4695 HARDCOPIES FROM THE 4107/4109 (CONT.)

viewport to make a smaller image on the screen. Here are the commands that set the maximum-sized image that fits on the paper:

In Setup: *VIEWPORT 800 300 4095 2771

From Host: <EC>RV"^K&H5ot?_

(<EC> indicates the escape character [ASCII decimal 27].)

Of course, if the entire image is in segments, you could issue the VIEWPORT command after the image is on the screen and hit the S Eras key to get the same results.

The 4695's paper out indicator will still come on. Press Cancel on the 4107/4109 to make the indicator go out and to stop the copy process.

Most overhead projectors can handle an image no greater than about 9 x 9 inches. For transparencies, you will probably want to set a viewport smaller than the one indicated above.

Note that the dialog area is not affected by this process and will copy at its normal size.

Don't forget that all 410X terminals can produce a small, quarter-sized copy on request. On the 4107/4109 this produces an image on the paper of about 5.25 x 4 inches.

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4907 FIRMWARE VERSION 1.4

REF: 4907 File Manager Service Manual
P/N 070-2405-00
Corporate Mod #52677

Firmware Version 1.4

Firmware for the 4907 has recently been upgraded to Version 1.4. This change consists of nine programmed 2716 EPROMs and a minor hardware modification to the circuit board. This corporate mod was effective with 4907 S/N B014234.

A parts replacement kit, P/N 050-1160-03 has been set up and is currently available for Version 1.4 firmware.

The hardware modification to the ROM board consists of soldering a one inch length of insulated wire between pins 7 and 10 of U521. This must be done when installation of Version 1.4 firmware occurs.

All Firmware Versions

Listed below are the part numbers and checksums for all versions of 4907 firmware.

Firmware checksums for the 4907 ROM board can be obtained by using the 067-0746-00 Systems Test Fixture. For details on this procedure, please refer to the File Manager Service Manual.

Please note that to verify P/N 160-2632-00 (U641), install the microcircuit in one of the other ROM sockets (U271 recommended), then verify the checksum. Be sure to return the ROMs to their respective sockets.

(ARTICLE CONTINUED ON THE NEXT PAGE)

4907 FIRMWARE VERSION 1.4 (CONT.)

P/N / Cksm		FIRMWARE VERSION LEVELS V1.0	V1.1	V1.2	V1.3	V1.4
Ckt	start addr	P/N & level Cksms	lvl Cksms	lvl Cksms	lvl Cksms	P/N & level Cksms
U121	A000	156-1067-00 CF CF	-00 CF CF	-00 CF CF	-00 CF	160-2624-00 41
U131	A800	156-1068-00 9F 2B	-00 AE 2B	-00 AE 2B	-01 28	160-2625-00 F8
U141	B000	156-1069-00 64 64	-00 64 64	-00 64 64	-00 64	160-2626-00 85
U151	B800	156-1070-00 A1 A4	-00 5D A4	-00 5D A4	-01 7C	160-2627-00 FF
U161	C000	156-1071-00 C1 C1	-00 C1 C1	-00 C1 C1	-00 C1	-00 C1
U201	C800	156-1072-00 E8 E8	-00 E8 E8	-00 E8 E8	-00 E8	-00 E8
U211	D000	156-1073-00 5A 5A	-00 5A 5A	-00 5A 5A	-00 5A	-00 5A
U221	D800	156-1074-00 39 39	-00 39 39	-00 39 39	-01 35	160-2628-00 4F
U231	E000	156-1075-00 79 79	-00 79 79	-00 79 79	-00 79	-00 79
U241	E800	156-1076-00 47 47	-00 47 47	-00 47 47	-00 47	-00 47
U251	F000	156-1077-00 AA AA	-00 AA AA	-00 AA AA	-00 AA	160-2629-00 D3
U261	F800	156-1078-00 0E 0E	-00 0E 0E	-00 0E 0E	-01 68	160-2630-00 9B
U271	6000 6800	156-1079-00 5B 6C 5B 6C	-00 5B 6C 5B 6C	-00 5B 6C 5B 6C	-01 7F 7F	160-2631-00 B9 B9
U541	N/A	156-0940-09 N/A	-14 N/A	-14 N/A	N/U N/A	N/U N/A
U631	8000	156-0960-06 E3 N/A	07 76 N/A	08 C6 N/A	N/U N/A	N/U N/A
U641	*	N/U N/A	N/U N/A	N/U N/A	N/U N/A	160-2632-00 6B
Board Level		670-5385-00	-01	-02	-04	-06

The abbreviations below are used with the chart.

Cksm = (with patch) (without patch)
N/A = Not Applicable
N/U = Not Used
U541 = FPLA
U631 = Patch ROM

To get checksum without patch, remove the FPLA.
Firmware Versions 1.3 and 1.4 do not use a patch ROM and therefore do not have a "w/o patch" checksum.

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4907 119-0977-05 STRAP CONFIGURATIONS

REF: 4907 File Manager Service Manual
P/N 070-2405-00
4907 File Manager Installation Guide
P/N 070-2493-00
119-0977-04 Strapping (upgrade to 119-0977-05)
P/N 070-4980-00
Corporate Mod #46160

NEW LSI BOARD

Shugart has a new LSI board for their 8 inch flexible disk drives. The new board is being shipped in the 119-0977-05 which is being used in the 4907 and other products. The new board is Tektronix P/N 118-1004-02 and is electrically identical to the existing board; they are both interchangeable in the disk drives. Some of the strap options and test points are in different locations. There is also a new group of wire jumpers used with this new board.

ALL DRIVE BOARDS

With this article I will attempt to summarize the strapping parameters, wire set connections and board layouts of the different drives used in the 4907. Table 1 shows drive history.

(ARTICLE CONTINUED ON THE NEXT PAGE)

4907 119-0977-05 STRAP CONFIGURATIONS (CONT.)

Drive P/N	Board P/N	Comments
119-0977-00	118-0358-01	Original discrete board
119-0977-01	118-0358-02	Second discrete board with mod
119-0977-03	118-1004-01	First LSI board
119-0977-05	118-1004-02	Second LSI board (current)

Note: Missing suffix levels were never shipped.

Table 1.
Drive History

STRAP	DRIVE 0	DRIVE 1	DRIVE 2
T2	IN	IN	IN
T1,T3,T4,T5,T6	*(1)	*(1)	*(1)
DS1	IN	OUT	OUT
DS2	OUT	IN	OUT
DS3	OUT	OUT	IN
DS4	OUT	OUT	OUT
HL *(2)	OUT	OUT	OUT
DS *(2)	IN	IN	IN
DS/HL *(5)	DS	DS	DS
DS/E1/HL *(3)	DS	DS	DS
D *(4)	*(4)	*(4)	*(4)
DC	IN	IN	IN
A	IN	IN	IN
B	IN	IN	IN
C	IN	IN	IN
Z *(2)	OUT	OUT	OUT
Y/Z *(5)	NONE	NONE	NONE
Y/EZ/Z *(3)	NONE	NONE	NONE
X	OUT	OUT	OUT
Y *(2)	OUT	OUT	OUT
800 *(2)	OUT	OUT	OUT
801 *(2)	IN	IN	IN
800/801 *(6)	801	801	801
L *(2)	OUT	OUT	OUT

Table 2.
Commented Strap Info

*(1) These jumpers are strapped in on the drive which is electrically the furthest from the main cabinet. This is usually Unit 1.

*(2) This strap is on the 118-0358-01, -02 boards only.

*(3) This strap is on the 118-1004-02 board only.

*(4) On the 118-0358-01, -02 and the 118-1004-01 boards connect P8 to this double pin set with the wire on the side toward the inside of the board. The 118-1004-02 board has nothing on these pins.

*(5) This strap is on the 118-1004-01 board only.

*(6) This strap is on the 118-1004-01, -02 boards only.

WIRE INSTALLATION INSTRUCTIONS

For: 118-0358-01,-02

The wire harness shown in Figure 1a is currently used for both versions of the non-LSI boards. Following is the procedure for connection of this wire harness.

(ARTICLE CONTINUED ON THE NEXT PAGE)

4907 119-0977-05 STRAP CONFIGURATIONS (CONT.)

Refer to Figure 4 for locations of the wire to be attached in the following procedures.

1) Place P-7 of this wire harness (shown in Figure 1a) on the board so connector pins 1 through 5 go over the square pins which connect to edge connector pins 2 through 10.

2) Place P-8 of the wire harness on pin set D of the board so the wire of P-8 is connected to the square pin which is toward the inside of the board.

3) Solder the 9-1 wire to the through hole connections to pin 3 of IC 2F.

4) Solder the 9-2 wire to the middle square pin of the NP/WP pin set.

5) Solder the 9-3 wire to the through hole located between ICs 3C and 3D (see Figure 4).

For: 118-1004-01

Refer to Figure 5 for locations of the wire to be attached in the following procedures.

1) Place P-7 of the wire harness (shown in Figure 1a) on the board so connector pins 1 through 5 go over the square pins as shown in Figure 5.

2) Place P-8 of the wire harness on pin set D of the board so the wire of P-8 is connected to the square pin which is toward the inside of the board.

3) Solder the 9-1 wire to the through hole connecting to pin 13 of IC 4B.

4) Solder the 9-2 wire to the WP square pin of the WP/NP pin set.

5) Solder the 9-3 wire to the through hole located between ICs 2A/3A and the LSI IC as shown in Figure 5.

For: 118-1004-02

Refer to Figure 6 for locations of the wire to be attached in the following procedures. Refer to Figure 2 for description of the wires used in this procedure. Note that the 198-5099-00 wire is not used in the 4907.

1) Solder the stripped-lead end of the 196-1158-00 wire to the feedthrough connected to pin 13 of IC 2A.

2) Connect the other end of the 196-1158-00 wire to the square pin connected to Pin 6 of the edge connector as shown in Figure 3 below.

3) Connect the single-pin-connector end of the 198-5098-00 wire to the square pin connected to Pin 2 of the edge connector as shown in Figure 3.

4) Connect the other end of the 198-5098-00 wire (double-pin) to the square pin labeled Z of the Y/EZ/Z jumper so the other side of the double-pin connector is left open (not on a square pin).

5) Check that one end of the 196-1159-00 wire is soldered to the feedthrough connected to the WP side of the NP/WP square pads.

6) Connect the other end of the 196-1159-00 wire to the square pin connected to Pin 4 of the edge connector as shown in Figure 6.

(ARTICLE CONTINUED ON THE NEXT PAGE)

4907 119-0977-05 STRAP CONFIGURATIONS (CONT.)

ADDITIONAL WIRING

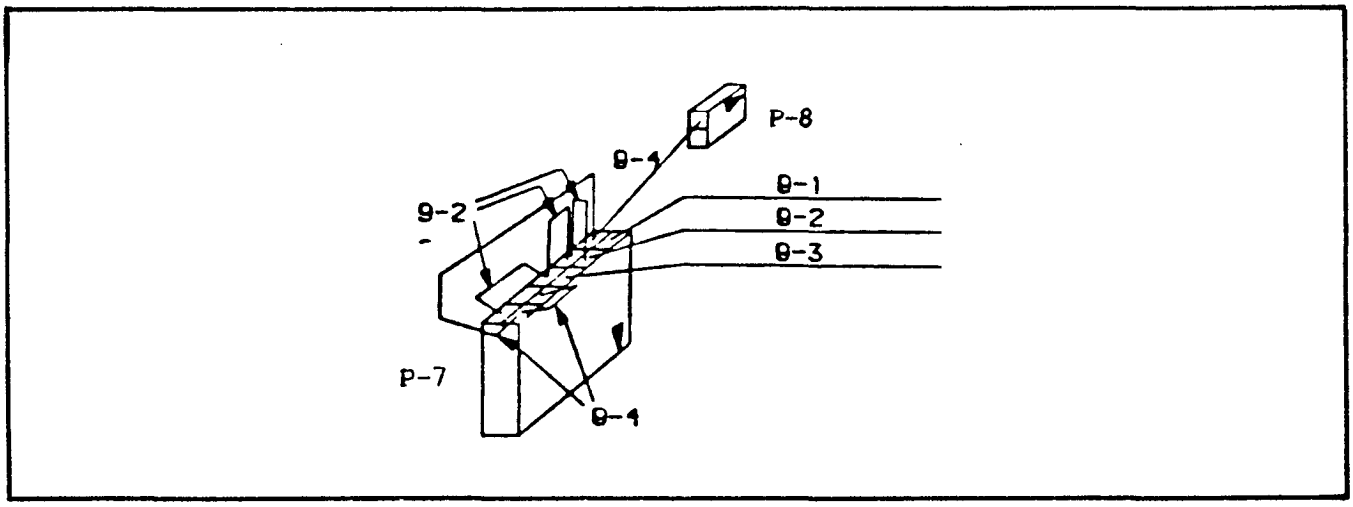

Figure 1a.
Wire Harness for 118-0358-01, -02 and 118-1004-01

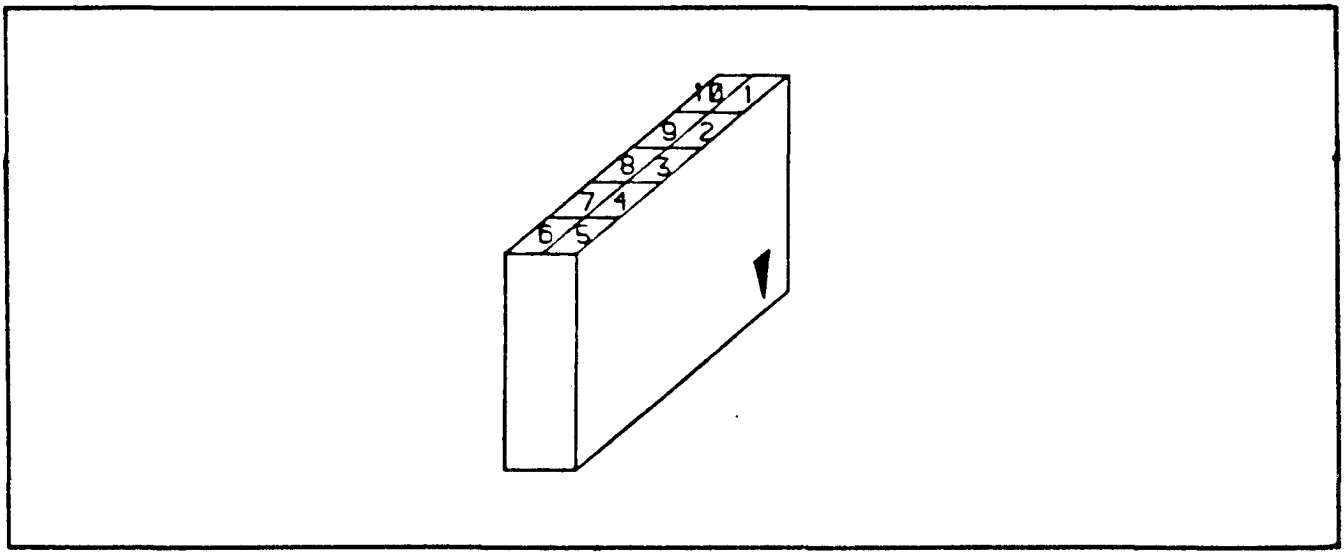

Figure 1b.
Wire Housing Pin Numbers

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4907 119-0977-05 STRAP CONFIGURATIONS (CONT.)

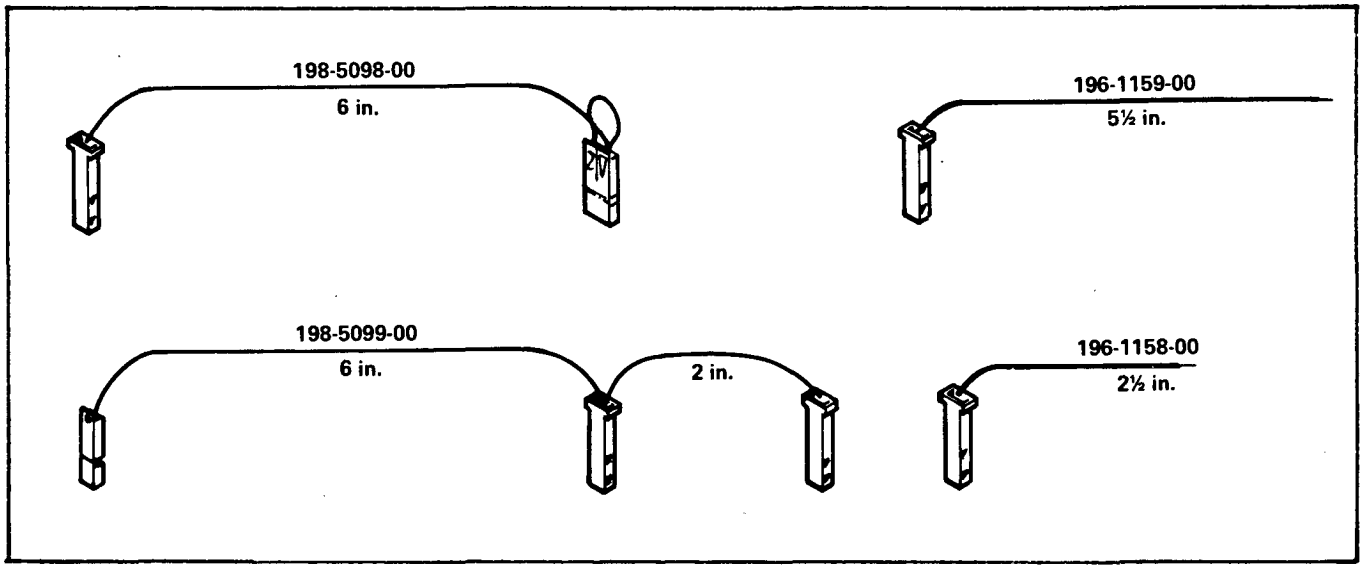

Figure 2.
Wire Set for 118-1004-02

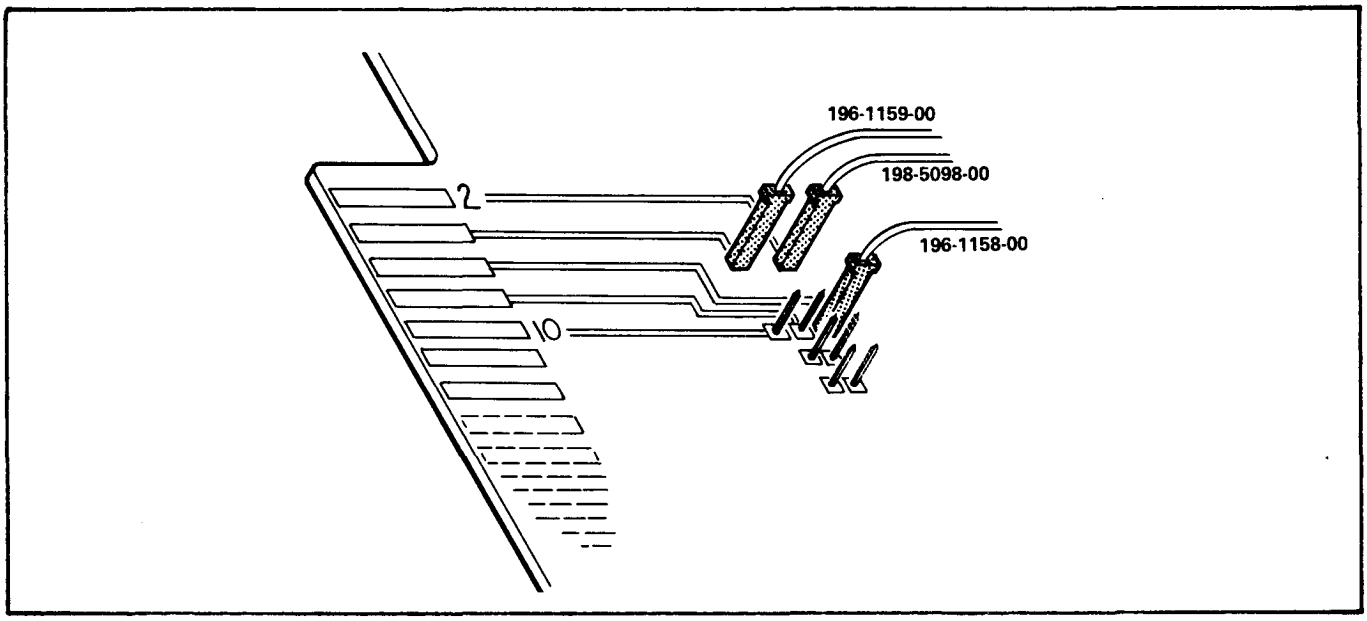

Figure 3.
118-1004-02 Wire Set Edge Pin Connections

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4907 119-0977-05 STRAP CONFIGURATIONS (CONT.)

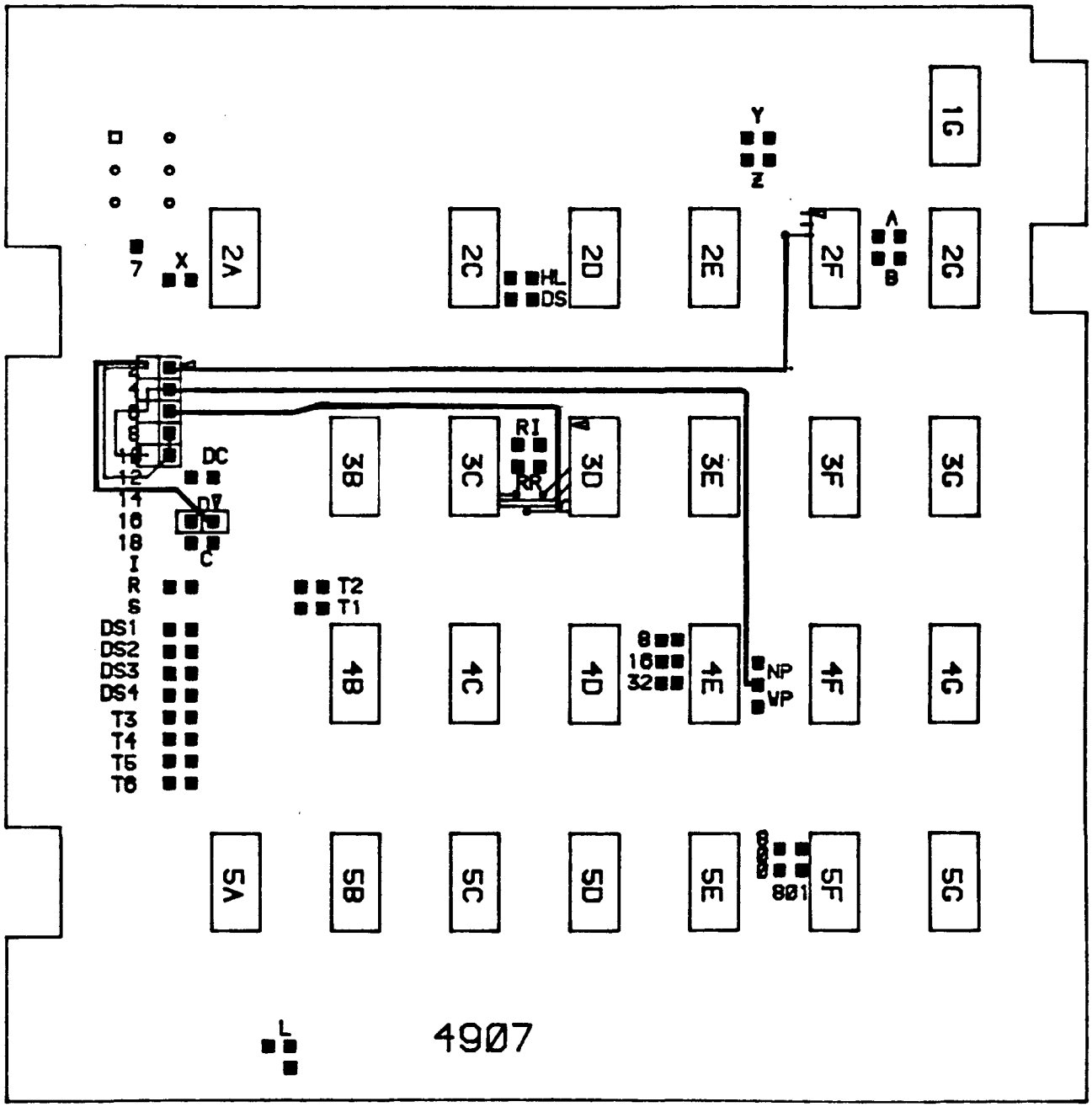

Figure 4.
Board Layout for 118-0358-01, -02

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4907 119-0977-05 STRAP CONFIGURATIONS
(CONT.)

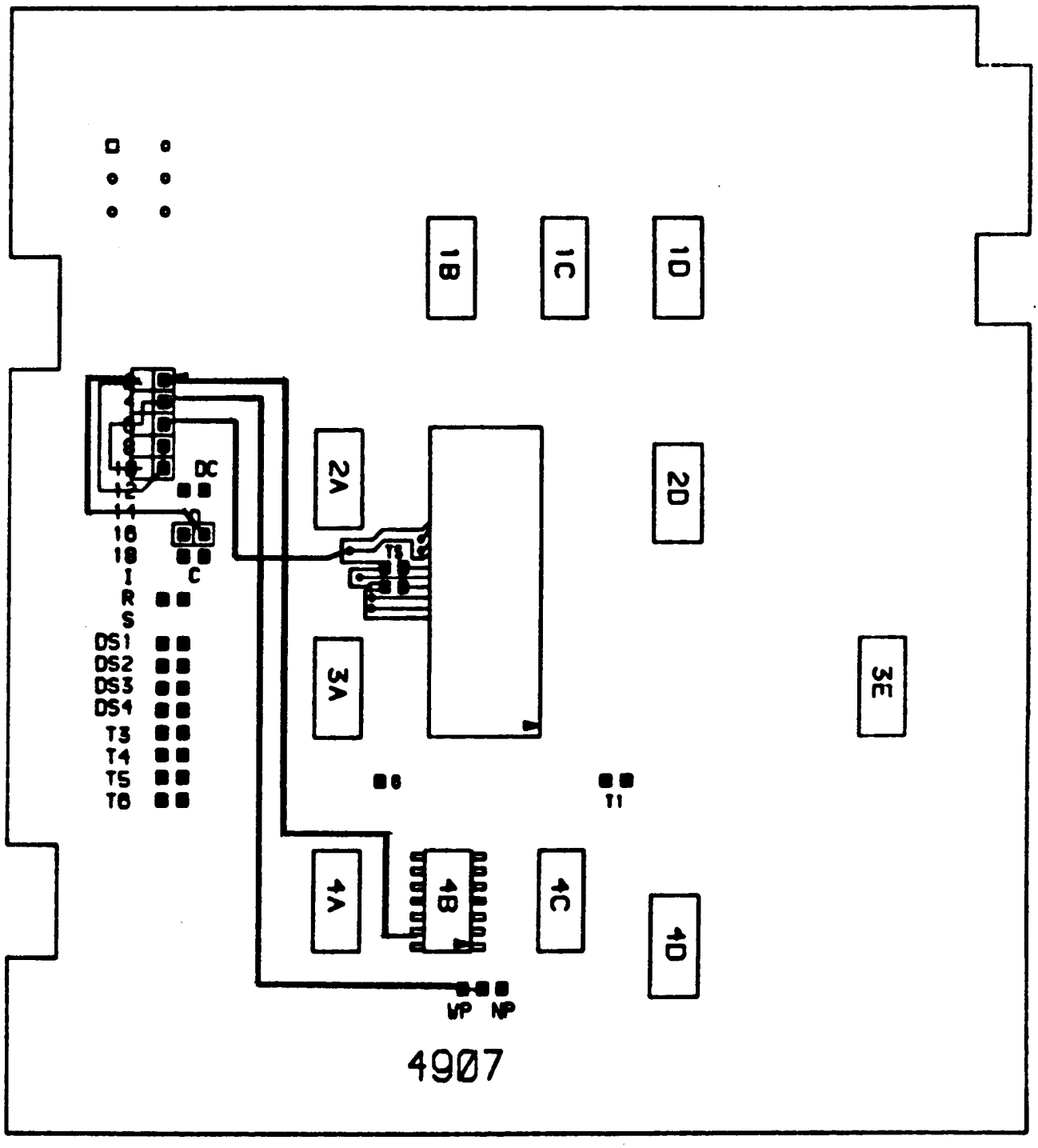

Figure 5.
Board Layout for 118-1004-01

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4907 119-0977-05 STRAP CONFIGURATIONS (CONT.)

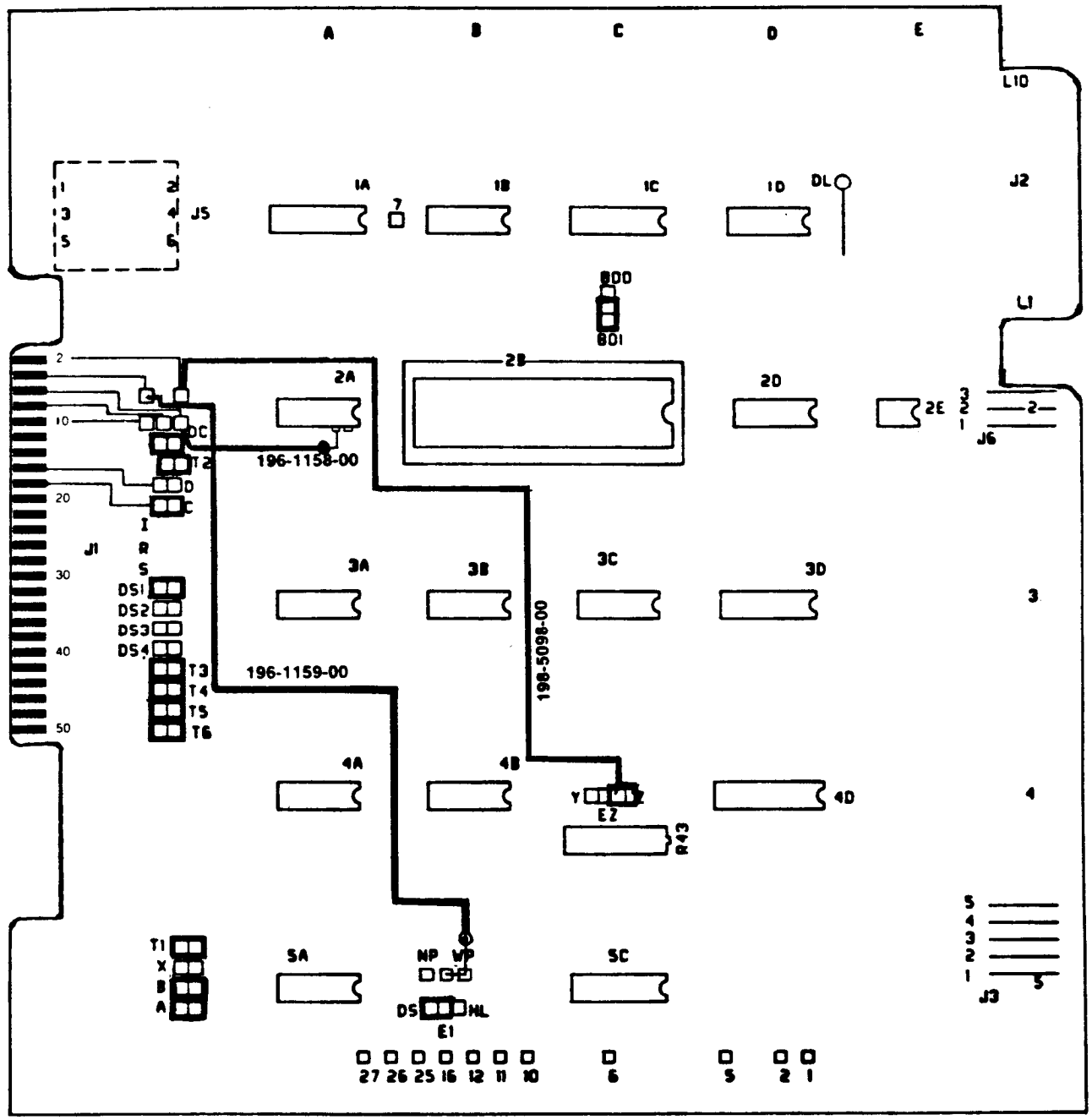

Figure 6.
Board Layout for 118-1004-02

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