

**SYSTEM 64 MAINTENANCE FIELD MANUAL**

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PRELIMINARY RELEASE

MDS QANTEL SYSTEM 64 MAINTENANCE FIELD MANUAL

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Equipment Characteristics  
Installation  
Field Service Level Parts Breakdown  
AC and DC Interconnection Diagram

TD-7255

# EQUIPMENT CHARACTERISTICS

## 1.0 GENERAL CHARACTERISTICS

The MDS Qantel System 64 uses a four-board CPU known as the Q64. This processor consists of an ALU board, an Auxiliary board, a Memory Data board, and a Memory Address board.

The System 64 also uses up to four Mem Q64A boards, each of which may hold up to two 512K Mem Q64B modules. The minimum amount of memory is 512K and the maximum amount of memory is 4012K (4.012 megabytes).

The System 64 will support up to 100 video terminals. However, no more than 16 video terminals should be connected to any one IOU 39Q communications controller, or operating efficiency will be degraded.

The basic System 64 uses a Fujitsu 75 megabyte Winchester disc drive and a Cipher 1/2-inch streaming tape drive. The system is designed to handle up to six 75MB, 150MB, or 400MB (Eagle) disc drives in any combination (four drives would be in a separate cabinet). BEST 407-2 is the minimum level operating system that can be used with the System 64.

## 1.1 SPECIFIC CHARACTERISTICS

### 1.1.1 Environmental Considerations

Ambient Temperature	50F - 85F (10C - 30C)
Thermal Output	10,750 BTUs per hour (basic system) 18,750 BTUs per hour (with add-on disc cabinet)
Relative Humidity	20% - 80% (during operation, no condensation) 5% - 95% (during storage, no condensation)
Operating Altitude	1000 ft. below - 6000 ft. above sea level (305 meters below - 1830 meters above sea level) A hard disc modification is necessary for operation above the upper altitude limit.
Storage Altitude	1000 feet below - 10,000 feet above sea level (305 meters below - 3050 meters above sea level)

## EQUIPMENT CHARACTERISTICS

### 1.1.2 Electrical Considerations

The A.C. Box may be jumpered for the following voltages:

100vac $\pm$ 10%	200vac $\pm$ 10%
115vac $\pm$ 10%	220vac $\pm$ 10%
127vac $\pm$ 10%	230vac $\pm$ 10%
	240vac $\pm$ 10%

The maximum current drain is as follows:

For 100vac - to 127vac	24 Amps: 3050 VA Max.
For 200vac - to 240vac	12 Amps: 2900 VA Max.

Tolerances for the DC voltages are as follows:

+ and - 12vdc	$\pm$ 0.6v
+ 5vdc	$\pm$ 0.25v

Maximum available current is as follows:

+12 volts at 1.2 amps	-12volts at 1.2 amps
+ 5 volts at 150 amps	

## INSTALLATION

Power must not be applied to the system during any of the following procedures until Subsection 2.3.

### 2.0 PWA INSTALLATION CONSIDERATIONS

#### 2.0.1 Auxiliary Board

When the pin patch is set across pins 1 and 2 on Jumper 2 and no pin patch is installed on Jumper 1, the baud rate is 19.2K. This is the normal setting for most local and remote configurations (see Figure 2-1).

When the pin patch is set across pins 2 and 3 on Jumper 2 the baud rate is 300 bits per second. This would only be used for extremely long propagation delays or very slow modems.

#### 2.0.2 MEM Q64A Board

DIP switches 1 and 2 must correspond to the configuration of MEM Q64A boards as they are installed in the system. If there is only one MEM Q64A board, it is board number 0 and DIP switches 1 and 2 should be set to indicate binary 0 (see Figure 2-2). There may be up to 4 MEM Q64A boards in a system-- numbered from 0 to 3-- and DIP switches 1 and 2 on any given board must be set to the binary number corresponding with that board's configured number (switch 2 is the MSB).

A MEM Q64A board must have two MEM Q64B modules attached to it before the next successive MEM Q64A board is installed in the system. Any MEM Q64A board with only one MEM Q64B module, should have the module attached to the bottom half of the A board (i.e. the MEM Q64A boards are to be filled from bottom to top).

Slots 3 - 6 (the slots designated for the System 64 memory) are wired in parallel, but for the sake of uniformity of installation, Board 0 should be installed in Slot 6 and additional boards should be installed sequentially in Slot 5, then Slot 4, and finally Slot 3 as required.

#### 2.0.3 ALU

Notice that all the chips on the ALU board are installed upside down. The PROMS on the ALU are to be installed in the locations shown in Figure 2-3 with the index notches pointing towards the bottom of the ALU board.

## INSTALLATION

### 2.0.4 CARD CAGE MAP

A card cage map is shown in Figure 2-4. The memory and processor boards must be in the correct slots.

### 2.1 PREPARATION OF THE DISC DRIVE

DO NOT APPLY POWER UNTIL THIS PROCEDURE HAS BEEN PERFORMED ON ALL DISC DRIVES IN THE CABINET.

1. Use a screwdriver to pry up the front panel retainer clips. This will release the top of the front panel (see Figure 2-5). Remove the front panel.
2. Loosen the two screws on each rail locking bracket. Slide the brackets out of the way.
3. Pull the disc drive out as far as it will go.
4. Unlock the spindle, the spindle motor, and the heads (see the Fujitsu section in the Field Service Handbook).
5. Push the disc drive in, replace the rail locking brackets, and replace the front panel.
6. Repeat this procedure for any other disc drives in the cabinet.

### 2.2 PREPARATION OF THE TAPE DRIVE

1. Pull from underneath the tape drive's front panel while squeezing the handhold on the extreme left side to release the shipping lock. Continue to pull from underneath the front panel to move the tape drive out on its rails.
2. Remove the shipping tape from the front and sides of the tape drive.
3. Lift the top cover, exposing the supply and takeup hubs. There is a plastic brace under the left rear edge of the cover which can be used to prop the cover up.

## INSTALLATION

4. Pull back on the spring loaded tachometer arm and remove the plastic foam piece from the takeup hub (see Figure 2-6). Gently set the tachometer arm back on the hub.
5. Loosen the two screws-- one on each side-- located just behind the front panel. the screws are exposed when the top cover of the drive is lifted.
6. Close the top cover and lift up from underneath the front panel until the tape deck is raised as far as it will go. Let the tape deck down slightly and the brace will lock and support the deck. There is plastic dowel which can be inserted into the brace as a safety lock. It hangs from a rubber band near the brace.
7. Remove the foam padding from the logic board. Make sure all edge connectors are firmly in place.
8. Pull the safety dowel out of the brace. Lift up the tape deck and let it down slowly. The brace lock will release.
9. Retighten the two screws and close the top cover.
10. Depress and hold the buttons located in the rails on each side near the rear of the tape drive. Push the drive all the way into the cabinet.

### 2.3 DC VOLTAGE MEASUREMENT

The D.C. voltage test points listed below are all located on the rear of the backplane.

Logic ground:	J125 or J126, pin 21 or pin 23
+12vdc:	J125 or J126, pin 5
-12vdc:	J125 or J126, pin 27
+5vdc:	wide horizontal bus strip across backplane

*check  
with  
load*

1. The system should be powered off.
2. Unplug all boards from the backplane.
3. Switch off all disc drive power supplies.
4. Turn on the power.

## INSTALLATION

5. Measure the +12v, -12v, and the +5v. The +5v should measure approximately 5.05v with no load (from the +5v bus to logic ground). Other voltages should be  $\pm 5\%$ . Record these measurements.
6. Turn off the power.
7. Switch on all disc drive power supplies.
8. Check switch settings on all controllers, memory, and CPU boards.
9. Install the boards and power up the system.
10. Measure the DC voltages again. The voltages should not vary more than 1/10 volt from the recorded measurements in Step 5. If a severe discrepancy occurs, faulty wiring or a short is indicated.
11. If necessary, adjust the voltages as follows:

+5v  $\pm 0.25v$   
+12v  $\pm 0.6v$   
-12v  $\pm 0.6v$

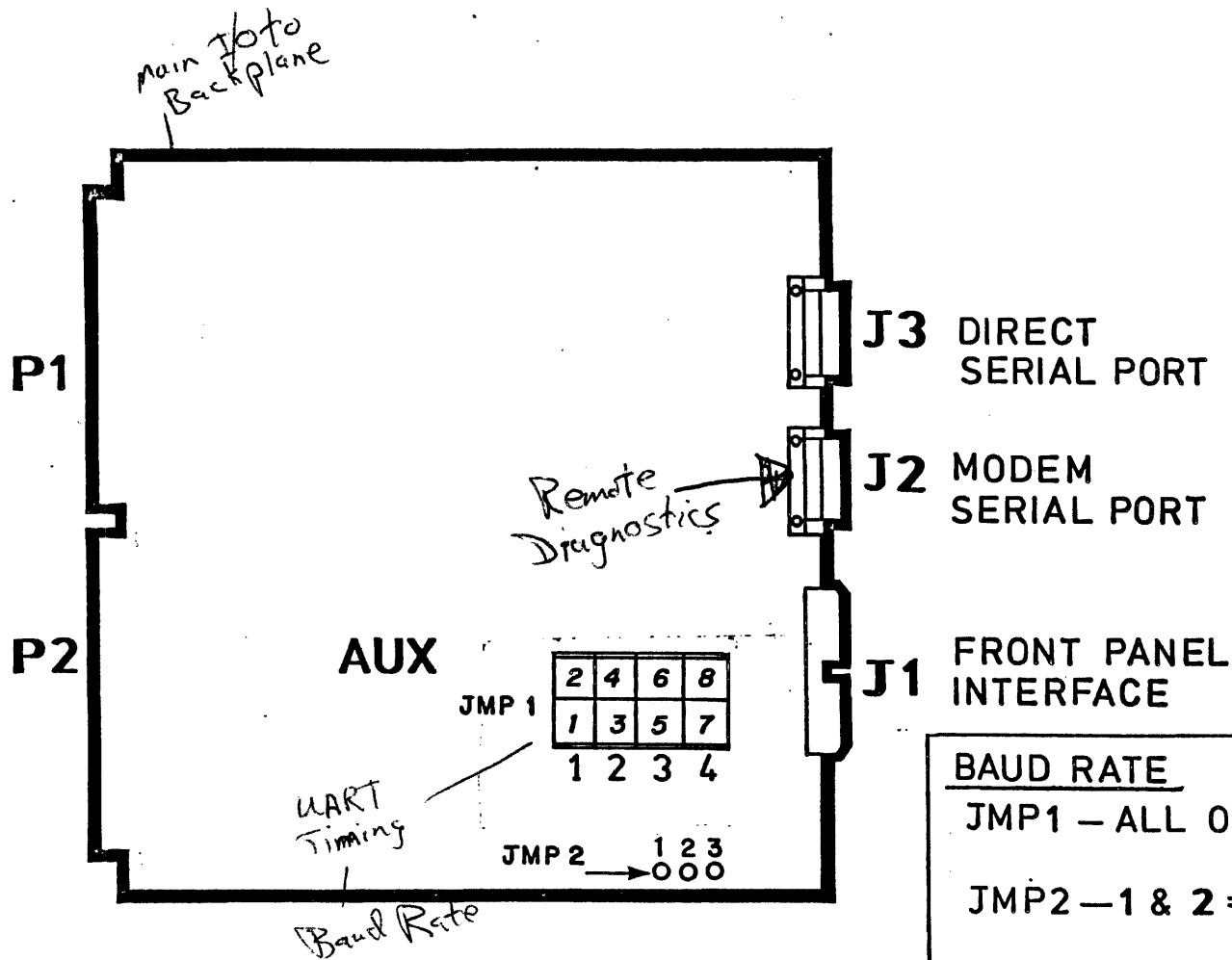
### 2.4 TEST PANEL

The test panel is mounted immediately under the control panel. To access the test panel, remove the two screws that hold the plastic cover over the test panel (see Figure 2-7). The test panel is for diagnostic purposes and is protected from user access by the plastic cover.

### 2.5 INTERCONNECTION DIAGRAM

An interconnection diagram is included with this document in case any peripheral devices need to be replaced or removed and reinstalled. The A.C. box is also detailed in the interconnection diagram.





**BAUD RATE**

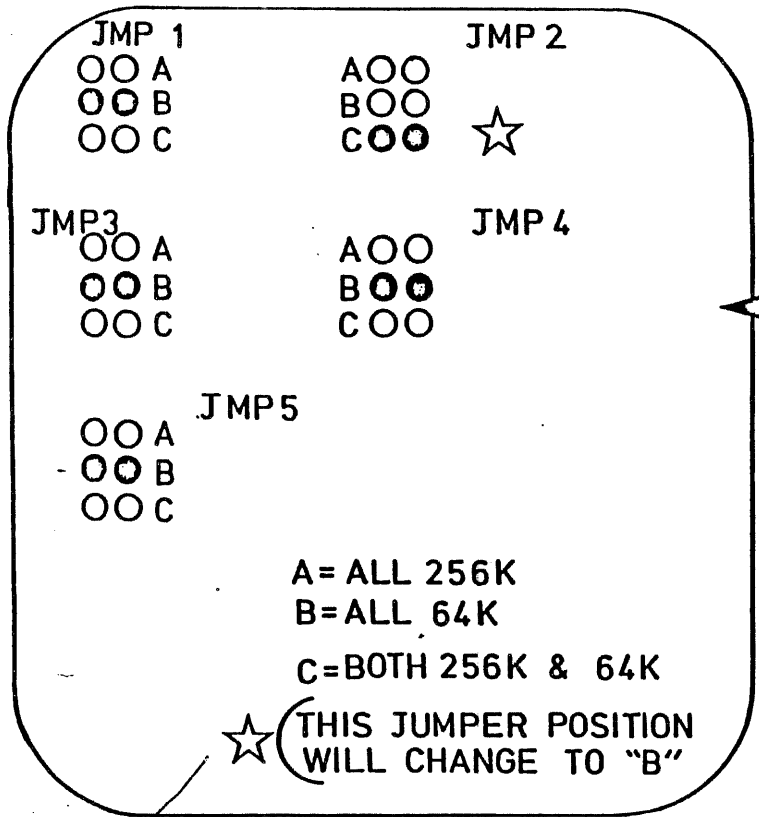
JMP1 - ALL OFF 19.2K

JMP2 - 1 & 2 = LOOK AT JMP 1

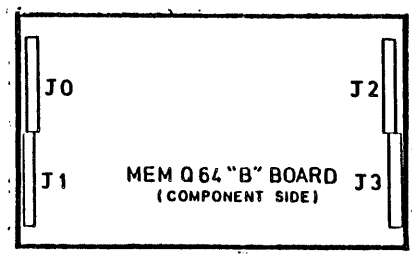
2 & 3 = 300 BAUD RATE

The switch settings for JMp1 are shown below:

BAUD RATE	CONNECTED SWITCHES
19200	None
9600	1-2
7200	3-4
4800	1-2 3-4
3600	5-6
2400	1-2 5-6
2000	3-4 5-6
1800	1-2 3-4 5-6
1200	7-8
600	1-2 7-8
300	3-4 7-8
150	1-2 3-4 7-8
134.50	5-6 7-8
110	1-2 5-6 7-8
75	3-4 5-6 7-8
50	1-2 3-4 5-6 7-8

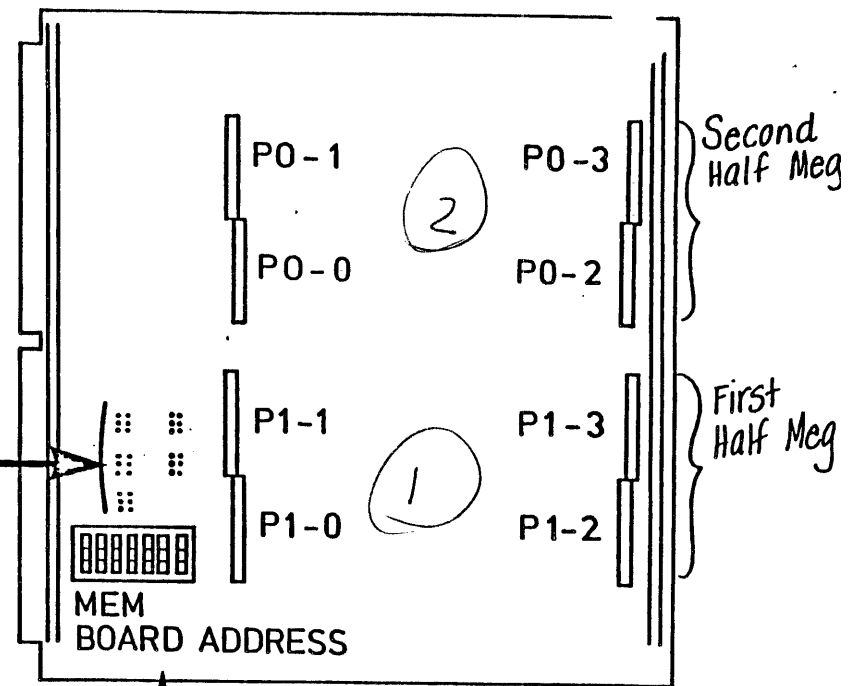


*Mem R board*

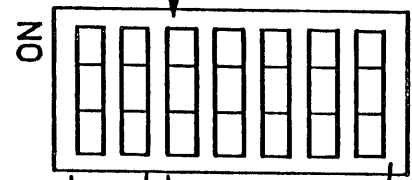


*watch Pin Placement*

Figure 2-2



The First 64B Module should be installed in the lower connectors.



MEM Board Address 0-3  
 ALL OFF for 64K chips

Q64 MEMORY MAP

Board 0	\$000000 - \$07FFFF = 512 KB/64B
	\$080000 - \$0FFFFFF = 1.0 MB
Board 1	\$100000 - \$17FFFF = 1.5 MB
	\$180000 - \$1FFFFFF = 2.0 MB
Board 2	\$200000 - \$27FFFF = 2.5 MB
	\$280000 - \$2FFFFFF = 3.0 MB
Board 3	\$300000 - \$37FFFF = 3.5 MB
	\$380000 - \$3FFFFFF = 4.0 MB

SWITCH SETTINGS

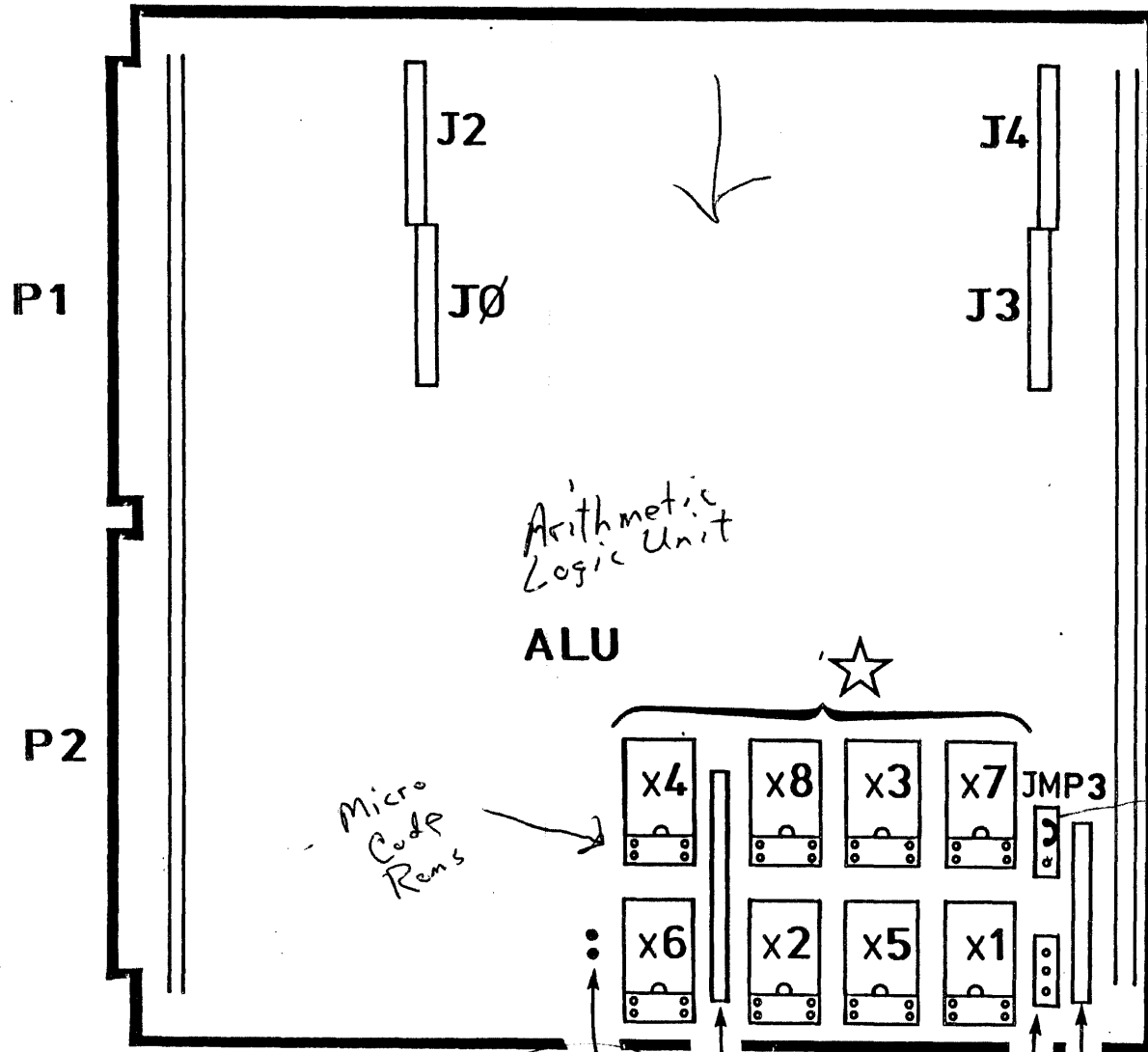
	*****		SW1	SW2
SW1	* X X *	Brd.0	Off	Off
SW2	* X X *	Brd.1	On	Off
SW3	* 0 *	Brd.2	Off	On
SW4	* 0 *	Brd.3	On	On
SW5	* 0 *			
SW6	* 0 *			
SW7	* 0 *			
SW8	* 0 *			

Pin Patches

Currently can only be set one way. All patches ON the pins provided. In the future, new pins will be added. Patches will then be changed to define the memory chip size to the MEM64A.

All patches set to "A" = 256K RAMs  
 All patches set to "B" = 64K RAMs  
 All patches set to "C" = Mixed  
 \* Patches set to "C" will require setting SW3-SW8 to define the mix. The switch settings are not defined yet.

ALU-R  
Has RAM Chips  
8K used for Remote  
down loading Diags.



The CORRECT ★  
ROM Sequence

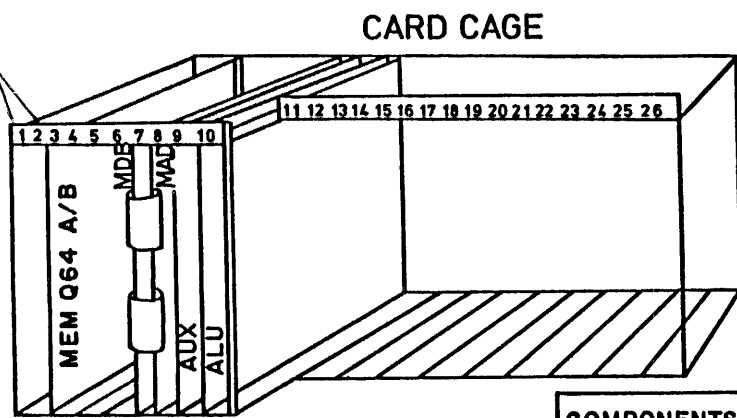
VCC pins  
up for  
short Rems

x = Don't care

**NOTE:** ALL CHIPS ON  
THIS BOARD ARE  
INSTALLED  
UPSIDE DOWN

Always on

1/2 Reserved  
for Error Correction  
Logic



1.25 MHz  
Data Transfere  
Rate

COMPONENTS ON A PROPERLY  
INSTALLED BOARD ARE ON  
THE LEFT SIDE OF THE BOARD,  
WHEN VIEWED FROM THE FRONT  
OF THE CARD CAGE.

- SLOTS 1 & 2 = RESERVED
- SLOTS 3-6 = MEM Q64
- SLOTS 7 & 8 = MDB & MAD
- SLOTS 9 & 10 = AUX & ALU
- SLOT 11 = EITHER I/O OR CPU TEST PANEL
- SLOTS 12-26 = I/O

Can be swapped  
with each other  
only

Can be  
swapped  
with each  
other  
only

Figure 2-4

~~MDB~~ MDB - Mem Data  
MAD - Mem. Adx

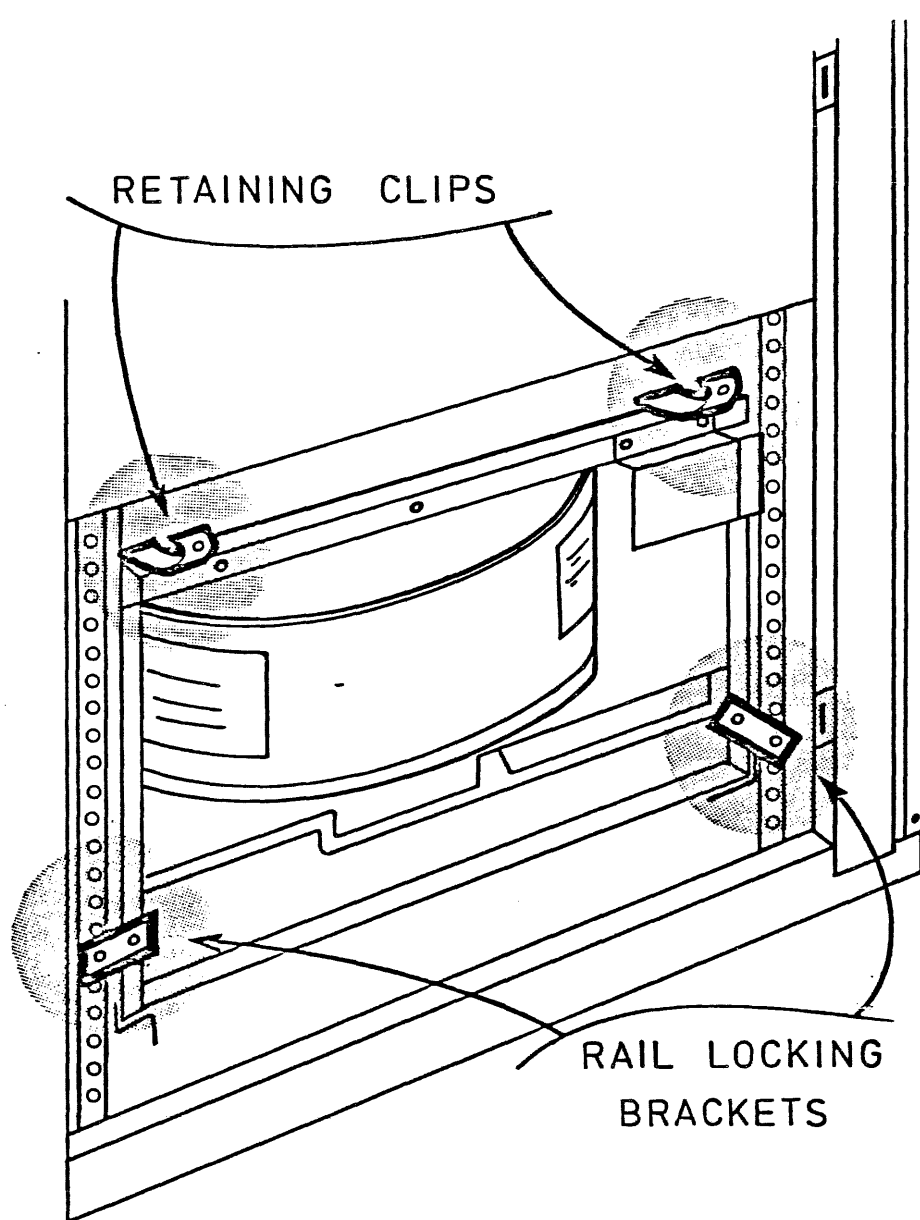


FIG. 2-5

INTERNAL PACKING MATERIAL MUST  
BE REMOVED PRIOR TO OPERATION

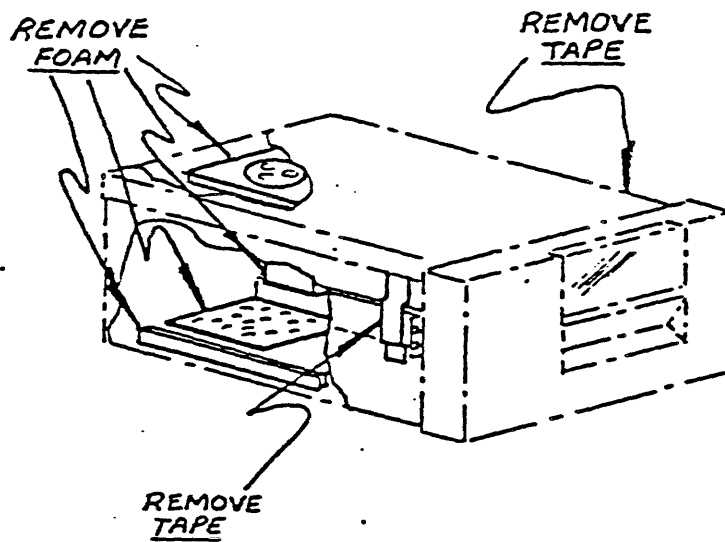


Figure 2-6



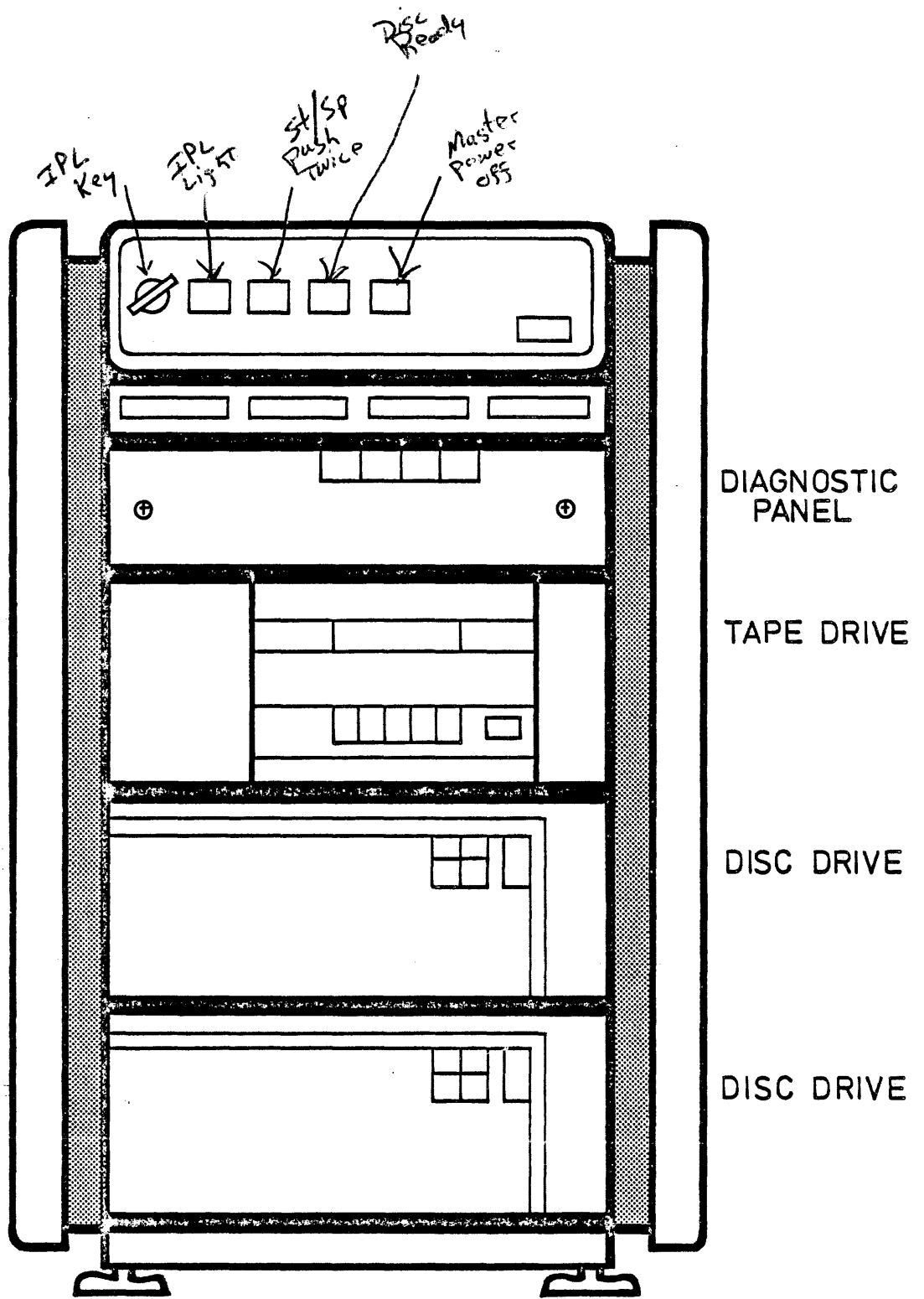


FIG. 2-7

## FIELD SERVICE LEVEL PARTLIST - SYSTEM 64

DESCRIPTION	PART No.
AC BOX ASSEMBLY, SYSTEM 64 .....	042645701
CABLE ASSEMBLY, 9FT. 50 CONDUCTOR .....	042645601
CABLE, BUSS DISC 20 FT. FOR Q64 .....	042644801
CABLE, DISC CONTROL PANEL .....	042647401
CABLE, RADIAL DISC 20 FT. FOR Q64 .....	042644901
CARD CAGE ASSEMBLY, SYSTEM 64 WITH BACKPLANE .....	042646001
CONTROL PANEL ASSEMBLY, ADD ON CABINET .....	042648201
CONTROL PANEL ASSEMBLY, MAIN UNIT .....	042648101
CORD AC LINE 250V 2XX/3XX/64 .....	041799601
CORD, AC LINE 125V 30A 2XX/3XX/64 .....	041799501
COVER ASSEMBLY, REAR SYSTEM 64 .....	042650901
COVER ASSEMBLY, RIGHT & LEFT SIDE SYSTEM 64 .....	042650801
COVER ASSEMBLY, TOP SYSTEM 64 .....	042650701
DISC DRIVE, 150MB 115V FUJITSU N-2284K .....	042001301
DISC DRIVE, 84MB 115V FUJITSU .....	042001101
DOOR ASSEMBLY, FRONT SYSTEM 64 .....	042651001
FAN ASSEMBLY, NUMBER 1 EXHAUST 115V .....	042648301
FAN ASSEMBLY, NUMBER 1 EXHAUST 220V .....	042648401
FAN ASSEMBLY, NUMBER 2 INTAKE 115V .....	042648501
FAN ASSEMBLY, NUMBER 2 INTAKE 220V .....	042648601
FILTER, AIR SYSTEM 64 .....	042651201
FILTER, RFI 30A .....	041925001
FUSE HOLDER, 51XX/64 .....	041225901
FUSE, 15A SLO BLO .....	041208401
FUSE, 8A SLO BLO .....	041208301
HARNESS ASSEMBLY, PS1 OUTPUT W10 .....	042648001
HARNESS ASSEMBLY, PS1-P1-W11 .....	042647901
HARNESS ASSEMBLY, PS2 DC-W9 .....	042647801
HUB UNIT II, DC POWER 4841-1 .....	042650601
POWER SUPPLY, FUJITSU 115V .....	042588201
PS, + & - 12V/15V, 3A .....	041909801
PS, +5V 150A .....	042646501
PS, +5V AND + & - 12V .....	042646401
PWA, ALU Q64 .....	042645401
PWA, AUX. Q64 .....	042645301
PWA, CONTROL PANEL INTERFACE SYSTEM 64 .....	042651101
PWA, DISC TERMINATOR .....	042647301
PWA, IOU49 .....	042645801
PWA, IOU52 WITH ROMS MARKSMAN/FUJI .....	042633801
PWA, MAD Q64 .....	042645501
PWA, MEM DATA BOARD Q64 .....	042645901
PWA, MEM64A .....	042645201
PWA, MEM64E .....	042645001
TAPE DRIVE, CIPHER 1/2-INCH STREAMER 115V .....	042637201

PARTS AND/OR ASSEMBLIES OF SYSTEM 64 (SYSTEM STRUCTURE SHEETS) USED FOR REFERENCE.

+++++  
 -----SORTED BY DESCRIPTION-----  
 +++++  
 -----FILE NAME "SYS64-D" CDW----

PART DESCRIPTION	PART NUMBER	MDS XREF	MODEL NUMBER
AC BOX ASSEMBLY, SYS 64 W3	44078-001B	042645702	64
BEZEL, DIAG. PANEL ASSY. 64	44430-001	042674101	64
BRACKET, CABLE RET RACK MT.	44279-001	042678901	64
BRACKET, CABLE RETRACTOR FUJ. MT.	44487-001	042678801	64
CABLE ASSY, AC POWER 2.65'	44088-001	042654801	64
CABLE ASSY, AC POWER 2.75'	44088-002	042647601	64
CABLE ASSY, AC POWER 3.58'	44088-003	042647701	64
CABLE, 50 CON. .15'	44039-009	042670401	64
CABLE, 50 COND. 5' 64	44449-001	042674401	64
CABLE, 50 COND. 50' (CYPHER)	44039-006	042679401	64
CABLE, 50 COND. 9FT. (CIPHER)	44039-002	042645601	64
CABLE, AC PWR 3.88'	44088-005	042669701	64
CABLE, BUSS DISC Q64 20FT.	42717-004	042644801	64
CABLE, CEL ASSY. BLUE .25' BLU	44177-022	042673901	64
CABLE, CEL ASSY. BRN .25" 64	44177-012	042673701	64
CABLE, CEL ASSY. BRN .25' 64	44177-021	042673801	64
CABLE, CONT. PANEL DISC	44342-001	042669801	64
CABLE, CYPHER 50 CON. 20'	44039-004	042646901	64
CABLE, DISC C/P	44232-001	042647401	64
CABLE, GND .25" 64	44110-001	042673501	64
CABLE, GND .5' 64	44110-002	042673601	64
CABLE, RADIAL DISC Q64 20FT.	42718-004	042644901	64
CARD CAGE, W/B.P. ASSY Q64	44122-001	042646001	64
CARRIER, CABLE STEEL	12853-001	042679001	64
CHANNEL ASSY., DRAWER MTG. 64	44420-001	042674601	64
CONTROL PANEL ASSY, ADD ON CAB.64	44034-002	042648201	64
CONTROL PANEL ASSY, MAIN UNIT 64	44034-001	042648101	64
CORD, LINE AC 125V 2XX/3XX/64	42693-001	041799501	64
CORD, LINE AC 250VAC 2XX/3XX/64	42693-002	041799601	64
COVER ASSY, REAR SYS. 64	44130-001	042650901	64
COVER KIT, COMP. 64	44132-001	042674501	64
CPU, 64 SYS	44079-001	042667101	64
DISC DR, 84M/B 115V FUJITSU	52006-011	042001101	64
DISC DR, FUJ. N-2284K 150M/B 115V	52006-021	042001301	64
DOOR ASSY, FRONT LOWER SYS.64	44422-001	042654701	64
DOOR ASSY, FRONT SYS. 64	43972-001	042651001	64
DOOR ASSY, FRONT UPPER SYS.64	44421-001	042654601	64
DRAWER, OPER. PANEL ASSY. (FUJ)	12616-066	042679101	64
FACEPLATE, AC BOX 115V 64	44069-001	042673301	64
FAN ASSY, NO.1 EXHAUST 115V	44047-001	042648301	64
FAN ASSY, NO.1 EXHAUST 220V	44047-002	042648401	64
FAN ASSY, NO.2 INTAKE 115V	44048-001	042648501	64
FAN ASSY, NO.2 INTAKE 220V	44048-002	042648601	64
FILTER, AIR SYS. 64	44188-001	042651201	64
FILTER, RFI 20 ANP	12829-001	042680701	64
FILTER, RFI 30A	12526-001	041925001	64
FUSE, 15A SLO BLO	11701-010	041208401	64

PARTS AND/OR ASSEMBLIES OF SYSTEM 64 (SYSTEM STRUCTURE SHEETS) USED FOR REFERENCE.

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PART DESCRIPTION	PART NUMBER	MDS XREF	MODEL NUMBER
FUSE, 8A SLO BLO	11701-008	041208301	64
HARNESS ASSY, PS1 OUTPUT W10	43995-001	042648001	64
HARNESS ASSY, PS2 DC-W9	44111-001	042647801	64
HARNESS, AC RCPT	44119-001	042673401	64
HARNESS, CIRCUIT BREAKER	43885-001	042655101	64
HARNESS, CONTROL PANEL Q 64	44173-001	042671601	64
HARNESS, FAN ASSY. EXH.AS	44035-001	042671701	64
HARNESS, FAN INTAKE A3-Q64	44036-001	042671901	64
HARNESS, PSI ADAPTER	44433-001	042681201	64
HINGE, Q64	44126-001	042674301	64
HOUSING ASSY., INTAKE FAN 64	44118-001	042673201	64
IC, PROM 'FCHER' *12711-001	44158-004	042677101	64
IC, PROM 'FCHLD' *12711-001	44160-002	042678101	64
IC, PROM 'FCHVB' *12711-001	44158-002	042678501	64
IC, PROM 'FCHVEN' *12711-001	44160-003	042678301	64
IC, PROM 'INCSIZ' *12711-001	44159-004	042677601	64
IC, PROM 'MEMROM1' *12711-001	44159-001	042677301	64
IC, PROM 'MEMROM2' *12711-001	44159-002	042677401	64
IC, PROM 'MEMROM3' *12711-001	44159-003	042677801	64
IC, PROM 'RCHMEM' *12711-001	44160-001	042678001	64
IC, PROM Q64 'BRLSHF' *12711-001	44161-001	042678201	64
IC, PROM Q64 'FCHBR1' *12711-001	44157-005	042677501	64
IC, PROM Q64 'FCHBR2S' *12711-001	44157-003	042677001	64
IC, PROM Q64 'FCHINC' *12711-001	44156-001	042675201	64
IC, PROM Q64 'FCHLDC' *12711-001	44156-002	042676101	64
IC, PROM Q64 'FCHSEQ' *12711-001	44157-002	042676801	64
IC, PROM Q64 'FCHSQL' *12711-001	44157-001	042676401	64
IC, PROM Q64 'FCHVA' *12711-001	44158-001	042677701	64
IC, PROM Q64 'FCHBR2B' *12711-001	44157-004	042677201	64
IC, PROM Q64 AXBCD *12711-001	44012-001	042675501	64
IC, PROM Q64 AXIOU *12711-001	44011-001	042675401	64
IC, PROM Q64 MAAD *12711-001	44016-001	042676701	64
IC, PROM Q64-51(A) *12711-001	44013-051	042675601	64
IC, PROM Q64-52(A) *12711-001	44013-052	042675701	64
IC, PROM Q64-53(A) *12711-001	44013-053	042675801	64
IC, PROM Q64-54(A) *12711-001	44013-054	042676001	64
IC, PROM Q64-55(A) *12711-001	44013-055	042676201	64
IC, PROM Q64-56(A) *12711-001	44013-056	042676301	64
IC, PROM Q64-57(A) *12711-001	44013-057	042676501	64
IC, PROM Q64-58(A) *12711-001	44013-058	042676601	64
IC, RPOM 'FCHVC' *12711-001	44158-003	042676901	64
MP, CON. PANEL SYS64 6.3V 2A	12835-001	042684201	64
ATCH, ASSY. COMP.	44125-001	042674201	64
PANEL ASSY, SIDE Q64	44129-001	042650801	64
PANEL ASSY, TOP Q64	44229-001	042650701	64
PS, +5V +-12V	12818-001	042646401	64
PS, +5V 150A	12822-001	042646501	64

## PARTS AND/OR ASSEMBLIES OF SYSTEM 64 (SYSTEM STRUCTURE SHEETS) USED FOR REFERENCE.

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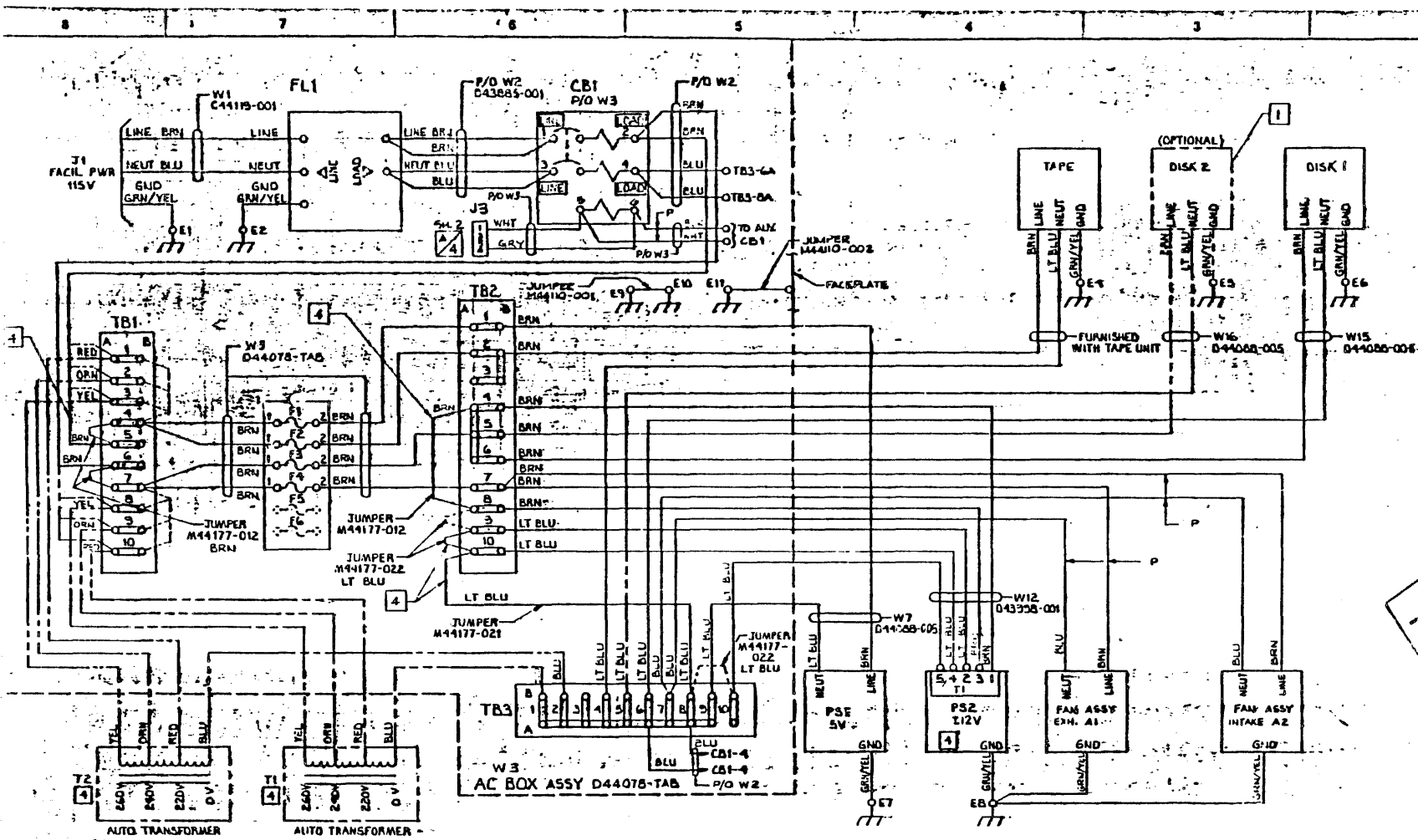
PART DESCRIPTION	PART NUMBER	MDS XREF	MODEL NUMBER
PS, FUJITSU MOD 115VAC	52007-001	042588201	64
PWA, ALU Q64 W/ROMS	44014-001	042645401	64
PWA, AUX Q64 W/O ROMS	43631-001	042670301	64
PWA, AUX W/O PROMS	43633-001	042670201	64
PWA, AUX W/ROMS	44010-001E	042645302	64
PWA, BACKPLANE Q64	43921-001C	042645103	64
PWA, DIAG. PANEL/LED READ-OUT 64	44121-001	042674001	64
PWA, DIAGNOSTIC PANEL Q64	44221-001E	042651103	64
PWA, DISC TERMINATOR	43760-001	042647301	64
PWA, IOU 49 W/ROMS	44090-001	042645801	64
PWA, IOU 52 (MEMX)	43904-001	042621201	64
PWA, IOU-49	43666-001	042669601	64
PWA, MAD W/ROMS	44015-001C	042645503	64
PWA, MEM 64A W/ROMS	43959-001B	042645202	64
PWA, MEM 64B	43644-001	042645001	64
PWA, MEM ADD Q64 CPU	43635-001	042674701	64
PWA, MEM DATA Q64 W/O ROMS	43637-001	042670501	64
PWA, MEM DATA Q64 W/ROMS	44114-001	042645901	64
PWA, IOU42 W/PRM.MRKS/FUJI.2XX/3XX	42672-003	041405601	64
REPL. BY #44078-001B #042645702	44078-001	042645701	64
REPL. BY 00-44221-001#042654501	44189-001	042651101	64
REPL. BY 042645502	44015-001	042645501	64
REPL. BY 11-43921-001C#042645103	43921-001B	042645102	64
REPL. BY 11-43959-001B#042645202	43959-001	042645201	64
REPL. BY 11-44010-001E#042645302	44010-001	042645301	64
REPL. BY 11-44114-001 #042645901	44144-001	042654301	64
REPL. BY 43921-001B #042645102	43921-001	042645101	64
REPL. BY 44015-001C#042645503	44015-001B	042645502	64
REPL. BY 44154-011 #042837802	44017-011	042586601	64
RETRACTOR, CABLE RIBBON PCR350	12860-002	042679201	64
SWITCH, LOCK (IPL)	12799-001	042682601	64
TAPE DRIVE, 1/2" CIPHER	52076-001	042637201	64
TIE WRAP, 14 1/2" (12)	10695-003	042679301	64

Q64 DIAGNOSTIC KIT P/N (00) 80103 MDS-#042647201  
KIT CONSISTS OF THE FOLLOWING PROMS MADE FROM  
P/N (11) 12711-001---EPROM 2732 UNPROGRAMMED.  
-----FILE NAME 64-DIA----CDW 07/27/83.

VC	PART NUMBER	MDS XREF	MODEL NUMBER	PART DESCRIPTION
00	44216-051	042659501	64 DIA	IC, PROM Q64 BRDDBG51A/DIA-80103
00	44216-052	042659601	64 DIA	IC, PROM Q64 BRDDBG52A/DIA-80103
00	44216-053	042660501	64 DIA	IC, PROM Q64 BRDDBG53A/DIA-80103
00	44216-054	042659801	64 DIA	IC, PROM Q64 BRDDBG54A/DIA-80103
00	44216-055	042659901	64 DIA	IC, PROM Q64 BRSSBG55A/DIA-80103
00	44216-056	042660001	64 DIA	IC, PROM Q64 BRDDBG56A/DIA-80103
00	44216-057	042660301	64 DIA	IC, PROM Q64 BRDDBG57A/DIA-80103
00	44216-058	042660401	64 DIA	IC, PROM Q64 BRDDBG58A/DIA-80103

~~Board~~ Board Bug  
Roms

8	7	6	5	4	3	2	1	
							PPR-0382-19	1964
							PR-0382-27	1964



- NOTE: UNLESS OTHERWISE SPECIFIED
- PHANTOM LINES INDICATE OPTIONAL VERSIONS.
  - P/O DENOTES "PART OF"
  - SEE TABLE NO. 1.
  - 115V VERSION SHOWN REFER TO TABLE 2 FOR OTHER VOLTAGES.
  - GROUND TERMINALS E3-E8 ARE LOCATED IN THE W3 AC BOX ASSY.
  - CABLES TO DISK P.S. ARE FURNISHED WITH DISC UNIT.

	100 VAC	115 VAC	127 VAC	200 VAC	220 VAC	240 VAC	250 VAC
	FROM CBI-2 TO TB1-1A FROM CBI-2 TO TB1-10A	FROM CBI-2 TO TB1-5A FROM CBI-2 TO TB1-6A	FROM CBI-2 TO TB1-3A FROM CBI-2 TO TB1-5A	FROM CBI-2 TO TB1-1A FROM CBI-2 TO TB1-10A	FROM CBI-2 TO TB1-5A FROM CBI-2 TO TB1-6A	FROM CBI-2 TO TB1-2A FROM CBI-2 TO TB1-9A	FROM CBI-2 TO TB1-3A FROM CBI-2 TO TB1-8A
TI	FROM TB1-7B TO TB1-2B FROM TB1-4B TO TB1-3B	FROM TB1-6A TO TB1-7A FROM TB1-4A TO TB1-5A	FROM TB1-7B TO TB1-9B FROM TB1-4B TO TB1-2B	FROM TB1-7B TO TB1-9B FROM TB1-4B TO TB1-2B	FROM TB1-7B TO TB1-7A FROM TB1-5A TO TB1-4A	FROM TB1-7B TO TB1-7B FROM TB1-4B TO TB1-1B	FROM TB1-7B TO TB1-7B FROM TB1-4B TO TB1-1B
PSE		FROM TB2-4A TO TB2-5A FROM TB2-5A TO TB2-10A FROM TB3-8B TO TB2-10A			FROM TB2-6A TO TB2-5A FROM TB3-8B TO TB3-10B		

AC VOLTAGE	F1	F2	F3	F4
100, 115, 120, 127	15A	2A	15A	5A
200, 220, 240, 250	8A	4A	8A	4A

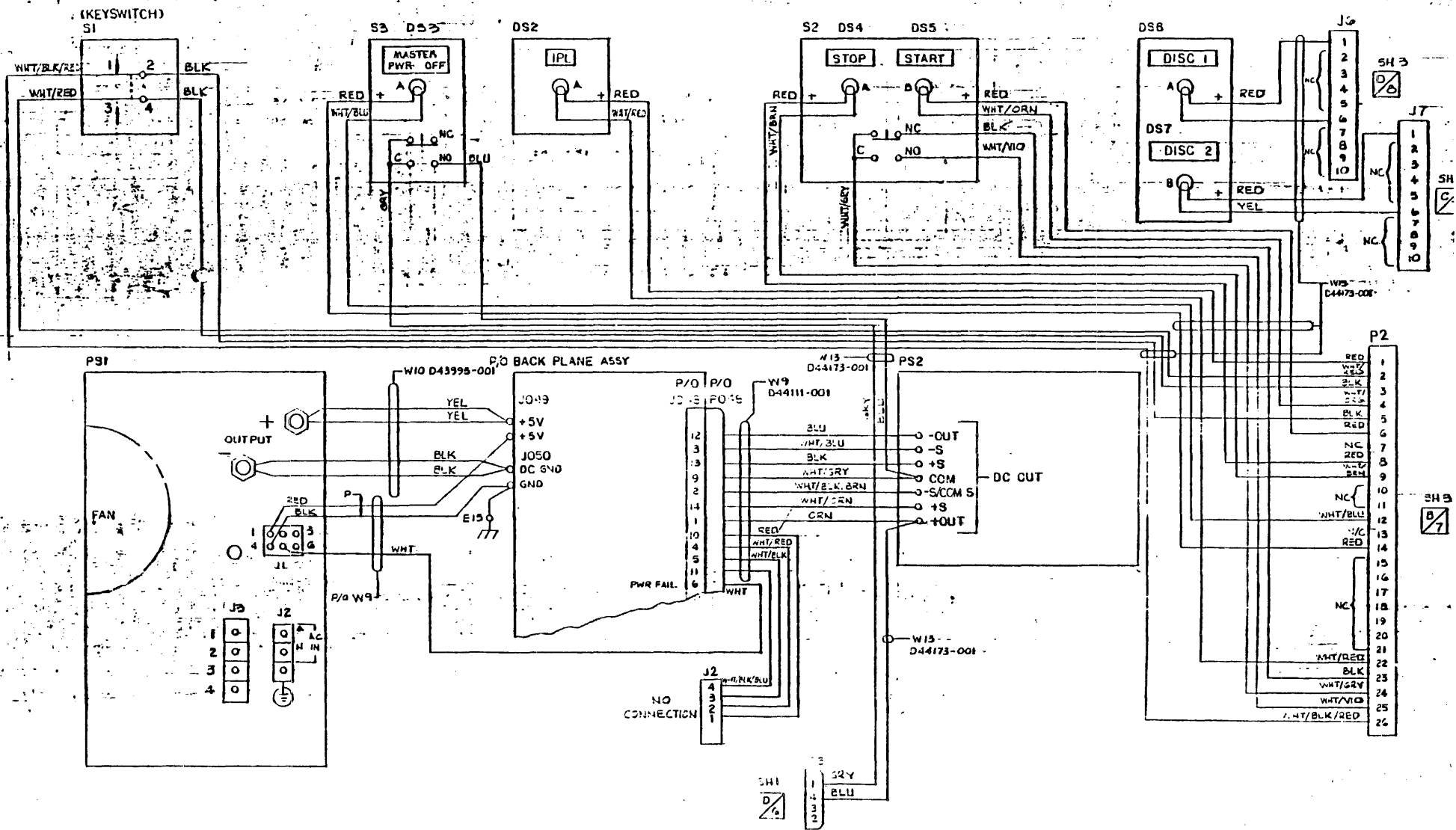
OFFICE OF THE DIRECTOR OF THE ARMY  
HEADQUARTERS, ARMY  
WASHINGTON, D.C. 20315

FORM 2017  
1-64

INTERCONNECTION DIAGRAM  
SYS 64  
22-28-001

MDS

CONTROL PANEL



DC POWER



