

# CALIBRATION and SERVICING HANDBOOK

for

## THE DATRON 1281

### SELF CAL DIGITAL MULTIMETER

### Volume 2 Reference

For any assistance contact your nearest Datron Sales and Service center.  
Addresses can be found at the back of this handbook.

850092

Issue 2 (JANUARY 1989)

Due to our policy of continuously updating our products, this handbook may contain minor differences in specification, components and circuit design to the instrument actually supplied. Amendment sheets precisely matched to your serial number are available on request.

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# Datron 1281 (1989) – Service Manual / Drawings

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### CURRENT Assembly Schematics

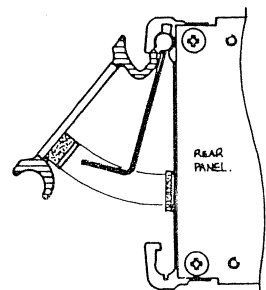
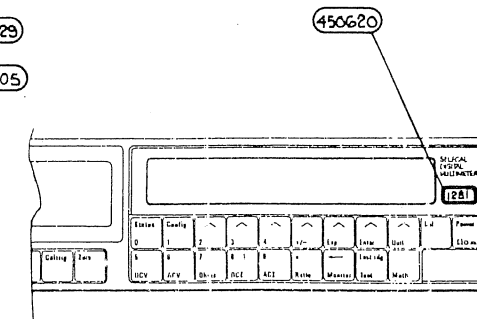
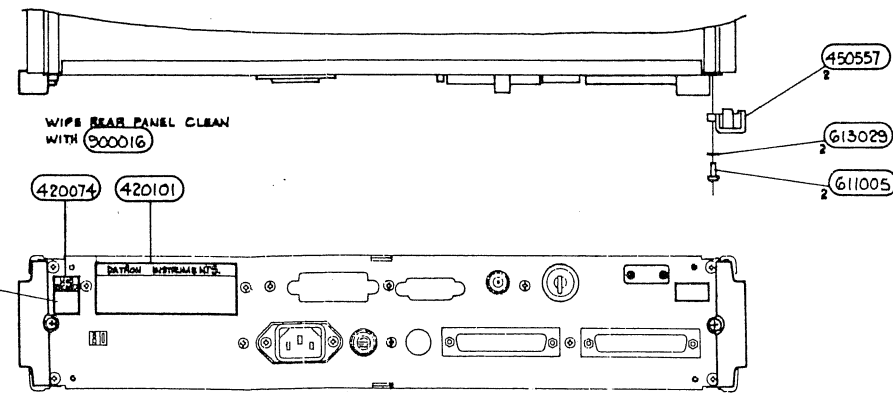
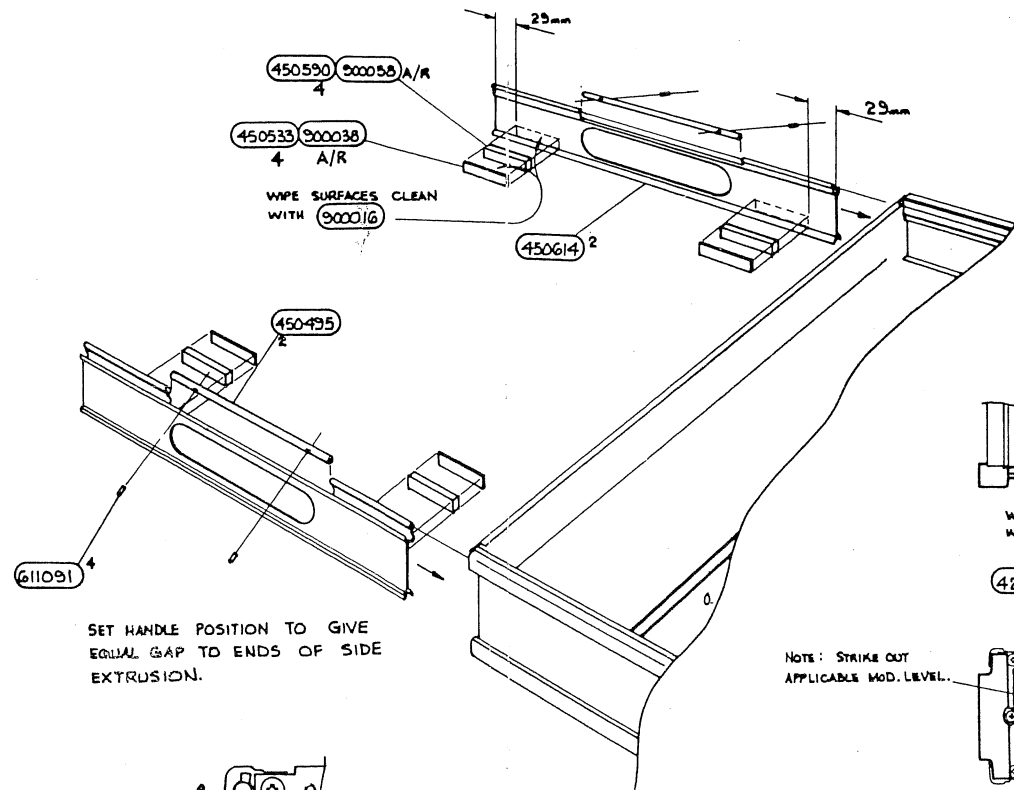
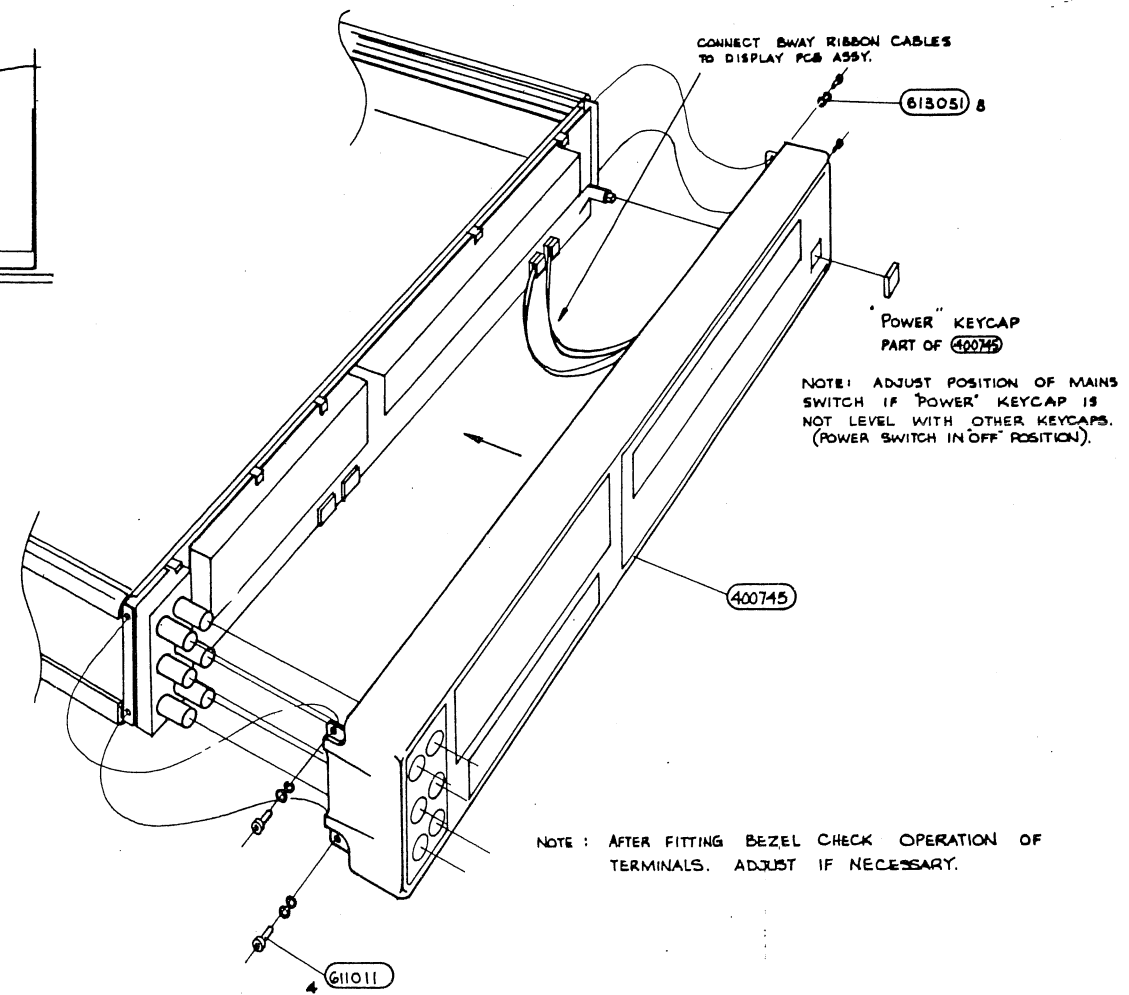
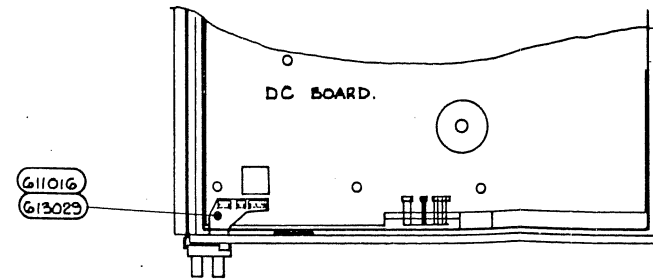
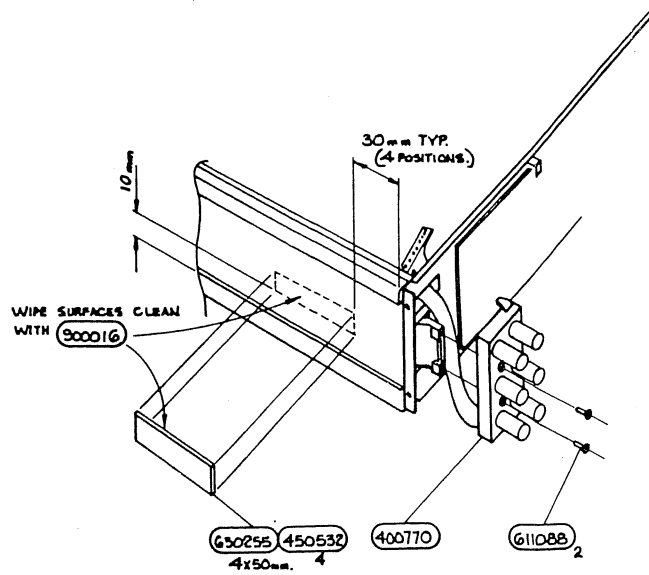
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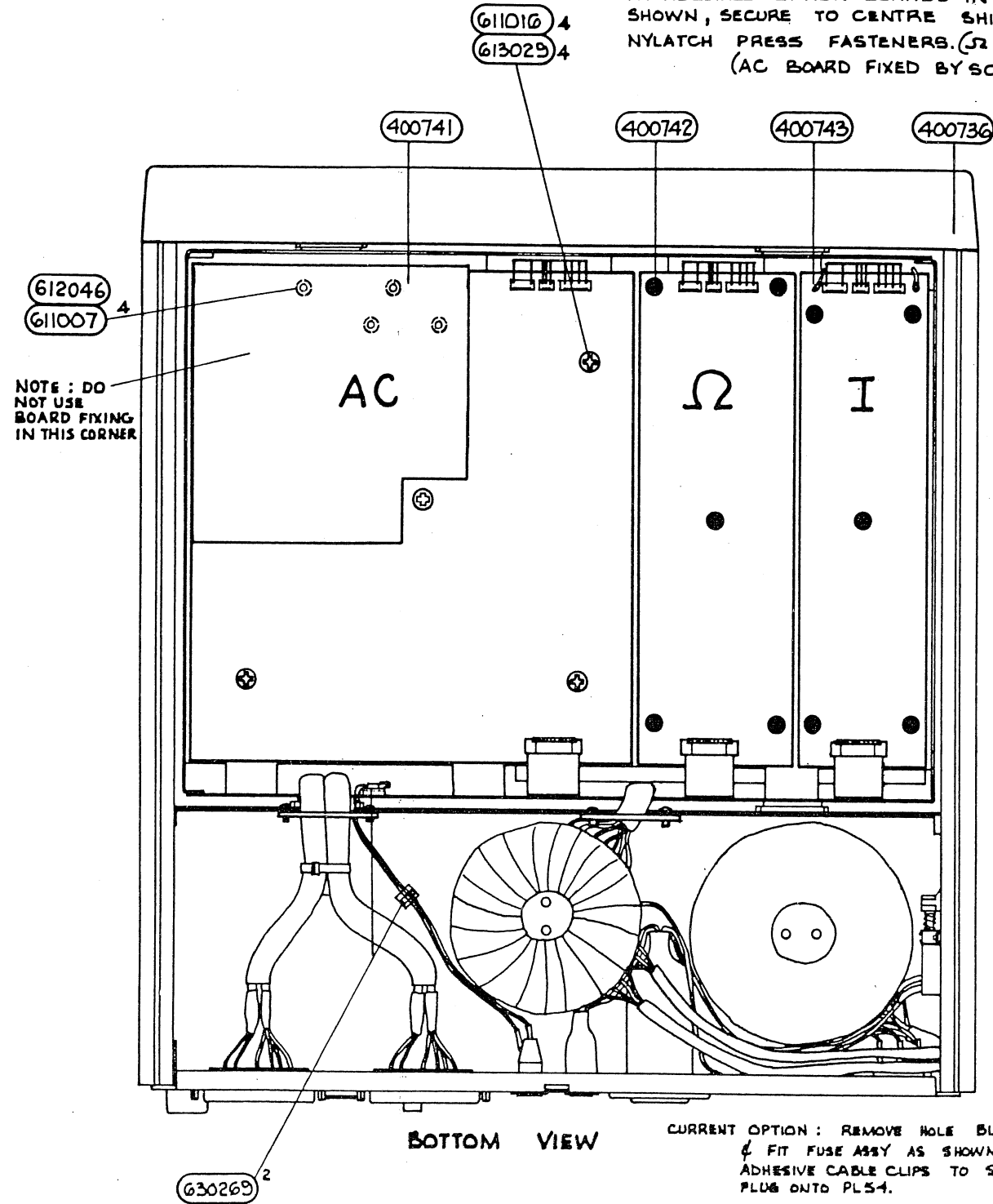
### SWITCH Assembly Schematics

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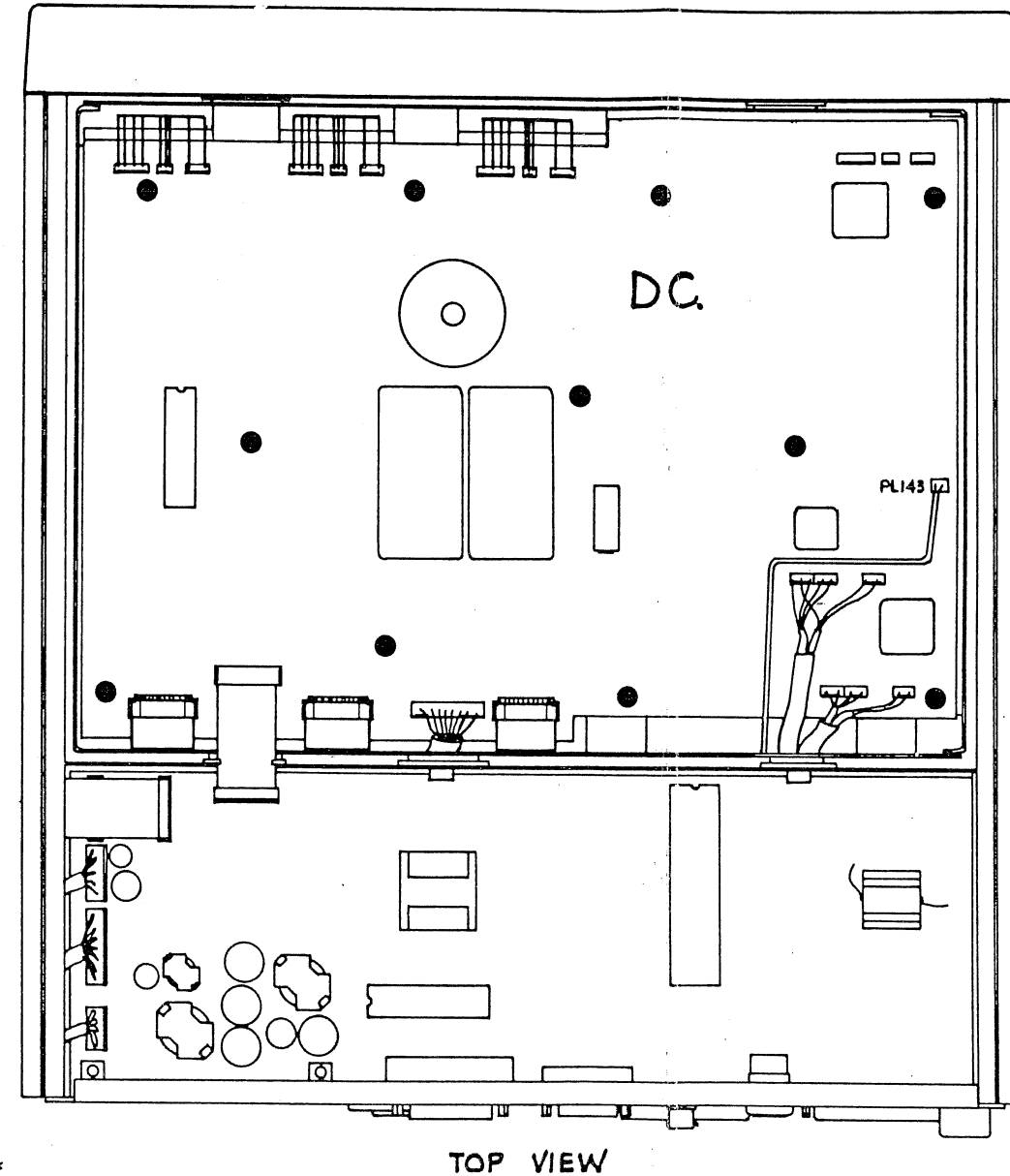


AC OPTION FITTING: REMOVE GU. SCREEN.  
 FIT BOARD TO CHASSIS WITH 613029 + 611016.  
 FIT 4 OFF 612046 THEN REFIT GU SCREEN  
 WITH 611007 - 8 OFF.

FIT REQUIRED OPTION BOARDS IN POSITIONS  
 SHOWN, SECURE TO CENTRE SHIELD USING  
 NYLATCH PRESS FASTENERS. (J2 & I)  
 (AC BOARD FIXED BY SCREWS).



CURRENT OPTION: REMOVE HOLE BLANKING PLUG & FIT FUSE ASSY AS SHOWN USE 4 OFF ADHESIVE CABLE CLIPS TO SECURE WIRES. PLUG ONTO PL54.

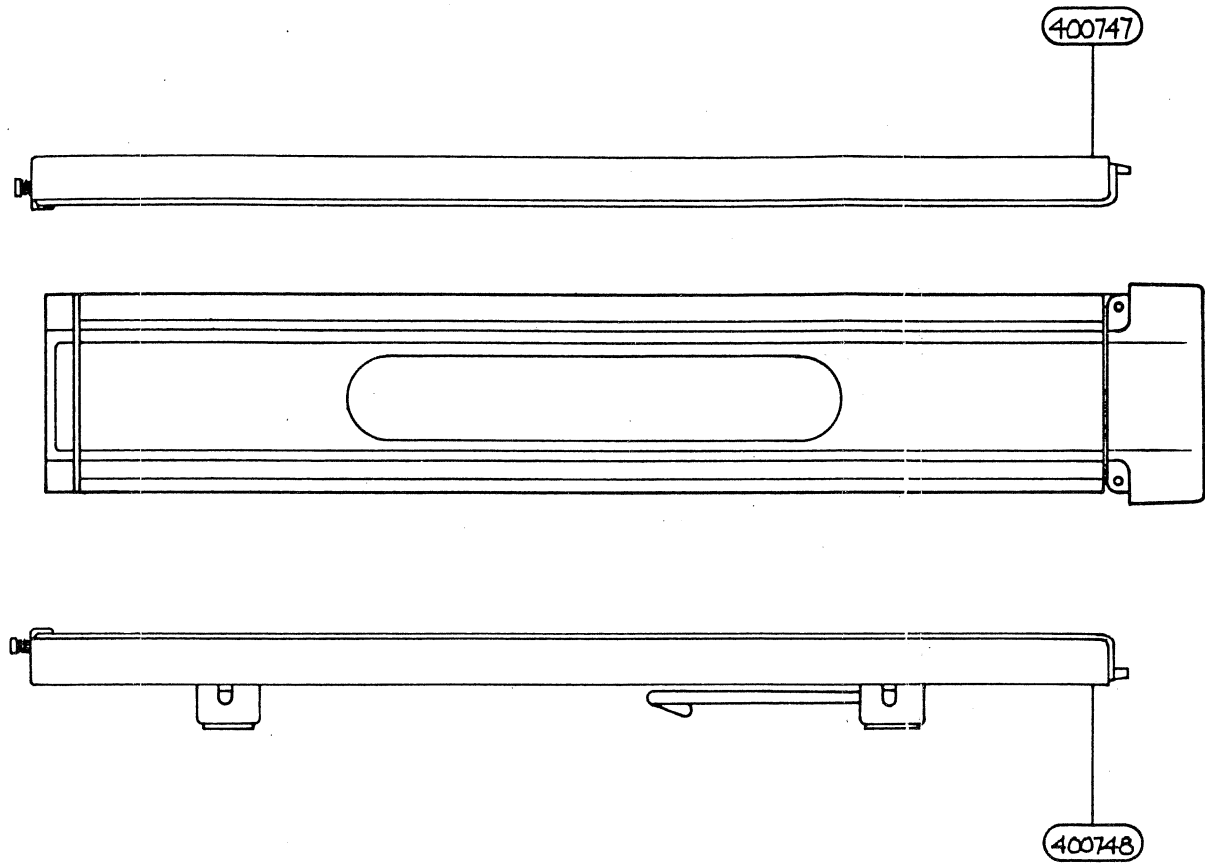


FINISHED ASSEMBLY

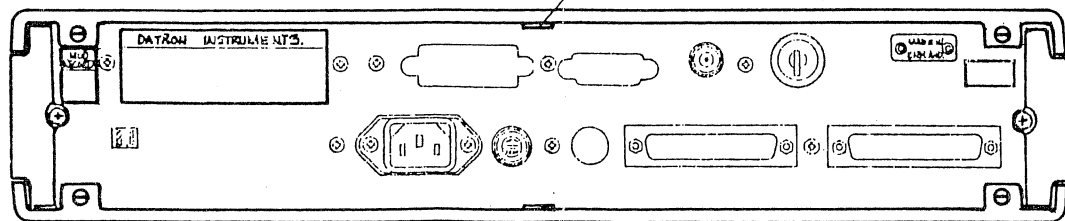
Drawing No. 480734 Sheet 2

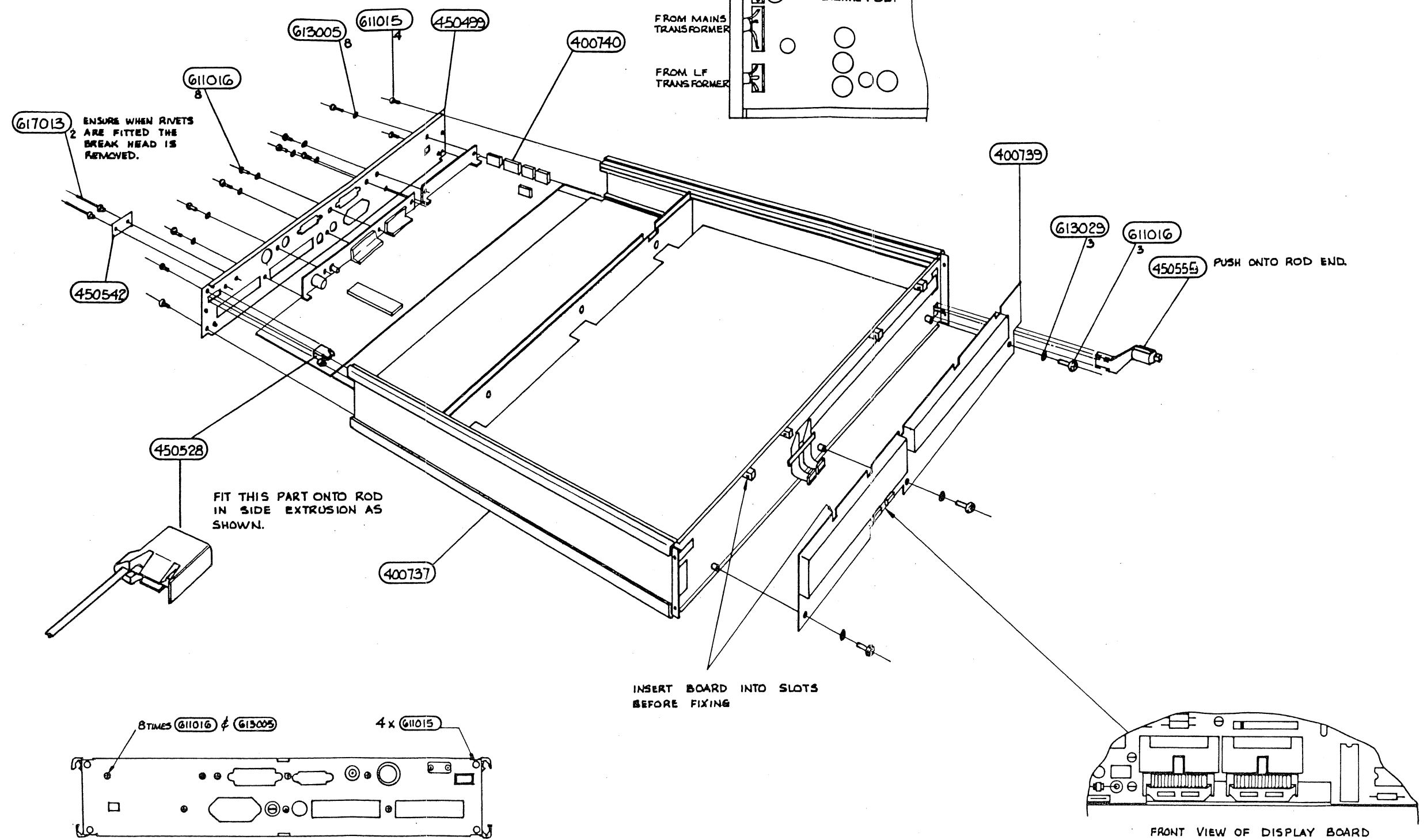
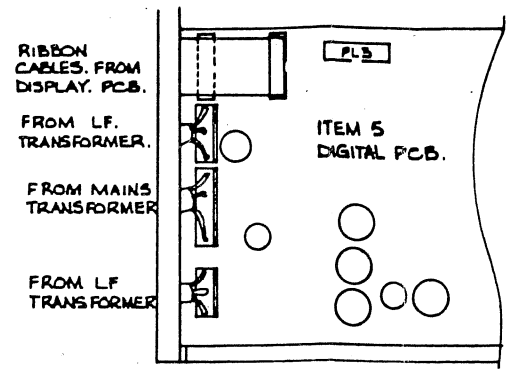
1281  
**datron**  
 WAVETEK

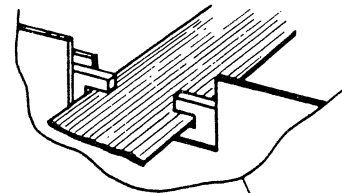
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ENSURE EARTH SCREEN "HOOKS"  
ENGAGE WITH REAR PANEL.





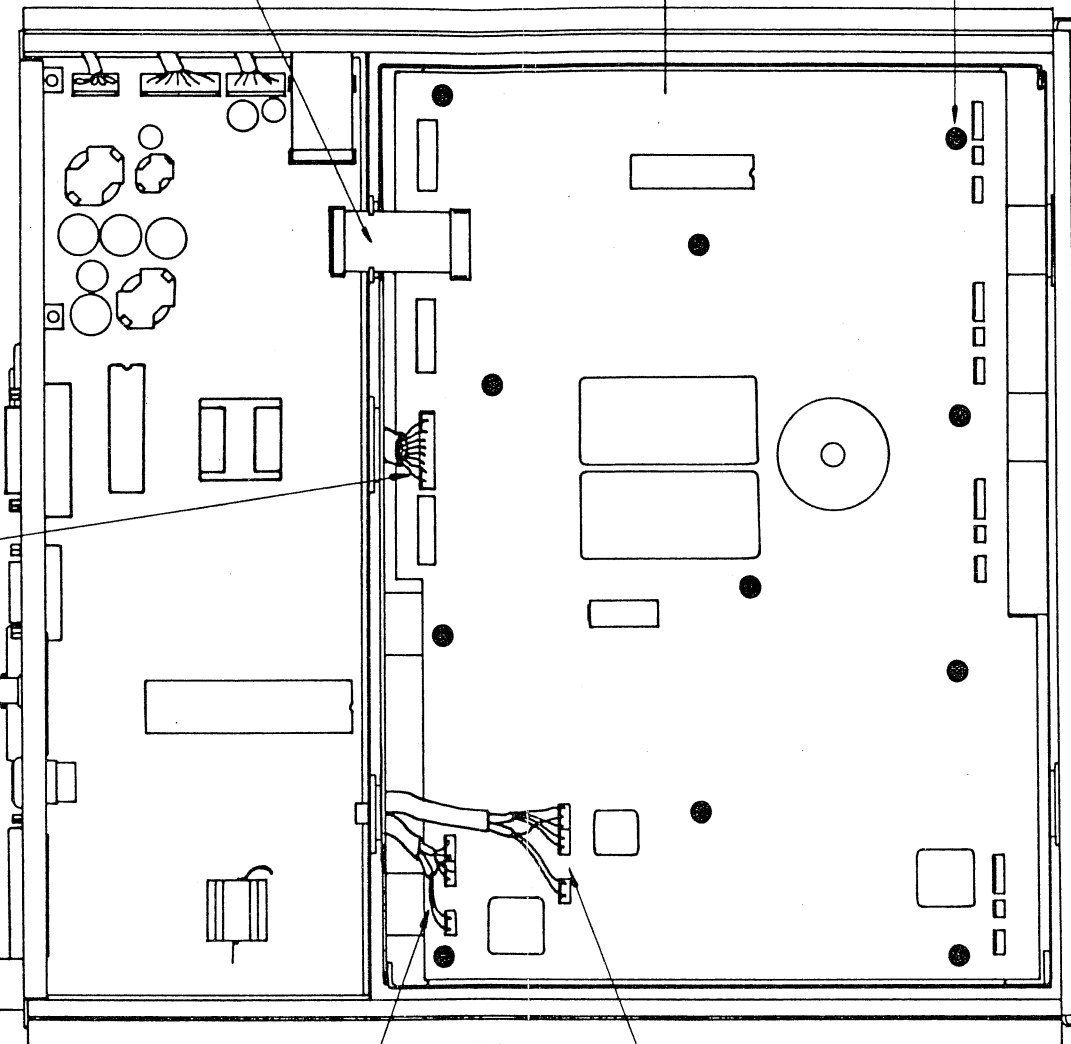


RIBBON CABLE SHOULD BE IN CLIP AS SHOWN ABOVE.

400738

FIT DC BOARD IN POSITION SHOWN SECURE TO CENTRE SHIELD USING ELEVEN NYLATCH PRESS FASTENERS

CONNECTOR FROM L.F TRANSFORMER.



CONNECTOR FROM PL12 ON REAR PANEL.

CONNECTOR FROM PL11 ON REAR PANEL.

INSTRUMENT ASSEMBLY

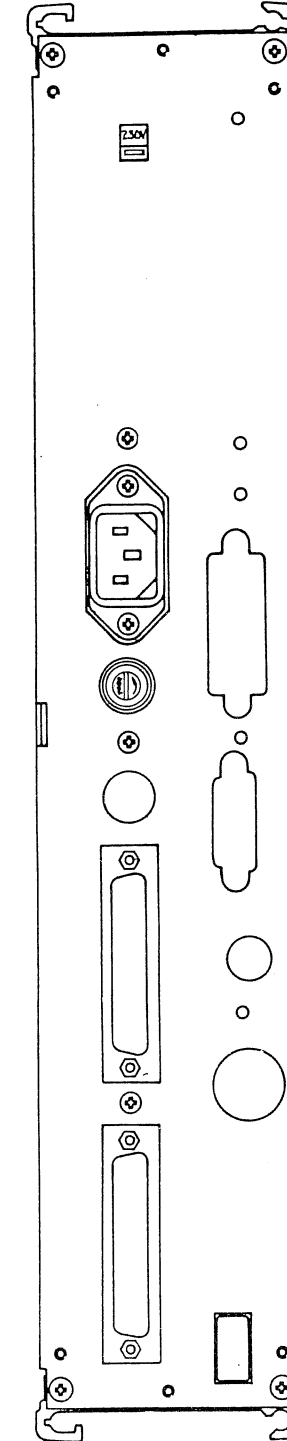
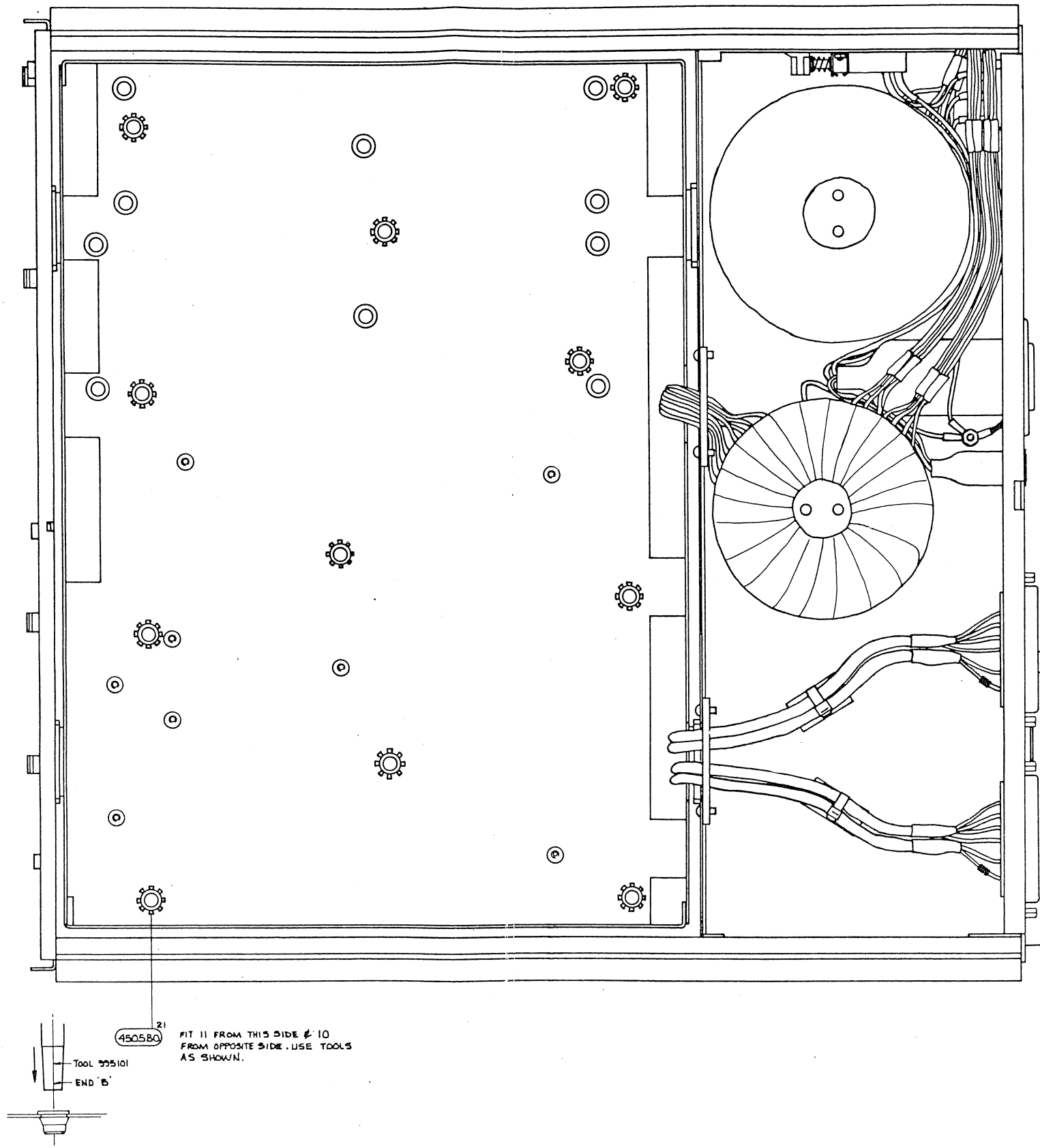
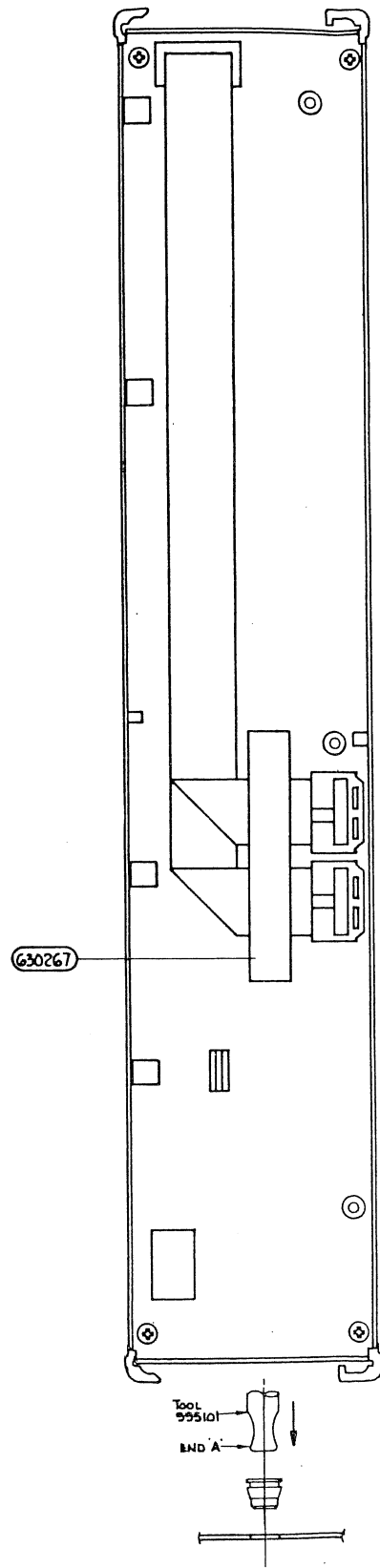
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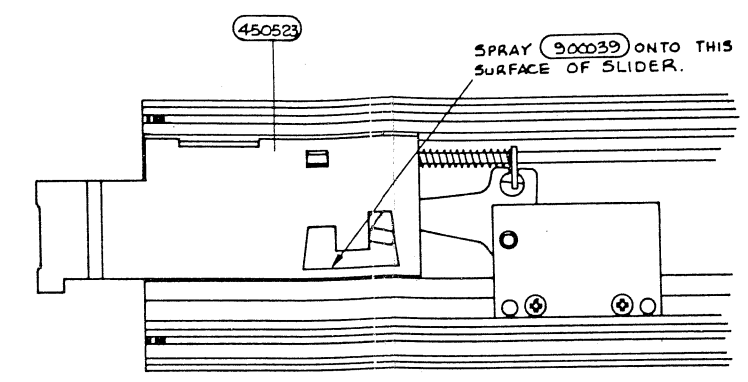
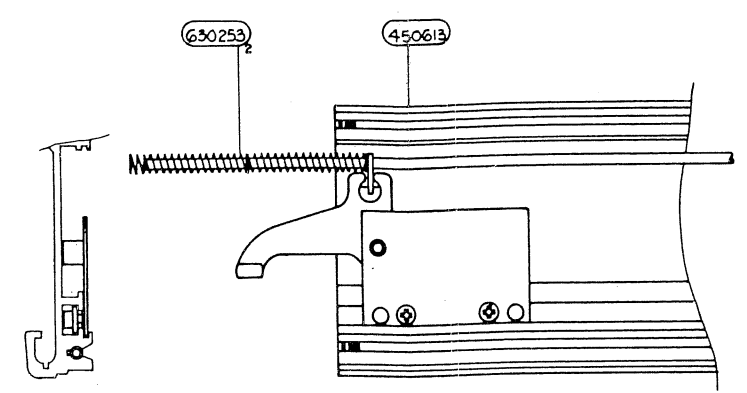
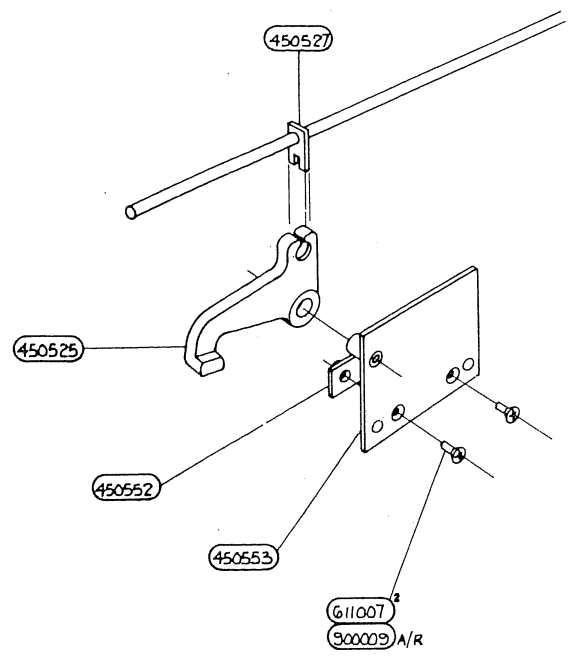
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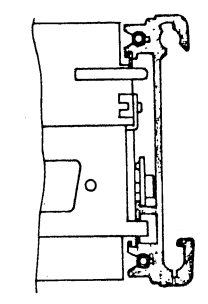
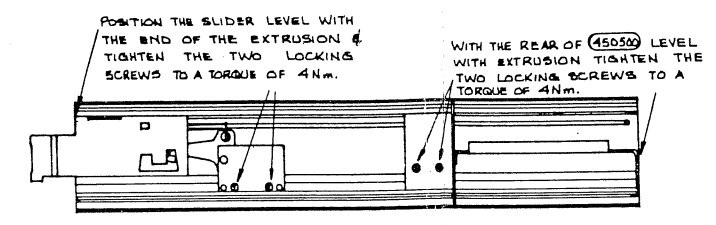
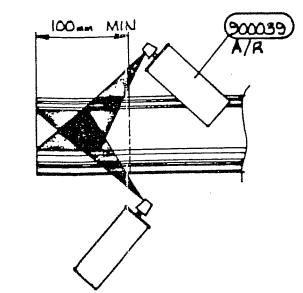
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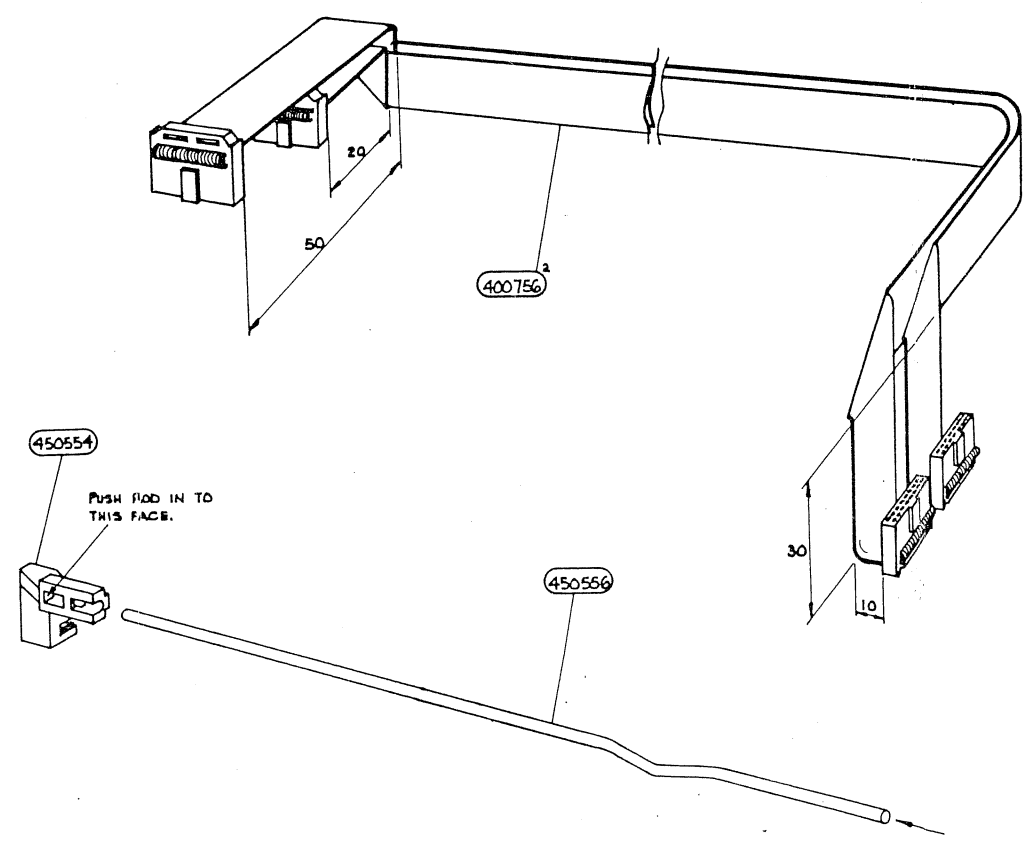
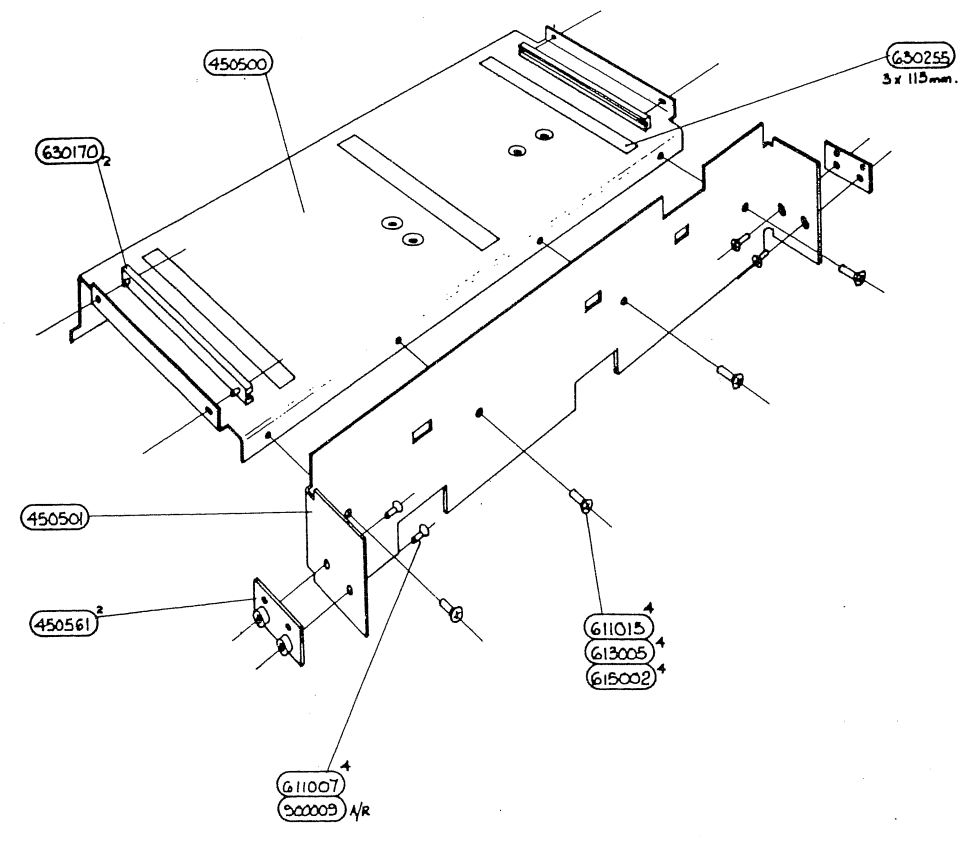




SPRAY 900039 INTO THESE AREAS AS SHOWN. ALLOW SOLVENT TO DRY & BUFF WITH SOFT CLOTH.



TO ENABLE YOU TO SLIDE (450520) & (450521) INTO PLACE YOU MAY HAVE TO SLIDE BACK THE TERMINAL SLIDER ASSY ITEMS.

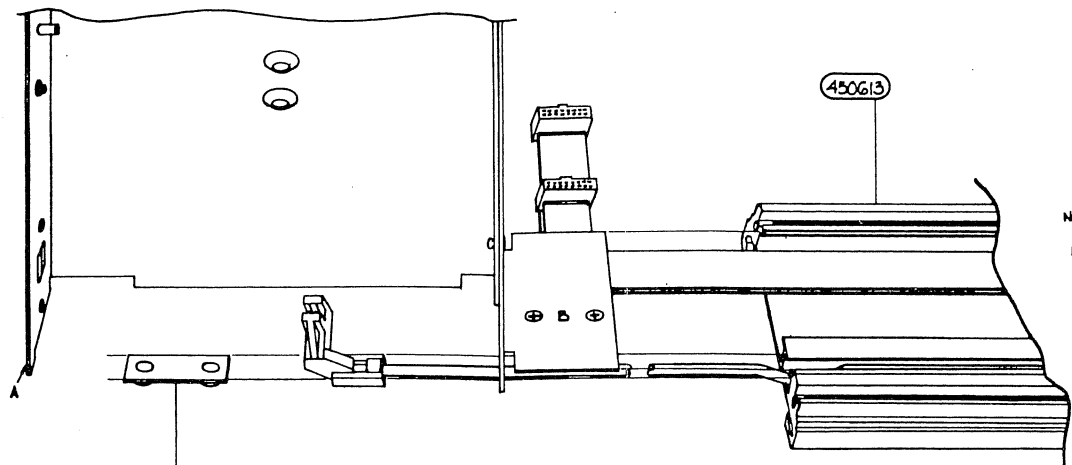


CHASSIS ASSEMBLY

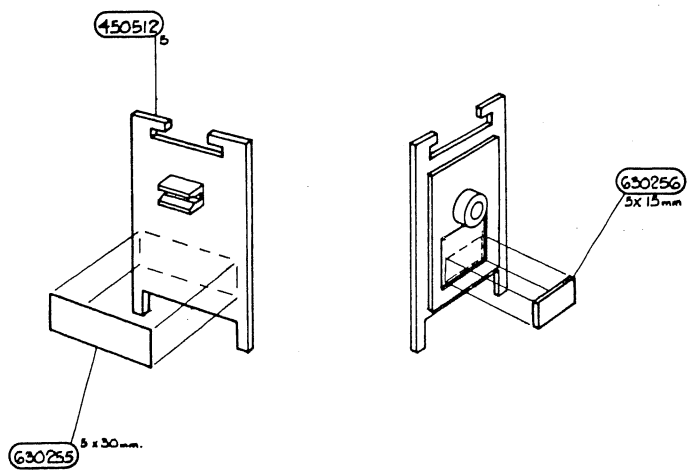
Drawing No. 480737 Sheet 2



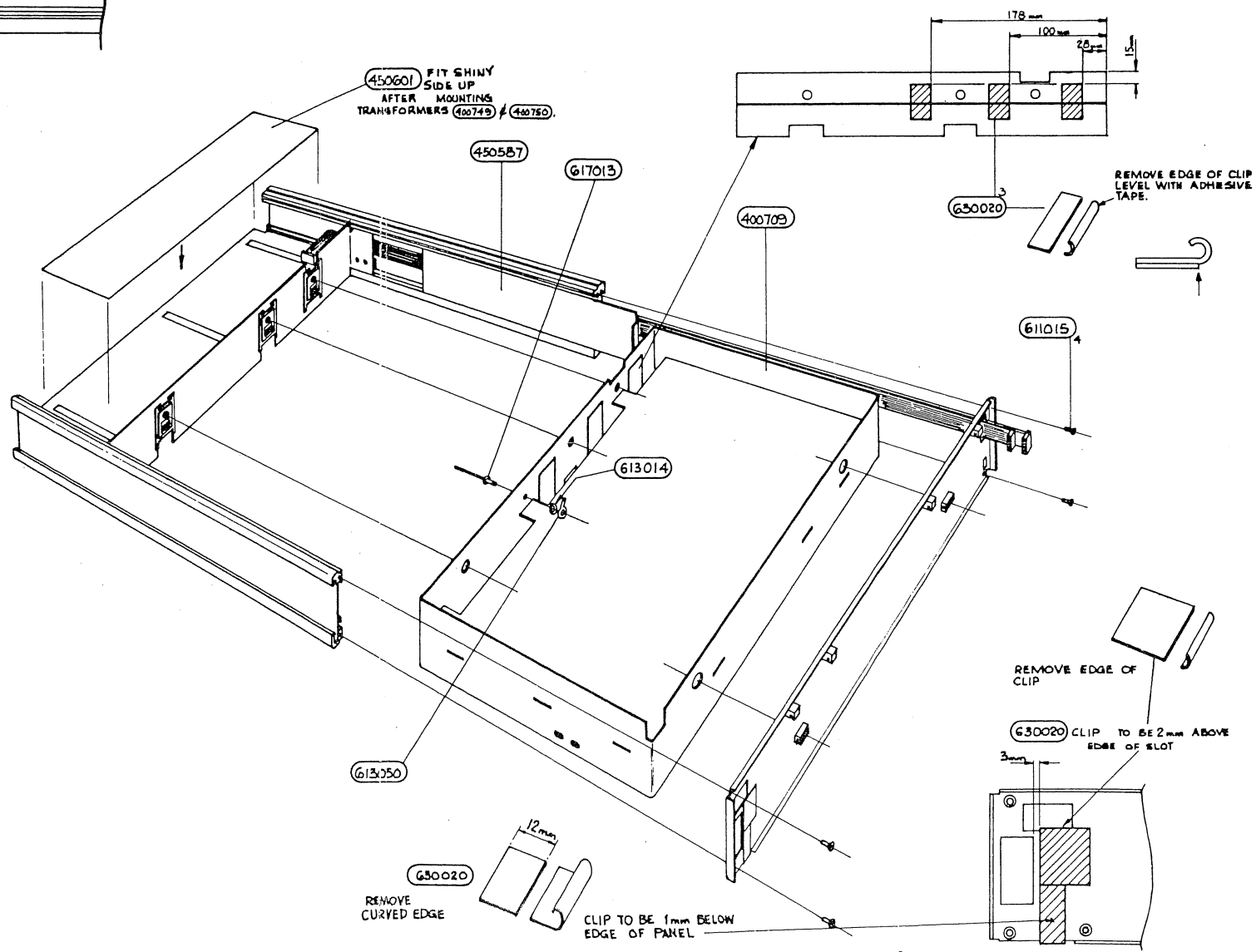
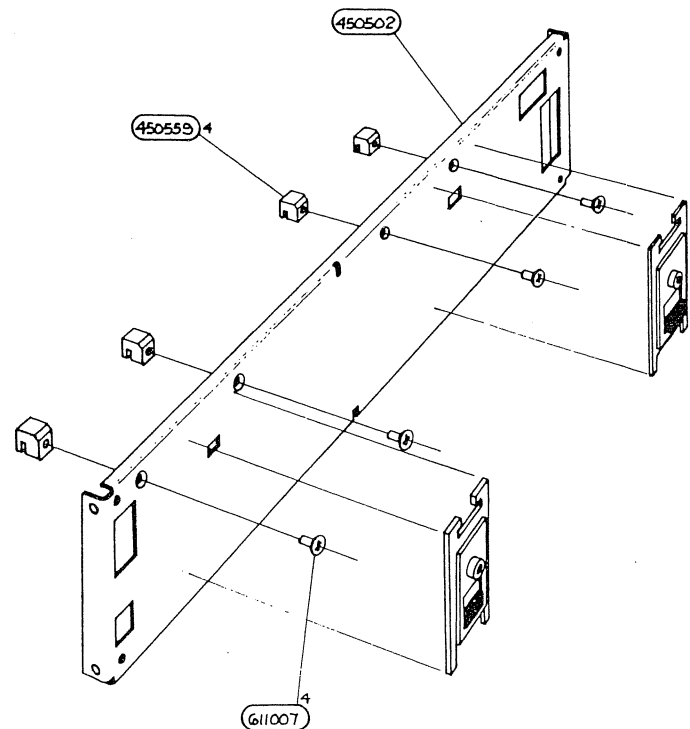
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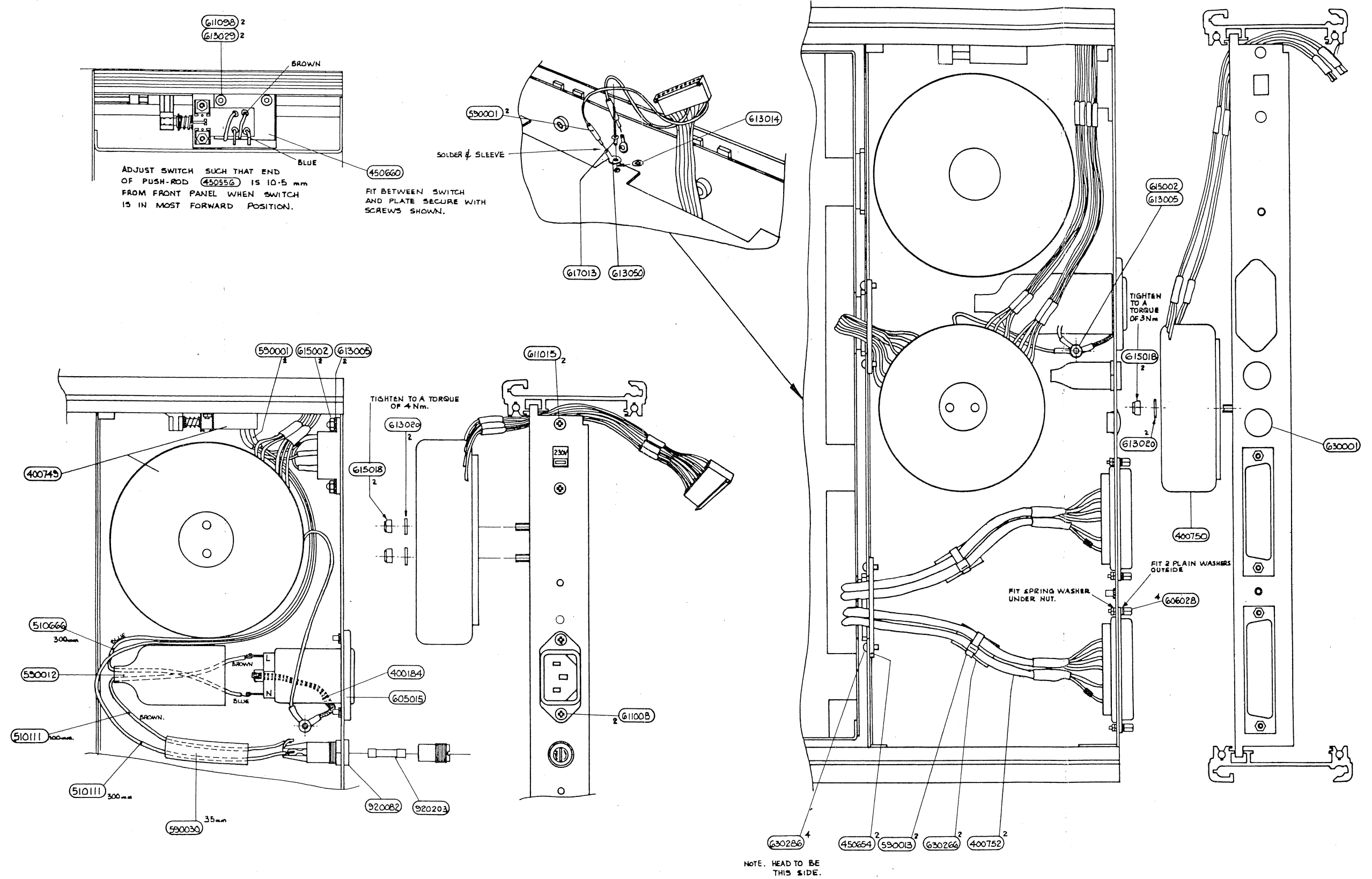


NOTE BUMP ON MAINS SWITCH ROD TO BE TOWARDS FRONT & POINTING DOWNWARDS.



LAY RIBBON CABLES ONTO EXTRUSION CAREFULLY SLIDE OTHER PARTS INTO PLACE IN THE ORDER SHOWN, UNTIL FACE 'A' IS LEVEL WITH END OF EXTRUSION THEN TIGHTEN TWO SCREWS AT 'B'.





ADJUST SWITCH SUCH THAT END OF PUSH-ROD (45055G) IS 10.5 mm FROM FRONT PANEL WHEN SWITCH IS IN MOST FORWARD POSITION.

FIT BETWEEN SWITCH AND PLATE SECURE WITH SCREWS SHOWN.

TIGHTEN TO A TORQUE OF 4 Nm.

TIGHTEN TO A TORQUE OF 3 Nm.

FIT 2 PLAIN WASHERS OUTSIDE

FIT SPRING WASHER UNDER NUT.

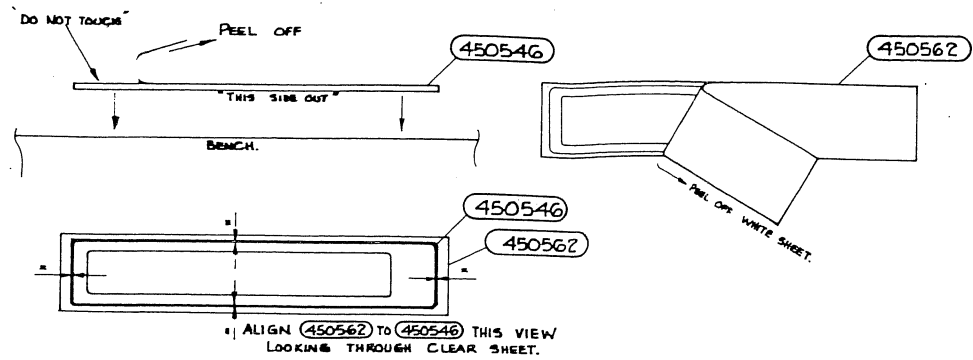
NOTE. HEAD TO BE THIS SIDE.

CHASSIS ASSEMBLY

Drawing No. 480737 Sheet 4

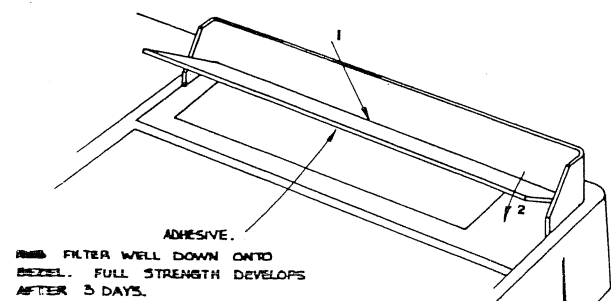
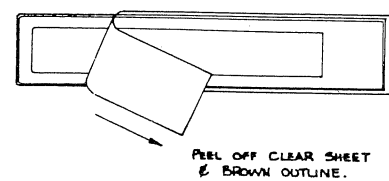
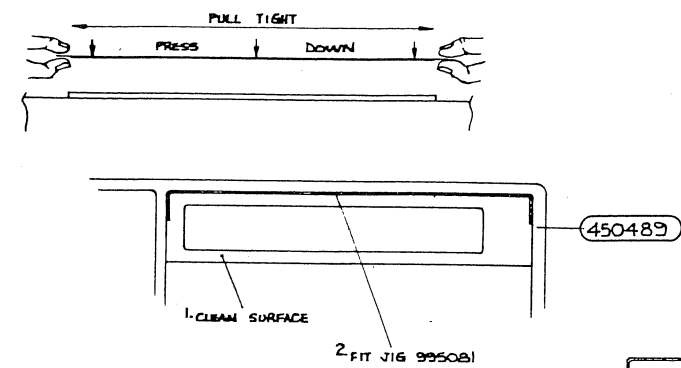
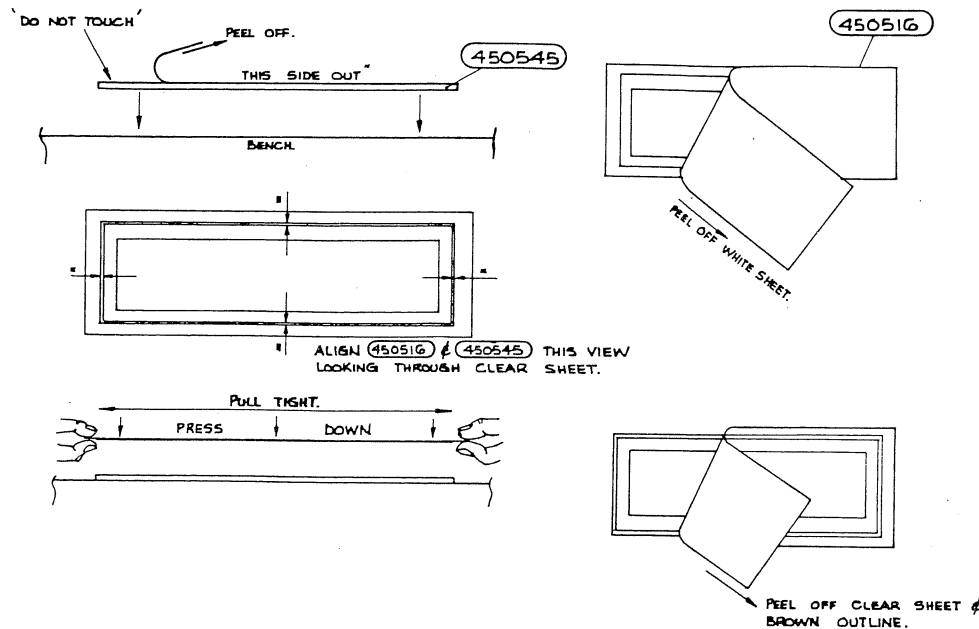


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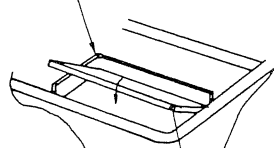


**GENERAL NOTES ON FITTING FILTERS & BADGES**

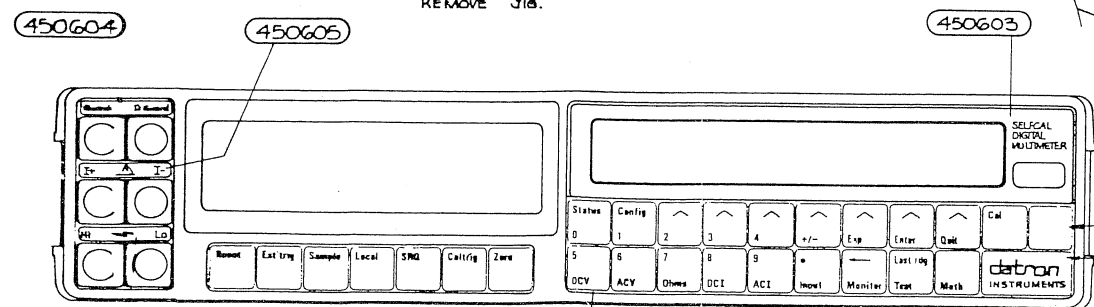
1. WIPE ALL SURFACES TO RECEIVE ADHESIVE WITH A CLEAN WIPE MOISTENED WITH 900016.
2. DO NOT TOUCH CLEANED SURFACE - RECLEAN IF ACCIDENTALLY TOUCHED.
3. DO NOT TOUCH ADHESIVE SURFACE.
4. HANDLING OF ADHESIVES (450562) & (450516)
  - a) IF CLEAR SHEET SEPARATES FIRST, PRESS BACK AND RUB DOWN. WHITE SHEET WILL THEN SEPARATE.
  - b) AFTER REMOVAL OF WHITE SHEET HANDLE ONLY BY ENDS OF CLEAR SHEET.
  - c) PULL TIGHT AND ALIGN BEFORE LOWERING TO FILTER SURFACE.
  - d) IF MIS-ALIGNED OR UNFLAT THEY MUST BE ENTIRELY REMOVED (RUB WITH FINGER), THE SURFACE CLEANED AND NEW ADHESIVE APPLIED.
5. HANDLE JIGS WITH GREAT CARE - THEY ARE FRAGILE. IF BENT THE JIGS WILL NOT ALIGN PARTS CORRECTLY.



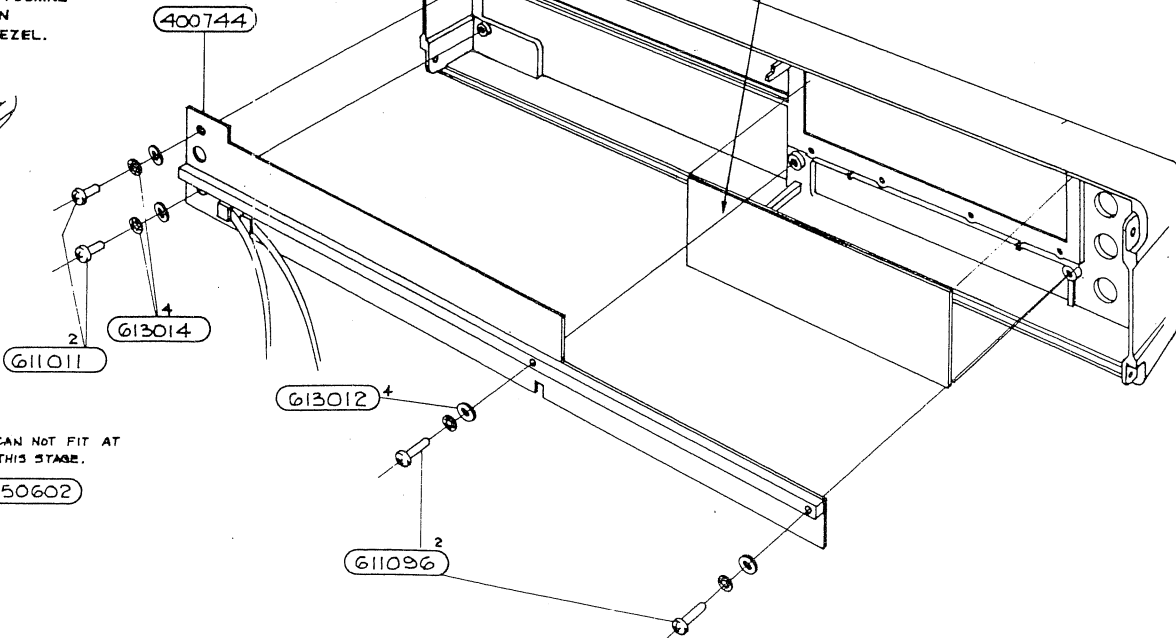
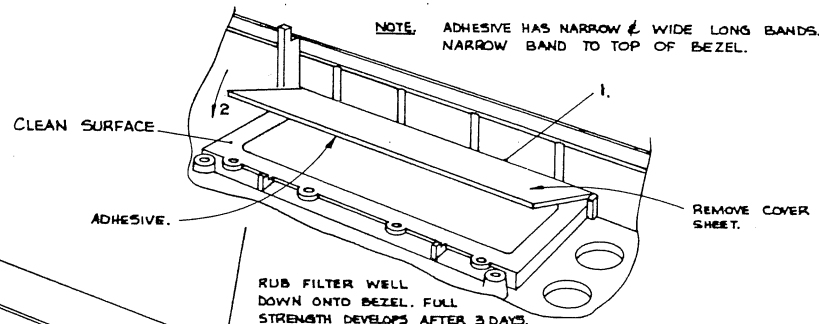
HOLD JIG 995082 IN PLACE. PLACE BADGE IN, PUSHING INTO JIG THEN LOWER ONTO BEZEL.



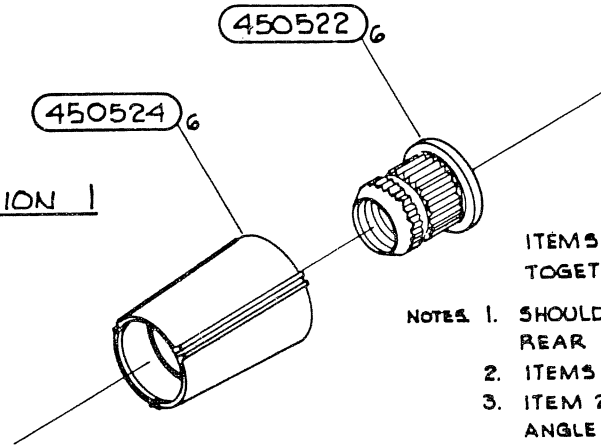
INSERT TOP EDGE OF FILTER INTO JIG THEN PRESS DOWN ONTO BEZEL. REMOVE "THIS SIDE OUT" AND BACKING SHEET FROM BADGE (450603) AND FIT IN SIMILAR MANNER. REMOVE JIG.



450531 FIT KEYCAPS TO SWITCHES IN POSITIONS SHOWN ABOVE. RETAIN WITH BEZEL.



OPERATION 1



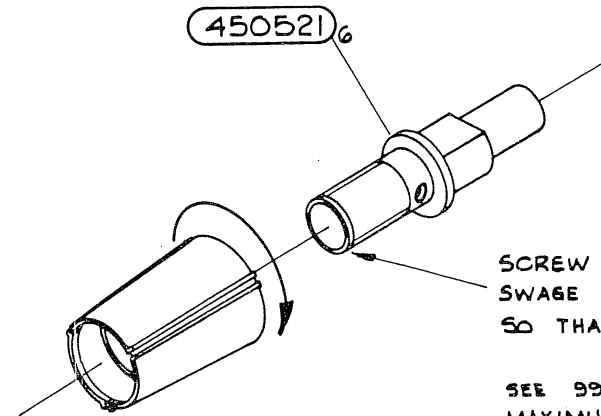
ASSEMBLED VIEW.



ITEMS 1 & 2 TO BE HEATSTAKED TOGETHER.

- NOTES 1. SHOULDER ITEM 2 TO SIT FLAT ON REAR FACE ITEM 1.  
 2. ITEMS TO BE CONCENTRIC.  
 3. ITEM 2 NOT TO BE INSERTED AT AN ANGLE TO ITEM 1.  
 4. SEE DRG. 995031 FOR SUGGESTED TOOL OUTLINES.

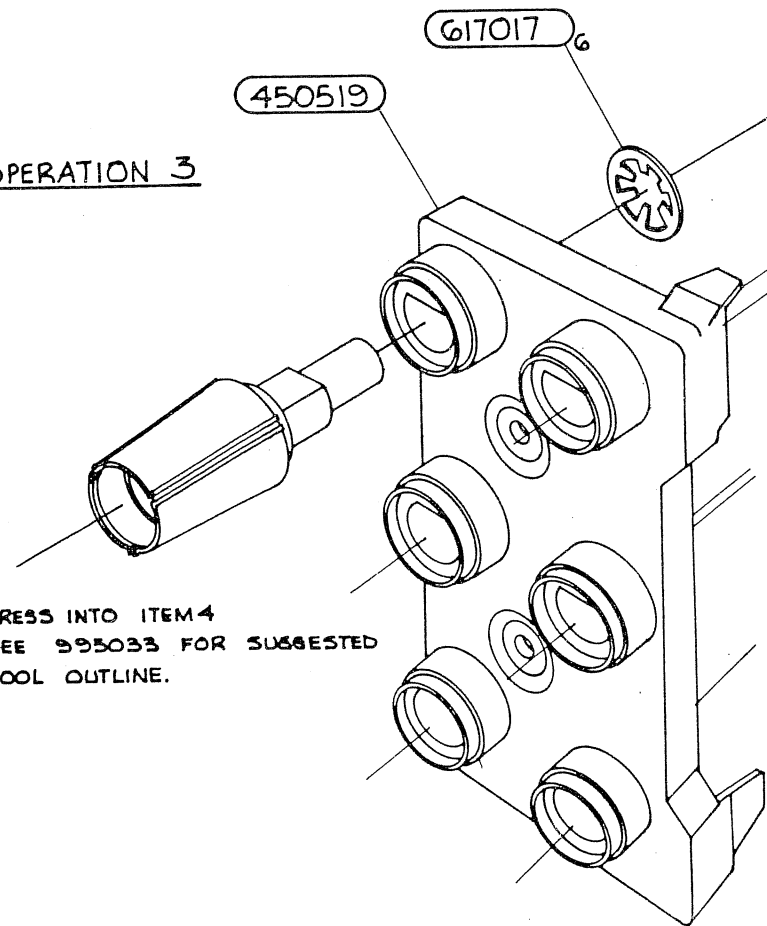
OPERATION 2



SCREW THESE TWO PARTS TOGETHER AND SWAGE OVER THE END OF TERMINAL SPINDLE (3) SO THAT TERMINAL BODY CAN NOT BE REMOVED.

SEE 995032 FOR SUGGESTED TOOL OUTLINE.  
 MAXIMUM AXIAL FORCE : 50 Kg.

OPERATION 3

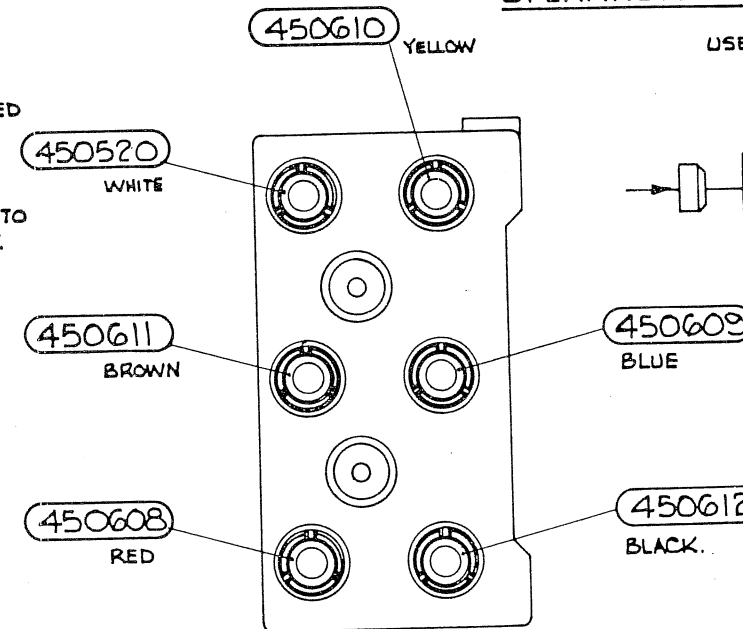


PRESS INTO ITEM 4  
 SEE 995033 FOR SUGGESTED TOOL OUTLINE.

SEE 995034 FOR SUGGESTED TOOL OUTLINE TO PRESS ITEM 5 IN PLACE.

TERMINAL MUST BE RIGID TO ITEM 4 AFTER ASSEMBLY.

OPERATION 4.



USE 900038 TO SECURE COLOUR RINGS IN PLACE. APPLY LIGHT PRESSURE (0.25-0.5 KG) FOR 10 SECS. TO ALLOW ADHESIVE TO SET.

NO SURPLUS ADHESIVE TO BE VISIBLE AFTER ASSEMBLY. REFER TO MANUFACTURERS INFORMATION FOR REMOVAL OF EXCESS ADHESIVE.

GENERAL. PLASTIC COMPONENTS NOT TO BE DAMAGED BY ASSEMBLY PROCESS. USE OF SUGGESTED TOOLS IS RECOMMENDED. ALL TERMINALS TO BE PERPENDICULAR TO BASE AND RUN TRUE ON THREADS.

**TERMINAL MECHANICAL ASSEMBLY**

Drawing No. 480746

Sheet 1

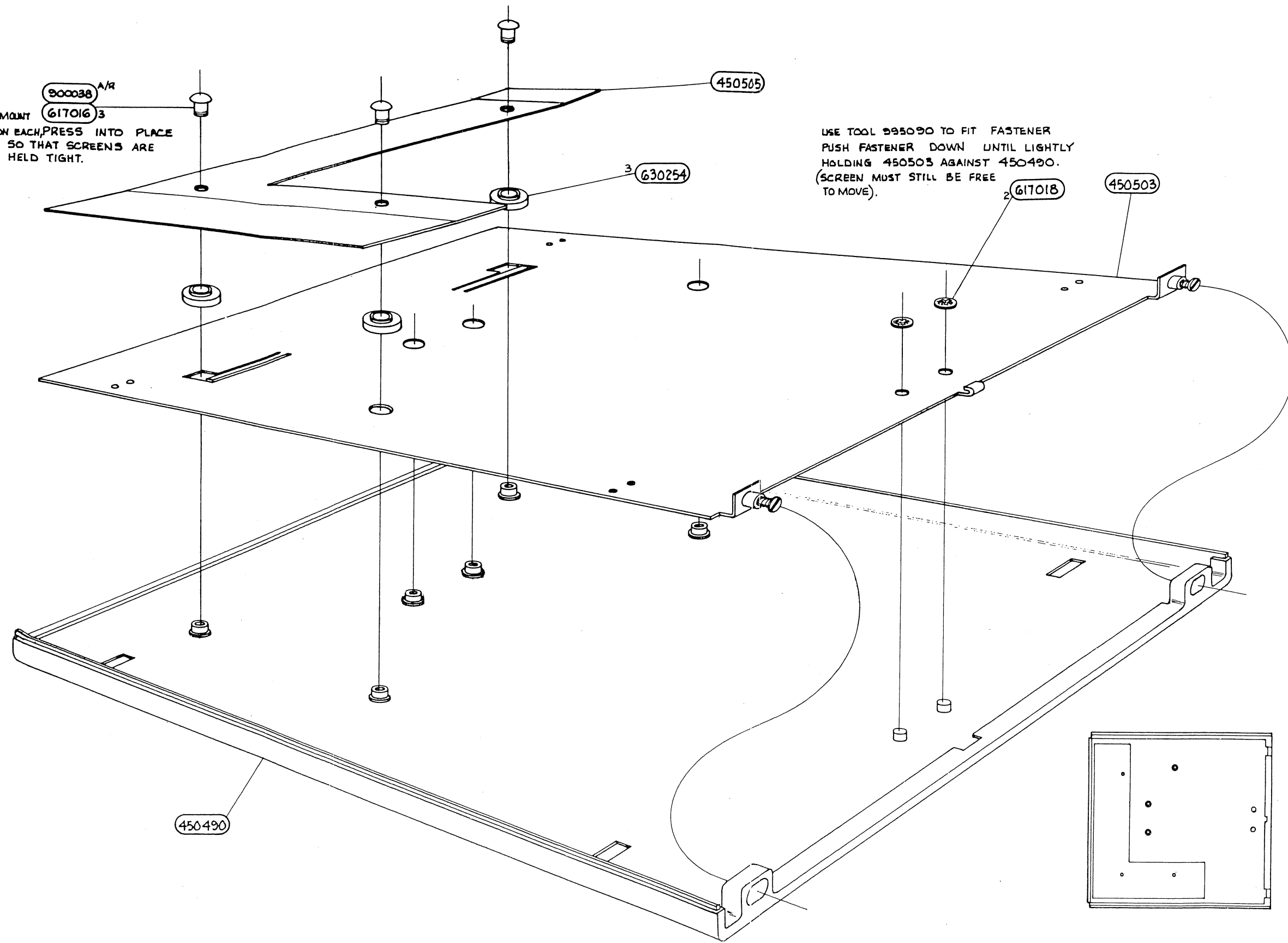


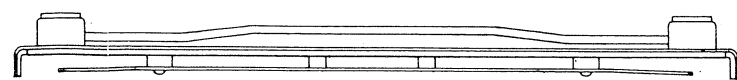
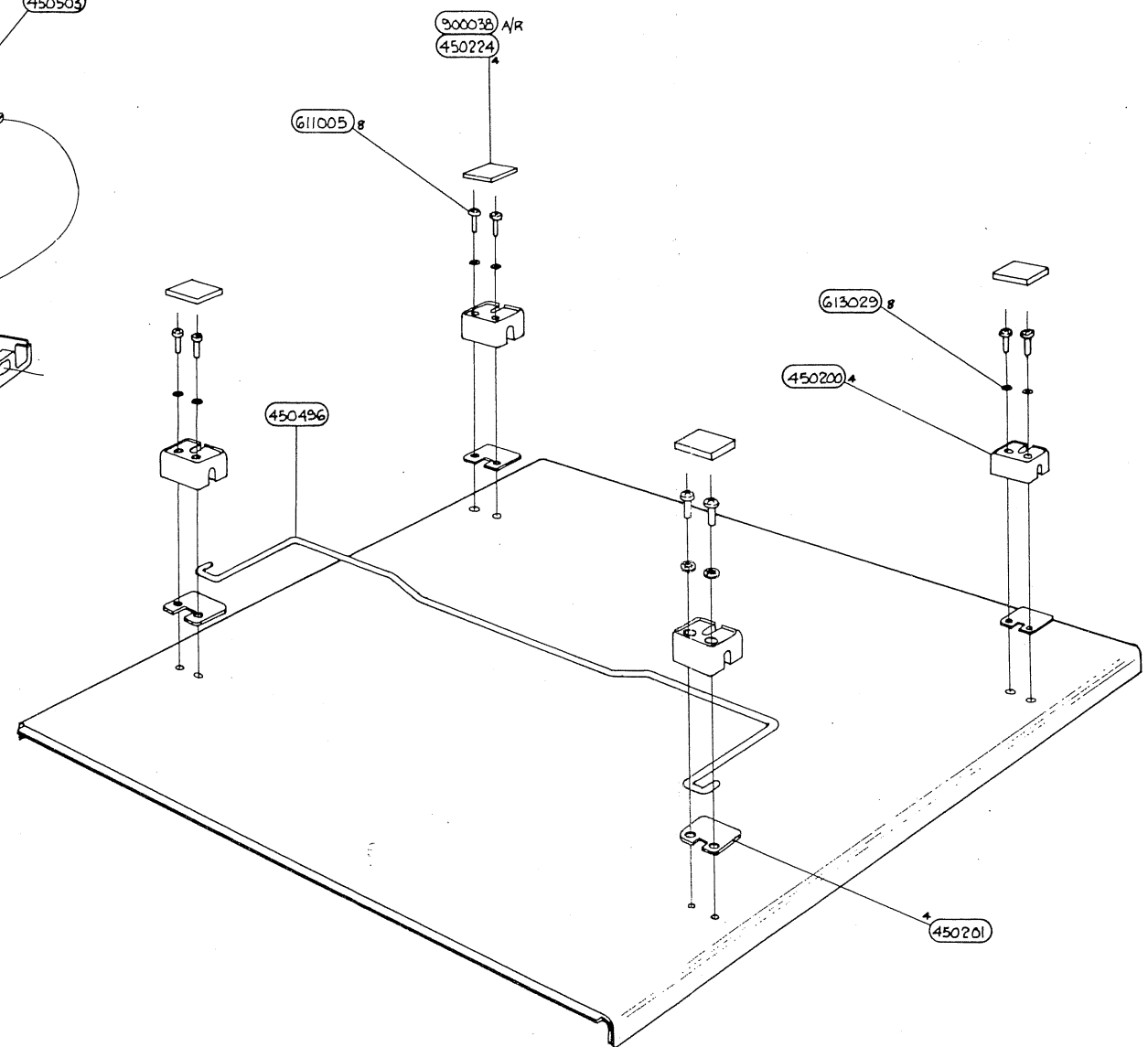
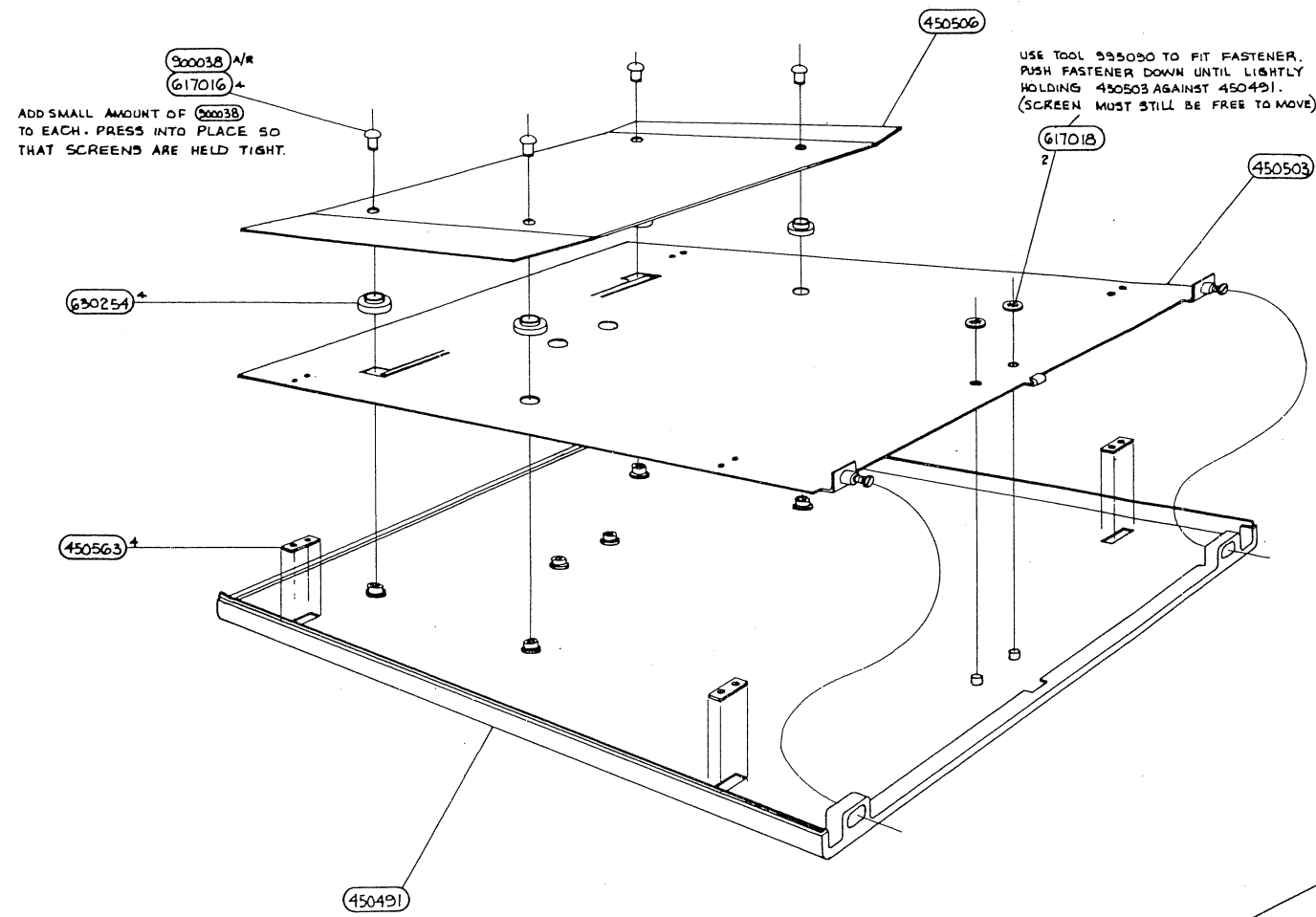
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900038 A/R  
 617016 3  
 A SMALL AMOUNT OF 900038 ON EACH, PRESS INTO PLACE SO THAT SCREENS ARE HELD TIGHT.

USE TOOL 995090 TO FIT FASTENER  
 PUSH FASTENER DOWN UNTIL LIGHTLY  
 HOLDING 450503 AGAINST 450490.  
 (SCREEN MUST STILL BE FREE  
 TO MOVE).



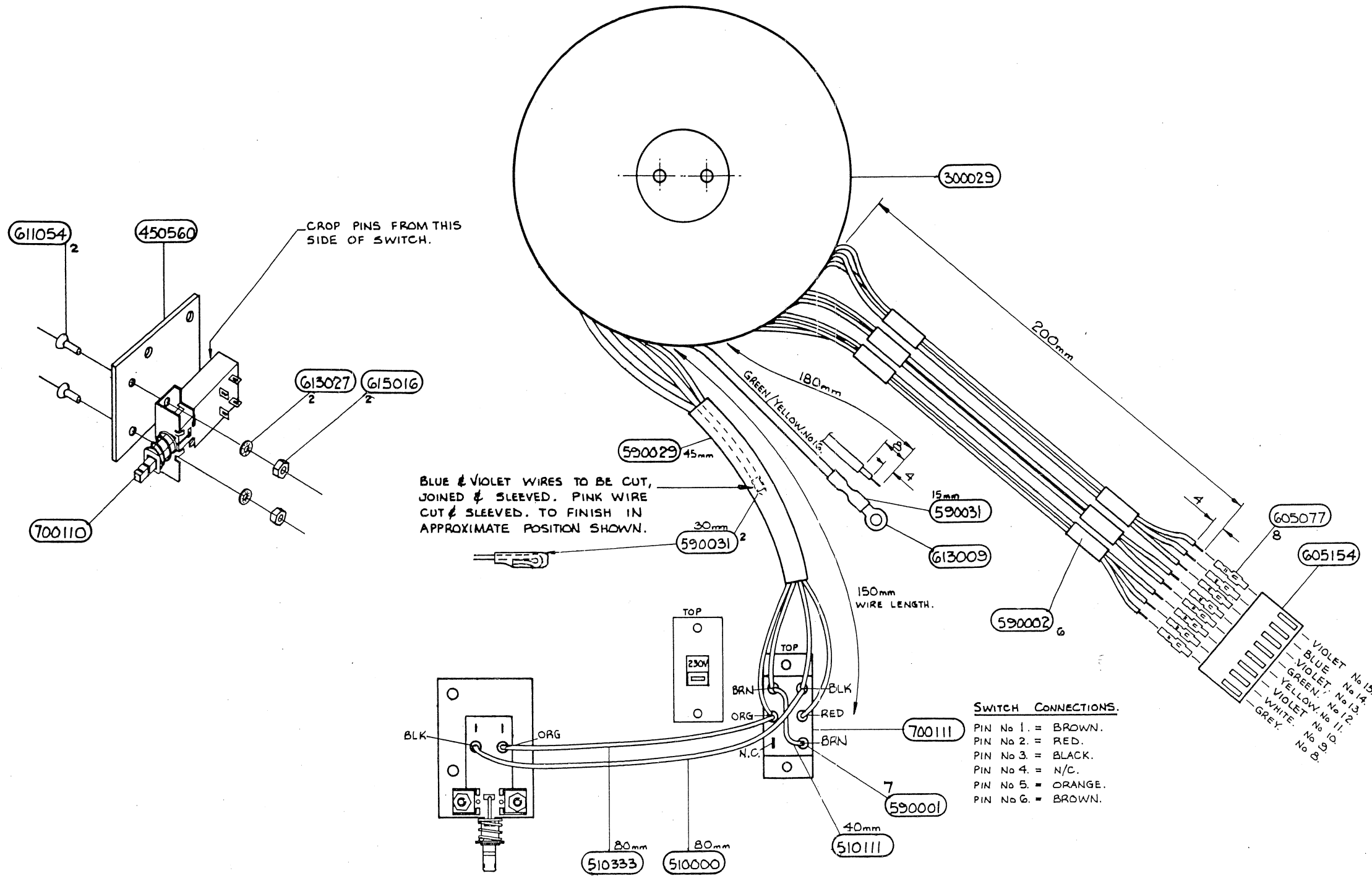


VIEW FROM FRONT OF COVER.  
NOTE DIRECTION OF BEND OF 450506 GUARD SCREEN  
AND 450496 TILT STAND.

BOTTOM COVER ASSEMBLY  
Drawing No. 480748 Sheet 1

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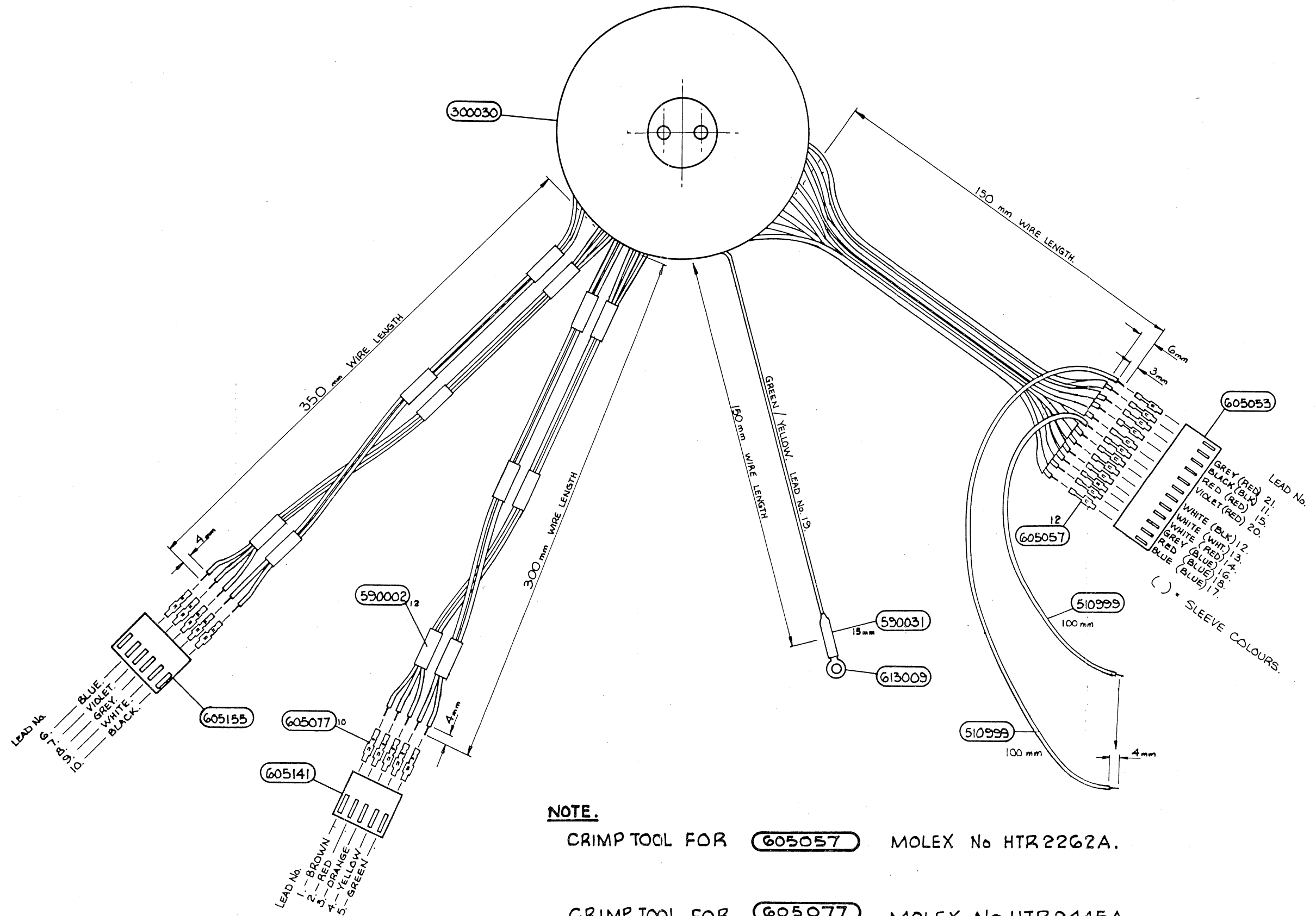




BLUE & VIOLET WIRES TO BE CUT, JOINED & SLEEVED. PINK WIRE CUT & SLEEVED. TO FINISH IN APPROXIMATE POSITION SHOWN.

**SWITCH CONNECTIONS.**  
 PIN No 1. = BROWN.  
 PIN No 2. = RED.  
 PIN No 3. = BLACK.  
 PIN No 4. = N/C.  
 PIN No 5. = ORANGE.  
 PIN No 6. = BROWN.

CRIMP TOOL FOR **605077** MOLEX HTR 2445A



**NOTE.**

CRIMP TOOL FOR **605057** MOLEX No HTR2262A.

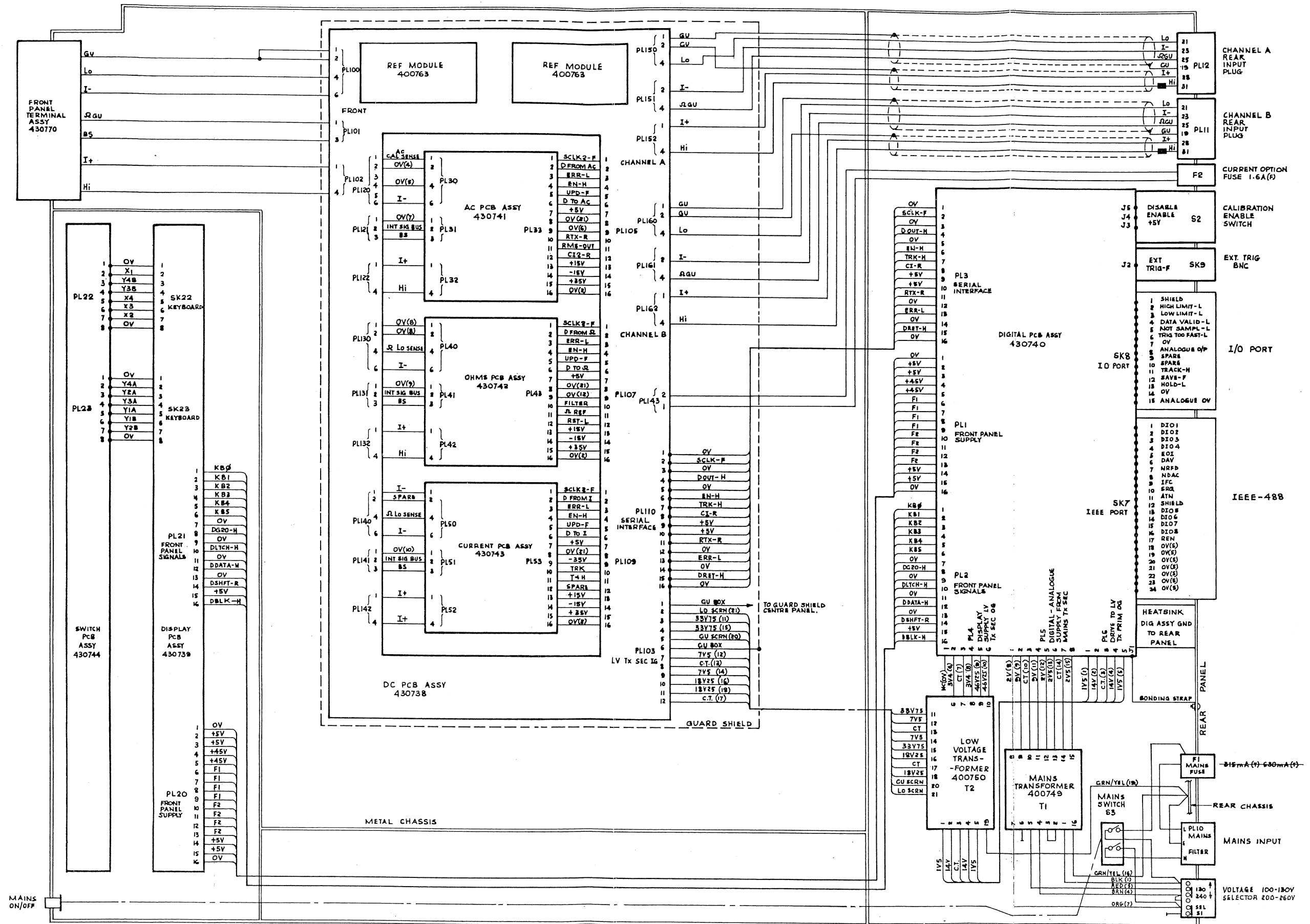
CRIMP TOOL FOR **605077** MOLEX No HTR2445A.

LOW VOLTAGE TRANSFORMER ASSEMBLY

Drawing No. 480750 Sheet 1

1281  
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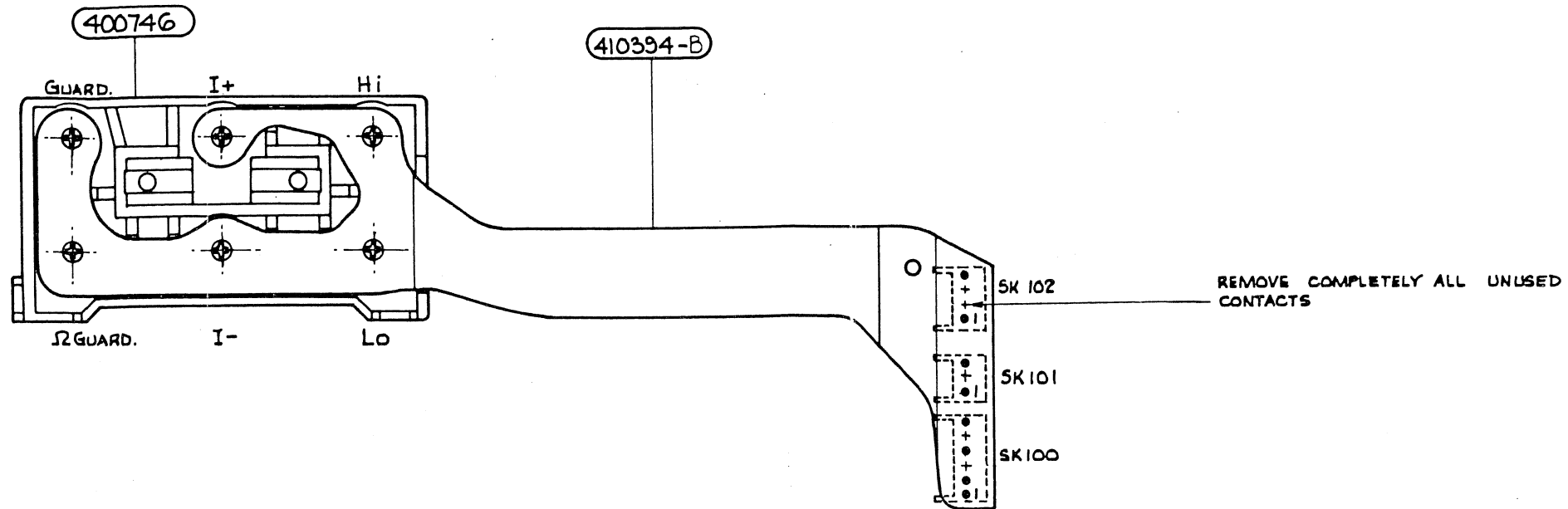


INTERCONNECTION DIAGRAM

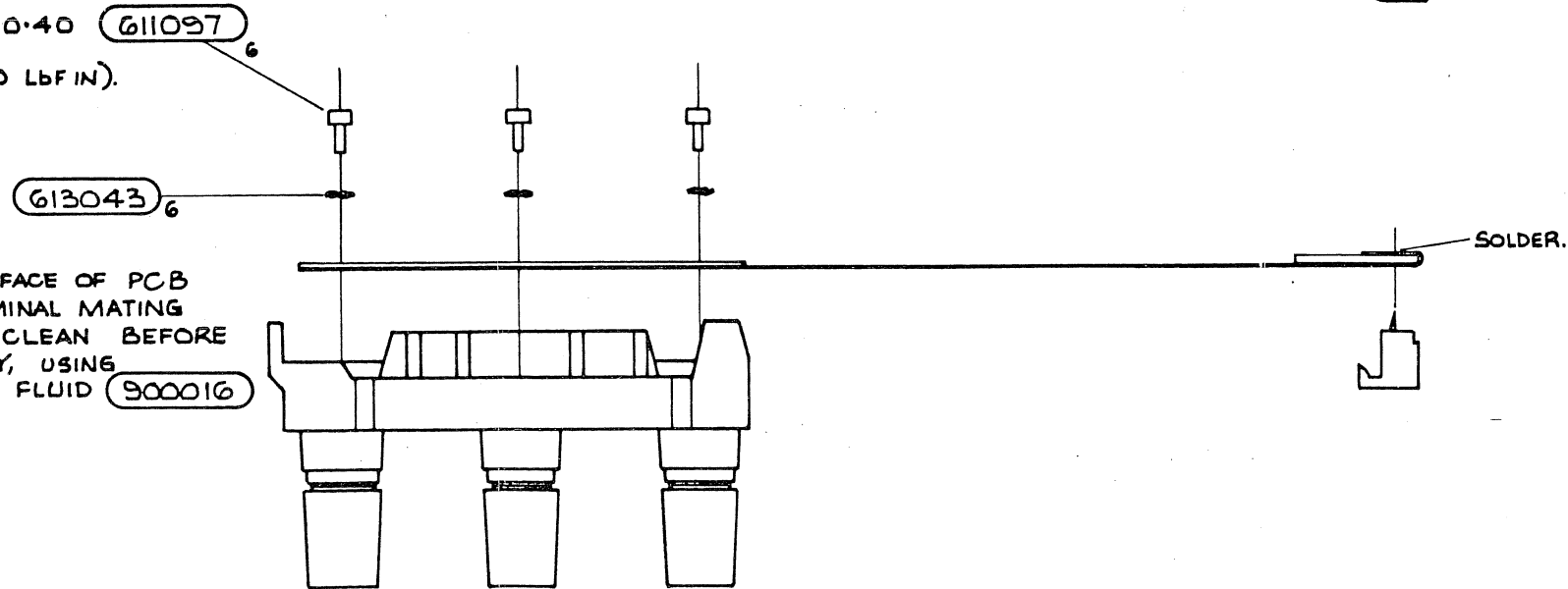
Drawing No. 430734 Sheet 1



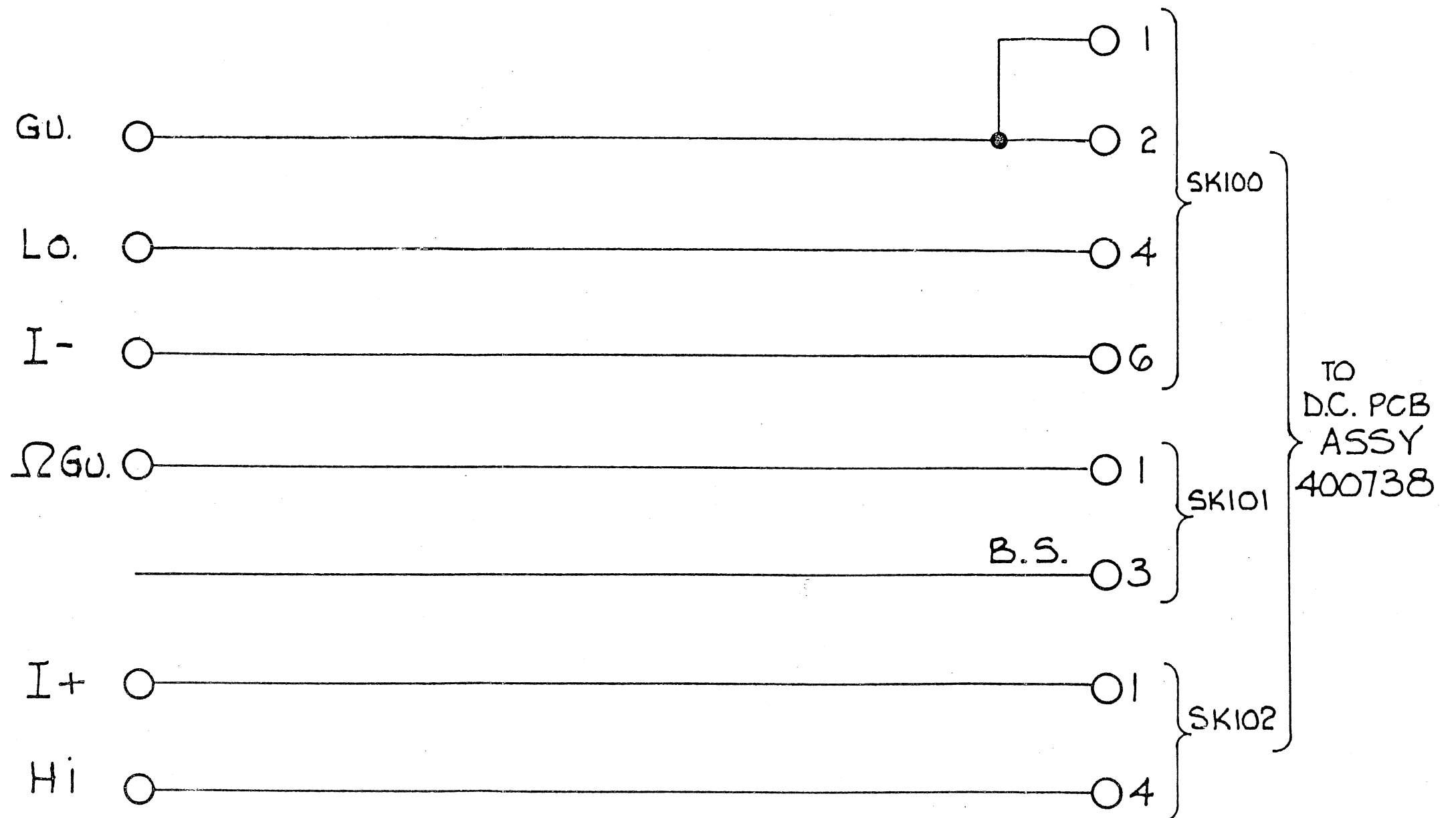
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TIGHTEN TO 0.40  
TO 0.45 Nm.  
(3.6 TO 4.0 Lbf IN).



FRONT  
PANEL  
TERMINALS.



TERMINAL ASSEMBLY

Drawing No. 430770

Sheet 1

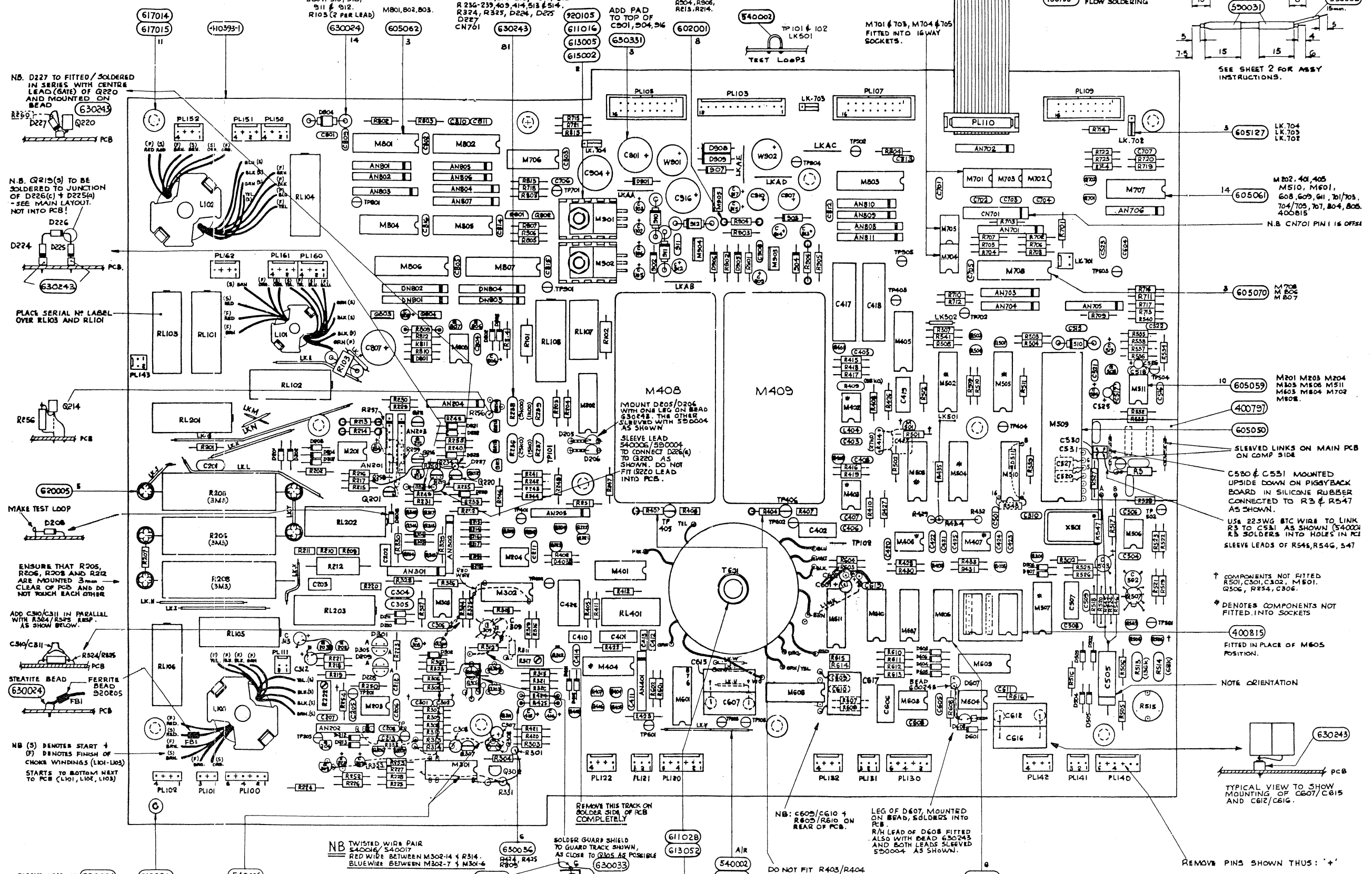
1281  
**datron**  
**WAVETEK**

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11.1-9

C201, C208, 411, 414, 420, 425, 510, 517, 518, 601, 602, 618, 701, 702, 703, 704, 705, 706, 801-805, 814-816, 807, 812, R 236-239, 409-414, 513 & 514, R324, R325, D224, D225, D227, CN701

N.B. ALL CLUDGES UNDER TOP COVER GUARD SHIELD TO BE KEPT AS CLOSE TO PCB AS POSSIBLE (MAX 18MM)



N.B. D227 TO FITTED/SOLDERED IN SERIES WITH CENTRE LEAD (GATE) OF Q220 AND MOUNTED ON BEAD  
 630243

N.B. Q225(S) TO BE SOLDERED TO JUNCTION OF D226(G) + D225(H) - SEE MAIN LAYOUT. NOT INTO PCB!  
 D226  
 D224  
 D225  
 630243

PLACE SERIAL NO LABEL OVER RL103 AND RL101

MAKE TEST LOOP  
 620005

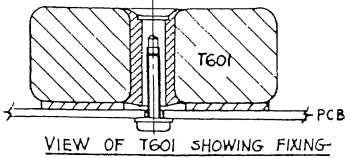
ENSURE THAT R205, R206, R208 AND R212 ARE MOUNTED 3mm CLEAR OF PCB AND DO NOT TOUCH EACH OTHER

ADD C304/C311 IN PARALLEL WITH R324/R325 RESP. AS SHOWN BELOW.

STEATITE BEAD  
 FERRITE BEAD  
 630024  
 FBI

NB (S) DENOTES START + (F) DENOTES FINISH OF CHOKO WINDINGS (L101-L103) STARTS TO BOTTOM NEXT TO PCB (L101, L102, L103)

SLEEVE LEAD OF 590004  
 C308  
 Q307  
 6314



D.C. ASSEMBLY

Drawing No. 480738 Sheet 1

ADD PAD TO TOP OF C501, 504, 506  
 630331  
 602001  
 TP101 & 102  
 LK501  
 TEST LOOPS

M408  
 MOUNT D205/D206 WITH ONE LEG ON BEAD 630048. THE OTHER SLEEVED WITH 590004 AS SHOWN  
 SLEEVE LEAD 540006/590004 TO CONNECT D226(G) TO G220 AS SHOWN. DO NOT FIT D220 LEAD INTO PCB.

REMOVE THIS TRACK ON SOLDER SIDE OF PCB COMPLETELY

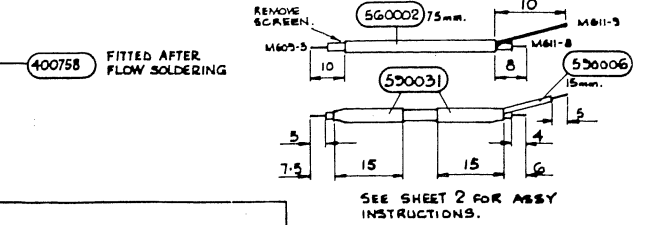
NB TWISTED WIRE PAIR 540006/540007 RED WIRE BETWEEN M302-7 + M301-4 630034 630035 630036 630037 630038 630039 630040 630041 630042 630043 630044 630045 630046 630047 630048 630049 630050 630051 630052 630053 630054 630055 630056 630057 630058 630059 630060 630061 630062 630063 630064 630065 630066 630067 630068 630069 630070 630071 630072 630073 630074 630075 630076 630077 630078 630079 630080 630081 630082 630083 630084 630085 630086 630087 630088 630089 630090 630091 630092 630093 630094 630095 630096 630097 630098 630099 630100

SOLDER GUARD SHIELD TO GUARD TRACK SHOWN AS CLOSE TO Q305 AS POSSIBLE 630033  
 GUARD FITTED RESTING ON PADS FOR Q305 + Q306  
 TIGHTEN TO A TORQUE OF 1.5 Nm.

NB: C605/C610 + R605/R610 ON REAR OF PCB.

LEG OF D607 MOUNTED ON BEAD, SOLDERED INTO PCB. R/H LEAD OF D608 FITTED ALSO WITH BEAD 630243 AND BOTH LEADS SLEEVED 590004 AS SHOWN.

DO NOT FIT R403/R404 OR FSJ TERMINALS.



REMOVE SCREEN. 560002 75mm. M811-3 590006 15mm. 5 7-5 15 15 6

SEE SHEET 2 FOR ASSY INSTRUCTIONS.

M802, 401, 405 M510, M601, 608, 609, 611, 701/703, 704/705, 707, 804, 805, 400B15  
 N.B. CN701 PIN 1 IS OFF

M708 M807  
 605070

M201 M203 M204 M303 M306 M511 M503 M804 M708 M808

SLEEVED LINKS ON MAIN PCB ON COMP SIDE

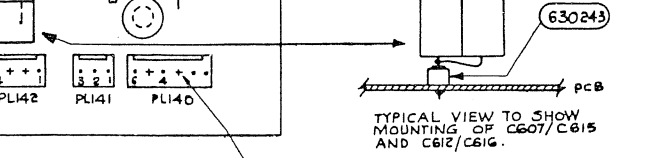
C580 & C531 MOUNTED UPSIDE DOWN ON PIGGYBACK BOARD IN SILICONE RUBBER CONNECTED TO R3 & R547 AS SHOWN.  
 USE 22SWG BTC WIRE TO LINK R3 TO C531 AS SHOWN (540004) R3 SOLDERED INTO HOLES IN PCB SLEEVE LEADS OF R546, R546, 547

COMPONENTS NOT FITTED R501, C301, C302, M601, Q306, R254, C308

DENOTES COMPONENTS NOT FITTED INTO SOCKETS

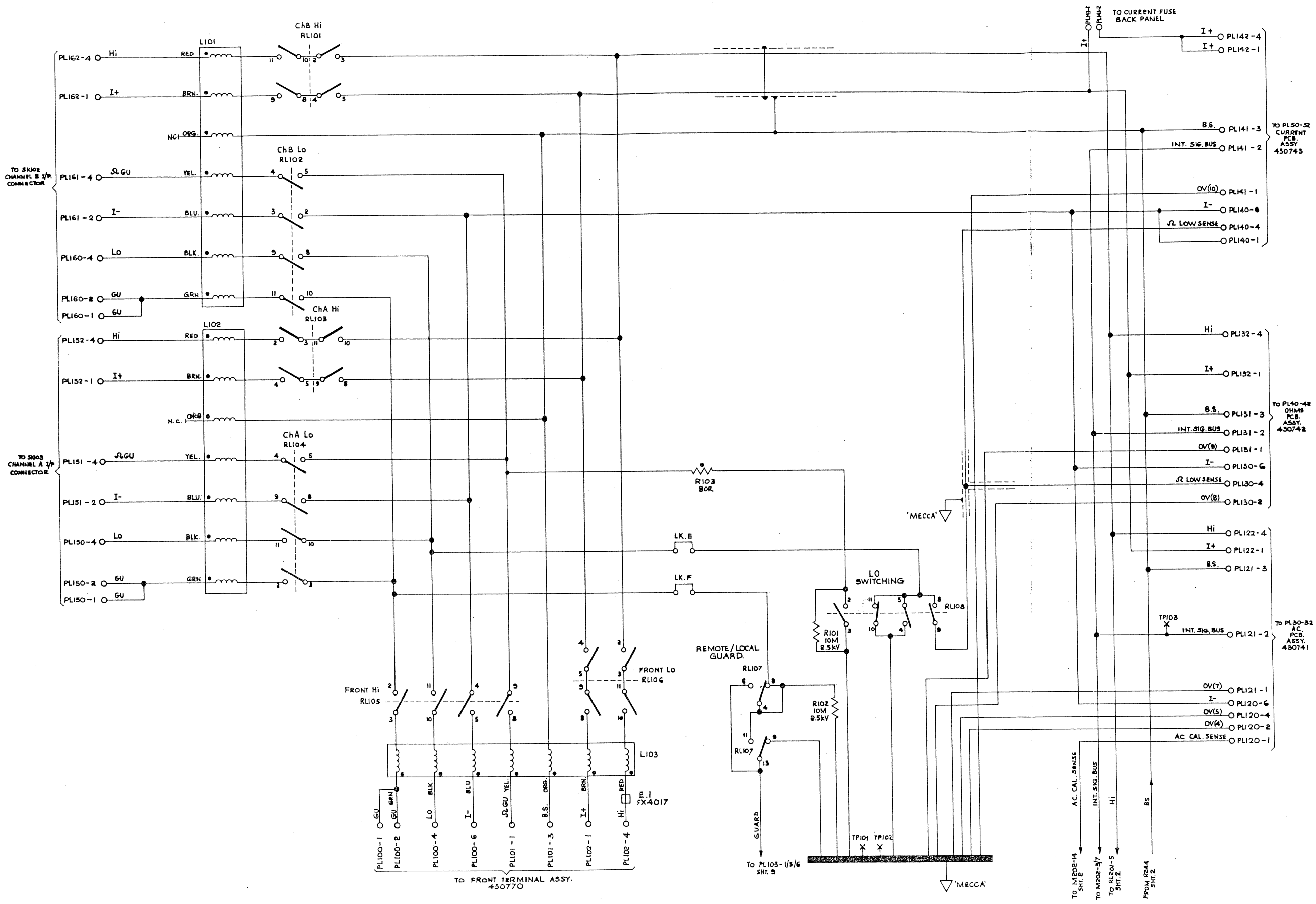
400815  
 FITTED IN PLACE OF M605 POSITION.

NOTE ORIENTATION



REMOVE PINS SHOWN THUS: '+'

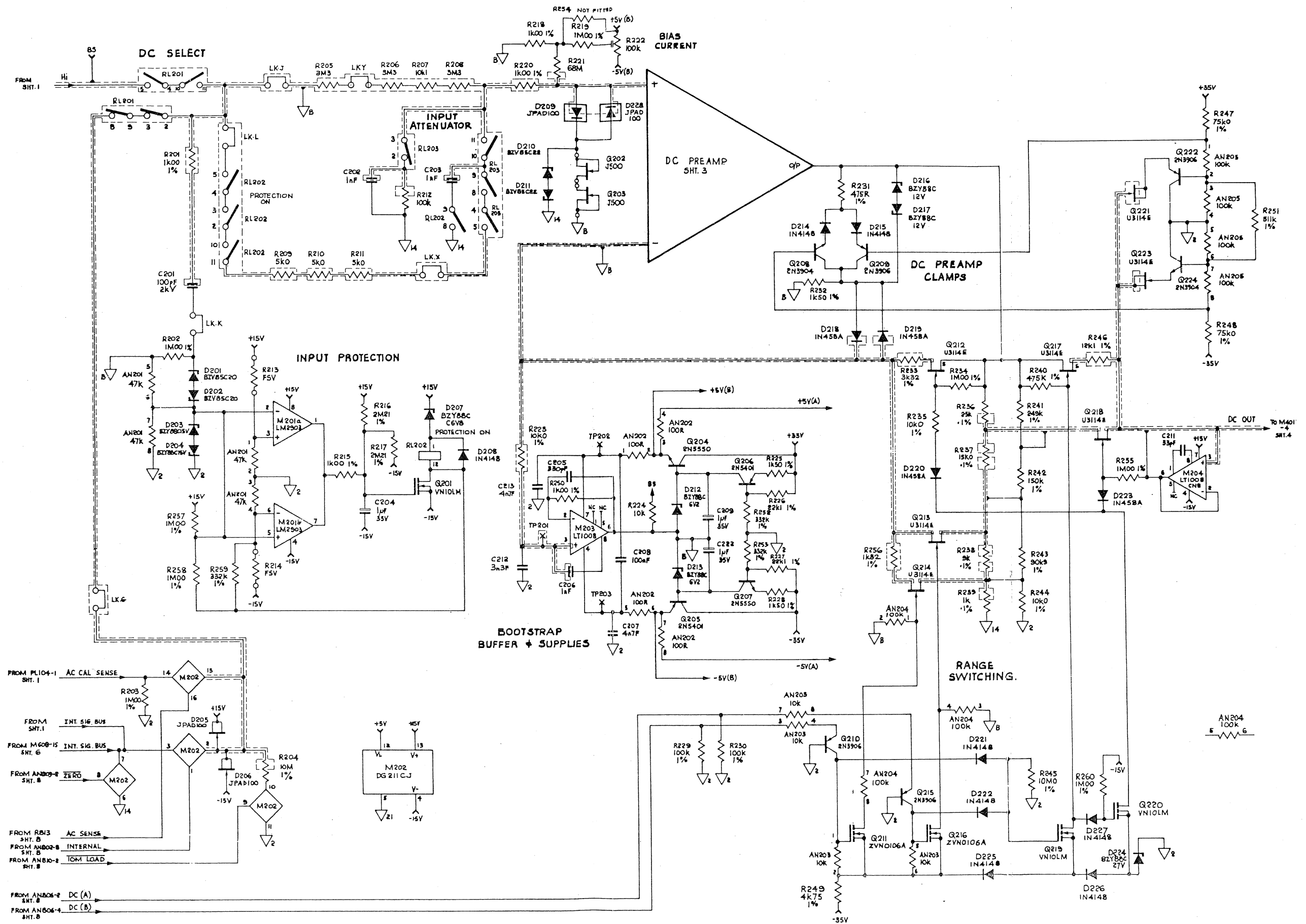
NB. FOR DETAIL OF FURTHER TRACK CUTS AND LINKS TO BE ADDED SEE SHT.2/3 > EC02800



D.C. ASSEMBLY  
 Input Signal Switching  
 Drawing No. 430738

Sheet 1 of 9

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 WAVETEK  
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D.C. ASSEMBLY

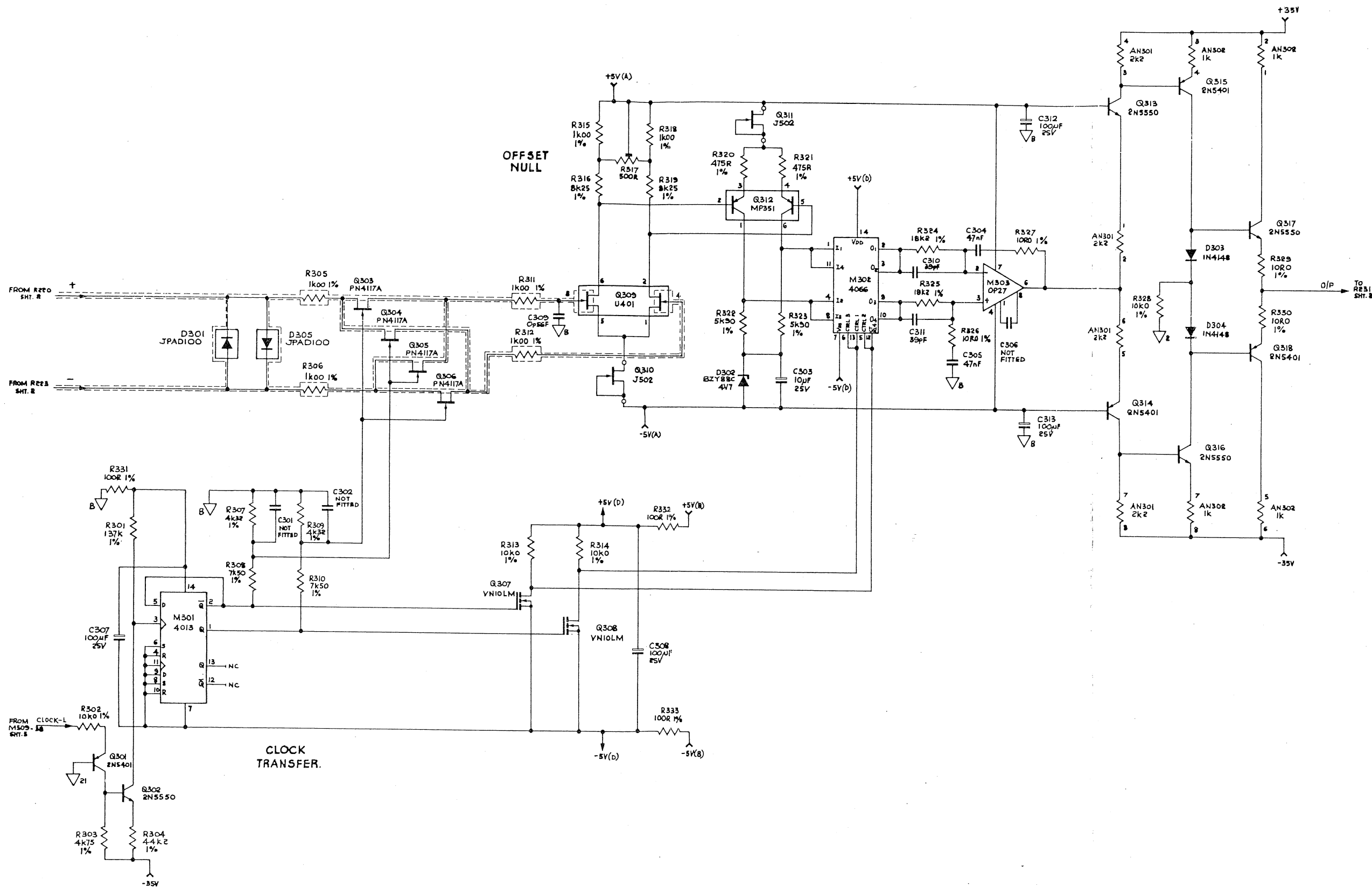
D.C. Switching, Protection and Ranging

Drawing No. 430738 Sheet 2 of 9



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D.C. ASSEMBLY

D.C. Preamplifier

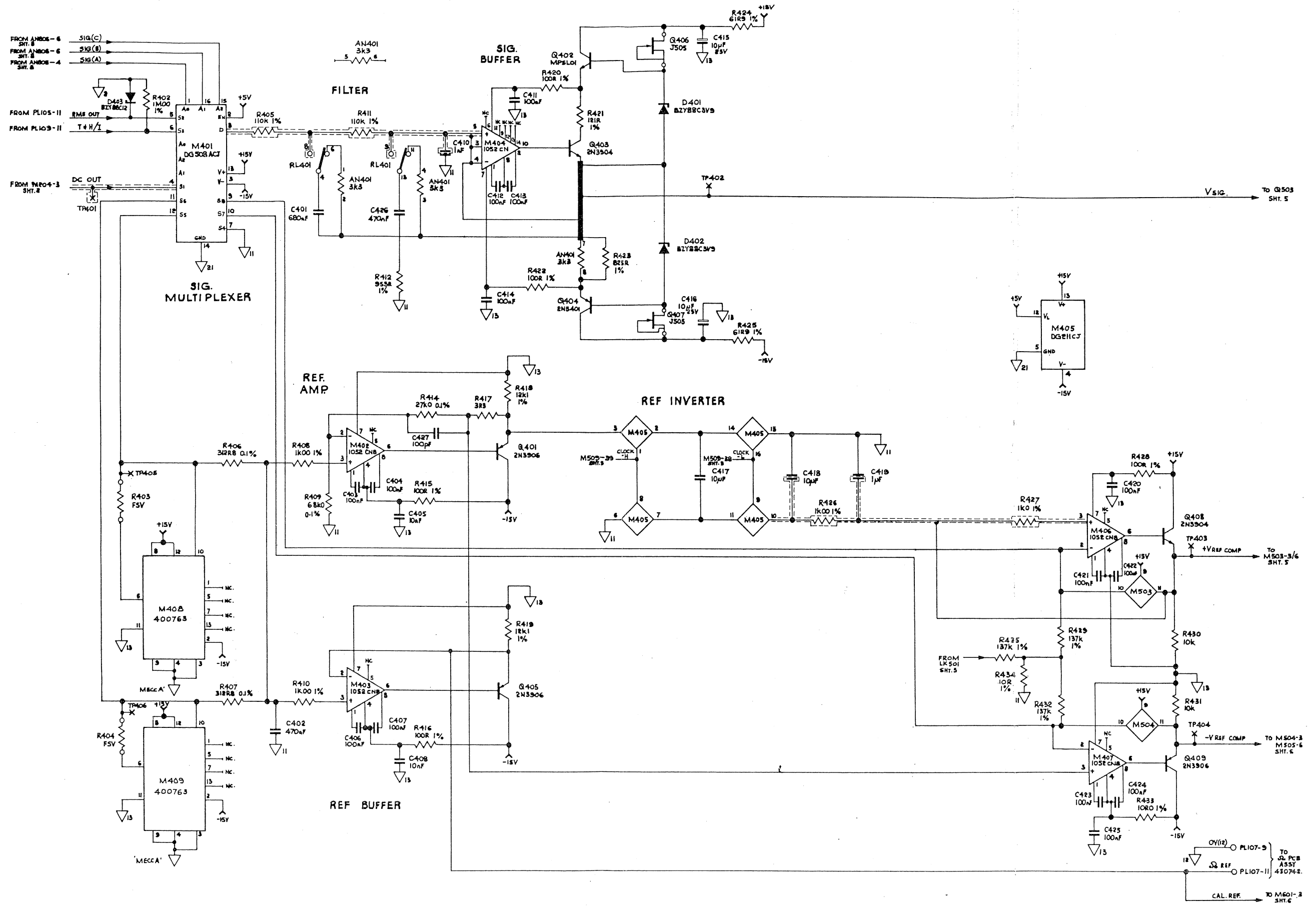
Drawing No. 430738

Sheet 3 of 9



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1281



D.C. ASSEMBLY

References and Signal Switching

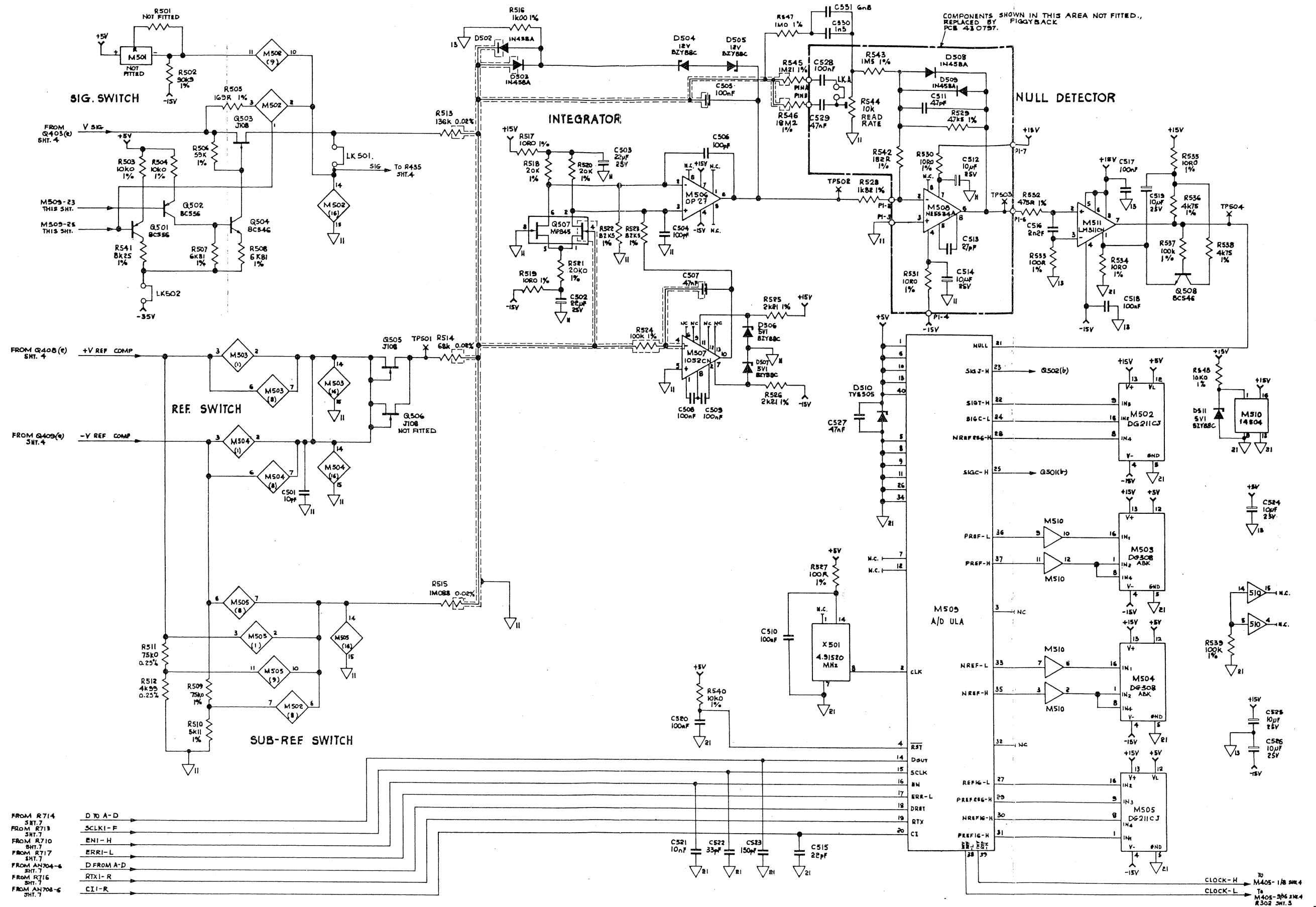
Drawing No. 430738

Sheet 4 of 9



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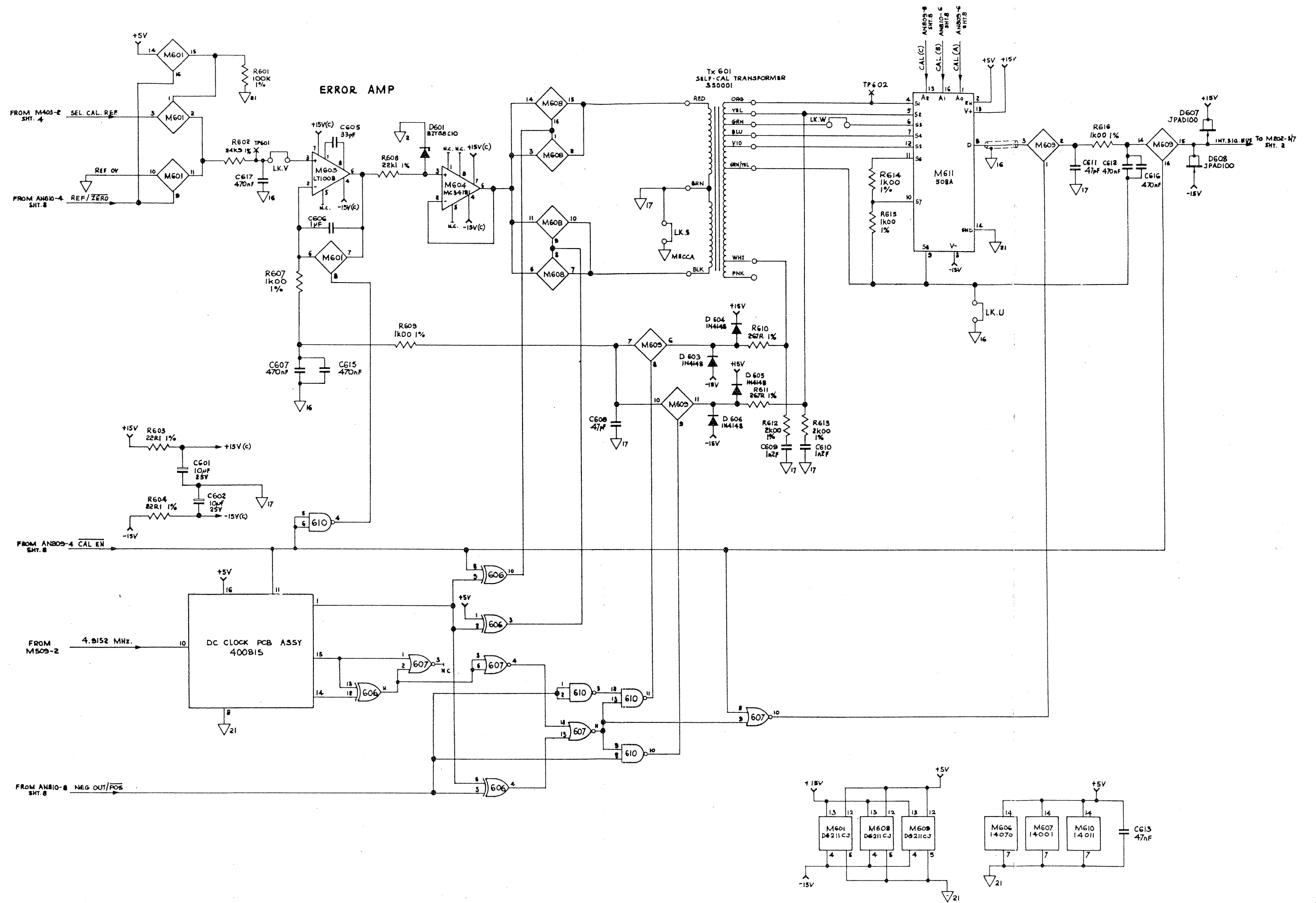


D.C. ASSEMBLY  
 Analog to Digital Converter  
 Drawing No. 430738

Sheet 5 of 9



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D.C. ASSEMBLY

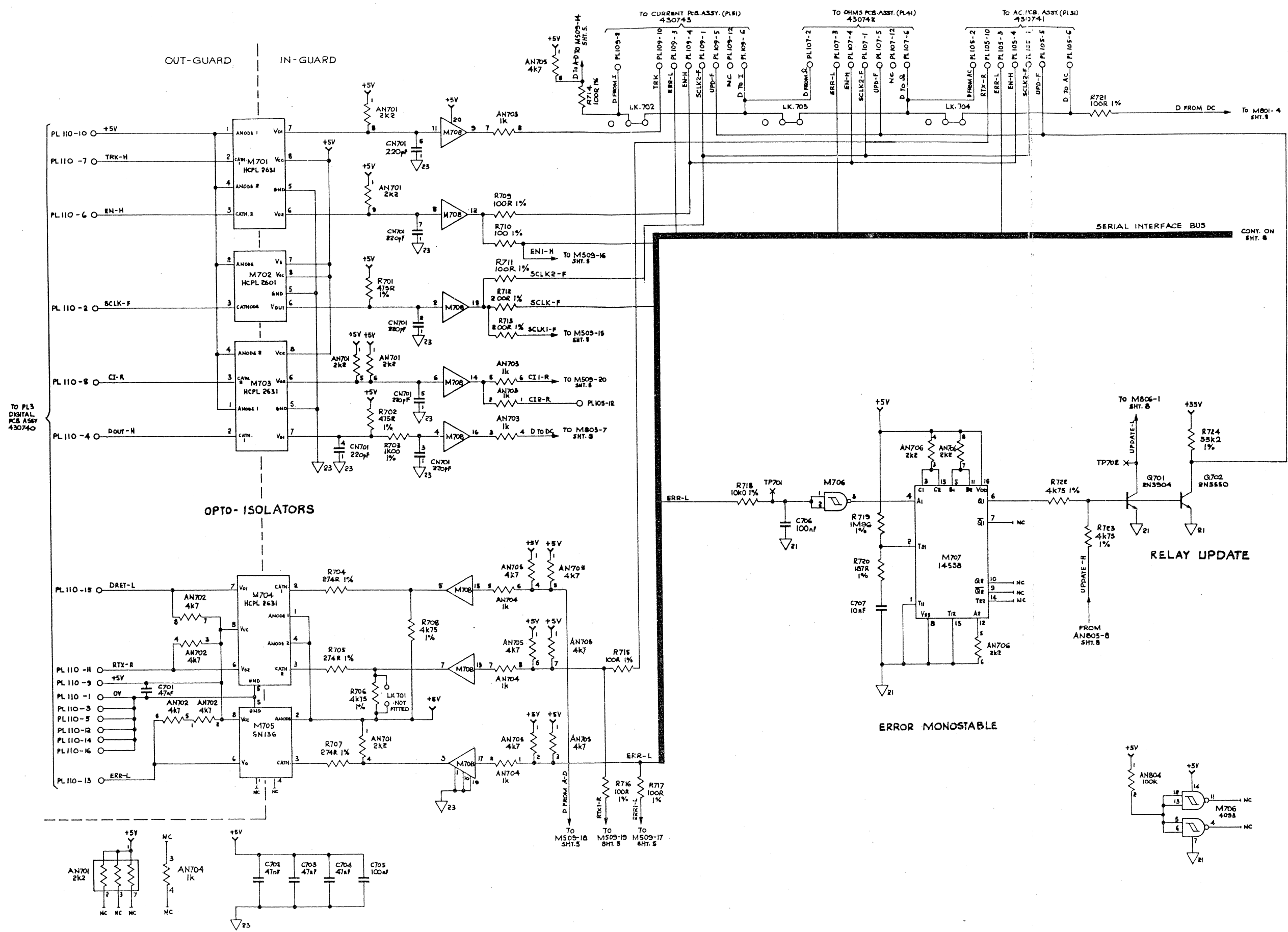
Selfcal Multiplier

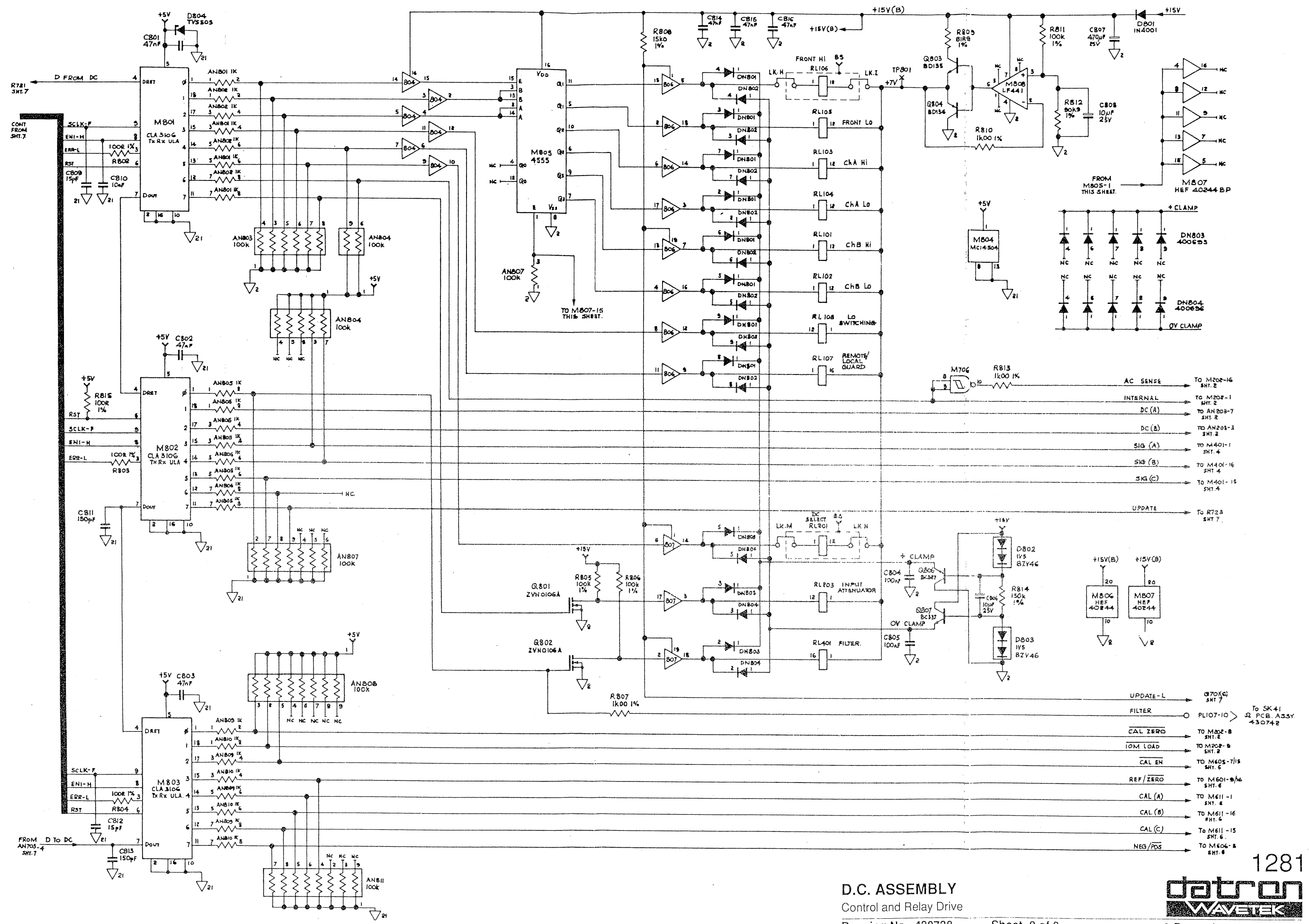
Drawing No. 430738

Sheet 6 of 9



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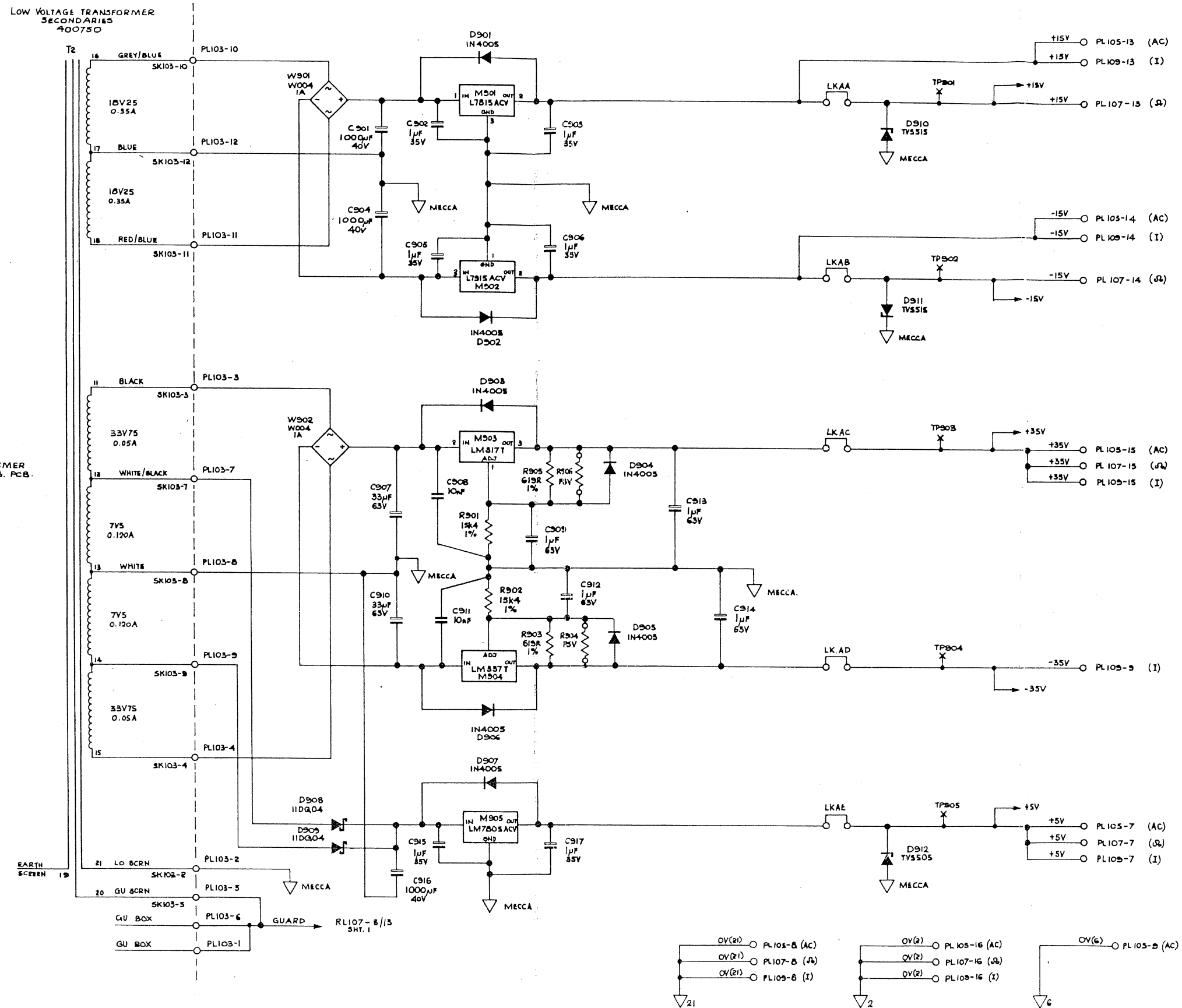


D.C. ASSEMBLY  
Control and Relay Drive  
Drawing No. 430738

Sheet 8 of 9

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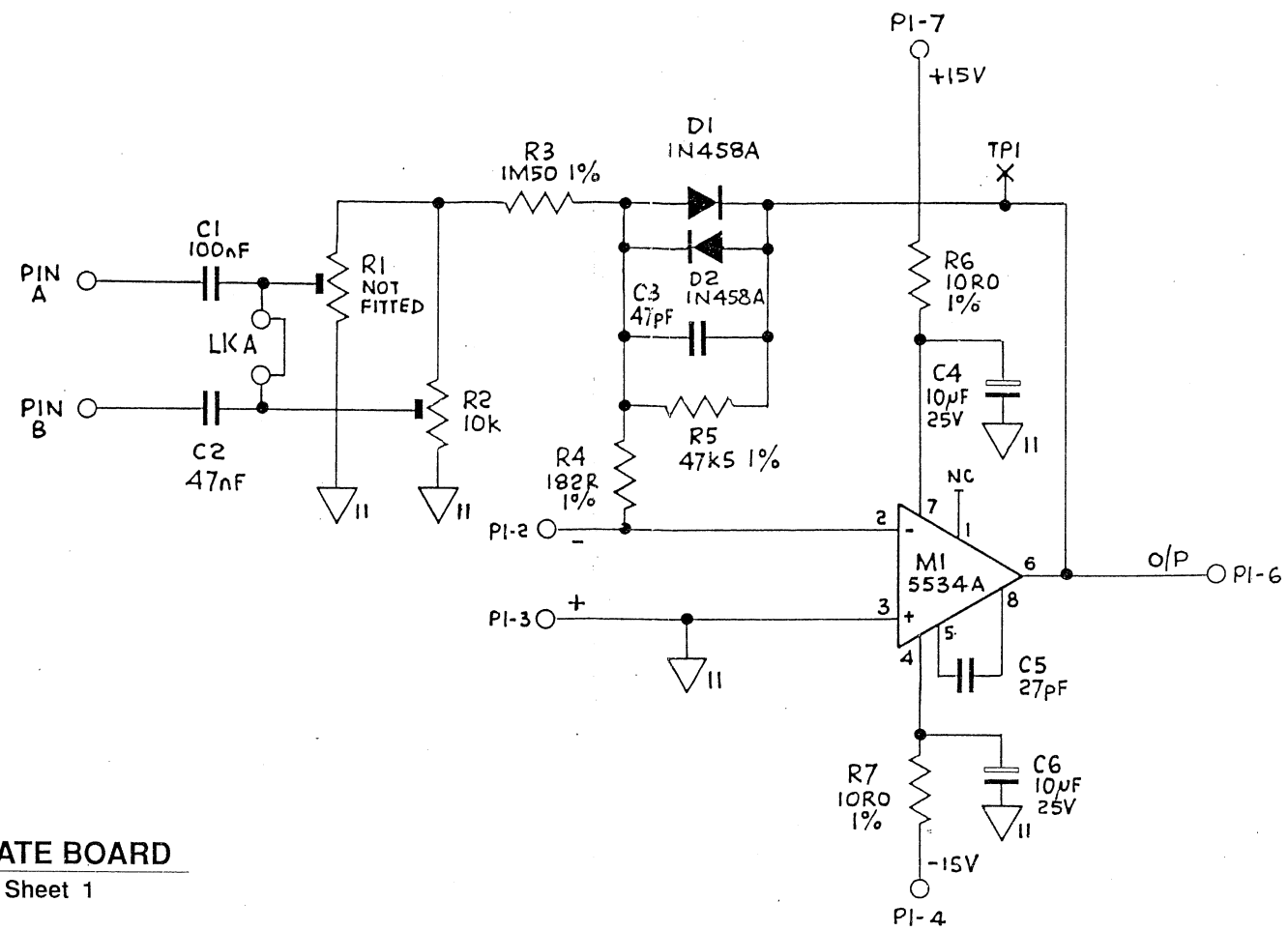
FROM L.V. TRANSFORMER  
 PRIMARIES SEE DGS. PCB.  
 430740.



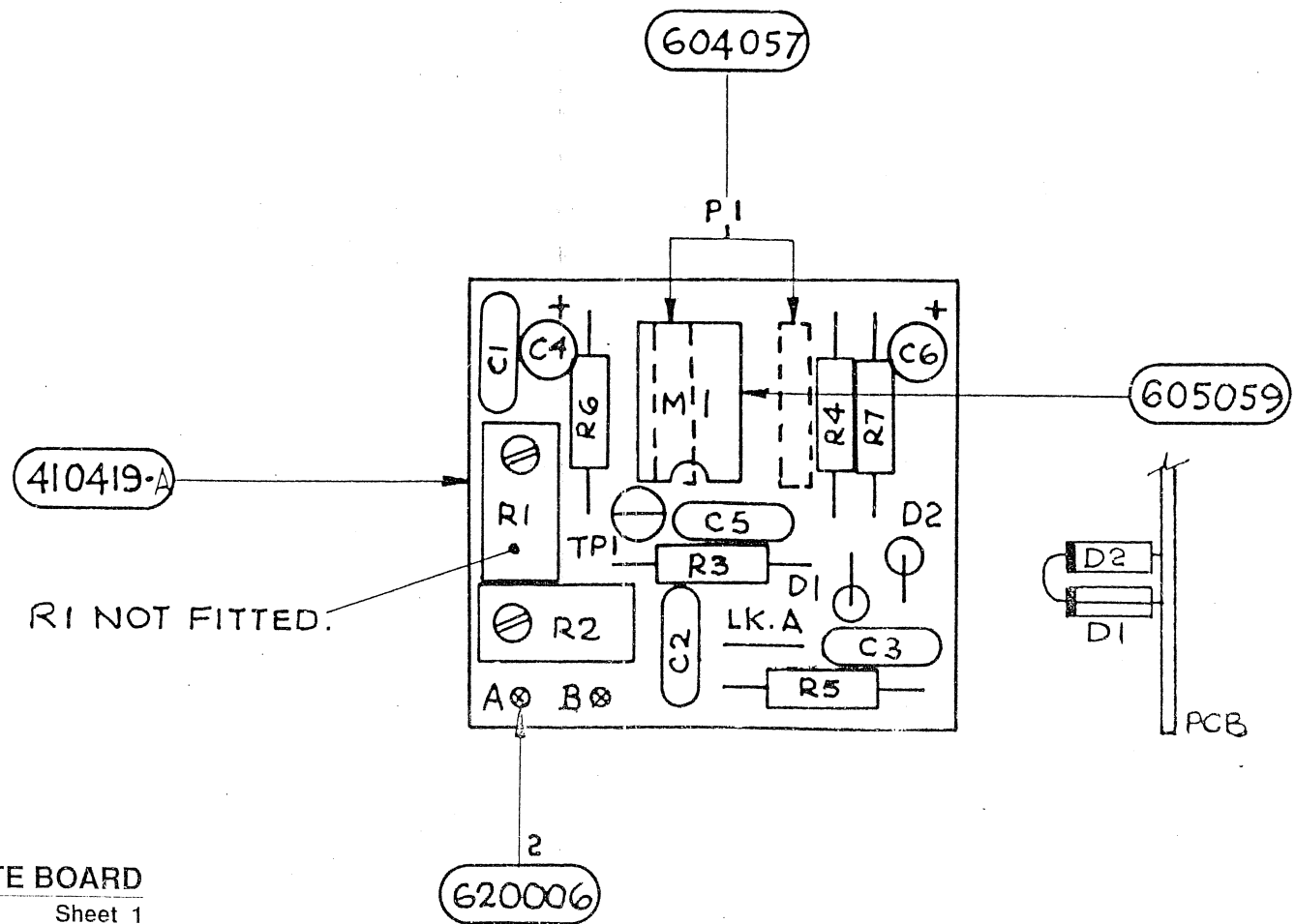
D.C. ASSEMBLY  
 In - Guard Power Supplies  
 Drawing No. 430738

Sheet 9 of 9

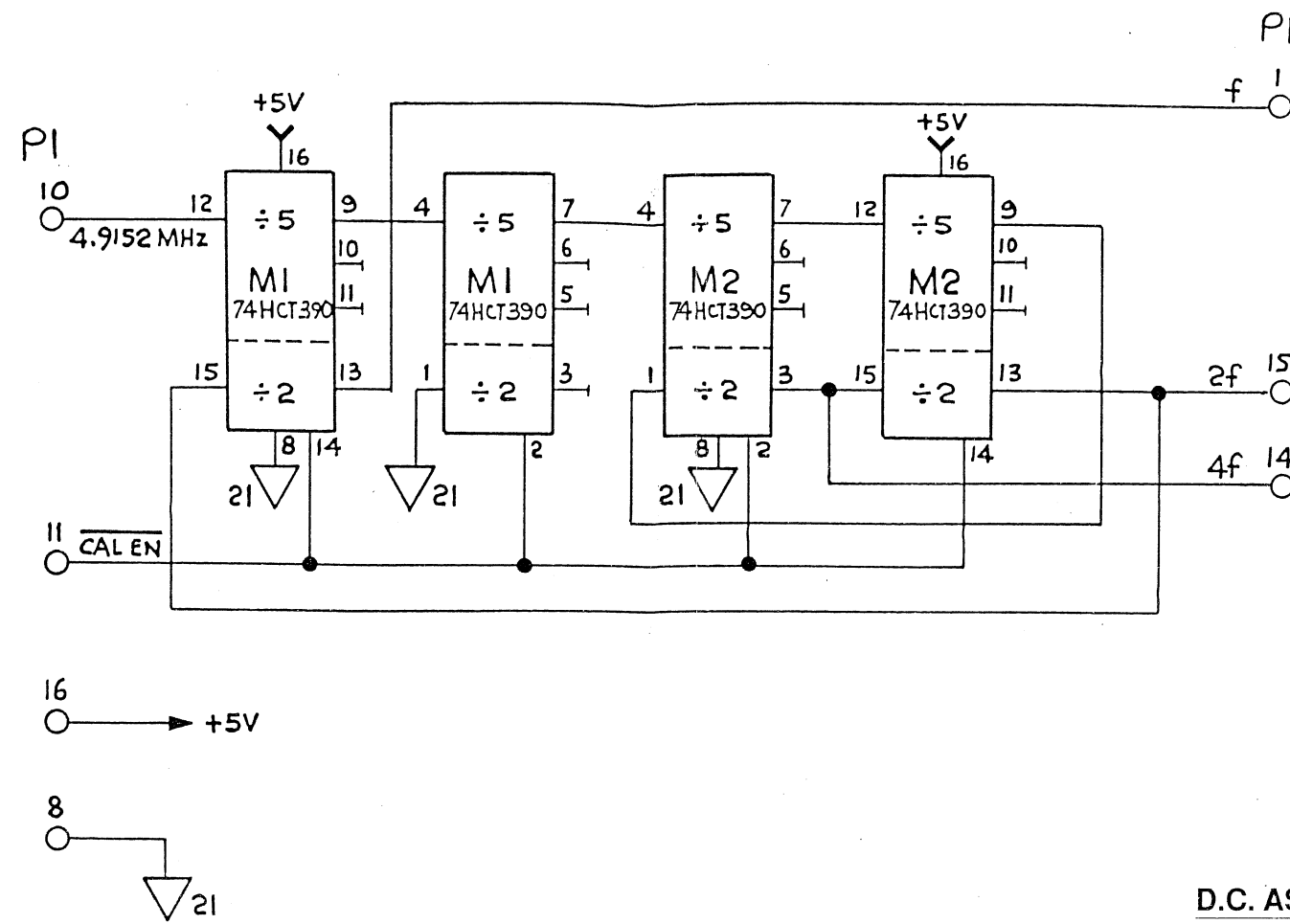
1281  
**datron**  
 WAVETEK  
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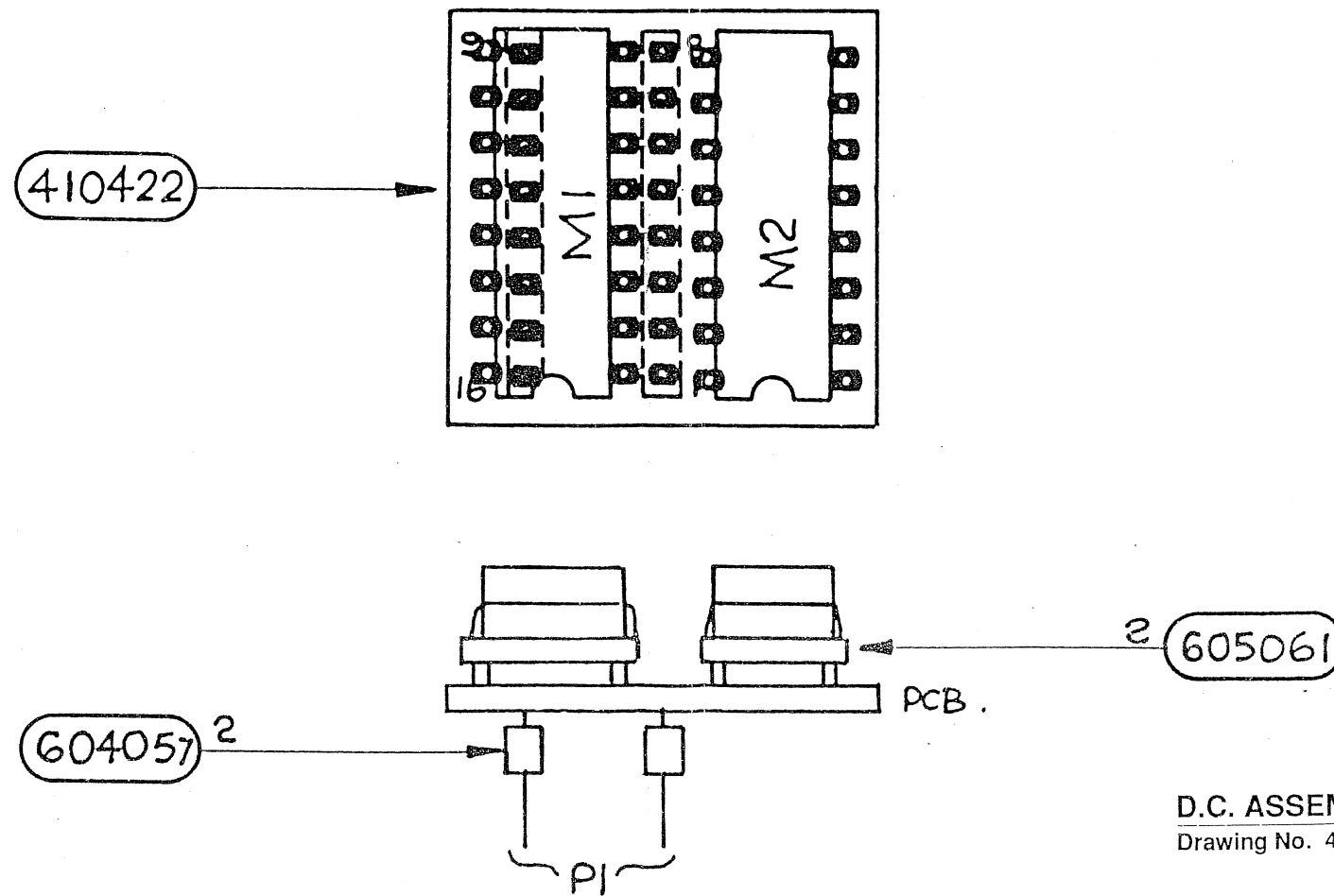
**D.C. ASSEMBLY : READ RATE BOARD**  
 Drawing No. 430797 Sheet 1





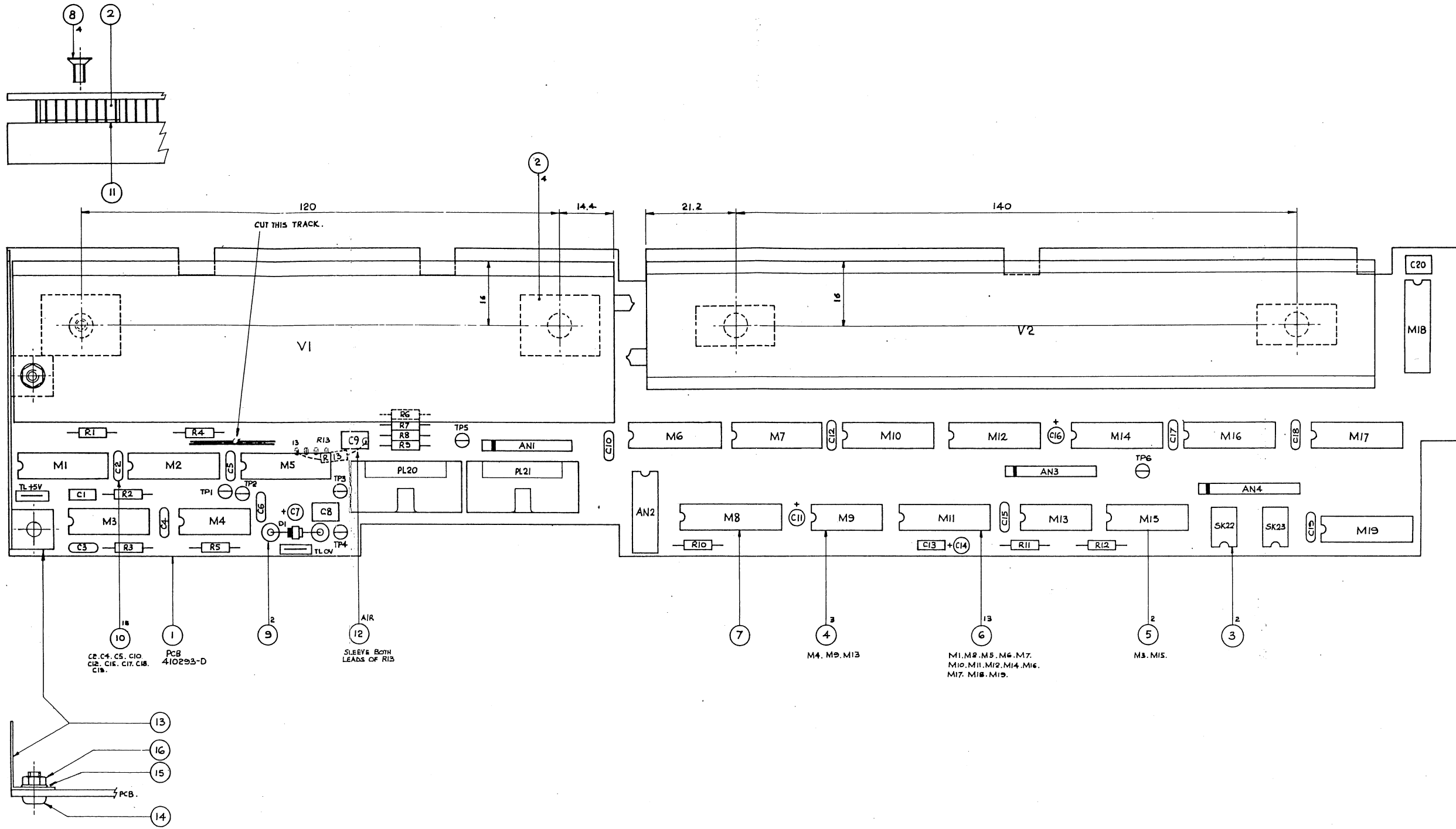


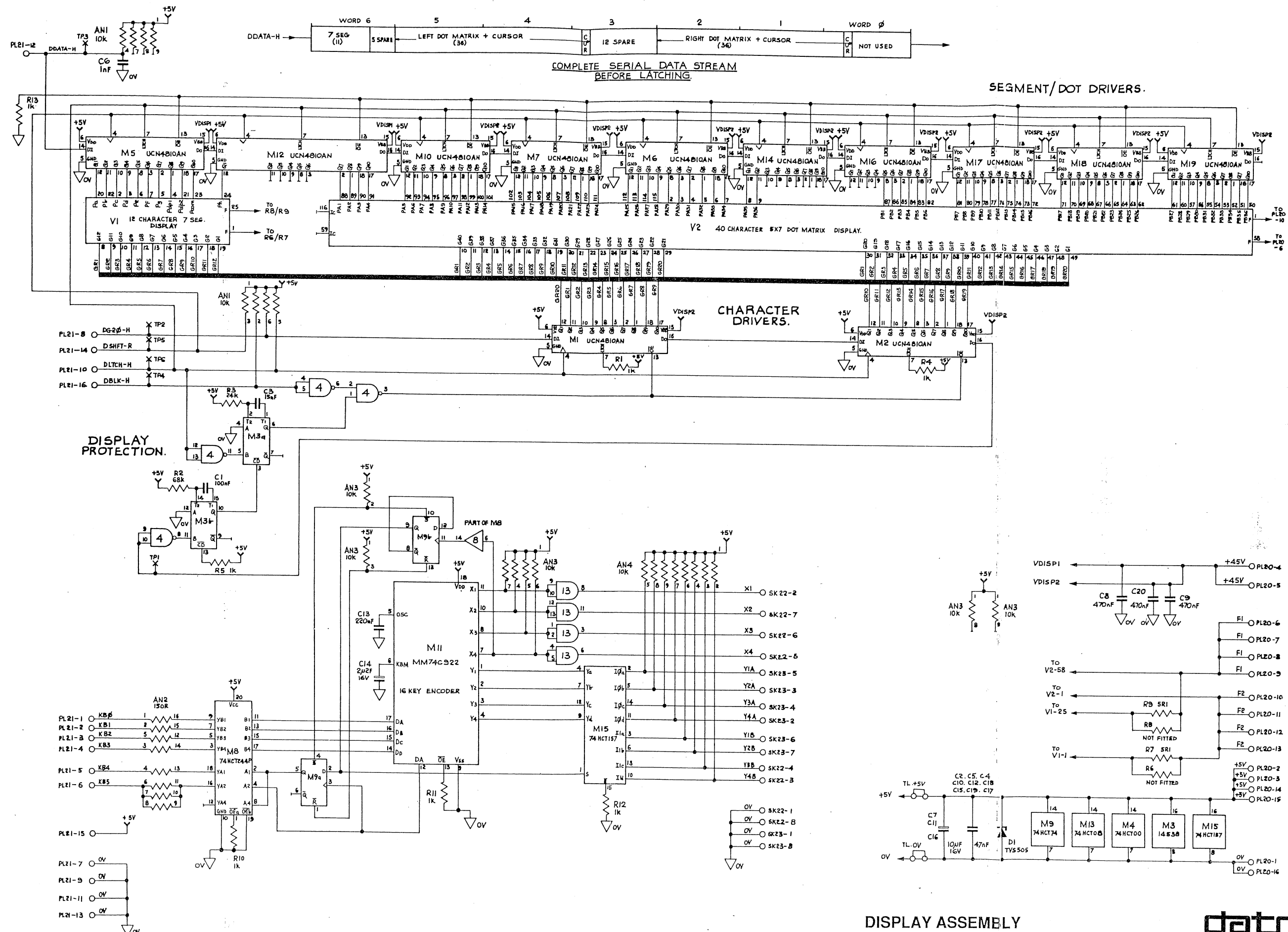
**D.C. ASSEMBLY : CLOCK BOARD**  
 Drawing No. 430815 Sheet 1



**D.C. ASSEMBLY : CLOCK BOARD**  
 Drawing No. 480815 Sheet 1

NOTE: SCREW HEAD  
WILL SIT ABOVE  
BOARD IN CSKs.





**DISPLAY ASSEMBLY**

Display Driver

Drawing No. 430739

Sheet 1 of 1



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MOUNT U503 ON TDS PAD.

920198

618002

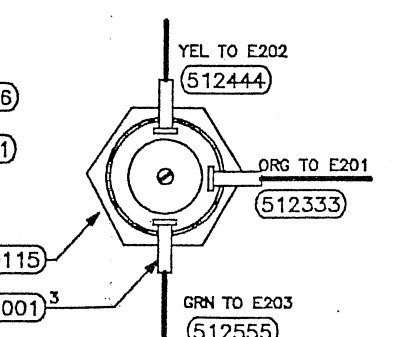
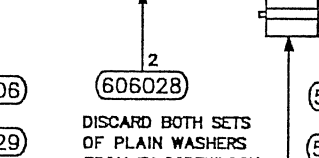
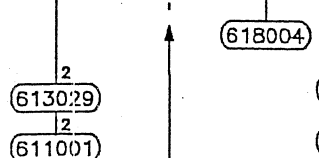
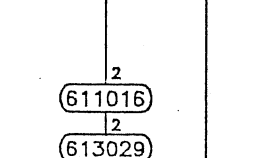
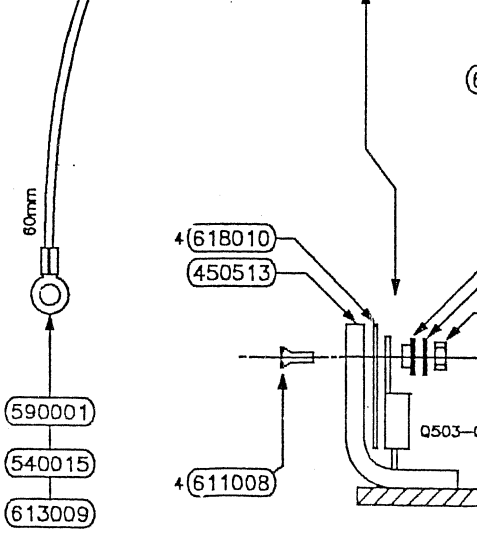
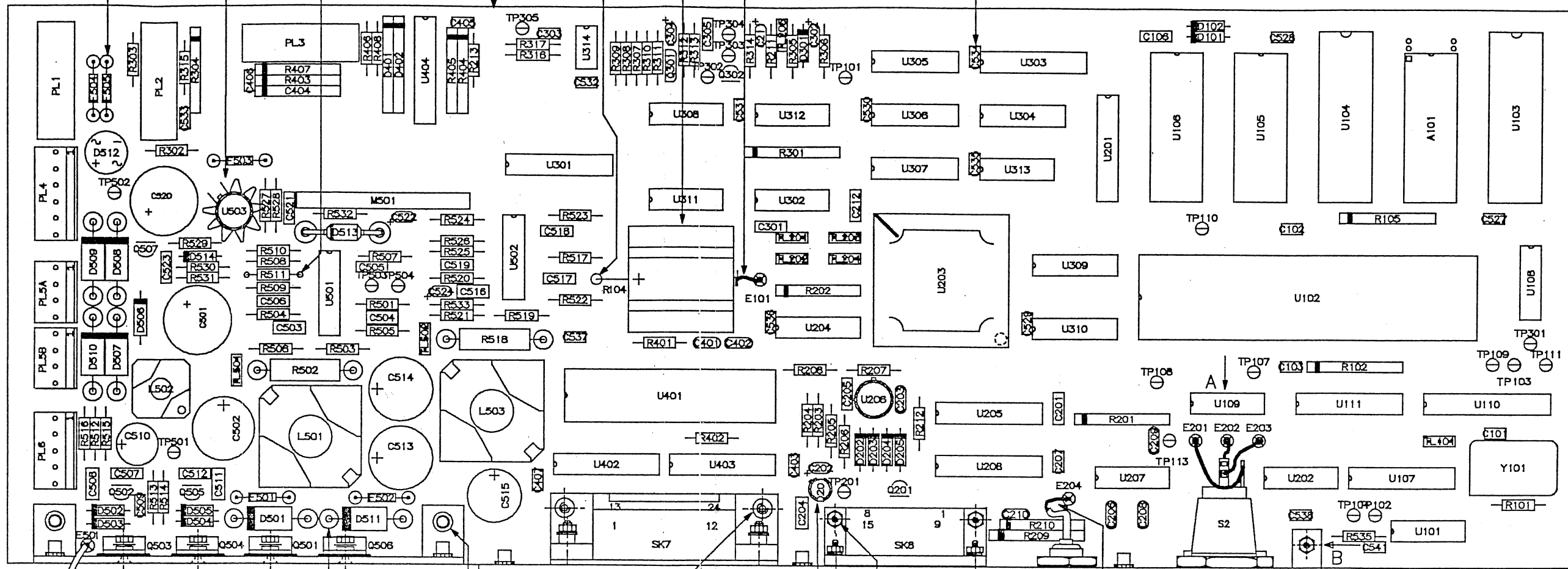
MOUNT BEAD UNDER R104 BODY.

630243

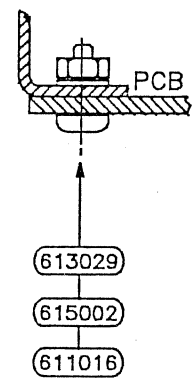
C101, C102, C103, C207, C303, C403, C405, C406, C407, C509, C527, C528, C529, C530, C531, C532, C533, C534, C535, C536, C537, C538 AND C541.

ONE BEAD PER LEAD

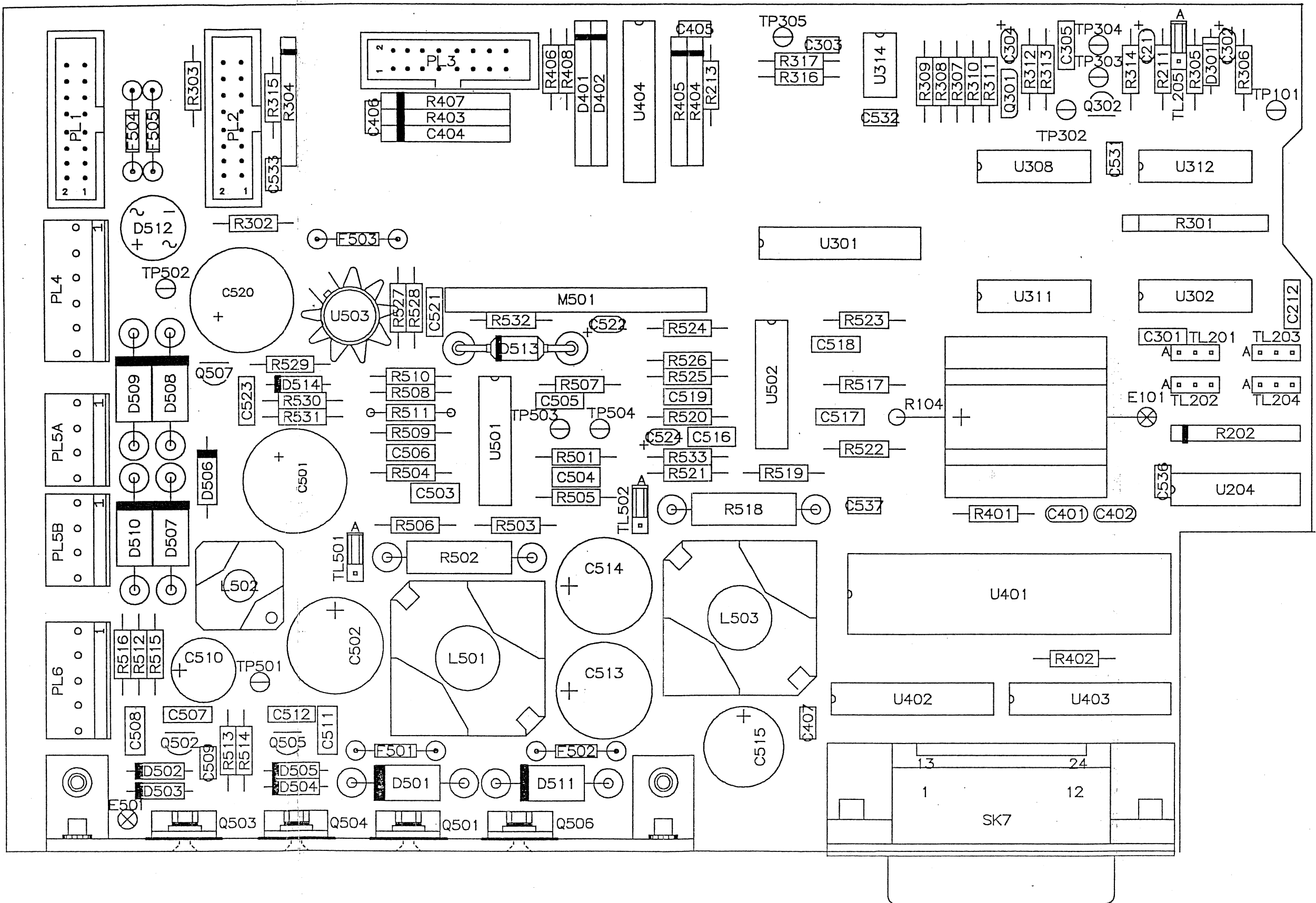
MOUNTING I C'S			
No OF PINS	PART No	No OFF	WHERE USED
8	605058	1	U314
14	605060	10	U101, U106, U109, U202, U207, U302, U306, U311, U312, U313.
16	605061	9	U204, U304, U305, U306, U307, U309, U310, U501, U502.
20	605070	10	U107, U111, U201, U205, U208, U301, U303, U402, U403, U404.
24	605084	1	U110.
28	605085	3	A101, U105, U106.
32	605199	2	U103, U104.
40	605050	1	U401.
64	605117	1	U102.
68	605151	1	U203.

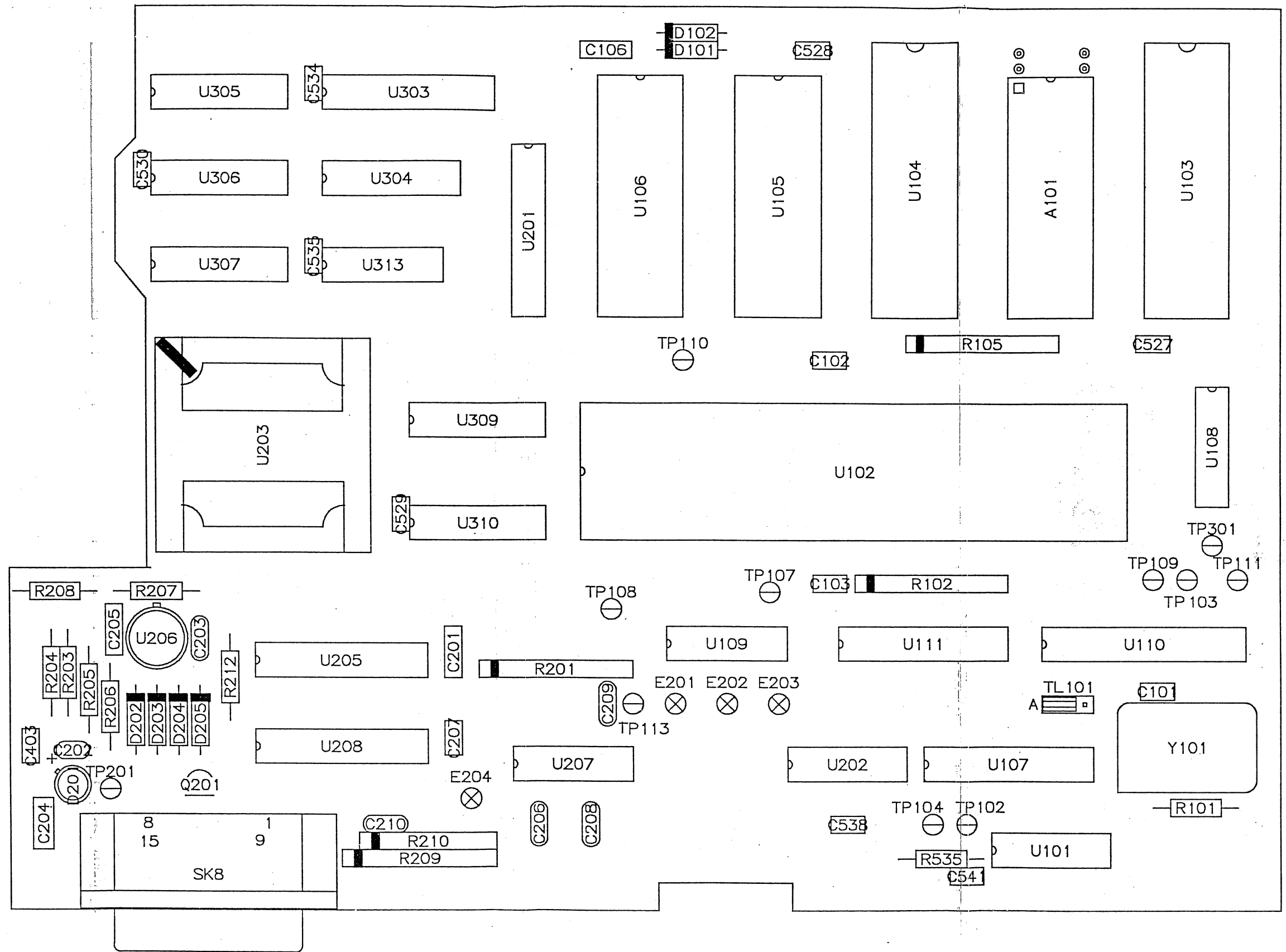


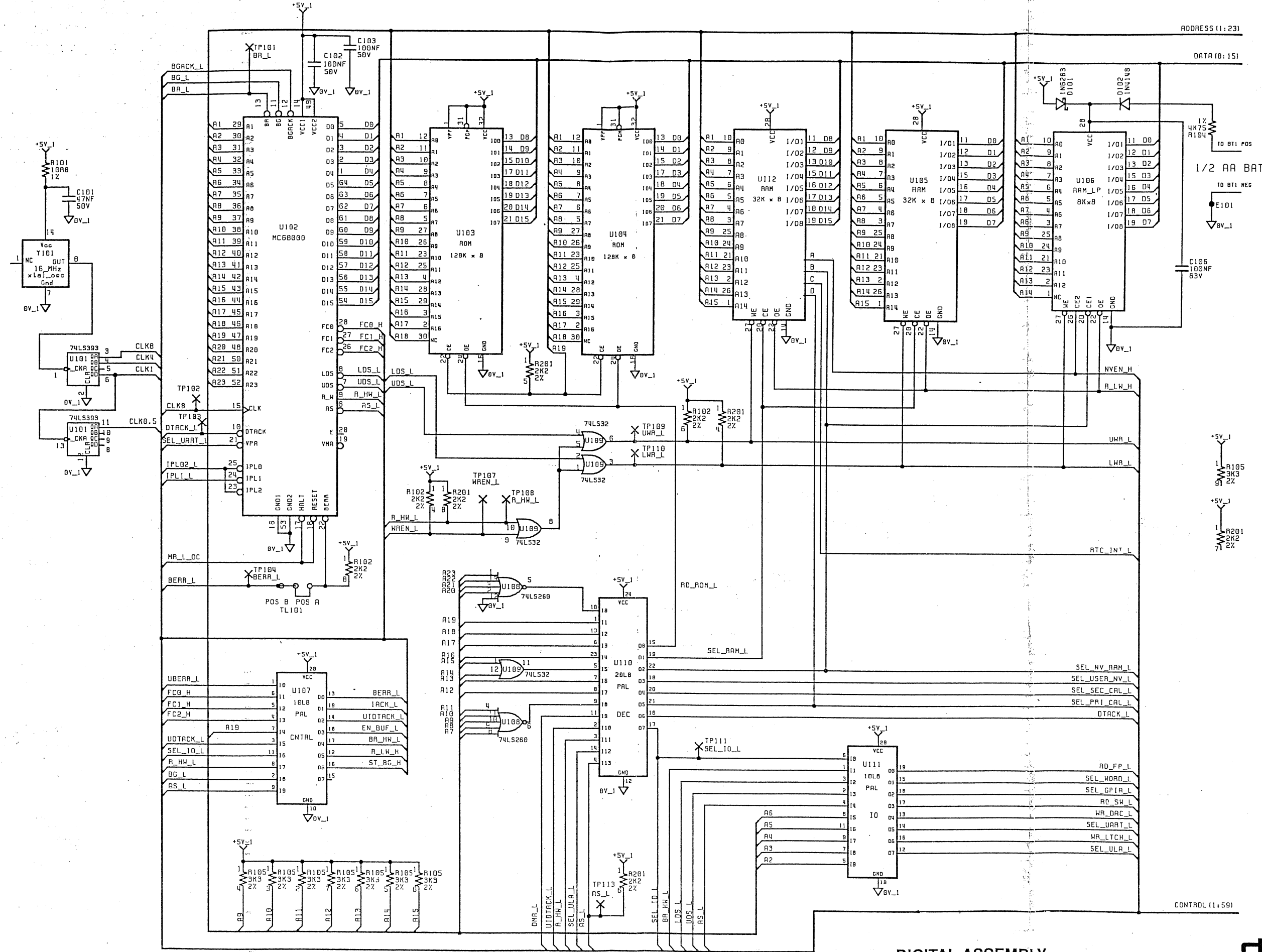
VIEW IN DIRECTION OF ARROW 'A'



VIEW IN DIRECTION OF ARROW 'B'



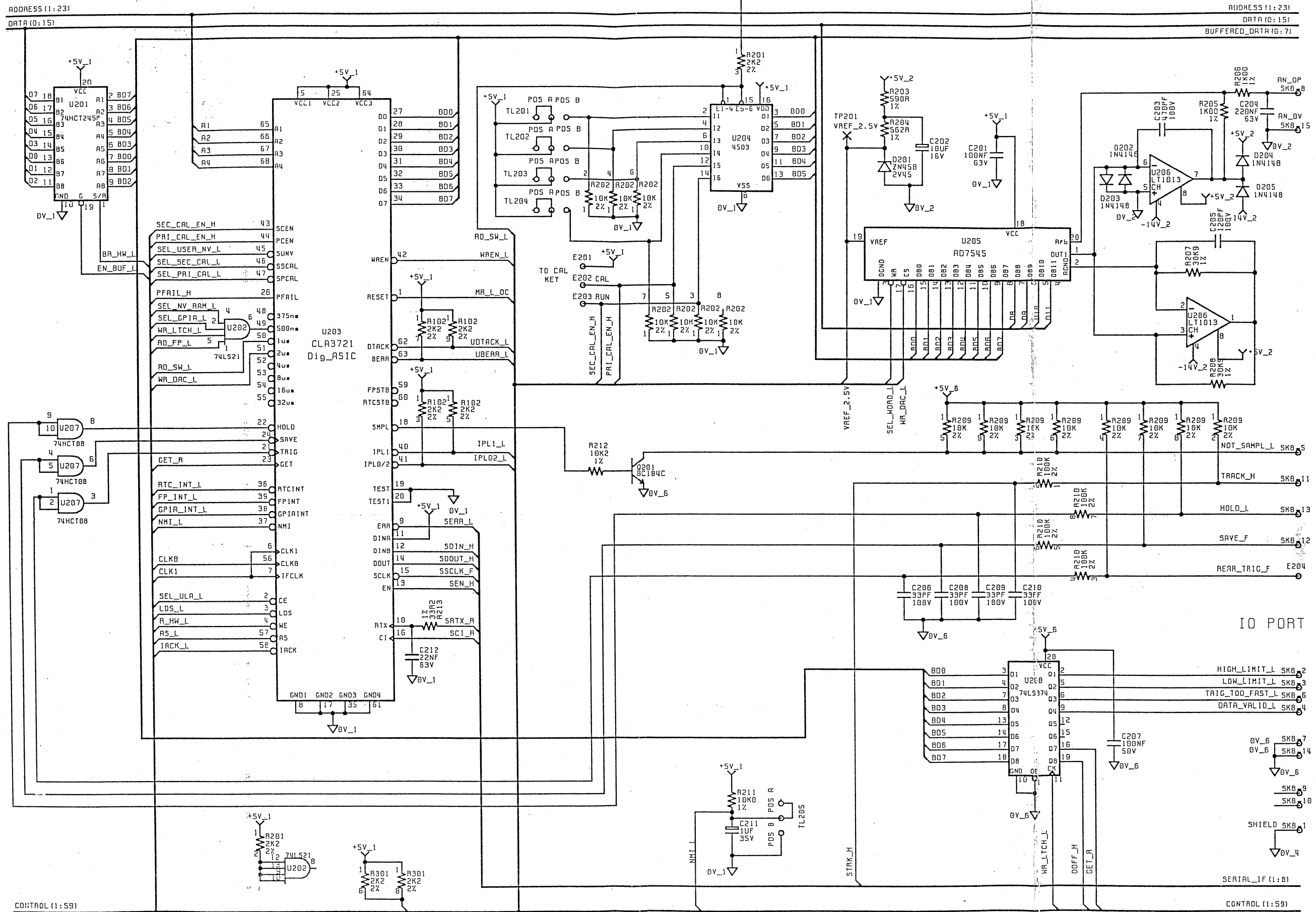




**DIGITAL ASSEMBLY**  
 Processor, Address Decoding and Memory  
 Drawing No. DC400901 Sheet 1 of 5



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CONTROL (1:59)

CONTROL (1:59)

DIGITAL ASSEMBLY

ASIC and I/O

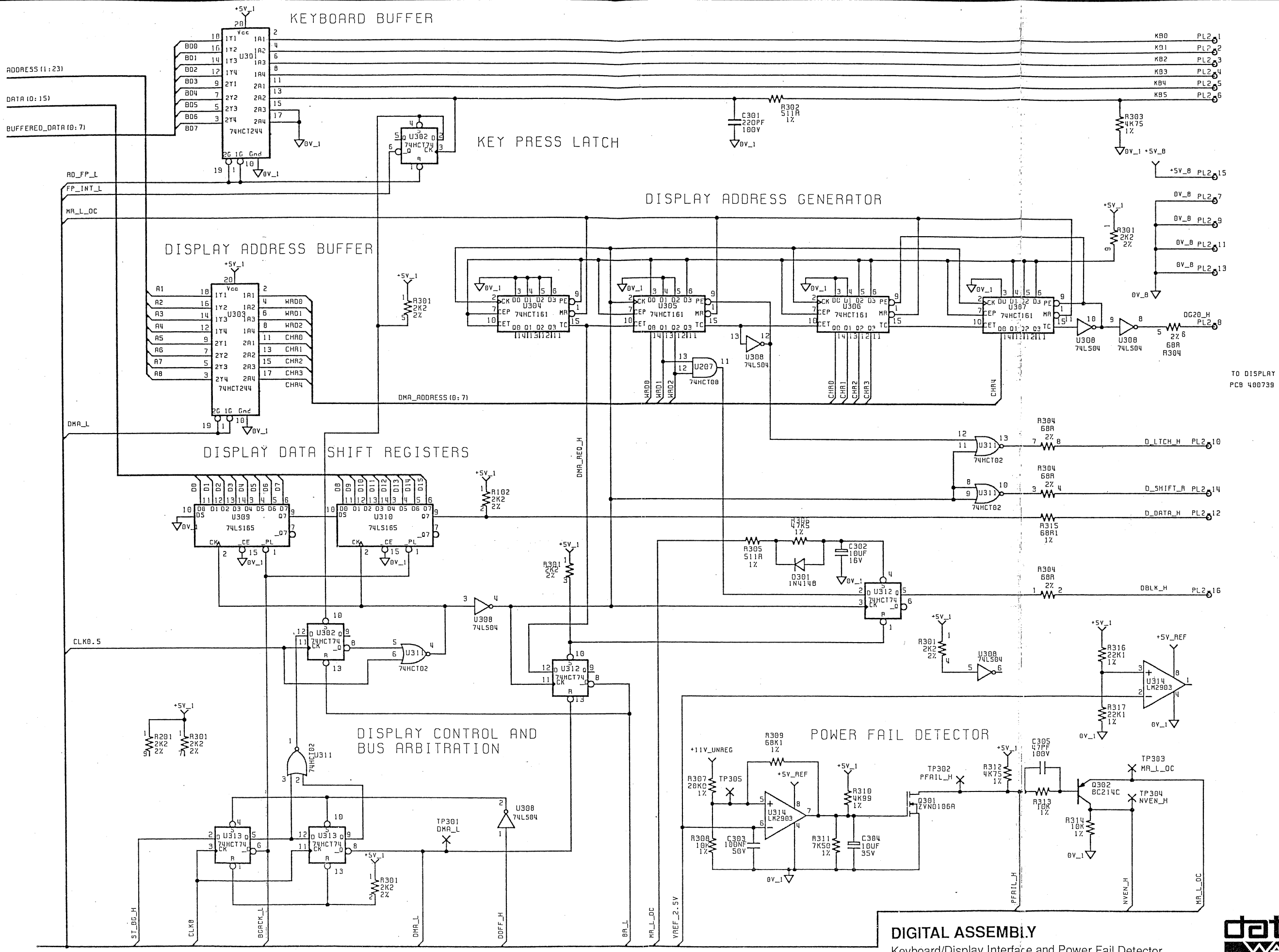
Drawing No. DC400901 Sheet 2 of 5



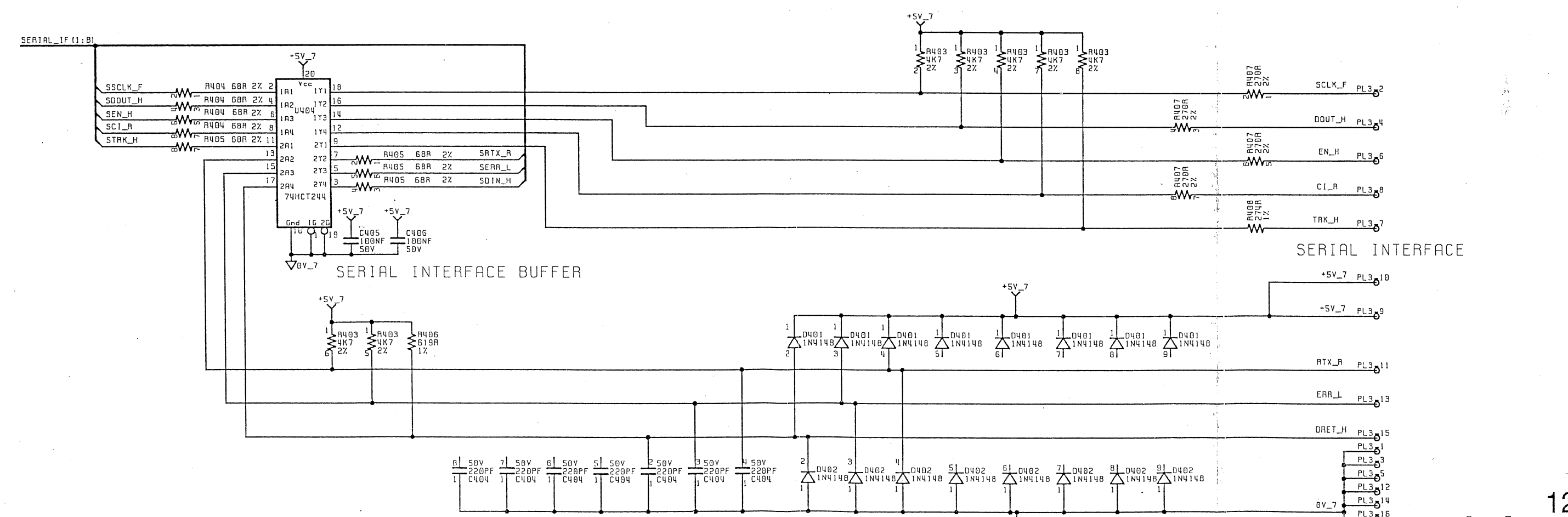
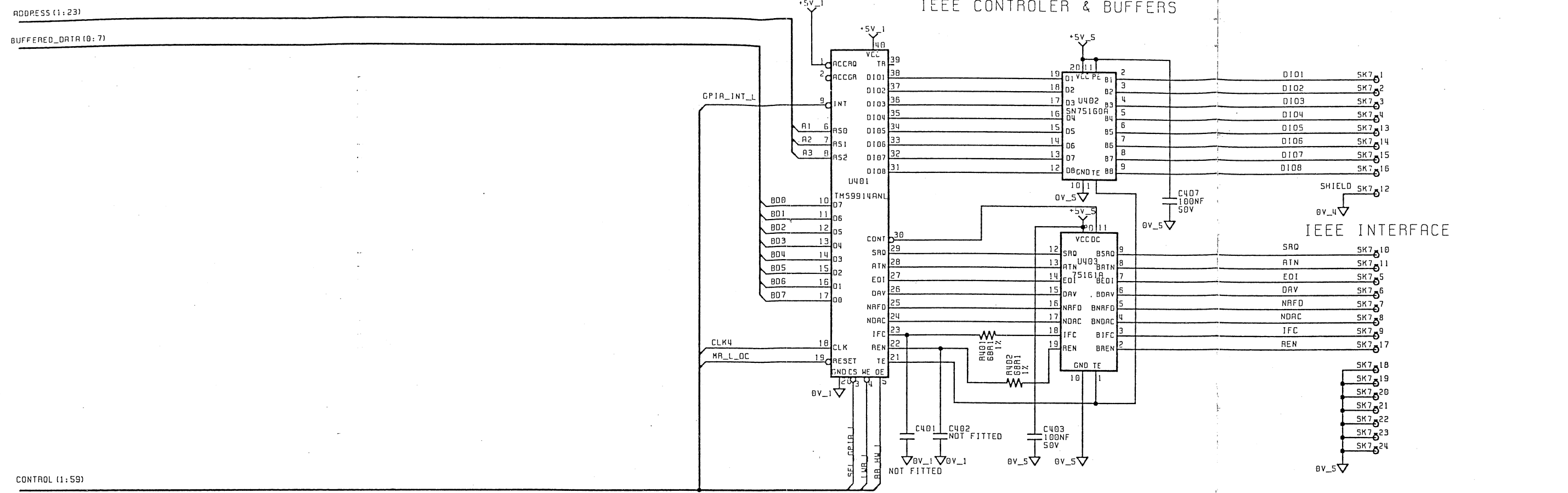
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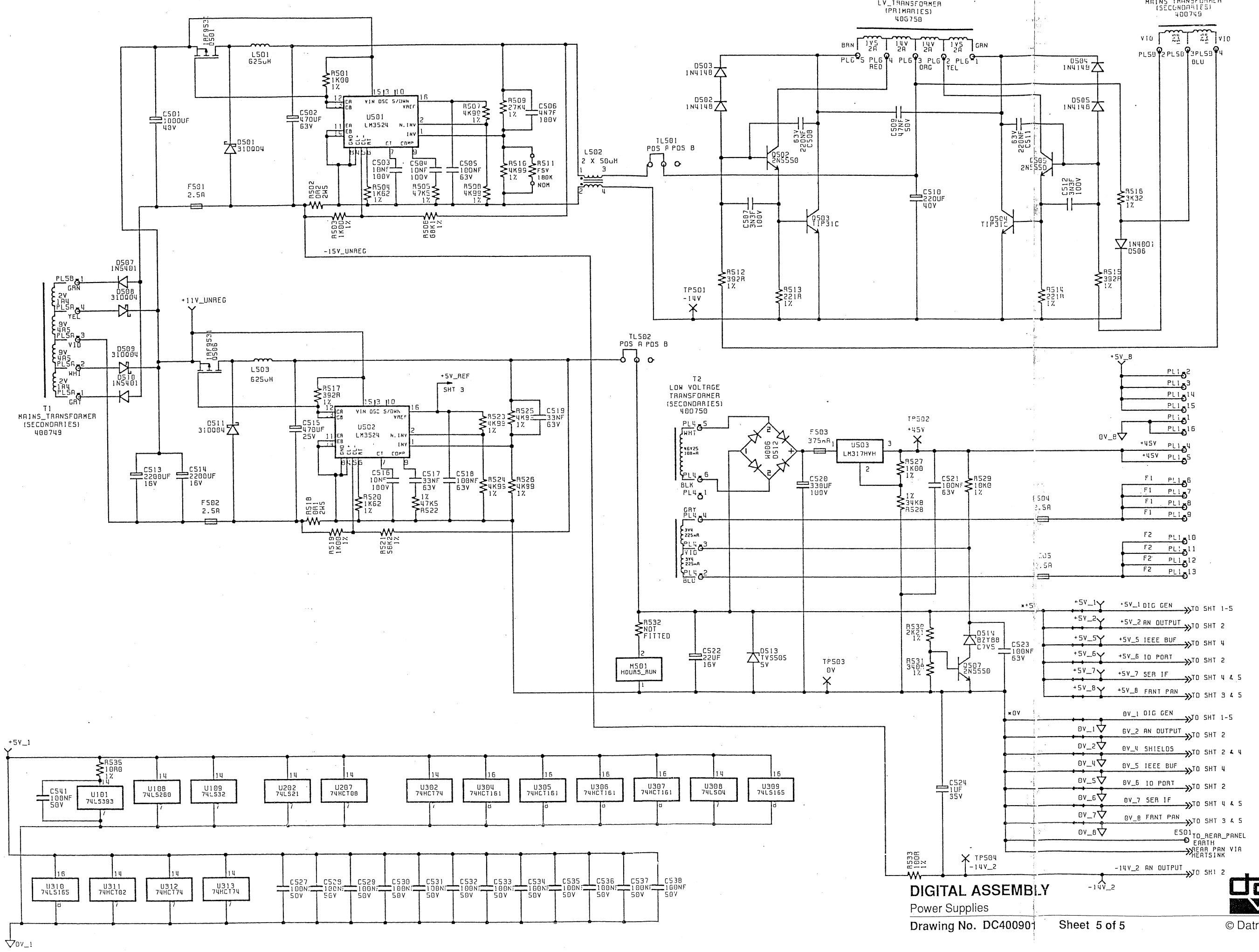


IEEE CONTROLLER & BUFFERS



DIGITAL ASSEMBLY  
IEEE Interface and Serial Interface  
Drawing No. DC400901 Sheet 4 of 5

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DIGITAL ASSEMBLY  
 Power Supplies  
 Drawing No. DC400907

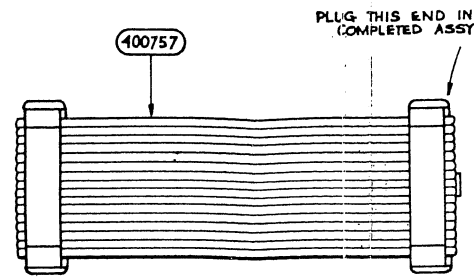
Sheet 5 of 5



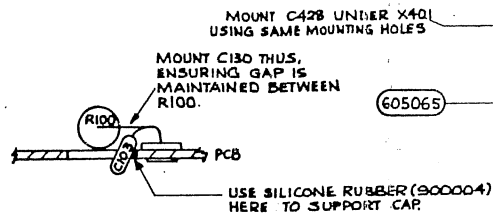
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605060 M407, M408, M409.  
M405, M406

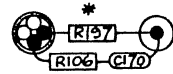
COMPONENTS NOT FITTED - R150 R264 R154  
R350 C231 C232 C236 C307 D301 D302  
C134



D402, D403, D404 630024



605065

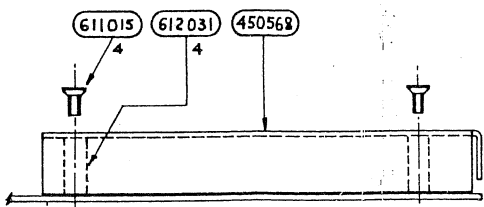


M401 M402 605062  
M403

NOTES:-

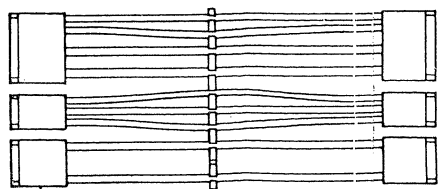
- M101, M201, M202 + M307 MUST BE SOLDERED DIRECT TO PCB. NO SOCKET
- REMOVE UNUSED PINS ON PL50, PL51 AND PL52.

C121, C122, C128, C129  
C131, C303,  
C401, C418, C428,  
C430, C431, C432,  
X401  
630243 28  
M102 Q101 920202 2

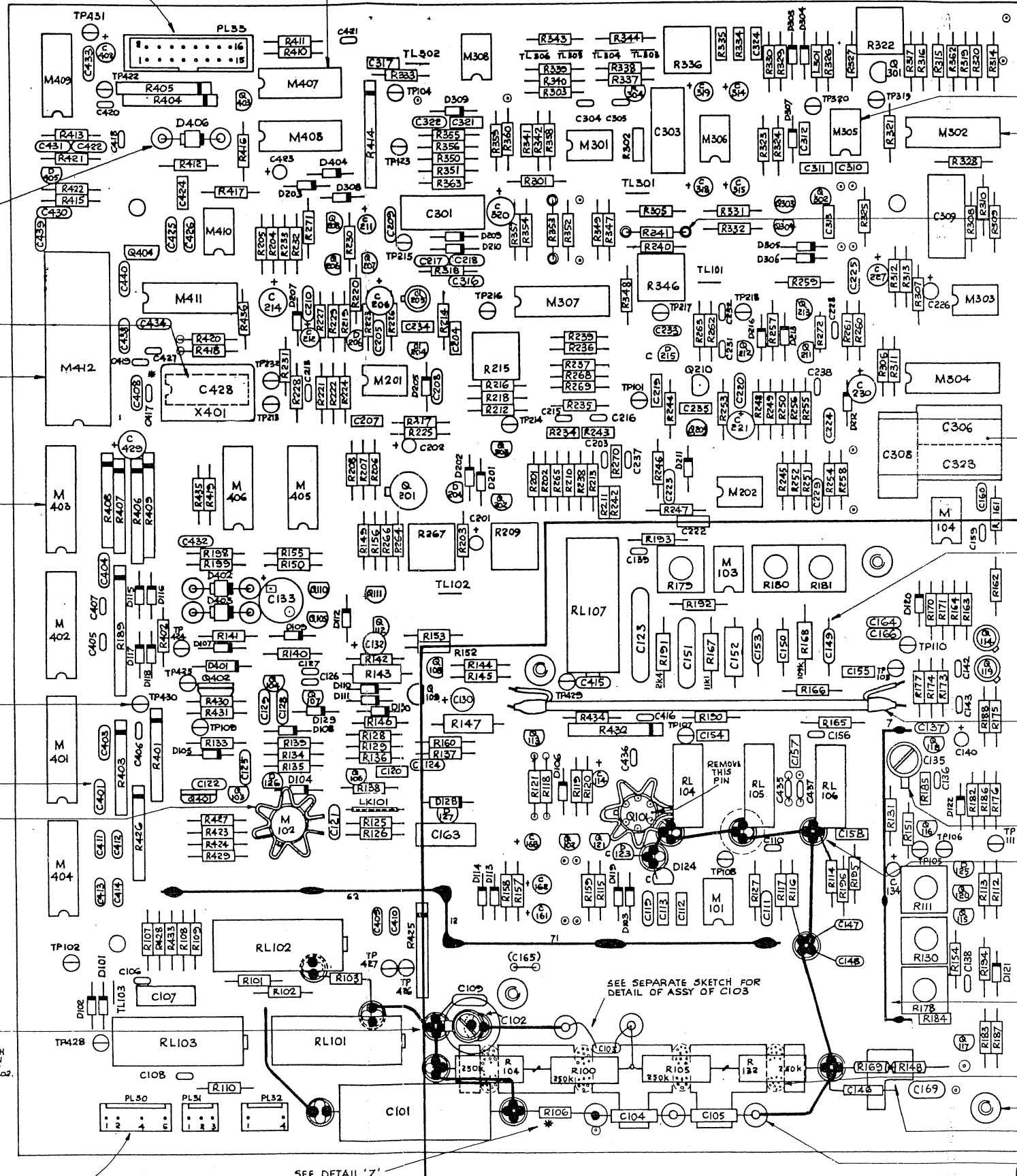


TYPICAL VIEW SHOWING MOUNTING OF GUARDSCREEN

630276  
BLANKING BUSH TO BE FITTED IN HOLE IN GUARD SCREEN ABOVE C102.



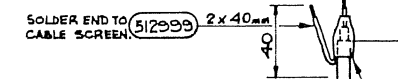
400753



8 605059 M104, M103  
M301, M303, M305  
M306, M308, M410  
4 605061 M302, M304  
M404, M411.

4 602001 R553, R241

410365-1

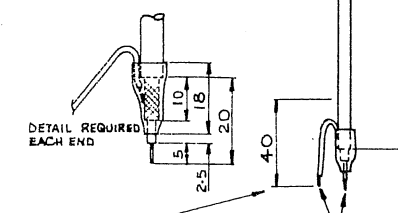


590074 2

420098

590004 SLEEVE LEADS OF C149, C151  
C153, D129 + D130

560002 OVERALL LENGTH 95mm



OUTLINE OF GUARDSCREEN

613017 ASSEMBLE WASHER BETWEEN PCB AND C133.

13 620005

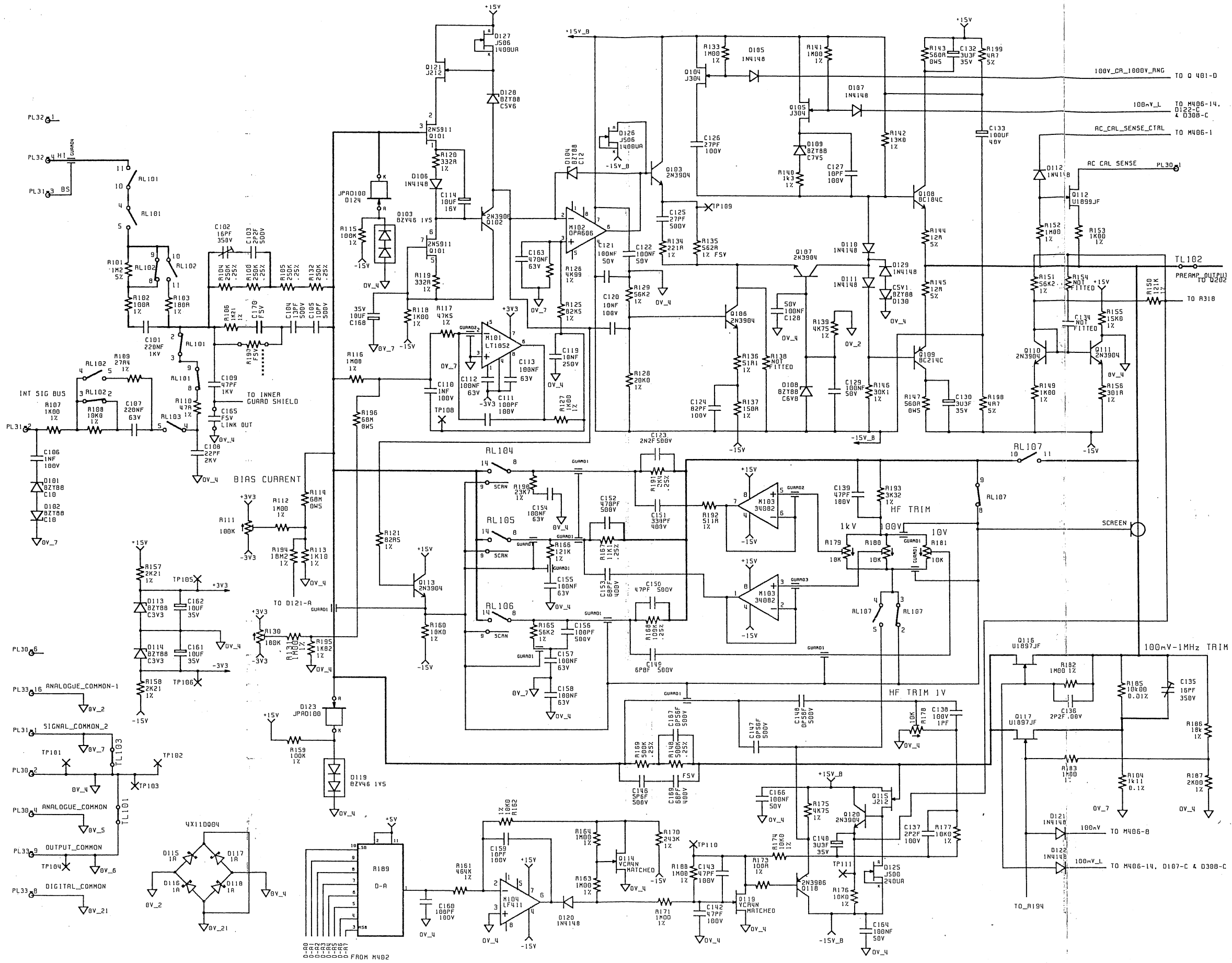
630107 TOTAL LENGTH OF STRIP REQD 222mm (CUT 2 LENGTHS)

AIR 900004 R104, R105, R169.

4 612031 THESE LEADS TO BE KEPT VERY SHORT.

5 620002

SEE DETAIL 'Z'



**A.C. ASSEMBLY**

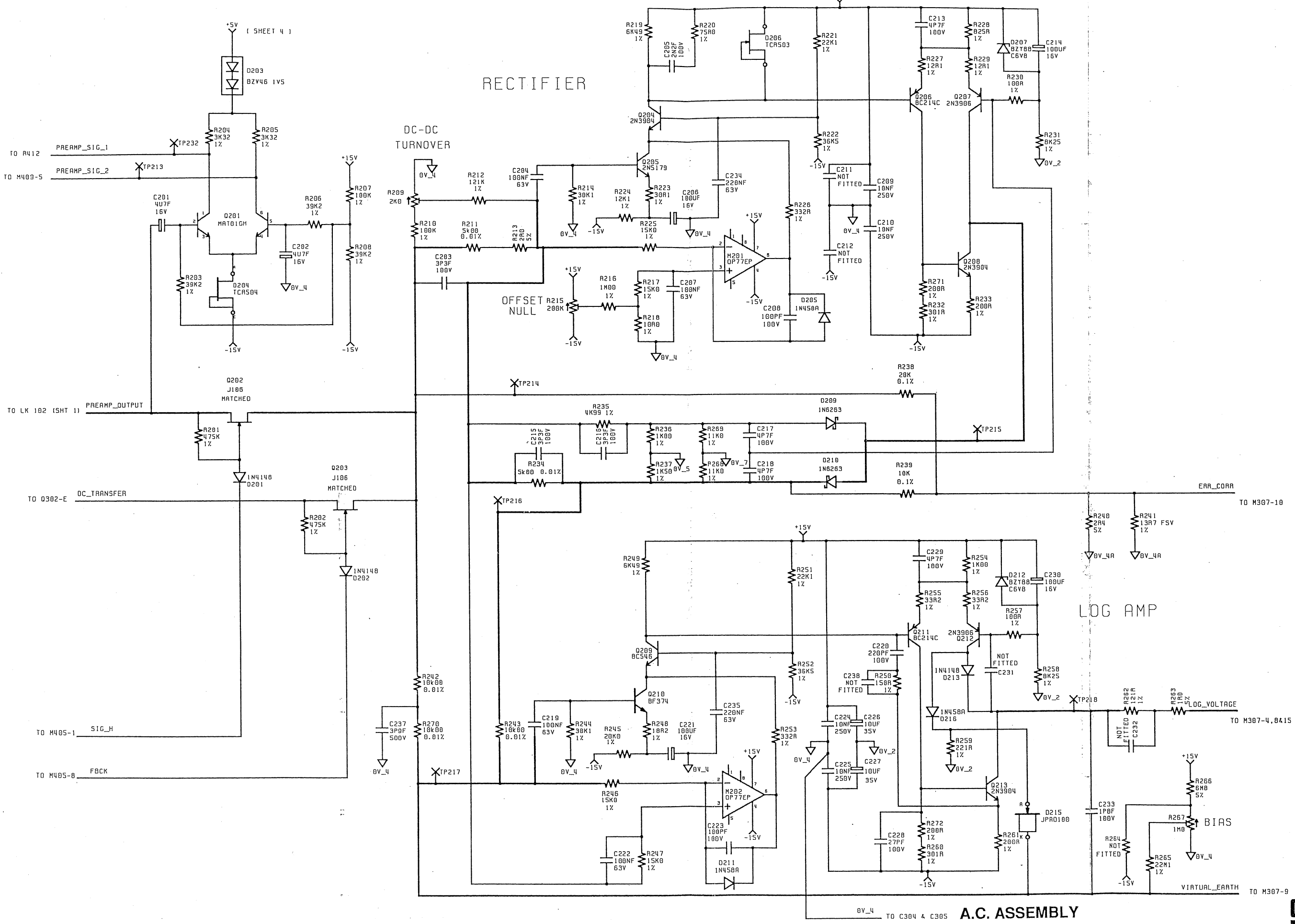
Preamplifier

Drawing No. 430741

Sheet 1 of 4



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+5V (SHEET 4)

TO R412 PREAMP\_SIG\_1

TO M409-5 PREAMP\_SIG\_2

TO LK 102 (SHT 1) PREAMP\_OUTPUT

TO O302-E DC\_TRANSFER

TO M405-1 SIG\_H

TO M405-B FBCK

RECTIFIER

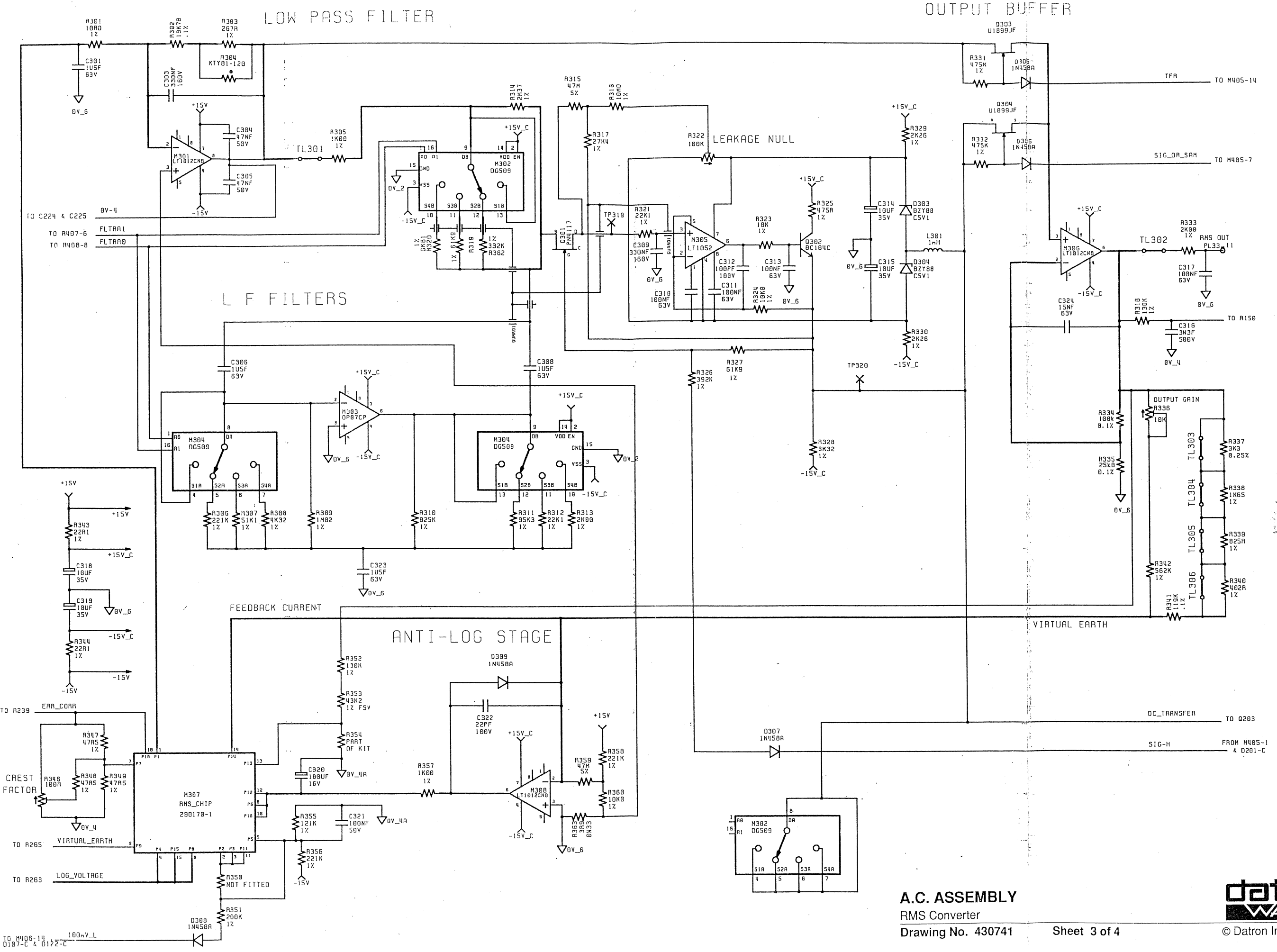
DC-DC  
TURNOVER

OFFSET  
NULL

LOG AMP

A.C. ASSEMBLY  
Precision Rectifier and Logarithmic Amplifier  
Drawing No. 430741 Sheet 2 of 4

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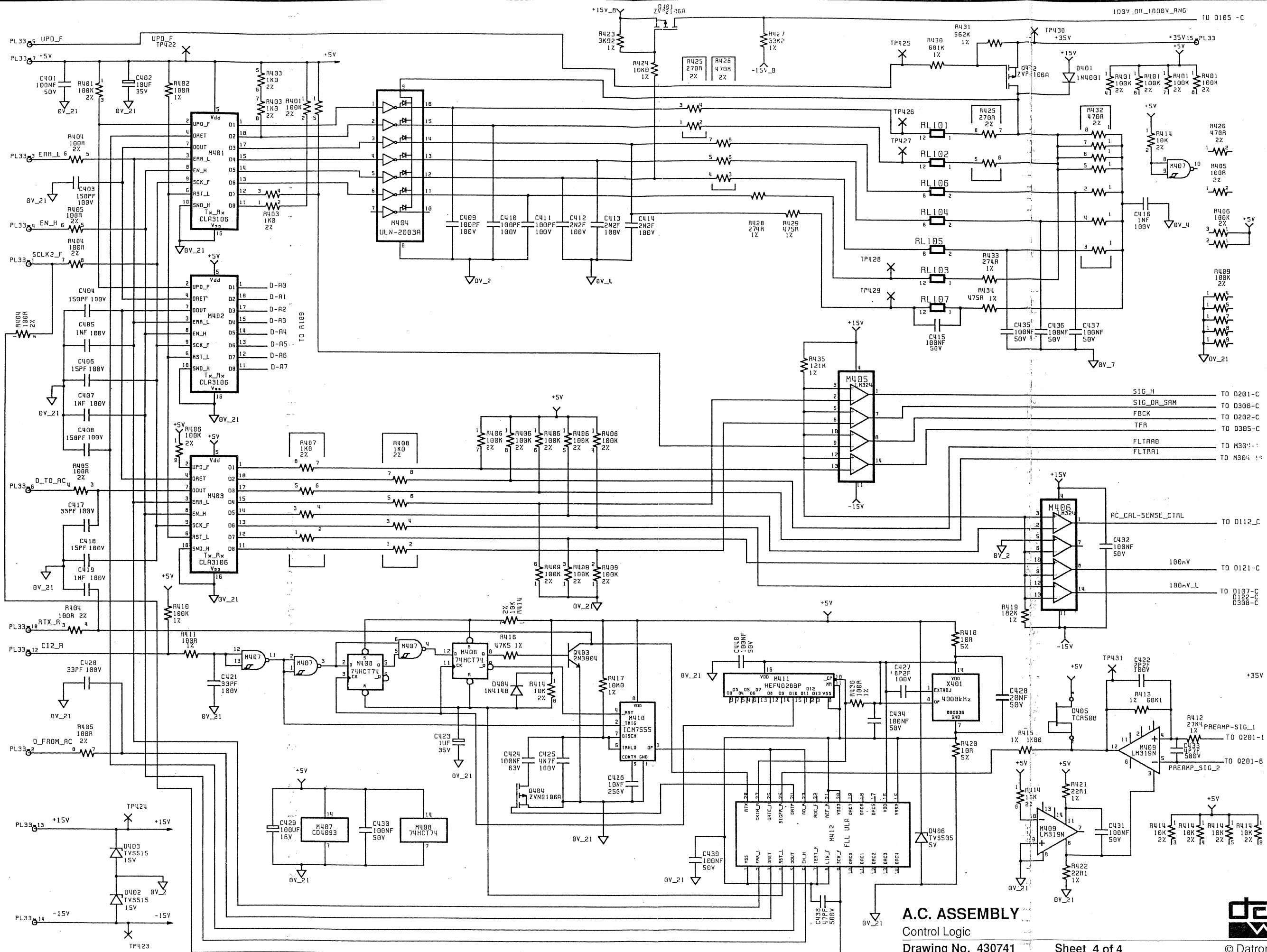
TO M406-14  
0107-C & 0122-C

A.C. ASSEMBLY  
RMS Converter  
Drawing No. 430741

Sheet 3 of 4



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A.C. ASSEMBLY  
Control Logic  
Drawing No. 430741

Sheet 4 of 4



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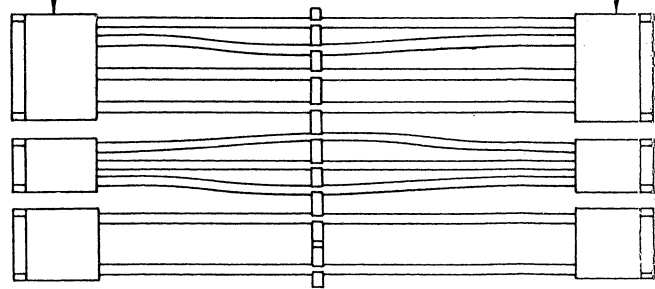


REMOVE PINS SHOWN THIS: +

FIX SERIAL N° LABEL  
420098 TO RL102.

400753 FITTED AFTER  
FLOW SOLDERING.

PLUG THIS END INTO  
COMPLETED ASSY.



LKA, LKB, LKC.  
540001  
AIR

410366-1

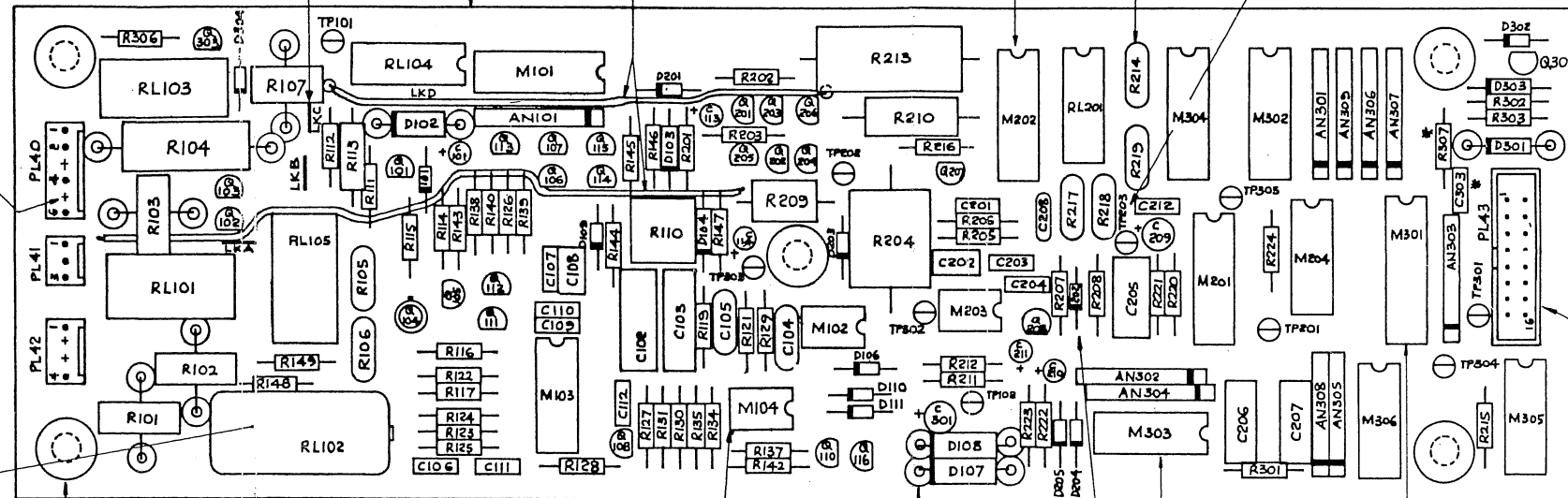
512999  
AIR

M101, M201, M202  
M302, M304  
R105, R106, R214, R128  
R17, R18, R13  
C104, C105, C206

605061  
5

650243  
20

FIT TP203 WITHOUT  
CERAMIC BEAD.



\* COMPONENT NOT FITTED

605059  
2  
M102, M104

630024  
28  
8 PER LEAD ON  
R101, R102, R103, R107, R104  
1 PER LEAD ON  
D102, D107, D108, D201.

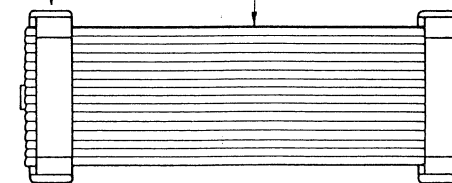
605060  
4  
M303, M204,  
M305, M306.

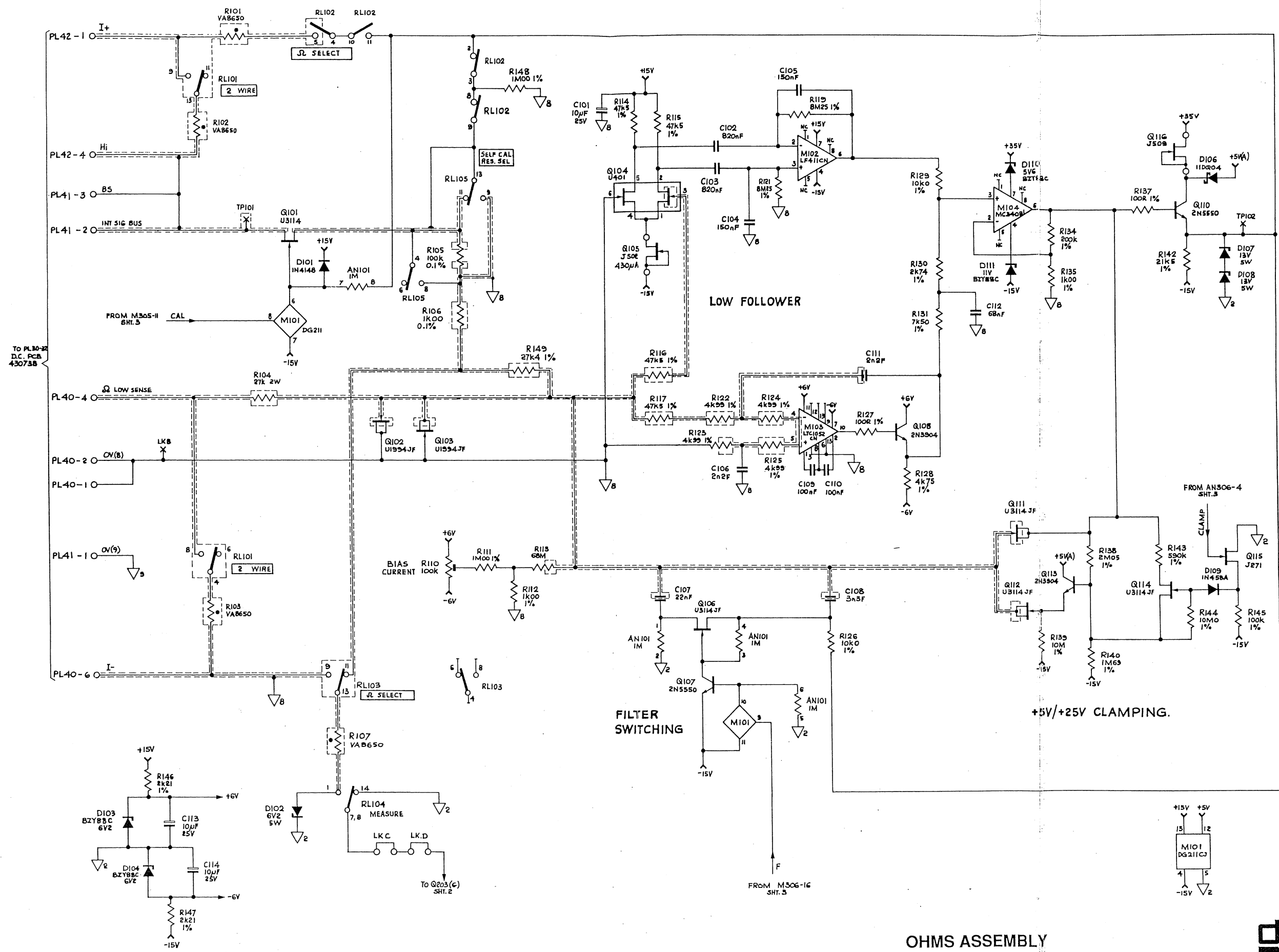
FORM D202 ANODE INTO  
TEST LOOP BEFORE FITTING

605062

PLUG THIS END INTO  
COMPLETED ASSY.

400757 FITTED AFTER  
FLOW SOLDERING.





**OHMS ASSEMBLY**

Low Follower

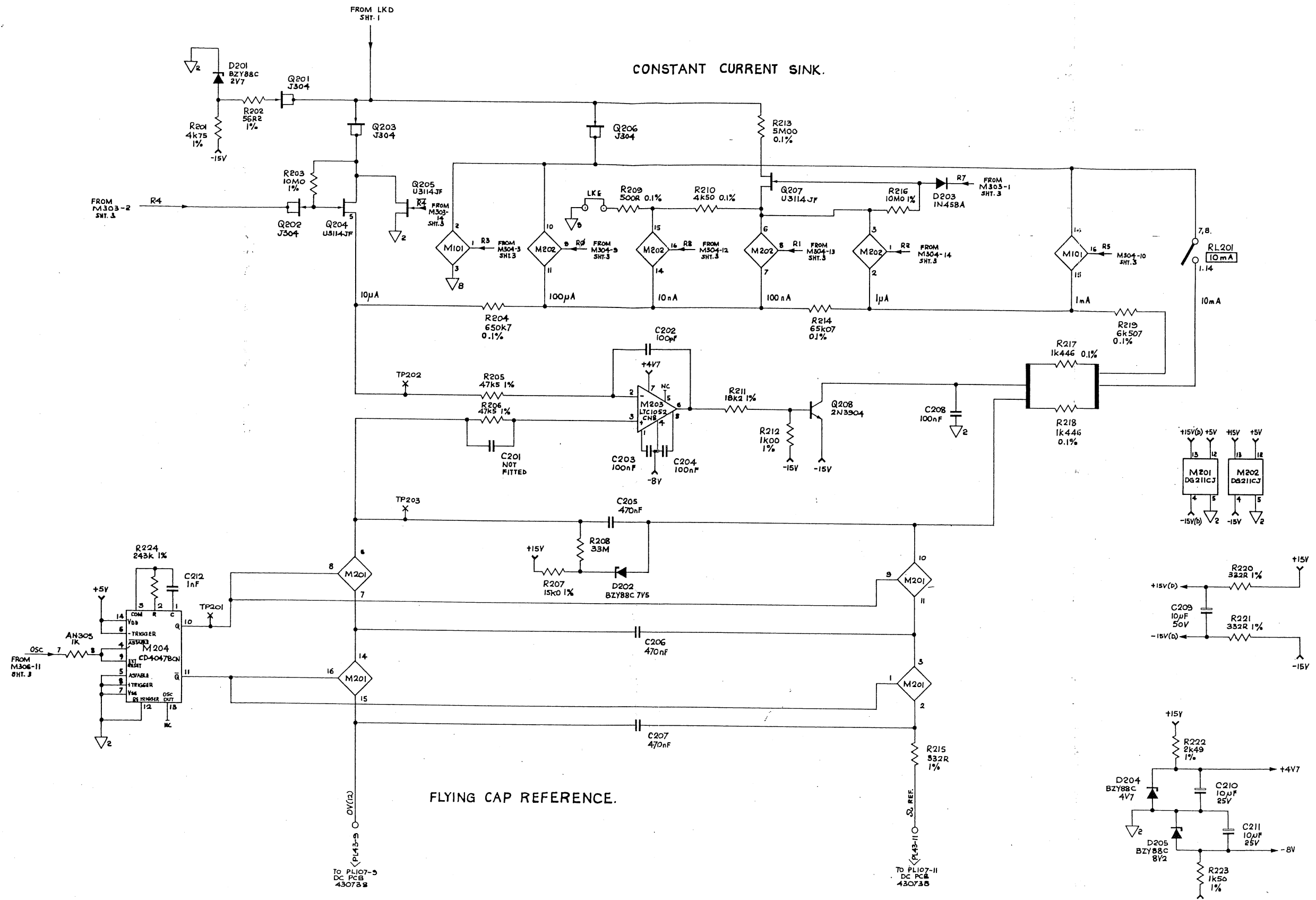
Drawing No. 430742

Sheet 1 of 3



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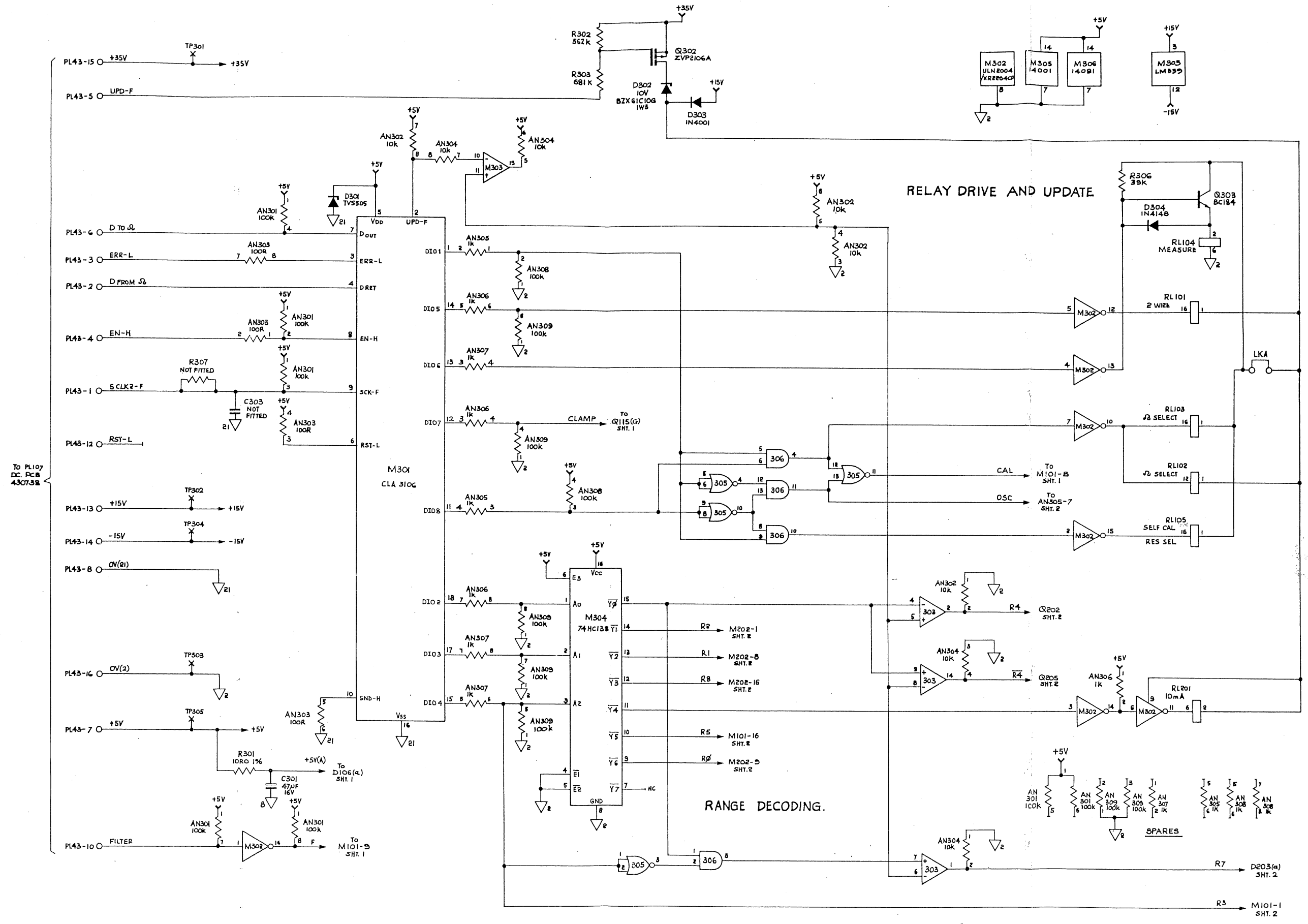
CONSTANT CURRENT SINK.

FLYING CAP REFERENCE.

OHMS ASSEMBLY  
 Constant Current Sink  
 Drawing No. 430742

Sheet 2 of 3

1281  
**datron**  
**WAVETEK**  
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To PL107  
DC PCB  
430738

RELAY DRIVE AND UPDATE

RANGE DECODING

OHMS ASSEMBLY

Control Logic

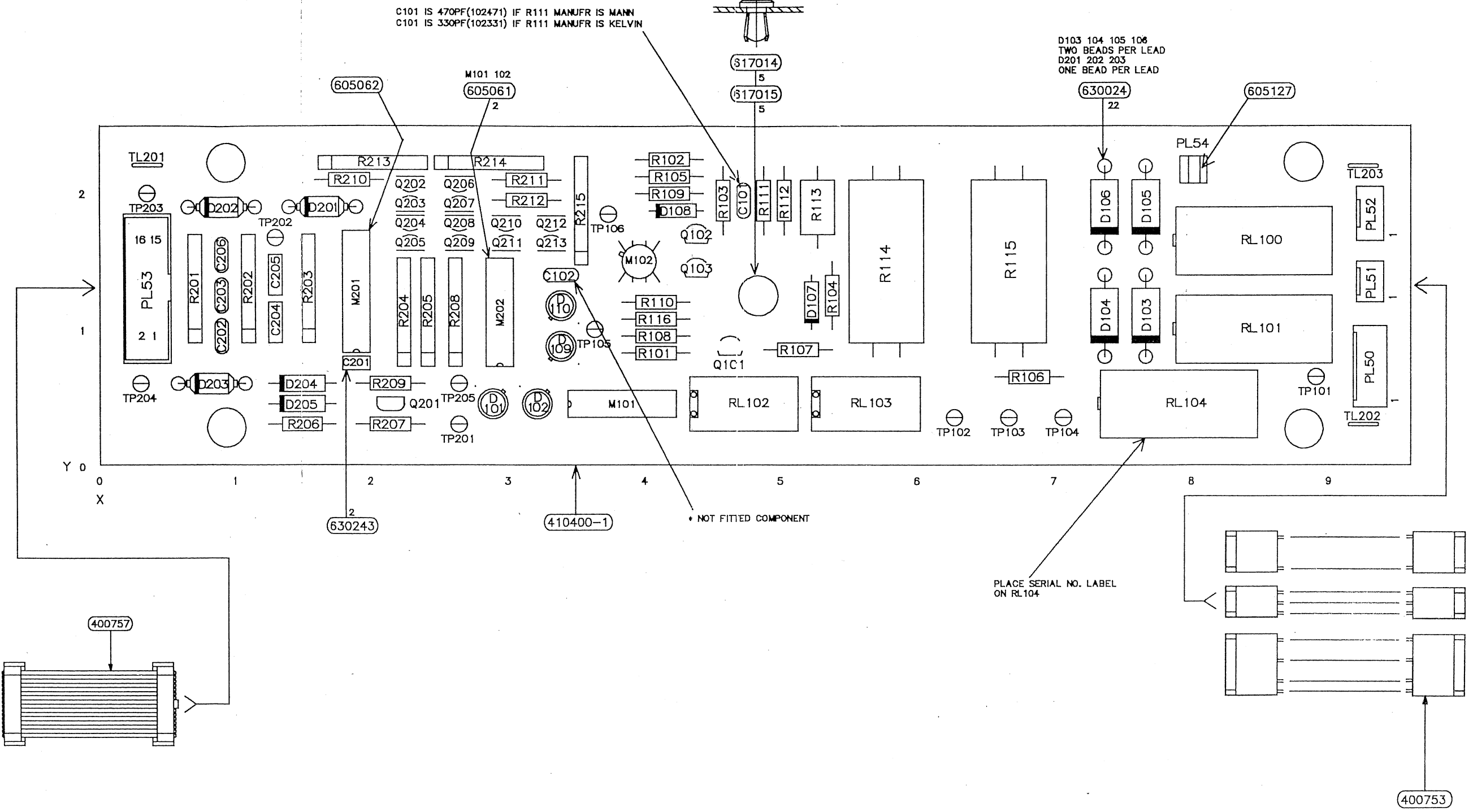
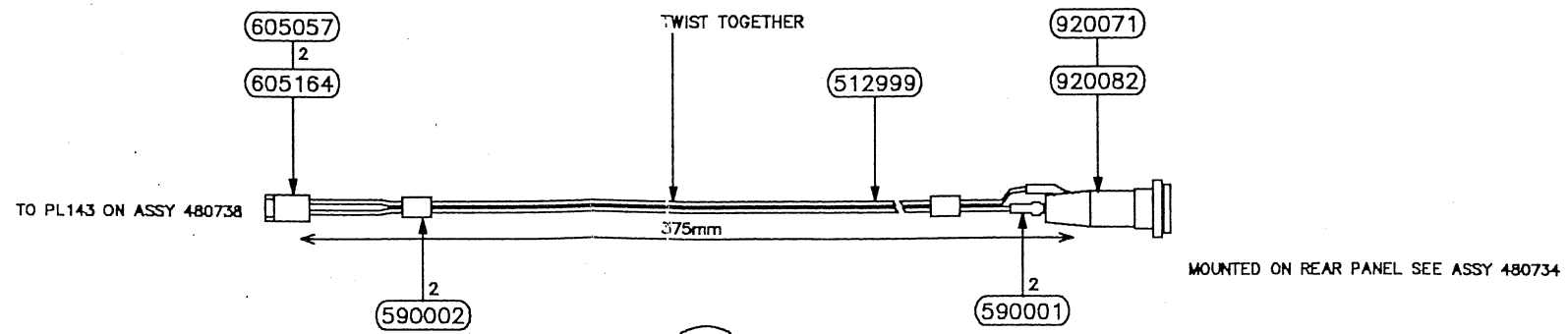
Drawing No. 430742

Sheet 3 of 3

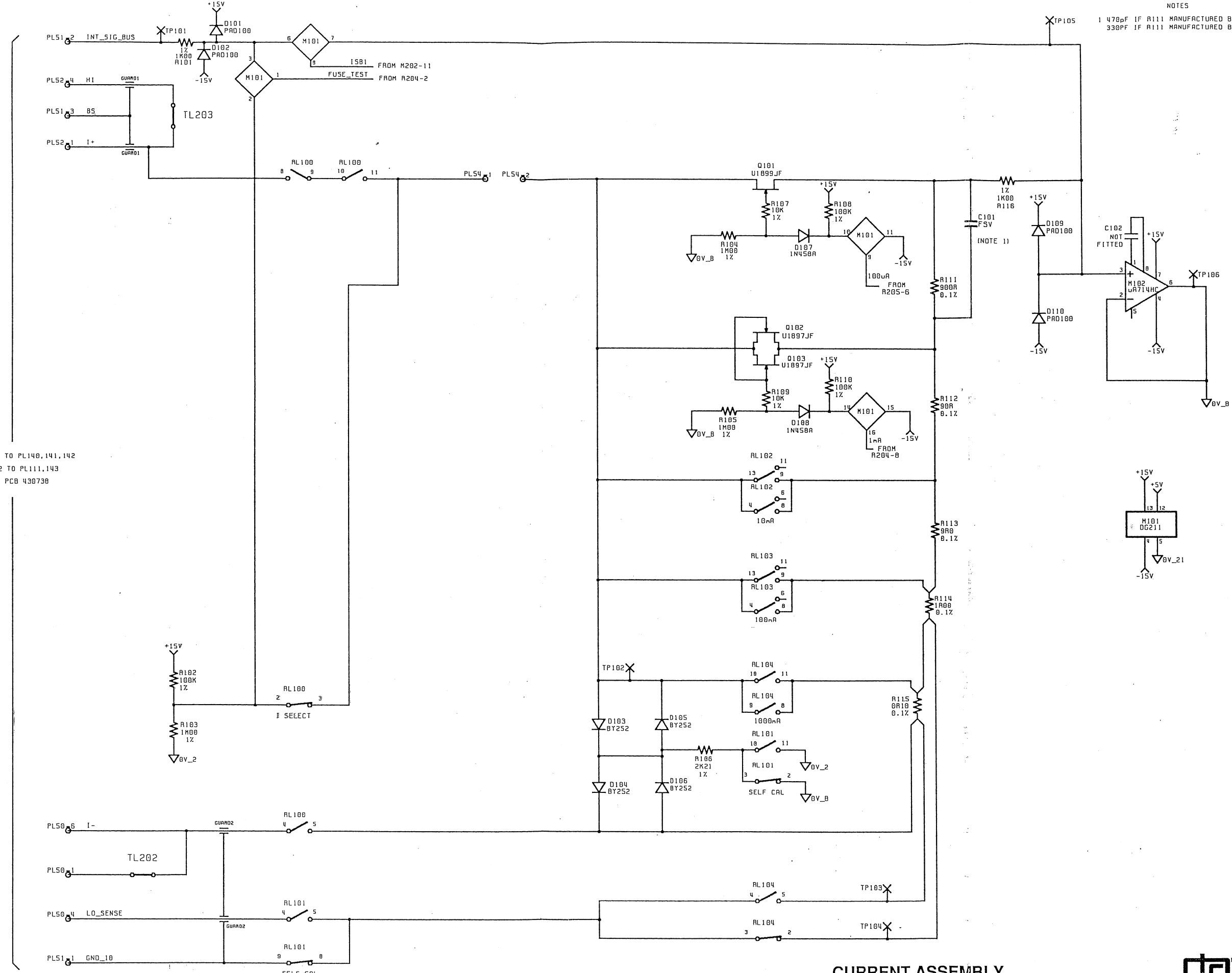


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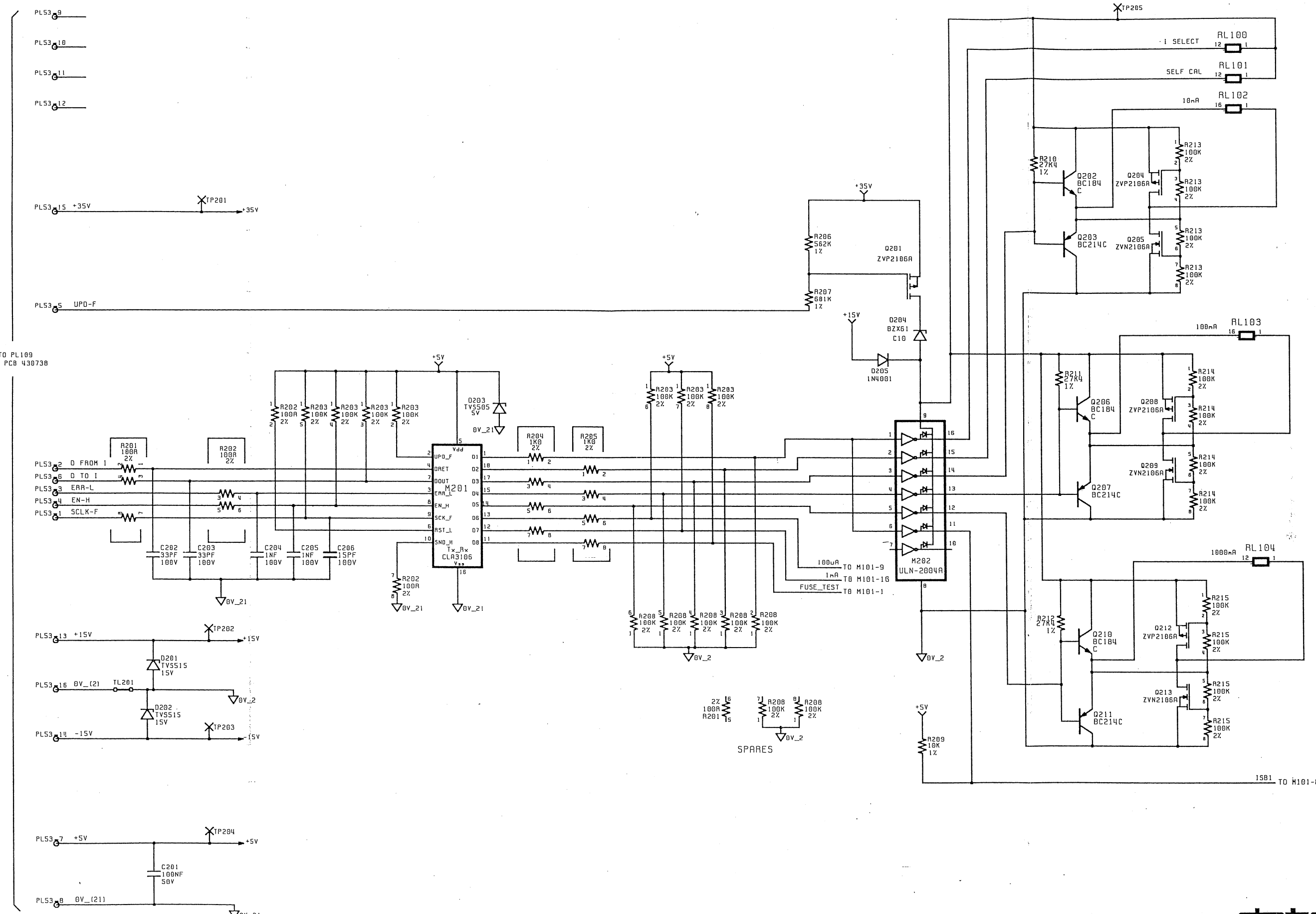


PL50,51,52 TO PL140,141,142  
E101,102 TO PL111,143  
DC PCB 430738



**CURRENT ASSEMBLY**  
Current to Voltage Converter  
Drawing No. 430743





TO PL109  
DC PCB 430730

**CURRENT ASSEMBLY**

Control Logic

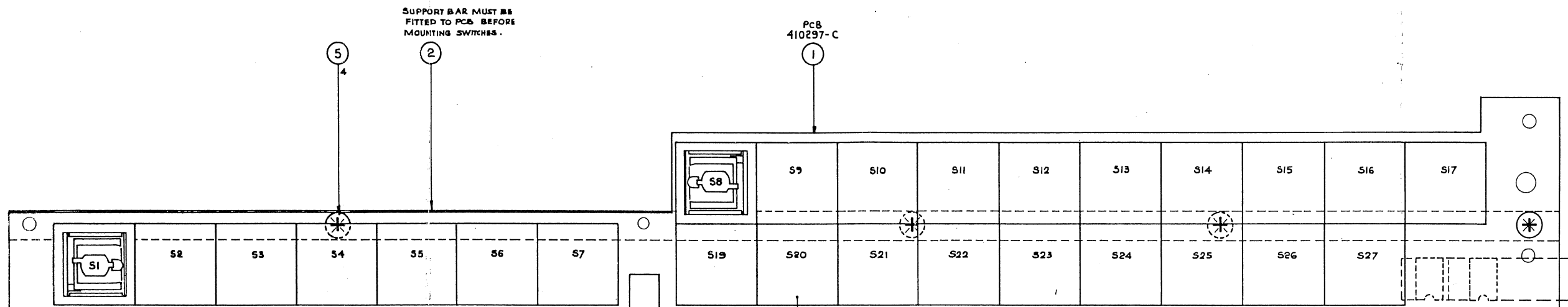
Drawing No. 430743

Sheet 2 of 2



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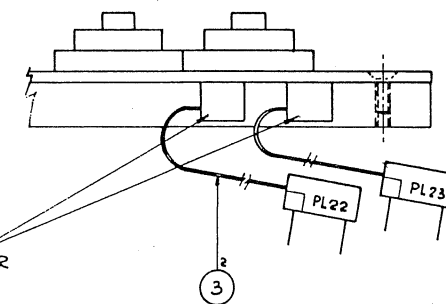


SUPPORT BAR MUST BE  
FITTED TO PCB BEFORE  
MOUNTING SWITCHES.

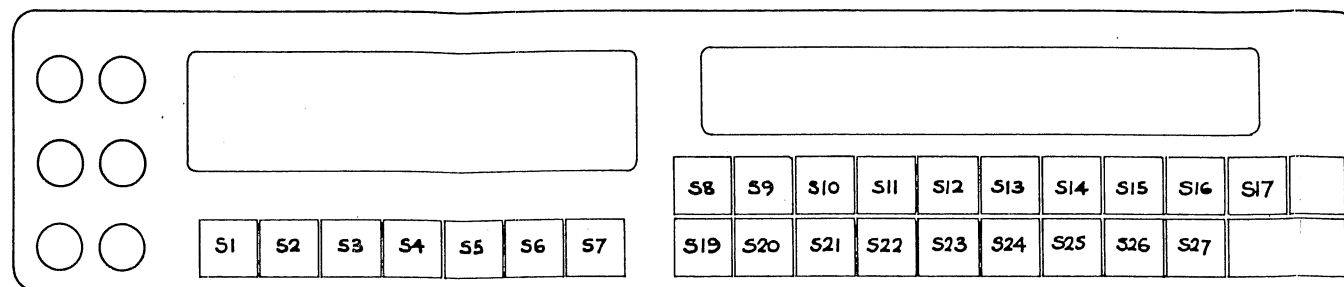
PCB  
410297-C

N.B. S1-S7 AND S19-S27 TO  
BE MOUNTED AS SHOWN  
BY S1.  
S8-S17 TO BE MOUNTED AS  
SHOWN BY S8

NOTE  
RIBBON CABLE TINNED CONNECTOR  
TO BE SOLDERED INTO P.C.B.

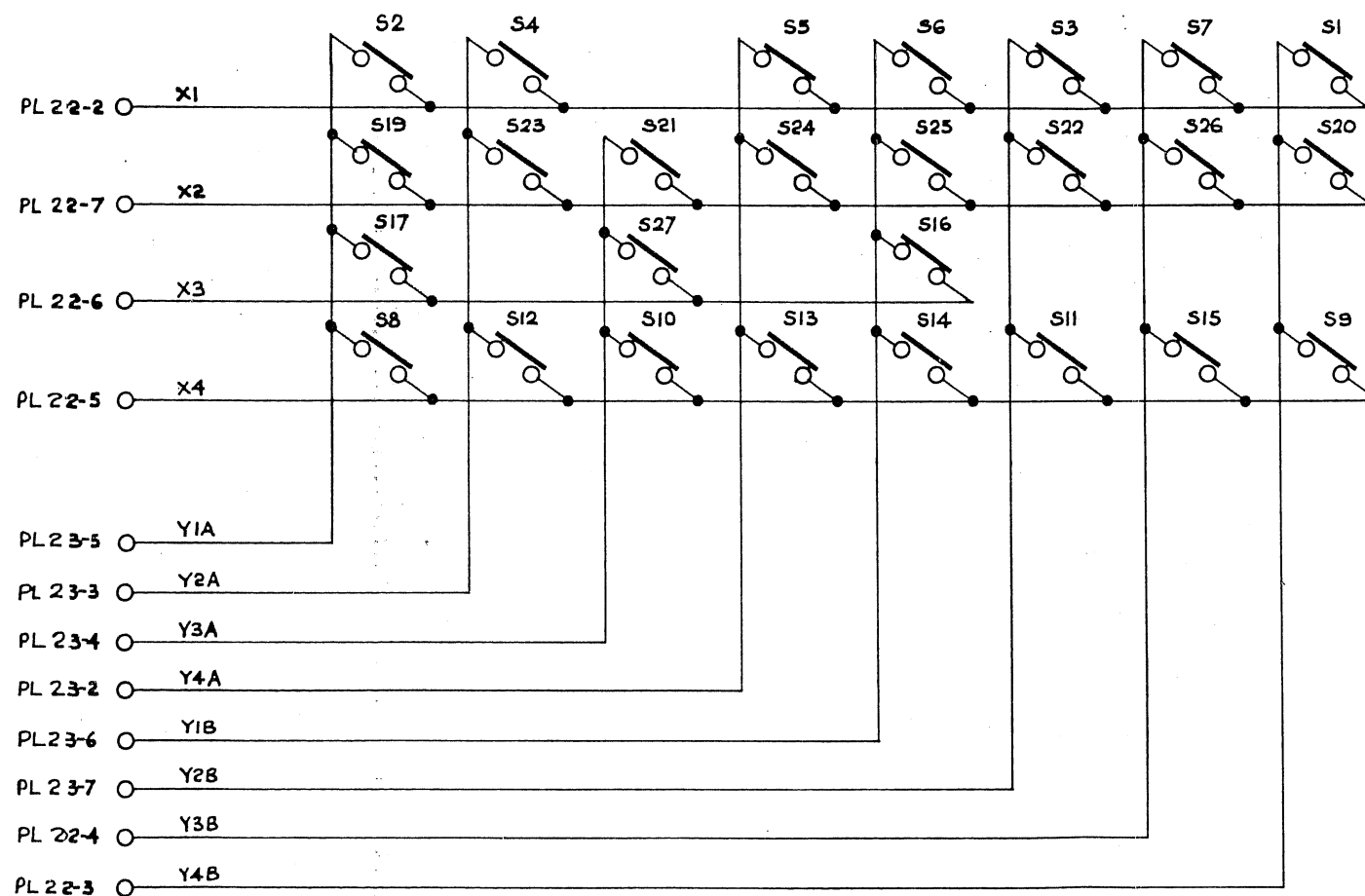






FRONT PANEL SWITCH LAYOUT.

- PL 22-1 ○ SPARE →
- PL 22-8 ○ SPARE →
- PL 23-1 ○ SPARE →
- PL 23-8 ○ SPARE →



KEY N°	*KB4-KBφ	KEY N°	*KB4-KBφ
1	1C	17	φ2
2	φφ		
3	14	19	φ1
4	φ4	20	1D
5	φC	21	φ9
6	1φ	22	15
7	18	23	φ5
8	φ3	24	φD
9	1F	25	11
10	φB	26	19
11	17	27	φA
12	φ7		
13	φF		
14	13		
15	1B		
16	12		

\* FOR KBφ-KB5 REFER TO 400739

KB5 IS A LOGIC '1' WHILE A VALID KEY IS HELD. THE KEY ENCODER OUTPUT ALWAYS INDICATES THE LAST VALID KEY ON KB4-KBφ.

SWITCH ASSEMBLY

Front Panel Switch Matrix

Drawing No. 430744

Sheet 1 of 1



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