Q R - Z (ABC DEF GHI + .) % \$ * @ < > [] ^ _ ` ~
3rd Array	123 456 789 0, - PQR # \$ @ / ST UVW XYZ, # @ J K L M N O P Q R - Z (ABC DEF GHI + .) % \$ * @ < > [] ^ _ ` ~
4th Array	123 456 789 0, - PQR # \$ @ / ST UVW XYZ, # @ J K L M N O P Q R - Z (ABC DEF GHI + .) % \$ * @ < > [] ^ _ ` ~

PN (PL/1 - 60 graphics): Consists of 4 identical arrays of 20 slugs each. Only the first array is illustrated.

PN - 1st Array	123 456 789 0XY / ST UVW | : , " = JKL MNO PQR - Z (ABC DEF GHI + .) % \$ * @ < > [] ^ _ ` ~
----------------	---

1403 AND 1404 PRINTERS—
OTHER THAN SYSTEM/360

Alphanumeric Chain (1403 models 1, 2, 4, 5 and 6, and 1404 model 2): A standard alphanumeric chain consists of five identical arrays of 24 type slugs (2 characters each) as illustrated below for Print Arrangement A. Only the first array is shown and indicates the 48 graphics included in the arrangement. Where a particular slug has characters other than those of Arrangement A, the differences are shown and identified as another Arrangement (B, C, etc.). For card and BCD bit codes associated with the special characters, see the chart to the right.

Character Position Numbers are assigned as follows for the five arrays in Arrangements A thru K:

1st array: 1-48 4th array: 145-192
2nd array: 49-96 5th array: 193-240
3rd array: 97-144

Numeric Chain (1403 models 1 and 2 only): A standard numeric chain consists of 15 identical arrays of 8 type slugs (2 characters each) as illustrated below. Only the first array is shown and indicates the 16 graphics included. Card and BCD bit codes associated with the special characters are the same as those shown for Arrangement A in the chart to the right.

Character Position Numbers are assigned as follows for the 15 arrays of the numeric chain:

1st array: 1-16 4th array: 49-64 7th array: 97-112 10th array: 145-160 13th array: 193-208
2nd array: 17-32 5th array: 65-80 8th array: 113-128 11th array: 161-176 14th array: 209-224
3rd array: 33-48 6th array: 81-96 9th array: 129-144 12th array: 177-192 15th array: 225-240

Alphanumeric Train (1416 used on 1403 model 3): A standard alphanumeric train consists of five identical arrays of 16 type slugs (3 characters each) as illustrated below for Print Arrangement A. Only the first array is shown and indicates the 48 graphics included in the arrangement. Where Arrangement H differs from A, the substituted characters are shown. Card and BCD bit codes for special characters are shown in the chart above.

Character Position Numbers assigned are the same as those listed above for the Alphanumeric Chain, 1-48, 49-96, etc.

Preferred Character Set -- 1420/1440/1460 Systems: For 1416 used on 1403 model 3 equipped with Preferred Character Set Feature (#5523). Card and BCD bit codes for special characters are the same as shown in the above chart for Arrangements A and H. The train consists of the following:

48 graphics -- 3-level preferred set	PCS-A	PCS-H
Characters of primary preference appearing 8 times	0-9 . , - *	0-9 . , - *
Characters of secondary preference appearing 4 times	A-Z II \$ / ' &	A-Z) \$ / +
Characters of least preference appearing twice	% # @ †	(= ' ‡

The 48 different graphics (combinations of 3 per slug) are arranged in 4 arrays of 20 slugs each, as illustrated below. Graphics are shown in the 2nd, 3rd and 4th arrays only where the slugs differ from those of the preceding array. The 1st and 3rd arrays are identical, as are the 2nd and 4th, as illustrated.

Character Position Numbers are assigned as follows for the 4 arrays:

1st array: 1-60 2nd array: 61-120 3rd array: 121-180 4th array: 181-240

Chain/Train Layouts: In all of the following illustrations, the characters (graphics) are depicted as printed out.

Alphanumeric Chain Layouts: For 1403 models 1, 2, 4, 5 and 6, and 1404 model 2

Printing Arrangements	A	1 2 3 4 5 6 7 8 9 0 # @ / S T U V W X Y Z # , % J K L M N O P Q R - \$ % : ABC D E F G H I E . II
	B	ε /
	C	o
	D	-
	E	> ε / ° - <
	F	= - (+)
	G	+ - (+)
	H	= ε (+)
	J	+)
	K	= (+)

Numeric Chain Layout: For 1403 models 1 and 2 only

1 2 3 4 5 6 7 8 9 0 . - \$ % : II

Alphanumeric Train Layouts: For 1416 (1403 model 3 only)

A	1 2 3 4 5 6 7 8 9 0 # @ / S T U V W X Y Z # , % J K L M N O P Q R - \$ % : ABC D E F G H I E . II
H	= ε (+)

Preferred Character Set Train Layouts: For 1416 (1403 model 3 only)

	PCS-A	1st Array	2nd Array	3rd Array	4th Array
1234567890.-PQR#\$/STUVWXYZ#,%JKL MN O PQR-\$%:ABCDEF GHI . II		1234567890.-PQR#\$/STUVWXYZ#,%JKL MN O PQR-\$%:ABCDEF GHI . II	#\$(#\$(#\$(
			#\$(#\$(#\$(
			#\$(#\$(#\$(
			#\$(#\$(#\$(

**1403 and 1404 Printers—
Other than System/360 (cont'd)**

Print Chain/Train

Arrangements: Print arrangements are assigned an alphabetic designation (A, B, C, etc.). The type size (or style) is denoted by a numeric suffix (A2, B3, J4, etc.) with 2 = .095" type size; 3 = .079" type size; and 4 = 1428 Type Style. Based on this coding, print chains/trains are assigned Feature #s as indicated below for each arrangement.

	System	Printer	Standard Type Style		Alternate Type Style		1428 Type Style		Reference
			.095"	Feature #	.079"	Feature #	OCR	Feature #	
CHAIN PRINTERS	1401	1403 models 1, 2, 4 5 and 6, and 1404 model 2	A2	9601	A3	9581	A4	9591	Notes 1,2,3,4
			B2	9602	B3	9582			
			C2	9603	C3	9583			
	1440	1403 models 2, 5 and 6	D2	9604	D3	9584	J4	9599	
			E2	9605	E3	9585			
	1460	1403 model 2	F2	9606	F3	9586			
	1410	1403 models 1 and 2	G2	9607	G3	9587			
1420	H2		9608	H3	9588				
7010	J2		9609	J3	9589				
7040	K2		9610	K3	9590				
7044									
TRAIN PRINTERS	1410 1420 1440 1460 7010 7040 7044	1416 (1403 mdl 3)	A2	9611	A3	9616	A4	9591	Notes 1,2,6,8
			H2	9618	H3	9617	J4	9599	
			PCS-A2	9561	PCS-A3	9623			
			PCS-H2	9563	PCS-H3	9625			
			1420	1416 (1403 mdl 3)					
	1440								
1460									

Chain and Train Printers: Notes:

- Any H arrangement listed has FORTRAN and COBOL capabilities.
- Alternate Type Style (.079" high) arrangements A3 thru K3 can be used to print between punched holes on a card document and at a vertical spacing of 8 lines per inch rather than the conventional 6 lines per inch with .095" type. This permits 25 lines of printing on a standard punched card as opposed to 19 lines at 6 lines per inch. (Note: On train printer, only arrangements A3 and H3 are available.)

Because of the greater type face density of the .079" type, ribbon life will be reduced when printing on continuous paper forms. This reduction will vary depending upon weight of paper, number of carbon copies, etc. There is little difference in ribbon life when printing on card documents.

Chain Printers:

- Any arrangement can be ordered for either a fixed cartridge or interchangeable cartridge. See Interchangeable Chain Cartridge Adapter (#4740) in 1403 "Machines."

On 1403s, any arrangement (A2-K2, A3-K3) can be equipped with an enlarged dash (in lieu of the standard dash) to print on continuous forms which will subsequently be separated into individual sheets for optical reading by a 1230 Optical Mark Scoring Reader (test answer sheets), 1231/1232 Optical Mark Page Reader (data sheets), or 3881 Optical Mark Reader.

1282 Optical Reader Card Punch: Arrangement J4 (#9599) can be used on all models of the 1403, or a 1404, to prepare documents for 1282 optical reading. Only numeric characters 0-9 and special characters - and + can be optically recognized by the 1282... remaining special characters cannot.

1287 Optical Reader: Arrangements A4 (#9591) and J4 (#9599) can be used on all models of the 1403 to prepare documents for 1287 reading. Only numeric characters 0-9 and alphabetic characters C, N, S, T, X, and Z can be recognized by the 1287... other alphabetic or special characters in these arrangements cannot.

1418 Optical Character Reader: The following arrangements can be used on all models of the 1403 to prepare documents for 1418 optical character reading: A2 (#9601), B2 (#9602), C2 (#9603), D2 (#9604), G2 (#9607), and J2 (#9609). Only numeric characters 0-9 and special characters - and I can be optically recognized by the 1418... remaining special characters cannot.

1428 Alphameric Optical Reader: Arrangement A4 (#9591) can be used on all models of the 1403 to prepare documents for 1428 reading. In addition to the alphabetic and numeric characters (A-Z and 0-9), special characters \$, - , * / can be optically recognized... remaining special characters cannot.

- A Numerical Chain (#9484 for .079" type size; #9485 for .095") is available for 1403 models 1 and 2 only. In addition to numeric characters (0-9), it contains I - , * and \$ as special characters.

Prerequisites: Interchangeable Chain Cartridge Adapter (#4740) and Numerical Print Feature (#5381) on the 1403, plus Numerical Print Control (#5380) on the 1401 Processing Unit, 1414 I/O Synchronizer (model 3, 4 or 8), 1446 Printer Control, 1461 I/O Control or 1462 Printer Control. See 1403 in "Machines."

Train Printers:

- Alternate Type Style (.079" high) arrangements PCS-A3 and PCS-H3 can be used to print between punched holes on a card document. See Note (2), above, for additional information and limitations.

- The following arrangements can be used to prepare documents for optical reading: A2 (#9611) for 1418 Optical Character Reader, A4 (#9591) for 1428 Alphameric Optical Reader and 1287 Optical Reader, and J4 (#9599) for 1282 Optical Reader Card Punch and 1287 Optical Reader.

Arrangement A2, H2, A3 or H3 can be equipped with an enlarged dash (in lieu of the standard dash) to print on continuous forms which will subsequently be separated into individual sheets for optical reading by a 1230 Optical Mark Scoring Reader (test answer sheets), 1231/1232 Optical Mark Page Reader (data sheets), or 3881 Optical Mark Reader.

- Preferred Character Set Feature (#5523) on the 1403 and Preferred Character Set Adapter (#5524) on the printer control unit are prerequisites. See Preferred Character Set Feature in 1403 "Machines."

- The 1403 model 3 requires a separate 1416 Interchangeable Train Cartridge for each different printing arrangement. See 1416 in "Machines."

For "Specify" see next page.

**1403 and 1404 Printers—
Other than System/360 (cont'd)**

- Specify:** For plant installation --
- [1] Based on printer being ordered, type style desired and system with which printer will be used, specify one Feature # from the above chart... if Interchangeable Chain Cartridge Adapter (#4740) is ordered, specify two Feature #s unless Numerical Print Feature (#5381) is also being ordered for 1403 model 1 or 2. With Numerical Print Feature, specify only one alphameric chain Feature # plus one Numeric Chain Feature # (see Note 4 above for Feature # and prerequisites). **Important:** Print Arrangement for 1403 model 3 must be specified on the 1416. If a PCS Arrangement is to be ordered for the 1416, see Notes 7 and 8 above for prerequisites.
 - [2] If desired, #9140 for enlarged dash (character Nb. 73246) in lieu of standard dash for printing on documents to be read by 1230, 1231, 1232 or 3881 optical mark readers. For 1403, see second paragraph of Note 3; for 1416, see second paragraph of Note 6.
 - [3] If desired, #9549 for slashed zero in lieu of standard zero in any arrangement except A4 and J4.
 - [4] If desired, #9676 for round alphabetic "O" in lieu of standard squared "O" in any arrangement except A4 and J4.

Specify: For field installation --

- [1] If a new or additional print chain is desired, see "New Print Chains" below. For new or additional print trains for 1403 model 3, see 1416 Interchangeable Train Cartridge in "Machines." For field installation of #9140, #9549 or #9676, see the "Specify" section under "Substitute Characters."

New Print Chains: Additional, spare or replacement chains are available for either fixed or interchangeable cartridges used on the 1403 model 1, 2, 4, 5 or 6, and 1404 model 2.

	Feature #	Rental	Purchase	MMMC	FIC
Any one arrangement, chain only	5532	\$1,380SUC	\$1,335	NC	\$51

Note: If both chains supplied with Interchangeable Chain Cartridge Adapter (#4740) are to be changed, prices apply to each chain. If more than two interchangeable cartridges with chains are desired for a machine, or interchangeability with more than one machine is desired, consult Regional Special Equipment Engineering Department.

Specify: [1] #5532 at price indicated above.

- [2] One Feature # for print arrangement desired... see "Print Chain/Train Arrangements" on previous page.
- [3] If desired, #9140 for enlarged dash in lieu of standard dash for printing on documents to be read by 1230, 1231, 1232 or 3881 optical mark readers ... available in any arrangement A2-K2 or A3-K3.
- [4] If desired, #9549 for slashed zero in lieu of standard zero in any arrangement except A4 and J4.
- [5] If desired, #9676 for round alphabetic "O" in lieu of standard squared "O" in any arrangement except A4 and J4.

Substitute

Characters: Whenever possible, a standard print arrangement should be specified. For available standard arrangements, see previous page. It is not feasible to make actual printing tests on non-standard characters. Therefore, printing and ribbon life from chains/trains with non-standard characters may be less satisfactory than results from a standard chain/train. It should also be noted that because of limitations of type face area (height, width, etc.), characters of the customer's design are subject to acceptance by the plant.

A substitute character is one which is ordered to displace a character in one of the standard arrangements. Standard characters may be rearranged, special characters may be selected from the type catalog, or characters of the customer's design may be substituted, subject to the above limitations.

Note: A substitute character assumes the card and bit codes of the character it replaces in the system to which the printer is attached.

Character substitutions may be ordered for plant or field installation on a print chain/train, subject to the following:

Artwork (#9950): A Service Charge will be made for designing a new character. Any character illustrated elsewhere in this section for the 1403, 1404, 1443, or 1445, or any character previously designed for these machines (except for "Limitations" below), may be substituted in any position of any type slug without charge for artwork.

Limitations: [1] The ABA E-13B type font can only be used on the 1445... [2] Characters from the SN5 and TN5 arrangements of the 1403 Printer (System/360) cannot be substituted in print arrangements used in other systems.

Matrix (#9951 and #9953): Each print chain type slug (1403 models 1, 2, 4, 5 and 6, and 1404) consists of two characters and requires one matrix (#9951). A Service Charge will be made for the matrix unless an identical 2-character matrix (same characters, in same positions) exists at the plant. This charge is in addition to that for Artwork.

Each print train type slug (for 1416 used on 1403 model 3) consists of three characters and requires one matrix (#9953). A Service Charge will be made for the matrix unless an identical 3-character matrix (same characters, in same positions) exists at the plant. This charge is in addition to that for Artwork.

Set-Up (#9952 for 1403 models 1, 2, 4, 5 and 6, and 1404... #9954 for 1416 used on 1403 model 3): In addition to charges for Artwork and Matrix (if applicable), a Service Charge applies each time a set-up is required to fabricate a special type slug. This charge is the same regardless of the quantity of identical slugs made at any one time. On re-orders of identical slugs, the set-up charge again applies.

Service Charges for Artwork, Matrix and Set-Up should be authorized on all orders for non-standard characters. The charge for Artwork need not be specified when character numbers from the illustrated catalog are ordered indicating that artwork is available. The plant will review all orders to determine if Artwork and Matrix are required. The Service Charges (even though authorized) will not be billed unless applicable.

1403 and 1404	Feature #	Service Charge	1416 (for 1403 model 3)	Feature #	Service Charge
Artwork, per character	9950	\$ 152	Artwork, per character	9950	\$ 152
Matrix, per slug (2 characters)	9951	229	Matrix, per slug (3 characters)	9953	229
Set-Up, for 2-character slug	9952	77	Set-Up, for 3-character slug	9954	77

Plant Installation (original assembly of chain/train): Any standard type slug (size, font) can be specified in any desired arrangement at no extra charge. See page 31 for standard slug configurations in each print arrangement. Page 31 also lists the Character Position Numbers assigned to the graphics in each array of a chain/train. These should be used as a reference when making character substitutions since they coincide with the designations on the Type Specification Sheet (120-1089).

Multiple Machine Orders (identical type specs - plant installation): On a multiple machine order, the Service Charges for Artwork, Matrix and Set-Up apply only to the first machine.

Submit a separate Type Specification Sheet for each machine on a multiple machine order. Show Service Charges for Artwork, Matrix and Set-Up on one DPOW/IAC and its attached Type Specification Sheet, and indicate Feature #9695 (Special Type -- Multiple Machine Order) at no charge on all other DPOWs/IACs and their Type Specification Sheets. On the DPOW/IAC with Service Charges, cross reference all other Branch Office Order Numbers (Plant Order Numbers) to which the charges apply. On the DPOWs/IACs with "No Charge" Service Charges, indicate the Branch Office Order Number which specifies the charges. Note: This cross reference of order numbers is mandatory.

If an additional machine with identical type specs is ordered prior to shipment of a machine which carries the Service Charges, specify #9695 on the DPOW, reference the Plant Order Number which carries the Service Charges, and attach a Type Specification Sheet. (When the order is entered after shipment of the machine carrying the Service Charges, the Set-Up charge will apply.)

If a machine with #9695 specified at no charge is shipped before the machine specifying the Service Charges, the plant will transfer the charges to the machine which is shipped first and substitute "No Charge" on the other one.

For "Specify" see next page.



1403 and 1404 Printers—
Other than System/360 (cont'd)

Substitute
Characters:
(cont'd)

- Specify: [1] Feature # of print arrangement which most closely resembles that desired by the customer.
- [2] Feature #s and charges for Artwork, Matrix and Set-Up.
- [3] Type Specification Sheet (120-1089) must accompany each order for substitute characters. Once a Type Specification Sheet has been submitted and additional characters are desired, a new Type Specification Sheet is required. It must include all characters desired... those previously ordered and the new ones.

Field Installation: The prices shown below apply to installation of standard type slugs (see page 31) or special type slugs (to which charges for Artwork, Matrix and Set-Up are to be added if applicable).

Print chains/trains are made up of a number of identical arrays of type slugs as described on page 31. When a modification is made to a slug in one array, corresponding type slugs must be changed in all identical arrays. The prices below apply to special chains with other than 5 or 15 identical arrays and special print trains with other than 5 identical arrays.

Type Slug Substitutions (on any one chain or train):	Feature #	Rental	Purchase	FIC	FIT
1403 model 1, 2, 4, 5 or 6, or 1404 model 2					
First type slug	8371	\$18 SU	\$ 8	\$11	.9 hour
Each additional slug, at same time	8372	10 SU	8	2	.1 hour
1416 (1403 model 3)					
First type slug	8373	29 SU	24	5	.5 hour
Each additional slug, at same time	8374	24 SU	24	NC	

- Specify: [1] Feature # of installed chain/train which is to be modified.
- [2] Applicable Feature #s and charges for Artwork, Matrix and Set-Up.
- [3] Feature #s and charges for type slug substitutions. Type slugs (#8371 and #8372, or #8373 and #8374) may be ordered on MES with Type Specification Sheet (120-1089) attached for any of the following:

	Type Catalog Character Number	
	.095" Type Size	.079" Type Size
Enlarged dash in lieu of standard dash (Arrangements A2-K2, A3-K3 only)	732464	732464
Round alphabetic "O" in lieu of standard squared "O" (Any arrangement except A4 and J4)	251839	475504
Slashed zero in lieu of standard zero (Any arrangement except A4 and J4).	474129	475539

- [4] Type Specification Sheet (120-1089) must accompany each order for substitute characters.

Note: If a new or additional print chain is desired for field installation, see "New Print Chains" on one of the previous pages. For new or additional print trains, see 1416 in "Machines."

Examples of Charges for Substitute Characters

1403 models 1, 2, 4, 5 and 6, and 1404 model 2

Example I: A rental customer desires a new character ϕ in place of % on an installed machine which is equipped with an alphameric chain (#9601).

Services Required: Artwork (#9950), one new character \$ 152 Service Charge
 Matrix (#9951), one 2-character slug [ϕ %] 229 " "
 Set-Up (#9952), to make 5 identical slugs 77 " "

Field modification of installed alphameric chain (5 identical arrays)
 Type Slug Substitutions
 First Type Slug (#8371) 18 Single Use-Charge
 Four additional slugs (#8372) at \$10 each 40 " "

Total Charge is \$458 Service Charge + \$58 SUC = \$516

A purchase customer making these same changes would pay the \$458 Service Charge plus \$40 Purchase Price for slug substitutions (1 slug at \$8, and 4 additional slugs at \$10 each) plus \$19 FIC (1 slug at \$11, and 4 additional slugs at \$2 each), total \$517.

Example II: A customer (rental or purchase) on initial order for a machine with an alphameric chain (#9601) wants the [ϕ %] slug reversed to [% ϕ].

Alphameric Chain (#9601) - to be plant installed NC
 Services Required: Artwork (#9950), both are standard characters NC
 Matrix (#9951), one 2-character slug [% ϕ] \$229 Service Charge
 Set-Up (#9952), to make 5 identical slugs 77

Total Charge = \$306 Service Charge

Example III: A purchase customer desires ϕ and \rightarrow (2 new characters) field installed on a numeric chain (#9485) in place of the standard \$ and X respectively. Two different type slugs are involved... see "Numeric Chain Layout" on page 31.

Services Required:	Service Charge	Purchase Price	FIC
Artwork (#9950), one new character \rightarrow (Note: ϕ is character No. 859567)	\$ 152	-	-
Matrix (#9951), [ϕ *] and [\rightarrow *] (2 matrices), \$229 each	458	-	-
Set-Up (#9952), for two different slugs, \$77 each	154	-	-
Field Installation -- Type Slug Substitutions			
First type slug (#8371)	-	\$ 8	\$ 11
Each additional type slug (#8372):			
14 slugs [ϕ *] 29 slugs, each \$8 + \$2 FIC	-	232	58
15 slugs [\rightarrow *]	-		
Total Charge (Service Charge + Purchase Price + FIC) = \$ 764 + \$ 240 + \$ 69 = \$1,073			

A rental customer making these same changes would pay the \$764 Service Charge plus \$308 Single Use-Charge for slug substitutions (1 slug at \$18, and 29 additional slugs at \$10 each), total \$1,072.

Examples continued on next page.

**1403 and 1404 Printers—
Other than System/360 (cont'd)**

Substitute Characters: Examples of Charges for Substitute Characters (cont'd)
(cont'd)

1416 (used on 1403 model 3)

Example I : A rental customer desires a new character ϕ in place of % on an installed train (#9611).
Services Required: Artwork (#9950), one new character ϕ \$ 152 Service Charge
 Matrix (#9953), one 3-character slug ϕ, ϕ, ϕ 229 " "
 Set-Up (#9954), to make 5 identical slugs 77 " "
Field modification of installed train (5 identical arrays)
Type Slug Substitutions
 First type slug (#8373) 29 Single Use-Charge
 Four additional slugs (#8374) at \$24 each 96 " "
Total Charge is \$458 Service Charge + \$125 SU = \$ 583

A purchase customer making these same changes would pay the \$458 Service Charge plus \$120 Purchase Price for slug substitution (1 slug at \$24, and 4 additional slugs at \$24 each) plus \$5 FIC (1 slug at \$5, and 4 additional slugs at no charge each), total \$583.

Example II: A customer (rental or purchase) on initial order for a machine with train Arrangement A (#9611) wants the positions of the # and @ interchanged.
Alphameric Train (#9611) - to be plant installed NC
Services Required: Artwork (#9950), both characters are standard NC
 Matrix (#9953), one 3-character slug $\phi @ \%$ \$ 229 Service Charge
 Set-Up (#9954), to make 5 identical slugs 77 " "
Total Charge = \$ 306 Service Charge

Example III: A purchase customer desires ϕ and ϕ (2 new characters) field installed on train #9611 in place of the standard \$ and II respectively. Two different type slugs are involved ... see "Alphameric Train Layouts" on page 31.

	Service Charge	Purchase Price	FIC
Services Required: Artwork (#9950), one new character ϕ	\$ 152	-	-
(Note: ϕ is character No. 859567)	NC	-	-
Matrix (#9953), ϕ, ϕ, ϕ and ϕ, ϕ, ϕ (2 matrices, \$229 each	458	-	-
Set-Up (#9954), for two different slugs at \$77 each	154	-	-
Field modification of installed train (5 identical arrays)			
Type Slug Substitutions			
First type slug (#8373)	-	\$ 24	\$ 5
Each additional type slug (#8374)			
4 slugs ϕ, ϕ, ϕ, ϕ 9 slugs, \$24 each . . .	-	216	NC
5 slugs $\phi, \phi, \phi, \phi, \phi$			
Total Charge (Service Charge + Purchase Price + FIC) =	\$ 764	+ \$240	+ \$ 5 = \$1,009

A rental customer making these same changes would pay the \$764 Service Charge plus \$245 Single Use -Charge for slug substitutions (1 slug at \$29, and 9 additional slugs at \$24 each), total \$1,009.



1403 PRINTER- SYSTEM/3 MODELS 10, 12, AND 15

Attachment of a 1403 Printer to System/3 Model 10, 12 or 15 is via the 5421 Printer Control Unit ... For System/3 Model 10 -- a 1403 model 2 or N1 ... For System/3 Model 12 or 15 -- a 1403 model 2, 5, or N1. See 1403 Machine page for prerequisites. Available chain/train arrangements are listed in the table below.

Standard Type Style		Alternate Type Style		1428 Type Style		OCR-A Applications		OCR-B Applications		Text Type Style	
.095"	Feature #	.079"	Feature #	OCR	Feature #	Size 1	Feature #	Size 1	Feature #	Text Prt.	Feature #
AN2	9612	AN3	9613	AN4	9621	OAA	9710	OAB	9713	TN5	9635
HN2	9614	HN3	9615			ODA	9701				
GN2	9721	GN3	9720			ONA	9702				
PCS-AN2	9562	PCS-AN3	9622								
PCS-HN2	9564	PCS-HN3	9624								
PN2	9631	PN3	9641								
XN2 *	9636	XN3 *	9646								
YN2 **	9637	YN3 **	9647								

* 1403 model 2 or 5 only. ** 1416 (1403 model N1 only).

Note: 1403 model 2 or 5 requires Universal Character Set Feature (#8641) and Interchangeable Chain Cartridge Adapter (#4740) for all arrangements except AN, HN, OAA, OAB, ODA and ONA. 1403 model N1 requires Universal Character Set Feature (#8640) for all arrangements except AN, HN, ODA and ONA.

For printing speeds, see chart below. For chain and train layouts, and other information regarding these arrangements, see pages TC 1403 (References to 1403 Model 2 also apply to Model 5)

Specify: [1] For 1403 model 2, one Feature # for desired print chain arrangement unless Interchangeable Chain Cartridge Adapter (#4740) is ordered... with #4740, specify two Feature #s.

For 1416 (1403 model N1), one Feature # for desired print train arrangement.

[2] If desired, #9140 for enlarged dash (Character No. 732464) in lieu of standard dash for printing on documents to be read by optical mark readers. Available as substitution in all arrangements except OAA, OAB, AN4, PCS-AN, PCS-HN, TN, XN, YN.

[3] If desired, #9549 for slashed zero in lieu of standard zero in any arrangement except AN4, OAA, ODA, ONA and TN5.

[4] If desired, #9676 for round alphabetic "O" in lieu of standard squared "O" in any arrangement except AN4, OAA, ODA, ONA and TN5.

[5] If desired, #9722 for ! (exclamation point) in lieu of | (logical OR) in GN arrangement.

[6] If desired, #9723 for ^ (circumflex) in lieu of ~ (logical NOT) in GN arrangement.

[7] Character sets of the 1403 Printer are similar to those of the 5203 Printer. If the 5203 LC arrangement is desired on the 1403 or 1416, order AN2 (#9612) or AN3 (#9613) and specify #9719 for ' (apostrophe) in lieu of II (lozenge).

[8] If desired, #9728 for - (timing mark dash) in lieu of * in OAA arrangement for printing timing marks on documents for the 3886 Optical Character Reader. For field installation, order Character No. 2642392 in Train Slug No. 2642393 or Chain Slug No. 2633870.

[9] If desired, #9729 for > (timing mark dash) in lieu of > in OAB arrangement for printing timing marks on documents for the 3886 Optical Character Reader. For field installation, order Character No. 1798438 in Train Slug No. 1798437 or Chain Slug No. 2645792.

[10] If desired #9690 for non-standard Type Arrangement. See "Substitute Characters" on page TC 1403/1404

The chart below shows 96-column card codes and EBCDIC bit codes assigned to special characters included in all print arrangements except TN. For TN graphics and their associated card and bit codes, see 1403 SRL (GA24-3073). PCS-AN and PCS-HN are not listed in the chart below since they contain special characters identical to those of the AN and HN arrangements, respectively.

96-column Card Code	EBCDIC Bit Code 0123 4567	Arrangements and Number of Graphics								
		AN, ODA (43)	ONA (48)	OAA (48)	OAB (48)	HN (48)	PN (60)	XN(40) (1403-2)	YN(42) (1416)	GN (63)
BA8 2	0100 1010									
BA8 21	1011	.	.	.	.	.	.	.	.	.
BA84	1100	□	♯	<	<	<	<	<	<	<
BA84 1	1101	(((((((((
BA842	1110	+	v	+	+	+	+	+	+	+
BA8421	1111	|	|	|	|	|	|	|	|	|
A8 2	0101 0000	€	€	€	€	€	€	€	€	€
B 8 2	1010]
B 8 21	1011	s	s	s	s	s	s	s	s	s
B 84	1100	*	*	*	*	*	*	*	*	*
B 84 1	1101)))))))))
B 842	1110	~	~	~	~	~	~	~	~	~
B 8421	1111	~	~	~	~	~	~	~	~	~
B	0110 0000	-	-	-	-	-	-	-	-	-
A 1	0001	/	/	/	/	/	/	/	/	/
A8 21	1011	.	.	.	.	.	.	.	.	.
A84	1100	z	z	z	z	z	z	z	z	z
A84 1	1101									
A842	1110									
A8421	1111									
8 2	0111 1010									
8 21	1011	#	#	#	#	#	#	#	#	#
84	1100	@	@	@	@	@	@	@	@	@
84 1	1101									
842	1110									
8421	1111									
See Note	1110 0000									

Note: No 96-column card code is associated with this internal EBCDIC code. Consult Special Product Marketing regarding ASCII graphics on the 5424 and 5496.

Printing Speeds: Nominal printing speeds for all available arrangements are listed below. "Nominal" speed is a weighted average of mean expected value when the chain or train arrangement is performing typical printing operations.

Arrangement	Character Set	Nominal Printing Speed - Lines per Minute		
		1403 model 5	1403 model 2	1403 model N1
AN	48 "A" graphics	465	600	1100
HN	48 "H" graphics	465	600	1100
OAA (representative of OCR-A - alphaneric)	5 "A" graphics + 43 OCR-A	465	600	1100
OAB (representative of OCR-B - alphaneric)	48 graphics (representative of OCR-B)	465	600	1100
ODA (representative of OCR-A - numeric)	38 "A" graphics + OCR-A numeric	465	600	1100
ONA (representative of OCR-A - numeric)	35 "A" graphics + OCR-A numeric and 3 special characters	465	600	1100
GN (ASCII)				
PCS-AN (Preferred Character Set)	3-level set, 48 "A" graphics	585/385/207	750/500/270	1400/955/560
PCS-HN (Preferred Character Set)	3-level set, 48 "H" graphics	585/385/207	750/500/270	1400/955/560
PN (PL/I)	60 graphics	385	500	955
TN (Text Printing - Scientific)	120 graphics	207	270	560
XN (High Speed Alphaneric)	40 graphics	540	690	----
YN (High Speed Alphaneric)	42 graphics, 39 preferred	----	----	1250/560

ILLUSTRATED TYPE CATALOG - 1403, 1404, 1443**IMPORTANT:**

The characters illustrated on the following pages do not necessarily represent the final appearance of the printed characters in every detail. This is because they are made from drawings (original artwork) of the characters and not from actual print samples. Dimensions shown are approximate and are not the final dimensions of the printed characters. Final dimensions will be somewhat larger and they will vary depending upon the characteristics of the ribbon and paper used.

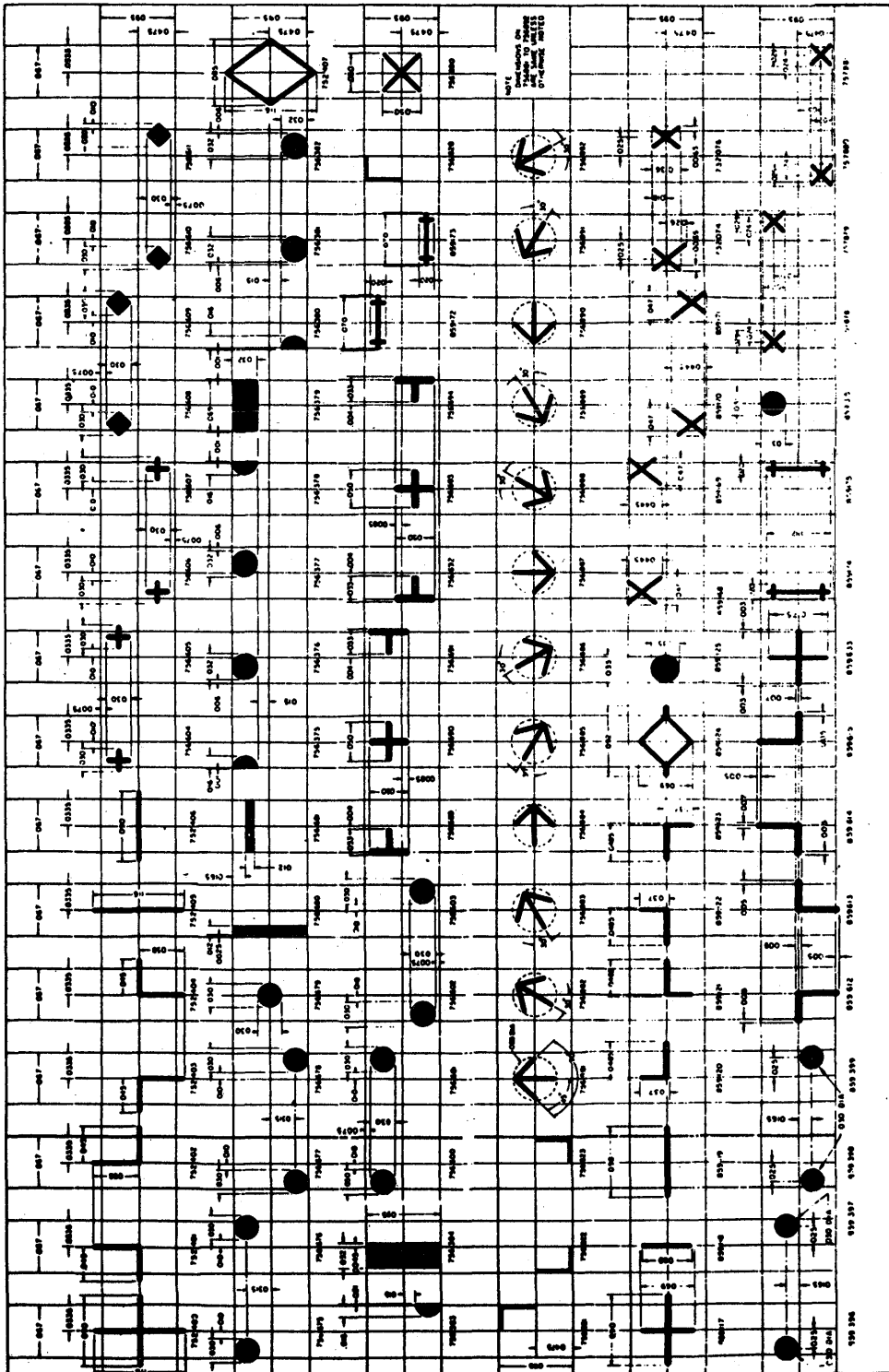
The reproductions are approximately five times actual type size. Each character is assigned a "character number" which appears directly below its illustration.

TYPE CATALOG

Illustrated Type Catalog - 1403, 1404, 1443 (cont'd)

1403, 1404, 1443 - Non-standard Characters (cont'd)

Special Plotting Characters





TYPE CATALOG

1443 PRINTER MODELS 1 AND 2-
OTHER THAN SYSTEM/360

One of the 52-character sets indicated in the charts below is standard on the 1443 models 1 and 2. Special characters with their corresponding card codes and BCD bit codes are shown for all character sets.

For 1240/1440 Systems, where two characters are shown under the 52-character set, the one on the left is for Arrangement A, the other for H.

1240/1440 Data Processing System

Graphics normally associated with the BCD code are those shown under the 63-character set.

Card Code	BCD Code	13	39	52		63
				A	H	
12-8-3	B A 8 2 1	.	.	.	.	.
12-8-4	C B A 8 4			Π	)	Π
12-8-5	B A 8 4 1					l
12-8-6	B A 8 4 2					<
12-8-7	C B A 8 4 2 1					#
12	C B A			⊕	+	⊕
11-8-3	C B 8 2 1			\$	\$	\$
11-8-4	B 8 4	*				*
11-8-5	C B 8 4 1]
11-8-6	C B 8 4 2					;
11-8-7	B 8 4 2 1					Δ
11	B	-		-	-	-
0-1	C A 1			/	/	/
0-8-3	C A 8 2 1			,	,	,
0-8-4	A 8 4			%	(%
0-8-5	C A 8 4 1					✓
0-8-6	C A 8 4 2					\
0-8-7	A 8 4 2 1					⊕
8-2	A			⊕	⊕	⊕
8-3	8 2 1			#	=	#
8-4	C 8 4			⊕	'	@
8-5	8 4 1			:	:	:
8-6	8 4 2					>
8-7	C 8 4 2 1					¥
12-0	C B A 8 2			?	?	?
11-0	B 8 2			!	!	!
0-8-2	A 8 2			⊕	⊕	⊕

On an initial order, the 63-character set may be specified at no charge in lieu of the 52-character set, if Selective Character Set (#6401) is ordered. The Feature #s indicated to the right apply to plant installation. →

System	Print Arrangements - Feature #s					
	52-Character Sets				63-Character Sets	
	A	H	K	—	A	—
1240/1440	9601	9608			9600	

Specify: From the above chart, for plant installation

- [1] For 1240/1440, one Feature# for standard 52-character set unless Selective Character Set (#6401) is ordered and the 63-character set is desired in lieu of the 52-character set.
- [2] Type Size -- #9731 for .079", or #9733 for .095".
- [3] If desired, #9140 for enlarged dash (character No. 830704) in lieu of standard dash. Used for printing on documents to be read by 1230, 1231, 1232 or 3881 optical mark readers. Available as substitution in either 52- or 63-character set.
- [4] If desired, #9676 for round alphabetic "0" in lieu of standard squared "0" in 39-, 52- or 63-character set.
- [5] If desired, #9549 for slashed zero in lieu of standard zero in any character set.

1443 Printer Models 1 and 2-
Other than System/360 (cont'd)

Character Sets: Type bars are available with 13-, 39-, 52- and 63-character sets as indicated below. All sets are alphameric except the 13-character set which is numeric only. The format of standard segments included in each character set is illustrated. The quantity of identical segments included in a 120 print position type bar is also shown... for 144 print positions (circled items below), see Note (2) below.

Standard Segment Formats - 1240/1440

Segment Number	Character Position Number													Character Sets						
	1	2	3	4	5	6	7	8	9	10	11	12	13	13(A)	39(A)	52(A)	52(H)	52(K)	63(A)	
1	1	2	3	4	5	6	7	8	9	0	.	*	-	(1)						
2	,	.	\$	1	A	J	2	S	B	K	3	T	C		5					
3	L	4	U	D	M	5	V	E	N	6	W	F	O		(4)	4	4	4	3	
4	7	X	G	P	8	Y	H	Q	9	Z	I	R	0		4	(3)	(3)	(3)	3	
5	6	-	1	/	A	J	2	S	B	K	3	T	C			4			(3)	
6	+	?	!	#	,	.	\$	@	%	^	&	*	:	;			3			
7	+	-	1	/	A	J	2	S	B	K	3	T	C				4	4		
8	+	?	!	#	,	.	\$	'	(	)	*	:	;				3		
9	+	?	!	#	,	.	\$	@	%	^	&	*	:	;						3
10	[	]	>	<	<	>	*	*	*	*	*	*	*						3
11	+	?	!	#	,	.	\$	@	(	)	*	:	;					3	

Notes

- 1) For a machine with 144 print positions, add one segment to any figure circled for a 13-, 39-, 52- or 63-character set. For example, the 13-character set has eleven segments (all No. 1 or 81, depending on the system) for 120 print positions, but twelve such segments for 144 positions. The 39-character set has four No. 3 (or No. 83) segments for 120 positions, but five for 144 positions. Similar determinations can be made for the other character sets.
- 2) Zero appears in Position 10 of Segment No. 1 (or No. 81) and in Position No. 13 of Segment No. 4 (or No. 84).
- 3) Alphabetic "O" is in Position 13 of Segment No. 3 (or No. 83). It is squared slightly to distinguish it from numeric zero.
- 4) Positions 11 and 12 of Segment Nos. 10 and 88 are blank. These positions cannot be used for substitute characters.

Additional

Character Sets:

Character Set	1240/1440	Single Use-Charge	Purchase Price	MMMC	FIC
13	#1890	\$580	\$580	NC	NC
39	1891	660	660	NC	NC
52	1892	700	700	NC	NC
63	1893	740	740	NC	NC

- Specify:
- [1] From the above, Feature #(s) for additional character set(s) desired. Note: Selective Character Set (#6401) is prerequisite for all except 52-character sets (see 1443 in "Machines").
 - [2] For 52-character set, #9601 for Arrangement A, or #9608 for Arrangement H.
 - [3] #9495 for 120 print positions, or #9496 for 144 print positions (24 Additional Print Positions, #5559, is prerequisite for #9496).
 - [4] Model of 1443 on which type bar(s) will be used, #9729 for model 1, or #9730 for model 2.
 - [5] Type Size, #9731 for .079", or #9733 for .095".
 - [6] If desired, #9140 for enlarged dash (character No. 830704) in lieu of standard dash. Used for printing on documents to be read by 1230, 1231, 1232 or 3881 optical mark readers. Available only as substitution in 52- and 63-character sets.
 - [7] If desired, #9676 for round alphabetic "O" in lieu of standard squared "O" in 39-, 52- or 63-character set.
 - [8] If desired, #9549 for slashed zero in lieu of standard zero in any character set.

Substitute Characters: A substitute character is one which is ordered to displace a character in one of the standard segments illustrated above. Note: A substitute character assumes the card and bit codes of the character it replaces in the system to which the printer is attached.

Substitute characters may be ordered subject to the following:

Artwork (#9950): A Service Charge will be made for designing a new character. Any character illustrated elsewhere in this section for the 1403, 1404, 1443, or 1445, or any character previously designed for these machines (except for "Limitations" below), may be substituted in any segment format without charge for artwork.

Limitations: [1] The ABA E-13B type font can only be used on the 1445... [2] Characters from the SN5 and TN5 arrangements of the 1403 Printer in System/360 cannot be used on the 1443.

Matrix (#9951): Each character requires a matrix. A Service Charge will be made for the matrix unless an identical matrix exists at the plant. This charge is in addition to that for Artwork. Note: 1445 matrices cannot be used to fabricate 1443 segments, or vice versa.

Set-Up (#9952): In addition to charges for Artwork and Matrix (if applicable), a Service Charge applies each time a set-up is required to fabricate a segment format other than those illustrated. This Service Charge is the same regardless of the quantity of identical segments made at any one time. On re-orders of identical segments, the set-up charge again applies.

Segment (#6404): Each character set consists of multiples of one or more segments. The quantity of identical segments in a character set is indicated in the charts under "Character Sets." In addition to applicable Service Charges above, a charge applies for each non-standard segment required to complete a character set... it applies only when an installed type bar is to be modified.

Note: When 24 Additional Print Positions (#5559) is installed, one additional segment is required in a character set. See Note (2) under "Character Sets" above... also see #5559 under 1443 in "Machines."

Service Charges for Artwork, Matrix and Set-Up should be authorized on all orders for non-standard characters. The charges for Artwork need not be specified when character numbers from the illustrated catalog are ordered indicating that artwork is available. The plant will review all orders to determine if Artwork and Matrix are required. The Service Charges (even though authorized) will not be billed unless applicable.

Description	Feature #	Service Charge	Single Use-Charge	Purchase Price	MMMC	FIC
Artwork, per character	9950	\$ 152	---	---	---	---
Matrix, per character	9951	229	---	---	---	---
Set-Up, for each different segment format	9952	138	---	---	---	---
Segment, each (field installation)	6404	---	\$ 43	\$ 40	NC	NC

**1443 Printer Models 1 and 2—
Other than System/360 (cont'd)**

Substitute Characters: Multiple Machine Orders (identical type specs - plant installation): On a multiple machine order, the Service Charges for Artwork, Matrix and Set-up apply only to the first machine and are to be entered on AAS for that machine order only.

For additional machines with all specs identical (including type), enter quantity of machines and specify #9695 (Special Type - Multiple Machine Order) at no charge. Once Plant Order numbers are assigned, enter the following under "Remarks":

On first machine order, indicate that Service Charges for special type also cover all other Plant Order numbers:

Example: SVC CHGS FOR SPEC TYPE COVER
E12341 E12342 E12343 E12344
E12345

On each additional machine order, indicate Plant Order number (first machine) which carries Service Charges:

Example: SVC CHGS FOR SPEC TYPE ON
E12340

A separate Type Spec Sheet (Z120-0658) is required for each machine and must be sent to the plant with sufficient lead time for the manufacturing schedule.

The Type Spec Sheet for the first machine must include the Service Charges as entered on that machine order plus a transmittal (memo) listing the Plant Order numbers of all additional machines involved. The spec sheet for each additional machine must indicate the Plant Order number of the machine which carries the Service Charges. (This may be written in the money fields of the Spec Sheet as "Service Charges on P.O. (insert number)."

Note: This cross reference of Plant Order numbers is mandatory on machine orders and Type Spec Sheets.

If an additional machine with identical type specs is ordered prior to shipment of a machine which carries the Service Charges, specify #9695 on the AAS order, and indicate under "Remarks" the Plant Order number which carries the Service Charges. Send a Type Spec Sheet to the plant indicating the Plant Order number which carries the Service Charges. (When the order is entered after shipment of the machine carrying the Service Charges, the Set-up charge will apply.)

If a machine with #9695 specified at no charge is shipped before the machine specifying the Service Charges, the plant will transfer the charges to the machine which is shipped first and substitute "No Charge" on the other one.

- Specify: [1] 1443/2203 Type Specification Sheet (120-0658) must accompany each order for substitute characters. Once a Type Specification Sheet has been submitted and additional characters are desired, a new Type Specification Sheet is required. It must include all characters desired... those previously ordered and the new ones.
- [2] Type Size, #9731 for .079" or #9733 for .095".
- [3] Segments (#6404) may be ordered on MES with Type Specification Sheet attached for any of the following:

	Type Catalog Character Number	
	.095" Type Size	.079" Type Size
Enlarged Dash (in lieu of standard dash) in 52- or 63-character set	830704	830704
Round alphabetic "O" in lieu of standard squared "O" in 39-, 52-, or 63-character set	251839	475504
Slashed zero in lieu of standard zero in any character set	474129	475539

Examples of Charges for Substitute Characters

New Additional Type Bar: A rental customer wants a new additional type bar with \mathcal{L} in lieu of @ in Arrangement A of the 52-character set for a 1443 model 1 with 120 print positions. The chart on the previous page indicates that this affects Position 8 of Segment No. 6. Charges are as follows:

Specifications

One 1443 Type Bar, 52-character set (#1892), Arrangement A (#9601) for 1443 model 1 (#9729) with 120 print positions (#9495), type size .095" (#9733)...	\$ 700 Single Use-Charge
Artwork (#9950) for one new character	152 Service Charge
Matrix (#9951) for this character	229 Service Charge
Set-Up (#9952) for Segment No. 6 with \mathcal{L} in lieu of @ in Position 8,	138 Service Charge

Total Charge is \$700 Single Use-Charge + \$519 Service Charge = \$1,219

Note: The Segment charge (#6404) does not apply since a complete type bar is being furnished with three special segments in lieu of the ones of standard Segment No. 6 format. For a customer owned machine, the same total charge would apply with a \$700 Purchase Price in lieu of the Single Use-Charge.

Installed Type Bar: A purchase customer orders a closing parenthesis ")" substituted for the ampersand "&" in a 63-character set of a 1443 model 2 with 120 print positions. The chart on one of the previous pages indicates that this affects Position 1 of Segment No. 5. Charges are as follows:

Specifications (Note: The ")" is an available character in Segment No. 8.)

Artwork (#9950)	No Charge
Matrix (#9951)	No Charge
Set-Up (#9952) for Segment No. 5 with ")" in lieu of "&" in Position 1	\$ 138 Service Charge
Three special segments (#6404), \$40 Purchase Price each, to replace corresponding quantity of Segment No. 5 in 63-character set type bar (#1893), of 1443 model 2 (#9730) with 120 print positions (#9495), type size .095" (#9733)	120 Purchase Price

Total Charge is 138 Service Charge + \$120 Purchase Price = \$ 258

Note: For a rental customer, the same total charge would apply with a \$120 Single Use-Charge in lieu of the Purchase Price.

For 144 print positions, one additional special segment would be required at an additional \$40 Purchase Price (Single Use-Charge for rental customer).

Change of Type Size: To change type size on an installed machine, attach 1443 Type Specification Sheet (120-0658) to MES ordering the required number of Segments (#6404).

**1443 MODEL N1 PRINTER-
SYSTEM/360, SYSTEM/370
2203 MODELS A1 AND A2 PRINTERS-
SYSTEM/360**

The 52-character set is standard on the 1443 model N1. On an initial machine order, the 63-character set may be specified at no charge in lieu of the 52-character set, if Selective Character Set (#6402) is ordered.

On the 2203 model A1 or A2, any one of the available character sets may be specified at no charge on initial machine order. See "Note" under Specify (1) below.

Special characters with their corresponding card codes and EBCDIC bit codes are shown for all character sets in the chart to the right. Graphics normally associated with the EBCDIC codes are those shown under the 63-character set.

Feature #s indicated below apply to plant installation only.

Character Set	1443 model N1	2203 model A1 and A2
13	--	#9086
39	--	9087
52	9088	9088
63	9089	9089

Specify: (1) For 1443 mdl N1 -- #9088 for 52-character set unless Selective Character Set (#6402) is ordered and the 63-character set is desired instead. For 2203 mdl A1 or A2 -- Any one Feature # indicated above.

Note: Programming Systems Diagnostics require an alphanumeric character set (#9087, 9088 or 9089) on the 2203. The 13-character set (#9086) should only be ordered if the installation will have another 2203 with an alphanumeric character set available for this purpose. It is recommended that the 13-character set be ordered as #1901 at the price indicated below.

(2) Type Size -- #9731 for .079", or #9733 for .095".

(3) If desired, #9140 for enlarged dash (Character No. 830704) in lieu of standard dash. Used for printing on documents to be read by 1230, 1231, 1232 and 3881 optical mark readers. Available as substitution in either 52- or 63-character set.

(4) If desired, #9549 for slashed zero in lieu of standard zero in any character set.

(5) If desired, #9676 for round alphabetic "O" in lieu of standard squared "O" in 39-, 52- or 63-character set.

Additional

Character Sets: Type bars are available with 13-, 39-, 52- and 63-character sets as indicated below. All sets are alphanumeric except the 13-character set which is numeric only. Format of standard segments is illustrated and the quantity of identical segments in a 120 print position type bar is shown... for 144 print positions (circled items below), see Note (1).

Segment Number	Character Position Number													Character Sets						
	1	2	3	4	5	6	7	8	9	10	11	12	13	1443 & 2203 13	2203 39	1443 52	2203 52	1443 63	2203 63	
51	.	*	-	0	1	2	3	4	5	6	7	8	9	①						
52	.	\$	,	Q	A	J	I	B	K	S	2	C	L		5					
53	6	-	0	A	J	/	I	B	K	S	2	C	L			4	4	3	3	③
54	T	3	D	M	U	4	E	N	V	5	F	O	W		④	③	4	3	3	
55	6	G	P	X	7	H	Q	Y	8	I	R	Z	9		4	3	③	3	3	
56	.	\$	,	*	II	*	%	@	(	)	=	'	+			4	3			
57	c	l	:	.	\$	,	*	@	(	)	=	'	+					③	3	
58	)	-	'	+	>	=	|	-	?	"								3	3	

Note: 1) For a machine with 144 print positions, add one segment to any figure circled above for a 13-, 39-, 52- or 63-character set. For example, the 13-character set has eleven segments (all No. 51) for 120 print positions, but twelve such segments for 144 positions. The 39-character set has four No. 54 segments for 120 positions, but five for 144 positions. Similar determinations can be made for the other character sets.

2) Zero appears in Position 4 of Segment No. 51, Position 4 of Segment No. 52, and in Position 3 of Segment No. 53.

3) Alphabetic "O" is in Position 12 of Segment No. 54. It is squared slightly to distinguish it from numeric zero.

4) Position 3 of Segment No. 57 and Positions 12 and 13 of Segment No. 58 are blank. These positions cannot be used for character substitutions.

Specify: [1] Feature #(s) for additional character set(s) desired. [Note: Selective Character Set (#6402) is prerequisite on 1443 model N1 for all except the 52-character set.]

[2] #9495 for 120 print positions, or #9496 for 144 print positions [24 Additional Print Positions (#5558) is prerequisite for #9496].

[3] Type Size, #9731 for .079" or #9733 for .095".

[4] If desired, #9140 for enlarged dash (Character No. 830704) in lieu of standard dash. Used for printing on documents to be read by 1230, 1231, 1232 or 3881 optical mark readers. Available only as substitution in 52- and 63-character sets.

[5] If desired, #9549 for slashed zero in lieu of standard zero in any character set.

[6] If desired, #9676 for round alphabetic "O" in lieu of standard squared "O" in 39-, 52- or 63-character set.

Substitute

Characters: Any character illustrated elsewhere in this section for the 1403, 1404, 1443, 1445 or 2203, or any character previously designed for these machines, may be substituted in any character position of any segment subject to conditions applicable to character substitutions in the section "Other Than System/360 - 1443 Printer Models 1 and 2".

Extd BCD Interchange Code	Card Code	Bit Code 0123 4567	Character Sets			
			13	39	52	63
12-8-2	0100	1010				c
12-8-3		1011	.	.	.	.
12-8-4		1100			II	<
12-8-5		1101			((
12-8-6		1110			+	+
12-8-7		1111			|	|
12	0101	0000			6	6
11-8-2		1010				!
11-8-3		1011		\$	\$	\$
11-8-4		1100	*		*	*
11-8-5		1101))
11-8-6		1110				;
11-8-7		1111				~
11	0110	0000	-		-	-
0-1		0001			/	/
0-8-3		1011	,	,	,	,
0-8-4		1100			%	%
0-8-5		1101				
0-8-6		1110				>
0-8-7		1111				?
8-2	0111	1010				:
8-3		1011			#	#
8-4		1100			@	@
8-5		1101			'	'
8-6		1110			=	=
8-7		1111				"

Limitation: Neither type bars nor segments are interchangeable between 1443 and 2203.

Character Set	Feature #
13	1901
39	1902
52	1903
63	1904

**1445 PRINTER MODELS 1 AND N1-
SYSTEM/360 AND OTHER SYSTEMS**

A 56-character set which includes ABA characters is standard on the 1445 models 1 and N1. Type size is .095" high, except for the E-13B characters which conform to ABA Specifications. The chart to the right illustrates special characters furnished in the standard 56-character set plus those included in the optional 14- and 42-character sets.

Card and bit codes are shown for systems using the Standard BCD Interchange Code (BCD) and the Extended BCD Interchange Code (EBCD) of System/360. In addition to the graphics used on the 1445, the standard graphics assigned to the BCD and EBCD codes are shown for associative purposes. Where two graphics are shown under "Graphic Normally Associated with BCD Code," the one on the left is for Arrangement A, the other for H.

MICR Characters: Other than MICR numeric characters, the following are included in the 56-character set:

- ⊞ Dash
- Ⓜ Amount
- Ⓢ Transit
- Ⓞ On Us

	1445 Model 1 1240/1401/1440/1460		Graphics in 1445 Character Sets			1445 Model N1 System/360	
	Card Code	BCD Code	14	42	56	Card Code	EBCD Code 01234567
.	12-8-3	B A 8 2 1	.	.	.	12-8-3	01001011
#	0-8-2	A 8 2			9	12-8-5	1101
@	8-4	C 8 4			4	12-8-6	1110
*	0-8-7	A 8 4 2 1			2	12-8-7	1111
\$	11-8-3	C B 8 2 1	\$	\$	\$	11-8-3	01011011
*	11-8-4	B 8 4	*	*	*	11-8-4	1100
?	12-0	C B A 8 2			7	11-8-5	1101
% (	0-8-4	A 8 4			0	11-8-6	1110
⊞ +	12	C B A			⊞	11-8-7	1111
-	11	B	-	-	-	11	01100000
/	0-1	C A 1	/	/	/	0-1	0001
,	0-8-3	C A 8 2 1	,	,	,	0-8-3	1011
∇	0-8-5	C A 8 4 1			∇	0-8-4	1100
]	11-8-5	C B 8 4 1			∇	0-8-5	1101
* =	8-3	8 2 1			3	0-8-6	1110
f	8-7	C 8 4 2 1			6	0-8-7	1111
:	8-5	8 4 1			5	8-4	01111100
[	12-8-5	B A 8 4 1			∇	8-5	1101
!	11-0	B 8 2			8	8-6	1110
X)	12-8-4	C B A 8 4			∇	8-7	1111

Specify: [1] #9570 for 56-character set to be used with 1240, 1401, 1440, 1460 or System/360... [2] #9733 for .095" type size (all except E-13B characters).

Character Sets: Type bars are available with 14-, 42- or 56-character sets. The 14-character set is numeric only (with 4 special characters)... the 42- and 56-character sets are alphanumeric (with 6 special characters). The 56-character set also includes fourteen E-13B symbols. The format of standard segments included in each character set is illustrated below. All characters below are a facsimile of 1445 printing and are slightly smaller than actual size. The quantity of identical segments in a 113 print-position type bar is shown.

Segment Number	Character Position Number														Quantity of identical segments in character set (113 print positions)		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	14 Character Set	42 Character Set	56 Character Set
1	1	2	3	4	5	6	7	8	9	0	.	\$	*	-	9		
2	P	B	Y	H	Q	9	Z	I	R	0	,	.	\$	*		3	3
3	-	1	/	A	J	2	S	B	K	3	T	C	L	4		4	3
4	U	D	M	5	V	E	N	6	W	F	0	7	X	G		4	3
5	5	∇	∇	∇	∇	∇	∇	∇	∇	∇	∇	∇	∇	∇			3

Notes

- 1) Zero appears in Position 10 of Segment No. 1 and in Position 10 of Segment No. 2.
- 2) Alphabetic "0" is in Position 11 of Segment No. 4. It is squared slightly to distinguish it from the numeric zero.
- 3) Segment No. 5 contains the E-13B characters. The zero is in Position 10.

Character Set	Feature #	Single Use-Charge	Purchase Price	MMMC	FIC
14	1898	\$ 2,330	\$ 2,330	NC	NC
42	1899	2,640	2,640	NC	NC
56	1906	2,795	2,795	NC	NC

Specify: [1] Feature #(s) for additional character set(s) desired. **Note:** Selective Character Set (#6402 on model N1) is prerequisite for all except the 56-character set (see 1445 in "Machines").

[2] Type Size, #9733 for .095".

(Continued)

**1445 Printer Models 1 and N1-
System/360 and Other Systems (cont'd)**

Substitute

Characters: A substitute character is one which is ordered to displace a character in one of the standard segment formats illustrated on the previous page. **Note:** A substitute character assumes the card and bit codes of the character it replaces in the system to which the printer is attached.

Character substitutions may be ordered for plant or field installation in a character set, subject to the following:

Artwork (#9950): A Service Charge will be made for designing a new character. Any character illustrated elsewhere in this section for the 1403, 1404, 1443, or 1445, or any character previously designed for these machines (except for "Limitations" below), may be substituted in any segment format without charge for artwork.

Limitations: [1] The ABA E-13B type font can only be used on the 1445. The " and ? (E-13B symbols for the "Dash" and "7") cannot be relocated from their present positions in the standard MICR type segment. This restriction applies to any arrangement of standard MICR or non-MICR type segments, or combinations of both. These characters must always be located in Character Positions 14 and 6, respectively... see Segment No. 5 of the 56-character set under "Character Sets" on the previous page. [2] Characters from the SN5 and TN5 arrangements of the 1403 Printer in System/360 cannot be used on the 1445. [3] The use of .079" character substitutions is not recommended.

Matrix (#9951): Each character requires a matrix. A Service Charge will be made for the matrix unless an identical matrix exists at the plant. This charge is in addition to that for Artwork. **Note:** 1443 matrices cannot be used to fabricate 1445 segments, or vice versa.

Set-Up (#9952): In addition to charges for Artwork and Matrix (if applicable), a Service Charge applies each time a set-up is required to fabricate a segment format other than those illustrated. This Service Charge is the same regardless of the quantity of identical segments made at any one time. On re-orders of identical segments, the set-up charge again applies.

Segment (#6404): Each character set consists of multiples of one or more segments. The quantity of identical segments in a character set is indicated in the chart on the previous page. In addition to applicable Service Charges above, a charge applies for each non-standard segment required to complete a character set... it applies only when an installed type bar is to be modified.

Service Charges for Artwork, Matrix and Set-Up should be authorized on all orders for non-standard characters. The charge for Artwork need not be specified when character numbers from the illustrated catalog are ordered indicating that artwork is available. The plant will review all orders to determine if Artwork and Matrix are required. The Service Charges (even though authorized) will not be billed unless applicable.

Description	Feature #	Service Charge	Single Use-Charge	Purchase Price	MMMC	FIC
Artwork, per character	9950	\$132	--	--	--	--
Matrix, per character	9951	199	--	--	--	--
Set-Up, for each different segment format	9952	120	--	--	--	--
Segment, each (field installation)	6404	--	\$160	\$160	NC	NC

Multiple Machine Orders (identical type specs - Plant installation): On a multiple machine order, the Service Charges for Artwork, Matrix and Set-up apply only to the first machine and are to be entered on AAS for that machine order only.

For additional machines with all specs identical (including type), enter quantity of machines and specify #9695 (Special Type - Multiple Machine Order) at no charge. Once Plant Order numbers are assigned, enter the following under "Remarks":

On first machine order, indicate that Service Charges for special type also cover all other Plant Order numbers:

Example: SVC CHGS FOR SPEC TYPE COVER
E12341 E12342 E12343 E12344
E12345

On each additional machine order, indicate Plant Order number (first machine) which carries Service Charges:

Example: SVC CHGS FOR SPEC TYPE ON
E12340

A separate Type Spec Sheet (Z120-1056) is required for each machine and must be sent to the plant with sufficient lead time for the manufacturing schedule.

The Type Spec Sheet for the first machine must include the Service Charges as entered on that machine order plus a transmittal (memo) listing the Plant Order numbers of all additional machines involved. The spec sheet for each additional machine must indicate the Plant Order number of the machine which carries the Service Charges. (This may be written in the money fields of the Spec Sheet as "Service Charges on P.O. (insert number).")

Note: This cross reference of Plant Order numbers is mandatory on machine orders and Type Spec Sheets.

If an additional machine with identical type specs is ordered prior to shipment of a machine which carries the Service Charges, specify #9695 on the AAS order, and indicate under "Remarks" the Plant Order number which carries the Service Charges. Send a Type Spec Sheet to the plant indicating the Plant Order number which carries the Service Charges. (When the order is entered after shipment of the machine carrying the Service Charges, the Set-up Charge will apply.)

If a machine with #9695 specified at no charge is shipped before the machine specifying the Service Charges, the plant will transfer the charges to the machine which is shipped first and substitute "No Charge" on the other one.

- Specify:**
- [1] 1445 Type Specification Sheet (120-1056) must accompany each order for substitute characters. Once a Type Specification Sheet has been submitted and additional characters are desired, a new Type Specification Sheet is required. It must include all characters desired... those previously ordered and the new ones.
 - [2] Type Size, #9733 for .095" (all except E-13B characters).

Examples of Charges for Substitute Characters

New Additional Type Bar: A rental customer wants a new additional type bar with $\text{\textcircled{A}}$ in lieu of * in the 42-character set. The chart on the previous page indicates that this affects Character Position 14 of Segment No. 2. Charges are as follows:

Specifications

One 1445 Type Bar, 42-character set (#1899), type size .095" (#9733)	\$2,640 Single Use-Charge
Artwork (#9950) for one new character	132 Service Charge
Matrix (#9951) for this character	199 Service Charge
Set-Up (#9952) for Segment No. 2 with $\text{\textcircled{A}}$ in lieu of * in Character Position 14.	120 Service Charge
Total charge is \$2,640 Single Use-Charge + \$451 Service Charge = \$3,091	

Note: The Segment Charge (#6404) does not apply since a complete type bar is being furnished with three special segments in lieu of the ones of standard Segment No. 2 format. For a customer owned machine, the same total charge would apply with a \$2,640 Purchase Price in lieu of the Single Use-Charge.

**1445 Printer Models 1 and N1-
System/360 and Other Systems (cont'd)**Examples of Charges for Substitute Characters (cont'd)

Installed Type Bar: A purchase customer orders an ampersand "g" substituted for the dash "-" in the 56-character set. The chart on the previous page indicates that this affects Character Position 1 of Segment No. 3. Charges are as follows:

Specifications: [Note: The "g" is a standard character on the 1443 (Character No. 251869, Page 52). However, a new matrix is required due to the 8 characters/inch spacing of the 1445.]

Artwork (#9950)	No Charge
Matrix (#9951)	\$ 199 Service Charge
Set-Up (#9952) for Segment No. 3 with g in lieu of - in Character Position 1	120 Service Charge
Three special Segments (#6404), \$160 Purchase Price each, to replace corresponding quantity of Segment No. 3 in 56-character set type bar	480 Purchase Price

Total charge is \$480 Purchase Price + \$319 Service Charge = \$ 799

For a rental customer, the same total charge would apply with a \$480 Single Use-Charge in lieu of the Purchase Price.

Note: Had this same change been made to the 56-character set on initial machine order, only the \$319 Service Charge would apply to both a rental and purchase customer.

TYPE CATALOG

Systems Typewriters (cont'd)

Specify: For Plant Installation --

- [1] One Feature # at no charge from the following table, based on machine model and system involved. For 2740, see "Note" in text on preceding page before specifying an element other than Data 1 or Data 2 Font.
- [2] #9104 if element selected has 10 character/inch spacing... #9105 if it has 12 character/inch spacing. [Note: 10 character/inch spacing cannot be changed to 12 character/inch spacing, or vice versa, in the field.]

For Field Installation --

2740 keytop changes for installed machines, necessitated by other than System/360 compatibility may be made on a Time and Material basis. Keytops are \$0.35 each and should be ordered on a DP Supply Order along with the printing element (Raleigh Plant).

Additional Printing Elements

Purchase Price

Specify Part No. on DP Supply Order (Raleigh Plant)

\$ 18 each

TABLE OF PRINTING ELEMENTS							2740 mdl 1	2740 mdl 2
	Char/Inch Printing	Type Font	Printing Arrangement	Dual or Mono Case Element D=Dual, M=Mono	Feature # for Plant Installation Only	Part No. for Additional Element		
PTTC/BCD - Other Than System/360	10	Data 1	Standard	D	9567	1167938	X	
				M	9575	1167939	X	X
	12	Data 2	Standard	D	9597	1167997	X	
	10	Data 1	A	D	9568	1167940	X	X
				M	9578	1167941	X	X
			E	M	9573	1167970	X	X
			H	D	9569	1167942	X	X
				M	9579	1167943	X	X
Typewriter Option			D	9566	1167948	X	X	
			M	9574	1167947	X	X	
Slashed Zero	D	9570	1167961	X	X			
	M	9576	1167962	X	X			
PTTC/EBCD S/360, S/370	10	Data 1	D	9571	1167963	X	X	
			M	9592	1167998	X	X	
	12	Data 2	D	9591	1167996	X	X	
Standard OPD Selectric Elements (See TC 24 for print samples)	10	Manifold 72	Standard OPD Arrangement	M	9806	1167010	X	
			Slashed Zero	M	9810	1167019	X	
	10	Courier 72	Pos. 0 has] over [	D	9808	1167015	X	
			Pos. 0 has ± over 1	D	9811	1167029	X	
			Pos. 41 has ½ over ½	D	9812	1167043	X	
	12	Scribe Elite 72 Prestige Elite 72	Standard OPD Arrangement	D	9820	1167001	X	
				D	9821	1167007	X	
D				9822	1167012	X		

Note: Print elements contain only the last 3 digits of the assigned 7-digit part number. When additional or replacement elements are desired, the 3 digits indicated on the element are to be used as a guide in determining the part number to be specified from the above list.

Type samples of the above Standard Selectric Printing Elements are shown on the next page.

Systems Typewriters (cont'd)Standard OPD Selectric Printing Elements

The following samples of OPD Selectric Type Styles are reproduced as near to actual size as high speed reproduction methods will permit. Because of inherent differences between printed and typewritten impressions, these type styles are not representative of typewritten material and should be used as a guide to type design only.

12 pitch
Part No. 1167001

IBM SCRIBE Type is a modern square-serif design in the Elite family of type styles. It is ideally suited for the preparation of routine correspondence and reports.

ABCDEFGHIJKLMNOPQRSTUVWXYZ []@#%\$¢&*()
abcdefghijklmnopqrstuvwxyz -_+=!°'''/?:;,.
1234567890

12 pitch
Part No. 1167007

IBM ELITE 72 Type is similar to the Elite type styles offered with the IBM Model C Typewriter. It is well suited for a wide range of typing applications.

ABCDEFGHIJKLMNOPQRSTUVWXYZ []@#%\$¢&*()
abcdefghijklmnopqrstuvwxyz -_+=!°'''/?:;,.
1234567890

10 pitch
Part No. 1167010

IBM MANIFOLD 72 TYPE IS A SANS-SERIF TYPE STYLE DESIGNED FOR BILLING AND FORMS PREPARATION. IT PROVIDES A MAXIMUM NUMBER OF CLEAR CARBON COPIES.

ABCDEFGHIJKLMNOPQRSTUVWXYZ ±@#%\$¢&*()
1234567890 -_+=!°'''/?:;,.

12 pitch
Part No. 1167012

IBM PRESTIGE ELITE 72 Type is a weighted type similar to the Prestige Elite styles offered with the IBM Model C Typewriter. It meets a range of typing applications.

ABCDEFGHIJKLMNOPQRSTUVWXYZ []@#%\$¢&*()
abcdefghijklmnopqrstuvwxyz -_+=!°'''/?:;,.
1234567890

10 pitch
Part No. 1167015

IBM COURIER 72 Type is a square-serif design in the Pica family of type styles. The open spaced characters make it highly legible.

ABCDEFGHIJKLMNOPQRSTUVWXYZ []@#%\$¢&*()
abcdefghijklmnopqrstuvwxyz -_+=!°'''/?:;,.
1234567890

10 pitch
Part No. 1167019

SIMILAR TO IBM MANIFOLD 72 (CODE 10), THIS TYPE STYLE HAS A LINE THROUGH ZERO (Ø) ELIMINATING CONFUSION BETWEEN LETTER AND NUMBER GROUPINGS.

ABCDEFGHIJKLMNOPQRSTUVWXYZ ±@#%\$¢&*()
123456789Ø -_+=!°'''/?:;,.

TYPE CATALOG

VIRTUAL STORAGE SYSTEM/370, 4331, 4341, 3031, 3032, 3033 PROCESSORS AND 3777 COMMUNICATIONS TERMINAL - 3203 PRINTER

PRINT TRAINS: The 1416 Interchangeable Train Cartridge is used on the 3203 Printer. It is the same as that used on the 1403 mdl 3 and N1. Additional print trains (1416s) are available by ordering additional 1416 Interchangeable Train Cartridges ... see M1416 pages.

The Universal Character Set is standard on the 3203; therefore, no special feature is required for any available arrangement.

See GA24-3073 for graphics and associated EBCDIC card and bit codes.

PRINT TRAIN ARRANGEMENTS: Trains are assigned alphabetic and numeric designations to indicate type size, style and arrangement. The type size or style is denoted by a numeric suffix (AN2, HN3, etc.) with 2 = .095" type size, 3 = .079" type size, 5 = Text Type Style, etc. Type sizes (the suffix) should not be intermixed. Based on this coding, print trains are assigned a Feature #, as indicated below, for each arrangement.

Std. Type Style		Alt. Type Style		Text Type Style	
.095"	SF#	.079"	SF#	Text Printing	SF#
AN2	#9612	AN3	#9613	SN5	#9634
HN2	#9614	HN3	#9615	TN5	#9635
GN2	#9721	GN3	#9720		
PCS-AN2	#9562	PCS-AN3	#9622		
PCS-HN2	#9564	PCS-HN3	#9624		
PN2	#9631	PN3	#9641		
QNC2	#9638	QNC3	#9648		
QN2	#9632	QN3	#9642		
RN2	#9633	RN3	#9643		
YN2	#9637	YN3	#9647		

Library Type Style		OCR Font (Size 1)			
Lib Prtg	SF#	Style A	SF#	Style B	SF#
ALA6	#9735	OAA	#9710	OAB	#9713
		ODA	#9701		
		ONA	#9702		

Notes:

- OCR fonts or arrangements can be used to prepare documents for IBM optical character readers. Marks may also be printed for reading by optical mark readers. For specific graphics which can be read, see the reader Component Description manuals. For graphics which comprise each character set, refer to the TC1403/1404 pages. Also see "Printing for Optical Character Reading" in the TC1403/1404 pages.
- The IBM OCR characters in arrangements OAA, ODA and ONA are derived from, but not identical to, the designs described in the USASOCR standard of the American National Standards Institute. Consequently, it should not be represented that the IBM OCR A Font is the same as the standard OCR A Font.
- The IBM OCR characters in arrangement OAB are representative of (but not always identical to) the characters described in the European Computer Manufacturers Association's Standard ECMA-11 for Alphameric Character Set OCR-B for Optical Character Recognition, 2nd Edition, October, 1971. Consequently, it should not be represented that the IBM OCR B Font is the same as the standard ECMA B Font.

Nominal printing speeds for all available arrangements are shown. "Nominal" speed is a weighted average of mean expected value for printing applications which use single line spacing (no skipping). These printing speeds are provided only as a guide to performance. Actual

throughput rates are a function of character set, number and frequency of characters printed on each line and vertical spacing or skipping. If actual throughput rates are required, the application(s) should be benchmarked and timed.

The nominal speed is dependent upon the frequency with which the various subsets in a preferred character set are printed. For example, the PCS-AN arrangement consists of 48 different graphics arranged in a sequence so that some of the characters occur more frequently than others.

48 graphics -- 3-level preferred set PCS-AN graphics

Characters of primary preference appearing 8 times 0-9 . , - *
 Characters of secondary preference appearing 4 times A-Z = \$ / +
 Characters of least importance appearing twice % # @ &

The speeds at which graphics in each of the three levels of preference are printed are included in the table below.

SPECIFY

- For 1416 -- one print train feature number for each 1416 ordered. When OCR ribbons are used for either OCR printing or other applications, specify #9488 on the 3203 (also field installable).
- If desired, #9140 for enlarged dash (Character No. 732464) in lieu of standard dash for printing on documents to be read by a 3881 Optical Mark Reader. Available as substitution in Arrangements AN2, HN2, AN3 and HN3 only.
- If desired, #9549 for slashed zero in lieu of standard zero in any arrangement except OAA, ODA, ONA, OAB, SN5 and TN5.
- If desired #9676 for round alphabetic "O" in lieu of standard squared "O" in any arrangement except OAA, ODA, ONA, OAB, SN5 and TN5.
- If desired #9722 for ! (exclamation point) in lieu of | (logical OR) in GN arrangement.
- If desired, #9723 for ^ (circumflex) in lieu of ~ (logical NOT) in GN arrangement.
- If desired, #9728 for - (timing mark dash) in lieu of # in OAA arrangement for printing timing marks on documents for the 3886 Optical Character Reader. For field installation, order character number 2642392 in train slug 2642393.
- If desired, #9729 for - (timing mark dash) in lieu of < in OAB arrangement for printing timing marks on documents for the 3886 Optical Character Reader. For field installation, order character number 2642392 in train slug 1798437.
- If desired, #9690 for Non Standard Type Arrangement. See "Type Slug Substitutions" paragraph below.
- If desired, #9719 for ' (apostrophe) in lieu of ◻ (lozenge) in AN arrangements to provide compatibility with #9490 on the 3776.
- If desired, #9650 for ` (grave accent) in lieu of % (percent) and ¢ ` in lieu of # & @ in the second and fourth arrays (only) in PN arrangements to provide compatibility with #9491 on the 3776.
- If desired, #9651 for the following substitutions in the SN5 arrangement to provide compatibility with #9491 on the 3776.

{ } ' in lieu of @ ' (in the first array
 ¢ % _ in lieu of) - | in the first array

Nominal Printing Speed -- Lines per Minute*

Arrangement	Character Set	3203 mdl 1	3203 mdl 2, 4	3203 mdl 3
ALA	162 graphics, 78 preferred	290/155	585/315	-
AN	48 "A" graphics	605	1215	1010
HN	48 "H" graphics	605	1215	1010
OAA (Style A Alphameric)	5 "A" graphics + 43 OCR-A	605	1215	1010
ODA (Style A Numeric)	38 "A" Graphics + OCR-A numeric	605	1215	1010
ONA (Style A Numeric)	35 "A" graphics + OCR-A numeric +3 special characters	605	1215	1010
OAB (Style B Alphameric)	48 (representative of OCR-B graphics)	605	1215	1010
GN (ASCII)	2-level set, 63 graphics	505/290	1020/585	870/530
PCS-AN (Preferred Character Set)	3-level set, 48 "A" graphics	775/505/290	1560/1020/585	1280/870/530
PCS-HN (Preferred Character Set)	3-level set, 48 "H" graphics	775/505/290	1560/1020/585	1280/870/530
PN (PL/I)	60 graphics	505	1020	870
QNC (PL/I—Commercially Preferred)	60 graphics, 45 preferred	595/155	1195/315	998/297
QN (PL—I—Scientifically Preferred)	60 graphics, 45 preferred	595/155	1195/315	998/297
RN (FORTRAN/COBOL Commercial)	52 graphics, 47 preferred	595/155	1195/315	998/297
SN (Text Printing—Commercial)	84 graphics, 78 preferred	405/155	815/315	717/297
TN (Text Printing—Scientific)	120 graphics	290	585	530
YN (High-Speed Alphameric)	42 graphics, 39 preferred	675/290	1355/585	-

* When printing diacritical marks over or under alphabetic characters, an additional print cycle is required, resulting in reduced throughput.

For train layouts and other information regarding these arrangements, see the TC1403/1404 pages.

**VS/370, 4331, 4341, 3031, 3032, 3033 and 3777 -- 3203 Printer
(cont'd)**

) # = in lieu of) - | in the second array
? ! ; in lieu of @ ' (in the third array
> < - in lieu of) | in the third array
'' ~ in lieu of ? ! ; in the third array
' | in lieu of € % ▣ in the third array

LIMITATIONS: Alphabetic and numeric characters from arrangements SN5 and TN5 cannot be substituted in any other arrangements, nor can characters from other arrangements be substituted in SN5 and TN5.

Because of greater type face density of the SN5 and TN5 arrangements: (1) Ribbon life may be reduced when printing on continuous forms; (2) The number of normal print quality copies is limited to the original and first copy with the customer using additional copies at his own discretion.

The TN arrangement is limited to use at 6 lines per inch spacing due to the overlap otherwise created by the exponent characters.

The ALA arrangement has the following limitations: (1) Ribbon life may be reduced when printing on continuous forms because of greater type face density. (2) For optimum print quality, single part paper is recommended; (3) 6 lines per inch vertical spacing is recommended when under or over-printing (diacritical marks, etc.); (4) All special applications such as spirit, photo-offset, multilith, diazo, heat transfer or similar process should be tested to assure satisfactory results.

Notes: All standard chains contain some ASCII characters. The GN arrangement provides a 63-character set consistent with the American Standard Code for Information Interchange (ANSI X3.4-1968).

It is important to select the arrangement that gives the highest print speed for the customer's applications. As a guide, the arrangement with the smallest character set should be selected. For example, the AN and HN 48-character sets have a nominal printing speed of 1,215 lines per minute on the 3203 mdl 2, while the PN 60-character set runs at 1,020 lines per minute (nominal speed).

#9690 (Non-standard Type Arrangement) will be specified for: (1) Rearrangement of standard type slugs; (2) Rearrangement of standard characters in one or more slugs; (3) Substitution of other available characters in slugs; (4) New design characters.

Arrangement RN is designed for FORTRAN/COBOL use. Any HN, PSC-HN, PN, QNC, QN and TN arrangement also has this capability.

TYPE SLUG SUBSTITUTIONS: Standard type slugs can be substituted for others in announced arrangements without charge. These slugs are furnished at no charge when properly ordered and plant installed on a chain or in a train. For field installation, see "Substitute Characters - Field Installation" in the TC1403/1404 pages for ordering and charges. Also review "Limitations" above. The frequency of occurrence on the chain/train determines the quantity of identical slugs which must be ordered. See 1403 manual, GA24-3073, for details of designing a custom train.

3203-5 PRINTER-SYSTEM/38

Print Trains: The 1416 Interchangeable Train Cartridge is used on the 3203 Printer. It is the same as that used on the 1403 N1. Additional print trains (1416s) are available by ordering additional 1416 interchangeable Train Cartridges . . . see 1416 in "Machines" section.

The Universal Character set is standard on the 3203-5; therefore, no special feature is required for any available arrangement.

Print Train

Arrangements: Trains are assigned alphabetic and numeric designations to indicate type size, style and arrangement. The type size or style is denoted by a numeric suffix (AN2, HN3, etc.) with 2 = .095" type size, 3 = .079" type size, 5 = Text Type Style, etc. Type sizes (the suffix) should not be intermixed. Based on this coding, print trains are assigned a Feature #, as indicated below, for each arrangement.

Standard Type Style		Alternate Type Style		OCR-A Applications		OCR-B Applications		Text Type Style		Library Type Style	
.095"	Feat. #	.079"	Feat. #	Size 1	Feat. #	Size 1	Feat. #	Text Prt.	Feat. #	Lib. Prt.	Feat. #
AN2	9612	AN3	9613								
HN2	9614	HN3	9615								
				ODA	9701						
				ONA	9702						
GN2-1	9721	GN3-1	9720	OAA	9710	OAB	9713	SN5	9634	ALA	9735
PCS-AN2	9562	PCS-AN3	9622					TN5	9635		
PCS-HN2	9564	PCS-HN3	9624								
PN2	9631	PN3	9641								
QNC2	9638	QNC3	9648								
QN2	9632	QN3	9642								
RN2	9633	RN3	9643								
YN2	9637	YN3	9647								

- Notes:**
- 1) OCR fonts or arrangements can be used to prepare documents for IBM optical character readers. Marks may also be printed for reading by optical mark readers. For specific graphics which can be read, see the reader Component Description manuals. For graphics which comprise each character set, refer to page TC 41. Also see "Printing for Optical Character Reading" on page TC 36.
 - 2) The IBM OCR characters in arrangements OAA, ODA and ONA are derived from, but not identical to, the designs described in the USASOCR standard of the American National Standards Institute. Consequently, it should not be represented that the IBM OCR A Font is the same as the standard OCR A Font.
 - 3) The IBM OCR characters in arrangement OAB are representative of (but not always identical to) the characters described in the European Computer Manufacturers Association's Standard ECMA-11 for Alphanumeric Character set OCR-B for Optical Character Recognition, 2nd Edition, October 1971. Consequently, it should not be represented that the IBM OCR B Font is the same as the standard ECMA B Font.

Printing Speeds:

Nominal printing speeds for all available arrangements are shown. "Nominal" speed is a weighted average of mean *expected* value for printing applications which use single line spacing (no skipping). These printing speeds are provided only as a guide to performance. Actual throughput rates are a function of character set and vertical spacing or skipping.

The nominal speed is dependent upon the frequency with which the various subsets in a preferred character set are printed. For example, the PCS-AN arrangement consists of 48 different graphics arranged in a sequence so that some of the characters occur more frequently than others.

48 graphics—3-level preferred set

Characters of primary preference appearing 8 times
 Characters of secondary preference appearing 4 times
 Characters of least importance appearing twice

PCS-AN graphics

0-9	.	,	-	*
A-Z	□	\$	/	+
%	#	@	&	

3203-5 Printer (cont'd)

The speeds at which graphics in each of three levels of performance are printed are included in the table.

Arrangement	Character Set	Nominal Printing Speed
		—Lines Per Minute
ALA	162 graphics, 78 preferred	585/315*
AN	48 "A" graphics	1215
HN	48 "H" graphics	1215
OAA (Style A Alphanumeric)	5 "A" graphics + 43 OCR-A	1215
ODA (Style A Numeric)	38 "A" graphics + OCR-A numeric	1215
ONA (Style A Numeric)	35 "A" graphics + OCR-A numeric + 3 special characters	1215
OAB (Style B Alphanumeric)	48 (representative of OCR-B graphics)	1215
GN (ASCII)	2-level set, 63 graphics	1020/585
PCS-AN (Preferred Character Set)	3-level set, 48 "A" graphics	1560/1020/585
PCS-HN (Preferred Character Set)	3-level set, 48 "H" graphics	1560/1020/585
PN (PL/I)	60 graphics	1020
QNC (PL/I—Commercially Preferred)	60 graphics, 45 preferred	1195/315
QN (PL/I—Scientifically Preferred)	60 graphics, 45 preferred	1195/315
RN (FORTRAN/COBOL Commercial)	52 graphics, 47 preferred	1195/315
SN (Text Printing—Commercial)	84 graphics, 78 preferred	815/315
TN (Text Printing—Scientific)	120 graphics	585
YN (High Speed Alphanumeric)	42 graphics, 39 preferred	1355/585

* When printing diacritical marks over or under alphabetic characters, an additional print cycle is required, resulting in reduced throughput.

For train layouts and other information regarding these arrangements, see pages TC 41 and 42.

The print images supplied for 1416 trains on other printers and other systems are often nonstandard, resulting in conflicts in EBCDIC code points assigned. For System/38, the train images (except ALA) will conform to the IBM standards and also be compatible with the console, 5252 work stations, and 5211/3262 printers.

Some of the ALA train EBCDIC codes may not be compatible with other output devices. These codes are:

EBCDIC CODE	ALA GRAPHIC
BF	Superscript Minus
9A	Double Dagger
AO	Macron
AB	Beta
AC	Gamma
BC	Subscript Open Paren
CC	Subscript Close Paren
CE	AYN

Note: All 9xxx specify items are no charge only if plant installed at time of original order. For field installation of specify items, see "substitute characters—field installation on page TC 21 for ordering and charges."

Specify:

- (1) For 1416—one print train Feature # for each 1416 ordered. When OCR ribbons are used for either OCR printing or other applications, specify #9488 on the 3203 (also field installable).
- (2) If desired, #9140 for enlarged dash (Character No. 732464) in lieu of standard dash for printing on documents to be read by a 3881 Optical Mark Reader. Available as substitution in Arrangements AN2, HN2, AN3 and HN3 only.
- (3) If desired, #9549 for slashed zero in lieu of standard zero in any arrangement except OAA, ODA, ONA, OAB, SN5 and TN5.
- (4) If desired, #9676 for round alphabetic "O" in lieu of standard squared "O" in any arrangement except OAA, ODA, ONA, OAB, SN5 and TN5.
- (5) If desired, #9722 for ! (exclamation point) in lieu of | (logical OR) in GN arrangement.
- (6) If desired, #9723 for ^ (circumflex) in lieu of ~ (logical NOT) in GN arrangement.
- (7) If desired, #9728 for - (timing mark dash) in lieu of # in OAA arrangement for printing timing marks on documents for the 3886 Optical Character Reader. For field installation, order character number 2642392 in train slug 2642393.

3203-5 Printer (cont'd)

- (8) If desired, #9729 for - (timing mark dash) in lieu of > in OAB arrangement for printing timing marks on documents for the 3886 Optical Character Reader. For field installation, order character number 2642392 in train slug 1798437.
- (9) If desired, #9690 for Non Standard Type Arrangement. See "Type Slug Substitutions" paragraph below.
- (10) If desired, #9719 for ' (apostrophe) in lieu of π (lozenge) in AN arrangements to provide compatibility with FC #9490 on the 3776.
- (11) If desired, #9650 for ` (grave accent) in lieu of % (percent) and ¢! \ in lieu of # & @ in the second and fourth arrays (only) in PN arrangements to provide compatibility with FC #9491 on the 3776.
- (12) If desired, #9651 for the following substitutions in the SN5 arrangement to provide compatibility with FC #9491 on the 3776:

```

{}' in lieu of @ ' ( in the first array
¢% _ in lieu of )-| in the first array
)#= in lieu of )-| in the second array
?!; in lieu of @ ' ( in the third array
><- in lieu of )-| in the third array
' \ ~ in lieu of ? ! ; in the third array
! ' | in lieu of ¢% π in the third array
    
```

Limitations:

Alphabetic and numeric characters from arrangements SN5 and TN5 cannot be substituted in any other arrangements, nor can characters from other arrangement be substituted in SN5 and TN5.

Because of greater type face density of the SN5 and TN5 arrangements: (1) Ribbon life may be reduced when printing on continuous forms; (2) The number of normal print quality copies is limited to the original and first copy with the customer using additional copies at his own discretion.

The TN arrangement is limited to use at 6 lines per inch spacing due to the overlap otherwise created by the exponent characters.

The ALA arrangement has the following limitations: (1) Ribbon life may be reduced when printing on continuous forms because of greater type face density. (2) For optimum print quality, single part paper is recommended; (3) 6 lines per inch vertical spacing is recommended when under or over-printing (diacritical marks, etc.); (4) All special applications such as spirit, photo-offset, multilith, diazo, heat transfer or similar process should be tested to assure satisfactory results.

Notes: All standard chains contain some ASCII characters. The GN arrangement provides a 63-character set consistent with the American Standard Code for Information Interchange (ANSI X3.4-1968).

It is important to select the arrangement that gives the highest print speed for the customer's applications. As a guide, the arrangement with the smallest character set should be selected. For example, the AN and HN 48-character sets have a nominal printing speed of 1215 lines per minute on the 3203-5, while the PN 60-character set runs at 1020 lines per minute (nominal speed).

FC #9690 (Nonstandard Type Arrangement) will be specified for: (1) Rearrangement of standard type slugs; (2) Rearrangement of standard characters in one or more slugs; (3) Substitution of other available characters in slugs; (4) New design characters.

Arrangement RN is designed for FORTRAN/COBOL use. Any HN, PSC-HN, PN, QNC, QN and TN arrangement also has this capability.

Type Slug

Substitutions:

Standard type slugs can be substituted for others in announced arrangements without charge. These slugs are furnished at no charge when properly ordered and plant installed on a chain or in a train. See "Substitute Characters" on page TC 20. For field installation, see "Substitute Characters—Field Installation" on page TC 21 for ordering and charges. Also review "Limitations" above. The frequency of occurrence on the chain/train determines the quantity of identical slugs which must be ordered. See *IBM 1403 Printer Component Description Manual* (GA24-3073) for details of designing a custom train.

**SYSTEM/360, SYSTEM/370 and 4300 PROCESSORS --
3216 INTERCHANGEABLE TRAIN CARTRIDGE OF
3211 PRINTER**

PRINT TRAINS: The 3216 Interchangeable Train Cartridge consists of 108 carrier assemblies. The assemblies (containing 4 elements each, with one character per element) are placed end to end to form a contiguous train of 432 characters.

CHARACTERISTICS: The characteristics of the 3216 train construction, combined with the standard Universal Character Set buffer, allow complete flexibility in the selection of the character arrays. Each carrier assembly is made up of 4 physically identical and interchangeable type elements, except for the unique alphabetic, numeric or special character which an element will print. The ability to interchange elements affords the capability to customize the user's train into assemblies which will optimize his work. For details, see *3211/3811 Component Description*, GA24-3543. It includes a formula for calculating anticipated throughput with special train cartridges.

PRINT TRAIN ARRANGEMENTS: Trains are assigned alphabetic and numeric designations to indicate the type size, style and arrangement. The type style is implied by the leading character and the numeric suffix denotes size and base line reference, with 1 = .094" OCR-A font type

size, 2 = .095" type size, 3 = .079" type size, and 5 = Text Type Style. Type sizes (the suffix) should not be intermixed. Based on this coding, print trains are assigned a Feature Number as indicated below.

System	Printer	Standard Type Style		Alternate Type Style		Text Type Style	
		.095"	Feature	.079"	Feature		Feature
S/360 S/370 4300	3216 (3211)	A11-2 H11-2 G11-2 P11-2	#9411 #9414 #9417 #9420	A11-3 H11-3 G11-3 P11-3	#9511 #9514 #9517 #9520	T11-5	#9530

System	Printer	OCR-A Font Type Style		OCR-B Font Type Style	
		.094"	Feature	.094"	Feature
S/360 S/370 4300	3216 (3211)	AOA-1 AOD-1 AON-1	#9608 #9611 #9612	BOA-5 BON-2	#9621 #9622

The characters appearing in the following set diagrams are for identification only. For more accurate character shapes, see the pages at the end of this section.

A11 48 graphics - Standard Commercial-- Arrangement consists of 9 identical arrays of 12 assemblies. Only the first array is illustrated.

< . + I	H G F E	D C B A	* \$ - R	Q P O N	M L K J	% , & Z	Y X W V	U T S /	@ # 0 9	8 7 6 5	4 3 2 1
---------	---------	---------	----------	---------	---------	---------	---------	---------	---------	---------	---------

AOA 48 graphics -- Commercial set modified with OCR-A font digits, alphabets and 7 OCR specials -- Arrangement consists of 9 identical arrays of 12 assemblies. Only the first array is illustrated. The < + % # @ remain standard .095" type style.

< . + I	H G F E	D C B A	* \$ - R	Q P O N	M L K J	% , & Z	Y X W V	U T S /	@ # 0 9	8 7 6 5	4 3 2 1
---------	---------	---------	----------	---------	---------	---------	---------	---------	---------	---------	---------

AOD 48 graphics - Standard Commercial, with OCR digits -- Arrangement consists of 9 identical arrays of 12 assemblies. Only the first array is illustrated.

< . + I	H G F E	D C B A	* \$ - R	Q P O N	M L K J	% , & Z	Y X W V	U T S /	@ # 0 9	8 7 6 5	4 3 2 1
---------	---------	---------	----------	---------	---------	---------	---------	---------	---------	---------	---------

AON 48 graphics - Standard Commercial, with OCR-A font digits and 3 specials (hook, fork and chair). Consists of 9 identical arrays of 12 assemblies. Only the first array is illustrated.

⌈ ⌋ |	H G F E	D C B A	* \$ - R	Q P O N	M L K J	⌈ , & Z	Y X W V	U T S /	@ # 0 9	8 7 6 5	4 3 2 1
-----	---------	---------	----------	---------	---------	---------	---------	---------	---------	---------	---------

BOA -5 48 graphics - Modified Commercial, alphameric with OCR-B font graphics except for equal (=) and apostrophe ('). Arrangement consists of 9 identical arrays of 12 assemblies. Only the first array is illustrated.

< . + I	H G F E	D C B A	* \$ - R	Q P O N	M L K J	> , & Z	Y X W V	U T S /	' = 0 9	8 7 6 5	4 3 2 1
---------	---------	---------	----------	---------	---------	---------	---------	---------	---------	---------	---------

BON-2 48 graphics - Modified Commercial, alphameric but only the 0 thru 9 and + > < are OCR-B font. Arrangement consists of 9 identical arrays of 12 assemblies. Only the first array is illustrated.

< . + I	H G F E	D C B A	* \$ - R	Q P O N	M L K J	> , & Z	Y X W V	U T S /	' = 0 9	8 7 6 5	4 3 2 1
---------	---------	---------	----------	---------	---------	---------	---------	---------	---------	---------	---------

H11 48 graphics - Standard Scientific -- Consists of 9 identical arrays of 12 assemblies. Only the first array is illustrated.

H G F E	.) + I	D C B A	* \$ - R	Q P O N	M L K J	(, & Z	Y X W V	8 7 6 5	' = 0 9	U T S /	4 3 2 1
---------	--------	---------	----------	---------	---------	---------	---------	---------	---------	---------	---------

G11 63 graphics - ASCII -- Consists of 4 arrays of 27 assemblies, total of 108 characters per array. Only the first array is illustrated.

' B D J	L - 5 K	* C (N	O ?) S	A @ = E	- # R >	V 9 2 \	Y T [G	6 8] X	F " H .	| U 0 7	/ P 3 W
M I Q ,	4 1 ' B	D J L -	5 K * C	(N O \$	) S A &	= E : #	R Z V 9	2 ; Y T	+ G 6 8	< X F %	H . _ U
0 7 / P	3 W M I	Q , 4 1									

P11 60 graphics - PL/I -- Consists of 4 arrays of 27 assemblies, total of 108 characters per array. Only the first array is illustrated.

B D J	L - 5 K	* C (N	A @ = E	O ?) S	- # R >	V 9 2 "	6 8 < X	Y T | G	F % H .	_ U 0 7	/ P 3 W
M I Q ,	4 1 ' B	D J L -	5 K * C	(N O \$	= E : #	) S A &	R Z V 9	+ G 6 8	2 ; Y T	< X F %	H . _ U
0 7 / P	3 W M I	Q , 4 1									

T11-5 120 graphics - Text Printing -- Consists of 3 arrays of 36 assemblies, total, of 144 characters per array. Only the first array is illustrated.

Q X g R	e b J G	3 H Y f	I T p m	| - u U	h r 9 c	1 , 4 B	d M S P	_ F 7 .	= N L t	s O n 8	E o i C
A a > <	6 Q c !	+ D *)	■ - 5 6	7 9 - ≠	π ° 2 1	± 0 8 R	e ≥ 5 "	3 3 ~ 4	I T ≤ @	(- + 1	2 r 9 ;
{ } 4 [	] % S j	z ? 7 .	& 7 r t	⌈ L : 8	E q ' .	A Z x #	6 0 v \$	k D * w	+) 5 (	K W - /	γ V 2 1

NOTE: Trains G11 and T11 have different appearing carrier assemblies. The reason for this is that a number of representative customer jobs were analyzed by computer. The analysis tabulated character usage and developed optimized trains for these character sets.

OCR NOTES: The IBM OCR characters in Arrangements AOA-1, AOD-1 and AON-1 are derived from, but are not identical to, the designs described in the USASCOCR standard of the American National Standards Institute. Consequently, it should not be represented that the IBM OCR-A Font is the same as the standard OCR-A Font. It is recommended that the "OCR Specials" be coded as follows:



TYPE CATALOG

3216 Interchangeable Train Cartridge of 3211 Printer (cont'd)

EBCDIC

Graphic	Card Code	Bit Code
⌈ hook	12-0-9-8-4	1100 1100
⌈ fork	12-0-9-8-6	1100 1110
⌈ chair	11-0-9-8-4	1110 1100

The IBM OCR characters in arrangements BON and BOA are derived from, but are not identical to, the designs described in the European Computer Manufacturers Association's Standard ECMA-11 for Alphanumeric Character Set OCR-B for Optical Recognition, 2nd Edition (October, 1971). Consequently, it should not be represented that the IBM OCR-B font is the same as the standard ECMA B-font.

NOTE: The Print Train Configurator, an IBM Aid Program (AIDS - SE - 010) can provide an optimized train layout and/or a comparison of specified trains. Input is derived from customer streams of printing, and output from the configurator provides desired train arrangement, type element usage, carrier assembly definition, as well as projected speeds for the optimized and/or selected train. The aid is to be used by IBM personnel only.

SPECIFY

For plant installation:

- One Feature Number for print arrangement desired ... see Print Train Arrangements above.
- If desired, #9549 for slashed zero in lieu of standard zero in any arrangement except AOA-1, AOD-1, AON-1, BOA-5, BON-2 and T11-5.
- If desired, #9676 for round alphabetic O in lieu of standard squared O in any arrangement (not applicable to AOA -1, BOA-5 and T11-5).
- If desired, #9677 for = in lieu of < in arrangement AOA-1, AOD-1, A11-2 or A11-3.
- If desired, #9140 for enlarged dash for printing on documents to be read by optical mark readers. Available as a substitution in arrangement A11-2, H11-2, P11-2 A11-3 and P11-3 only.
- If desired in arrangement G11-2 or G11-3, Exclamation Point #9722 may be substituted for Logical OR ... Circumflex (#9723) may be substituted for Logical NOT.
- If desired #9729 for 3886 timing mark dash (1793636) in lieu of > in BON-2 and BOA-5.
- If desired #9690 for rearrangement of the characters in a standard chain, substitution of other available characters, or new special characters ... see "Substitute Characters" below.

NEW PRINT TRAINS: Additional trains are available by ordering 3216 Interchangeable Train Cartridges. Trains are removable and interchangeable. See M3216 pages for prices, and additional information, ... see other options under "Specify" above.

SUBSTITUTE CHARACTERS: It may be desirable to specify an optimized train (see above note on train optimization) to achieve added performance. For available standard arrangements, see previous page and above. It is not feasible to make actual printing tests on nonstandard characters. Therefore printing and ribbon life from trains with nonstandard characters may be less satisfactory than results from standard train. It should also be noted that because of limitations of type face area (height, width, etc.,) characters of the customer's design are not subject to acceptance by the plant.

A substitute character is one which is ordered to displace a character in one of the standard arrangements. Standard characters may be rearranged, special characters may be selected from the type catalog on following pages or characters of the customer's design may be substituted, subject to the above limitations.

NOTE: Refer to 3211/3811 Component Description, GA24-3543, for card and bit codes recommended for special characters.

Character substitutions may be ordered for plant or field installation on a print train, subject to the following:

Artwork (#9950). A Service Charge will be made for the design of a new character. Characters illustrated in the catalog which follows are not subject to this charge. The plant will review requests for other characters to determine if a charge for Artwork is applicable.

Matrix (#9951). Each print train type element consists of a single alphabetic, numeric or special character. A Service Charge will be made for the matrix unless an identical matrix exists. This charge is in addition to the charge for Artwork.

Set-Up (#9952). In addition to charges for Artwork and Matrix (if applicable), a Service Charge applies each time a Set-Up is required to fabricate special type elements. This charge is the same regardless of the quantity of identical new elements made at any one time. On reorders of identical type elements, the Set-Up charge again applies.

Service Charges for Artwork, Matrix and Set-Up should be authorized on all orders for nonstandard characters. The charges need not be specified when elements from the illustrated catalog(see following

pages) are ordered. The plant will review all other orders to determine what charges (if any) are applicable.

3216	Feature	Service Charge
Artwork, per character	#9950	\$135
Matrix, per type element	#9951	160
Set-Up, per type element	#9952	40

Plant Installation (original assembly of train): ANY STANDARD TYPE ELEMENT (see following pages) may be specified in any of the 432 characters positions on the train at no extra charge. See "Specify" below for action required.

Multiple Machine Orders: (identical type specs): Service Charges for Artwork, Matrix and Set-Up are to be entered on the Type Specification Sheet and DP Order Guide for the first 3216 of a multiple machine order. A separate Order Guide must be prepared for the additional 3216s, indicating #9695 for Special Type - Multiple Machine Order (with no Service Charges applicable to Artwork, Matrix and Set-Up). A separate Type Specification Sheet must be prepared for each 3216 (with no Service Charges applicable.).

For the additional 3216s, "Supplemental Specs - Via Terminal Entry" are required for #9695 to state: "Charges on P. O. No. _____" (Show Plant Order Number assigned to first 3216.)

When Plant Order Numbers are assigned to the additional 3216s, "Supplemental Specs - Via Terminal Entry" are required on the first 3216 as follows:

- Line 1 -- P. O. No. of first additional 3216.
- Line 2 -- P. O. No. of second additional 3216.
- Line 3 -- P. O. No. of third additional 3216.
- etc.

This indicates that charges for Artwork, Matrix and Set-Up for the first 3216 also cover the additional 3216s.

This cross-reference of Plant Order Numbers is required ... otherwise, charges for Artwork, Matrix and Set-Up will be assessed against each 3216.

If an additional 3216 with identical type specs is ordered prior to shipment of the one which carries the Service Charges, specify #9695 on the order, reference the Plant Order Number which carries the Service Charges, and submit a Type Specification Sheet for the new 3216. (Procedure to be followed is described above.)

When an order for an additional 3216 is entered after shipment of the one which carried the Service Charges, the Set-Up charge will apply to fabrication of each different type element.

If a 3216 with #9695 specified at no charge is shipped before the one specifying the Service Charges, the plant will transfer the charges to the 3216 which is shipped first and substitute #9695 on the other one.

SPECIFY

- Feature Number of print arrangement which most closely resembles that desired by the customer.
- #9690 (Nonstandard Train Arrangement) must be specified for rearrangement of characters in a standard train, substitution of other available characters (following pages) or new special characters.
- Use appropriate 3216 Type Specification Sheet and follow directions contained on the form:

Train Arrangement	Order No.	Train Arrangement	Order No.
A11-2	Z120-2250*	A11-3	Z120-2249
H11-2	Z120-2246*	H11-3	Z120-2245
G11-2	Z120-2248*	G11-3	Z120-2247
P11-2	Z120-2244*	P11-3	Z120-2243
		T11-5	Z120-2242

* NOTE: In the example or a character substitution on these forms, the question mark (?) is shown as part number 2471454. This part number has been changed to 2645350 and will be corrected when the forms are reprinted.

For character substitution in AOA-1, AOD-1 or AON-1 train, use the A11-2 Type Specification Sheet and change headings as appropriate.

- A Type Specification Sheet must be prepared for each nonstandard train arrangement, except for the character substitutions under "Specify" on the previous page. Do not intermix type sizes or styles.
- Enter quantity of Feature Numbers for Artwork, Matrix and Set-Up based on number of different special characters being ordered.
- Enter order for 3216 via AAS, including the first, second and fourth Specifies above. When Plant Order Number has been assigned, post to Type Specification Sheet and forward to Dept. 781, SMD

3216 Interchangeable Train Cartridge of 3211 Printer (cont'd)

Endicott Plant. Once the Type Specification Sheet has been forwarded to the plant, if further changes are desired a new spec sheet must be completed including all characters desired ... those previously ordered and the new ones. If increased Service Charges apply, the total new charges should be entered on the spec sheet. AAS input is required to update the charges listed for the on-order 3216.

Field Installation: Prices (shown below) apply to field installation of standard type elements (or special elements to which charges for Artwork, Matrix and Set-Up are to be added as applicable).

Print trains are made up of number of identical arrays of carrier assemblies. When a modification is made to a carrier assembly in one array, corresponding carrier assemblies should be changed in all identical arrays. Field modification converting to OCR characters for use in OCR applications should not be made.

**Type Element Substitution
in a Print Train**

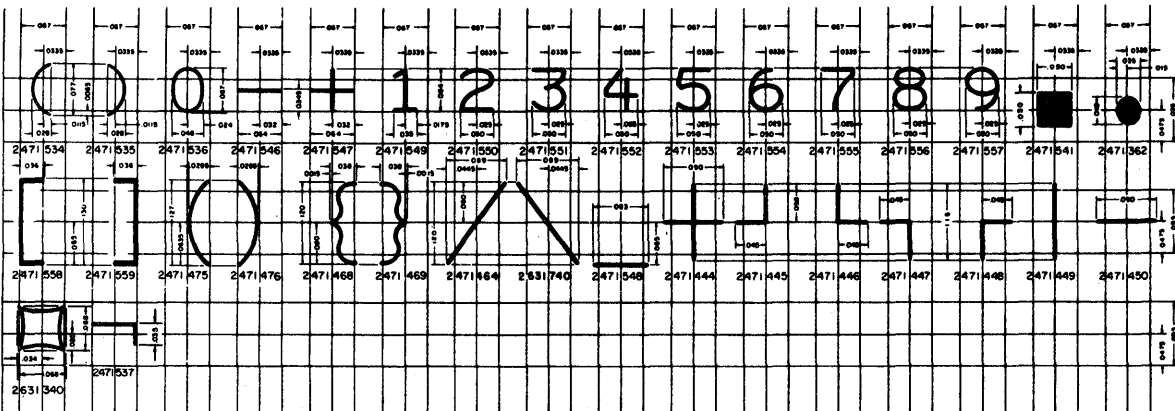
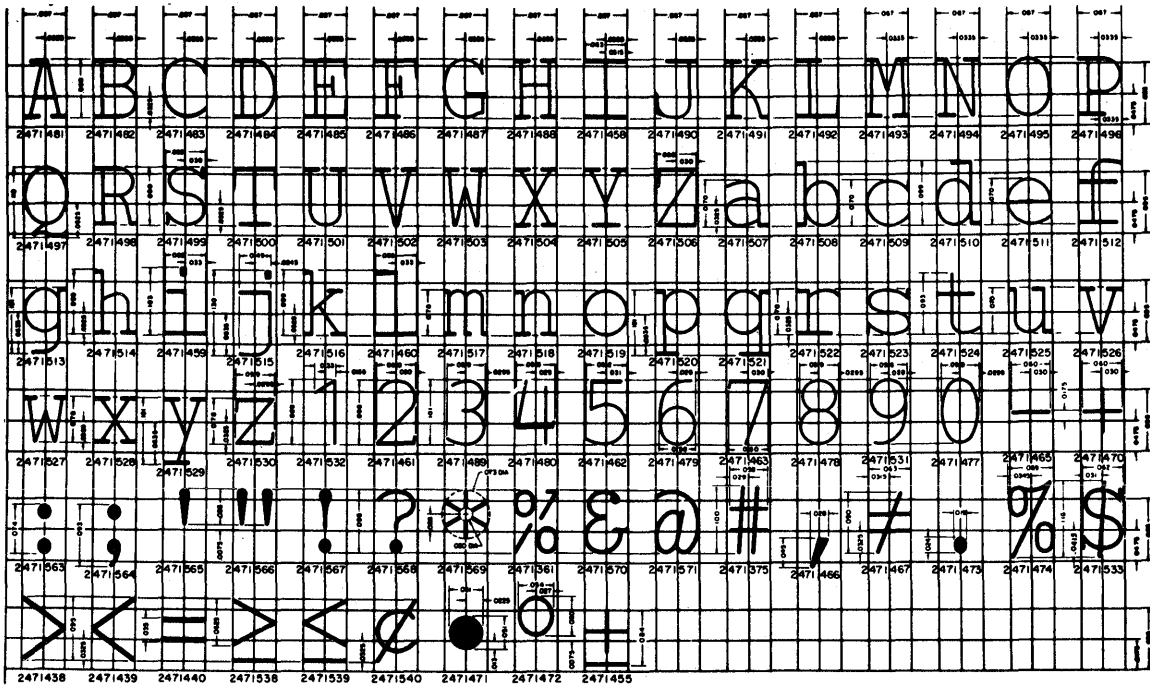
	Feature	Rental	Purchase
First type element , anywhere in Train	#8481	\$165	\$158
Each additional element (same 3216, at same time)	#8482	25	24

SPECIFY

- Feature Number of installed train arrangement which is to be modified.
- Applicable Feature Numbers and charges (for Artwork, Matrix and Set-Up).
- Submit MES with appropriate Type Specification Sheet attached. (Type Specification Sheet order numbers are listed above.)

3216 Interchangeable Train Cartridge of 3211 Printer (cont'd)

Text Printing Arrangement -- T11-5



NOTE: Illustration for 2471464 previously shown as 2631740 in error. Illustration for 2631740 previously shown as 2471363 in error.

3262 PRINTER

48-CHARACTER EBCDIC

POSITION NO.	CHAR.	POSITION NO.	CHAR.	POSITION NO.	CHAR.
1-49- 97-145-193-241	3	17-65-113-161-209-257	X	33-81-129-177-225-273	\$
2-50- 98-146-194-242	4	18-66-114-162-210-258	Y	34-82-130-178-226-274	*
3-51- 99-147-195-243	5	19-67-115-163-211-259	Z	35-83-131-179-227-275	A
4-52-100-148-196-244	6	20-68-116-164-212-260	&	36-84-132-180-228-276	B
5-53-101-149-197-245	7	21-69-117-165-213-261	,	37-85-133-181-229-277	C
6-54-102-150-198-246	8	22-70-118-166-214-262	%	38-86-134-182-230-278	D
7-55-103-151-199-247	9	23-71-119-167-215-263	J	39-87-135-183-231-279	E
8-56-104-152-200-248	0	24-72-120-168-216-264	K	40-88-136-184-232-280	F
9-57-105-153-201-249	#	25-73-121-169-217-265	L	41-89-137-185-233-281	G
10-58-106-154-202-250	@	26-74-122-170-218-266	M	42-90-138-186-234-282	H
11-59-107-155-203-251	/	27-75-123-171-219-267	N	43-91-139-187-235-283	I
12-60-108-156-204-252	S	28-76-124-172-220-268	O	44-92-140-188-236-284	+
13-61-109-157-205-253	T	29-77-125-173-221-269	P	45-93-141-189-237-285	.
14-62-110-158-206-254	U	30-78-126-174-222-270	Q	46-94-142-190-238-286	'
15-63-111-159-207-255	V	31-79-127-175-223-271	R	47-95-143-191-239-287	1
16-64-112-160-208-256	W	32-80-128-176-224-272	-	48-96-144-192-240-288	2

48-CHARACTER FORTRAN

POSITION NO	CHAR	POSITION NO	CHAR	POSITION NO	CHAR
1-49- 97-145-193-241	3	17-65-113-161-209-257	X	33-81-129-177-225-273	\$
2-50- 98-146-194-242	4	18-66-114-162-210-258	Y	34-82-130-178-226-274	*
3-51- 99-147-195-243	5	19-67-115-163-211-259	Z	35-83-131-179-227-275	A
4-52-100-148-196-244	6	20-68-116-164-212-260	&	36-84-132-180-228-276	B
5-53-101-149-197-245	7	21-69-117-165-213-261	,	37-85-133-181-229-277	C
6-54-102-150-198-246	8	22-70-118-166-214-262	(	38-86-134-182-230-278	D
7-55-103-151-199-247	9	23-71-119-167-215-263	J	39-87-135-183-231-279	E
8-56-104-152-200-248	0	24-72-120-168-216-264	K	40-88-136-184-232-280	F
9-57-105-153-201-249	=	25-73-121-169-217-265	L	41-89-137-185-233-281	G
10-58-106-154-202-250	)	26-74-122-170-218-266	M	42-90-138-186-234-282	H
11-59-107-155-203-251	/	27-75-123-171-219-267	N	43-91-139-187-235-283	I
12-60-108-156-204-252	S	28-76-124-172-220-268	O	44-92-140-188-236-284	+
13-61-109-157-205-253	T	29-77-125-173-221-269	P	45-93-141-189-237-285	.
14-62-110-158-206-254	U	30-78-126-174-222-270	Q	46-94-142-190-238-286	'
15-63-111-159-207-255	V	31-79-127-175-223-271	R	47-95-143-191-239-287	1
16-64-112-160-208-256	W	32-80-128-176-224-272	-	48-96-144-192-240-288	2



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TYPE CATALOG

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3262 Printer (cont'd)

48-CHARACTER SPANISH SPEAKING

POSITION NO	CHAR	POSITION NO	CHAR	POSITION NO	CHAR
1-49-97-145-193-241	3	17-65-113-161-209-257	X	33-81-129-177-225-273	\$
2-50-98-146-194-242	4	18-66-114-162-210-258	Y	34-82-130-178-226-274	*
3-51-99-147-195-243	5	19-67-115-163-211-259	Z	35-83-131-179-227-275	A
4-52-100-148-196-244	6	20-68-116-164-212-260	&	36-84-132-180-228-276	B
5-53-101-149-197-245	7	21-69-117-165-213-261	,	37-85-133-181-229-277	C
6-54-102-150-198-246	8	22-70-118-166-214-262	%	38-86-134-182-230-278	D
7-55-103-151-199-247	9	23-71-119-167-215-263	J	39-87-135-183-231-279	E
8-56-104-152-200-248	0	24-72-120-168-216-264	K	40-88-136-184-232-280	F
9-57-105-153-201-249	Ñ	25-73-121-169-217-265	L	41-89-137-185-233-281	G
10-58-106-154-202-250	@	26-74-122-170-218-266	M	42-90-138-186-234-282	H
11-59-107-155-203-251	/	27-75-123-171-219-267	N	43-91-139-187-235-283	I
12-60-108-156-204-252	S	28-76-124-172-220-268	O	44-92-140-188-236-284	+
13-61-109-157-205-253	T	29-77-125-173-221-269	P	45-93-141-189-237-285	.
14-62-110-158-206-254	U	30-78-126-174-222-270	Q	46-94-142-190-238-286	'
15-63-111-159-207-255	V	31-79-127-175-223-271	R	47-95-143-191-239-287	1
16-64-112-160-208-256	W	32-80-128-176-224-272	-	48-96-144-192-240-288	2

60-CHARACTER SYSTEM/38 SPECIAL

POS NO	CHAR	POS NO	CHAR	POS NO	CHAR	POS NO	CHAR	POS NO	CHAR	POS NO	CHAR	POS NO	CHAR	POS NO	CHAR
1	2	37	8	73	T	109	J	145	2	181	8	217	T	253	/
2	0	38	F	74	0	110	D	146	0	182	F	218	0	254	D
3	1	39	1	75	1	111	1	147	1	183	1	219	1	255	1
4	B	40	7	76	Y	112	L	148	B	184	7	220	Y	256	L
5	H	41	W	77	R	113	U	149	P	185	V	221	R	257	U
6	G	42	6	78	A	114	I	150	G	186	6	222	A	258	I
7	.	43	K	79	\$	115	S	151	.	187	X	223	.	259	S
8	P	44	5	80	/	116	&	152	P	188	5	224	J	260	%
9	Z	45	4	81	E	117	0	153	?	189	4	225	E	261	0
10	*	46	(	82	.	118	N	154	*	190	@	226	.	262	N
11	M	47	3	83	=	119	C	155	M	191	3	227	)	263	C
12	V	48	#	84	9	120	#	156	W	192	#	228	9	264	#
13	X	49	2	85	8	121	T	157	K	193	2	229	8	265	T
14	D	50	.	86	F	122	O	158	D	194	\$	230	F	266	O
15	'	51	J	87	'	123	Z	159	'	195	/	231	'	267	=
16	L	52	B	88	7	124	Y	160	L	196	B	232	7	268	Y
17	U	53	H	89	0	125	R	161	U	197	H	233	0	269	R
18	I	54	G	90	6	126	A	162	I	198	G	234	6	270	A
19	S	55	.	91	;	127	V	163	S	199	.	235	;	271	V
20	&	56	P	92	5	128	X	164	%	200	P	236	5	272	X
21	\$	57	Q	93	4	129	E	165	,	201	Q	237	4	273	E
22	N	58	*	94	@	130	.	166	N	202	*	238	Z	274	.
23	C	59	M	95	3	131	Q	167	C	203	M	239	3	275	Q
24	/	60	0	96	<	132	9	168	J	204	0	240	(	276	9
25	T	61	—	97	2	133	8	169	T	205	—	241	2	277	8
26	O	62	D	98	W	134	F	170	O	206	D	242	V	278	F
27	>	63	Z	99	K	135	)	171	=	207	:	243	X	279	[
28	Y	64	L	100	B	136	7	172	y	208	L	244	B	280	7
29	R	65	U	101	H	137	\$	173	R	209	U	245	H	281	,
30	A	66	I	102	G	138	6	174	A	210	I	246	G	282	6
31	0	67	S	103	.	139	/	175	0	211	S	247	.	283	J
32	+	68	%	104	P	140	5	176	+	212	&	248	P	284	5
33	E	69	V	105	+	141	4	177	E	213	W	249	+	285	4
34	.	70	N	106	*	142	(178	.	214	N	250	*	286	@
35)	71	C	107	M	143	3	179	Z	215	C	251	M	287	3
36	9	72	X	108	,	144		180	9	216	K	252	\$	288	



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TYPE CATALOG

Major Revision

3262 Printer (cont'd)

64-CHARACTER EBCDIC

POSITION NO.	CHAR.	POSITION NO.	CHAR.	POSITION NO.	CHAR.
1-73-145-217	0	25- 97-169-241	0	49-121-193-265	0
2-74-146-218	1	26- 98-170-242	1	50-122-194-266	1
3-75-147-219	2	27- 99-171-243	¢	51-123-195-267	/
4-76-148-220	3	28-100-172-244	<	52-124-196-268	S
5-77-149-221	.	29-101-173-245	(	53-125-197-269	T
6-78-150-222	7	30-102-174-246	|	54-126-198-270	U
7-79-151-223	4	31-103-175-247	!	55-127-199-271	V
8-80-152-224	5	32-104-176-248	)	56-128-200-272	W
9-81-153-225	6	33-105-177-249	;	57-129-201-273	X
10-82-154-226	8	34-106-178-250	┘	58-130-202-274	Y
11-83-155-227	9	35-107-179-251	\	59-131-203-275	Z
12-84-156-228	\$	36-108-180-252	—	60-132-204-276	&
13-85-157-229	*	37-109-181-253	2	61-133-205-277	,
14-86-158-230	A	38-110-182-254	3	62-134-206-278	%
15-87-159-231	B	39-111-183-255	.	63-135-207-279	J
16-88-160-232	C	40-112-184-256	7	64-136-208-280	K
17-89-161-233	D	41-113-185-257	>	65-137-209-281	L
18-90-162-234	E	42-114-186-258	?	66-138-210-282	M
19-91-163-235	F	43-115-187-259	:	67-139-211-283	N
20-92-164-236	G	44-116-188-260	=	68-140-212-284	O
21-93-165-237	H	45-117-189-261	"	69-141-213-285	P
22-94-166-238	I	46-118-190-262	\	70-142-214-286	Q
23-95-167-239	+	47-119-191-263	#	71-143-215-287	R
24-96-168-240	'	48-120-192-264	@	72-144-216-288	-



TYPE CATALOG

3262 Printer (cont'd)

64-CHARACTER ASCII

POSITION NO.	CHAR.	POSITION NO.	CHAR.	POSITION NO.	CHAR.
1-73-145-217	0	25- 97-169-241	0	49-121-193-265	0
2-74-146-218	1	26- 98-170-242	1	50-122-194-266	1
3-75-147-219	2	27- 99-171-243	[	51-123-195-267	/
4-76-148-220	3	28-100-172-244	<	52-124-196-268	S
5-77-149-221	.	29-101-173-245	(	53-125-197-269	T
6-78-150-222	7	30-102-174-246	!	54-126-198-270	U
7-79-151-223	4	31-103-175-247	]	55-127-199-271	V
8-80-152-224	5	32-104-176-248	)	56-128-200-272	W
9-81-153-225	6	33-105-177-249	;	57-129-201-273	X
10-82-154-226	8	34-106-178-250	^	58-130-202-274	Y
11-83-155-227	9	35-107-179-251	\	59-131-203-275	Z
12-84-156-228	\$	36-108-180-252	_	60-132-204-276	&
13-85-157-229	*	37-109-181-253	2	61-133-205-277	,
14-86-158-230	A	38-110-182-254	3	62-134-206-278	%
15-87-159-231	B	39-111-183-255	.	63-135-207-279	J
16-88-160-232	C	40-112-184-256	7	64-136-208-280	K
17-89-161-233	D	41-113-185-257	>	65-137-209-281	L
18-90-162-234	E	42-114-186-258	?	66-138-210-282	M
19-91-163-235	F	43-115-187-259	:	67-139-211-283	N
20-92-164-236	G	44-116-188-260	=	68-140-212-284	O
21-93-165-237	H	45-117-189-261	"	69-141-213-285	P
22-94-166-238	I	46-118-190-262	\	70-142-214-286	Q
23-95-167-239	+	47-119-191-263	#	71-143-215-287	R
24-96-168-240	'	48-120-192-264	@	72-144-216-288	-



TYPE CATALOG

3262 Printer (cont'd)

64-CHARACTER SPANISH SPEAKING

POSITION NO	CHAR	POSITION NO	CHAR	POSITION NO	CHAR
1-73-145-217	0	25- 97-169-241	0	49-121-193-265	0
2-74-146-218	1	26- 98-170-242	1	50-122-194-266	1
3-75-147-219	2	27- 99-171-243	[	51-123-195-267	/
4-76-148-220	3	28-100-172-244	<	52-124-196-268	S
5-77-149-221	.	29-101-173-245	(	53-125-197-269	T
6-78-150-222	7	30-102-174-246	|	54-126-198-270	U
7-79-151-223	4	31-103-175-247	]	55-127-199-271	V
8-80-152-224	5	32-104-176-248	)	56-128-200-272	W
9-81-153-225	6	33-105-177-249	;	57-129-201-273	X
10-82-154-226	8	34-106-178-250	¬	58-130-202-274	Y
11-83-155-227	9	35-107-179-251	\	59-131-203-275	Z
12-84-156-228	\$	36-108-180-252	—	60-132-204-276	&
13-85-157-229	*	37-109-181-253	2	61-133-205-277	,
14-86-158-230	A	38-110-182-254	3	62-134-206-278	%
15-87-159-231	B	39-111-183-255	.	63-135-207-279	J
16-88-160-232	C	40-112-184-256	7	64-136-208-280	K
17-89-161-233	D	41-113-185-257	>	65-137-209-281	L
18-90-162-234	E	42-114-186-258	?	66-138-210-282	M
19-91-163-235	F	43-115-187-259	:	67-139-211-283	N
20-92-164-236	G	44-116-188-260	=	68-140-212-284	O
21-93-165-237	H	45-117-189-261	"	69-141-213-285	P
22-94-166-238	I	46-118-190-262	\	70-142-214-286	Q
23-95-167-239	+	47-119-191-263	Ñ	71-143-215-287	R
24-96-168-240	'	48-120-192-264	@	72-144-216-288	-

3262 Printer (cont'd)

64-CHARACTER MULTINATIONAL

POSITION NO.	CHAR.	POSITION NO.	CHAR.	POSITION NO.	CHAR.
1-73-145-217	3	25- 97-169-241	L	49-121-193-265	à
2-74-146-218	4	26- 98-170-242	M	50-122-194-266	Ä
3-75-147-219	5	27- 99-171-243	N	51-123-195-267	Å
4-76-148-220	6	28-100-172-244	O	52-124-196-268	À
5-77-149-221	7	29-101-173-245	P	53-125-197-269	Š
6-78-150-222	8	30-102-174-246	Q	54-126-198-270	Ń
7-79-151-223	9	31-103-175-247	R	55-127-199-271	Ø
8-80-152-224	0	32-104-176-248	—	56-128-200-272	Æ
9-81-153-225	#	33-105-177-249	\$	57-129-201-273	Œ
10-82-154-226	@	34-106-178-250	*	58-130-202-274	£
11-83-155-227	/	35-107-179-251	A	59-131-203-275	¥
12-84-156-228	S	36-108-180-252	B	60-132-204-276	Pr
13-85-157-229	T	37-109-181-253	C	61-133-205-277	š
14-86-158-230	U	38-110-182-254	D	62-134-206-278	Ö
15-87-159-231	V	39-111-183-255	E	63-135-207-279	Õ
16-88-160-232	W	40-112-184-256	F	64-136-208-280	Ü
17-89-161-233	X	41-113-185-257	G	65-137-209-281	0
18-90-162-234	Y	42-114-186-258	H	66-138-210-282	1
19-91-163-235	Z	43-115-187-259	I	67-139-211-283	2
20-92-164-236	&	44-116-188-260	+	68-140-212-284	3
21-93-165-237	,	45-117-189-261	.	69-141-213-285	4
22-94-166-238	%	46-118-190-262	'	70-142-214-286	5
23-95-167-239	J	47-119-191-263	1	71-143-215-287	6
24-96-168-240	K	48-120-192-264	2	72-144-216-288	7

64-CHARACTER EBCDIC OPTIMIZED

POS NO	CHAR	POS NO	CHAR	POS NO	CHAR	POS NO	CHAR	POS NO	CHAR	POS NO	CHAR	POS NO	CHAR	POS NO	CHAR
1	1	37	B	73	J	109	V	145	+	181	'	217	M	253	.
2	0	38	5	74	9	110	#	146	0	182	5	218	9	254	C
3	T	39	N	75	Y	111	P	147	T	183	N	219	(	255	G
4	U	40	♀	76	┌	112	A	148	/	184	♀	220	┌	256	A
5	O	41	H	77	S	113	W	149	O	185	*	221	S	257	1
6	.	42	3	78	7	114	I	150	\$	186	3	222	7	258	I
7	L	43	-	79	F	115	6	151	L	187	K	223	D	259	6
8	=	44	M	80	Q	116	%	152	B	188	J	224	V	260	%
9	R	45	2	81	C	117	0	153	R	189	2	225	1	261	0
10	,	46	X	82	G	118	X	154	,	190	Y	226	P	262	/
11	8	47	.	83	4	119	U	155	8	191	X	227	4	263	X
12	*	48	;	84	'	120	E	156	H	192	;	228	W	264	E
13	K	49	+	85	>	121	@	157	\	193	1	229	>	265	\$
14	\	50	D	86	5	122	9	158	-	194	F	230	5	266	9
15	J	51	T	87	N	123	(	159	M	195	T	231	N	267	B
16	A	52	V	88	.	124	?	160	A	196	C	232	&	268	?
17	Y	53	O	89	0	125	S	161	1	197	O	233	0	269	S
18	I	54	P	90	3	126	7	162	I	198	G	234	3	270	7
19	6	55	L	91	/	127	*	163	6	199	L	235	U	271	H
20	:	56	W	92	\$	128	K	164	:	200	=	236	@	272	Q
21	Z	57	R	93	2	129	1	165	D	201	R	237	2	273	.
22	F	58	,	94	B	130	.	166	V	202	,	238	Z	274	M
23	C	59	8	95	<	131	4	167	Z	203	8	239	<	275	4
24	E	60	0	96	Z	132	Y	168	E	204	O	240	+	276	'
25	G	61	&	97	1	133	J	169	P	205	/	241	#	277	@
26	9	62	U	98	H	134	5	170	9	206	|	242	*	278	5
27	(	63	!	99	T	135	N	171	.	207	\$	243	T	279	N
28	#	64	A	100	.	136	&	172	W	208	A	244	K	280	D
29	S	65	1	101	O	137	F	173	S	209	B	245	O	281	V
30	7	66	I	102	M	138	3	174	7	210	I	246	J	282	3
31	0	67	6	103	L	139	C	175	0	211	6	247	L	283)
32	/	68	)	104	=	140	G	176	#	212	.	248	Y	284	P
33	1	69	@	105	R	141	2	177	U	213	H	249	R	285	2
34	\$	70	*	106	,	142	)	178	Q	214	)	250	,	286	W
35	4	71	K	107	8	143	—	179	4	215	-	251	8	287	—
36	!	72	E	108	D	144	"	180	!	216	E	252	F	288	"



3262 Printer (cont'd)

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TYPE CATALOG

TC 3262.8
Jul 83
Major Revision

64-CHARACTER ASCII OPTIMIZED

POS NO	CHAR	POS NO	CHAR	POS NO	CHAR	POS NO	CHAR	POS NO	CHAR	POS NO	CHAR	POS NO	CHAR	POS NO	CHAR
1	1	37	B	73	J	109	V	145	+	181	'	217	M	253	.
2	0	38	5	74	9	110	#	146	0	182	5	218	9	254	C
3	T	39	N	75	Y	111	P	147	T	183	N	219	(	255	G
4	U	40	[	76	^	112	A	148	/	184	[	220	^	256	A
5	O	41	H	77	S	113	W	149	O	185	*	221	S	257	1
6	.	42	3	78	7	114	I	150	\$	186	3	222	7	258	I
7	L	43	-	79	F	115	6	151	L	187	K	223	D	259	6
8	=	44	M	80	Q	116	%	152	B	188	J	224	V	260	%
9	R	45	2	81	C	117	0	153	R	189	2	225	1	261	0
10	,	46	X	82	G	118	X	154	,	190	Y	226	P	262	/
11	8	47	.	83	4	119	U	155	8	191	X	227	4	263	X
12	*	48	;	84	'	120	E	156	H	192	;	228	W	264	E
13	K	49	+	85	>	121	@	157	\	193	1	229	>	265	\$
14	\	50	D	86	5	122	9	158	-	194	F	230	5	266	9
15	J	51	T	87	N	123	(	159	M	195	T	231	N	267	B
16	A	52	V	88	.	124	?	160	A	196	C	232	&	268	?
17	Y	53	O	89	0	125	S	161	1	197	O	233	0	269	S
18	I	54	P	90	3	126	7	162	I	198	G	234	3	270	7
19	6	55	L	91	/	127	*	163	6	199	L	235	U	271	H
20	:	56	W	92	\$	128	K	164	:	200	=	236	@	272	Q
21	Z	57	R	93	2	129	1	165	D	201	R	237	2	273	.
22	F	58	,	94	B	130	.	166	V	202	.	238	Z	274	M
23	C	59	8	95	<	131	4	167	Z	203	8	239	<	275	4
24	E	60	0	96	Z	132	Y	168	E	204	O	240	+	276	'
25	G	61	&	97	1	133	J	169	P	205	/	241	#	277	@
26	9	62	U	98	H	134	5	170	9	206	!	242	*	278	5
27	(	63	!	99	T	135	N	171	.	207	\$	243	T	279	N
28	#	64	A	100	-	136	&	172	W	208	A	244	K	280	D
29	S	65	1	101	O	137	F	173	S	209	B	245	O	281	V
30	7	66	I	102	M	138	3	174	7	210	I	246	J	282	3
31	0	67	6	103	L	139	C	175	0	211	6	247	L	283)
32	/	68	)	104	=	140	G	176	#	212	.	248	Y	284	P
33	1	69	@	105	R	141	2	177	U	213	H	249	R	285	2
34	\$	70	*	106	,	142)	178	Q	214)	250	.	286	W
35	4	71	K	107	8	143	—	179	4	215	-	251	8	287	—
36]	72	E	108	D	144	"	180]	216	E	252	F	288	"



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TYPE CATALOG

TC 3262.9
Jul 83
Major Revision

64-CHARACTER SPANISH SPEAKING OPTIMIZED

POS NO	CHAR	POS NO	CHAR	POS NO	CHAR	POS NO	CHAR	POS NO	CHAR	POS NO	CHAR	POS NO	CHAR	POS NO	CHAR
1	1	37	B	73	J	109	V	145	+	181	'	217	M	253	.
2	0	38	5	74	9	110	Ñ	146	0	182	5	218	9	254	C
3	T	39	N	75	Y	111	P	147	T	183	N	219	(	255	G
4	U	40	[	76	—	112	A	148	/	184	[	220	—	256	A
5	O	41	H	77	S	113	W	149	O	185	*	221	S	257	1
6	.	42	3	78	7	114	I	150	\$	186	3	222	7	258	I
7	L	43	-	79	F	115	6	151	L	187	K	223	D	259	6
8	=	44	M	80	Q	116	%	152	B	188	J	224	V	260	%
9	R	45	2	81	C	117	0	153	R	189	2	225	1	261	0
10	,	46	X	82	G	118	X	154	,	190	Y	226	P	262	/
11	8	47	.	83	4	119	U	155	8	191	X	227	4	263	X
12	*	48	;	84	'	120	E	156	H	192	;	228	W	264	E
13	K	49	+	85	>	121	@	157	\	193	1	229	>	265	\$
14	\	50	D	86	5	122	9	158	-	194	F	230	5	266	9
15	J	51	T	87	N	123	(	159	M	195	T	231	N	267	B
16	A	52	V	88	.	124	?	160	A	196	C	232	&	268	?
17	Y	53	O	89	0	125	S	161	1	197	O	233	0	269	S
18	I	54	P	90	3	126	7	162	I	198	G	234	3	270	7
19	6	55	L	91	/	127	*	163	6	199	L	235	U	271	H
20	:	56	W	92	\$	128	K	164	:	200	=	236	@	272	Q
21	Z	57	R	93	2	129	1	165	D	201	R	237	2	273	.
22	F	58	,	94	B	130	.	166	V	202	,	238	Z	274	M
23	C	59	8	95	<	131	4	167	Z	203	8	239	<	275	4
24	E	60	0	96	Z	132	Y	168	E	204	O	240	+	276	'
25	G	61	&	97	1	133	J	169	P	205	/	241	Ñ	277	@
26	9	62	U	98	H	134	5	170	9	206	|	242	*	278	5
27	(	63	|	99	T	135	N	171	.	207	\$	243	T	279	N
28	Ñ	64	A	100	-	136	&	172	W	208	A	244	K	280	D
29	S	65	1	101	O	137	F	173	S	209	B	245	O	281	V
30	7	66	I	102	M	138	3	174	7	210	I	246	J	282	3
31	0	67	6	103	L	139	C	175	0	211	6	247	L	283)
32	/	68	)	104	=	140	G	176	Ñ	212	.	248	Y	284	P
33	1	69	@	105	R	141	2	177	U	213	H	249	R	285	2
34	\$	70	*	106	,	142	)	178	Q	214	)	250	.	286	W
35	4	71	K	107	8	143	—	179	4	215	-	251	8	287	—
36]	72	E	108	D	144	"	180]	216	E	252	F	288	"

3262 Printer (cont'd)



TYPE CATALOG

Major Revision

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Jul 83

3262 Printer (cont'd)

96-CHARACTER EBCDIC

POSITION NO.	CHAR.	POSITION NO.	CHAR.	POSITION NO.	CHAR.	POSITION NO.	CHAR.
1- 97-193	(	29-125-221	k	57-153-249	#	85-181-277	C
2- 98-194	|	30-126-222	l	58-154-250	@	86-182-278	D
3- 99-195	!	31-127-223	m	59-155-251	/	87-183-279	E
4-100-196	)	32-128-224	n	60-156-252	S	88-184-280	F
5-101-197	;	33-129-225	o	61-157-253	T	89-185-281	G
6-102-198	┌	34-130-226	p	62-158-254	U	90-186-282	H
7-103-199	\	35-131-227	q	63-159-255	V	91-187-283	I
8-104-200	—	36-132-228	r	64-160-256	W	92-188-284	+
9-105-201	>	37-133-229	⊗	65-161-257	X	93-189-285	.
10-106-202	?	38-134-230	▣	66-162-258	Y	94-190-286	'
11-107-203	:	39-135-231	s	67-163-259	Z	95-191-287	¢
12-108-204	=	40-136-232	t	68-164-260	&	96-192-288	<
13-109-205	"	41-137-233	u	69-165-261	,		
14-110-206	\	42-138-234	v	70-166-262	%		
15-111-207	;	43-139-235	w	71-167-263	J		
16-112-208	a	44-140-236	x	72-168-264	K		
17-113-209	b	45-141-237	y	73-169-265	L		
18-114-210	c	46-142-238	z	74-170-266	M		
19-115-211	d	47-143-239	1	75-171-267	N		
20-116-212	e	48-144-240	2	76-172-268	O		
21-117-213	f	49-145-241	3	77-173-269	P		
22-118-214	g	50-146-242	4	78-174-270	Q		
23-119-215	h	51-147-243	5	79-175-271	R		
24-120-216	i	52-148-244	6	80-176-272	-		
25-121-217	{	53-149-245	7	81-177-273	\$		
26-122-218	}	54-150-246	8	82-178-274	*		
27-123-219	~	55-151-247	9	83-179-275	A		
28-124-220	j	56-152-248	0	84-180-276	B		

On System/38 the ⊗ is an unprintable fill character.

3262 Printer (cont'd)

96-CHARACTER ASCII

POSITION NO.	CHAR.	POSITION NO.	CHAR.	POSITION NO.	CHAR.	POSITION NO.	CHAR.
1- 97-193	3	29-125-221	P	57-153-249	>	85-181-277	|
2- 98-194	4	30-126-222	Q	58-154-250	?	86-182-278	┌
3- 99-195	5	31-127-223	R	59-155-251	:	87-183-279	s
4-100-196	6	32-128-224	.	60-156-252	=	88-184-280	t
5-101-197	7	33-129-225	\$	61-157-253	"	89-185-281	u
6-102-198	8	34-130-226	*	62-158-254	\	90-186-282	v
7-103-199	9	35-131-227	A	63-159-255	!	91-187-283	w
8-104-200	0	36-132-228	B	64-160-256	a	92-188-284	x
9-105-201	#	37-133-229	C	65-161-257	b	93-189-285	y
10-106-202	@	38-134-230	D	66-162-258	c	94-190-286	z
11-107-203	/	39-135-231	E	67-163-259	d	95-191-287	1
12-108-204	S	40-136-232	F	68-164-260	e	96-192-288	2
13-109-205	T	41-137-233	G	69-165-261	f		
14-110-206	U	42-138-234	H	70-166-262	g		
15-111-207	V	43-139-235	I	71-167-263	h		
16-112-208	W	44-140-236	+	72-168-264	i		
17-113-209	X	45-141-237	.	73-169-265	}		
18-114-210	Y	46-142-238	'	74-170-266	}		
19-115-211	Z	47-143-239	[	75-171-267	~		
20-116-212	&	48-144-240	<	76-172-268	j		
21-117-213	,	49-145-241	(	77-173-269	k		
22-118-214	%	50-146-242	!	78-174-270	l		
23-119-215	J	51-147-243	]	79-175-271	m		
24-120-216	K	52-148-244	)	80-176-272	n		
25-121-217	L	53-149-245	;	81-177-273	o		
26-122-218	M	54-150-246	^	82-178-274	p		
27-123-219	N	55-151-247	\	83-179-275	q		
28-124-220	O	56-152-248	_	84-180-276	r		

3262 Printer (cont'd)

96-CHARACTER MULTINATIONAL

POSITION NO.	CHAR.	POSITION NO.	CHAR.	POSITION NO.	CHAR.
1- 97-193	\$	41-137-233	#	81-177-273	Ø
2- 98-194	*	42-138-234	@	82-178-274	Æ
3- 99-195	A	43-139-235	/	83-179-275	Œ
4-100-196	B	44-140-236	S	84-180-276	£
5-101-197	C	45-141-237	T	85-181-277	¥
6-102-198	D	46-142-238	U	86-182-278	P T
7-103-199	E	47-143-239	V	87-183-279	§
8-104-200	F	48-144-240	W	88-184-280	O
9-105-201	G	49-145-241	X	89-185-281	Ö
10-106-202	H	50-146-242	Y	90-186-282	Û
11-107-203	I	51-147-243	Z	91-187-283	Ó
12-108-204	+	52-148-244	&	92-188-284	Ô
13-109-205	.	53-149-245	,	93-189-285	Ù
14-110-206	'	54-150-246	%	94-190-286	Ü
15-111-207	[	55-151-247	J	95-191-287	Û
16-112-208	<	56-152-248	K	96-192-288	Ů
17-113-209	(	57-153-249	L		
18-114-210	!	58-154-250	M		
19-115-211	]	59-155-251	N		
20-116-212	)	60-156-252	O		
21-117-213	;	61-157-253	P		
22-118-214	^	62-158-254	Q		
23-119-215	\	63-159-255	R		
24-120-216	-	64-160-256	.		
25-121-217	>	65-161-257	ˆ		
26-122-218	?	66-162-258	˜		
27-123-219	:	67-163-259	À		
28-124-220	=	68-164-260	Á		
29-125-221	"	69-165-261	Â		
30-126-222	—	70-166-262	Ã		
31-127-223	1	71-167-263	Ç		
32-128-224	2	72-168-264	Ñ		
33-129-225	3	73-169-265	É		
34-130-226	4	74-170-266	Ê		
35-131-227	5	75-171-267	Ë		
36-132-228	6	76-172-268	Ë		
37-133-229	7	77-173-269	Ï		
38-134-230	8	78-174-270	Î		
39-135-231	9	79-175-271	Ï		
40-136-232	0	80-176-272	Ï		



TYPE CATALOG

3262 Printer (cont'd)

96-CHARACTER SPANISH SPEAKING

POS NO.	CHAR	POS NO.	CHAR	POS NO.	CHAR
1- 97-193	(	33-129-225	o	65-161-257	X
2- 98-194	l	34-130-226	p	66-162-258	Y
3- 99-195	]	35-131-227	q	67-163-259	Z
4-100-196	)	36-132-228	r	68-164-260	&
5-101-197	;	37-133-229	⊗	69-165-261	,
6-102-198	¬	38-134-230	⌘	70-166-262	%
7-103-199	\	39-135-231	s	71-167-263	J
8-104-200	-	40-136-232	t	72-168-264	K
9-105-201	>	41-137-233	u	73-169-265	L
10-106-202	?	42-138-234	v	74-170-266	M
11-107-203	:	43-139-235	w	75-171-267	N
12-108-204	=	44-140-236	x	76-172-268	O
13-109-205	"	45-141-237	y	77-173-269	P
14-110-206	`	46-142-238	z	78-174-270	Q
15-111-207	ñ	47-143-239	1	79-175-271	R
16-112-208	a	48-144-240	2	80-176-272	-
17-113-209	b	49-145-241	3	81-177-273	\$
18-114-210	c	50-146-242	4	82-178-274	*
19-115-211	d	51-147-243	5	83-179-275	A
20-116-212	e	52-148-244	6	84-180-276	B
21-117-213	f	53-149-245	7	85-181-277	C
22-118-214	g	54-150-246	8	86-182-278	D
23-119-215	h	55-151-247	9	87-183-279	E
24-120-216	i	56-152-248	0	88-184-280	F
25-121-217	{	57-153-249	Ñ	89-185-281	G
26-122-218	}	58-154-250	@	90-186-282	H
27-123-219	**	59-155-251	/	91-187-283	I
28-124-220	j	60-156-252	S	92-188-284	+
29-125-221	k	61-157-253	T	93-189-285	.
30-126-222	l	62-158-254	U	94-190-286	'
31-127-223	m	63-159-255	V	95-191-287	[
32-128-224	n	64-160-256	W	96-192-288	<

3262 Printer (cont'd)

188-CHARACTER MULTINATIONAL

POS NO.	CHAR	POS NO.	CHAR	POS NO.	CHAR	POS NO.	CHAR	POS NO.	CHAR	POS NO.	CHAR
1-193	0	33-225	R	65-257	;	97	0	129	Ê	161	Œ
2-194	1	34-226	-	66-258	a	98	1	130	Ë	162	¼
3-195	2	35-227	\$	67-259	b	99	2	131	Ï	163	½
4-196	3	36-228	*	68-260	c	100	3	132	Î	164	¾
5-197	4	37-229	A	69-261	d	101	â	133	Ï	165	¸
6-198	5	38-230	B	70-262	e	102	ä	134	Ï	166	¸
7-199	6	39-231	C	71-263	f	103	à	135	Ï	167	≠
8-200	7	40-232	D	72-264	g	104	á	136	Ø	168	::
9-201	8	41-233	E	73-265	h	105	ã	137	«	169	/
10-202	9	42-234	F	74-266	i	106	ä	138	»	170	=
11-203	#	43-235	G	75-267	{	107	å	139	†	171	—
12-204	@	44-236	H	76-268	}	108	ñ	140	∇	172	ø
13-205	/	45-237	I	77-269	~	109	ª	141	∇	173	ø
14-206	S	46-238	+	78-270	j	110	é	142	±	174	ø
15-207	T	47-239	.	79-271	k	111	ê	143	°	175	ø
16-208	U	48-240	'	80-272	l	112	ë	144	‡	176	ø
17-209	V	49-241	[	81-273	m	113	è	145	∅	177	∞
18-210	W	50-242	<	82-274	n	114	í	146	æ	178	∞
19-211	X	51-243	(	83-275	o	115	î	147	›	179	∞
20-212	Y	52-244	!	84-276	p	116	ï	148	Æ	180	∞
21-213	Z	53-245	]	85-277	q	117	ì	149	µ	181	∞
22-214	&	54-246	)	86-278	r	118	ÿ	150	ı	182	∞
23-215	,	55-247	;	87-279	®	119	ÿ	151	ı	183	∞
24-216	%	56-248	^	88-280	Œ	120	ÿ	152	∅	184	∞
25-217	J	57-249	\	89-281	s	121	ÿ	153	†	185	∞
26-218	K	58-250	_	90-282	t	122	ÿ	154	‡	186	∞
27-219	L	59-251	>	91-283	u	123	ÿ	155	‡	187	∞
28-220	M	60-252	?	92-284	v	124	ÿ	156	‡	188	∞
29-221	N	61-253	:	93-285	w	125	ÿ	157	‡	189	∞
30-222	O	62-254	=	94-286	x	126	ÿ	158	‡	190	∞
31-223	P	63-255	"	95-287	y	127	ÿ	159	‡	191	∞
32-224	Q	64-256	'	96-288	z	128	ÿ	160	‡	192	∞

**3741 DATA STATION (MODEL 1 AND 2)
 3741 PROGRAMMABLE WORK STATION
 (MODEL 3 AND 4)
 3742 DUAL DATA STATION**

The following keyboards are available for the above machines.

COUNTRY KEYBOARD LAYOUTS

United States (#2956)



**3780 DATA COMMUNICATIONS
TERMINAL**

Any one of the available character sets may be specified on the initial 3780 order.

Special characters with their corresponding card codes are shown for all character sets in the chart to the right.

Feature *s indicated below apply to plant installation only.

Character Set	Feature
39	*9087
52	9088
63 EBCDIC	9089
63 ASCII	9102

Note: If Transmission Code is ASCII (*9762), the ASCII character set is required.

For prices of character sets other than the one furnished at no charge, see "Character Sets" below.

Specify: [1] Feature * for standard character set.

[2] If desired *9676 for round alphabetic "O" in lieu of standard squared "O", for any character set except ASCII (*9102).

[3] If desired, *9140 for enlarged dash (Character No. 830704) in lieu of standard dash for printing on documents to be read by 1230, 1231, 1232 optical mark readers. Available as a substitution in a 52- or 63-character set.

[4] If desired, *9549 for slashed zero in lieu of standard zero in any character set.

[5] Type size -- *9733 for .095", or *9731 for .079".

Character Sets: Type bars are available with 39-, 52- and 63-character sets as illustrated below. The format of standard segments is illustrated and the quantity of identical segments in the various character sets and number of print positions are shown.

Note: 1) For example, using the EBCDIC chart, the 39-character set has four No. 54 segments for 120 positions or five for 144 positions.

2) Zero appears in the following locations on the different type bars:
EBCDIC - Segment 52, Position 4 and Segment 53, Position 3.
ASCII - Segment 1, Position 1.

3) Alphabetic "O" appears in the following locations on the different type bars:
EBCDIC - Segment 54, Position 12.
ASCII - Segment 5, Position 10.

Additional Character Sets:

Code	Char Set	Feature
EBCDIC 39	#1902	
EBCDIC 52	1903	
EBCDIC 63	1904	
ASCII 63	1897	

Specify: [1] Feature *(s) for additional character set(s) desired.

[2] *9495 for 120 print positions, or *9496 for 144, if applicable. Prerequisite: For *9496, Print Positions, Add'l (*5701).

[3] If desired, *9240 for enlarged dash (Character No. 830704) in lieu of standard dash for printing of documents to be read by 1230, 1231 or 1232 optical mark readers. Available as a substitution in 52- and 63-character sets.

[4] If desired, *9649 for slashed zero in lieu of standard zero in any character set.

[5] If desired, *9776 for round alphabetic "O" in lieu of standard squared "O". Available in all character sets except #1897.

[6] Type Size -- *9833 for .095" or *9831 for .079".

Substitute Characters: Any character illustrated elsewhere in this section for the 1403, 1443, or 2203, or any character previously designed for these units, may be substituted in any character position except those shown as blanks.

CARD CODE	EBCDIC			ASCII
	39	52	63	63
12-8-2			c	(
12-8-3			.	.
12-8-4			<	<
12-8-5			((
12-8-6			+	+
12-8-7			|	|
12				
11-8-2			!	!
11-8-3			\$	\$
11-8-4			*	*
11-8-5))
11-8-6			;	;
11-8-7			-	-
11			-	-
0-1			/	/
0-2			/	/
0-3			/	/
0-4			/	/
0-5			/	/
0-6			/	/
0-7			/	/
8-2			:	:
8-3			:	:
8-4			:	:
8-5			:	:
8-6			:	:
8-7			:	:

Note: A maximum of 63 graphics are available in EBCDIC or ASCII code set. In EBCDIC, the printable graphics include "Space" code ... in ASCII, 63 graphics can be printed, plus "Space" code.

EBCDIC -- Standard Segment Layouts

Segment Number	Character Position Number													No. of Segments -- determined by number of print positions and character set.					
	1	2	3	4	5	6	7	8	9	10	11	12	13	120	144	120	144	120	144
														39	52	63			
52	.	\$	,	0	A	J	1	B	K	S	2	C	L	5	5				
53	.	-	0	A	J	/	1	B	K	S	2	C	L			4	4	3	4
54	T	3	D	M	U	4	E	N	V	5	F	O	W	4	5	4	4	3	3
55	6	G	P	X	7	H	Q	Y	8	I	R	Z	9	4	4	3	4	3	3
56	.	\$	,	#	□	*	%	@	(	)	=	'	+			3	3		
57	c	l	:	.	\$	,	#	<	*	%	@	(	)					3	3
58	)	-	'	+	;	>	=	|	?	?	"							3	3

ASCII -- Standard Segment Layouts

Segment Number	Character Position Number													No. of Segments -- determined by number of print positions and character set.		
	1	2	3	4	5	6	7	8	9	10	11	12	13	120	144	
														63		
1	0	@	P	|	1	A	Q	"	2	B	R	#	3		3	4
2	C	S	\$	4	D	T	%	5	E	U	&	6	F		3	3
3	V	'	7	G	W	(	8	H	X	)	9	I	Y		3	3
4	*	:	J	Z	+	;	K	[	,	<	L	\	-		3	3
5	=	M	]	.	>	N	^	/	?	O	_				3	3

**5203 PRINTER—
SYSTEM/370 MODEL 115**

Either an AN or HN(48-character set) is standard on the 5203 model 3. Other arrangements require Universal Character Set Attachment (#8639) on the 5203 and Universal Character Set Control (#9848) on the 3115 Processing Unit. A chart, similar to the following, showing 80-column card codes and associated EBCDIC bit codes (for AN, HN, GN and PN of a 1403 Printer) is on page TC 71.1 ... it also applies to the 5203 model 3 in System/370 Model 115.

96-col. Card Code	EBCDIC Code	Arrangements and Number of Graphics			
		AN(48)	HN(48)	PN(60)	GN(63)
BA8 21	0100 1011	.	.	.	.
BA8 4	1100	#	#	#	#
BA8 4 1	1101	((((
BA8 4 2	1110	+	+	+	+
BA8 4 2 1	1111	|	|	|	|
A8 2	0101 0000	€	€	€	€
B 8 2 1	1011	•	•	•	•
B 8 4	1100	*	*	*	*
B 8 4 1	1101))))
B 8 4 2	1110	~	~	~	~
B 8 4 2 1	1111	^	^	^	^
B	0110 0000	-	-	-	-
A	1 0001	/	/	/	/
A8 2 1	1011	•	•	•	•
A8 4	1100	#	#	#	#
A8 4 1	1101	((((
A8 4 2	1110	+	+	+	+
A8 4 2 1	1111	|	|	|	|
B 2 1	0111 1011	•	•	•	•
B 4	1100	#	#	#	#
B 4 1	1101))))
B 2	1010	~	~	~	~
B 4 2	1110	~	~	~	~
B 4 2 1	1111	^	^	^	^
See Note	1110 0000				
B 8 2	0101 1010				
BA8 2	0100 1010				

Note: No 96-column card code is associated with this internal EBCDIC Code. See TC 71.1 - 71.8 for 80 column card codes, regarding these sets.

Printing Speeds: The table below illustrates printing speeds for available print arrangements. All speeds shown assume single line spacing (no skipping). For AN and HN arrangements, the printing speeds are based upon a 132 character print line and a random distribution of characters. To determine print speeds for the PN and GN arrangements (UCS Applications), a mathematical model was devised. Based upon assumptions concerning the number and frequency of characters in a line for a "typical" application, the model predicted the ranges in the table. These speed ranges are provided only as a guide to performance. Actual throughput rates depend upon character set, number and frequency of characters printed on each line and vertical spacing or skipping. If actual throughput rates are required, the job(s) should be benchmarked and timed.

Arrangement	Character Set	Printing Speeds
AN, HN	48 graphics	300 lpm
PN	60 graphics	197 to 213 lpm
GN	63 graphics	180 to 212 lpm

Print Trains: The Interchangeable Train Cartridge consists of multiple arrays of type slugs placed end to end with 3 characters per slug. Each cartridge has a total of 80 slugs (240 character positions). In the layouts illustrated below, the characters are depicted as they appear on the cartridge.

Standard Arrangements: Arrangements AN and HN consist of 5 identical arrays of 16 slugs each. Only the first array is illustrated. 48 graphics.

AN - 1st Array	123 456 789 0#% /ST UVW XYZ &,% JKL MNO PQR - \$@ ABC DEF GHI + . |
HN - 1st Array	123 456 789 0= ' /ST UVW XYZ &.(JKL MNO PQR - \$* ABC DEF GHI + .)

Character position numbers are assigned as follows for the 5 arrays: 1st array: 1-48, 2nd array: 49-96, 3rd array: 97-144, 4th array: 145-192, 5th array: 193-240.

Universal Character Set: Arrangement PN consists of 4 identical arrays of 20 slugs each. Only the first array is illustrated. 60 graphics.

PN - 1st Array	123 456 789 0XY /ST UVW | : _ " , = JKL MNO PQR - 2 (ABC DEF GHI + .) * \$ % & # @ < ; ~ ' ?
----------------	---

Character position numbers are assigned as follows for the 4 arrays: 1st array: 1-60, 2nd array: 61-120, 3rd array: 121-180, 4th array: 181-240.

Arrangement GN consists of 4 arrays of 20 slugs each. The first and third arrays are identical, as are the second and fourth. Only the first and second arrays are illustrated. 63 graphics.

GN - 1st Array	123 456 789 0XY /ST UVW | : _ " , = JKL MNO PQR - 2 (ABC DEF GHI + .) * \$ % & # @ < ; ~ ' ?
- 2nd Array	123 456 789 0XY /ST UVW | : _ " , = JKL MNO PQR - 2 (ABC DEF GHI + .) * \$ % \ | | < ; ~ ' ?

Character position numbers are assigned as follows for the 4 arrays: 1st array: 1-60, 2nd array: 61-120, 3rd array: 121-180, 4th array: 181-240.

Type Arrangements: Print arrangements are assigned an alphabetic designation (AN, HN, PN, GN). The type size is denoted by a numeric suffix, with 2 = .095" type size and 3 = .079" type size. Based on this coding, feature #s are assigned as indicated below for each available arrangement.

Standard Type Style		Alternate Type Style	
.095" Feature #		.079" Feature #	
AN2	9666	AN3	9776
HN2	9667	HN3	9777
PN2	9664	PN3	9665
GN2	9660	GN3	9661

Notes: (1) To avoid overlap when printing 8 lines/inch, specify .079" type size. (2) Arrangements PN and GN require Universal Character Set Attachment (#8639) on the 5203.

Specify: For Plant Installation

- One feature # for print arrangement desired ... see "Type Arrangements" above.
- If desired, #9549 for slashed zero in lieu of standard zero in any arrangement.
- If desired, #9676 for round alphabetic "O" in lieu of standard squared "O" in any arrangement.
- If desired, #9722 for Exclamation Point (!) in lieu of Logical OR (|) in the GN arrangement.
- If desired, #9723 for Circumflex (^) in lieu of Logical NOT (~) in the GN arrangement.
- If desired, #9140 for enlarged dash in lieu of standard dash for printing on documents to be read by IBM optical mark readers. Available as substitution in all arrangements.
- If desired, #9690 for Non Standard Type Arrangement. See "Type Slug Substitutions" paragraph on TC 110.

For Field Installation of Interchangeable Train Cartridge, Add'l (#4740)

- One feature # for print arrangement desired ... see "Type Arrangements" above.
- #9549, #9676, #9722, #9723 or #9140 may be specified on MES for substitution in the arrangement selected. For other character substitutions see "Specify" under "Plant Installation" of "Substitute Characters" below.

For modification of installed trains, see "Field Installation" under "Substitute Characters" on page TC 110.



TYPE CATALOG

5203 Printer—
System/370 Model 115 (cont'd)

It may be a customer advantage to have a character set other than standard. Or it may be necessary to provide a customer designed character. This section outlines the order for these requirements. It is not feasible to make actual printing tests on non-standard characters. Therefore, printing and ribbon life from trains with non-standard characters may be less satisfactory than results from standard trains. It should also be noted that because of limitations of type face area (height, width, etc.), characters of the customer's design are subject to acceptance by the plant.

A substitute character is one which is ordered to displace a character in one of the standard arrangements. Standard characters may be rearranged, special characters may be selected from the type catalog, or characters of the customer's design may be substituted, subject to the above limitations.

Note: A substitute character assumes the card and bit codes of the character it replaces in the system to which the printer is attached, unless the card and bit codes are changed.

Character substitutions may be ordered for plant or field installation. Standard characters (pgs TC 52 - 58) will not require artwork, but may require matrix and set-up. Special design characters may require all three.

Artwork (#9950): A Service Charge will be made for designing a new character. Any character illustrated on pages 52 to 58, or any character previously designed for the printers headed by this section (except for "Limitations" below) may be substituted in any position of any type slug without charge for artwork.

Limitations [1] The ABA E-13B type font cannot be used ... [2] Characters from the SNS and TNS arrangements cannot be substituted in other arrangements.

Matrix (#9951 or #9953): A chain or train type slug consists of two or three characters and requires one matrix (#9951 or #9953). A Service Charge will be made for the matrix unless identical matrices (same characters in same positions) exist at the plant. This charge is in addition to that for Artwork.

Set-Up (#9952 or #9954): In addition to charges for Artwork and Matrix (if applicable), a Service Charge applies each time a set-up is required to fabricate a special type slug. This charge is the same regardless of the quantity of identical slugs made at any one time. On re-orders of identical slugs, the set-up charge again applies.

Service Charges for Artwork, Matrix and Set-Up should be authorized on all orders for non-standard characters. The charge for Artwork need not be specified when character numbers from the illustrated catalog are ordered, indicating that artwork is available. The plant will review all orders to determine if Artwork and Matrix are required. The Service Charges (even though authorized) will not be billed unless applicable.

	1416, (3203),		
	1403 - 2,7	5203 - 3	
	Feature	Feature	Service Charge
Artwork, per character	#9950	#9950	\$ 152
Matrix, per slug	9951	9953	229
Set-Up for slug	9952	9954	77

Plant Installation (original assembly of chain or train): Any standard type slug (size, font) can be specified in any desired arrangement at no extra charge. Instructions for rearrangement of standard characters and slugs, and definition and location of special design slugs is found on the Type Specification Sheet, Z120-1089.

Multiple Machine Orders (identical type specs - plant installation): On a multiple machine order, the Service Charges for Artwork, Matrix and Set-up apply only to the first machine and are to be entered on AAS for that machine order only.

For additional machines with all specs identical (including type), enter quantity of machines and specify #9695 (Special Type - Multiple Machine Order) at no charge.

Once Plant Order numbers are assigned, enter the following under "Remarks":

On first machine order, indicate that Service Charges for special type also cover all other plant order numbers:

Example: SVC CHGS FOR SPEC TYPE COVER
E12341 E12342 E12343 12344
E12345

On each additional machine order, indicate plant order number (first machine) which carries Service Charges:

Example: SVC CHGS FOR SPEC TYPE ON
E12340

A separate Type Spec Sheet (Z120-1089) is required for each machine and must be sent to the Endicott Plant with sufficient lead time for the manufacturing schedule.

The spec sheet for the first machine must include the Service Charges as entered on that machine order plus a transmittal (memo) listing the Plant Order numbers of all additional machines involved. The spec sheet for each additional machine must indicate the Plant Order number of the machine which carries the Service Charges. (This may be written in the money fields of the Spec Sheet as "Service Charges on P.O. (insert number).")

Note: This cross reference of Plant Order numbers is mandatory on machine orders and Type Spec sheets.

If an additional machine with identical type specs is ordered prior to shipment of a machine which carries the Service Charges, specify #9695 on the AAS order, and indicate under "Remarks" the Plant Order number which carries the Service Charges. Send a Type Specification Sheet to the Endicott Plant indicating the Plant Order No. of the machine which carries the Service Charges. (When the order is entered after shipment of the machine carrying the Service Charges, the Set-up charge will apply.)

If a machine with #9695 specified at no charge is shipped before the machine specifying the Service Charges, the plant will transfer the charges to the machine which is shipped first and substitute "No Charge" on the other one.

Specify: [1] Feature # of print arrangement which most closely resembles that desired by the customer.

[2] #9690 (Non-standard Type Arrangement) must be specified for any of the following changes.

- 1) Rearrangement of standard type slugs.
- 2) Rearrangement of standard characters in one or more slugs.
- 3) Substitution of other available characters (pages TC 52 -58) in slugs.
- 4) New special characters.

[3] Feature #s and charges for Artwork, Matrix and Set-up if required. The Service Charges (even though authorized) will not be billed unless applicable.

[4] Type Specification Sheet (Z120-1089) must be submitted for each order for substitute characters. Once a type specification sheet has been submitted and additional characters are desired, a new type specification sheet is required. It must include all characters desired ... those previously ordered and the new ones.

Field Installation: The prices shown below apply to installation of standard type slugs (to which charges for Artwork, Matrix and Set-up are to be added if applicable).

Print chains or trains are made up of identical arrays of type slugs as described above. When a modification is made to a slug in one array, corresponding type slugs must be changed in all identical arrays.

Type Slug Substitutions (for a chain or train)

	Feature	Rental	Purchase	FIC
First type slug (1403 - 2,7)	#8371	\$18 SU	\$ 8	\$11
Ea, add'l slug (at same time)	8372	10 SU	8	2
First type slug (1416, 5203)	8373	29 SU	24	5
Ea, add'l slug (at same time)	8374	24 SU	24	NC

Specify: [1] Feature # of installed chain or train which is to be modified.

[2] Applicable Feature # and charges for Artwork, Matrix and Set-up.

[3] Feature #s and charges for type slug substitutions. Type slugs (#8371 thru #8374) may be ordered on MES with Type Specification Sheet, Z120-1089, attached for any of the following:

	Type Catalog Character Number	
	.095" Type Size	.079" Type Size
Round alphabetic "O" in lieu of standard squared "O"	251839	475504
Slashed zero in lieu of standard zero	474129	475539
Exclamation Point in lieu of Logical OR	749306	859820
Circumflex in lieu of Logical NOT	847243	847243

Note: For examples of charges for substitute characters, see examples on page TC 34 - 35.

* Corrects prices

**5203 PRINTER-
SYSTEM/3 MODELS 8, 10 AND 12**

System/3 Models 8, 10 and 12: Either HN or LC (48 character set) is standard on the 5203 model 1, 2, or 3. Arrangements PN (60 character set) and GN (63 character set) require Universal Character Set Attachment (#8639) on the 5203 and Universal Character Set Control (#8642) on the 5408/5410/5412 Processing Unit. See 'Type Arrangements' below for feature codes for each type arrangement and size. The chart below shows EBCDIC bit codes and System/3 card codes assigned to the special characters included in all arrangements.

Printing Speeds: The table below illustrates printing speeds for available print arrangements. All speeds shown assume single line spacing (no skipping). For the LC, AN and HN arrangements, the printing speeds are based upon a 132 character print line and a random distribution of characters. To determine print speeds for the PN and GN arrangements (UCS Applications), a mathematical model was devised. Based upon assumptions concerning the number and frequency of characters in a line for a "typical" application, the model predicted the ranges in the table. These speed ranges are provided only as a guide to performance. Actual throughput rates depend upon character set, number and frequency of characters printed on each line and vertical spacing or skipping. If actual throughput rates are required, the job(s) should be benchmarked and timed.

96-col. Card Code	EBCDIC Code	Arrangements and Number of Graphics				
		LC (48)	AN (48)	HN (48)	PN (60)	GN (63)
BA8 21	0100 1011	.	.	.	.	.
BA84	1100	.	.	.	.	.
BA84 1	1101	.	.	.	.	.
BA842	1110	.	.	.	.	.
BA8421	1111	.	.	.	.	.
AB 2	0101 0000	£	£	£	£	£
B 8 21	1011	£	£	£	£	£
B 84	1100	*	*	*	*	*
B 84 1	1101	*	*	*	*	*
B 842	1110	*	*	*	*	*
B 8421	1111	*	*	*	*	*
B	0110 0000	-	-	-	-	-
A 1	0001	/	/	/	/	/
AB 21	1011	.	.	.	.	.
AB4	1100	£	£	£	£	£
AB4 1	1101	£	£	£	£	£
AB42	1110	£	£	£	£	£
AB421	1111	£	£	£	£	£
8 21	0111 1011	#	#	#	#	#
34	1100	£	£	£	£	£
84 1	1101	*	*	*	*	*
8 2	1010	.	.	.	.	.
842	1110	*	*	*	*	*
8421	1111	*	*	*	*	*
See Note	1110 0000					
B 8 2	0101 1010	.	.	.	.	.
EA8 2	0100 1010	.	.	.	.	.

Note: No 96-column card code is associated with this internal EBCDIC Code. Consult Special Product Marketing regarding ASCII graphics on the 5424 and 5496.

Arrangement	Character Set	Printing Speeds		
		Model 1	Model 2	Model 3
LC, AN, HN	48 graphics	100 lpm	200 lpm	300 lpm
	PN	92 to 96 lpm	165 to 181 lpm	197 to 213 lpm
	GN	88 to 95 lpm	147 to 179 lpm	190 to 212 lpm

Type Arrangements: Print arrangements are assigned an alphabetic designation (LC, AN, HN, PN, GN). The type size is denoted by a numeric suffix, with 2 = .095" type size and 3 = .079" type size. Based on this coding, feature #s are assigned as indicated below for each available arrangement.

Chains (mdl 1 or 2 only):

Standard Type Style		Alternate Type Style	
.095" Feature #		.079" Feature #	
LC2	9639	LC3	9649
HN2	9627	HN3	9647
PN2	9631	PN3	9641
GN2	9721	GN3	9720

Trains (mdl 3 only):

Standard Type Style		Alternate Type Style	
.095" Feature #		.079" Feature #	
LC2	9662	LC3	9663
AN2*	9666	AN3*	9776
HN2	9667	HN3	9777
PN2	9664	PN3	9665
GN2	9660	GN3	9661

- Notes:**
- To avoid overlap when printing 8 lines/inch, specify .079" type size.
 - Arrangements PN and GN require Universal Character Set Attachment (#8639) on the 5203.
 - LC arrangements on previously installed machines may be modified to the HN arrangement. Submit an MES specifying "Change installed chain (train) Feature Number _____ to Number _____".

Prices (15 type slugs)

Chain... mdl 1 or 2
Train... mdl 3

*System/370 mdl 115 only.

Universal Character Set Feature: The System/3 Chain Image Buffer contains 120 positions. Character sets for use with this feature should contain 60 or 120 characters. If the character set contains less than 60 (or 120) different characters, it must be filled out to 60 (or 120) by repeating characters. For example, if only 56 different characters are desired, the character set must be filled out to 60 by repeating four of the 56 characters. This buffer limitation applies only to System/3.

Print Chains (mdl 1 or 2 only)

Specify: **For Plant Installation**

- One feature # for print arrangement desired ... see "Type Arrangements" above.
- If desired, #9549 for slashed zero in lieu of standard zero in any arrangement.
- If desired, #9676 for round alphabetic "O" in lieu of standard squared "O" in any arrangement.
- If desired, #9722 for Exclamation Point (!) in lieu of Logical OR (|) in the GN arrangement.
- If desired, #9723 for Circumflex (^) in lieu of Logical NOT (~) in the GN arrangement.
- If desired, #9140 for enlarged dash in lieu of standard dash for printing on documents to be read by optical mark readers. Available as substitution in all arrangements.
- If desired, #9690 for Non Standard Type Arrangement. See "Substitute Characters" paragraphs on TC #.

For Field Installation

- If a new or additional print chain is desired, see "New Print Chains" below. For field installation of #9549, #9676, #9722, #9723 or #9140 see "specify" under "Substitute Characters" below.

New

Print Chains: Additional, spare or replacement chains are available for interchangeable chain cartridges used on the 5203.

Any one arrangement, chain only:

Feature #

#5532

Specify:

- #5532.
- One feature # for print arrangement desired ... see "Type Arrangements" above.
- If desired, #9549 for slashed zero in lieu of standard zero in any arrangement.
- If desired, #9676 for round alphabetic "O" in lieu of standard squared "O" in any arrangement.
- If desired, #9722 for Exclamation Point (!) in lieu of Logical OR (|) in the GN arrangement.
- If desired, #9723 for Circumflex (^) in lieu of Logical NOT (~) in the GN arrangement.
- If desired, #9140 for enlarged dash in lieu of standard dash for printing on documents to be read by optical mark readers. Available as substitution in all arrangements.

Print Trains (mdl 3 only)

Specify: **For Plant Installation**

- One feature # for print arrangement desired ... see "Type Arrangements" above.
- If desired, #9549 for slashed zero in lieu of standard zero in any arrangement.
- If desired, #9676 for round alphabetic "O" in lieu of standard squared "O" in any arrangement.
- If desired, #9722 for Exclamation Point (!) in lieu of Logical OR (|) in the GN arrangement.
- If desired, #9723 for Circumflex (^) in lieu of Logical NOT (~) in the GN arrangement.
- If desired, #9140 for enlarged dash in lieu of standard dash for printing on documents to be read by optical mark readers. Available as substitution in all arrangements.
- If desired, #9690 for Non Standard Type Arrangement. See "Substitute Characters" paragraphs on TC #.

For Field Installation of Interchangeable Train Cartridge, Add'l (#4740)

- One feature # for print arrangement desired ... see "Type Arrangements" above.
- #9549, #9676, #9722, #9723 or #9140 may be specified on MES for substitution in the arrangement selected. For other character substitutions see "Specify" under "Plant Installation" of "Substitute Characters" below.

For modification of installed chains/trains, see "Field Installation" under "Substitute Characters" on page TC #.

**5203 Printer—
System/3 Models 8, 10 and 12 (cont'd)**

Print Chains: Print chains consist of multiple arrays of type slugs placed end to end. There are two characters per slug. Each chain has a total of 120 slugs (240 character positions). In the layouts illustrated below, the characters are depicted as they appear on the chain.

Standard Chains: Arrangements LC and HN consist of 5 identical arrays of 24 slugs each. Only the first array is illustrated. 48 graphics.

LC - 1st Array	12 34 56 78 90 #@ /S TU VW XY Z€ ,% JK LM NO PQ R- \$* AB CD EF GH I+ .'
HN - 1st Array	12 34 56 78 90 = ' /S TU VW XY Z€ , (JK LM NO PQ R- \$* AB CD EF GH I+ .)

Character position numbers are assigned as follows for the 5 arrays: 1st array: 1-48, 2nd array: 49-96, 3rd array: 97-144, 4th array: 145-192, 5th array: 193-240.

Universal Character Set Chain: Arrangement PN consists of 4 identical arrays of 30 slugs each. Only the first array is illustrated. 60 graphics.

PN - 1st Array	12 34 56 78 90 XY /S TU VW | : _ " , = JK LM NO PQ R- Z ((AB CD EF GH I+ .) %\$ *# &@ < ; - ' ? >
----------------	---

Character position numbers are assigned as follows for the 4 arrays: 1st array: 1-60, 2nd array: 61-120, 3rd array: 121-180, 4th array: 181-240.

Arrangement GN consists of 4 arrays of 30 slugs each. The first and third arrays are identical, as are the second and fourth. Only the first and second arrays are illustrated. 63 graphics.

GN - 1st Array	12 34 56 78 90 XY /S TU VW | : _ " , = JK LM NO PQ R- Z ((AB CD EF GH I+ .) %\$ *# &@ < ; - ' ? >
- 2nd Array	12 34 56 78 90 XY /S TU VW | : _ " , = JK LM NO PQ R- Z ((AB CD EF GH I+ .) %\$ * \ | | < ; - ' ? >

Print Trains: The Interchangeable Train Cartridge consists of multiple arrays of type slugs placed end to end with 3 characters per slug. Each cartridge has a total of 80 slugs (240 character positions). In the layouts illustrated below, the characters are depicted as they appear on the cartridge.

Standard Arrangements: Arrangements LC, AN and HN consist of 5 identical arrays of 16 slugs each. Only the first array is illustrated. 48 graphics.

LC - 1st Array	123 456 789 0#@ /ST UVW XYZ €,% JKL MNO PQR - \$* ABC DEF GHI + .'
AN - 1st Array	123 456 789 0#@ /ST UVW XYZ €,% JKL MNO PQR - \$* ABC DEF GHI + .II
HN - 1st Array	123 456 789 0= ' /ST UVW XYZ €, (JKL MNO PQR - \$* ABC DEF GHI + .)

Character position numbers are assigned as follows for the 5 arrays: 1st array: 1-48, 2nd array: 49-96, 3rd array: 97-144, 4th array: 145-192, 5th array: 193-240.

Universal Character Set: Arrangement PN consists of 4 identical arrays of 20 slugs each. Only the first array is illustrated. 60 graphics.

PN - 1st Array	123 456 789 0XY /ST UVW | : _ " , = JKLMNO PQR -Z ((ABC DEF GHI + .) %\$ * # & @ < ; - ' ? >
----------------	--

Character position numbers are assigned as follows for the 4 arrays: 1st array: 1-60, 2nd array: 61-120, 3rd array: 121-180, 4th array: 181-240.

Arrangement GN consists of 4 arrays of 20 slugs each. The first and third arrays are identical, as are the second and fourth. Only the first and second arrays are illustrated. 63 graphics.

GN - 1st Array	123 456 789 0XY /ST UVW | : _ " , = JKLMNO PQR -Z ((ABC DEF GHI + .) %\$ * # & @ < ; - ' ? >
- 2nd Array	123 456 789 0XY /ST UVW | : _ " , = JKLMNO PQR -Z ((ABC DEF GHI + .) %\$ * \ | | < ; - ' ? >

Character position numbers are assigned as follows for the 4 arrays: 1st array: 1-60, 2nd array: 61-120, 3rd array: 121-180, 4th array: 181-240.

Substitute Characters: For available standard arrangements, see above. It is not feasible to make actual printing tests on non-standard characters. Therefore, printing and ribbon life from chains or trains with non-standard characters may be less satisfactory than results from standard chains or trains. It should also be noted that because of limitations of type face area (height, width, etc.), characters of the customer's design are subject to acceptance by the plant.

A substitute character is one which is ordered to displace a character in one of the standard arrangements. Standard characters may be rearranged, special characters may be selected from the type catalog, or characters of the customer's design may be substituted, subject to the above limitations.

Note: A substitute character assumes the card and bit codes of the character it replaces in the system to which the printer is attached, unless the card and bit codes are changed.

Character substitutions may be ordered for plant or field installation on a print chain or train, subject to the following:

Artwork (#9950): A Service Charge will be made for designing a new character. Any character illustrated on pages 52 to 58, or any character previously designed for the 1403-2, 5, 7, 1416 or 5203 (except for "Limitations" below) may be substituted in any position of any type slug without charge for artwork.

Limitations: [1] The ABA E-13B type font cannot be used. . . [2] Characters from the SN5 and TN5 arrangements of the 1403 cannot be substituted in other arrangements.

Matrix (#9951 and #9953): Each print chain type slug consists of two characters and requires one matrix (#9951). Each print train type slug consists of three characters and requires one matrix (#9953). A Service Charge will be made for the matrix unless identical 2-character or 3-character matrices (same characters in same positions) exists at the plant. This charge is in addition to that for Artwork.

Set-Up (#9952 and #9954): In addition to charges for Artwork and Matrix (if applicable), a Service Charge applies each time a set-up is required to fabricate a special type slug. This charge is the same regardless of the quantity of identical slugs made at any one time. On re-orders of identical slugs, the set-up charge again applies.

Service Charges for Artwork, Matrix and Set-up should be authorized on all orders for non-standard characters. The charge for Artwork need not be specified when character numbers from the illustrated catalog are ordered, indicating that artwork is available. The plant will review all orders to determine if Artwork and Matrix are required. The Service Charges (even though authorized) will not be billed unless applicable.

Chain (for 5203 mdl 1 and 2)	Feature
Artwork, per character	#9950
Matrix, per slug (2 character)	9951
Set-up for 2 character slug	9952
Train (for 5203 mdl 3)	
Artwork, per character	#9950
Matrix, per slug (3 character)	9953
Set-up for 3 character slug	9954

FC #9690 (Non-standard Type Arrangement) will be specified for: 1) Rearrangement of standard type slugs; 2) Rearrangement of standard characters in one or more slugs; 3) Substitution of other available characters in slugs; 4) New design characters.

Plant Installation (original assembly of chain or train): Any standard type slug (size, font) can be specified in any desired arrangement at no extra charge. See above for standard slug configurations in each print arrangement. Instructions for rearrangement of standard characters and slugs, and definition and location of special design slugs is printed.

Multiple Machine Orders (identical type specs - plant installation): On a multiple machine order, the Service Charges for Artwork, Matrix and Set-up apply only to the first machine and are to be entered on AAS for that machine order only.

For additional machines with all specs identical (including type), enter quantity of machines and specify #9695 (Special Type - Multiple Machine Order) at no charge.

Once Plant Order numbers are assigned, enter the following under "Remarks":

On first machine order, indicate that Service Charges for special type also cover all other plant order numbers:

Example: SVC CHGS FOR SPEC TYPE COVER
E12341 E12342 E12343 E12344
E12345

On each additional machine order, indicate plant order number (first machine) which carries Service Charges:

Example: SVC CHGS FOR SPEC TYPE ON
E12340

**5203 Printer-
System/3 Models 8, 10 and 12 (cont'd)**

Multiple Machine Orders (cont'd)

A separate Type Spec Sheet (Z120-1089) is required for each machine and must be sent to the Endicott Plant with sufficient lead time for the manufacturing schedule.

The spec sheet for the first machine must include the Service Charges as entered on that machine order plus a transmittal (memo) listing the Plant Order numbers of all additional machines involved. The spec sheet for each additional machine must indicate the Plant Order number of the machine which carries the Service Charges. (This may be written in the money fields of the Spec Sheet as "Service Charges on P.O. (insert number)."

Note: This cross reference of Plant Order numbers is mandatory on machine orders and Type Spec Sheets.

If an additional machine with identical type specs is ordered prior to shipment of a machine which carries the Service Charges, specify #9695 on the AAS order, and indicate under "Remarks" the Plant Order number which carries the Service Charges. Send a Type Specification Sheet to the Endicott Plant indicating the Plant Order No. of the machine which carries the Service Charges. (When the order is entered after shipment of the machine carrying the Service Charges, the Set-up charge will apply.)

If a machine with #9695 specified at no charge is shipped before the machine specifying the Service Charges, the plant will transfer the charges to the machine which is shipped first and substitute "No Charge" on the other one.

- Specify: [1] Feature # of print arrangement which most closely resembles that desired by the customer.
- [2] #9690 (Non-standard Type Arrangement) must be specified for any of the following changes
 - 1) Rearrangement of standard type slugs
 - 2) Rearrangement of standard characters in one or more slugs.
 - 3) Substitution of other available characters.
 - 4) New special characters.
- [3] Feature #s and charges for Artwork, Matrix and Set-up, if required. The Service Charges (even though authorized) will not be billed unless applicable.
- [4] Type Specification Sheet (Z120-1089) must be submitted for each order for substitute characters. Once a type specification sheet has been submitted and additional characters are desired, a new type specification sheet is required. It must include all characters desired... those previously ordered and the new ones.

Field Installation: The prices shown below apply to installation of standard type slugs (to which charges for Artwork, Matrix and Set-up are to be added if applicable).

Print chains or trains are made up of identical arrays of type slugs as described above. When a modification is made to a slug in one array, corresponding type slugs must be changed in all identical arrays.

Type Slug Substitutions
(on any one chain or train)

<u>Chain</u> (5203 mdl 1 and 2)	<u>Feature</u>
First type slug	#8371
Ea, add'l slug (at same time)	8372
<u>Train</u> (5203 mdl 3)	
First type slug	8373
Ea, add'l slug (at same time)	8374

- Specify: [1] Feature # of installed chain or train which is to be modified.
- [2] Applicable Feature # and charges for Artwork, Matrix and Set-up.
- [3] Feature #s and charges for type slug substitutions. Type slugs (#8371, #8372, #8373 and #8374) may be ordered on MES with Type Specification Sheet Z120-1089, attached for any of the following:

	<u>Type Catalog Character Number</u>	
	<u>.095" Type Size</u>	<u>.079" Type Size</u>
Round alphabetic "O" in lieu of standard squared "O"	251839	475504
Slashed zero in lieu of standard zero	474129	475539
Exclamation Point in lieu of Logical OR	749306	859820
Circumflex in lieu of Logical NOT	847243	847243



**5210, 5217, 5218, 5219, 5228, 5229
PRINTERS**

Courier 10

The IBM Printwheel printer represents a major opportunity for the production of text and document distribution with a high level of print quality for using systems.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#\$\$%&*()_+[¼³":?.,¶±1234567890-=[]½²';/.,\$ (Word processing)
~!@#\$\$%&*()_+|{\":?.,>`1234567890--=}||';/.,< (Data processing)

Prestige Pica

The IBM Printwheel printer represents a major opportunity for the production of text and document distribution with a high level of print quality for using systems.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#\$\$%&*()_+[¼³":?.,¶±1234567890-=[]½²';/.,\$

Artisan 10

The IBM Printwheel printer represents a major opportunity for the production of text and document distribution with a high level of print quality for using systems.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#\$\$%&*()_+[¼³":?.,¶±1234567890-=[]½²';/.,\$

Rhetoric

THE IBM PRINTWHEEL PRINTER REPRESENTS A MAJOR OPPORTUNITY FOR THE PRODUCTION OF TEXT AND DOCUMENT DISTRIBUTION WITH A HIGH LEVEL OF PRINT QUALITY FOR USING SYSTEMS.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
ABCDEFGHIJKLMNOPQRSTUVWXYZ
°!@#\$\$%&*()_+[¼³":?.,¶±1234567890-=[]½²';/.,\$

Courier 12

The IBM Printwheel printer represents a major opportunity for the production of text and document distribution with a high level of print quality for using systems.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#\$\$%&*()_+[¼³":?.,¶±1234567890-=[]½²';/.,\$



5210, 5217, 5218, 5219, 5228, 5229 Printers
(cont'd)

Prestige Elite

The IBM Printwheel printer represents a major opportunity for the production of text and document distribution with a high level of print quality for using systems.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#%&*()_+[¼³":?.,¶±1234567890-]=]½²';/.,\$

Letter Gothic

The IBM Printwheel printer represents a major opportunity for the production of text and document distribution with a high level of print quality for using systems.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#%&*()_+[¼³":?.,¶±1234567890-]=]½²';/.,\$

Light Italic

The IBM Printwheel printer represents a major opportunity for the production of text and document distribution with a high level of print quality for using systems.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#%&*()_+[¼³":?.,¶±1234567890-]=]½²';/.,\$

Courier 15

The IBM Printwheel printer represents a major opportunity for the production of text and document distribution with a high level of print quality for using systems.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#%&*()_+[¼³":?.,¶±1234567890-]=]½²';/.,\$

Prestige 15

The IBM Printwheel printer represents a major opportunity for the production of text and document distribution with a high level of print quality for using systems.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#%&*()_+[¼³":?.,¶±1234567890-]=]½²';/.,\$



5210, 5217, 5218, 5219, 5228, 5229 Printers
(cont'd)

Gothic 15

The IBM Printwheel printer represents a major opportunity for the production of text and document distribution with a high level of print quality for using systems.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#%&*()_+[¼³":?.,¶±1234567890-=]½²';/.,\$

Modern

The IBM Printwheel printer represents a major opportunity for the production of text and document distribution with a high level of print quality for using systems.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#%&*()_+[¼³":?.,¶±1234567890-=]½²';/.,\$

Boldface

The IBM Printwheel printer represents a major opportunity for the production of text and document distribution with a high level of print quality for using systems.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#%&*()_+[¼³":?.,¶±1234567890-=]½²';/.,\$

Essay

The IBM Printwheel printer represents a major opportunity for the production of text and document distribution with a high level of print quality for using systems.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#%&*()_+[¼³":?.,¶±1234567890-=]½²';/.,\$

Essay Italic

The IBM Printwheel printer represents a major opportunity for the production of text and document distribution with a high level of print quality for using systems.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#%&*()_+[¼³":?.,¶±1234567890-=]½²';/.,\$

5211 PRINTER

5211 Printer

38-CHARACTER SET

POSITION	CHAR	POSITION	CHAR
1 - 39 - 77 - 115 - 153 - 191	A	20 - 58 - 96 - 134 - 172	N
2 - 40 - 78 - 116 - 154 - 192	B	21 - 59 - 97 - 135 - 173	6
3 - 41 - 79 - 117 - 155	0	22 - 60 - 98 - 136 - 174	O
4 - 42 - 80 - 118 - 156	C	23 - 61 - 99 - 137 - 175	P
5 - 43 - 81 - 119 - 157	D	24 - 62 - 100 - 138 - 176	7
6 - 44 - 82 - 120 - 158	1	25 - 63 - 101 - 139 - 177	Q
7 - 45 - 83 - 121 - 159	E	26 - 64 - 102 - 140 - 178	R
8 - 46 - 84 - 122 - 160	F	27 - 65 - 103 - 141 - 179	8
9 - 47 - 85 - 123 - 161	2	28 - 66 - 104 - 142 - 180	S
10 - 48 - 86 - 124 - 162	G	29 - 67 - 105 - 143 - 181	T
11 - 49 - 87 - 125 - 163	H	30 - 68 - 106 - 144 - 182	9
12 - 50 - 88 - 126 - 164	3	31 - 69 - 107 - 145 - 183	U
13 - 51 - 89 - 127 - 165	I	32 - 70 - 108 - 146 - 184	V
14 - 52 - 90 - 128 - 166	J	33 - 71 - 109 - 147 - 185	W
15 - 53 - 91 - 129 - 167	4	34 - 72 - 110 - 148 - 186	X
16 - 54 - 92 - 130 - 168	K	35 - 73 - 111 - 149 - 187	.
17 - 55 - 93 - 131 - 169	L	36 - 74 - 112 - 150 - 188	Y
18 - 56 - 94 - 132 - 170	5	37 - 75 - 113 - 151 - 189	Z
19 - 57 - 95 - 133 - 171	M	38 - 76 - 114 - 152 - 190	

Nominal rated speed using this belt is 190 lpm for Model 1, 355 lpm for Model 2. Unprintable characters will result in degraded speed.

42-CHARACTER NUMERIC ORIENTED

POSITION	CHAR	POSITION	CHAR	POSITION	CHAR	POSITION	CHAR
1 - 97	A	25 - 121	P	49 - 145	A	73 - 169	P
2 - 98	B	26 - 122	Q	50 - 146	B	74 - 170	Q
3 - 99	0	27 - 123	9	51 - 147	6	75 - 171	3
4 - 100	C	28 - 124	R	52 - 148	C	76 - 172	R
5 - 101	D	29 - 125	S	53 - 149	D	77 - 173	S
6 - 102	1	30 - 126	.	54 - 150	7	78 - 174	4
7 - 103	E	31 - 127	T	55 - 151	E	79 - 175	T
8 - 104	2	32 - 128	,	56 - 152	8	80 - 176	5
9 - 105	F	33 - 129	U	57 - 153	F	81 - 177	U
10 - 106	G	34 - 130	V	58 - 154	G	82 - 178	V
11 - 107	3	35 - 131	0	59 - 155	9	83 - 179	6
12 - 108	H	36 - 132	W	60 - 156	H	84 - 180	W
13 - 109	I	37 - 133	X	61 - 157	I	85 - 181	X
14 - 110	4	38 - 134	1	62 - 158	.	86 - 182	7
15 - 111	J	39 - 135	Y	63 - 159	J	87 - 183	Y
16 - 112	5	40 - 136	2	64 - 160	,	88 - 184	8
17 - 113	K	41 - 137	Z	65 - 161	K	89 - 185	Z
18 - 114	L	42 - 138	\$	66 - 162	L	90 - 186	\$
19 - 115	6	43 - 139	3	67 - 163	0	91 - 187	9
20 - 116	M	44 - 140	/	68 - 164	M	92 - 188	/
21 - 117	N	45 - 141	-	69 - 165	N	93 - 189	-
22 - 118	7	46 - 142	4	70 - 166	1	94 - 190	.
23 - 119	O	47 - 143	*	71 - 167	0	95 - 191	*
24 - 120	8	48 - 144	5	72 - 168	2	96 - 192	,

Contains six copies of: 0123456789.,
Contains four copies of: ABCDEFGHIJKLMNOPQRSTUVWXYZ\$/-*

Nominal rated speed using this belt:
Lines containing numerics only (0-9.): 225 lpm, Model 1; 395 lpm, Model 2
Lines containing other characters: 160 lpm, Model 1; 300 lpm, Model 2

Unprintable characters will result in degraded speed.

Note that the average speed for a given print run will vary from 160 to 225 lpm for Model 1, and from 300 to 395 for Model 2, depending on the proportion of numeric print lines in the run.



5211 Printer (cont'd)

48-CHARACTER SPANISH Ñ

48-CHARACTER EBCDIC

POSITION NO.	CHAR	POSITION NO.	CHAR
1-49-97-145	3	25-73-121-169	L
2-50-98-146	4	26-74-122-170	M
3-51-99-147	5	27-75-123-171	N
4-52-100-148	6	28-76-124-172	O
5-53-101-149	7	29-77-125-173	P
6-54-102-150	8	30-78-126-174	Q
7-55-103-151	9	31-79-127-175	R
8-56-104-152	0	32-80-128-176	-
9-57-105-153	Ñ	33-81-129-177	\$
10-58-106-154	@	34-82-130-178	★
11-59-107-155	/	35-83-131-179	A
12-60-108-156	S	36-84-132-180	B
13-61-109-157	T	37-85-133-181	C
14-62-110-158	U	38-86-134-182	D
15-63-111-159	V	39-87-135-183	E
16-64-112-160	W	40-88-136-184	F
17-65-113-161	X	41-89-137-185	G
18-66-114-162	Y	42-90-138-186	H
19-67-115-163	Z	43-91-139-187	I
20-68-116-164	&	44-92-140-188	+
21-69-117-165	,	45-93-141-189	.
22-70-118-166	%	46-94-142-190	'
23-71-119-167	J	47-95-143-191	1
24-72-120-168	K	48-96-144-192	2

POSITION NO.	CHAR	POSITION NO.	CHAR.
1-49-97-145	3	25-73-121-169	L
2-50-98-146	4	26-74-122-170	M
3-51-99-147	5	27-75-123-171	N
4-52-100-148	6	28-76-124-172	O
5-53-101-149	7	29-77-125-173	P
6-54-102-150	8	30-78-126-174	Q
7-55-103-151	9	31-79-127-175	R
8-56-104-152	0	32-80-128-176	-
9-57-105-153	#	33-81-129-177	\$
10-58-106-154	@	34-82-130-178	*
11-59-107-155	/	35-83-131-179	A
12-60-108-156	S	36-84-132-180	B
13-61-109-157	T	37-85-133-181	C
14-62-110-158	U	38-86-134-182	D
15-63-111-159	V	39-87-135-183	E
16-64-112-160	W	40-88-136-184	F
17-65-113-161	X	41-89-137-185	G
18-66-114-162	Y	42-90-138-186	H
19-67-115-163	Z	43-91-139-187	I
20-68-116-164	&	44-92-140-188	+
21-69-117-165	,	45-93-141-189	.
22-70-118-166	%	46-94-142-190	'
23-71-119-167	J	47-95-143-191	1
24-72-120-168	K	48-96-144-192	2

48-CHARACTER FORTRAN

POSITION NO.	CHAR	POSITION NO.	CHAR
1-49-97-145	3	25-73-121-169	L
2-50-98-146	4	26-74-122-170	M
3-51-99-147	5	27-75-123-171	N
4-52-100-148	6	28-76-124-172	O
5-53-101-149	7	29-77-125-173	P
6-54-102-150	8	30-78-126-174	Q
7-55-103-151	9	31-79-127-175	R
8-56-104-152	0	32-80-128-176	-
9-57-105-153	=	33-81-129-177	\$
10-58-106-154	)	34-82-130-178	★
11-59-107-155	/	35-83-131-179	A
12-60-108-156	S	36-84-132-180	B
13-61-109-157	T	37-85-133-181	C
14-62-110-158	U	38-86-134-182	D
15-63-111-159	V	39-87-135-183	E
16-64-112-160	W	40-88-136-184	F
17-65-113-161	X	41-89-137-185	G
18-66-114-162	Y	42-90-138-186	H
19-67-115-163	Z	43-91-139-187	I
20-68-116-164	&	44-92-140-188	+
21-69-117-165	,	45-93-141-189	.
22-70-118-166	(	46-94-142-190	'
23-71-119-167	J	47-95-143-191	1
24-72-120-168	K	48-96-144-192	2

TYPE CATALOG

5211 Printer (cont'd)

48-CHARACTER OCR A

POSITION NO.	CHAR	POSITION NO.	CHAR	POSITION NO.	CHAR
1 - 49 - 97 - 145	3	17 - 65 - 113 - 161	X	33 - 81 - 129 - 177	\$
2 - 50 - 98 - 146	4	18 - 66 - 114 - 162	Y	34 - 82 - 130 - 178	★
3 - 51 - 99 - 147	5	19 - 67 - 115 - 163	Z	35 - 83 - 131 - 179	A
4 - 52 - 100 - 148	6	20 - 68 - 116 - 164	£	36 - 84 - 132 - 180	B
5 - 53 - 101 - 149	7	21 - 69 - 117 - 165	,	37 - 85 - 133 - 181	C
6 - 54 - 102 - 150	8	22 - 70 - 118 - 166	H	38 - 86 - 134 - 182	D
7 - 55 - 103 - 151	9	23 - 71 - 119 - 167	J	39 - 87 - 135 - 183	E
8 - 56 - 104 - 152	0	24 - 72 - 120 - 168	K	40 - 88 - 136 - 184	F
9 - 57 - 105 - 153	#	25 - 73 - 121 - 169	L	41 - 89 - 137 - 185	G
10 - 58 - 106 - 154	☐	26 - 74 - 122 - 170	M	42 - 90 - 138 - 186	H
11 - 59 - 107 - 155	/	27 - 75 - 123 - 171	N	43 - 91 - 139 - 187	I
12 - 60 - 108 - 156	S	28 - 76 - 124 - 172	O	44 - 92 - 140 - 188	Y
13 - 61 - 109 - 157	T	29 - 77 - 125 - 173	P	45 - 93 - 141 - 189	.
14 - 62 - 110 - 158	U	30 - 78 - 126 - 174	Q	46 - 94 - 142 - 190	∑
15 - 63 - 111 - 159	V	31 - 79 - 127 - 175	R	47 - 95 - 143 - 191	|
16 - 64 - 112 - 160	W	32 - 80 - 128 - 176	-	48 - 96 - 144 - 192	2

48-CHARACTER OCR B

POSITION NO.	CHAR	POSITION NO.	CHAR	POSITION NO.	CHAR
1 - 49 - 97 - 145	3	17 - 65 - 113 - 161	X	33 - 81 - 129 - 177	\$
2 - 50 - 98 - 146	4	18 - 66 - 114 - 162	Y	34 - 82 - 130 - 178	★
3 - 51 - 99 - 147	5	19 - 67 - 115 - 163	Z	35 - 83 - 131 - 179	A
4 - 52 - 100 - 148	6	20 - 68 - 116 - 164	£	36 - 84 - 132 - 180	B
5 - 53 - 101 - 149	7	21 - 69 - 117 - 165	,	37 - 85 - 133 - 181	C
6 - 54 - 102 - 150	8	22 - 70 - 118 - 166	>	38 - 86 - 134 - 182	D
7 - 55 - 103 - 151	9	23 - 71 - 119 - 167	J	39 - 87 - 135 - 183	E
8 - 56 - 104 - 152	0	24 - 72 - 120 - 168	K	40 - 88 - 136 - 184	F
9 - 57 - 105 - 153	#	25 - 73 - 121 - 169	L	41 - 89 - 137 - 185	G
10 - 58 - 106 - 154	☐	26 - 74 - 122 - 170	M	42 - 90 - 138 - 186	H
11 - 59 - 107 - 155	/	27 - 75 - 123 - 171	N	43 - 91 - 139 - 187	I
12 - 60 - 108 - 156	S	28 - 76 - 124 - 172	O	44 - 92 - 140 - 188	+
13 - 61 - 109 - 157	T	29 - 77 - 125 - 173	P	45 - 93 - 141 - 189	.
14 - 62 - 110 - 158	U	30 - 78 - 126 - 174	Q	46 - 94 - 142 - 190	<
15 - 63 - 111 - 159	V	31 - 79 - 127 - 175	R	47 - 95 - 143 - 191	|
16 - 64 - 112 - 160	W	32 - 80 - 128 - 176	-	48 - 96 - 144 - 192	2



TYPE CATALOG

5211 Printer (cont'd)

60-CHARACTER SYSTEM/38 SPECIAL

POS NO	CHAR	POS NO	CHAR	POS NO	CHAR	POS NO	CHAR	POS NO	CHAR	POS NO	CHAR
1	0	33	0	65	0	97	0	129	0	161	0
2	B	34	>	66	|	98	B	130	?	162	×
3	W	35	A	67	N	99	W	131	A	163	N
4	H	36	@	68	%	100	H	132	@	164	%
5	4	37	3	69	2	101	4	133	3	165	2
6	S	38	O	70	U	102	S	134	O	166	U
7	P	39	E	71	R	103	P	135	E	167	R
8	\$	40	,	72	Y	104	\$	136	,	168	Y
9	6	41	8	73	1	105	6	137	8	169	1
10	G	42	<	74	*	106	G	138	:	170	*
11	M	43	T	75	C	107	M	139	T	171	C
12	V	44	X	76	V	108	X	140	V	172	X
13	7	45	9	77	5	109	7	141	9	173	5
14	'	46	#	78	'	110	#	142	'	174	#
15	I	47	D	79	L	111	I	143	D	175	L
16	)	48	F	80	-	112	)	144	F	176	-
17	.	49	/	81	—	113	.	145	;	177	/
18	┌	50	B	82	Q	114	┌	146	B	178	Q
19	N	51	W	83	A	115	N	147	W	179	A
20	&	52	H	84	=	116	&	148	H	180	=
21	2	53	4	85	3	117	2	149	4	181	3
22	U	54	S	86	O	118	U	150	S	182	O
23	R	55	P	87	E	119	R	151	P	183	E
24	Y	56	\$	88	,	120	Y	152	\$	184	,
25	1	57	6	89	8	121	1	153	6	185	8
26	*	58	G	90	(	122	*	154	G	186	(
27	C	59	M	91	T	123	C	155	M	187	T
28	J	60	K	92	J	124	J	156	J	188	K
29	5	61	7	93	9	125	5	157	7	189	9
30	+	62	Z	94	+	126	Z	158	+	190	Z
31	L	63	I	95	D	127	L	159	I	191	D
32	-	64	.	96	F	128	-	160	.	192	F

TYPE CATALOG

5211 Printer (cont'd)

64-CHARACTER SPANISH Ñ

POSITION	CHAR	POSITION	CHAR
1 - 65 - 129	\$	33 - 97 - 161	3
2 - 66 - 130	*	34 - 98 - 162	4
3 - 67 - 131	A	35 - 99 - 163	5
4 - 68 - 132	B	36 - 100 - 164	6
5 - 69 - 133	C	37 - 101 - 165	7
6 - 70 - 134	D	38 - 102 - 166	8
7 - 71 - 135	E	39 - 103 - 167	9
8 - 72 - 136	F	40 - 104 - 168	0
9 - 73 - 137	G	41 - 105 - 169	Ñ
10 - 74 - 138	H	42 - 106 - 170	@
11 - 75 - 139	I	43 - 107 - 171	/
12 - 76 - 140	+	44 - 108 - 172	S
13 - 77 - 141	.	45 - 109 - 173	T
14 - 78 - 142	'	46 - 110 - 174	U
15 - 79 - 143	[	47 - 111 - 175	V
16 - 80 - 144	<	48 - 112 - 176	W
17 - 81 - 145	(	49 - 113 - 177	X
18 - 82 - 146	|	50 - 114 - 178	Y
19 - 83 - 147	]	51 - 115 - 179	Z
20 - 84 - 148	)	52 - 116 - 180	&
21 - 85 - 149	:	53 - 117 - 181	,
22 - 86 - 150	┌	54 - 118 - 182	%
23 - 87 - 151	\	55 - 119 - 183	J
24 - 88 - 152	-	56 - 120 - 184	K
25 - 89 - 153	>	57 - 121 - 185	L
26 - 90 - 154	?	58 - 122 - 186	M
27 - 91 - 155	:	59 - 123 - 187	N
28 - 92 - 156	=	60 - 124 - 188	O
29 - 93 - 157	"	61 - 125 - 189	P
30 - 94 - 158	\	62 - 126 - 190	Q
31 - 95 - 159	1	63 - 127 - 191	R
32 - 96 - 160	2	64 - 128 - 192	-

64-CHARACTER EBCDIC

POSITION NO.	CHAR	POSITION NO.	CHAR
1-65-129	\$	33-97-161	3
2-66-130	*	34-98-162	4
3-67-131	A	35-99-163	5
4-68-132	B	36-100-164	6
5-69-133	C	37-101-165	7
6-70-134	D	38-102-166	8
7-71-135	E	39-103-167	9
8-72-136	F	40-104-168	0
9-73-137	G	41-105-169	#
10-74-138	H	42-106-170	@
11-75-139	I	43-107-171	/
12-76-140	+	44-108-172	S
13-77-141	.	45-109-173	T
14-78-142	'	46-110-174	U
15-79-143	[	47-111-175	V
16-80-144	<	48-112-176	W
17-81-145	(	49-113-177	X
18-82-146	|	50-114-178	Y
19-83-147	]	51-115-179	Z
20-84-148	)	52-116-180	&
21-85-149	:	53-117-181	,
22-86-150	┌	54-118-182	%
23-87-151	\	55-119-183	J
24-88-152	-	56-120-184	K
25-89-153	>	57-121-185	L
26-90-154	?	58-122-186	M
27-91-155	:	59-123-187	N
28-92-156	=	60-124-188	O
29-93-157	"	61-125-189	P
30-94-158	\	62-126-190	Q
31-95-159	1	63-127-191	R
32-96-160	2	64-128-192	-

64-CHARACTER ASCII

POSITION NO.	CHAR	POSITION NO.	CHAR
1-65-129	\$	33-97-161	3
2-66-130	*	34-98-162	4
3-67-131	A	35-99-163	5
4-68-132	B	36-100-164	6
5-69-133	C	37-101-165	7
6-70-134	D	38-102-166	8
7-71-135	E	39-103-167	9
8-72-136	F	40-104-168	0
9-73-137	G	41-105-169	#
10-74-138	H	42-106-170	@
11-75-139	I	43-107-171	/
12-76-140	+	44-108-172	S
13-77-141	.	45-109-173	T
14-78-142	'	46-110-174	U
15-79-143	[	47-111-175	V
16-80-144	<	48-112-176	W
17-81-145	(	49-113-177	X
18-82-146	|	50-114-178	Y
19-83-147	]	51-115-179	Z
20-84-148	)	52-116-180	&
21-85-149	:	53-117-181	,
22-86-150	┌	54-118-182	%
23-87-151	\	55-119-183	J
24-88-152	-	56-120-184	K
25-89-153	>	57-121-185	L
26-90-154	?	58-122-186	M
27-91-155	:	59-123-187	N
28-92-156	=	60-124-188	O
29-93-157	"	61-125-189	P
30-94-158	\	62-126-190	Q
31-95-159	1	63-127-191	R
32-96-160	2	64-128-192	-

64-CHARACTER MULTINATIONAL

POSITION NO.	CHAR.	POSITION NO.	CHAR.	POSITION NO.	CHAR.	POSITION NO.	CHAR.
1-65-129	3	17-81-145	X	33-97-161	\$	49-113-177	à
2-66-130	4	18-82-146	Y	34-98-162	*	50-114-178	Ä
3-67-131	5	19-83-147	Z	35-99-163	A	51-115-179	Å
4-68-132	6	20-84-148	&	36-100-164	B	52-116-180	À
5-69-133	7	21-85-149	,	37-101-165	C	53-117-181	Ç
6-70-134	8	22-86-150	%	38-102-166	D	54-118-182	Ñ
7-71-135	9	23-87-151	J	39-103-167	E	55-119-183	Ø
8-72-136	0	24-88-152	K	40-104-168	F	56-120-184	Æ
9-73-137	#	25-89-153	L	41-105-169	G	57-121-185	Œ
10-74-138	@	26-90-154	M	42-106-170	H	58-122-186	£
11-75-139	/	27-91-155	N	43-107-171	I	59-123-187	¥
12-76-140	S	28-92-156	O	44-108-172	+	60-124-188	Pr
13-77-141	T	29-93-157	P	45-109-173	.	61-125-189	š
14-78-142	U	30-94-158	Q	46-110-174	'	62-126-190	Ö
15-79-143	V	31-95-159	R	47-111-175	1	63-127-191	Õ
16-80-144	W	32-96-160	-	48-112-176	2	64-128-192	Ü

5211 Printer (cont'd)

96-CHARACTER MULTINATIONAL

POSITION NO.	CHAR.	POSITION NO.	CHAR.	POSITION NO.	CHAR.
1- 97	\$	41-137	#	81-177	Ø
2- 98	*	42-138	@	82-178	Æ
3- 99	A	43-139	/	83-179	Œ
4-100	B	44-140	S	84-180	£
5-101	C	45-141	T	85-181	¥
6-102	D	46-142	U	86-182	P T
7-103	E	47-143	V	87-183	S
8-104	F	48-144	W	88-184	O
9-105	G	49-145	X	89-185	Ö
10-106	H	50-146	Y	90-186	ö
11-107	I	51-147	Z	91-187	ó
12-108	+	52-148	&	92-188	õ
13-109	.	53-149	,	93-189	ô
14-110	'	54-150	%	94-190	u
15-111	[	55-151	J	95-191	ü
16-112	<	56-152	K	96-192	ü
17-113	(	57-153	L		
18-114	!	58-154	M		
19-115	]	59-155	N		
20-116	)	60-156	O		
21-117	;	61-157	P		
22-118	^	62-158	Q		
23-119	\	63-159	R		
24-120	-	64-160	.		
25-121	>	65-161	·		
26-122	?	66-162	·		
27-123	:	67-163	·		
28-124	=	68-164	·		
29-125	"	69-165	·		
30-126	~	70-166	·		
31-127	1	71-167	·		
32-128	2	72-168	·		
33-129	3	73-169	·		
34-130	4	74-170	·		
35-131	5	75-171	·		
36-132	6	76-172	·		
37-133	7	77-173	·		
38-134	8	78-174	·		
39-135	9	79-175	·		
40-136	0	80-176	·		

96-CHARACTER ASCII

POSITION NO.	CHAR	POSITION NO.	CHAR
1 - 97	3	49 - 145	(
2 - 98	4	50 - 146	|
3 - 99	5	51 - 147	!
4 - 100	6	52 - 148)
5 - 101	7	53 - 149	:
6 - 102	8	54 - 150	~
7 - 103	9	55 - 151	\
8 - 104	0	56 - 152	—
9 - 105	#	57 - 153	>
10 - 106	@	58 - 154	?
11 - 107	/	59 - 155	:
12 - 108	S	60 - 156	=
13 - 109	T	61 - 157	"
14 - 110	U	62 - 158	\
15 - 111	V	63 - 159	:
16 - 112	W	64 - 160	a
17 - 113	X	65 - 161	b
18 - 114	Y	66 - 162	c
19 - 115	Z	67 - 163	d
20 - 116	E	68 - 164	e
21 - 117	.	69 - 165	f
22 - 118	%	70 - 166	g
23 - 119	J	71 - 167	h
24 - 120	K	72 - 168	i
25 - 121	L	73 - 169	{
26 - 122	M	74 - 170	}
27 - 123	N	75 - 171	~
28 - 124	O	76 - 172	j
29 - 125	P	77 - 173	k
30 - 126	Q	78 - 174	l
31 - 127	R	79 - 175	m
32 - 128	-	80 - 176	n
33 - 129	\$	81 - 177	o
34 - 130	*	82 - 178	p
35 - 131	A	83 - 179	q
36 - 132	B	84 - 180	r
37 - 133	C	85 - 181	⊗
38 - 134	D	86 - 182	⊗
39 - 135	E	87 - 183	s
40 - 136	F	88 - 184	t
41 - 137	G	89 - 185	u
42 - 138	H	90 - 186	v
43 - 139	I	91 - 187	w
44 - 140	+	92 - 188	x
45 - 141	.	93 - 189	y
46 - 142	!	94 - 190	z
47 - 143	@	95 - 191	|
48 - 144	<	96 - 192	2

TYPE CATALOG

5211 Printer (cont'd)

96-CHARACTER SPANISH Ñ

POSITION NO.	CHAR	POSITION NO.	CHAR
1 - 97	3	49 - 145	(
2 - 98	4	50 - 146)
3 - 99	5	51 - 147	[
4 - 100	6	52 - 148]
5 - 101	7	53 - 149	:
6 - 102	8	54 - 150	;
7 - 103	9	55 - 151	\
8 - 104	0	56 - 152	—
9 - 105	Ñ	57 - 153	>
10 - 106	@	58 - 154	?
11 - 107	/	59 - 155	:
12 - 108	S	60 - 156	=
13 - 109	T	61 - 157	"
14 - 110	U	62 - 158	^
15 - 111	V	63 - 159	ñ
16 - 112	W	64 - 160	a
17 - 113	X	65 - 161	b
18 - 114	Y	66 - 162	c
19 - 115	Z	67 - 163	d
20 - 116	&	68 - 164	e
21 - 117	'	69 - 165	f
22 - 118	%	70 - 166	g
23 - 119	J	71 - 167	h
24 - 120	K	72 - 168	i
25 - 121	L	73 - 169	£
26 - 122	M	74 - 170	₢
27 - 123	N	75 - 171	..
28 - 124	O	76 - 172	j
29 - 125	P	77 - 173	k
30 - 126	Q	78 - 174	l
31 - 127	R	79 - 175	m
32 - 128	—	80 - 176	n
33 - 129	\$	81 - 177	o
34 - 130	*	82 - 178	p
35 - 131	A	83 - 179	q
36 - 132	B	84 - 180	r
37 - 133	C	85 - 181	x
38 - 134	D	86 - 182	π
39 - 135	E	87 - 183	s
40 - 136	F	88 - 184	t
41 - 137	G	89 - 185	u
42 - 138	H	90 - 186	v
43 - 139	I	91 - 187	w
44 - 140	+	92 - 188	x
45 - 141	.	93 - 189	y
46 - 142	!	94 - 190	z
47 - 143	[	95 - 191	1
48 - 144	<	96 - 192	2

96-CHARACTER EBCDIC

POSITION NO	CHAR	POSITION NO	CHAR
1-97	3	49-145	(
2-98	4	50-146)
3-99	5	51-147	[
4-100	6	52-148]
5-101	7	53-149	:
6-102	8	54-150	;
7-103	9	55-151	\
8-104	0	56-152	—
9-105	#	57-153	>
10-106	•	58-154	?
11-107	/	59-155	:
12-108	S	60-156	=
13-109	T	61-157	"
14-110	U	62-158	^
15-111	V	63-159	ñ
16-112	W	64-160	a
17-113	X	65-161	b
18-114	Y	66-162	c
19-115	Z	67-163	d
20-116	&	68-164	e
21-117	,	69-165	f
22-118	%	70-166	g
23-119	J	71-167	h
24-120	K	72-168	i
25-121	L	73-169	£
26-122	M	74-170	₢
27-123	N	75-171	..
28-124	D	76-172	j
29-125	P	77-173	k
30-126	Q	78-174	l
31-127	R	79-175	m
32-128	—	80-176	n
33-129	\$	81-177	o
34-130	*	82-178	p
35-131	A	83-179	q
36-132	B	84-180	r
37-133	C	85-181	x
38-134	D	86-182	π
39-135	E	87-183	s
40-136	F	88-184	t
41-137	G	89-185	u
42-138	H	90-186	v
43-139	I	91-187	w
44-140	+	92-188	x
45-141	.	93-189	y
46-142	!	94-190	z
47-143	€	95-191	1
48-144	<	96-192	2



TYPE CATALOG

5211 Printer (cont'd)

188-CHARACTER MULTINATIONAL

POS NO.	CHAR	POS NO.	CHAR	POS NO.	CHAR	POS NO.	CHAR	POS NO.	CHAR	POS NO.	CHAR
1	0	33	R	65	:	97	0	129	⤴	161	⌘
2	1	34	-	66	a	98	1	130	⤵	162	¼
3	2	35	\$	67	b	99	2	131	⤶	163	½
4	3	36	*	68	c	100	3	132	⤷	164	¾
5	4	37	A	69	d	101	⤸	133	⤹	165	┌
6	5	38	B	70	e	102	ä	134	⤺	166	|
7	6	39	C	71	f	103	à	135	⤻	167	≠
8	7	40	D	72	g	104	á	136	⤼	168	::
9	8	41	E	73	h	105	ã	137	⤽	169	'
10	9	42	F	74	i	106	ä	138	⤿	170	||
11	#	43	G	75	{	107	å	139	⤾	171	|
12	@	44	H	76	}	108	Ⱬ	140	⤿	172	⊖
13	/	45	I	77	~	109	ⱬ	141	⤾	173	⊖
14	S	46	+	78	j	110	é	142	⤾	174	⊖
15	T	47	.	79	k	111	ê	143	⤾	175	⊖
16	U	48	'	80	l	112	ë	144	⤾	176	⊖
17	V	49	[	81	m	113	è	145	⤾	177	⊖
18	W	50	<	82	n	114	í	146	⤾	178	⊖
19	X	51	(	83	o	115	î	147	⤾	179	⊖
20	Y	52	!	84	p	116	ï	148	⤾	180	⊖
21	Z	53	]	85	q	117	ì	149	⤾	181	⊖
22	&	54	)	86	r	118	Ɱ	150	⤾	182	⊖
23	,	55	;	87	Ⓜ	119	Ɐ	151	⤾	183	⊖
24	%	56	^	88	Ɀ	120	Ɒ	152	⤾	184	⊖
25	J	57	\	89	s	121	ⱱ	153	⤾	185	⊖
26	K	58	|	90	t	122	Ⱳ	154	⤾	186	⊖
27	L	59	>	91	u	123	ⱳ	155	⤾	187	⊖
28	M	60	?	92	v	124	ⱴ	156	⤾	188	⊖
29	N	61	:	93	w	125	Ⱶ	157	⤾	189	⊖
30	O	62	=	94	x	126	ⱶ	158	⤾	190	⊖
31	P	63	"	95	y	127	ⱷ	159	⤾	191	⊖
32	Q	64	'	96	z	128	ⱸ	160	⤾	192	⊖

5222/5224/5225 PRINTERS

5222 Printer Model 1

5224 Printer Models 1 and 2

5225 Printer Models 1, 2, 3 and 4

United States EBCDIC (#2956) 95 Graphics

Multinational (#9470) 184 Graphics

Hex 1	00				01				10				11			
	00	01	10	11	00	01	10	11	00	01	10	11	00	01	10	11
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0000	0				SP	&	-				|	|	\	0		
0001	1				/				a	j	~		A	J		1
0010	2								b	k	s		B	K	S	2
0011	3								c	l	t		C	L	T	3
0100	4								d	m	u		D	M	U	4
0101	5								e	n	v		E	N	V	5
0110	6								f	o	w		F	O	W	6
0111	7								g	p	x		G	P	X	7
1000	8								h	q	y		H	Q	Y	8
1001	9								i	r	z		I	R	Z	9
1010	A				€	!	!	!								
1011	B				.	\$,	=								
1100	C				<	*	%	@								
1101	D				(	)	-	|							
1110	E				+	;	>	=								
1111	F				|	—	?	||								

Column	00				01				10				11					
	00	01	10	11	00	01	10	11	00	01	10	11	00	01	10	11		
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F		
0	0000								SP	&	-	ø	ø	ø	ø	ø		
1	0001									é	/	É	a	j	~	í	A	J
2	0010									à	é	À	É	b	k	s	¥	B
3	0011									ü	e	Ä	È	c	l	t	Pts	C
4	0100									ä	e	À	È	d	m	u	f	D
5	0101									á	í	Á	Í	e	n	v	§	E
6	0110									ä	í	Ä	Ï	f	o	w	¶	F
7	0111									á	í	Á	Ï	g	p	x		G
8	1000									ç	í	Ç	Ï	h	q	y		H
9	1001									n	B	N	Ï	i	r	z		I
A	1010									[	]	:	<<	a	i	~		1
B	1011									.	\$	,	>>	o	z	|	ó	ú
C	1100									<	*	%	@	æ	ð	-	ö	ü
D	1101									(	)	-	'	y	ÿ	—	ù	û
E	1110									+	;	>	=	Æ	Ï	—	ó	ú
F	1111									!	—	?	"	±	⊗	—	o	y

Spanish Speaking (#2969) 95 Graphics

Hex 1	00				01				10				11			
	00	01	10	11	00	01	10	11	00	01	10	11	00	01	10	11
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0000	0				SP	&	-				|	|	\	0		
0001	1				/				a	j	~		A	J		1
0010	2								b	k	s		B	K	S	2
0011	3								c	l	t		C	L	T	3
0100	4								d	m	u		D	M	U	4
0101	5								e	n	v		E	N	V	5
0110	6								f	o	w		F	O	W	6
0111	7								g	p	x		G	P	X	7
1000	8								h	q	y		H	Q	Y	8
1001	9								i	r	z		I	R	Z	9
1010	A				[	]	ñ	:								
1011	B				.	\$	,	Ñ								
1100	C				<	*	%	@								
1101	D				(	)	-	|							
1110	E				+	;	>	=								
1111	F				|	—	?	||								

Note: Character code assignments other than those shown within all outlined areas of these charts are undefined. If an undefined character code is programmed, the character will be undefined. The character printed for a given undefined character code may be different for other devices. IBM reserves the right to change at any time the character displayed for an undefined character code.

5253/5254 DISPLAY STATIONS

Keyboards Only one keyboard is physically installable on the IBM 5253 and 5254 Display Stations. This is the U.S. keyboard ID # 1 which may have 92 or 96 characters.

Other U.S. and foreign keyboard arrangements may be obtained however, by **emulation** using the facilities of the 5520 Administrative Processing Program. These are keyboard IDs # 2, 3, 4, 5, 6, 7, 8, 17, 19, 25, 29, 31, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57, 67, 100, 101, 103, and 251.

For the creation of symbol characters at the display station, additional keyboard ID numbers 202 and 204 are supported by the IBM 5520 Administrative Processing Program as alternate keyboards to the keyboard ID currently in operation. Symbol characters are generated into the datastream by using code key combinations, while the characters displayed are the corresponding ones from the non-symbol character set, video reversed.

Those symbols created using keyboard ID numbers 202 and 204 are printable on the IBM 5258 Printer with the optional symbol font.

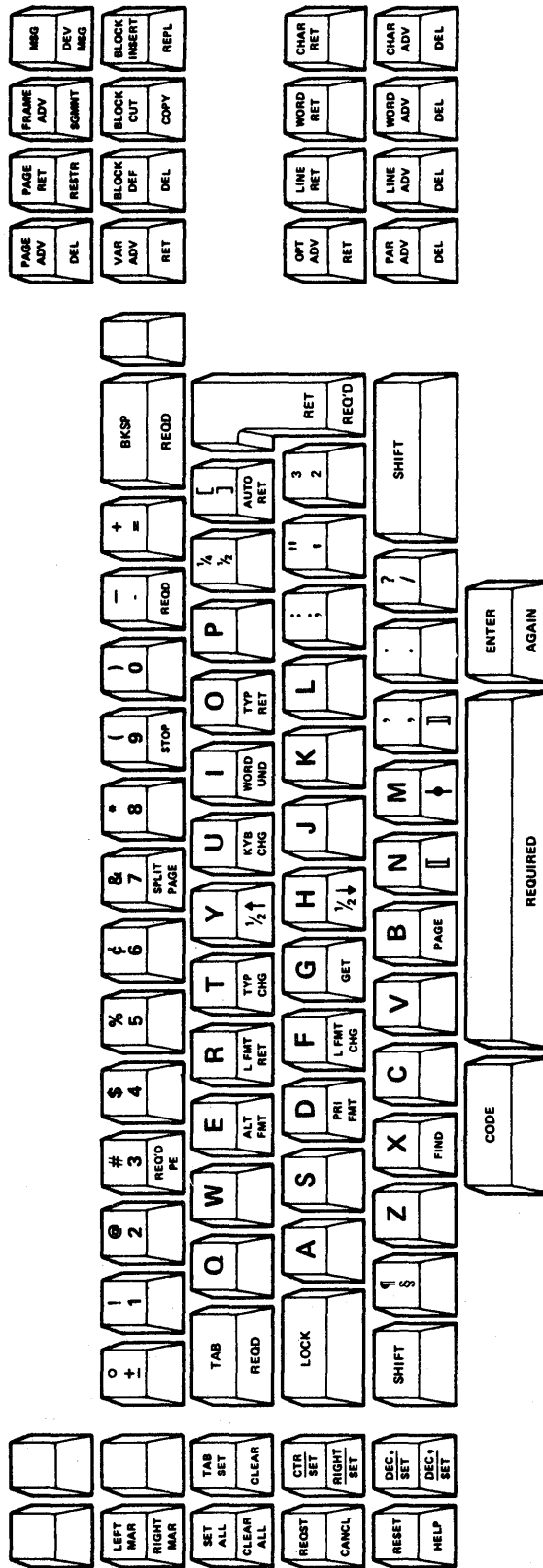
The keyboard layouts and characters obtained are illustrated on the following pages in the Type Catalog.

Type Styles The print samples provided for the IBM 5258 Printer fonts are given to illustrate the style of printing only. Quality of print and size of characters cannot be accurately reproduced in these Type Catalog pages.

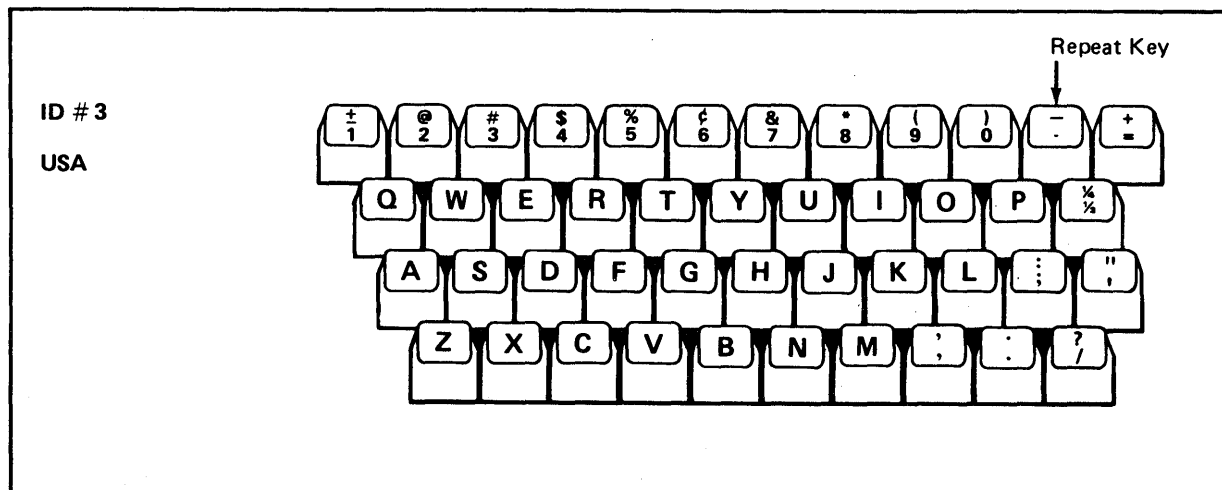
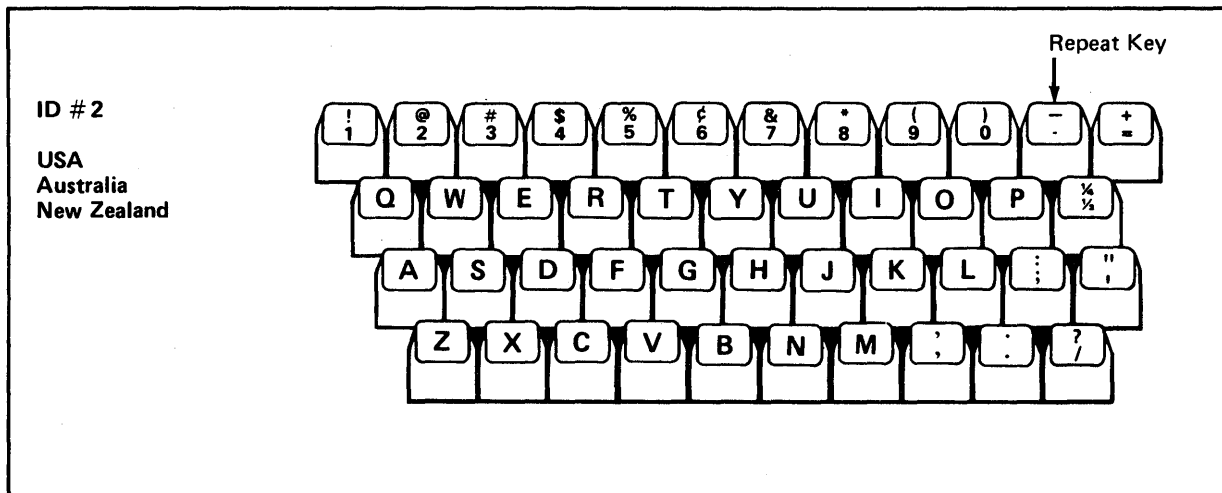
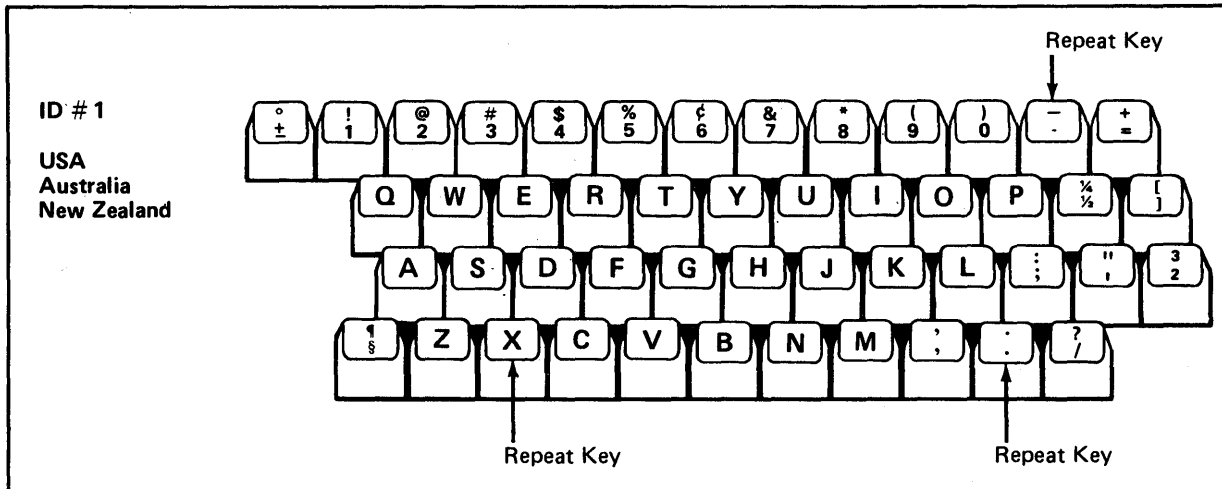
TYPE CATALOG

5253/5254 Display Stations (cont'd)

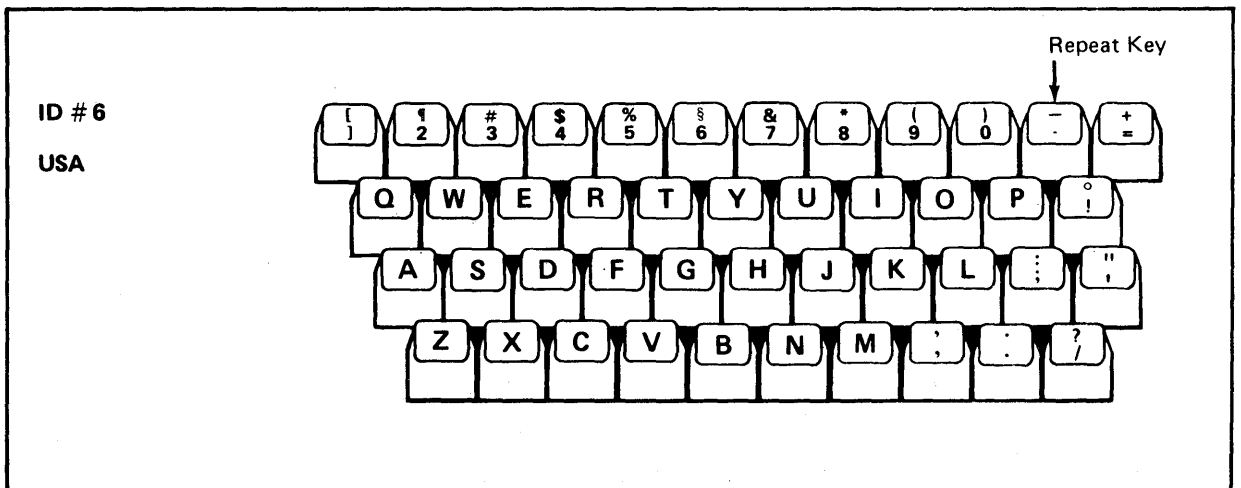
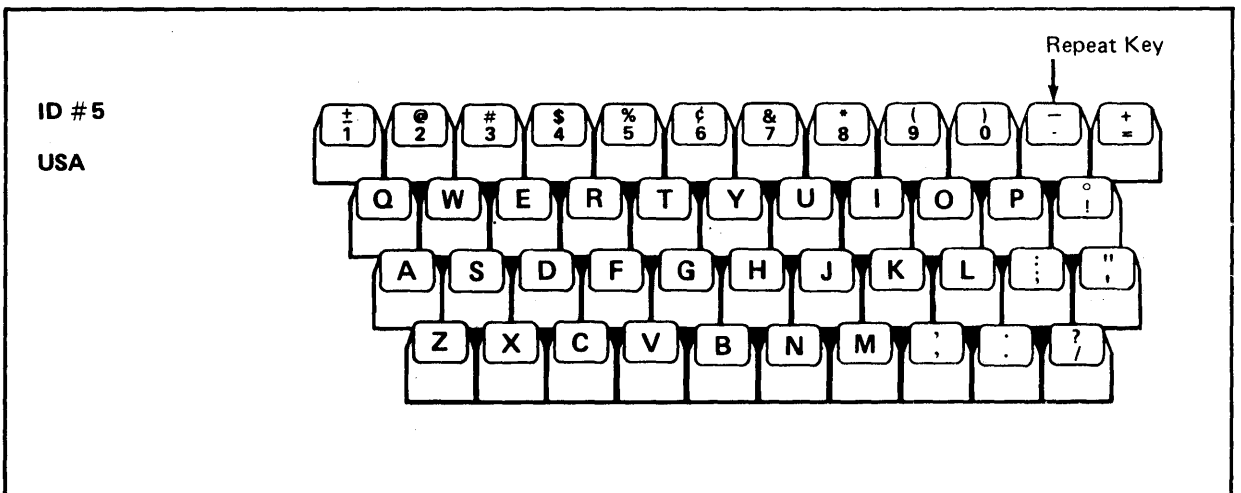
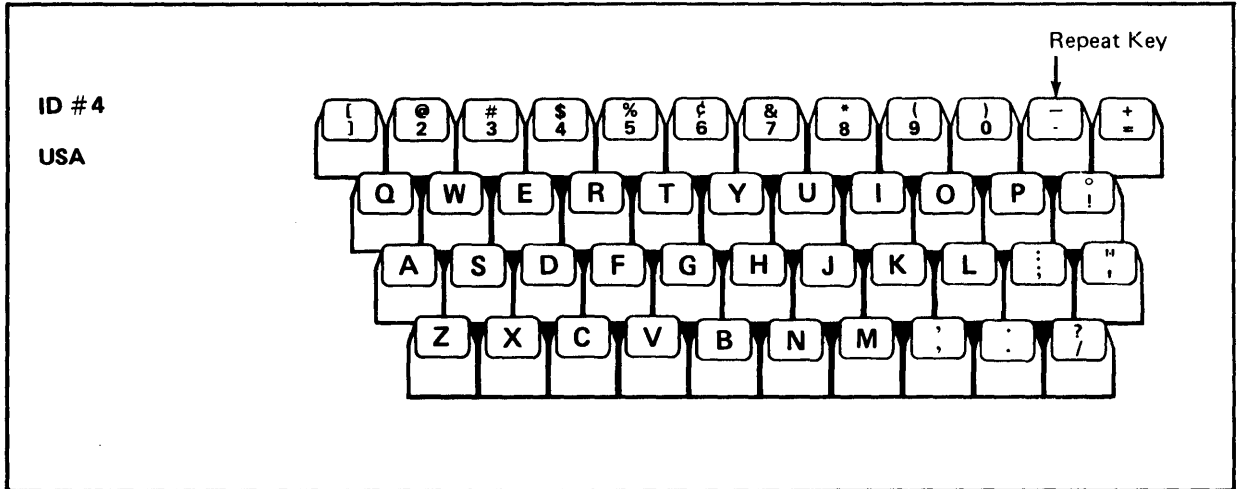
FEATURE CODE 4611
96 CHARACTER



5253/5254 Display Stations (cont'd)

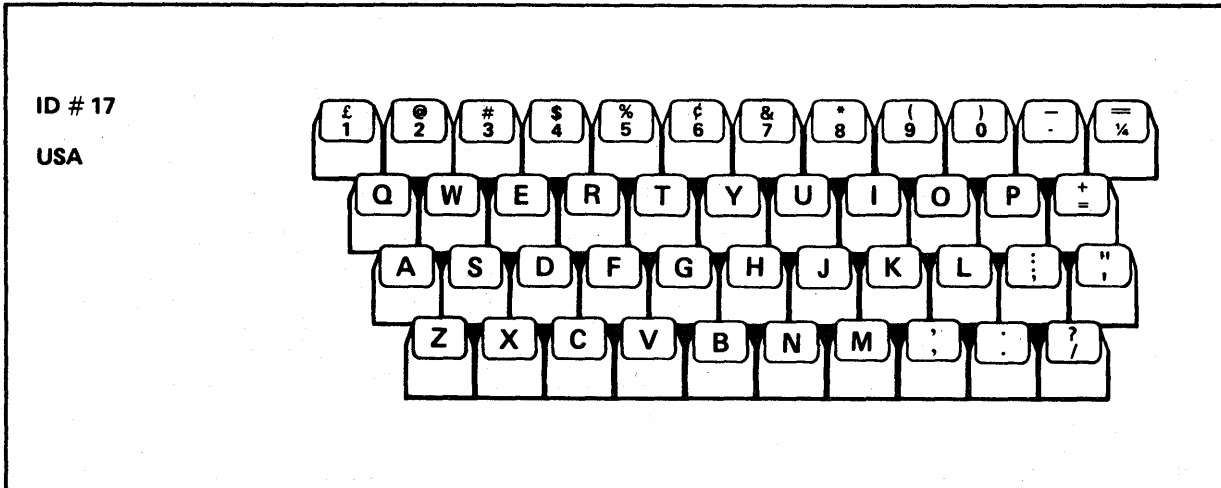
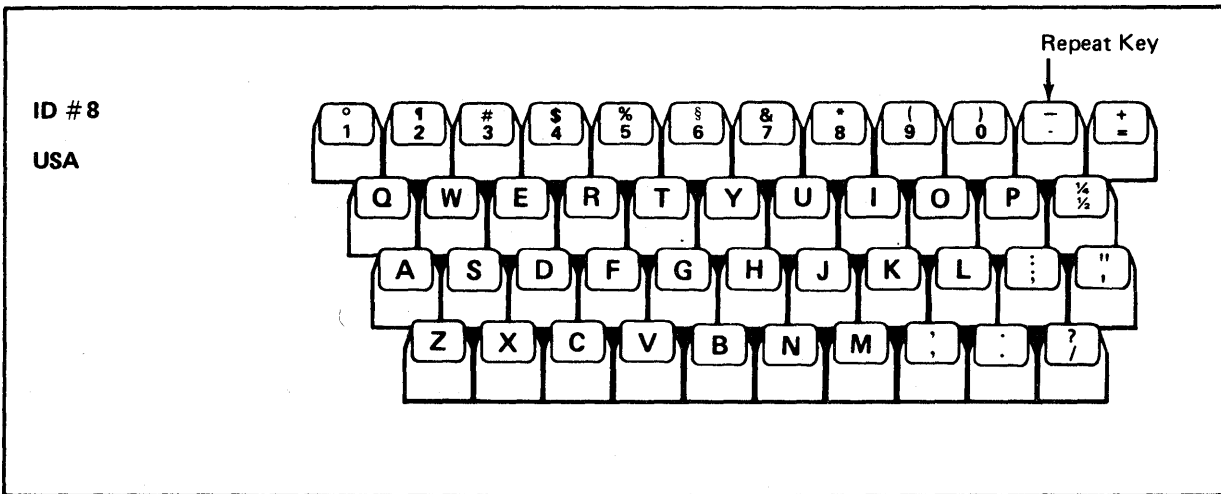
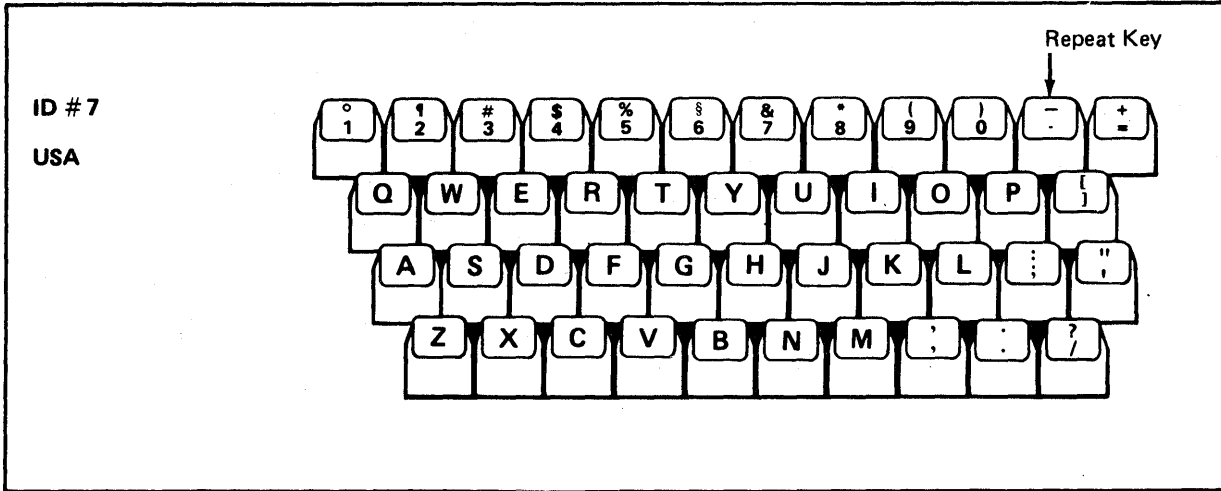


5253/5254 Display Stations (cont'd)

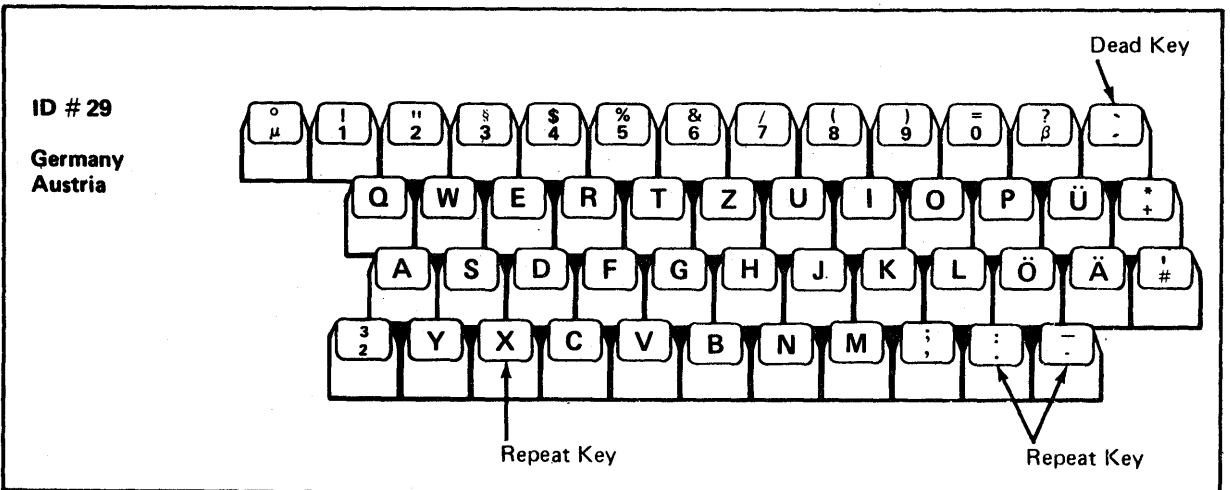
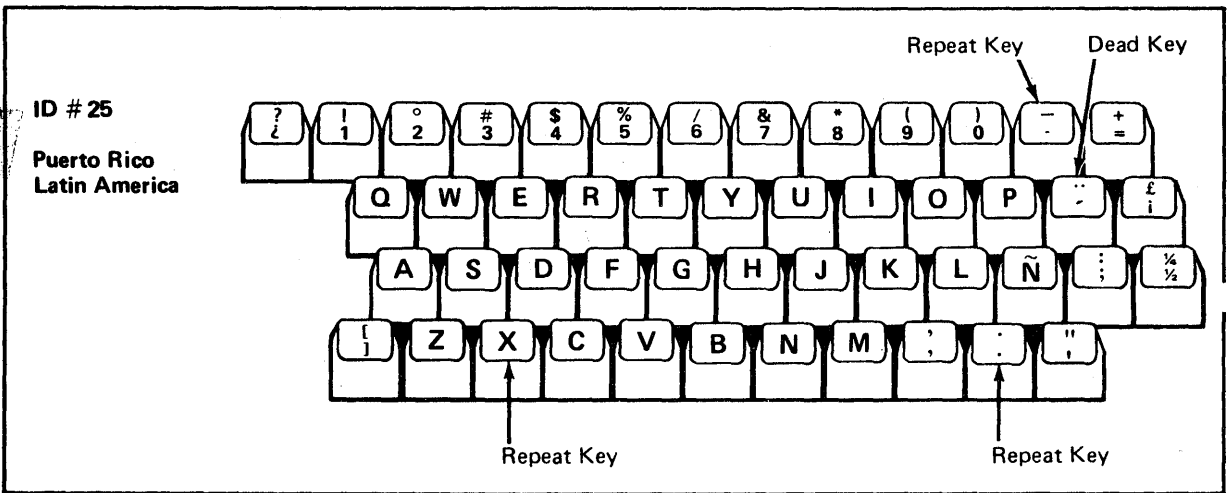
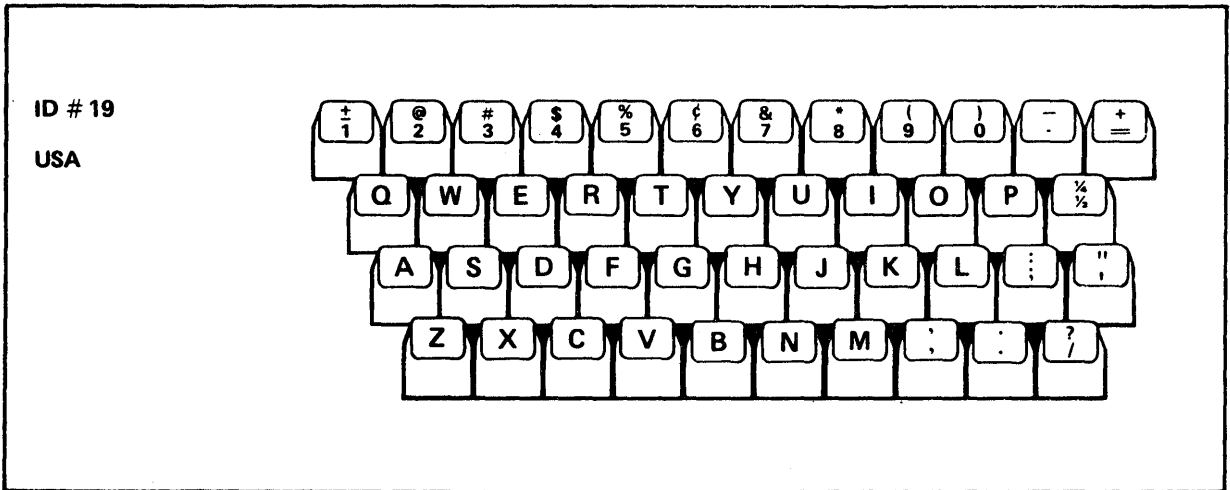


TYPE CATALOG

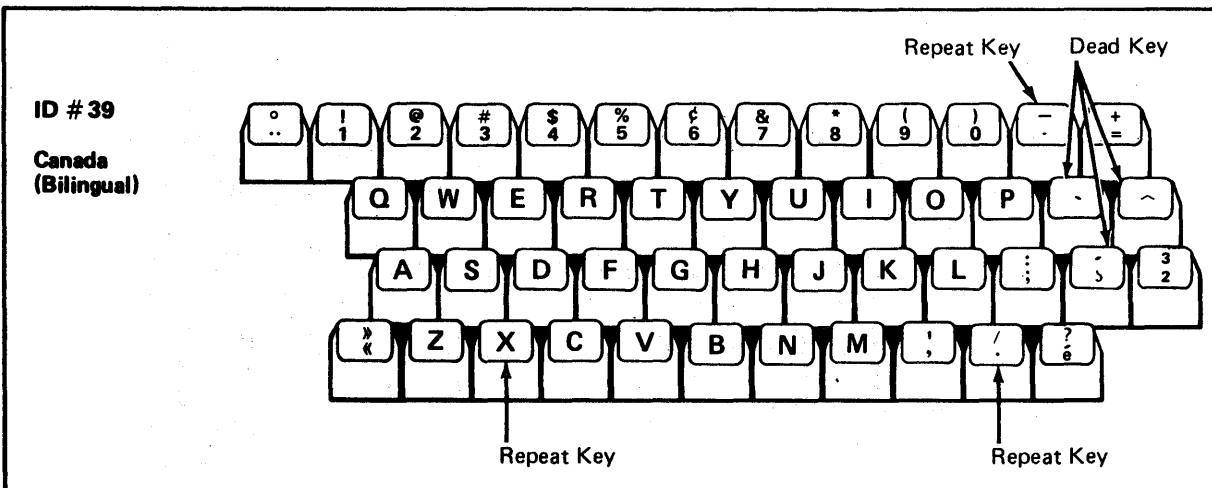
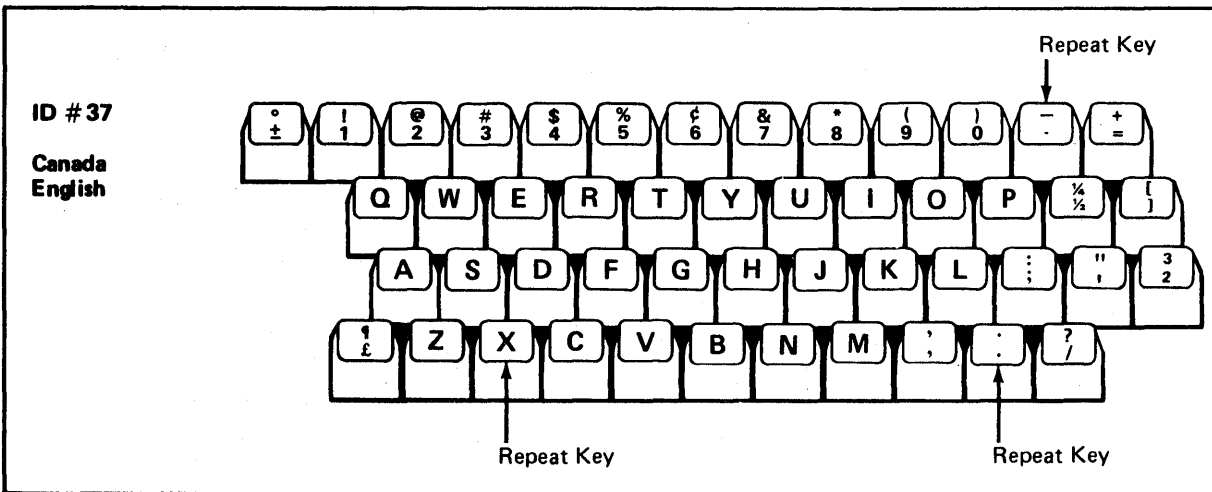
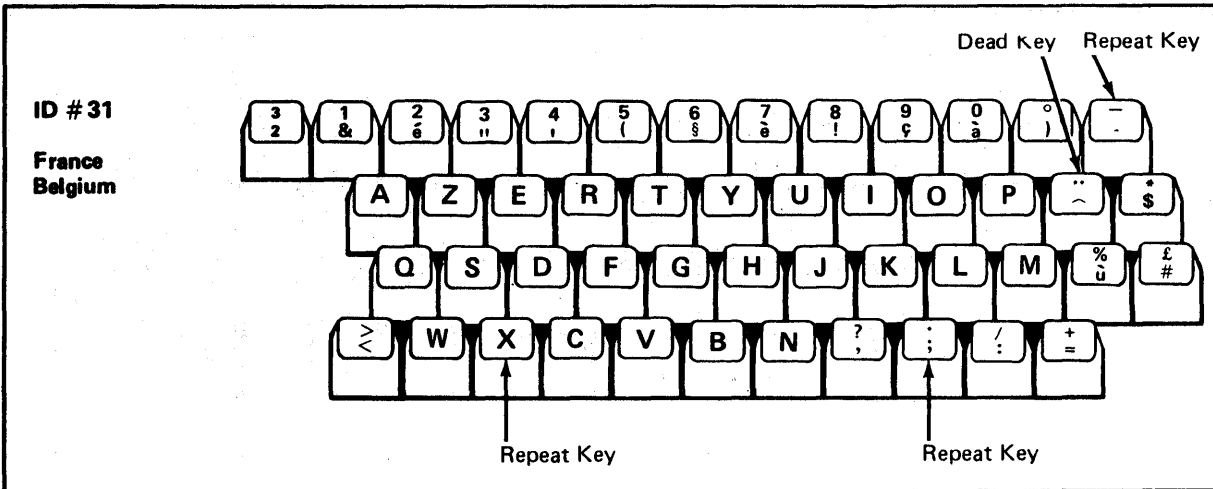
5253/5254 Display Stations (cont'd)



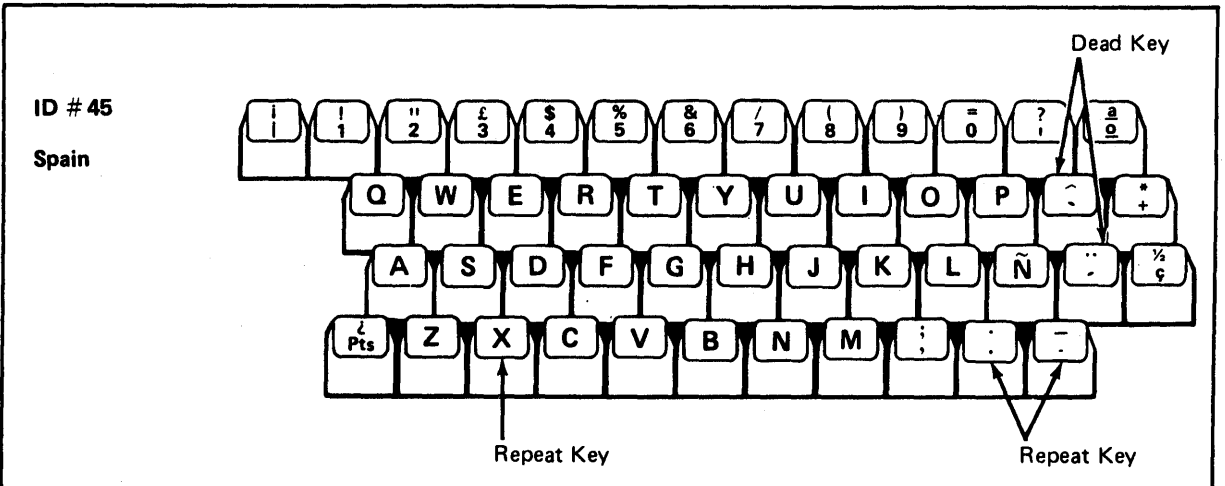
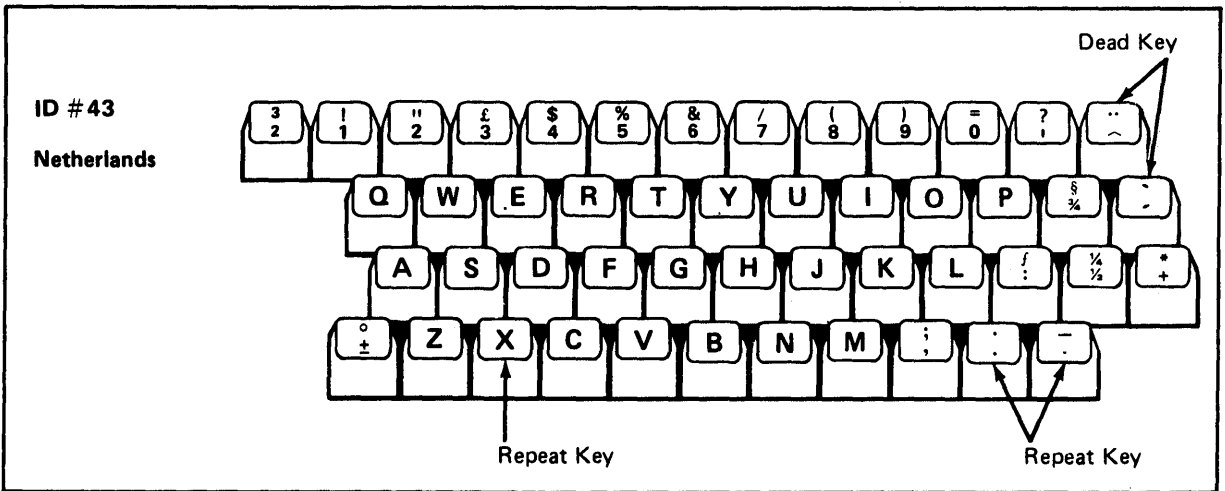
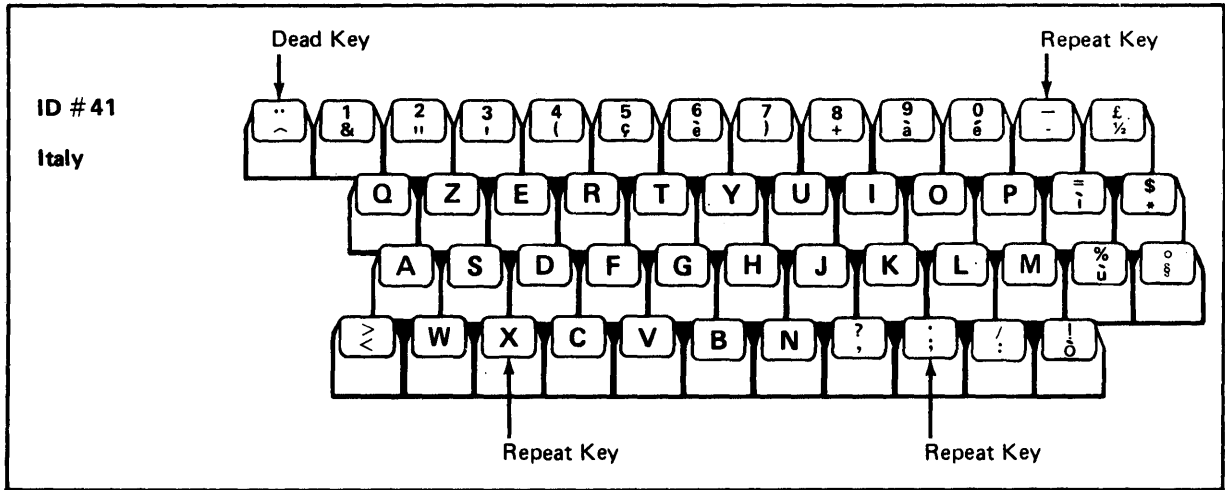
5253/5254 Display Stations (cont'd)



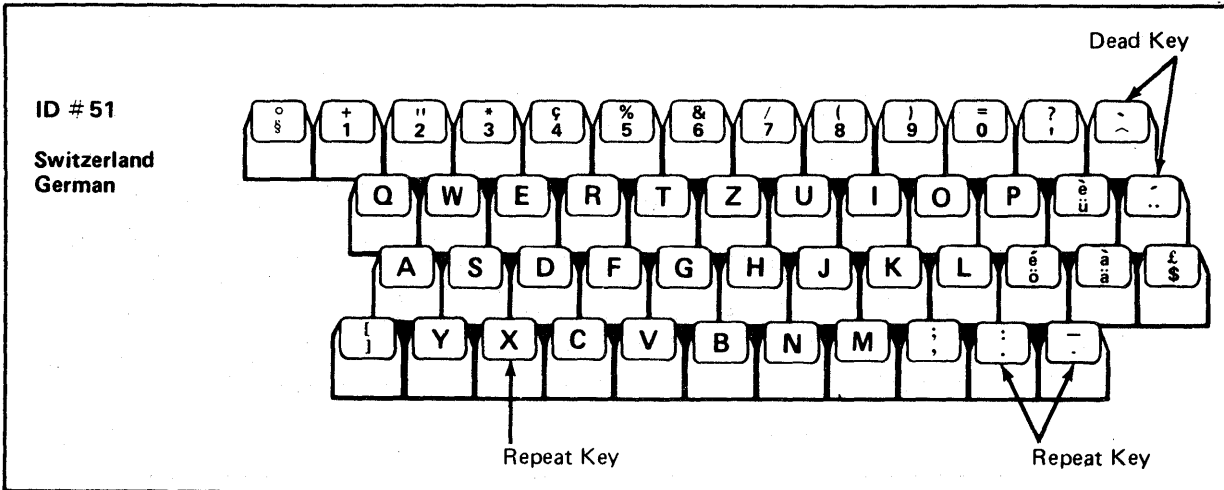
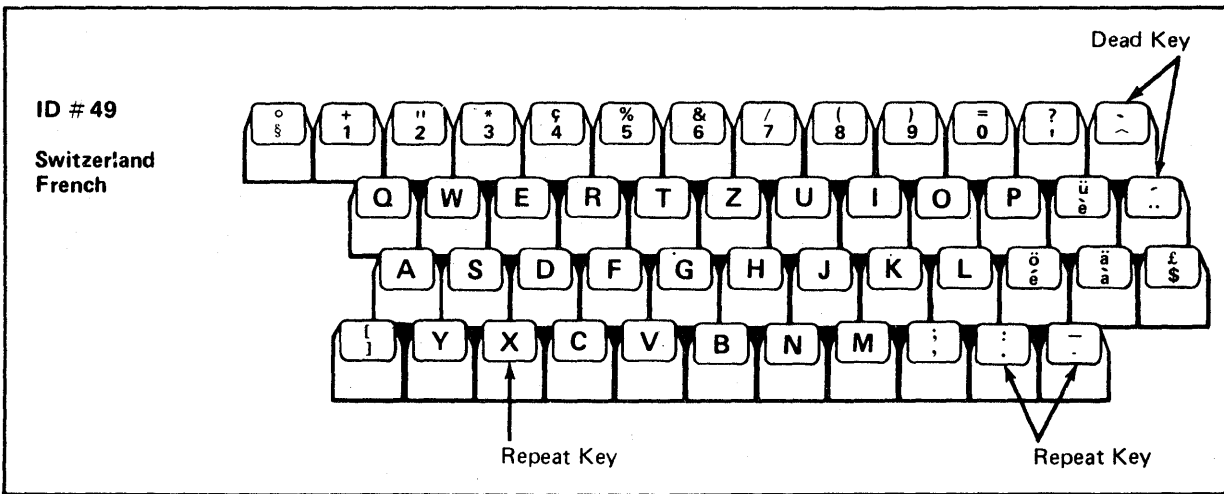
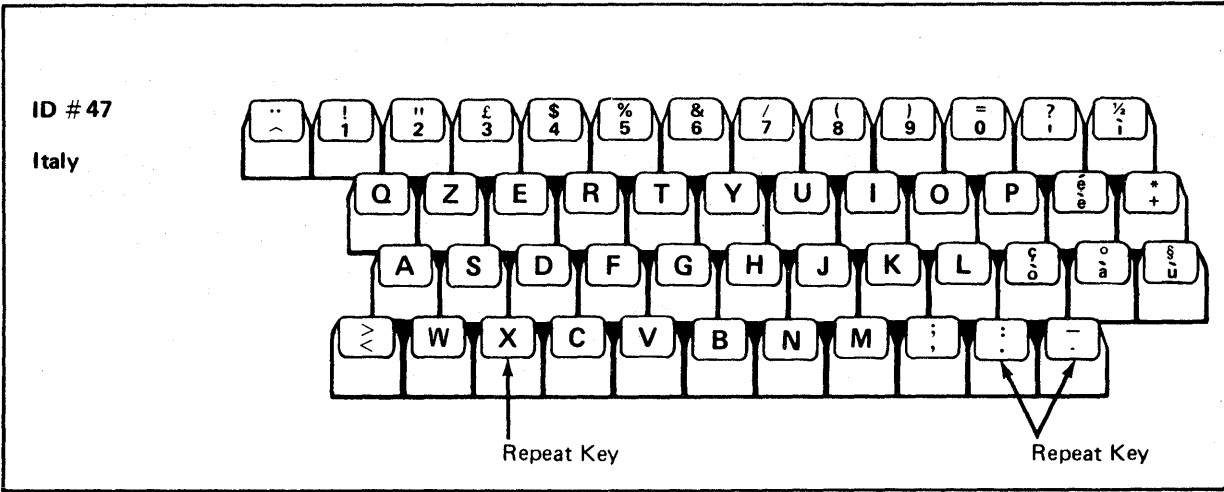
5253/5254 Display Stations (cont'd)



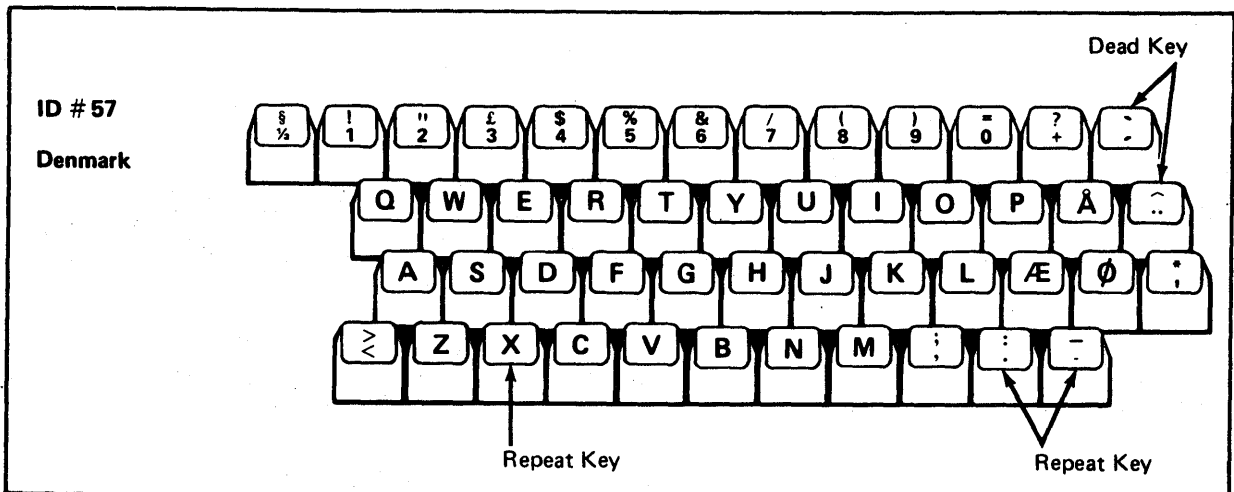
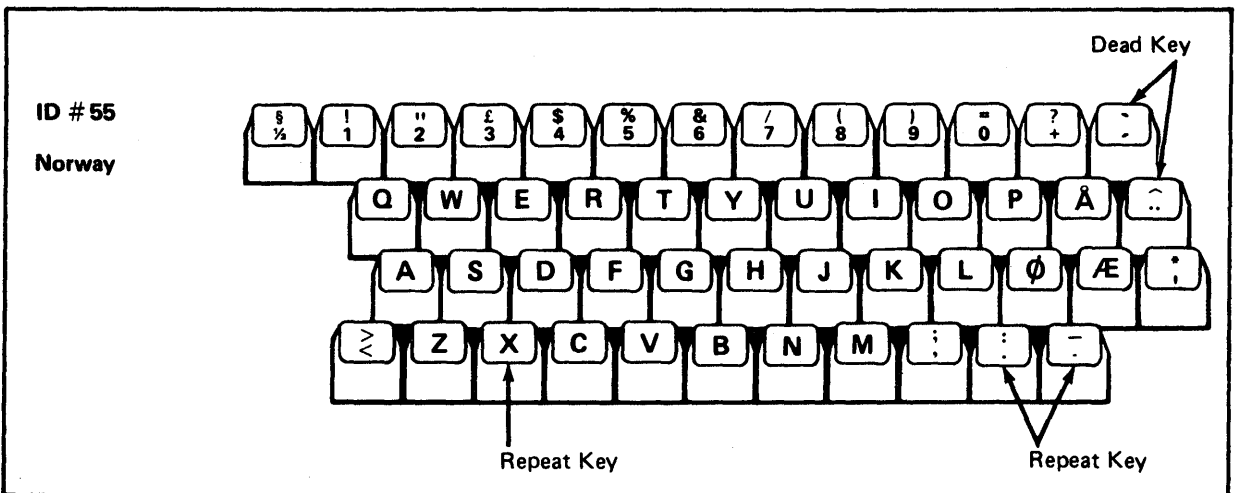
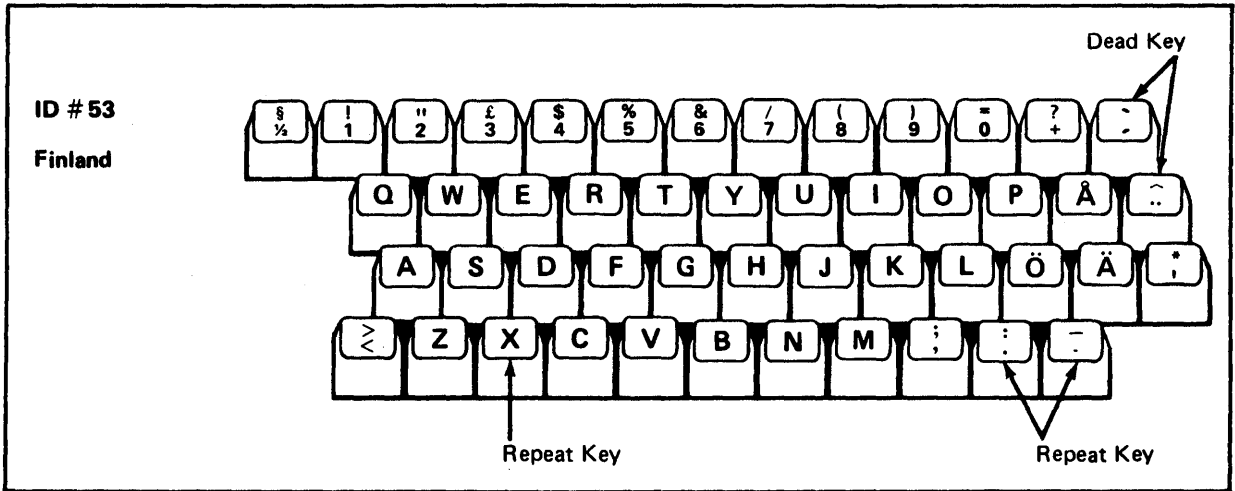
5253/5254 Display Stations (cont'd)



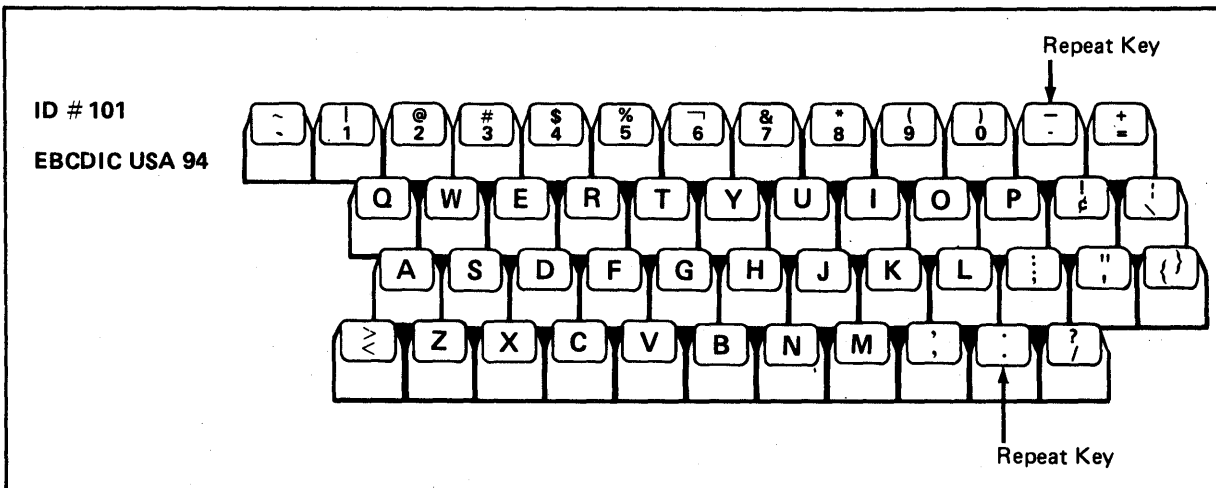
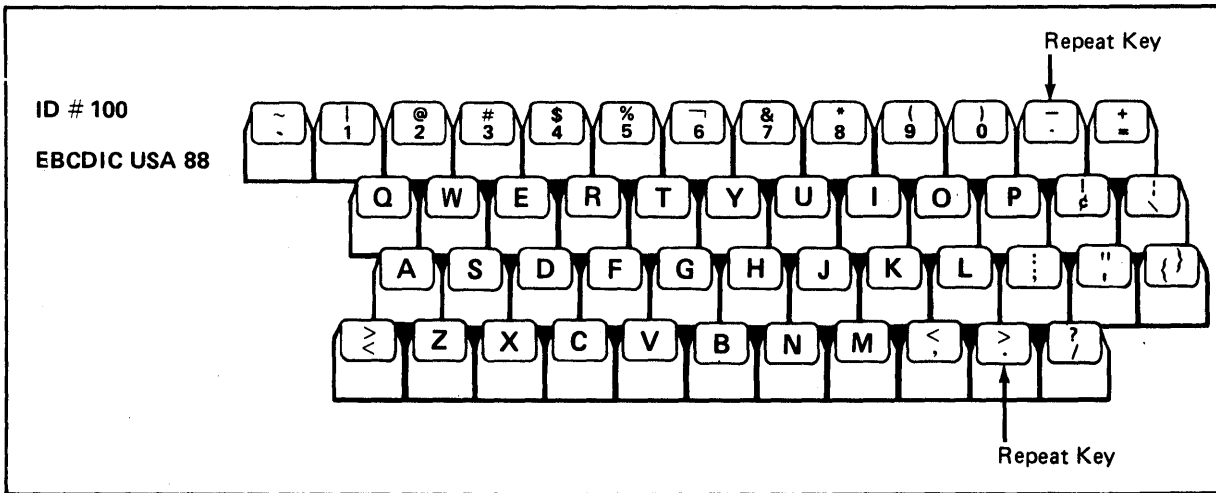
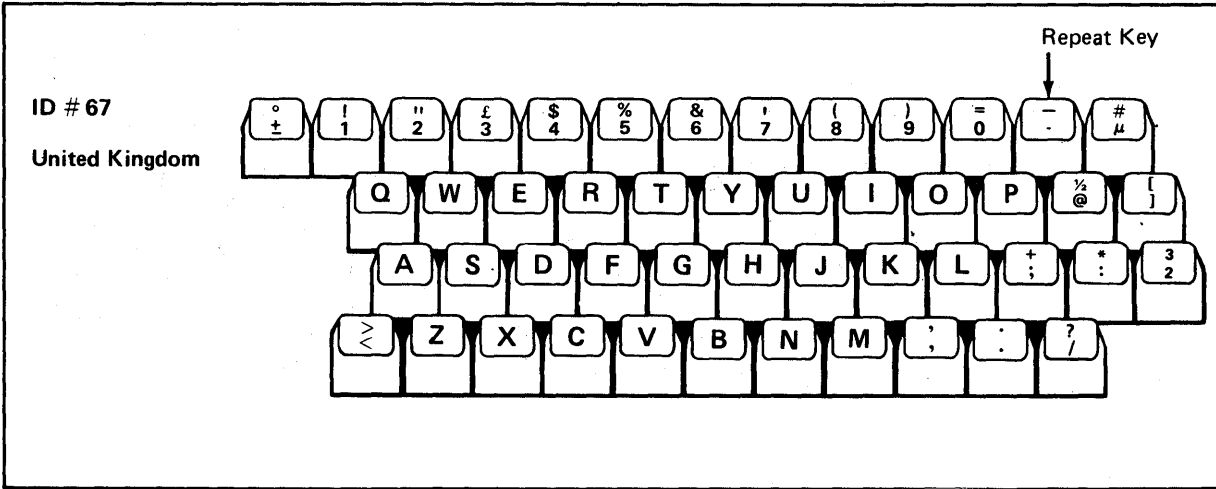
5253/5254 Display Stations (cont'd)



5253/5254 Display Stations (cont'd)



5253/5254 Display Stations (cont'd)

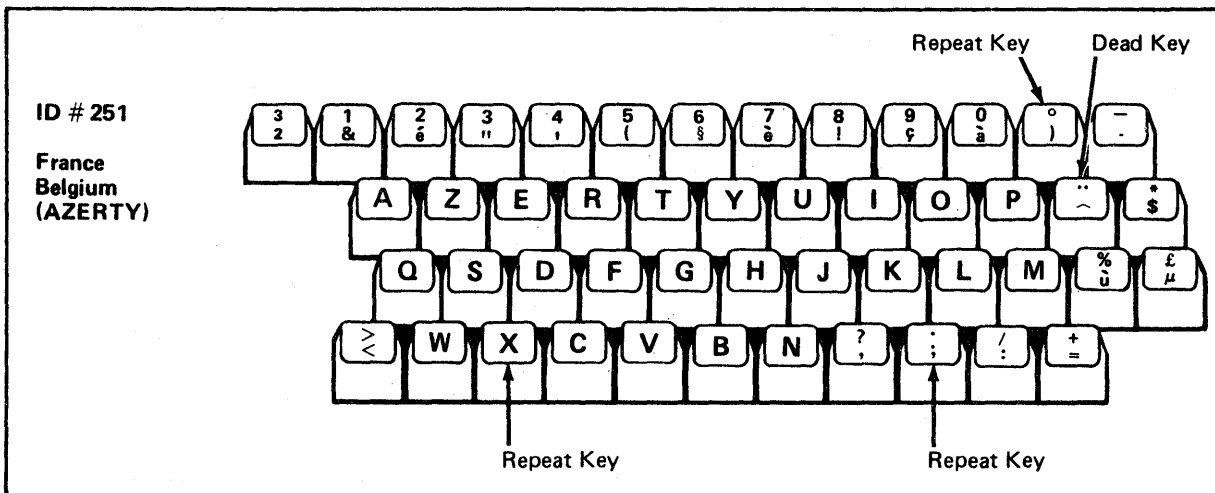


5253/5254 Display Stations (cont'd)

(Symbols printable on the IBM 5258 Printer)

ID # 204
5520

	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13
E		1	2	3	4	5	6	7	8	9	0	=	/		E
D		—	Δ	∞	L	∅	∪	∩	∩	∩	∩	∩	∩	∩	D
C		∇	U	∩	<	∩	∩	∩	∩	∩	∩	∩	∩	∩	C
B		/	{	}	<	∞	∞	∞	∞	∞	∞	∞	∞	∞	B
A															A



5253/5254 Display Stations (cont'd)

IBM 5253/5254 Symbol-Font Character Names For Keyboard ID # 204 (5520)

(Printable on the IBM 5258 Printer)

Keyboard Position	Upper Case Character	Lower Case Character
E00	Greater than or equal to	Less than or equal to
E01	Superscript one	Superscript one
E02	Superscript two	Superscript two
E03	Superscript three	Superscript three
E04	Superscript four	Superscript four
E05	Superscript five	Superscript five
E06	Superscript six	Superscript six
E07	Superscript seven	Superscript seven
E08	Superscript eight	Superscript eight
E09	Superscript nine	Superscript nine
E10	Superscript zero	Superscript zero
E11	Underscore	Double underscore
E12	Superscript diagonal	Superscript equal
D01	Overscore (long)	Throughscore
D02	Superscript delta	Blank substitute
D03	Superscript infinity	Epsilon (l.c.) (is an element)
D04	Right angle	Is not an element
D05	Total	Solid diamond
D06	Breve	Parallel
D07	And	Or
D08	Slash Zero	Therefore
D09	Superscript pi	Solid triangle
D10	Script ell (lc)	Closed circle (large bullet)
D11	Closed box (square)	Pi (lc)
D12	Superscript plus	Superscript minus
C01	Delta	Circle plus (direct sum)
C02	Union (logical sum)	Intersection (logical product)
C03	Includes (is superset of)	Is included in (is subset of)
C04	Less than	Open box (square)
C05	Beaker (bottle)	Minus or plus
C06	Lozenge	Pro mille (per thousand)
C07	Greater than	Angle
C08	Superscript right arrow	Perpendicular
C09	Increase	Decrease
C10	Radical	Reverse slash
C11	Bullet (multiply sign)	Divide sign
C12	Cancelled box	Not equal
B00	Seconds	Minutes
B01	Approximately equal (congruent)	Left brace
B02	Identical with	Right brace
B03	Left square parenthesis	Right square parenthesis
B04	Varies directly as	Multiply sign
B05	Infinity	Trademark
B06	Sine	Prescription
B07	Partial difference	Mu
B08	Short overbar (macron)	International monetary symbol
B09	Dagger	Double dagger
B10	Integral	Cycle (similar or equivalent)

5258 PRINTER

This is Courier Italic, 10, 018

The IBM 5520 Administrative System represents a major opportunity for the development of text processing and electronic document distribution services to a wide variety of organizations.

*ABCDEFGHIJKLMN OPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxy z
 °!@#%&*()_+[½³":?.,¶±1234567890-=]½²';/.,\$*

This is Courier, 10, 011

The IBM 5520 Administrative System represents a major opportunity for the development of text processing and electronic document distribution services to a wide variety of organizations.

ABCDEFGHIJKLMN OPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxy z
 °!@#%&*()_+[½³":?.,¶±1234567890-=]½²';/.,\$

This is Prestige Pica, 10, 012

The IBM 5520 Administrative System represents a major opportunity for the development of text processing and electronic document distribution services to a wide variety of organizations.

ABCDEFGHIJKLMN OPQRSTUVWXYZ
 abcdefghijklmnopqrstuvwxy z
 °!@#%&*()_+[½³":?.,¶±1234567890-=]½²';/.,\$



5258 Printer (cont'd)

This is Artisan, 10, 013

The IBM 5520 Administrative System represents a major opportunity for the development of text processing and electronic document distribution services to a wide variety of organizations.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#\$\$%&ε*()_+[¼³":?.,¶±1234567890-=]½²';/.,§

THIS IS ARTISAN U/C, 10, 014

THE IBM 5520 ADMINISTRATIVE SYSTEM REPRESENTS A MAJOR OPPORTUNITY FOR THE DEVELOPMENT OF TEXT PROCESSING AND ELECTRONIC DOCUMENT DISTRIBUTION SERVICES TO A WIDE VARIETY OF ORGANIZATIONS.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
ABCDEFGHIJKLMNOPQRSTUVWXYZ
°!@#\$\$%&ε*()_+[¼³":?.,¶±1234567890-=]½²';/.,§

This is Bookface Academic, 10, 015

The IBM 5520 Administrative System represents a major opportunity for the development of text processing and electronic document distribution services to a wide variety of organizations.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#\$\$%&* ()_+[¼³":?.,¶±1234567890-=]½²';/.,§

5258 Printer (cont'd)

This is Courier, 12, 085

The IBM 5520 Administrative System represents a major opportunity for the development of text processing and electronic document distribution services to a wide variety of organizations.

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

°!@#%&*()_+[³/₄":?.,¶±1234567890-=]½²';/.,§

This is Prestige Elite, 12 pitch, 086

The IBM 5520 Administrative System represents a major opportunity for the development of text processing and electronic document distribution services to a wide variety of organizations.

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

°!@#%&*()_+[³/₄":?.,¶±1234567890-=]½²';/.,§

This is Letter Gothic, 12, 087

The IBM 5520 Administrative System represents a major opportunity for the development of text processing and electronic document distribution services to a wide variety of organizations.

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

°!@#%&*()_+[³/₄":?.,¶±1234567890-=]½²';/.,§

5258 Printer (cont'd)

This is Essay PSM, 160

The IBM 5520 Administrative System represents a major opportunity for the development of text processing and electronic document distribution services to a wide variety of organizations.

ABCDEFGHIJKLMN**OP**QRSTUVWXYZ
 abcdefghijklmnopqrstuv**xy**z
 °!@#%&*()_+[¼³":?.,¶±1234567890-=]½²';/.,\$

This is Arcadia, PSM, 161

The IBM 5520 Administrative System represents a major opportunity for the development of text processing and electronic document distribution services to a wide variety of organizations.

ABCDEFGHIJKLMN**OP**QRSTUVWXYZ
 abcdefghijklmnopqrstuv**xy**z
 °!@#%&*()_+[¼³":?.,¶±1234567890-=]½²';/.,\$

This is Bold Face, PSM, 159

The IBM 5520 Administrative System represents a major opportunity for the development of text processing and electronic document distribution services to a wide variety of organizations.

ABCDEFGHIJKLMN**OP**QRSTUVWXYZ
 abcdefghijklmnopqrstuv**xy**z
 °!@#%&*()_+[¼³":?.,¶±1234567890-=]½²';/.,\$

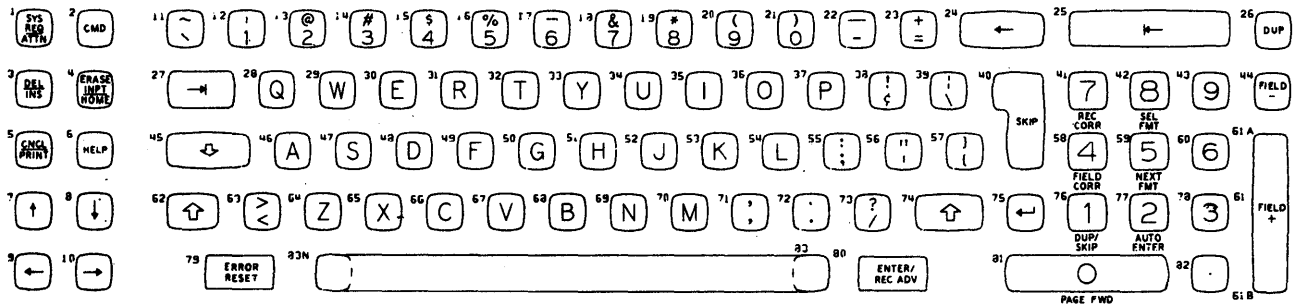
5280 DISTRIBUTED DATA SYSTEM

5280 Display Graphics:

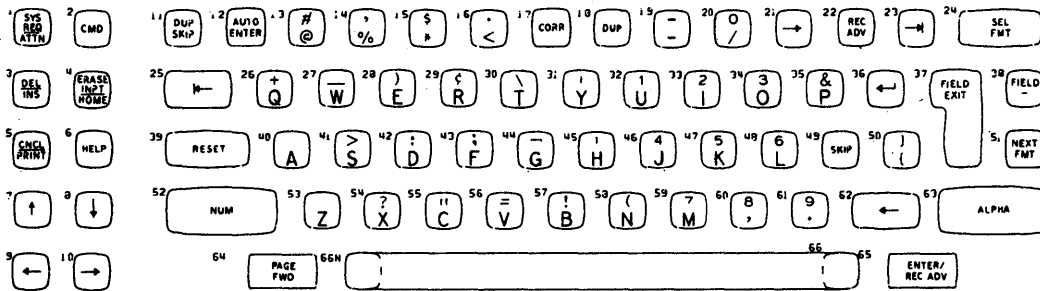
The graphics for each available 5280 character set are illustrated on the following pages. The character sets are presented for reference only. Because of differences in character formation between a printer and a CRT, the printed graphics that follow do not necessarily represent the final appearance of the displayed graphics.

Some system generated special characters are not shown.

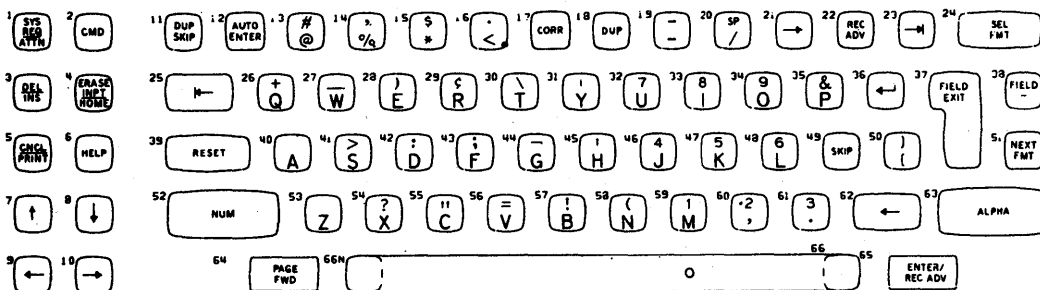
Keyboard Layouts:



4600 EBCDIC Typewriter



4601 Data Entry

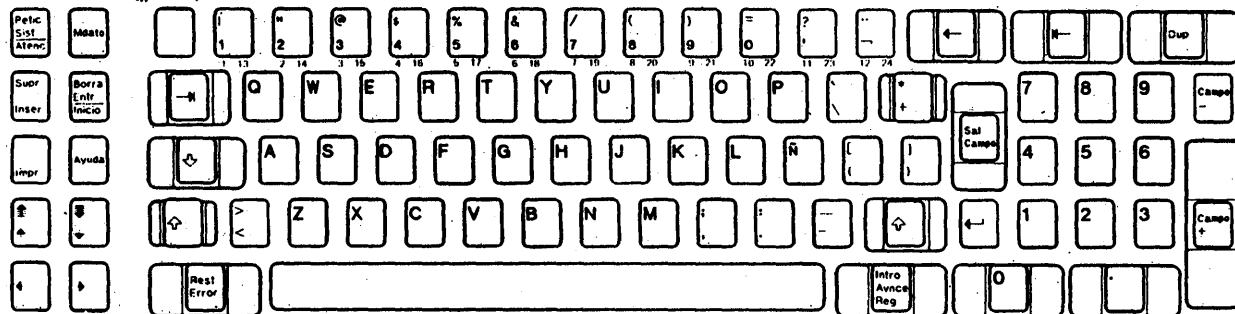


4602 Data Entry with Proof

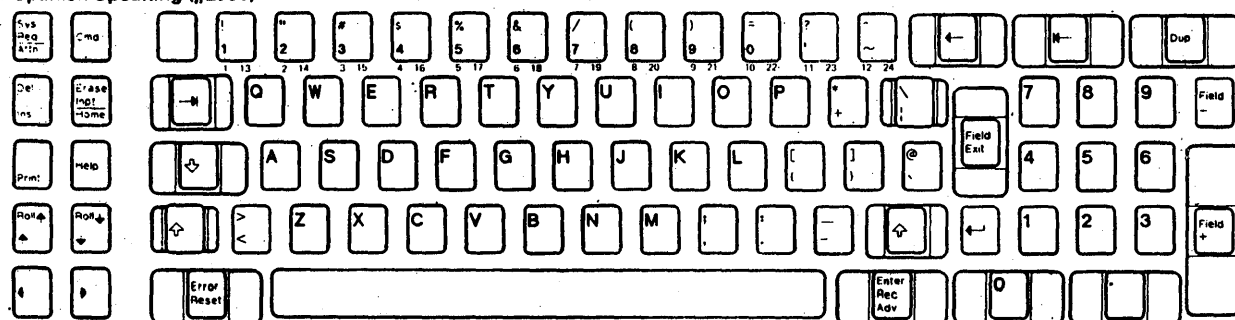
TYPE CATALOG

5291/5292 KEYBOARD LAYOUT

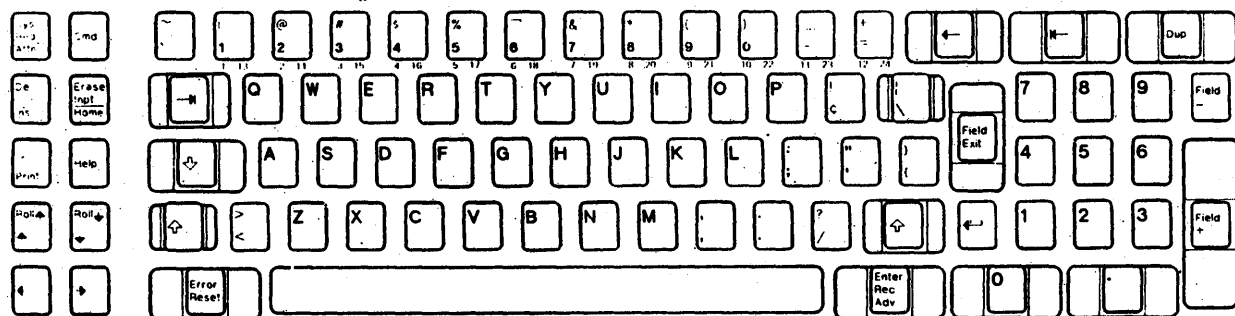
International (#2950)



Spanish Speaking (#2961)



United States and Canada (EBCDIC)(#2956)



5320 SYSTEM UNIT-SYSTEM/32

System/32 character sets provide graphics for the keyboard, the display, and for printing. Any one of these character sets may be specified on the initial 5320 order. The Feature Numbers indicated below apply to plant installation:

Character Set	Feature (A mdl's)		Feature (B and C mdl's)	
	.117"		.079"	.095"
48 (EBCDIC)	N/A		#9491	#9497
64 (EBCDIC)	STD		#9490	#9496
64 (ASCII)	#9370		#9493*	#9498*
96 (Modified Courier)	N/A		N/A	#9499
96 (Artisan)	N/A		N/A	#9487
48 (FORTRAN)	N/A		N/A	#9492

Additional Print Belts (5320 B and C models only): An additional print belt, interchangeable with the one provided with the system may be ordered as an accessory.

Character Set	Feature(s)	
	.079"	.095"
48 (EBCDIC)	#5906	#5911
64 (EBCDIC)	#5905	#5910
64 (ASCII)	#5907	#5912
96 (Modified) Courier)	N/A	#5913
96 (Artisan)	N/A	#5914
48 (FORTRAN)	N/A	#5552

* Also specify #9370 for ASCII keytops and Display Screen graphics.

5320 System Unit (cont'd)

Keyboard Layouts:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
INQ	CMD	|	@	=	\$	%	~	&	.	(	)	-	+	←		FIELD BKSP		REC ADV
20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
PAGE LINE	REC BKSP	FIELD ADV	Q	W	E	R	T	Y	U	I	O	P	|	ENTER	7	8	9	ENTER
39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57
PRINT RESET	DUP	ERROR RESET	A	S	D	F	G	H	J	K	L	:	;	ENTER	4	5	6	
58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76
CODE	→	SHIFT	Z	X	C	V	B	N	M	<	>	?	/	SHIFT	1	2	3	ENTER
74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92
ROLL↑	ROLL↓	REP								REP					0	.		

NOTE:

1. #56 IS MODIFIED FROM "BLANK" TO "CODE" WHEN #3400 IS INSTALLED.

USA - EBCDIC

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
INQ	CMD	|	@	#	\$	%	^	&	.	(	)	-	+	←		FIELD BKSP		REC ADV
20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
PAGE LINE	REC BKSP	FIELD ADV	Q	W	E	R	T	Y	U	I	O	P	|	ENTER	7	8	9	ENTER
39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57
PRINT RESET	DUP	ERROR RESET	A	S	D	F	G	H	J	K	L	:	;	ENTER	4	5	6	
58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76
	→	SHIFT	Z	X	C	V	B	N	M	<	>	?	/	SHIFT	1	2	3	ENTER
74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92
ROLL↑	ROLL↓	REP								REP					0	.		

USA - ASCII

5320 System Unit (cont'd)

In addition to the standard System/32 character sets provided, SCP #6002 provides support for ten modified/substitution arrangements. The options/substitutions are identified in the following table. Template diagramming the keyboard are supplied when Feature #3400 is ordered. For additional templates see Accessories.

KEYBOARD/TEMPLATE NAME	System/32 Key/Display Characters							
	[1	@ 2	^ 6	· 8	+ =	! ¢	< .	> .
KEYBOARD 100 UPPER/LOWER EBCDIC	[1		] 6				± .	° .
AMERICAN STANDARD 101-A	! 1		¢ 6			¼ ½	. .	. .
AMERICAN STANDARD 101-B	± 1		¢ 6			¼ ½	. .	. .
AMERICAN STANDARD 101-C	[]		z 6			° !	. .	. .
AMERICAN STANDARD 101-D	± 1		¢ 6			° !	. .	. .
LEGAL-149	° 1	¶ 2	§ 6			[ ]	. .	. .
LEGAL - 177	° 1	¶ 2	§ 6			¼ ½	. .	. .
PICA - 146	[]		¢ 6			° @	. .	. .
ACCOUNTING 172*	± 1	-	¢ 6		≡ ¼	+ =	. .	. .
ACCOUNTING 174*	! 1		+ 6	£ 8	≡ =	* ¢	. .	. .

* The double underscore character is printable only thru Mag Card playback with the supporting print element on OPD Mag Card devices. Double underscore prints as a single underscore.

5320 "A" Models (Serial Printing) 64 Character Set Array:

ABCDEFGHIJKLMN OPQRSTUVWXYZ1234567890
 . < (+ *) ; - / , % _) ? ' = " ¢ ! ! \$ - ¢ @ \

Note: "Space" is considered as one of the 64 characters.

5320 "B and C" Models Upper/Lower Case Print Belt Type Styles:

Artisan (#9487, #5914)

ABCDEFGHIJKLMN OPQRSTUVWXYZ[@# \$ %] & * () _ + ! : " ; ± ° ? ¶ % § £ ¢ ¢
 abcdefghijklmnopqrstuvwxyz1234567890--=¢;'.•./½@

Modified Courier (#9499, #5913)

ABCDEFGHIJKLMN OPQRSTUVWXYZ# @ / 6, Z - 5 + . * ¢ ([]) ; % : _ ° ? : = " ± § ¢ ¶ % §
 abcdefghijklmnopqrstuvwxyz1234567890



TYPE CATALOG

5320 System Unit (cont'd)

Print Belt Character Sets:

48 Character EBCDIC

Table with 4 columns: POSITION NO, CHAR, POSITION NO, CHAR. Lists character mappings for 48-character EBCDIC.

64 Character EBCDIC

Table with 4 columns: POSITION NO, CHAR, POSITION NO, CHAR. Lists character mappings for 64-character EBCDIC.

64 Character ASCII

Table with 4 columns: POSITION NO, CHAR, POSITION NO, CHAR. Lists character mappings for 64-character ASCII.

96 Character (upper & lower case) Artisan & Modified Courier Supported by: F.C. #3400, 4530

Table with 4 columns: POSITION NO, CHAR, POSITION NO, CHAR. Lists character mappings for 96-character Artisan & Modified Courier.

96 Character (upper & lower case) RPO GG0339 Not compatible with F.C. #3400

Table with 4 columns: POSITION NO, CHAR, POSITION NO, CHAR. Lists character mappings for 96-character RPO GG0339.

FORTRAN 48 CHARACTER

Table with 2 columns: POSITION NO, CHAR. Lists character mappings for FORTRAN 48-character set.

5340 SYSTEM UNIT – SYSTEM/34

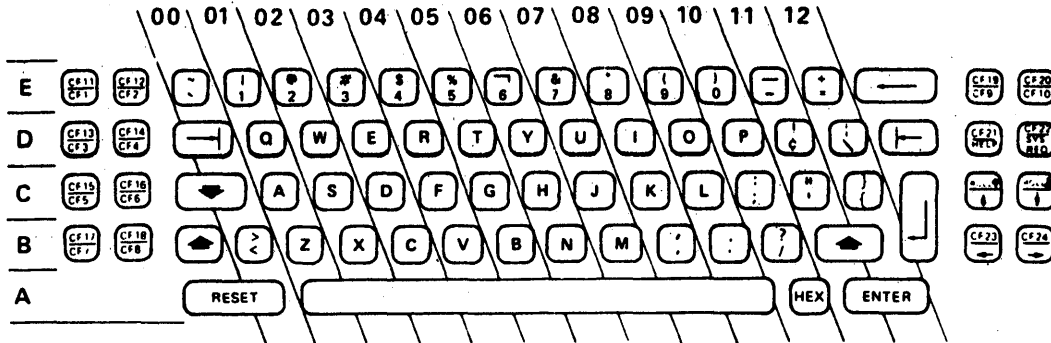
There are no System/34 printer or display units. However, the following IBM printers and display units can be used with the System/34:

- 3262 Printer (Mdl B1 only)
- 5211 Printer (Mdl 1 and 2)
- 5225 Printer
- 5251 Display Station
- 5252 Dual Display Station
- 5256 Printer

For information on these products, refer to the individual "Machine" or "Type Catalog" pages.

5381 KEYBOARDS AND HEX CODES

United States (#2956)



US Keyboard-Generated Hex Codes for US Character Set (#9540)

US Keyboard-Generated Hex Codes for Multinational Character Set (#9535)

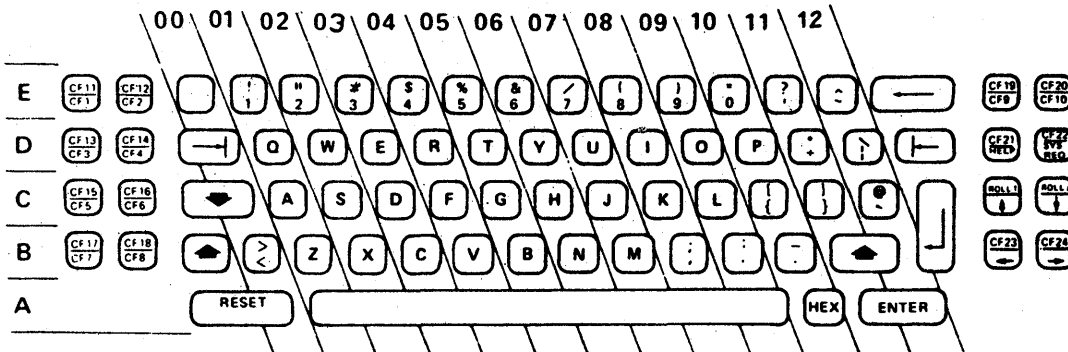
Graphic	Hex Code	Location	Graphic	Hex Code	Location	Graphic and Description	Hex Code	Location
A	C1	C01/UC	a	81	C01/LC	0 Numeric Zero	F0	E10/LC
B	C2	B05/UC	b	82	B05/LC	1 Numeric One	F1	E01/LC
C	C3	B03/UC	c	83	B03/LC	2 Numeric Two	F2	E02/LC
D	C4	C03/UC	d	84	C03/LC	3 Numeric Three	F3	E03/LC
E	C5	D03/UC	e	85	D03/LC	4 Numeric Four	F4	E04/LC
F	C6	C04/UC	f	86	C04/LC	5 Numeric Five	F5	E05/LC
G	C7	C05/UC	g	87	C05/LC	6 Numeric Six	F6	E06/LC
H	C8	C06/UC	h	88	C06/LC	7 Numeric Seven	F7	E07/LC
I	C9	D08/UC	i	89	D08/LC	8 Numeric Eight	F8	E08/LC
J	D1	C07/UC	j	91	C07/LC	9 Numeric Nine	F9	E09/LC
K	D2	C08/UC	k	92	C08/LC			
L	D3	C09/UC	l	93	C09/LC			
M	D4	B07/UC	m	94	B07/LC	Grave Accent	79	E00/LC
N	D5	B06/UC	n	95	B06/LC	Broken Vertical Line	6A	D12/UC
O	D6	D09/UC	o	96	D09/LC	Tilde	A1	E00/UC
P	D7	D10/UC	p	97	D10/LC	{ Left Brace	C0	C12/LC
Q	D8	D01/UC	q	98	D01/LC	} Right Brace	D0	C12/UC
R	D9	D04/UC	r	99	D04/LC	Logical Not	5F	E06/UC
S	E2	C02/UC	s	A2	C02/LC	\ Reverse Slant	E0	D12/LC
T	E3	D05/UC	t	A3	D05/LC	Space	40	A01-09
U	E4	D07/UC	u	A4	D07/LC	ˆ Cent Sign	4A	D11/LC
V	E5	B04/UC	v	A5	B04/LC	˙ Period	4B	B09/LC
W	E6	D02/UC	w	A6	D02/LC	< Less Than	4C	B00/LC
X	E7	B02/UC	x	A7	B02/LC	(Left Parenthesis	4D	E09/UC
Y	E8	D06/UC	y	A8	D06/LC	+ Plus Sign	4E	E12/UC
Z	E9	B01/UC	z	A9	B01/LC	| Logical Or	4F	E01/UC
						& Ampersand	50	E07/UC
						! Exclamation Mark	5A	D11/UC
						\$ Dollar Sign	5B	E04/UC
						* Asterisk	5C	E08/UC
						) Right Parenthesis	5D	E10/UC
						; Semicolon	5E	C10/LC
						- Minus Sign	60	E11/LC
						/ Slash	61	B10/LC
						, Comma	6B	B08/LC
						% Percent Sign	6C	E05/UC
						_ Underscore	6D	E11/UC
						> Greater Than	6E	B00/UC
						? Question Mark	6F	B10/UC
						: Colon	7A	C10/UC
						# Number Sign	7B	E03/UC
						@ At Sign	7C	E02/UC
						' Apostrophe	7D	C11/LC
						= Equal Sign	7E	E12/LC
						" Quotation Mark	7F	C11/UC

Graphic	Hex Code	Location	Graphic	Hex Code	Location	Graphic and Description	Hex Code	Location
A	C1	C01/UC	a	81	C01/LC	0 Numeric Zero	F0	E10/LC
B	C2	B05/UC	b	82	B05/LC	1 Numeric One	F1	E01/LC
C	C3	B03/UC	c	83	B03/LC	2 Numeric Two	F2	E02/LC
D	C4	C03/UC	d	84	C03/LC	3 Numeric Three	F3	E03/LC
E	C5	D03/UC	e	85	D03/LC	4 Numeric Four	F4	E04/LC
F	C6	C04/UC	f	86	C04/LC	5 Numeric Five	F5	E05/LC
G	C7	C05/UC	g	87	C05/LC	6 Numeric Six	F6	E06/LC
H	C8	C06/UC	h	88	C06/LC	7 Numeric Seven	F7	E07/LC
I	C9	D08/UC	i	89	D08/LC	8 Numeric Eight	F8	E08/LC
J	D1	C07/UC	j	91	C07/LC	9 Numeric Nine	F9	E09/LC
K	D2	C08/UC	k	92	C08/LC			
L	D3	C09/UC	l	93	C09/LC			
M	D4	B07/UC	m	94	B07/LC	Grave Accent	79	E00/LC
N	D5	B06/UC	n	95	B06/LC	Broken Vertical Line	6A	D12/UC
O	D6	D09/UC	o	96	D09/LC	Tilde	A1	E00/UC
P	D7	D10/UC	p	97	D10/LC	{ Left Brace	C0	C12/LC
Q	D8	D01/UC	q	98	D01/LC	} Right Brace	D0	C12/UC
R	D9	D04/UC	r	99	D04/LC	Logical Not	BA	E06/UC
S	E2	C02/UC	s	A2	C02/LC	\ Reverse Slant	E0	D12/LC
T	E3	D05/UC	t	A3	D05/LC	Space	40	A01-09
U	E4	D07/UC	u	A4	D07/LC	ˆ Cent Sign	80	D11/LC
V	E5	B04/UC	v	A5	B04/LC	˙ Period	4B	B09/LC
W	E6	D02/UC	w	A6	D02/LC	< Less Than	4C	B00/LC
X	E7	B02/UC	x	A7	B02/LC	(Left Parenthesis	4D	E09/UC
Y	E8	D06/UC	y	A8	D06/LC	+ Plus Sign	4E	E12/UC
Z	E9	B01/UC	z	A9	B01/LC	| Logical Or	BB	E01/UC
						& Ampersand	50	E07/UC
						! Exclamation Mark	4F	D11/UC
						\$ Dollar Sign	5B	E04/UC
						* Asterisk	5C	E08/UC
						) Right Parenthesis	5D	E10/UC
						; Semicolon	5E	C10/LC
						- Minus Sign	60	E11/LC
						/ Slash	61	B10/LC
						, Comma	6B	B08/LC
						% Percent Sign	6C	E05/UC
						_ Underscore	6D	E11/UC
						> Greater Than	6E	B00/UC
						? Question Mark	6F	B10/UC
						: Colon	7A	C10/UC
						# Number Sign	7B	E03/UC
						@ At Sign	7C	E02/UC
						' Apostrophe	7D	C11/LC
						= Equal Sign	7E	E12/LC
						" Quotation Mark	7F	C11/UC

TYPE CATALOG

5381 Keyboards and Hex Codes (cont'd)

International (#2950)



International Keyboard-Generated Hex Codes for Multinational Character Set (#9535)

Graphic	Hex Code	Location	Graphic	Hex Code	Location	Graphic and Description	Hex Code	Location
A	C1	C01/UC	a	81	C01/LC	0 Numeric Zero	F0	E10/LC
B	C2	B05/UC	b	82	B05/LC	1 Numeric One	F1	E01/LC
C	C3	B03/UC	c	83	B03/LC	2 Numeric Two	F2	E02/LC
D	C4	C03/UC	d	84	C03/LC	3 Numeric Three	F3	E03/LC
E	C5	D03/UC	e	85	D03/LC	4 Numeric Four	F4	E04/LC
F	C6	C04/UC	f	86	C04/LC	5 Numeric Five	F5	E05/LC
G	C7	C05/UC	g	87	C05/LC	6 Numeric Six	F6	E06/LC
H	C8	C06/UC	h	88	C06/LC	7 Numeric Seven	F7	E07/LC
I	C9	D08/UC	i	89	D08/LC	8 Numeric Eight	F8	E08/LC
J	D1	C07/UC	j	91	C07/LC	9 Numeric Nine	F9	E09/LC
K	D2	C08/UC	k	92	C08/LC			
L	D3	C09/UC	l	93	C09/LC			
M	D4	B07/UC	m	94	B07/LC	' Apostrophe	7D	E11/LC
N	D5	B06/UC	n	95	B06/LC	= Equal Sign	7E	E10/UC
O	D6	D09/UC	o	96	D09/LC	" Quotation Mark	7F	E02/UC
P	D7	D10/UC	p	97	D10/LC	~ Tilde	A1	E12/LC
Q	D8	D01/UC	q	98	D01/LC	{ Left Brace	C0	C10/LC
R	D9	D04/UC	r	99	D04/LC	} Right Brace	D0	C11/LC
S	E2	C02/UC	s	A2	C02/LC	\ Reverse Slant	E0	D12/UC
T	E3	D05/UC	t	A3	D05/LC	Space	40	A01-Q9
U	E4	D07/UC	u	A4	D07/LC	[Open Bracket	4A	C10/UC
V	E5	B04/UC	v	A5	B04/LC	. Period	4B	B09/LC
W	E6	D02/UC	w	A6	D02/LC	< Less Than	4C	B00/LC
X	E7	B02/UC	x	A7	B02/LC	(Left Parenthesis	4D	E08/UC
Y	E8	D06/UC	y	A8	D06/LC	+ Plus Sign	4E	D11/LC
Z	E9	B01/UC	z	A9	B01/LC	! Exclamation Mark	4F	E01/UC
						& Ampersand	50	E06/UC
						] Close Bracket	5A	C11/UC
						\$ Dollar Sign	5B	E04/UC
						* Asterisk	5C	D11/UC
						) Right Parenthesis	5D	E09/UC
						; Semicolon	5E	B08/UC
						^ Circumflex	5F	E12/UC
						- Minus Sign	60	B10/LC
						/ Slash	61	E07/UC
						| Broken Vertical Line	6A	D12/LC
						, Comma	6B	B08/LC
						% Percent Sign	6C	E05/UC
						_ Underscore	6D	B10/UC
						> Greater Than	6E	B00/UC
						? Question Mark	6F	E11/UC
						Grave Accent	79	C12/LC
						: Colon	7A	B09/UC
						# Number Sign	7B	E03/UC
						@ At Sign	7C	C12/UC

**6240 MAG CARD TYPEWRITER
KEYBOARD SUPPORT****IBM 6240 MAG CARD TYPEWRITER KEYBOARD**

A 92-character keyboard is standard on the IBM 6240. A 96-character keyboard is available at the time of order as a no-charge option. It is recommended that legal customers order a 96-character keyboard. The IBM 6240 does not offer an 88 or 94-character keyboard. However, the IBM 6240 does support 88 or 94-character keyboards.

STANDARD/OPTIONAL KEYBOARD SWITCH

The Standard/Optional Keyboard switch enables compatibility with magnetic cards created on 88-character keyboards. At the time of the order, the customer should select either a 92 - or 96 - character keyboard. If the IBM 6240 needs to support magnetic card typewriters with 88-character keyboards, an "optional" keyboard must be selected to ensure card compatibility. *The Standard/Optional Keyboard switch allows the IBM 6240 to support only one other 88-character keyboard arrangement that requires the optional switch. See the keyboard support chart to determine which 88-character keyboards require the optional switch. If the working environment to be supported consists of more than one 88-character keyboard arrangement that requires the optional switch, a decision must be made as to which one keyboard arrangement will be supported by the Optional Keyboard switch.*

The differences between the 92/96-character keyboards and 88-character keyboards are:

- The electronic connection that converts 92/96-character keyboards to 88-character keyboards.
- Additional keybuttons.

When the keyboard switch is in the Optional position, the operator types on the IBM 6240 as if it were an 88-character keyboard. The operator will ignore the keybutton engravings on the 92/96 character keyboard. The additional keybuttons are inoperative in the Optional mode. Dual engraved keybuttons are available on an SER basis.

The Optional Keyboard is provided by an electronic connection that converts a 92/96-character keyboard to the 88-character keyboard ID selected at the time of order. Magnetic cards created by mag card typewriters (88-character keyboards) other than the IBM 6240 must be played out and revised in the Optional Keyboard mode. Magnetic cards recorded at the IBM 6240 using ID 2 (88-character keyboard) should be revised and played back in the Standard mode. Even though ID 2 is an 88-character keyboard, magnetic cards created at the IBM 6240 do not need electronic conversion like magnetic cards created at other 88-character keyboards.

ORDERING INFORMATION

STANDARD KEYBOARDS	FEATURE CODE
92-character (ID 1 & 2)	Standard
96-character (ID 1 & 2)	7843
96-character Latin America (ID 25)	7916

The keyboard arrangements for IDs 17, 19, 101, 103 are included in the above keyboards when the proper print wheel is selected. (Extended Font Feature required for communications of these four ID's.) Reference IBM 6240 Keyboard Support Chart in this chapter.

**6240 Mag Card Typewriter Keyboard Support
(cont'd)**

OPTIONAL KEYBOARDS ID (ELECTRONIC CONNECTION)	FEATURE CODE
ID 3 (American Standard *)	5209
ID 4 (American Standard*)	5210
ID 5 (American Standard*)	5211
ID 6 (Legal*)	5212
ID 7 (Legal*)	5213
ID 8 (Legal*)	5214
ID 24 (Latin America)	5150

*Reference IBM 6240 Keyboard Support Chart in this chapter for correct keybutton positions in positions 0 and 41.

IBM 6240 USA KEYBOARD SUPPORT-ELECTRONIC

ID		Number Characters	"Selectric" Keyboard Reference No.	Keybutton Position		
				0	41	
1	American Standard	92/96	-	! 1	1/4	1/2
2	American Standard	88	101	! 1	1/4	1/2
3*	American Standard	88	101	± 1	1/4	1/2
4*	American Standard	88	101	[]	°	!
5*	American Standard	88	101	± 1	°	!
6*	Legal	88	017	[]	°	!
7*	Legal	88	149 177	° !	[]	
8*	Legal	88	177	° !	1/4	1/2
24* and **	Latin America	88	414 948 002			

*Requires keyboard switch in "OPT" position and proper electronic connection (plant order or field connected by Customer Engineering). *Only one "OPT" keyboard can be selected.*

** For communication operation the Extended Font Feature is required. Send SER to Mag Media Products, Dept. 539/993-5, Austin.



6240 Mag Card Typewriter Keyboard Support
(cont'd)

IBM 6240 USA KEYBOARD SUPPORT-PRINT WHEEL

ID		Number Characters	"Selectric" Keyboard Reference No.	Position
17	Accounting	88	172	Keyboard switch in "STD" position-- print wheel part no. 1257611** & 1257697
19	Accounting	88	195	Keyboard switch in "STD" position-- print wheel part no. 1257614 **
101	EBCDIC	96		Keyboard switch in "STD" position-- print wheel part no. 1257613 **
103	ASCII	96		Keyboard switch in "STD" position-- print wheel part no. 1257612 **

** For communication operation the Extended Font Feature is required. Send SER to Mag Media Products, Dept. 539/993-5, Austin.

UNSUPPORTED KEYBOARDS

WP/32 USA Keyboards Not Supported By IBM 6240

ID	"SELECTRIC" KEYBD. REF. NO.	
9	046	Registered Trade Mark

IBM 6240 USA Keyboards Not Supported By IBM WP/32

ID	"SELECTRIC" KEYBD. REF. NO.	
6	017	Legal

IBM OS/6 USA Keyboards Not Supported By IBM 6240

ID	"SELECTRIC" KEYBD. REF. NO.	
18	174	Accounting

"Selectric"/Mag Card USA Keyboards Not Supported By IBM 6240

The USA keyboards supported by the IBM 6240 are listed on the IBM 6240 Keyboard Support Chart. All other mag media keyboards such as SER keyboards/custom elements, 048 Court Reporter, OCR, etc., are not supported.



6240 Mag Card Typewriter Keyboard Support (cont'd)

PRINT WHEELS

The print wheels for the IBM 6240 are comprised of 96 characters (see 96 character keyboard illustration) and support all keyboards supported by IBM 6240 with the exception of three keyboard groups. The IBM 6240 Accounting print wheels must be used for ID's 17 and 19. The Communication print wheels must be used for ID 101 (EBCDIC) and ID 103 (ASCII). All foreign languages use different print wheels. These three keyboard groups also require the Extended Font Feature for Communications.

TYPE STYLES

STYLE CODE	TYPE STYLE	KEYBOARD ID SUPPORT	PART NUMBER
086	Prestige Elite	1 - 8	1257504
011	Courier 10	1 - 8	1257503
087	Letter Gothic	1 - 8	1257506
012	Prestige Pica	1 - 8	1257507
086	Prestige Elite (Accounting)	17	1257611
086	Prestige Elite (Accounting)	19	1257614*
011	Courier 10 (ASCII)	103	1257612
011	Courier 10 (EBCDIC)	101	1257613
085	Courier 12	1-8	1257638
012	Prestige Pica Accounting	17	1257697
195	Mag Card Symbol	N/A	1257617
019	OCR-A	1-8	1257696 **
005	Rhetoric	1-8	1257722 ***
091	Lt. Italic	1-8	1257654

Latin America

STYLE CODE	TYPE STYLE	KEYBOARD ID SUPPORT	PART NUMBER
086	Prestige Elite	24-25	1257570
011	Courier 10	24-25	1257569
087	Letter Gothic	24-25	1257572
012	Prestige Pica	24-25	1257573
085	Courier 12	25	1257646
091	Lt. Italic	25	1257662

*The Prestige Elite Accounting print wheel Part Number 1257614 should not be used with the IBM 6/442 and /6452. ID 19 on the IBM 6/442 and 6/452 can be accessed with print wheel part number 1257611 and ID 19 selected in the Master Format Frame.

**SER only.

***Not available on equipment orders. Additionally, the print quality does not equal Orator element or other print wheel type styles applications.

WORLD TRADE KEYBOARDS/PRINT WHEEL

Feature codes for ordering World Trade keyboards and print wheels are listed in the IBM 6240 Equipment Order Handbook located in the Branch Offices. Contact Mag Media Products SER Department, Dept. 539/993-5, Austin, for additional information.



**6240 Mag Card Typewriter Keyboard Support
(cont'd)**

Prestige Elite 96

12 Pitch
10 Point
Style Code: 086
Part No. 1257504

The IBM 6240 Mag Card Typewriter incorporates the benefits of IBM Mag Card II Typewriter functions and 55 cps impact printing.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#\$\$%&*()_+[³":?.,¶±1234567890--]=²';/.,\$

Courier 96

10 Pitch
10 Point
Style Code: 011
Part No. 1257503

The IBM 6240 Mag Card Typewriter incorporates the benefits of IBM Mag Card II Typewriter functions and 55 cps impact printing.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#\$\$%&*()_+[³":?.,¶±1234567890--]=²';/.,\$

Letter Gothic 96

12 Pitch
12 Point
Style Code: 087
Part No. 1257506

The IBM 6240 Mag Card Typewriter incorporates the benefits of IBM Mag Card II Typewriter functions and 55 cps impact printing.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#\$\$%&*()_+³[":?.±1234567890--=²];',./

Prestige Pica 96

10 Pitch
12 Point
Style Code: 012
Part No. 1257507

The IBM 6240 Mag Card Typewriter incorporates the benefits of IBM Mag Card II Typewriter functions and 55 cps impact printing.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#\$\$%&*()_+[³":?.,¶±1234567890--]=²';/.,\$

**Accounting ID17
Prestige Elite 96**

12 Pitch
10 Point
Style Code: 086
Part No. 1257611

The IBM 6240 Mag Card Typewriter incorporates the benefits of IBM Mag Card II Typewriter functions and 55 cps impact printing.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#\$\$%&*()_+[³":?.,¶±1234567890-³]=!¹';/.,\$



**6240 Mag Card Typewriter Keyboard Support
(cont'd)**

**Accounting ID19
Prestige Elite 96**

12 Pitch
10 Point
Style Code: 086
Part No. 1257614

The IBM 6240 Mag Card Typewriter incorporates the benefits of IBM Mag Card II Typewriter functions and 55 cps impact printing.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°±@#\$\$%&*()_+[½³":?.,¶±1234567890-_=]½²';/.,\$

**EBCDIC
Courier 96**

10 Pitch
10 Point
Style Code: 086
Part No. 1257613

The IBM 6240 Mag Card Typewriter incorporates the benefits of IBM Mag Card II Typewriter functions and 55 cps impact printing.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
~|@#\$\$%-&*()_+|!}" :?.,>~1234567890-=-\ç{';/.,<

**ASCII
Courier 96**

10 Pitch
10 Point
Style Code: 086
Part No. 1257612

The IBM 6240 Mag Card Typewriter incorporates the benefits of IBM Mag Card II Typewriter functions and 55 cps impact printing

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
~!@#\$\$%^&*() +|!}" :? >~1234567890-=-\{|':/..<

PRESTIGE PICA ACCOUNTING 172

10 Pitch
12 Point
Style Code: 012
Part No. 1257697

The IBM 6240 Mag Card Typewriter incorporates the benefits of IBM Mag Card II Typewriter functions and 55 cps impact printing

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°£@#\$\$%&*()__+[½³":?.,¶±1234567890-¼]=!';/.,\$

COURIER 12

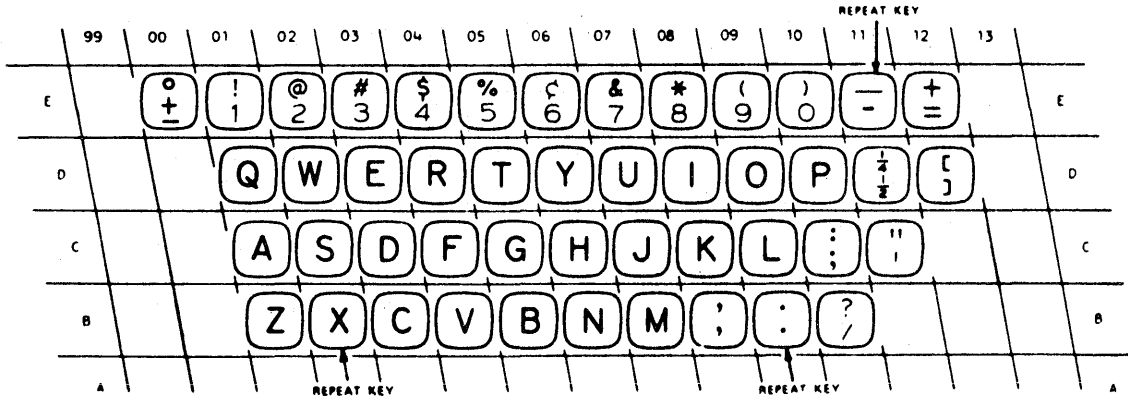
12 Pitch
8 Point
Style Code: 085
Part No. 1257638

The IBM 6240 Mag Card Typewriter incorporates the benefits of IBM Mag Card II Typewriter functions and 55 cps impact printing.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#\$\$%&*()_+[½³":?.,¶±1234567890-]=]½²';/.,\$

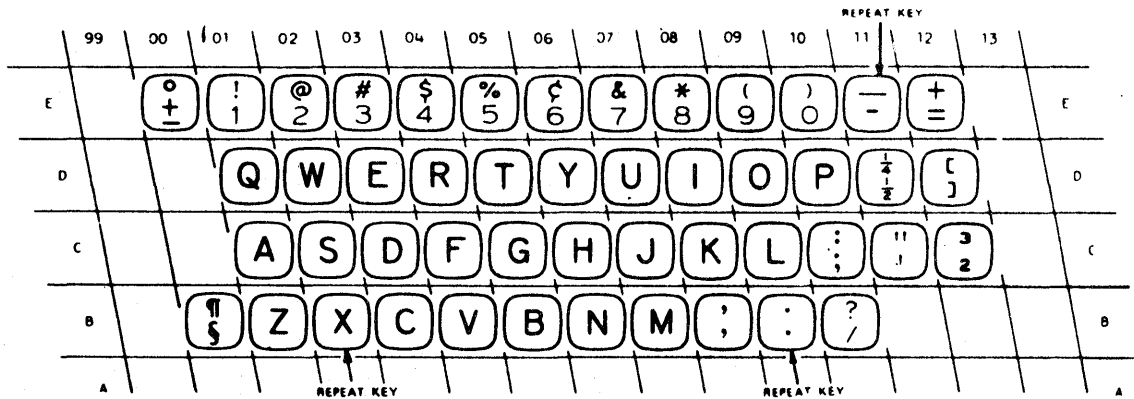
6240 Mag Card Typewriter Keyboard Support
(cont'd)

A 92 character U.S. keyboard is standard on the 6240 with an optional 96 character keyboard also available.



United States
Correspondence

92 Character



United States
Correspondence

96 Character

6240 Mag Card Typewriter Keyboard Support
(cont'd)

A 96 character Latin American Keyboard is available on IBM 6/420, 6/430, 6/440, 6/442, 6/450, and 6/452 Information Processors.



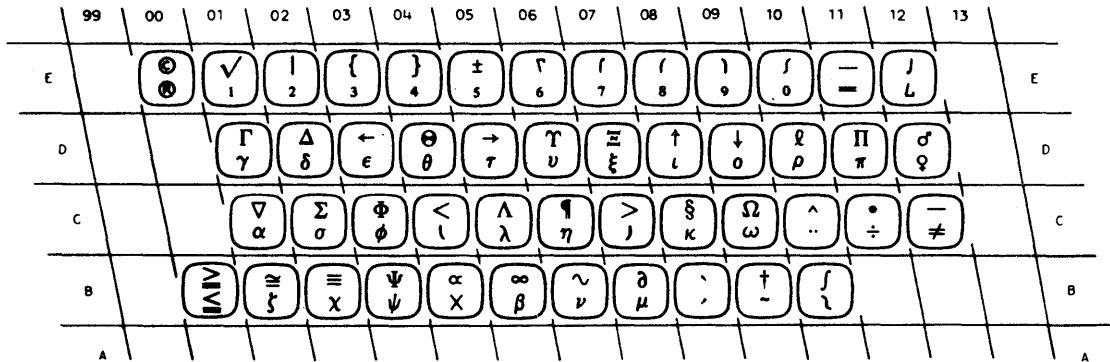
Latin American Keyboard

96 Character

Mag Card Symbol

Keybutton Locations

Mag Card Symbol Print Wheel matches Symbol 10 and 12 elements.
(Type codes 004 and 061)



E00, B00, D12, C12 are additional keys
Keyboard Layout Plaque is available, OPD form no. G542-0037-2.

END

**IBM 6580 DISPLAYWRITER® SYSTEM
TYPE STYLES/KEYBOARDS**

IBM "SELECTRIC" ELEMENT PRINTER

All "Selectric" elements specified for Mag Card Typewriters in Section 1 and 3 of the TYPE STYLES/KEYBOARDS section can be used on the IBM "Selectric" Element Printer. However, only certain elements can be properly displayed on the IBM Displaywriter. In order to have the characters display properly, type style element selection should be made in the following ID's.

<u>ID-88 Character</u>	<u>"Selectric" Keyboard Reference No.</u>	<u>Keybutton Position</u>	
		<u>0</u>	<u>41</u>
2 American Standard	101	! 1	½ ½
3 American Standard	101	± 1	½ ½
4 American Standard	101	[]	o !
5 American Standard	101	± 1	o !
6 Legal	017	[]	o !
7 Legal	177	o 1	[]
8 Legal	177	o 1	½ ½
17 Accounting	172	£	+ =
18 Accounting	174	! 1	* ¢
19 Accounting	195	± 1	½ ½
	414		
24 Puerto Rico	948	-	-
	002		
100 EBCDID	-	-	-
103 ASCII	-	-	-
200 Symbol - Mag Card	-	-	-

PRINTWHEEL

All printwheels for the IBM Displaywriter System are 96 characters (see IBM Displaywriter System - Keyboards for illustrations). The following pages show the printwheel type styles available.



**IBM 6580 DISPLAYWRITER® System
Type Styles/Keyboards (cont'd)**

Description, Pitch, Part No.

Bold Face

10 Point
1/60" Unit Escapement
Part No. 1439504 AM STD
Part No. 1439537 Latin AM

The IBM Displaywriter System provides the customer with modular capability to originate, process, and distribute information in a system environment.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#\$\$%&*()_+[³":?.,¶±1234567890-=]½²;/.,\$

Essay

10 Point
1/60" Unit Escapement
Part No. 1439526 AM STD
Part No. 1439561 Latin AM

The IBM Displaywriter System provides the customer with modular capability to originate, process, and distribute information in a system environment.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#\$\$%&*()_+[³":?.,¶±1234567890-=]½²;/.,\$

Modern

10 Point
1/60" Unit Escapement
Part No. 1439517 AM STD
Part No. 1439549 Latin AM

The IBM Displaywriter System provides the customer with modular capability to originate, process, and distribute information in a system environment.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#\$\$%&*()_+[³":?.,¶±1234567890-=]½²;/.,\$

Prestige Elite

10 Point
12 Pitch
Part No. 1439502 AM STD
Part No. 1439529 Latin AM

The IBM Displaywriter System provides the customer with modular capability to originate, process, and distribute information in a system environment.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#\$\$%&*()_+[³":?.,¶±1234567890-=]½²;/.,\$

Letter Gothic

12 Point
12 Pitch
Part No. 1439514 AM STD
Part No. 1439541 Latin AM

The IBM Displaywriter System provides the customer with modular capability to originate, process, and distribute information in a system environment.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#\$\$%&*()_+[³":?.,¶±1234567890-=]½²;/.,\$



TYPE CATALOG

IBM 6580 DISPLAYWRITER® System
Type Styles/Keyboards (cont'd)
Description, Pitch, Part No.

Courier 12
8 Point
12 Pitch
Part No. 1439523 AM STD
Part No. 1439553 Latin AM

The IBM Displaywriter System provides the customer with modular capability to originate, process, and distribute information in a system environment.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#%&*()_+[¼³":?.,¶±1234567890-]=½²';/.,\$

Prestige Pica
12 Point
10 Pitch
Part No. 1439503 AM STD
Part No. 1439533 Latin AM

The IBM Displaywriter System provides the customer with modular capability to originate, process, and distribute information in a system environment.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#%&*()_+[¼³":?.,¶±1234567890-]=½²';/.,\$

Courier 10
10 Point
10 Pitch
Part No. 1439511 AM STD
Part No. 1439545 Latin AM

The IBM Displaywriter System provides the customer with modular capability to originate, process, and distribute information in a system environment.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#%&*()_+[¼³":?.,¶±1234567890-]=½²';/.,\$

Artisan 10
10 Point
10 Pitch
Part No. 1439520 AM STD
Part No. 1439557 Latin AM

The IBM Displaywriter System provides the customer with modular capability to originate, process, and distribute information in a system environment.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
°!@#%&*()_+[¼³":?.,¶±1234567890-]=½²';/.,\$

Symbol 2
10 Point
Part No. 1439637

ζνε τ≥θ φ†σρ}αυδλ†τελ συστεμ ρλο×†φεσ
τηε ≈ξστομελ δ†τη μοφξ}αλ ≈αραβ†}†τυ
το ολ†λ†νατε ρλο=εσσ ανφ φ†σ†λ†βξτε
†νπολμα††ον †ν α συστεμ εν×†λονμεν†

V≥ΨΦχΠΛ¶†>§{θ<θΓΘΣζεαΔ≡Τψ
αβ=φεπλη†,κ}μνοργλστξ×δ+υ+
=√|ρω@††††_ασ†ν.††††_±1234567890-ℒφ(≠≡"†~†≡



TYPE CATALOG

IBM 6580 DISPLAYWRITER® System
Type Styles/Keyboards (cont'd)

Description, Pitch, Part No.

Prestige 15 To be furnished later
9 Point
15 Pitch
Part No. 1439655 AM STD
Part No. 1439680 Latin AM

Rhetoric To be furnished later
12 Point
10 Pitch
Part No. 1439736 AM STD
Part No. 1439737 Latin AM

Gothic 15 Available 2/82
8 Point
15 Pitch

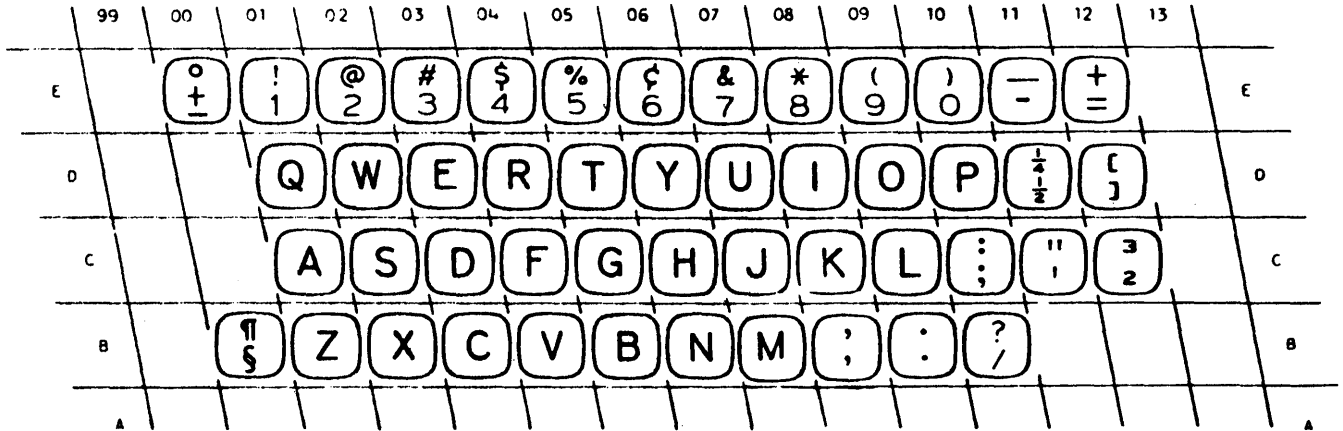
Symbol 2 To be furnished later
Variable Point
12 Pitch
Part No. 1439734 AM STD

Symbol 3 To be furnished later
Variable Point
12 Pitch
Part No. 1439735 AM STD

**IBM 6580 DISPLAYWRITER® System
Type Styles/Keyboards (cont'd)**

A 92 character U.S. keyboard is standard on the IBM Displaywriter System with an optional 96 character keyboard also available.

**Print Key Arrangement
(U.S. Keyboard)**



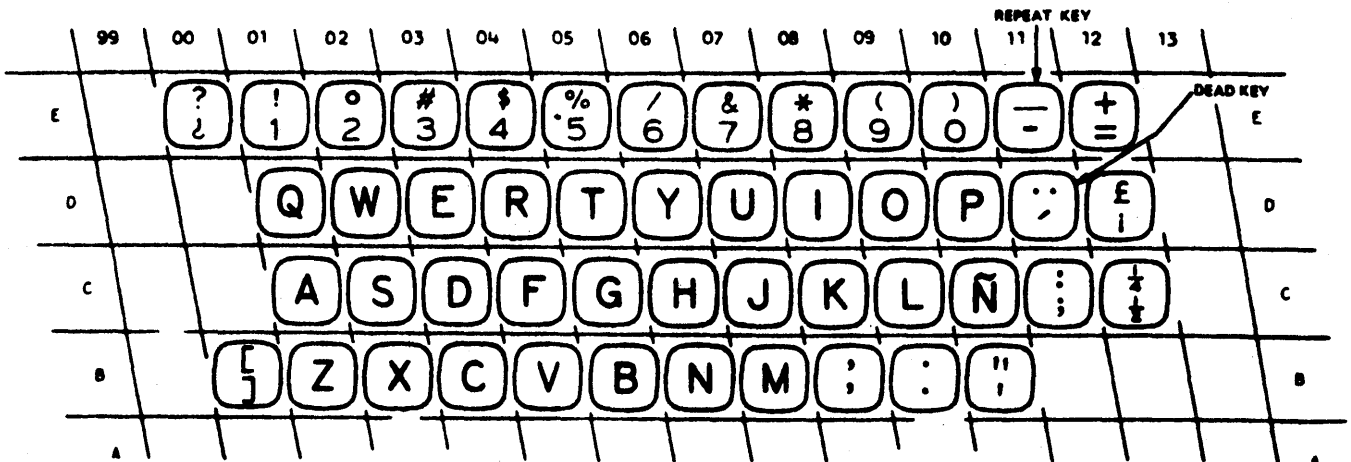
96 Character-- As shown above (Correspondence)

92 Character - Position B00 & C12 covered (Correspondence)

A 96 Character Latin American keyboard is available on the IBM Displaywriter System

**Print Key Arrangement
(Latin American Keyboard)**

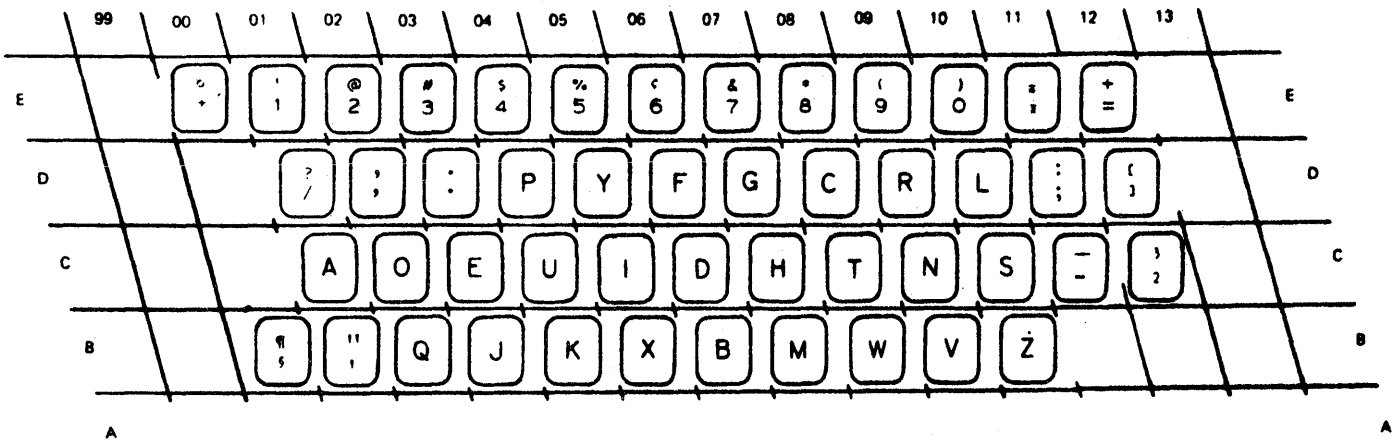
This keyboard is supplied on IBM Displaywriter System models when the Puerto Rican requirement group is specified. It is available in a 96 character arrangement only.



IBM 6580 DISPLAYWRITER® System
Type Styles/Keyboards (cont'd)

A 96 Character U.S. keyboard - Dvorak is optional

Print Key Arrangement
(U.S. Keyboard)
DVORAK



END



6670 INFORMATION DISTRIBUTOR

GROUP I FONTS *

Data 1 Rotated
13.3 Pitch
Part No. 1662491
Same font card as Symbol

The IBM 6670 Information Distributor combines features such as high speed printing, text processing, communications, and convenience copying. Up to nine typestyles are available.

0123456789<>"/#\$abcdefghijklmnopqrstuvwxyz
yzABCDEFGHIJKLMNOPQRSTUVWXYZ?(),;:'.!."±]
§²°[¶³=*ç_|@%-+&¼½ -

Symbol
12 Pitch
Part No. 1662491
Same font card as Data 1 Rotated

})ε οωθ 6670 ονλρθματιρν φιστθιβξιτρθ ψρμβινεσ ξεατζεθεσ σξψη
ασ ηιλη σ+εεφ +θιντινλ\ τεχι +θρψεσσινλ\ ψρμξνιψατιρνσ\ αυφ
ψρνκενιενψε ψρ+τινλθ Ε+ τρ νινε τυ+εστυωεσ αθε ακαιωαβωεθ

0123456789<>~αβψφεεληιθκωμυρ+θσσιξδχ
υζν-ψφ{RΛ™o©Ωαβλ→ΓΘΣ}Ξ=Δ≡Τ=J H\#||+|θ|√↓
≤)π↑≥(□└┐┌┐┌┐┌┐┌ -

Prestige Pica
10 Pitch
Part No. 1663885
Same font card as Letter Gothic

The IBM 6670 Information Distributor combines features such as high speed printing, text processing, communications, and convenience copying. Up to nine typestyles are available.

0123456789<>"/#\$abcdefghijklmnopqrstuvwxyz
yzABCDEFGHIJKLMNOPQRSTUVWXYZ?(),;:'.!."±]
§²°[¶³=*ç_|@%-+&¼½ -

Prestige Elite
12 Pitch
Part No. 1662490
Same font card as Courier 10

The IBM 6670 Information Distributor combines features such as high speed printing, text processing, communications, and convenience copying. Up to nine typestyles are available.

0123456789<>"/#\$abcdefghijklmnopqrstuvwxyz
yzABCDEFGHIJKLMNOPQRSTUVWXYZ?(),;:'.!."±]
§²°[¶³=*ç_|@%-+&¼½ -

Letter Gothic
12 Pitch
Part No. 1663885
Same font card as Prestige Pica

The IBM 6670 Information Distributor combines features such as high speed printing, text processing, communications, and convenience copying. Up to nine typestyles are available.

0123456789<>"/#\$abcdefghijklmnopqrstuvwxyz
yzABCDEFGHIJKLMNOPQRSTUVWXYZ?(),;:'.!."±]
§²°[¶³=*ç_|@%-+&¼½ -

Courier 10
10 Pitch
Part No. 1662490
Same font card as Prestige Elite

The IBM 6670 Information Distributor combines features such as high speed printing, text processing, communications, and convenience copying. Up to nine typestyles are available.

0123456789<>"/#\$abcdefghijklmnopqrstuvwxyz
yzABCDEFGHIJKLMNOPQRSTUVWXYZ?(),;:'.!."±]
§²°[¶³=*ç_|@%-+&¼½ -

*All Group I Fonts are also available as Group II Fonts



6670 Information Distributor (cont'd)

Essay
1/60" unit escapement
Part No. 1662489
Same font card as Essay Italic
Part No. 1662886
Same font card as Essay Bold

The IBM 6670 Information Distributor combines features such as high speed printing, text processing, communications, and convenience copying. Up to nine typestyles are available..

0123456789<>"/#\$abcdefghijklmnopqrstuvw
yzABCDEFGHIJKLMN^oPQRSTUVWXYZ?(),;:'.|±]
§²°[¶³=*¢_|@%-+&¼½ -

Essay Italic
1/60" unit escapement
Part No. 1662489
Same font card as Essay

The IBM 6670 Information Distributor combines features such as high speed printing, text processing, communications, and convenience copying. Up to nine typestyles are available.

0123456789<>"/#\$abcdefghijklmnopqrstuvw
yzABCDEFGHIJKLMN^oPQRSTUVWXYZ?(),;:'.|±]
§²°[¶³=*¢_|@%-+&¼½ -

Essay Bold
1/60" unit escapement
Part No. 1662886
Same font card as Essay

The IBM 6670 Information Distributor combines features such as high speed printing, text processing, communications, and convenience copying. Up to nine typestyles are available.

0123456789<>"/#\$abcdefghijklmnopqrstuvw
yzABCDEFGHIJKLMN^oPQRSTUVWXYZ?(),;:'.|±]
§²°[¶³=*¢_|@%-+&¼½ -

GROUP II FONTS (FONT STORAGE FEATURE REQUIRED)

Courier 10
Extended
10 Pitch

THE IBM 6670 INFORMATION DISTRIBUTOR COMBINES FEATURES SUCH AS HIGH SPEED PRINTING, TEXT PROCESSING, COMMUNICATIONS AND CONVENIENCE COPYING.

0123456789<>"/#\$abcdefghijklmnopqrstuvw
yzABCDEFGHIJKLMN^oPQRSTUVWXYZ?(),;:'.|{}+
±]§²°[¶³=*¢_|@%-+&¼½-⁸⁹↓(,↑≤≥≠±∓↔|=·
0 1 2 3 4 5 6 7 8 9 () - = x - H L r j 7 + 1 0 4 5 6

Courier 12
Extended
12 Pitch

THE IBM 6670 INFORMATION DISTRIBUTOR COMBINES FEATURES SUCH AS HIGH SPEED PRINTING, TEXT PROCESSING, COMMUNICATIONS AND CONVENIENCE COPYING.

0123456789<>"/#\$abcdefghijklmnopqrstuvw
yzABCDEFGHIJKLMN^oPQRSTUVWXYZ?(),;:'.|{}+
±]§²°[¶³=*¢_|@%-+&¼½-⁸⁹↓(,↑≤≥≠±∓↔|=·
0 1 2 3 4 5 6 7 8 9 () - = x - H L r j 7 + 1 0 4 5 6



6670 Information Distributor (cont'd)

APL
10 Pitch

THE IBM 6670 INFORMATION DISTRIBUTOR COMBINES FEATURES SUCH AS HIGH SPEED PRINTING, TEXT PROCESSING, COMMUNICATIONS AND CONVENIENCE COPYING.

0123456789<>[]/⊕αλειρωxv∩∇*I-cuΔ~λ∇∇[]|oo
|ΔABCDEFGHIJKLMNOPQRSTUVWXYZ?(), ; : ' ! . ~ [⊓
⊕ \ T] I A ° [⊕ ↑ = ⊕ * ⊕ _ | → ← × + ≥ ≤ " - ⊖ ~ ⊕ ⊕ ABCDEFGHIJKL
MNOPQRSTUVWXYZ

Courier 10
Overstrike/Hyphen
10 Pitch

THE IBM 6670 INFORMATION DISTRIBUTOR COMBINES FEATURES SUCH AS HIGH SPEED PRINTING, TEXT PROCESSING, COMMUNICATIONS AND CONVENIENCE COPYING.

0123456789<>" / # \$ a b e d e f g h i j k l m n o p q r s t u v w x
y z A B C D E F G H I J K L M N O P Q R S T U V W X Y Z ? () ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
\$ 2 0 f q 2 = + * e _ t @ % - + & 1 2 -

NOTE:

Unless specified otherwise, IBM Office System 6 Information Processors, the IBM 6640 Document Printer, and the IBM 6670 Information Distributor will be manufactured to read magnetic cards recorded on any IBM mag card typewriter equipped with a 101 (correspondence) keyboard, using an element with the American Standard Character set (!/1 in Pos. 0 and ¼/½ in Pos. 41). Any of the following standards may be specified to satisfy customer requirements (see "Keyboard Compatibility Groups" in the Order Entry Handbook):

KEYBOARD	POS. 0	POS. 41
101 (Corr.)	+/1	¼/½
101 (Corr.)	[/]	°/!
101 (Corr.)	+/1	°/!
017 (Legal)	[/]	°/!
177 (Legal)	0/1	[/]
177 (Legal)	0/1	¼/½

6670 Information Distributor (cont'd)

Courier Elongate Overstrike
Type Style 37
10 Pitch

The IBM 6670 Information Distributor combines features such as high speed printing, text processing, communications, and convenience copying.

0123456789<>"/#\$%&'()*+,-./:;
abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ?@,.;:~
`!±]§²°[¶³=+¢-|@%-+&¼½-|+
`!±]§²°[¶³=+¢-|@%-+&¼½-|+

PSM Essay Light
Type Style 173

The IBM 6670 Information Distributor combines features such as high speed printing, text processing, communications, and convenience copying.

0123456789<>"/#\$%&'()*+,-./:;
abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ?@,.;:~
`!±]§²°[¶³=+¢-|@%-+&¼½-|+
`!±]§²°[¶³=+¢-|@%-+&¼½-|+

ÀáÊÉÏíóôÙúÀàÊêÏìòóÙùÄäËëÏïÖöÜüÅåÑñÕõÄäÊêÏì
áêéíîóôúøøììµβÀáúúÇçÆæij@oo×ppr.fu¥i£, «>>'''

PSM Essay Elongate Overstrike
Type Style 174

The IBM 6670 Information Distributor combines features such as high speed printing, text processing, communications, and convenience copying.

0123456789<>"/#\$%&'()*+,-./:;
abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ?@,.;:~
`!±]§²°[¶³=+¢-|@%-+&¼½-|+
`!±]§²°[¶³=+¢-|@%-+&¼½-|+

Letter Gothic Bold
Type Style 110
12 Pitch

The IBM 6670 Information Distributor combines features such as high speed printing, text processing, communications, and convenience copying.

0123456789<>"/#\$%&'()*+,-./:;
abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ?@,.;:~
`!±]§²°[¶³=+¢-|@%-+&¼½-|+
`!±]§²°[¶³=+¢-|@%-+&¼½-|+

ÀáÊÉÏíóôÙúÀàÊêÏìòóÙùÄäËëÏïÖöÜüÅåÑñÕõÄäÊêÏì
óôúúøøììµβÀáúúÇçÆæij@oo×ppr.fu¥i£, «>>'''

6670 Information Distributor (cont'd)

PSM Boldface
Type Style 176

The IBM 6670 Information Distributor combines features such as high speed printing, text processing, communications, and convenience copying.

0123456789<>"/#\$abcdefghijklmnopqrstuvwxy
zABCDEFGHIJKLMNopQRSTUVWXYZ?(),.,:;
'!±]§²°[¶³=*¢_|@%-+&¼½-| ~ ¼|÷

ÁáÉéííÓóÚúÀàÈèììÒòÙùÄäËëîîÖöÛüÅåÑñÕõÄ
áêëìíîöùúøøïìμβÀáÛúÇçÆæijǻǻǻ×²³fGr¥i£, «
»

PSM Boldface Italic
Type Style 177

The IBM 6670 Information Distributor combines features such as high speed printing, text processing, communications, and convenience copying.

0123456789<>"/#\$abcdefghijklmnopqrstuvwxy
zABCDEFGHIJKLMNopQRSTUVWXYZ?(),.,:;
'!±]§²°[¶³=*¢_|@%-+&¼½-| ~ ¼|÷

ÁáÉéííÓóÚúÀàÈèììÒòÙùÄäËëîîÖöÛüÅåÑñÕõÄ
áêëìíîöùúøøïìμβÀáÛúÇçÆæijǻǻǻ×²³fGr¥i£, «
»

PSM Document
Type Style 175

The IBM 6670 Information Distributor combines features such as high speed printing, text processing, communications, and convenience copying.

0123456789<>"/#\$abcdefghijklmnopqrstuvwxy
zABCDEFGHIJKLMNopQRSTUVWXYZ?(),.,:;
'!±]§²°[¶³=*¢_|@%-+&¼½-| ~ ¼|÷

ÁáÉéííÓóÚúÀàÈèììÒòÙùÄäËëîîÖöÛüÅåÑñÕõÄ
áêëìíîöùúøøïìμβÀáÛúÇçÆæijǻǻǻ×²³fGr¥i£, «
»