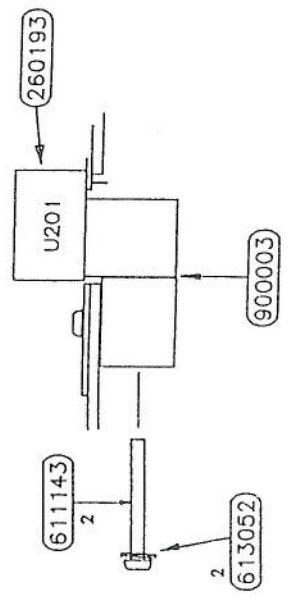
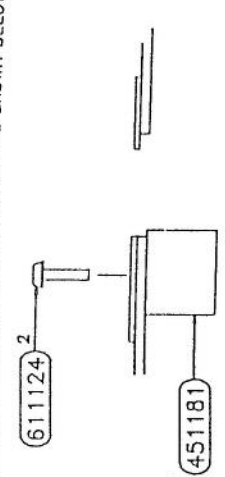
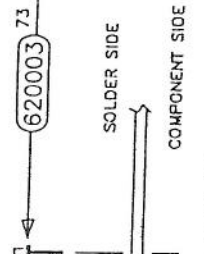


15 JUL 1997

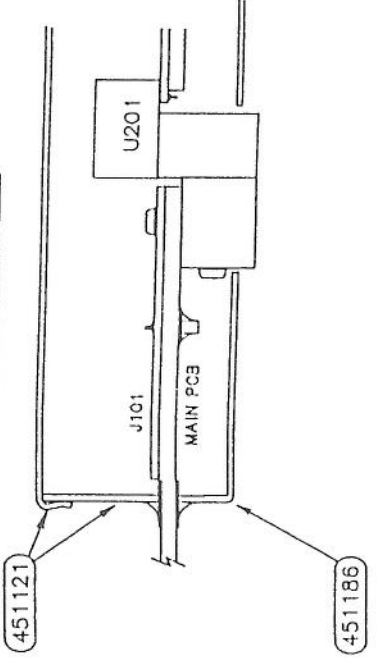
NB : POSITION OF CUTOUT IN TOP SCREEN SHIELD FOLD CORNERS INWARDS.

NOTES ON FITTING J101 ASSEMBLY

- 1 INVERT MAIN PCB AND INSERT PINS FROM SOLDER SIDE AS SHOWN BELOW. ENSURE THAT PINS ARE FULLY HOME BEFORE SOLDERING.
- 2 WITH MAIN PCB RIGHT SIDE UP, ALIGN J101 OVER PINS. PRESS HOME FULLY. J101 SHOULD BE FLUSH WITH MAIN BOARD.
- 3 FIT HEATSINK BLOCK INTO POSITION AND SECURE AS SHOWN BELOW.
- 4 SOLDER THE 73 PINS JOINING J101 TO THE MAINBOARD.
- 5 LOOSEN 2 SCREWS SECURING 451181 (STAGE 3 ABOVE). PLACE AMPLIFIER IN POSITION SHOWN AND SCREW THE AMPLIFIER TO THE HEATSINK BLOCK. ENSURE HEATSINK COMPOUND IS APPLIED BETWEEN THE BLOCKS. RE-TIGHTEN 2 SCREWS SECURING 451181.
- 6 SOLDER AMPLIFIER PINS AND ADD SCREENS. A SECTION OF THE COMPLETE ASSEMBLY IS SHOWN BELOW

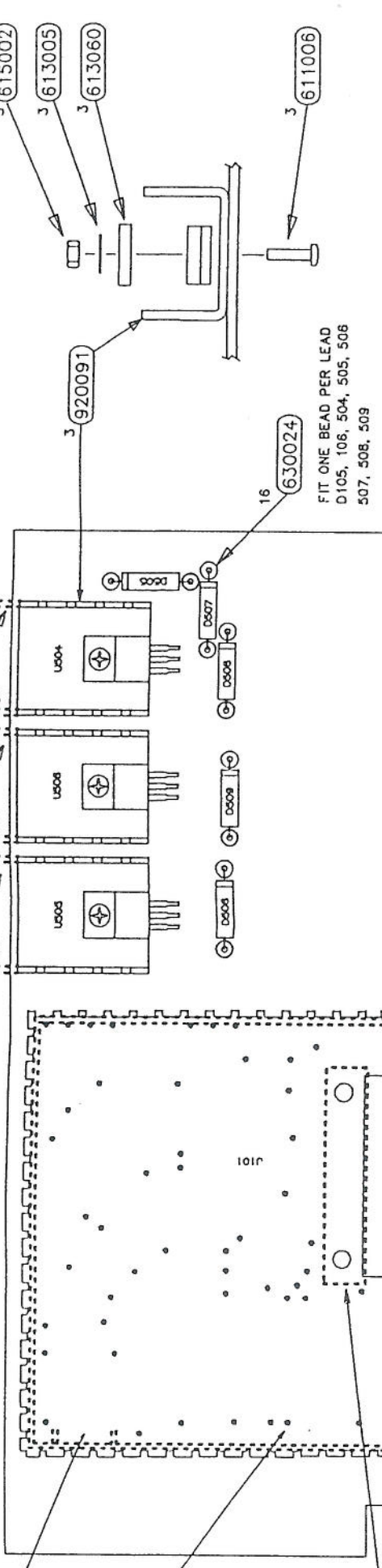


SECTION OF COMPLETED ASSEMBLY



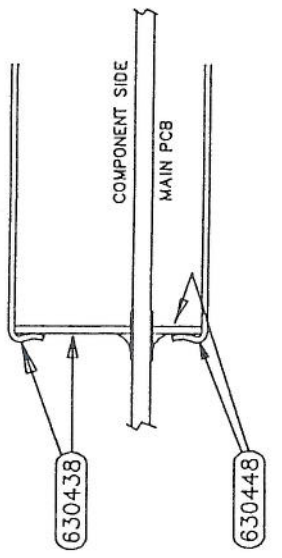
CROP ANY PINS WHICH OBSTRUCT THE HEATSINK MOUNTING SCREWS

REMOVE SOLDER TAGS FROM HEATSINKS BEFORE FITTING

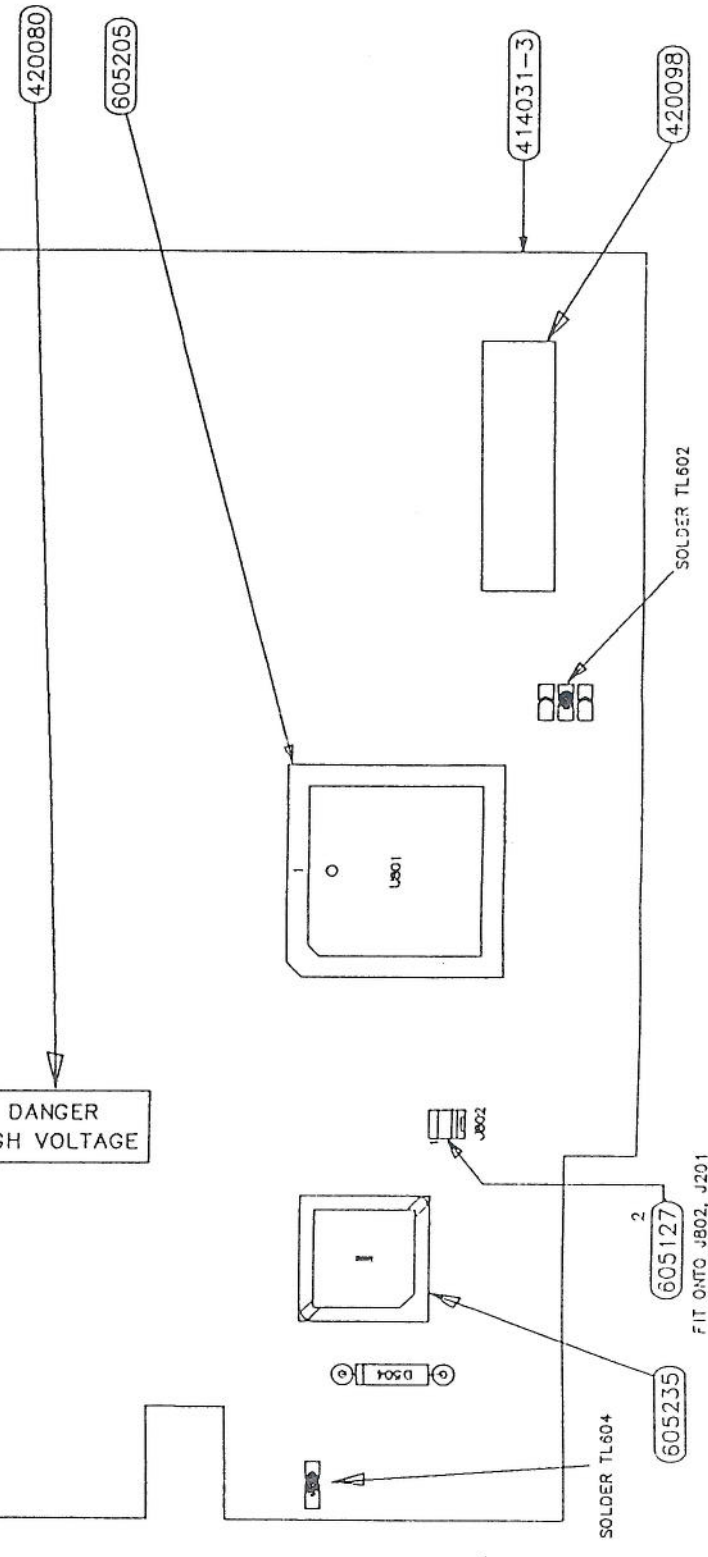


NOTES FOR ASSEMBLY OF SCREENING CANS  
(PART Nos 630438, 630448, 451186 & 451122)

ALIGN TOP CAN CENTRALLY OVER SCREENING TRACK. SOLDER IN EACH CORNER AND AT INTERVALS DEFINED IN SOLDER MASK ALL ROUND. REPEAT FOR BOTTOM CAN IN SIMILAR FASHION. FIT LIBS AFTER SOLDERING SIDE WALLS



K105  
DANGER  
HIGH VOLTAGE



600 MHz  
Scope option

OPTION 600

9100 SCOPE OPTION  
MAIN PCB ASSEMBLY

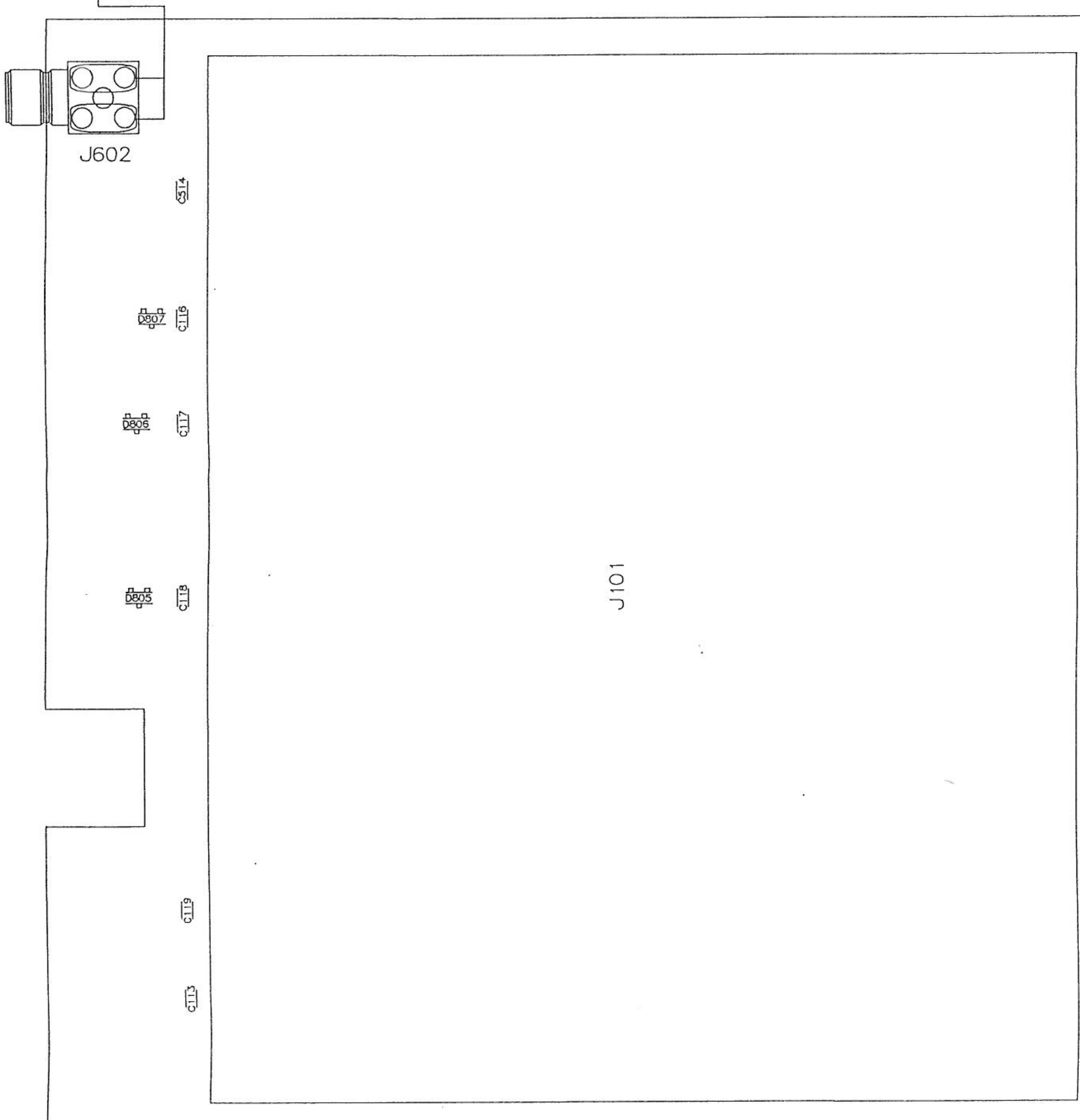
THIRD ANGLE PROJECTION		DRAWN	DATE	DIMENSIONS IN MILLIMETRES		TOLERANCES		MATERIAL
		AMC	05 MAR 97	DECIMAL TO 2 PLACES ± 0.1mm		DECIMAL TO 1 PLACE ± 0.2mm		
ALL BIPPERS TO BE REMOVED		CHECKED	DATE	SCALE		WHOLE DIMENSIONS ± 0.4mm		FINISH
		CB	07 JUL 97	N.T.S.		ANGULAR ± 0.5°		
		APPROVED	DATE	NOT TO BE SCALED		UNLESS OTHERWISE STATED		
		DAH	07 JUL 97					

ISS CHANGES  
 1.0 ECO 3551 RELEASED 25 JUN 97  
 2.0 ECO 5554 2 JUL 97 AMC

15 JUL 1997

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 © COPYRIGHT 1997  
 DRAWING NO. DA401351  
 SHEET 2 OF 5

SOLDER CENTRE PIN FIRST  
 SOLDER IN USING LARGE  
 TIP IRON IN CONTACT WITH PIN.  
 SOLDER 2 GROUND PINS AT ONCE  
 IF A PAD IS LOST, JOIN LEG OF  
 J602 TO THE 2 ADJACENT LEGS  
 USING 24SWG TIN COPPER WIRE  
 (540001)



C112  
 OFFSET PAD DEFINES  
 ORIENTATION OF DEVICE

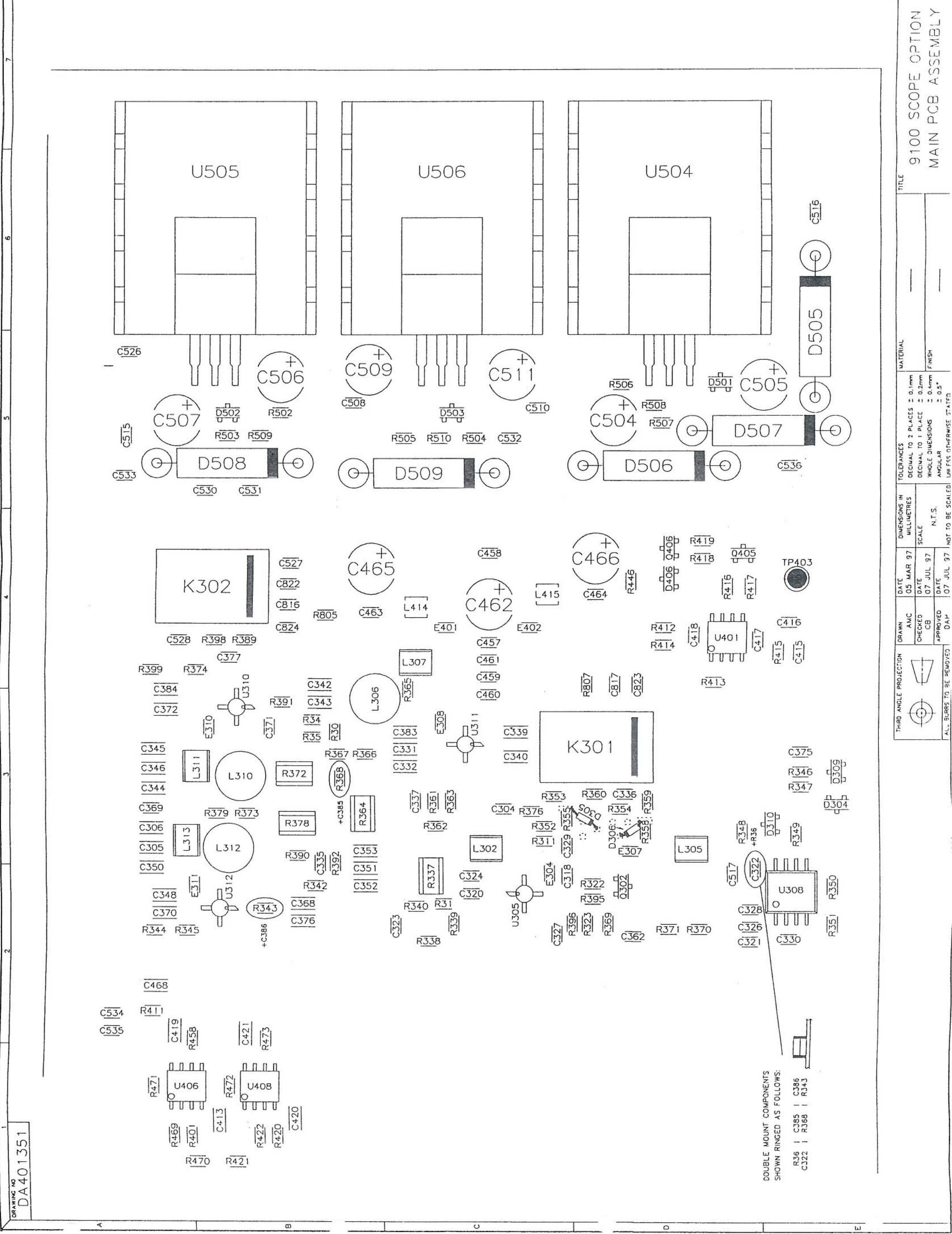
J101

THIRD ANGLE PROJECTION		DRAWN AMC		DATE 05 MAR 97	DIMENSIONS IN MILLIMETRES		TOLERANCES		MATERIAL	
		CHECKED CB	DATE 07 JUL 97	SCALE N.T.S.	DECIMAL TO 2 PLACES ± 0.1mm	DECIMAL TO 1 PLACE ± 0.2mm	WHOLE DIMENSIONS ± 0.4mm	ANGULAR ± 0.5°	FINISH	9100 SCOPE OPTION MAIN PCB ASSEMBLY
ALL BURRS TO BE REMOVED		APPROVED DAH	DATE 07 JUL 97	NOT TO BE SCALED UNLESS OTHERWISE STATED						

ISS	CHANGES
1.0	ECO 5551 RELEASED 25 JUN 97
2.0	ECO 5554 2 JUL 97 AMC
2.1	ECO 5650 D305 & D306 WERE 200041
2.2	ECO 5670 R36, C385, C386 ADDED. C333 DELETED. JD 01 DEC 97

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MORRIS ENGINEERING  
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DRAWING NO.  
DA401351



TITLE  
9100 SCOPE OPTION  
MAIN PCB ASSEMBLY

MATERIAL  
FINISH

TOLERANCES  
DECIMAL TO 2 PLACES = 0.1mm  
DECIMAL TO 1 PLACE = 0.2mm  
WHOLE DIMENSIONS = 0.4mm  
ANGULAR = 0.5°  
UNLESS OTHERWISE STATED

DIMENSIONS IN MILLIMETRES  
SCALE N.T.S.  
NOT TO BE SCALED

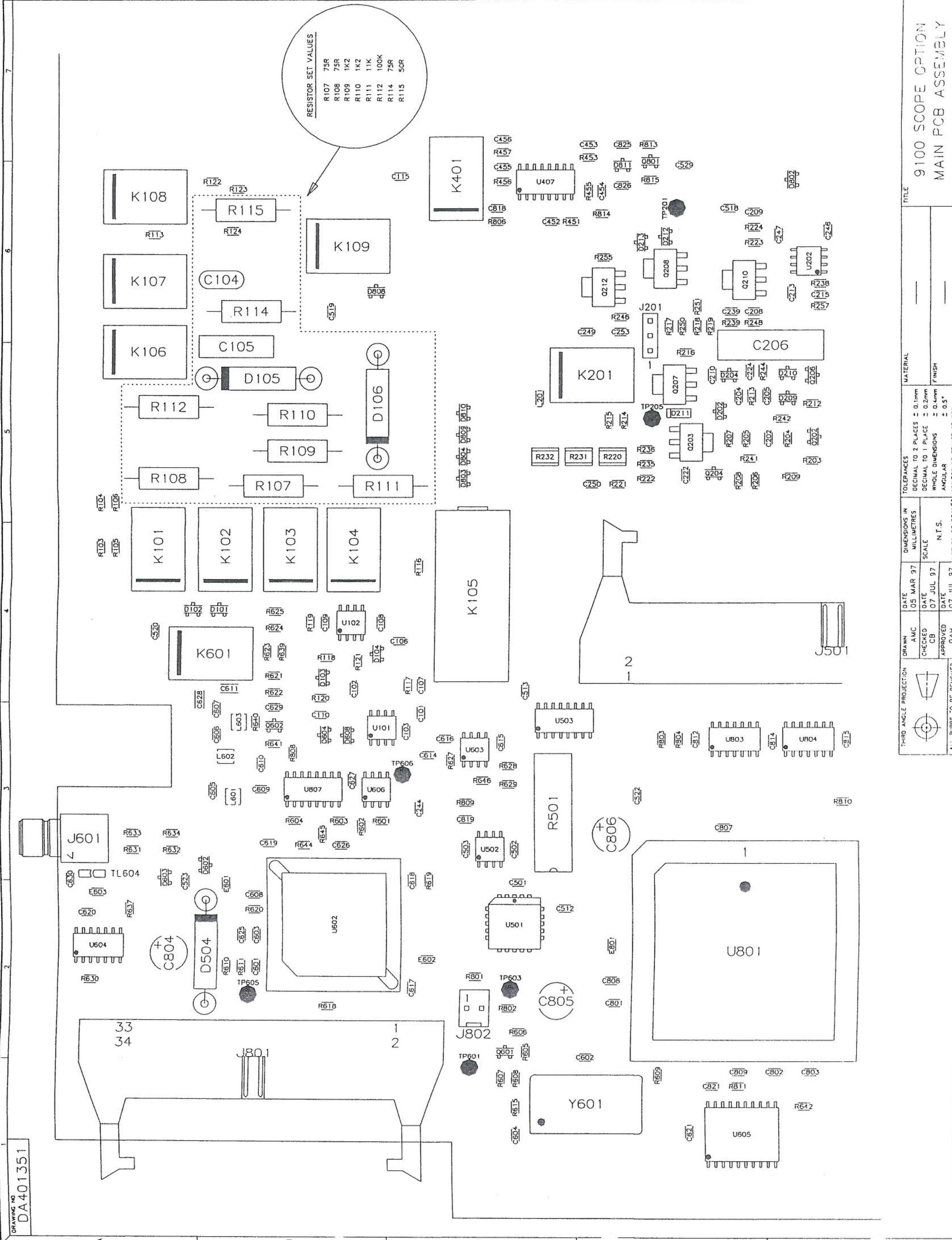
DATE 05 MAR 97  
DATE 07 JUL 97  
DATE 07 JUL 97  
DRAWN AMC  
CHECKED CB  
APPROVED DAP  
ALL BURS TO BE REMOVED

DOUBLE MOUNT COMPONENTS  
SHOWN RINGED AS FOLLOWS:  
R36 | C385 | C386  
C322 | R368 | R343

DRAWING NO.  
DA401351

CHANGES	
1.0	ECO 5551 RELEASED 25 JUN 97
2.0	ECO 5554 2 JUL 97 AMC
2.1	ECO 5670 C334 REMOVED, JD 01 DEC 97

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DRAWING NO. DA401351



RESISTOR SET VALUES  
R107 75R  
R108 75R  
R109 1K2  
R110 1K2  
R111 11K  
R112 100K  
R114 75R  
R115 50R

TOLERANCES	
DECIMAL TO 2 PLACES	± 0.1mm
DECIMAL TO 1 PLACE	± 0.2mm
WHOLE DIMENSIONS	± 0.4mm
ANGULAR	± 0.5°
FINISH	

DIMENSIONS IN MILLIMETRES	
SCALE	N.T.S.

DATE	
05 MAR 97	AMC
07 JUL 97	CB
07 JUL 97	DAH

DRAWN	
AMC	CHECKED
CB	APPROVED

THIRD ANGLE PROJECTION	
	ALL BURS TO BE REMOVED

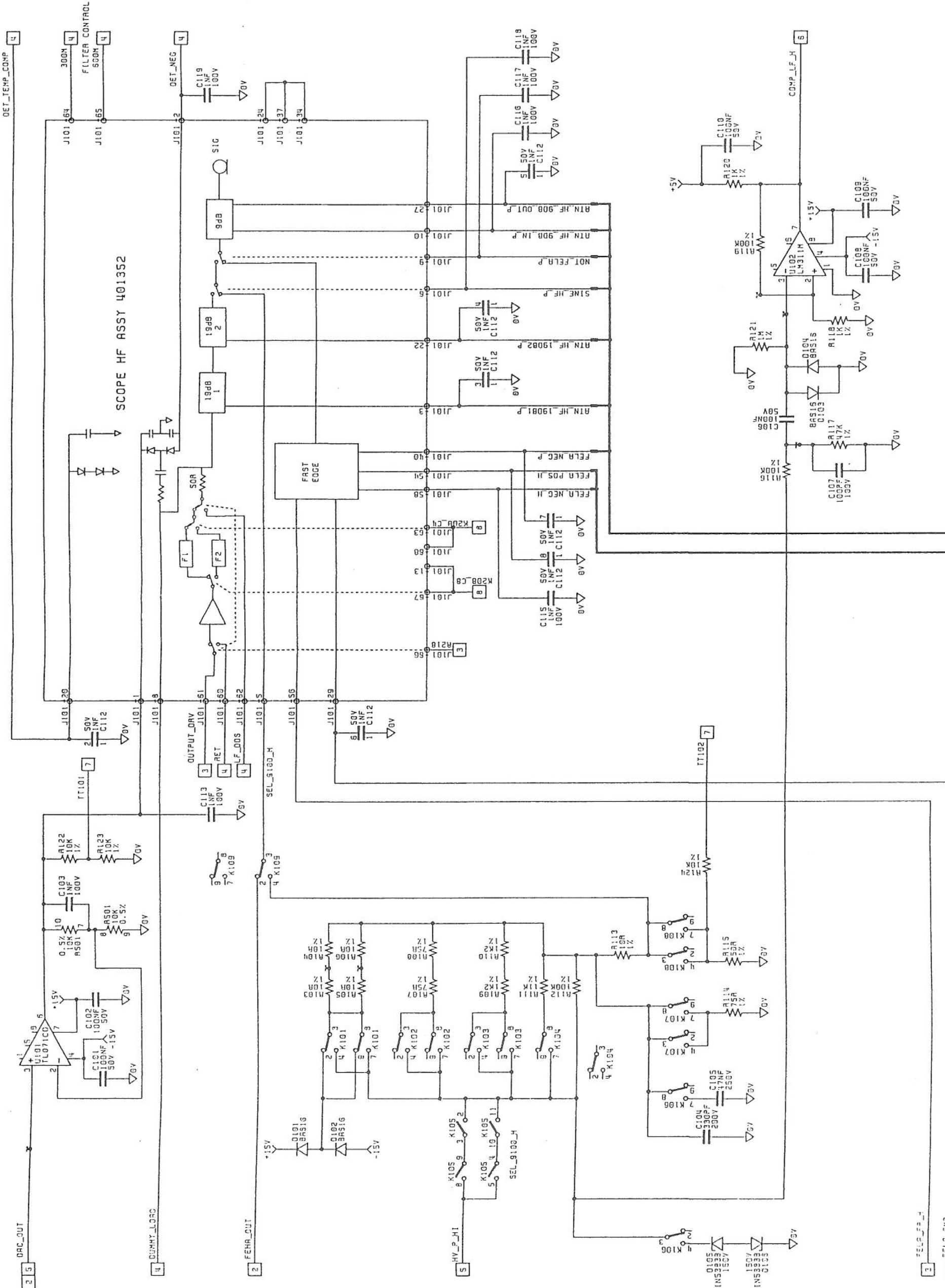
TITLE  
9100 SCOPE OPTION  
MAIN PCB ASSEMBLY

DRAWING NO.  
DA401351

ISS	CHANGES
1.0	ECO 5551 RELEASED 25 JUN 97
2.0	ECO 5551 DATE C111, C114 09 JUL 97 AXC

15 JUL 1997

SCOPE HF ASSY 401352



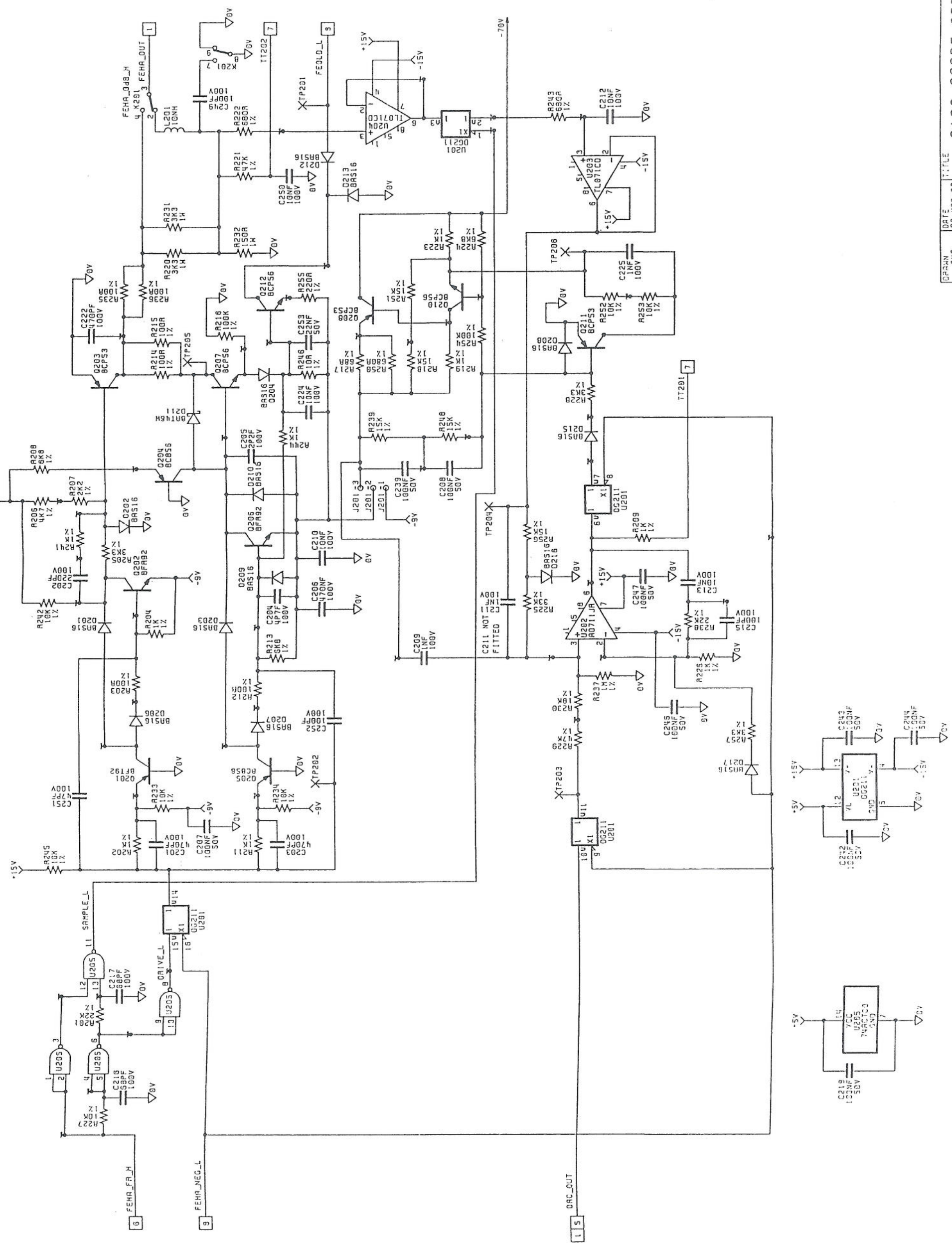
9100 SCOPE OPTION  
EDGE, LF & HF  
ATTENUATOR

DATE	BY	APP	REV
05 MAR 97	AWC	AWC	1
07 JUL 97	CE	CE	2
07 JUL 97	AWC	AWC	3



ISS	CHANGES
1.0	ECO 5551 RELEASED 25 JUN 97
1.1	ECO 5558 U202 HAS TL071CD DO NOT FIT C211 09 JUL 97 RMC
2.0	ECO 5554 R225 HAS 47K DELETED C17K C221, C223, C224, C226, R210, R211, R212, R213, ADDED R255, R257 C216, R217, R218, 09 JUL 97 RMC

15 JUL 1997



DATE	FILE
05 MAR 97	
07 JUL 97	
07 JUL 97	

9100 SCOPE OPTION  
HIGH EDGE  
100ns AMP

DATE	FILE
05 MAR 97	
07 JUL 97	
07 JUL 97	

DATE	FILE
05 MAR 97	
07 JUL 97	
07 JUL 97	

DATE	FILE
05 MAR 97	
07 JUL 97	
07 JUL 97	

DATE	FILE
05 MAR 97	
07 JUL 97	
07 JUL 97	

DATE	FILE
05 MAR 97	
07 JUL 97	
07 JUL 97	

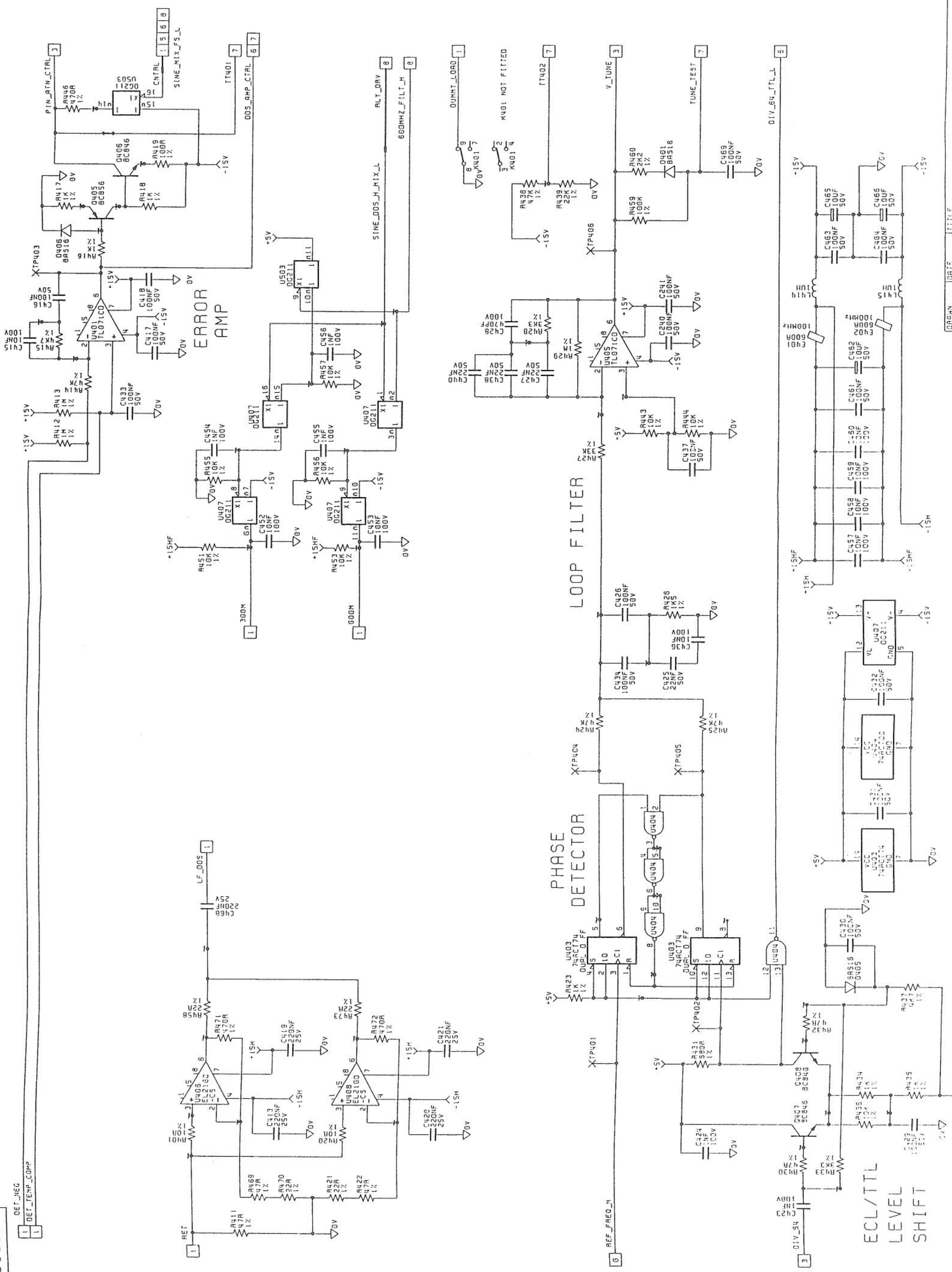
DATE	FILE
05 MAR 97	
07 JUL 97	
07 JUL 97	

DATE	FILE
05 MAR 97	
07 JUL 97	
07 JUL 97	





1.33	CHANGES
1.0	ECO 5551 RELEASED 25 JUN 90
2.0	ECO 5554 L115 WAS ADDED R455 AND 0401, C469 AND NET TUNE TEST DELETED C470, C471, C472 AND C473. 09 JUL 97 AHC
2.1	ECO 5670 R411 WAS 68R JD 28 NOV 97



DATE	BY	DESCRIPTION
05 MAR 97	AHC	DATE
07 JUL 97	CE	DATE
07 JUL 97	CE	DATE

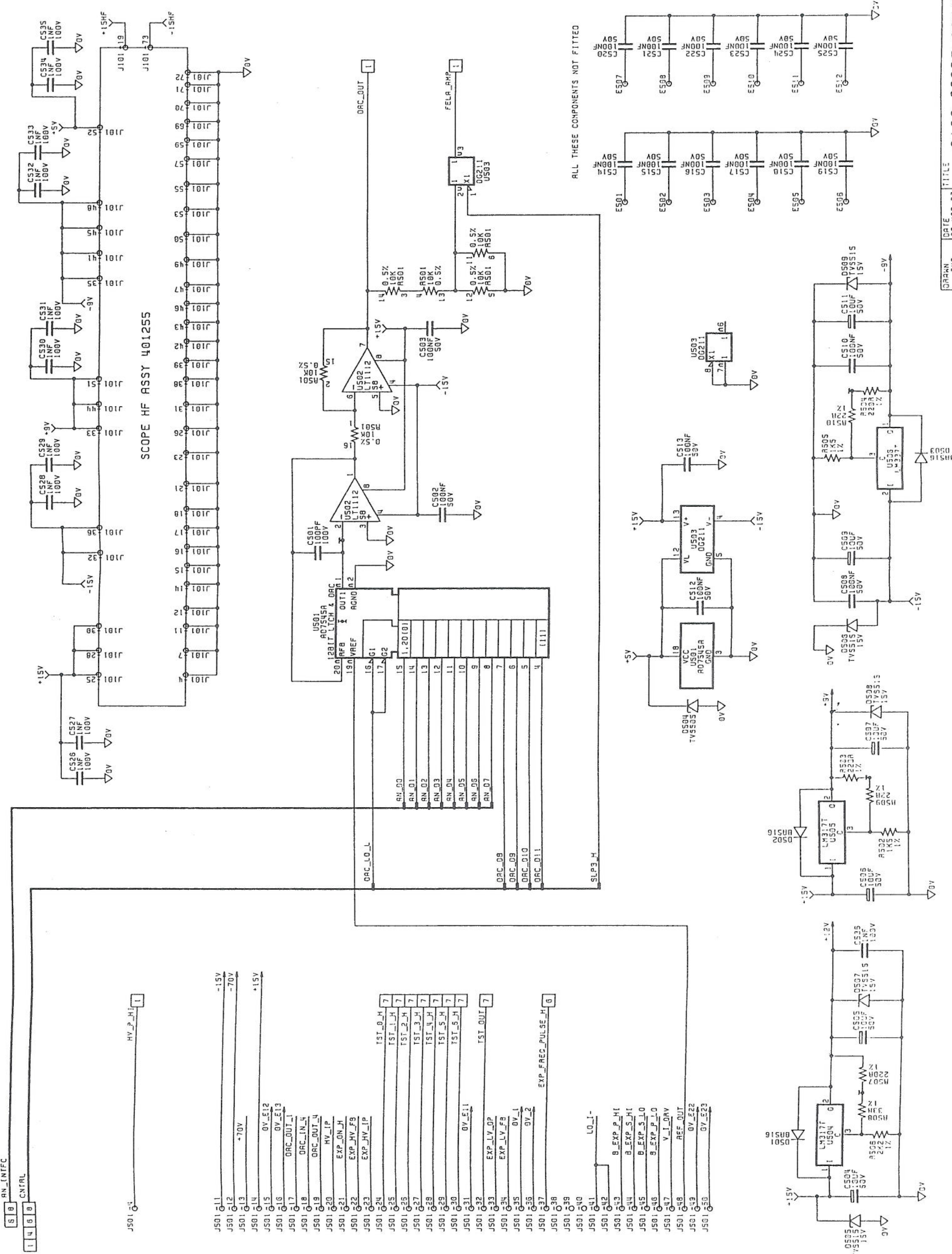
TITLE: 9100 SCOPE OPTION LEVELLED SINE GENERATOR

ISS CHANGES

1.0	ECO 5551	RELEASED	25 JUN 97
2.0	ECO 5554	09 JUL 97	AMC

15 JUL 1997

DRAWN	AMC	DATE	06 MAR 97
CHECKED	CB	DATE	07 JUL 97
APP'D	CB	DATE	27 JUL 97



ALL THESE COMPONENTS NOT FITTED

SCOPE HF ASSY 401255

AN\_INIFC

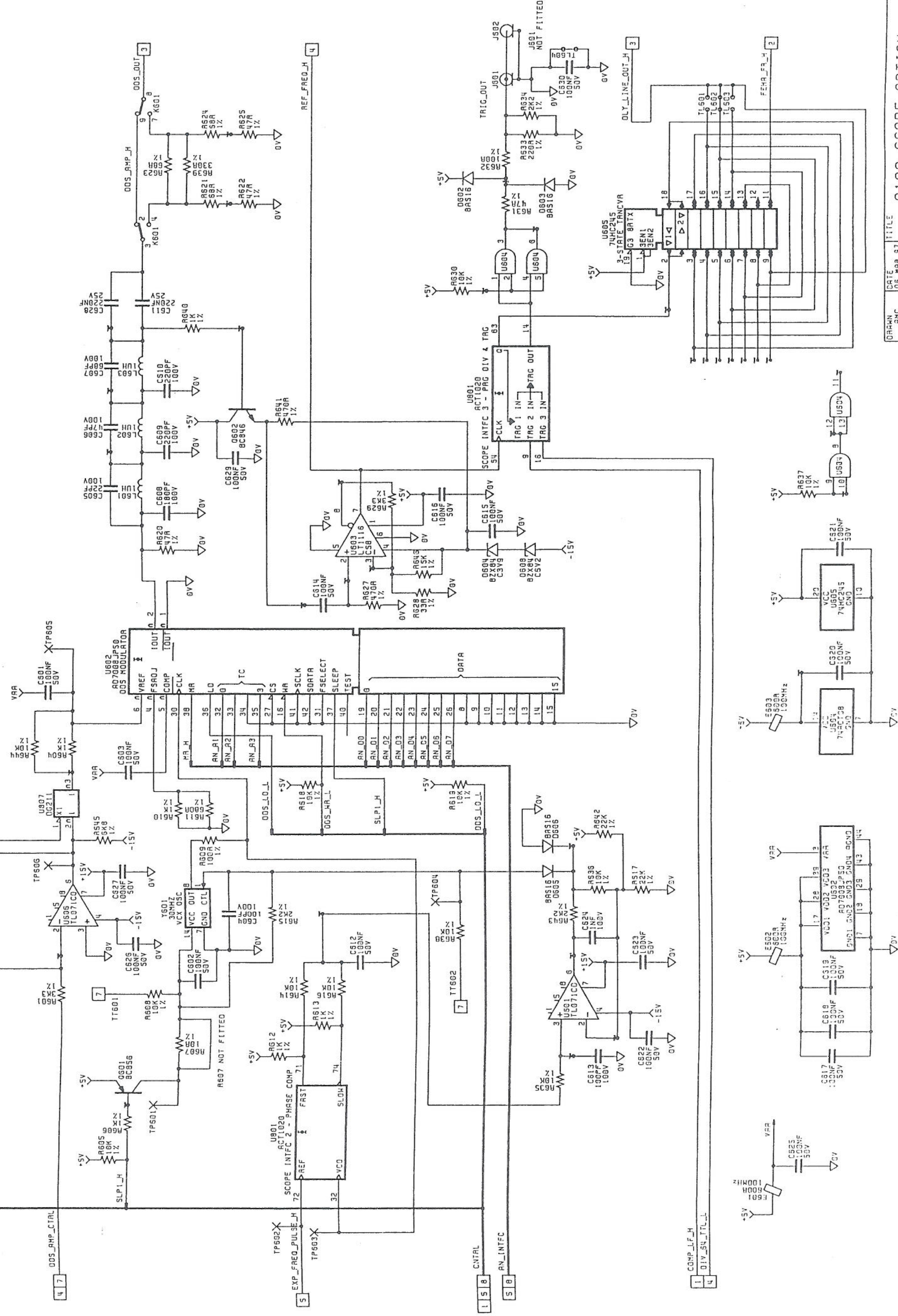
HV\_P\_H1

- J501 G11 -15V
- J501 G12 -70V
- J501 G13 +70V
- J501 G14
- J501 G15 0V\_E12
- J501 G16 0V\_E13
- J501 G17 DAC\_OUT\_1
- J501 G18 DAC\_OUT\_4
- J501 G19 DAC\_OUT\_4
- J501 G20 HV\_IP
- J501 G21 EXP\_ON\_H
- J501 G22 EXP\_HV\_F5
- J501 G23 EXP\_HV\_IP
- J501 G24
- J501 G25 TST\_L\_H
- J501 G26 TST\_L\_H
- J501 G27 TST\_2\_H
- J501 G28 TST\_3\_H
- J501 G29 TST\_4\_H
- J501 G30 TST\_5\_H
- J501 G31 0V\_E11
- J501 G32
- J501 G33 EXP\_LV\_OP
- J501 G34 EXP\_LV\_F3
- J501 G35 0V\_1
- J501 G36 0V\_2
- J501 G37 EXP\_FREQ\_PULSE\_H
- J501 G38
- J501 G39
- J501 G40
- J501 G41
- J501 G42 L0\_I-
- J501 G43 B\_EXP\_P\_H1
- J501 G44 B\_EXP\_S\_H1
- J501 G45 B\_EXP\_S\_L0
- J501 G46 B\_EXP\_P\_L0
- J501 G47 V\_I\_DRV
- J501 G48 REF\_OUT
- J501 G49 0V\_E22
- J501 G50 0V\_E23

DRAWN	AMC	DATE	06 MAR 97
CHECKED	CB	DATE	07 JUL 97
APP'D	CB	DATE	27 JUL 97

ISS	CHANGES
1.0	ECO 5551 RELEASED 25 JUN 97
2.0	ECO 5554 C611 HAS 100n C628 HAS 100n R604 HAS 10V R622 HAS 1K R640 0608 AND R646 0608 AND 09 JUL 97 AMC

15 JUL 1997



9100 SCOPE OPTION  
DDS, PLL REF  
& TRIGGERS

DRAWN	DATE	TITLE
AMC	05 MAR 97	9100 SCOPE OPTION
CB	07 JUL 97	DDS, PLL REF
APPN	07 JUL 97	& TRIGGERS

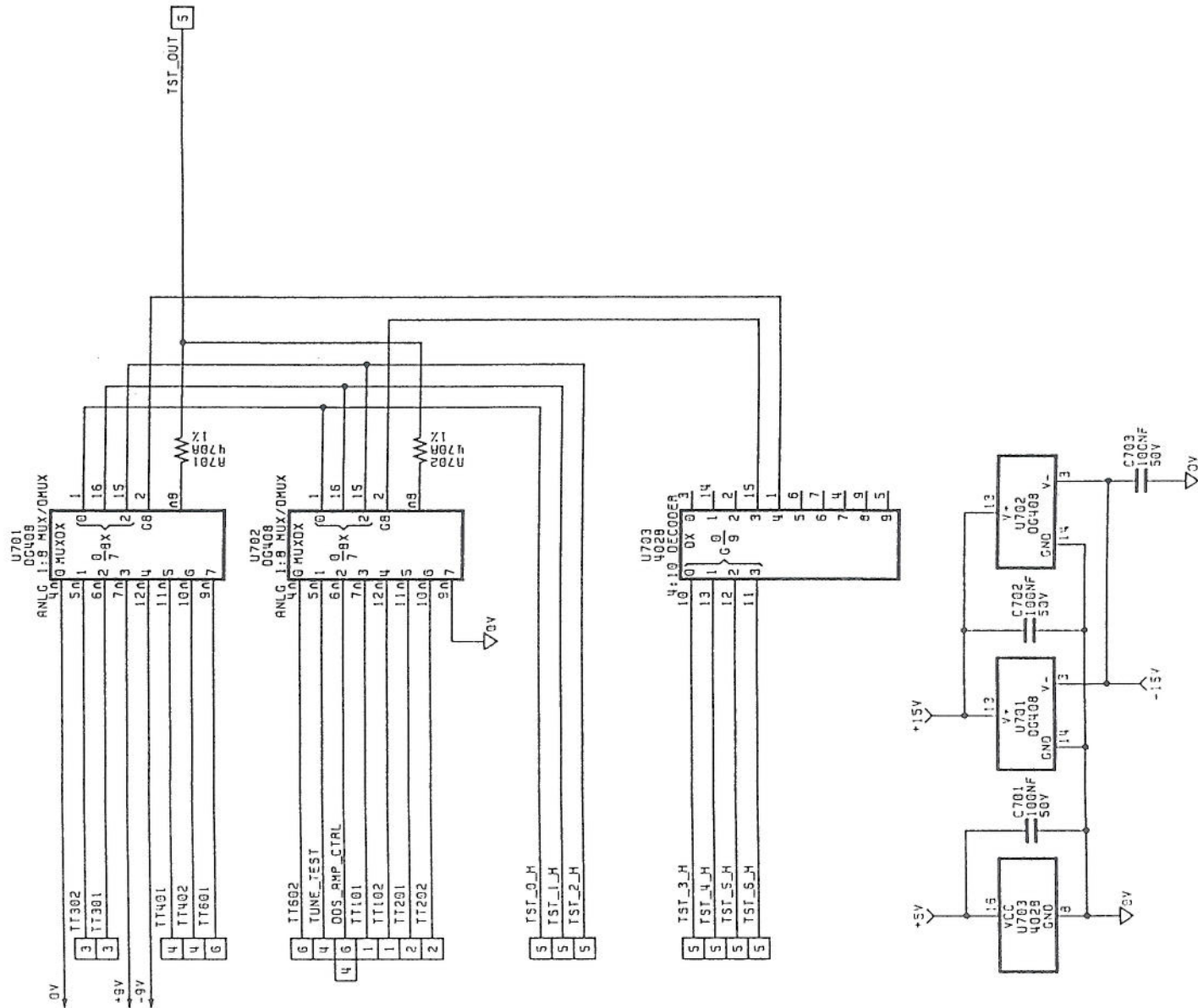
15 JUL 1997

ISS	CHANGES
1.0	ECO 5551 RELEASED 25 JUN 97
2.0	ECO 5554 CHANGED V_TUNE TO TUNE_TEST 09 JUL 97 RNC

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DC401351  
SHEET 7 OF 8

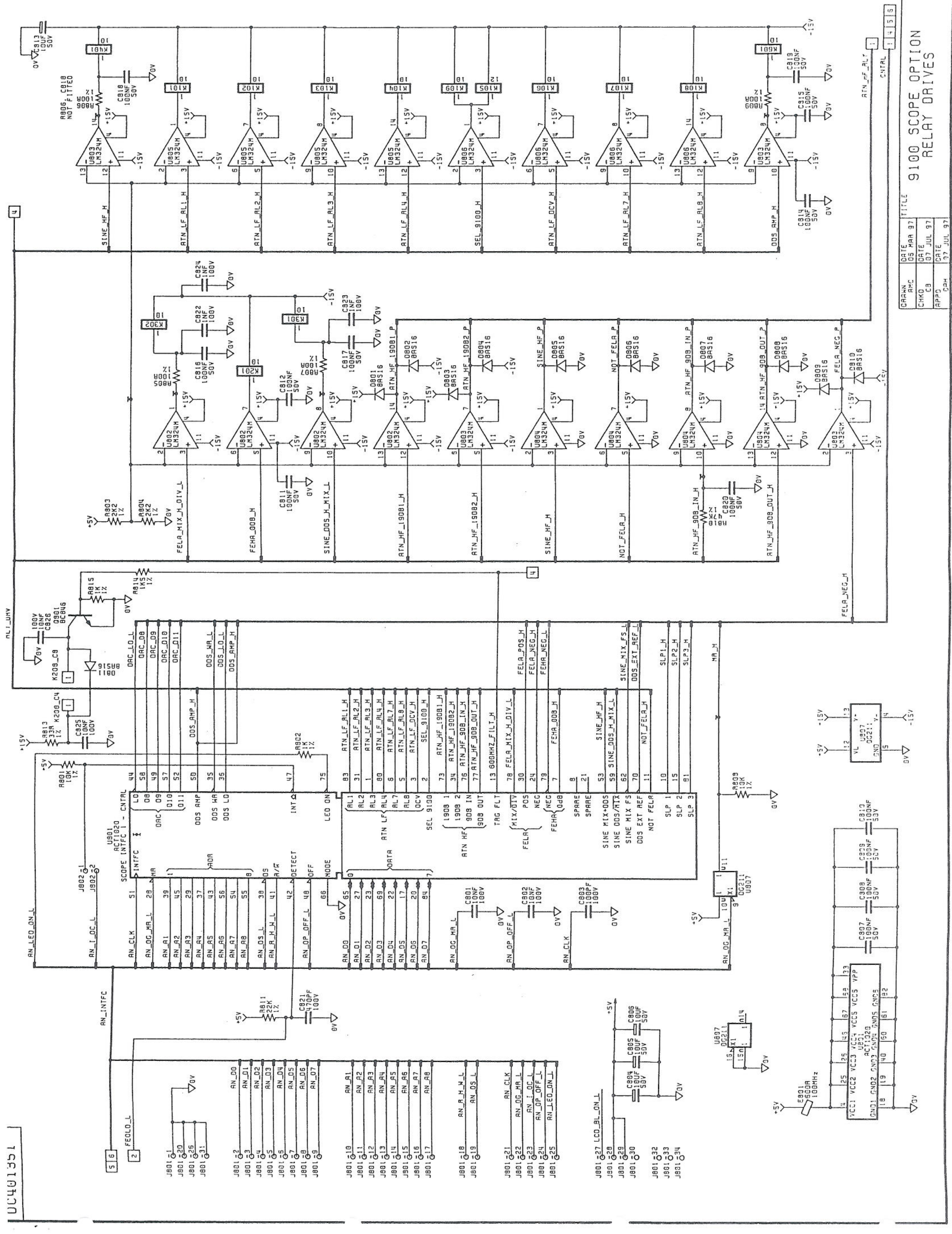
DRAWN	DATE	TITLE
RNC	06 MAR 97	9100 SCOPE OPTION
CHKD	DATE	SELF TEST
CA	07 JUL 97	MONITOR
APPD	DATE	
GAH	07 JUL 97	



CHANGES

1.0	ECO 5551	RELEASED	25 JUN 97
2.0	ECO 5554	09 JUL 97	RMC

15 JUL 1997

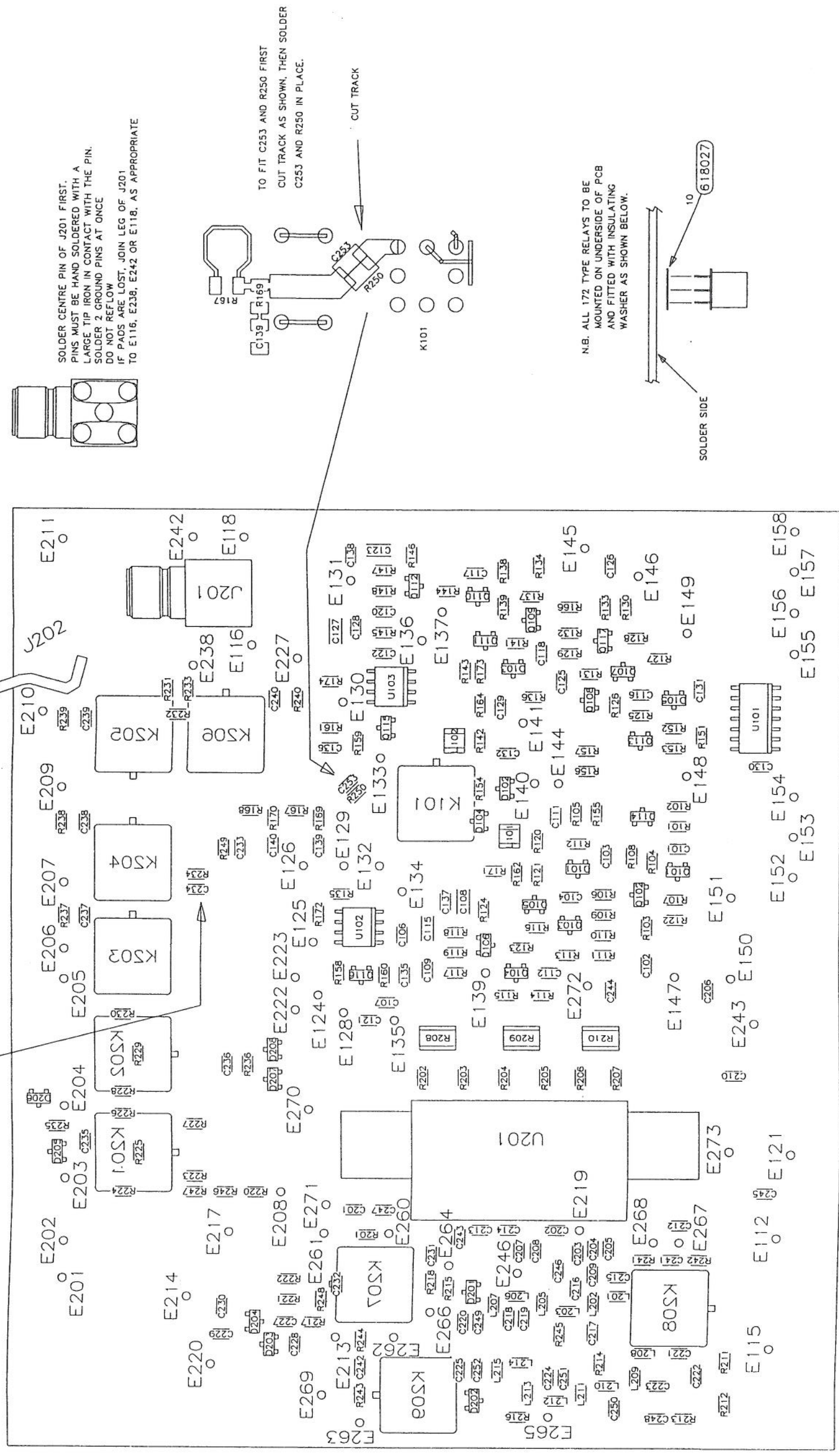


TITLE

DATE	05 MAR 97
DRWN	RMC
CHKD	CB
APPR	DATE
CDR	97 JUL 97

9100 SCOPE OPTION  
 RELAY DRIVES

C234 IS LARGE AND SHOULD BE MOUNTED ON ITS EDGE



SOLDER CENTRE PIN OF J201 FIRST. PINS MUST BE HAND SOLDERED WITH A LARGE TIP IRON IN CONTACT WITH THE PIN. SOLDER 2 GROUND PINS AT ONCE DO NOT REFLOW IF PADS ARE LOST, JOIN LEG OF J201 TO E116, E238, E242 OR E118, AS APPROPRIATE

TO FIT C253 AND R250 FIRST CUT TRACK AS SHOWN, THEN SOLDER C253 AND R250 IN PLACE.

N.B. ALL 172 TYPE RELAYS TO BE MOUNTED ON UNDERSIDE OF PCB AND FITTED WITH INSULATING WASHER AS SHOWN BELOW.

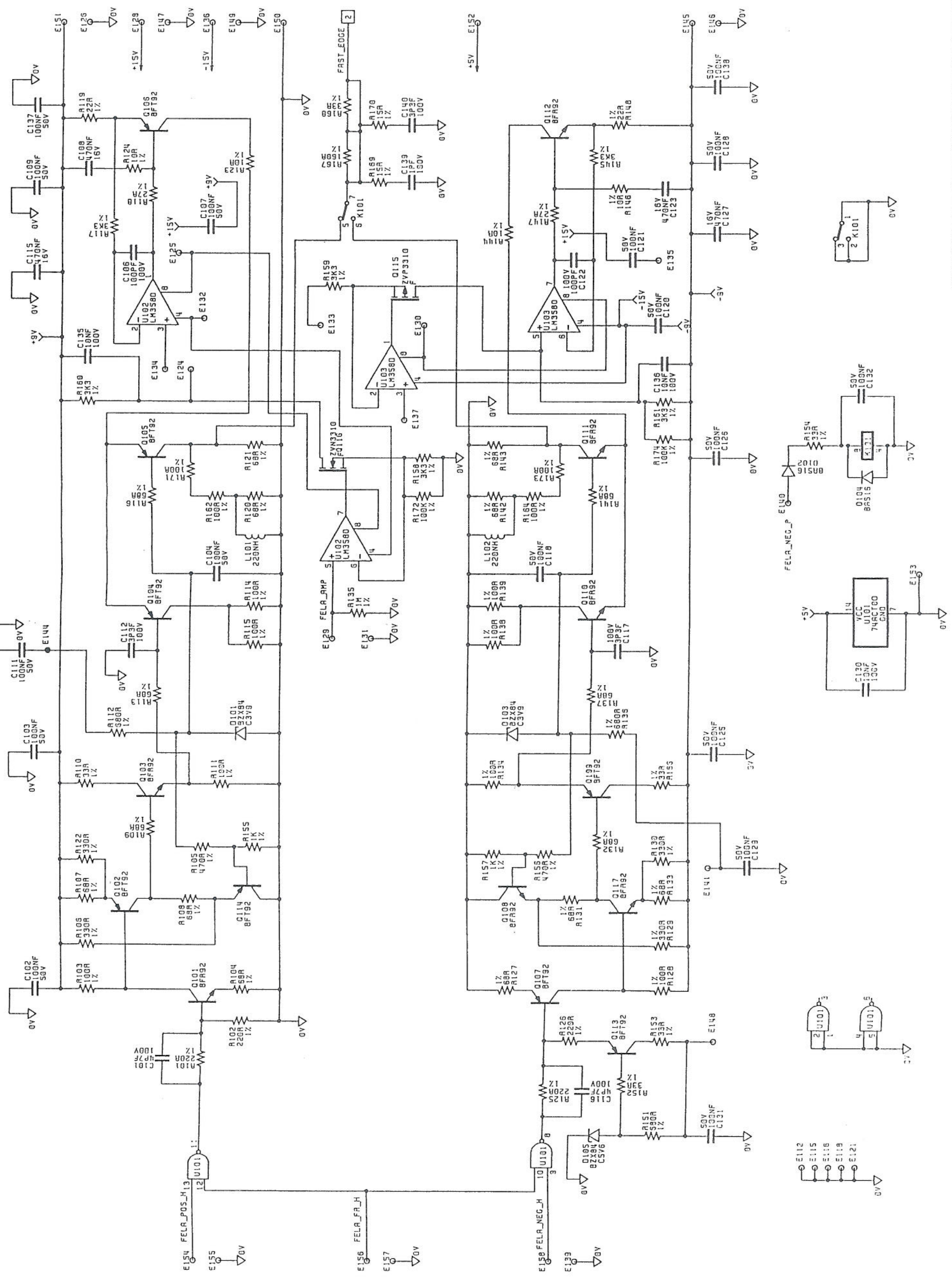
SOLDER PIPS ON RELAY BODIES TO GROUND PLANE ON UNDERSIDE OF BOARD IN AREA PROVIDED

410518-3

ISS	CHANGES
1.0	ECO 5551 RELEASED 25 JUN 97
1.1	ECO 5554 07 JUL 97 AMC
1.2	ECO 5605 ADDED C253 AND R250 23 SEP 97 AMC

TITLE	MATERIAL	TOLERANCES	DIMENSIONS IN MILLIMETRES	DATE	DRAWN	THIRD ANGLE PROJECTION
SCOPE DAUGHTER PCB ASSEMBLY		DECIMAL TO 2 PLACES ± 0.1mm DECIMAL TO 1 PLACE ± 0.2mm WHOLE DIMENSIONS ± 0.4mm ANGULAR ± 0.5° UNLESS OTHERWISE STATED	SCALE N.T.S. NOT TO BE SCALED	24 FEB 97 7 JUL 97 7 JUL 97	JD CB DAH	

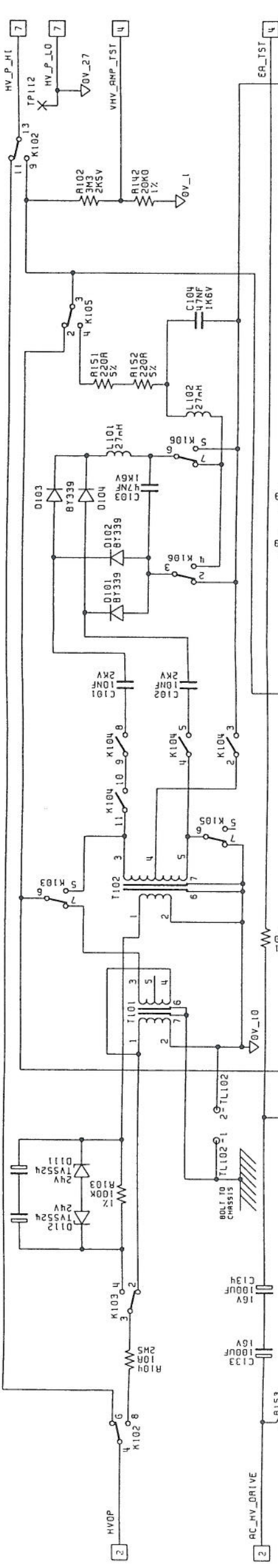
DATE	12 FEB 97
CHKD	CLS
DATE	27 JUN 97
CHKD	CLS



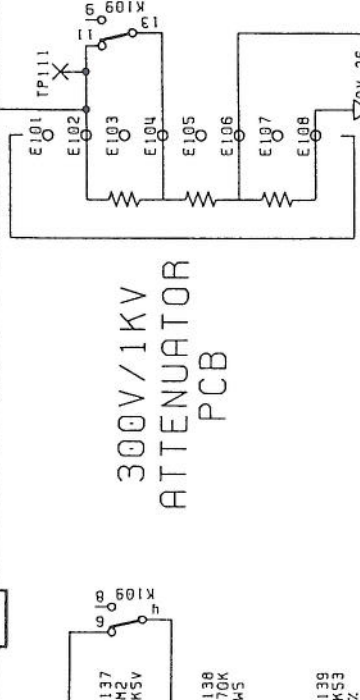




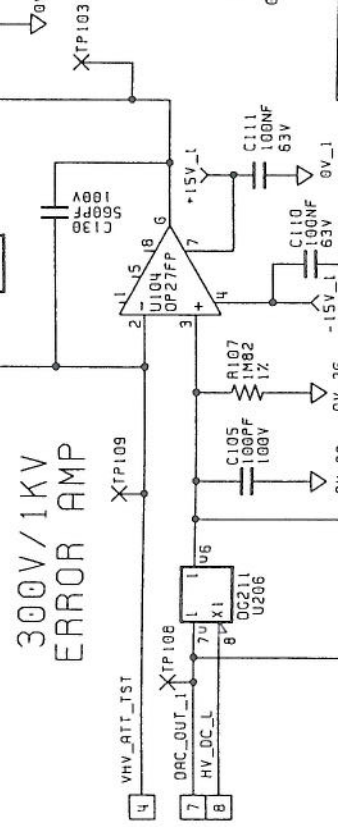
VOLTAGE DOUBLER



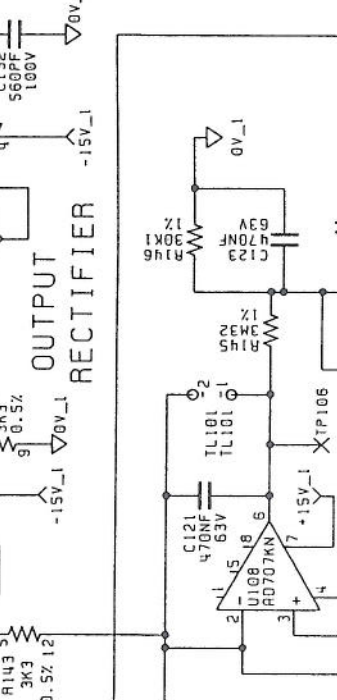
300V/1KV  
ATTENUATOR  
PCB



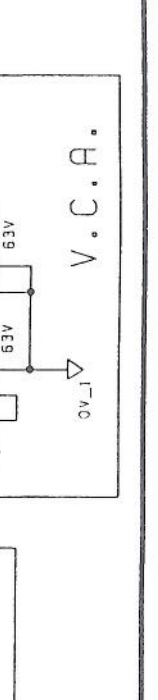
300V/1KV  
ERROR AMP



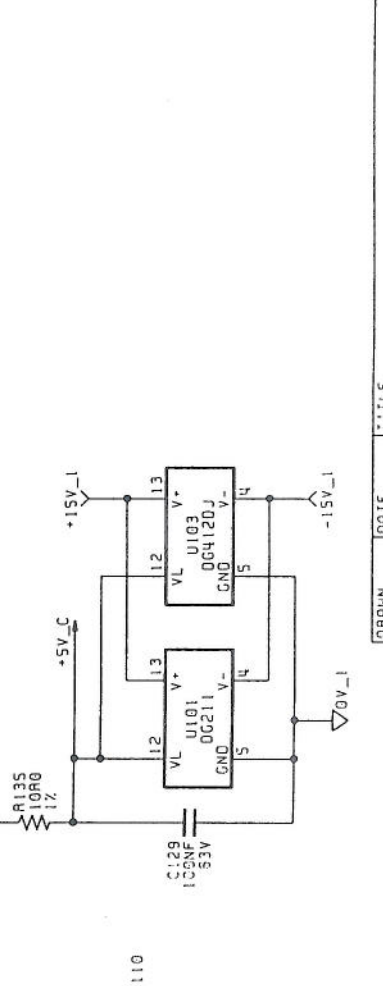
OUTPUT  
RECTIFIER



INPUT  
RECTIFIER



300V/1KV DC CONTROL AMP





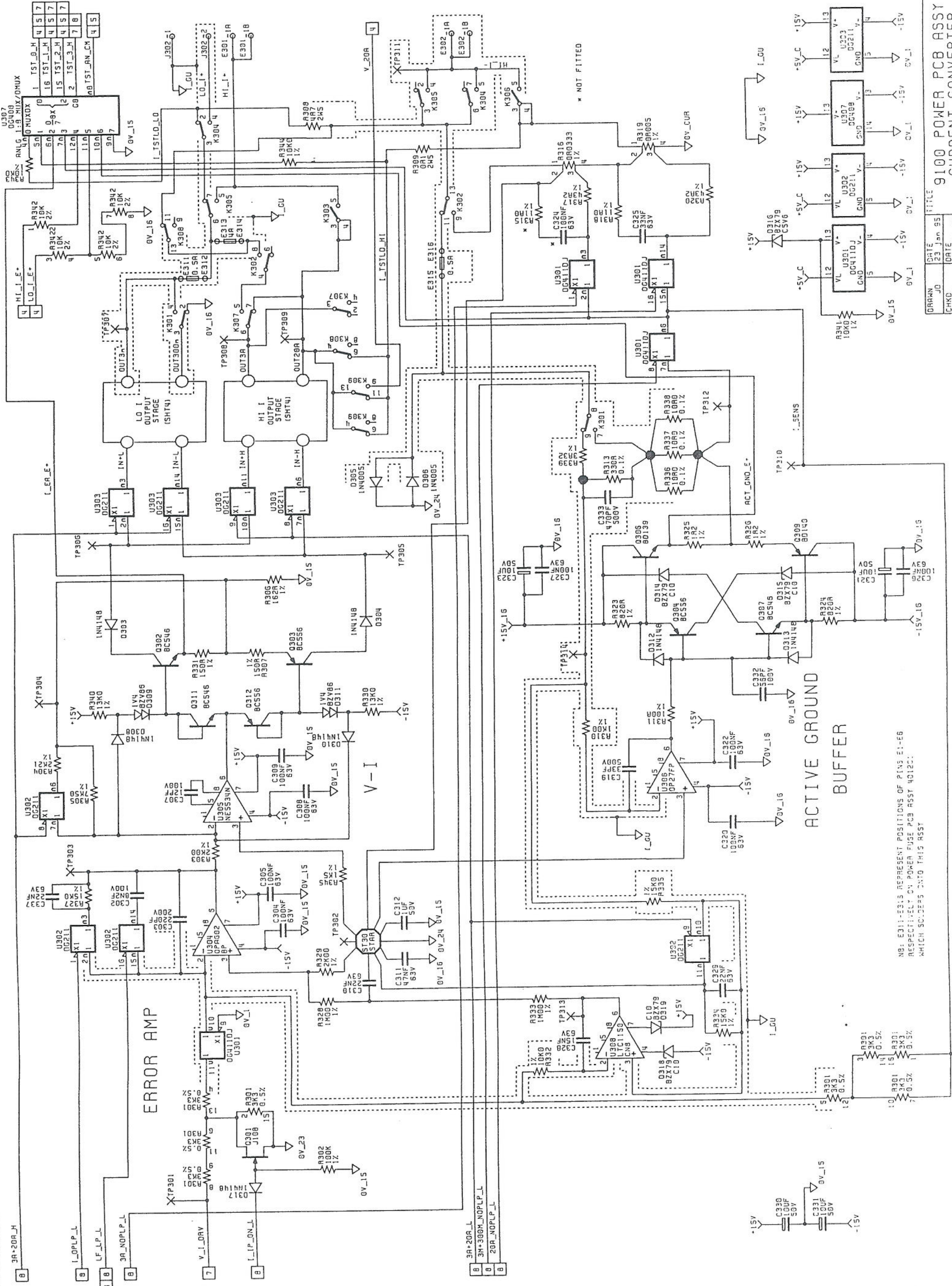
ISS	CHANGES
1.0	ECO 4740 RELEASED 23 JAN 95
1.1	ECO 4742 PCB WAS ISS 3 JO 23 JAN 95

- 2 FEB 1995

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DRAWING\_NO DC 401238  
SHEET 3 OF 8

OUTPUT STAGES

DRAWING\_NO  
DC 401238



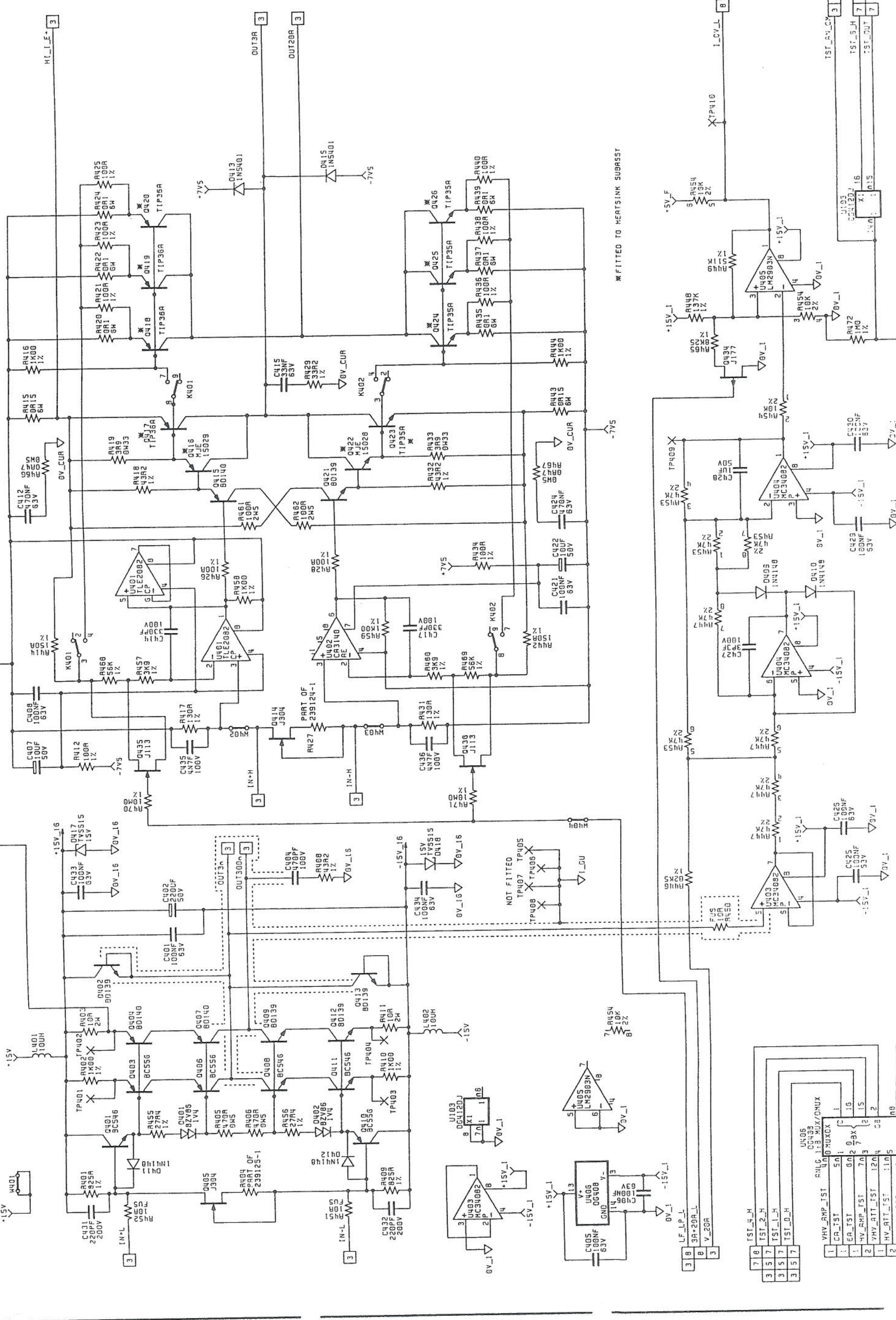
9100 POWER PCB ASSY  
CURRENT CONVERTER

DRAWN	DATE	23 JAN 95
CHKD	DATE	26 JAN 95
APPD	DATE	30 JAN 95

NOTE: E311-E315 REPRESENT POSITIONS OF PINS E1-E6  
RESPECTIVELY ON POWER FUSE PCB ASSY 4012C  
WHICH SOLDERES ONTO THIS ASSY

LOW CURRENT OUTPUT STAGE

HIGH CURRENT OUTPUT STAGE



\* FITTED TO HEATSINK SUBSTRATE

OVER VOLTAGE DETECTOR

9100 POWER PCB ASSY  
CURRENT  
OUTPUT STAGES

DRWN	JO	DATE	23 JAN 95
CHKD	HD	DATE	26 JAN 95
APPD	RAF	DATE	29 JAN 95

ISS CHANGES

1.0	ECO 4740 RELEASED 23 JAN 95
1.1	ECO 4742 PCB HAS ISS 3 JD 23 JAN 95
1.2	ECO 4828 R472 ADDED 1 JL 12 APR 95

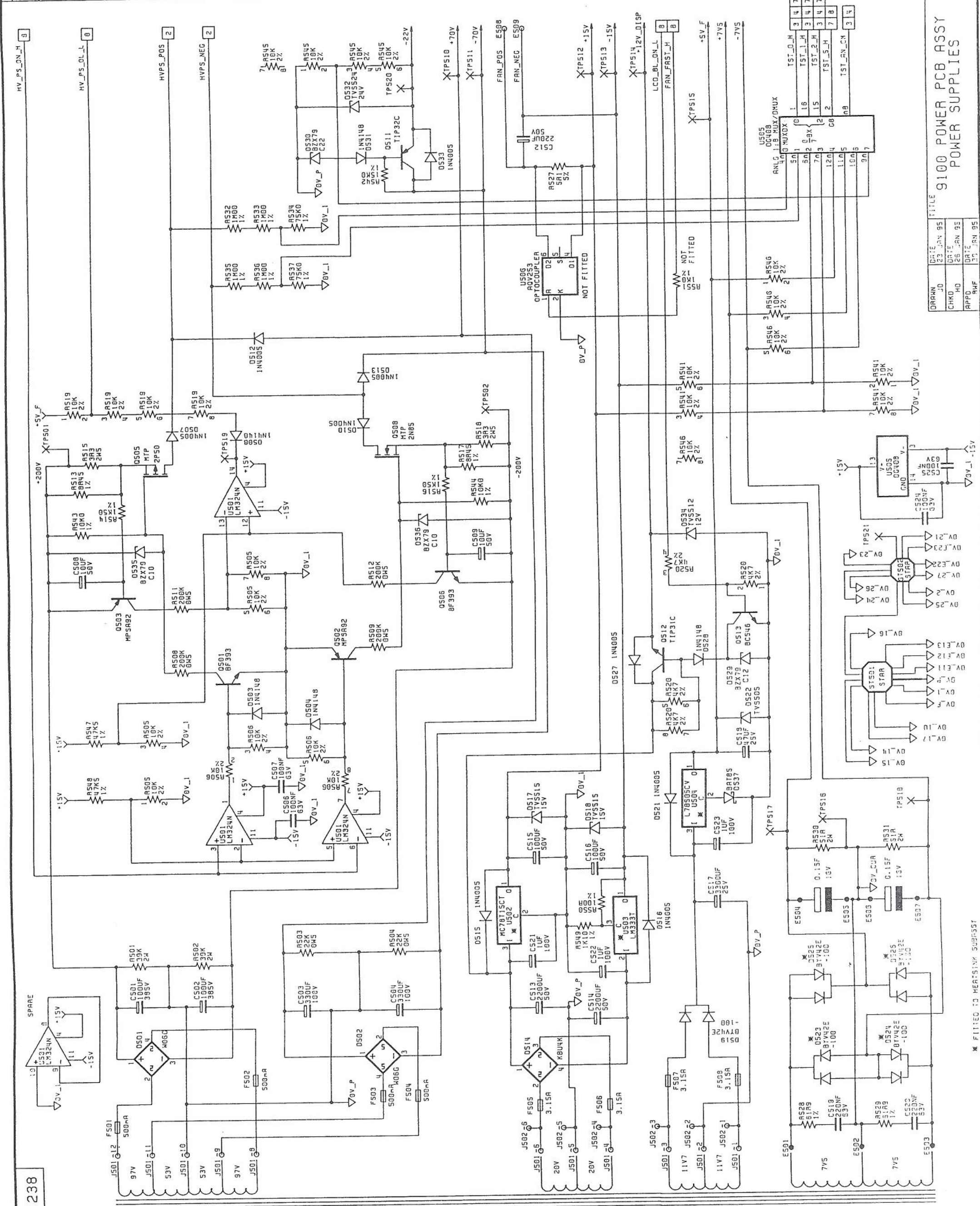
9 APR 1995

1	VHV_RMP_IST	4	0	MUXOX
1	CR_TST	5	1	
1	ER_TST	6	2	1G
2	HV_RMP_TST	7	3	1S
1	VHV_ATT_TST	12	4	2B
2	HV_ATT_TST	11	5	
1	AC_HV_TST	10	6	

ISS	CHANGES
1.0	ECO 4740 RELEASED 23 JAN 95
1.1	ECO 4742 PCB HAS ISS 3 20 JAN 95
1.2	ECO 4859 US02 HAS LM340T-15 1.1L 18 MAY 95

19 MAY 1995

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DRAWING\_NO  
DC 401238  
SHEET 5 OF 8



DRAWING\_NO  
DP 401238

FOR TRANSFORMER PRIMARY CONNECTIONS - SEE SHEET 6

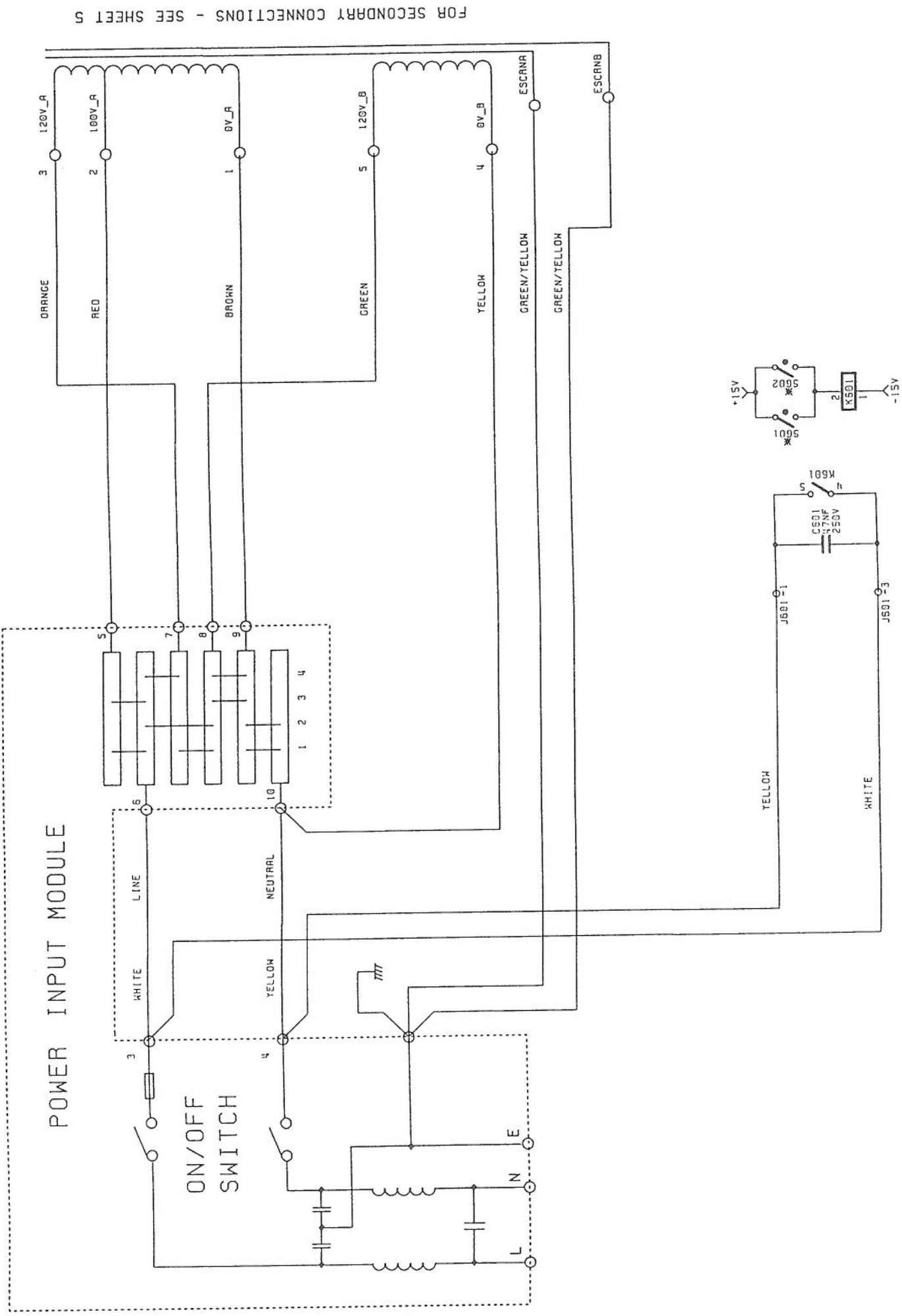
DRAWN	DATE	TITLE
JK	23 JAN 95	9100 POWER PCB ASSY
CHKD	25 JAN 95	POWER SUPPLIES
APPD	10 JAN 95	

TEST POINT	TEST POINT	TEST POINT	TEST POINT
TST_0_H	TST_1_H	TST_2_H	TST_3_H
TST_4_H	TST_5_H	TST_0_C	TST_1_C
TST_2_C	TST_3_C	TST_4_C	TST_5_C

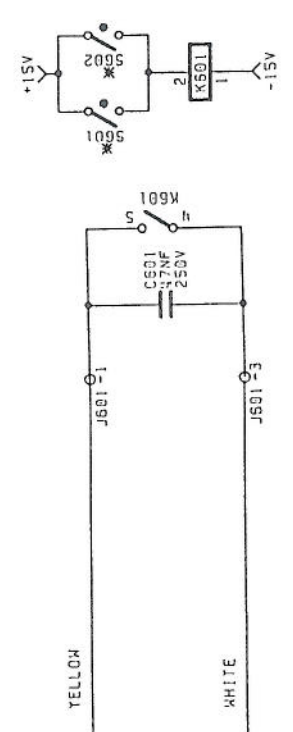
\* FITTED TO HEATSINK SUBP51

1.0	ECO 4740 RELEASED 23 JAN 95
1.1	ECO 4742 PCB HAS ISS 3 JO 23 JAN 95

- 2 FEB 1995



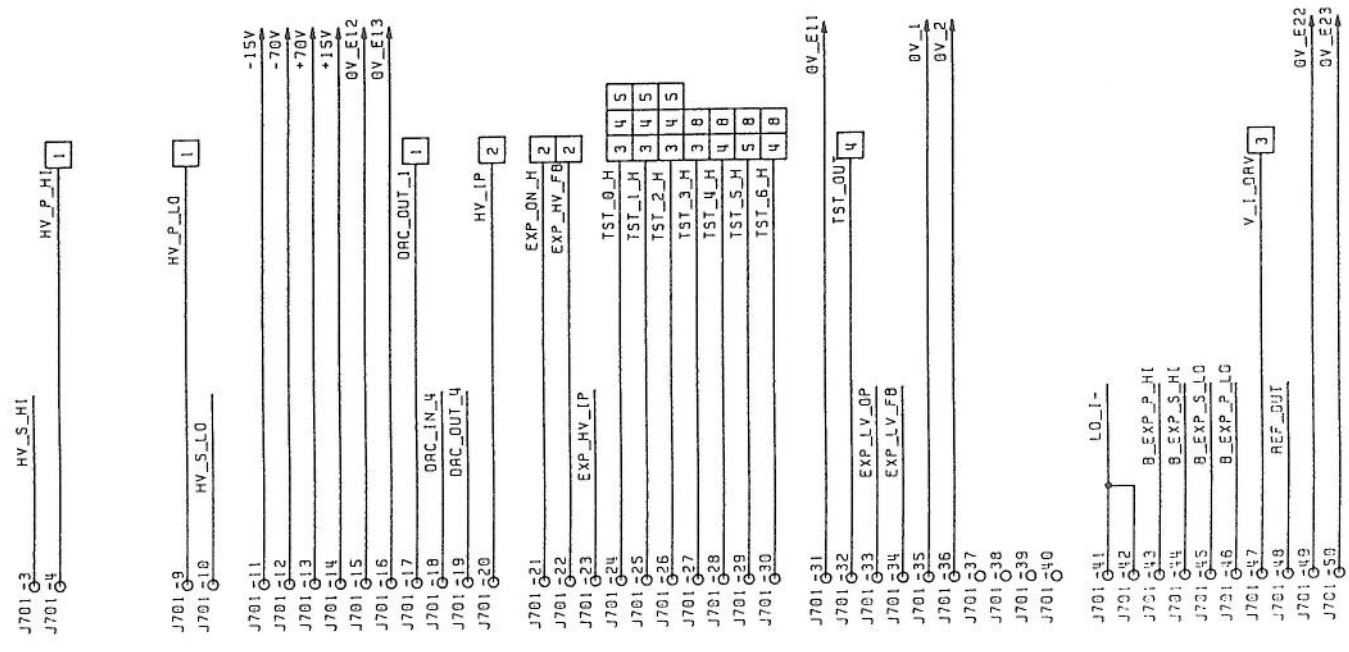
\* FITTED TO HEATSINK SUBASSY



DRAWN	DATE	TITLE
JO	23 JAN 95	9100 POWER PCB ASSY
CHECKED	DATE	
HO	25 JAN 95	MAINS INPUT AND
APPROVED	DATE	
PAF	30 JAN 95	OVERTEMP CIRCUITS

ISS	CHANGES
1.0	ECO 4740 RELEASED 23 JAN 95
1.1	ECO 4742 PCB HAS ISS 3 JD 23 JAN 95

2 7 7 2 1995



DRAWN	DATE	TITLE
JD	23 JAN 95	9100 POWER PCB ASSY
CHKD	DATE	ANALOG CONNECTOR
HQ	25 JAN 95	
APPRO	DATE	
PAF	30 JAN 95	