

PART LISTS
AND
DRAWINGS
ADDENDUM

4000
4000A

datron
INSTRUMENTS

AUTOCAL STANDARD

DESIGNATOR	DATRON PART No.	DESCRIPTION	PRINCIPAL MANUFACTURER	MANUFACTURER'S PART No.	No. USED Per Assy.
C1	140045	1 μ F 20% 1KSV POLYPROP	NORTRONICS (MFD)	NSC2027	1
C2	180036	4700 μ F 100V AL. ELECT	MULLARD/ITT	050-1-9472/K520 472T 100 μ D	2
C3	180036	4700 μ F " " "	" "	" "	-
C4	104032	220pF 10% 2KV CER DISC	ITT	HDO9	1
RL1	330031	RELAY 2P N/O 2P N/C	SDS	S2-24V	1
L1	370017	COMMON MODE CHOKE	SIGA	SEE DRG	1
	410163-8	PCB			1
	512999	7/2 PTFE INSUL. (WHITE) WIRE			A/R
	590001	SLEEVE MAX CABLE ϕ 3.0	HELLERMANN ELECTRIC	H15 X 20 mm BLACK HELSYN	6
	530000	24/2 PVC INSUL. WIRE		1.5KV RMS BLACK	350 mm
	530111	24/2 PVC INSUL. WIRE		1.5KV RMS BROWN	240 mm
	530222	24/2 PVC INSUL. WIRE		1.5KV RMS RED	350 mm
	530666	24/2 PVC INSUL. WIRE		1.5KV RMS BLUE	240 mm
	590029	HEATSHRINK SLEEVE. POLYOLEFIN ϕ 9	HELLERMANN ELECTRIC	SFM9 -38K	40 mm
J19	604042	4WAY .156" PLUG GD PL	MOLEX	09-72-2041	2

NOTES.

SEE SHEET 1 FOR LATEST ISSUE

ISS																			
E.C.O.																			
DATE																			
CHKD.																			

DATE	25th MAR 82	datron ELECTRONICS LTD TITLE 4000 MOTHER PCB ASSY DRAWING NUMBER 400440	SHEET 5 OF 7
DRAWN	B.J		
CHECKED			
APPROVED			
DATE			

DESIGNATOR	DATRON PART No.	DESCRIPTION	PRINCIPAL MANUFACTURER	MANUFACTURER'S PART No.	No. USED Per Assy.
J28	605071	4WAY .156" HOUSING	MOLEX	90-50-3041	1
J1	605111	24+24WAY .1" PCB SOCKET	AMP	2-141592-4	3
	605077	CRIMP TERMINAL GD.PL	MOLEX	08-56-0106	4
	605087-2	24 WAY PCB EDGE CONN.	SEE DRG		9
	605088-2	18 WAY PCB EDGE CONN.	SEE DRG		6
J2-J16	605089-2	12 WAY PCB EDGE CONN.	SEE DRG		6
	605090-2	6 WAY PCB EDGE CONN.	SEE DRG		4
	605091-2	6WAY SPECIAL EDGE CONN.	SEE DRG		7
	605092-2	3WAY PCB EDGE CONN.	SEE DRG		13
	612013	M3 X 8 mm STANDOFF	CAMBION	350-5182-24-07	1
	613029	M3 CRINKLE WASHER S.S.			5
	611006	M3 X 10 mm POZI-PAN STEEL	ZN PL		1
	611016	M3 X 8 mm POZI-PAN STEEL	ZN PL		5
	611019	M3 X 35 mm POZI-PAN STEEL	ZN PL		4
	612004	STANDOFF M3 X 4 mm BRASS	HARWIN	CS2116/B	6
	613005	WASHER M3 INT/SHAKEPROOF	ZN/PLTD	GKN	5
	615002	NUT M3 FULL HEX STEEL	ZN/PLTD	GKN	10

NOTES.

SEE SHEET 1 FOR LATEST ISSUE

ISS																			
E.C.O.																			
DATE																			
CHKD.																			

DATE	26 MAR 82	datron ELECTRONICS LTD TITLE 4000 MOTHER PCB ASSY. DRAWING NUMBER 400440	SHEET 6 OF 7
DRAWN	B.J		
CHECKED			
APPROVED			
DATE			

DESIGNATOR	DATRON PART No.	DESCRIPTION	PRINCIPAL MANUFACTURER	MANUFACTURER'S PART No.	No. USED Per Assy.
R24	000102	1k 5% 1/4W CARBON	MULLARD	CR25	-
R25	000102	1k " " "	"	"	-
R26	000104	100k " " "	"	"	3
R27	000102	1k " " "	"	"	-
R28	000102	1k " " "	"	"	-
R29	000102	1k " " "	"	"	-
R30	000102	1k " " "	"	"	-
R31	000102	1k " " "	"	"	-
R32	000102	1k " " "	"	"	-
R33	000102	1k " " "	"	"	-
R34	000102	1k " " "	"	"	-
R35	000103	10k " " "	"	"	4
R36	000103	10k " " "	"	"	-
R37	000103	10k " " "	"	"	-
R38		NOT USED			-
R39	000472	4k7 " " "	"	"	6
R40	000688	6R8 " " "	"	"	8
R41	000688	6R8 " " "	"	"	-
R42	000688	6R8 " " "	"	"	-
R43	000272	2k7 " " "	"	"	18
R44	000272	2k7 " " "	"	"	-
R45	000472	4k7 " " "	"	"	-
R46	000272	2k7 " " "	"	"	-

NOTES.

SEE SHEET 2 FOR LATEST ISSUE

ISS.																				
E.C.O.																				
DATE																				
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DATE	10.4.81	datron ELECTRONICS LTD					
DRAWN	ll		TITLE				
CHECKED			4000				
APPROVED			FRONT PCB. ASSY.				
DATE		DRAWING NUMBER	400441	SHEET	3	OF	11

DESIGNATOR	DATRON PART No.	DESCRIPTION	PRINCIPAL MANUFACTURER	MANUFACTURER'S PART No.	No. USED Per Assy.
R47	000182	1k8 5% 1/4W CARBON	MULLARD	CR25	2
R48	000272	2k7 " " "	"	"	-
R49	000272	2k7 " " "	"	"	-
R50	000222	2k2 " " "	"	"	2
R51	000222	2k2 " " "	"	"	-
R52	000272	2k7 " " "	"	"	-
R53	000272	2k7 " " "	"	"	-
R54	000472	4k7 " " "	"	"	-
R55	000272	2k7 " " "	"	"	-
R56	000272	2k7 " " "	"	"	-
R57	000272	2k7 " " "	"	"	-
R58	000182	1k8 " " "	"	"	-
R59	000272	2k7 " " "	"	"	-
R60	000272	2k7 " " "	"	"	-
R61	000272	2k7 " " "	"	"	-
R62	000272	2k7 " " "	"	"	-
R63	000272	2k7 " " "	"	"	-
R64	000272	2k7 " " "	"	"	-
R65	000272	2k7 " " "	"	"	-
R66	000272	2k7 " " "	"	"	-
R67	000688	6R8 " " "	"	"	-
R68	000688	6R8 " " "	"	"	-
R69	000688	6R8 " " "	"	"	-

NOTES.

SEE SHEET 2 FOR LATEST ISSUE

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E.C.O.																				
DATE																				
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DATE	10.4.81	datron ELECTRONICS LTD					
DRAWN	ll		TITLE				
CHECKED			4000				
APPROVED			FRONT PCB. ASSY.				
DATE		DRAWING NUMBER	400441	SHEET	4	OF	11

DESIGNATOR	DATRON PART No.	DESCRIPTION	PRINCIPAL MANUFACTURER	MANUFACTURER'S PART No.	No. USED Per Assy.
R70		NOT USED			-
R71		NOT USED			-
R72	000682	6k8 5% 1/4W CARBON	MULLARD	CR25	1
R73	000272	2k7 5% 1/4W CARBON	MULLARD	CR25	-
R74	000470	47R 5% 1/4W CARBON	MULLARD	CR25	2
R75	011183	118k 1% 1/8W 50ppm MF	HOLCO	H8C	1
R76	011001	1k00 1% 1/8W 50ppm MF	HOLCO	H8C	4
R77	011001	1k00 1% 1/8W 50ppm MF	HOLCO	H8C	-
R78	012672	26k7 1% 1/8W 50ppm MF	HOLCO	H8C	1
R79	080032	78k7 1% 1W 10ppm MF	VISHAY	V53C5	1
R80	070143	16k0 0.01% 5ppm WW	MANN	MX125B	1
R81	070142	12k0 0.01% 5ppm WW	MANN	MX125B	-
R82		NOT USED			
R83		NOT USED			
R84	012212	22k1 1% 1/8W 50ppm MF	HOLCO	H8C	2
R85 (FSV)	013162	31k6 1% 1/8W 50ppm MF	HOLCO	H8C	1
R86	000102	1k 5% 1/4W CARBON	MULLARD	CR25	-
R87	000104	100k 5% 1/4W CARBON	MULLARD	CR25	-
R88		NOT USED			-
R89		NOT USED			-
R90	000104	100k 5% 1/4W CARBON	MULLARD	CR25	-
R91	011182	11k8 1% 1/8W 50ppm MF	HOLCO	H8C	1
R92	011001	1k00 1% 1/8W 50ppm MF	HOLCO	H8C	-

NOTES.

SEE SHEET 2 FOR LATEST ISSUE

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E.C.O.																				
DATE																				
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DATE	21.9.82	
DRAWN	IL	
CHECKED		
APPROVED		
DATE		
TITLE		4000 REF. DIVIDER PCB. ASSY.
DRAWING NUMBER		400444 400444A
SHEET		5 OF 17

DESIGNATOR	DATRON PART No.	DESCRIPTION	PRINCIPAL MANUFACTURER	MANUFACTURER'S PART No.	No. USED Per Assy.
R93	011001	1k00 1% 1/8W 50ppm MF	HOLCO	H8C	-
R94	014532	45k3 1% 1/8W 50ppm MF	HOLCO	H8C	1
R95	011402	14k0 1% 1/8W 50ppm MF	HOLCO	H8C	1
R96	019531	9k53 1% 1/8W 50ppm MF	HOLCO	H8C	1
R97		NOT USED			-
R98	011002	10K 1% 1/8W 50ppm MF	HOLCO	H8C	3
R99	070156	555k41 0.01% 5ppm WW	MANN	AX175B	1
R100	070145	475R 0.01% 5ppm WW	MANN	AX175B	1
R101	012212	22k1 1% 1/8W 50ppm MF	HOLCO	H8C	-
R102	000473	47k 5% 1/4W CARBON	MULLARD	CR25	3
R103	000103	10k 5% 1/4W CARBON	MULLARD	CR25	-
R104	000103	10k 5% 1/4W CARBON	MULLARD	CR25	-
R105	000472	4k7 5% 1/4W CARBON	MULLARD	CR25	-
R106	000103	10k 5% 1/4W CARBON	MULLARD	CR25	-
R107	000393	39k 5% 1/4W CARBON	MULLARD	CR25	2
R108	012001	2k00 1% 1/8W 50ppm MF	HOLCO	H8C	2
R109	011302	13k0 1% 1/8W 50ppm MF	HOLCO	H8C	2
R110	012001	2k00 1% 1/8W 50ppm MF	HOLCO	H8C	-
R111	000393	39k 5% 1/4W CARBON	MULLARD	CR25	-
R112	011302	13k0 1% 1/8W 50ppm MF	HOLCO	H8C	-
R113	000101	100R 5% 1/4W CARBON	MULLARD	CR25	-
R114	000101	100R 5% 1/4W CARBON	MULLARD	CR25	-
R115	000470	47R 5% 1/4W CARBON	MULLARD	CR25	-

NOTES.

SEE SHEET 2 FOR LATEST ISSUE

ISS.																				
E.C.O.																				
DATE																				
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DATE	21.9.81	
DRAWN	IL	
CHECKED		
APPROVED		
DATE		
TITLE		4000 REF. DIVIDER PCB. ASSY.
DRAWING NUMBER		400444 400444A
SHEET		6 OF 17

DESIGNATOR	DATRON PART No.	DESCRIPTION	PRINCIPAL MANUFACTURER	MANUFACTURER'S PART No.	No. USED Per Assy.
D1	210027	2V7 400mW ZENER	MULLARD	BZY88C2V7	4
D2	210120	12V 400mW ZENER	MULLARD	BZY88C12	1
D3	210027	2V7 400mW ZENER	MULLARD	BZY88C2V7	-
D4	210043	4V3 400mW ZENER	MULLARD	BZY88C4V3	1
D5	210027	2V7 400mW ZENER	MULLARD	BZY88C2V7	-
D6	210027	2V7 400mW ZENER	MULLARD	BZY88C2V7	-
D7	213009	15V 5W ZENER	UNITRODE	TVS 515	4
D8	213009	15V 5W ZENER	UNITRODE	TVS 515	-
D9	213009	15V 5W ZENER	UNITRODE	TVS 515	-
D10	200008	200mA 125V LL Si DIODE	FAIRCHILD	IN458A	1
D11	213009	15V 5W ZENER	UNITRODE	TVS515	-
D12	200001	75 mA 75V GP Si DIODE	FAIRCHILD	IN414B	6
D13	200001	75 mA 75V GP Si DIODE	FAIRCHILD	IN414B	-
D14	210062	6V2 400mW ZENER	MULLARD	BZY88C6V2	2
D15	210062	6V2 400mW ZENER	MULLARD	BZY88C6V2	-
D16	200001	75 mA 75V GP Si DIODE	FAIRCHILD	IN414B	-
D17	210150	15V 400mW ZENER	MULLARD	BZY88C15	1
D18	200001	75mA 75V GP Si DIODE	FAIRCHILD	IN414B	-
D19	200001	75mA 75V GP Si DIODE	FAIRCHILD	IN414B	-
D20	200001	75mA 75V GP Si DIODE	FAIRCHILD	IN414B	-

NOTES.

SEE SHEET 2 FOR LATEST ISSUE

ISS.																				
E.C.O.																				
DATE																				
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DATE	21. 9. 81	datron ELECTRONICS LTD TITLE 4000 REF DIVIDER PCB ASSY DRAWING NUMBER 400444 SHEET 11 OF 17
DRAWN	IL	
CHECKED		
APPROVED		
DATE		

DESIGNATOR	DATRON PART No.	DESCRIPTION	PRINCIPAL MANUFACTURER	MANUFACTURER'S PART No.	No. USED Per Assy.
Q1	250004	Si PNP TRANSISTOR	NATIONAL	2N3906/TO18	12
Q2	240006	Si NPN	NATIONAL	2N3904/TO18	13
Q3	250004	Si PNP	NATIONAL	2N3906/TO18	-
Q4	240006	Si NPN	NATIONAL	2N3904/TO18	-
Q5	240006	Si NPN	NATIONAL	2N3904/TO18	-
Q6	250004	Si PNP	NATIONAL	2N3906/TO18	-
Q7	240006	Si NPN	NATIONAL	2N3904/TO18	-
Q8	250004	Si PNP	NATIONAL	2N3906/TO18	-
Q9	250004	Si PNP	NATIONAL	2N3906/TO18	-
Q10	240006	Si NPN	NATIONAL	2N3904/TO18	-
Q11	250004	Si PNP	NATIONAL	2N3906/TO18	-
Q12	240006	Si NPN	NATIONAL	2N3904/TO18	-
Q13		NOT USED			-
Q14		NOT USED			-
Q15		NOT USED			-
Q16		NOT USED			-
Q17		NOT USED			-
Q18		NOT USED			-
Q19	240006	Si NPN	NATIONAL	2N3904/TO18	-
Q20	240006	Si NPN	NATIONAL	2N3904/TO18	-
Q21	250004	Si PNP	NATIONAL	2N3906/TO18	-
Q22	240006	Si NPN	NATIONAL	2N3904/TO18	-
Q23	250004	Si PNP	NATIONAL	2N3906/TO18	-

NOTES.

SEE SHEET 2 FOR LATEST ISSUE

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E.C.O.																				
DATE																				
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DATE	21. 9. 81	datron ELECTRONICS LTD TITLE 4000 REF DIVIDER PCB ASSY DRAWING NUMBER 400444 SHEET 12 OF 17
DRAWN	IL	
CHECKED		
APPROVED		
DATE		

DESIGNATOR	DATRON PART No.	DESCRIPTION	PRINCIPAL MANUFACTURER	MANUFACTURER'S PART No.	No. USED Per Assy.
C33	140003	47nF 10% 400V POLYPROP	WIMA	MKPIO	1
C34	110039	470nF 20% 63V POLYESTER	WIMA	MKS2	4
C35	110039	470nF 20% 63V POLYESTER	WIMA	MKS	-
C36	110039	470nF 20% 63V POLYESTER	WIMA	MKS2	-
C37	110039	470nF 20% 63V POLYESTER	WIMA	MKS	-
C38	110040	33nF 20% 63V POLYESTER	WIMA	MKS2	1
C39	110042	100nF 20% 63V POLYESTER	WIMA	MKS2	-
C40	110042	100nF 20% 63V POLYESTER	WIMA	MKS2	-
C41	110042	100nF 20% 63V POLYESTER	WIMA	MKS2	-
C42	102101	100pF 10% 500V CER DISC	ITT	CD10	1
C43	150016	1μF 20% 35V DIP TANT	UNION CARBIDE	KIROE35	-
C44	110035	220nF 20% 63V POLYESTER	WIMA	MKS2	-
C45	120015	470pF 20% 100V POLYCARB	WIMA	FKC2MIN	1
C46		NOT USED			-
C47		NOT USED			-
C48	104032	220pF 10% 2kV CER DISC	ITT	HDO9	1
C49	110042	100nF 20% 63V POLYESTER	WIMA	MKS2	-
C50	110042	100nF 20% 63V POLYESTER	WIMA	MKS2	-
C51	102221	220pF 10% 500V CER DISC	ITT	CD10	2
C52	102221	220pF 10% 500V CER DISC	ITT	CD10	-
C53	110042	100nF 20% 63V POLYESTER	WIMA	MKS2	-

NOTES.

SEE SHEET 2 FOR LATEST ISSUE

ISS.																				
E.C.O.																				
DATE																				
CHKD																				

DATE	18.5.82	datron ELECTRONICS LTD TITLE 4000 DC PCB ASSY. DRAWING NUMBER 400445 400445A SHEET 9 OF 16
DRAWN	LL	
CHECKED		
APPROVED		
DATE		

DESIGNATOR	DATRON PART No.	DESCRIPTION	PRINCIPAL MANUFACTURER	MANUFACTURER'S PART No.	No. USED Per Assy.
D1		NOT USED			
D2		NOT USED			
D3	213009	15V 5W ZENER	UNITRODE	TVS515	4
D4	213009	15V 5W ZENER	UNITRODE	TVS515	-
D5	200001	75mA 75V GP Si DIODE	FAIRCHILD	IN4148	9
D6	200001	75mA 75V GP Si DIODE	FAIRCHILD	IN4148	-
D7	214012	2V45 30pFm ZENER	FERRANTI	ZN458	3
D8	200001	75mA 75V GP Si DIODE	FAIRCHILD	IN4148	-
D9	200001	75mA 75V GP Si DIODE	FAIRCHILD	IN4148	-
D10	220020	FET DIODE 100pA Ir	TELEDYNE	PAD100/INSULATED CASE	6
D11	214012	2V45 30pFm ZENER	FERRANTI	ZN458	-
D12	200001	75mA 75V GP Si DIODE	FAIRCHILD	IN4148	-
D13	200001	75mA 75V GP Si DIODE	FAIRCHILD	IN4148	-
D14	200001	75mA 75V GP Si DIODE	FAIRCHILD	IN4148	-
D15	200001	75mA 75V GP Si DIODE	FAIRCHILD	IN4148	-
D16	220020	FET DIODE 100pA Ir	TELEDYNE	PAD100/INSULATED CASE	-
D17	213009	15V 5W ZENER	UNITRODE	TVS515	-
D18	213009	15V 5W ZENER	UNITRODE	TVS515	-
D19	213006	5V 5W ZENER	UNITRODE	TVS505	4
D20	213006	5V 5W ZENER	UNITRODE	TVS505	-
D21	200001	75mA 75V GP Si DIODE	FAIRCHILD	IN4148	-
D22	210033	3V3 400mW ZENER	MULLARD	BZY88C 3V3	1
D23	213008	24V 5W ZENER	UNITRODE	TVS524	4

NOTES.

SEE SHEET 2 FOR LATEST ISSUE

ISS.																				
E.C.O.																				
DATE																				
CHKD																				

DATE	18.5.82	datron ELECTRONICS LTD TITLE 4000 DC PCB ASSY. DRAWING NUMBER 400445 400445A SHEET 10 OF 16
DRAWN	LL	
CHECKED		
APPROVED		
DATE		

DESIGNATOR	DATRON PART No.	DESCRIPTION	PRINCIPAL MANUFACTURER	MANUFACTURER'S PART No.	No. USED Per Assy.
	604037	16 DIL LINK PLUG	AUGAT	8136-47568	1
	602001	FSV TERMINAL	MOLEX	02-04-5114	16
	605060	14 WAY LOW PROFILE DIL SOCKET			8
	605061	16 WAY LOW PROFILE DIL SOCKET			6
	611008	M3 X 10 mm POZI-CSK STEEL ZN PL			2
	611016	M3 X 8 mm POZI-PAN STEEL. ZN.PL.			2
	611004	M3 X 6 mm POZI-PAN STEEL. ZN.PL.			3
	611015	M3 X 8mm POZI-C.S.K STEEL. ZN.PL.			2
	613005	M3 INT SHAKEPROOF			2
	613007	M3 WASHER STEEL ZN.PL.			2
	613029	M3 WAVY WASHER SS			7
	613017	M3 FLAT WASHER NYLON			36
	615002	M3 FULL NUT STEEL ZN.PL.			6
*	618001	INSULATING BUSH TO 220	MULLARD	56359C	2
	620001	CLOVERLEAF PTFE INSUL.	SEAELECTRO	FTE12P59	18
	620003	SOLDER PIN	HARWIN	H 2105 AOI	14
	620005	CLOVERLEAF PTFE INSUL.	SEAELECTRO	FTE15P59	19
	620007	TEST POINT TERMINAL	MICROYAR	TYPE C30	1
	620006	SOLDER TURRET	HARWIN	H9001-01	1

NOTES: * INSULATING BUSH REQUIRED ONLY WHEN VISHAY RESISTOR ALTERNATIVE USED. (R79)

SEE SHEET 2 FOR LATEST ISSUE

ISS.	E.C.O.	DATE	CHKD.

DATE	3.5.83	datron ELECTRONICS LTD
DRAWN	IL	
CHECKED		TITLE '4000'
APPROVED		I/Ω PCB ASSEMBLY
DATE		DRAWING NUMBER 400448
		SHEET 13 OF 14

DESIGNATOR	DATRON PART No.	DESCRIPTION	PRINCIPAL MANUFACTURER	MANUFACTURER'S PART No.	No. USED Per Assy.
	630003	P CLIP φ 4.8 mm	SES	CNS	2
	630024	STEATITE BEAD 16 SWG	PARK ROYAL PORCELAIN	Nº2	18
	630036	STEATITE BEAD 18 SWG	PARK ROYAL PORCELAIN	Nº1	17
	630122	PCB EJECTOR BLUE	RICHCO	CBE	2
	900003	HEAT SINK COMPOUND	RS	554-311	A/R
F1	920124	FUSE 375mA 125V 7mm	LITTLE FUSE	275-375	3
F2	920124	FUSE 375mA 125V 7mm	LITTLE FUSE	275-375	..
F3	920120	FUSE 1A 125V 7mm	LITTLE FUSE	275 001	1
F4	920124	FUSE 375mA 125V 7mm	LITTLE FUSE	275-375	-
F5	920125	FUSE 2 1/2A 125V 7mm	LITTLE FUSE	275 02-5	1

NOTES.

SEE SHEET 2 FOR LATEST ISSUE

ISS.	E.C.O.	DATE	CHKD.

DATE	3.5.83	datron ELECTRONICS LTD
DRAWN	IL	
CHECKED		TITLE '4000'
APPROVED		I/Ω PCB ASSEMBLY
DATE		DRAWING NUMBER 400448
		SHEET 14 OF 14

DESIGNATOR	DATRON PART No.	DESCRIPTION	PRINCIPAL MANUFACTURER	MANUFACTURER'S PART No.	No. USED Per Assy.
R24	008034	ORIS 10% 2 1/2 W WIREWOUND	WELWYN	W21	-
R25	000183	18k 5% 1/4 W CARBON	MULLARD	CR25	-
R26	000183	18k 5% 1/4 W CARBON	MULLARD	CR25	-
R27	000123	12k 5% 1/4 W CARBON	MULLARD	CR25	2
R28	011962	19k6 1% 1/8 W 50ppm MF	HOLCO	H8C	2
R29	011001	1k00 1% 1/8 W 50ppm MF	HOLCO	H8C	2
R30	000123	12k 5% 1/4 W CARBON	MULLARD	CR25	-
R31	011962	19k6 1% 1/8 W 50ppm MF	HOLCO	H8C	-
R32	011001	1k00 1% 1/8 W 50ppm MF	HOLCO	H8C	-
R33	005103	10k 2% 1/2 W MET-OX	ELECTROSIL	TR5	1
R34	008026	2k7 5% 2 1/2 W WIREWOUND	WELWYN	W21	1
R35	000472	4k7 5% 1/4 W CARBON	MULLARD	CR25	-
R36	008034	ORIS 10% 2 1/2 W WIREWOUND	WELWYN	W21	-
R37	000183	18k 5% 1/4 W CARBON	MULLARD	CR25	-
R38	000331	330R 5% 1/4 W CARBON	MULLARD	CR25	2
R39	000181	180R 5% 1/4 W CARBON	MULLARD	CR25	-
R40	000151	150R 5% 1/4 W CARBON	MULLARD	CR25	2
R41	000222	2k2 5% 1/4 W CARBON	MULLARD	CR25	3
R42	000392	3k9 5% 1/4 W CARBON	MULLARD	CR25	-
R43	000183	18k 5% 1/4 W CARBON	MULLARD	CR25	-
R44	000181	180R 5% 1/4 W CARBON	MULLARD	CR25	-
R45	000331	330R 5% 1/4 W CARBON	MULLARD	CR25	-
R46	000151	150R 5% 1/4 W CARBON	MULLARD	CR25	-

NOTES.

SEE SHEET 1 FOR LATEST ISSUE

ISS.																				
E.C.O.																				
DATE																				
CHKD.																				

DATE	23.3.82	datron ELECTRONICS LTD TITLE 4000 POWER AMP (DC) PCB ASSY DRAWING NUMBER 400449	SHEET OF 21
DRAWN	LL		
CHECKED			
APPROVED			
DATE			

DESIGNATOR	DATRON PART No.	DESCRIPTION	PRINCIPAL MANUFACTURER	MANUFACTURER'S PART No.	No. USED Per Assy.
R47	000392	3k9 5% 1/4 W CARBON	MULLARD	CR25	-
R48	000222	2k2 5% 1/4 W CARBON	MULLARD	CR25	-
R49	008034	ORIS 10% 2 1/2 W WIREWOUND	WELWYN	W21	-
R50	000183	18k 5% 1/4 W CARBON	MULLARD	CR25	-
R51	000152	1k5 5% 1/4 W CARBON	MULLARD	CR25	3
R52	000152	1k5 5% 1/4 W CARBON	MULLARD	CR25	-
R53	000183	18k 5% 1/4 W CARBON	MULLARD	CR25	-
R54	000560	56R 5% 1/4 W CARBON	MULLARD	CR25	5
R55	000560	56R 5% 1/4 W CARBON	MULLARD	CR25	-
R56	000228	2R2 5% 1/4 W CARBON	MULLARD	CR25	2
R57	000228	2R2 5% 1/4 W CARBON	MULLARD	CR25	-
R58	000102	1k 5% 1/4 W CARBON	MULLARD	CR25	-
R59	011002	10k0 1% 1/8 W 50ppm M.F.	HOLCO	H8C	2
R60	013920	392R 1% 1/8 W 50ppm M.F.	HOLCO	H8C	1
R61	016810	681R 1% 1/8 W 50ppm M.F.	HOLCO	H8C	1
R62	011002	10k0 1% 1/8 W 50ppm M.F.	HOLCO	H8C	-
R63	014751	4k75 1% 1/8 W 50ppm M.F.	HOLCO	H8C	3
R64	014751	4k75 1% 1/8 W 50ppm M.F.	HOLCO	H8C	-
R65	064104	100k POT 15 TURN CERMET	BECKMAN	B9P	1
R66		PART OF Q26 KIT			-
R67	014751	4k75 1% 1/8 W 50ppm M.F.	HOLCO	H8C	-
R68	000101	100R 5% 1/4 W CARBON	MULLARD	CR25	-
R69	000471	470R 5% 1/4 W CARBON	MULLARD	CR25	-

NOTES.

SEE SHEET 2 FOR LATEST ISSUE

ISS.																				
E.C.O.																				
DATE																				
CHKD.																				


DATE	23.3.82	datron ELECTRONICS LTD TITLE 4000 POWER AMP (DC) PCB ASSY DRAWING NUMBER 400449	SHEET OF 21
DRAWN	LL		
CHECKED			
APPROVED			
DATE			

DESIGNATOR	DATRON PART No.	DESCRIPTION	PRINCIPAL MANUFACTURER	MANUFACTURER'S PART No.	No. USED Per Assy.
C13	150021	22 μ F 20% 25V DIP TANT	UNION CARBIDE	K22E25	-
C14	180024	10 μ F 63V AL. ELECT.	MULLARD	O1G 18109	1
C15	102102	1nF 10% 500V CER DISC	ITT	CD10	1
C16	150016	1 μ F 20% 35V DIP TANT	UNION CARBIDE	KIROE35	1
C17	104026	47nF $\pm 50\%$ 50V CER DISC	SIEMENS	B37449	-
C18	150001	22 μ F 20% 16V DIP TANT	UNION CARBIDE	K22E16	-
C19	150001	22 μ F 20% 16V DIP TANT	UNION CARBIDE	K22E16	-
C20	104026	47nF $\pm 50\%$ 50V CER DISC	SIEMENS	B37449	-
C21	180038	1000 μ F 63V AL. ELECT	STEATITE	EG00 MG410J	1
C22	180025	1000 μ F 35V AL. ELECT	WIMA	PRINTILYT 1	1
C23	180005	1000 μ F 25V AL. ELECT	WIMA	PRINTILYT 1	2
C24	180005	1000 μ F 25V AL. ELECT	WIMA	PRINTILYT 1	-
D1	200022	3A 400V 6P Si DIODE	MOTOROLA	BY252	4
D2	200022	3A 400V 6P Si DIODE	MOTOROLA	BY252	-
D3	200022	3A 400V 6P Si DIODE	MOTOROLA	BY252	-
D4	200022	3A 400V 6P Si DIODE	MOTOROLA	BY252	-
D5	210150	15V 400mW ZENER	MULLARD	BZY88C15	1

NOTES.

SEE SHEET 1 FOR LATEST ISSUE

ISS.																				
E.C.O.																				
DATE																				
CHKD.																				


DATE	19. 11. 81	
DRAWN		
CHECKED		
APPROVED		
TITLE	4000. IN-GUARD POWER SUPPLY PCB. ASSY.	
DRAWING NUMBER	400451	SHEET OF 5

DESIGNATOR	DATRON PART No.	DESCRIPTION	PRINCIPAL MANUFACTURER	MANUFACTURER'S PART No.	No. USED Per Assy.
D6	211150	15V 1.3W ZENER	MOTOROLA	BZXG1C15	1
D7	214012	2V45 30ppm ZENER	FERRANTI	ZN458	1
W1-W4	209003	1A5 100V BRIDGE RECTIFIER	MICRO-ELECTRONICS	W001	4
Q1	240009	Si NPN TRANSISTOR	NATIONAL	MPS101 / TO18	1
Q2	240014	Si NPN TRANSISTOR	NATIONAL	BC337 / TO18	1
Q3	230047	N-CHAN CURRENT LIM	TELEDYNE	TCR 513	1
Q4	240024	Si NPN TRANSISTOR	NATIONAL	TIP31A	1
M1	260051	-15V 1A REGULATOR	MOTOROLA	MC7915CT	2
M2	260006	15V 1A REGULATOR	MOTOROLA	MC7815CP	1
M3	260045	-8V 1/2A REGULATOR	MOTOROLA	MC79M08CT	2
M4	260044	8V 1/2A REGULATOR	MOTOROLA	MC78M08CT	2
M5	260026	212 OP AMP	NATIONAL	LM 212H	1
M6	260005	5V 1A REGULATOR	MOTOROLA	MC7805CP	1
M7	260051	-15V 1A REGULATOR	MOTOROLA	MC7915CT	-
M8	260045	-8V 1/2A REGULATOR	MOTOROLA	MC79M08CT	-
M9	260044	8V 1/2A REGULATOR	MOTOROLA	MC78M08CT	-

NOTES.

SEE SHEET 1 FOR LATEST ISSUE

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E.C.O.																				
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DATE	19. 11. 81	
DRAWN		
CHECKED		
APPROVED		
TITLE	4000. IN-GUARD POWER SUPPLY PCB. ASSY	
DRAWING NUMBER	400451	SHEET OF 5

DESIGNATOR	DATRON PART No.	DESCRIPTION	PRINCIPAL MANUFACTURER	MANUFACTURER'S PART No.	No. USED Per Assy.
L1-L3	370013	4 μ H 6A RF CHOKE	ERO	F1756-004-601	3
L4-L9	370014	8 μ H 3A RF CHOKE	ERO	F1756-008-301	6
L10	370019-1	P.S.COMMON MODE CHOKE	SIGA	SEE DRG.	1
	410160-6A	PCB			1
	540002	22 SWG B.T.C. WIRE	RS.		A/R
J1-J3	604042	4-WAY PLUG WITH LOCKING RAMP	MOLEX	09-72-2041	5
	611016	SCREW M3x8mm POZIPAN STEEL	ZN/PLATED	GKN	12
	613005	WASHER M3 SHAKEPROOF	ZN/PLATED	GKN	12
	620007	TEST POINT TERMINAL	MICROVAR	C30	6
	615002	NUT M3 HEX FULL STEEL	ZN/PLATED	GKN	12
	900004	SILICONE RUBBER COMPOUND	RS	555-588	A/R
	920089-1	HEATSINK TO220	SEE DRG.		4
	920090-1	HEATSINK 2X TO220	SEE DRG.		3
F1, F2	920128	FUSE 4 A SLO-BLOW	BELLING LEE	L2080A/4	2
	920126	FUSE HOLDER	BELLING LEE	L1426	4
F3, F4	920127	FUSE 2 A SLO-BLOW	BELLING LEE	L2080A/2	2
	900003	HEATSINK COMPOUND	RS	554-311	A/R

NOTES.

SEE SHEET 1 FOR LATEST ISSUE

ISS.																				
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DATE																				
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DATE	19.11.81	
DRAWN		
CHECKED		
APPROVED		
TITLE	4000. IN-GUARD POWER SUPPLY PCB. ASSY	
DRAWING NUMBER	400451	SHEET OF 5

DESIGNATOR	DATRON PART No.	DESCRIPTION	PRINCIPAL MANUFACTURER	MANUFACTURER'S PART No.	No. USED Per Assy.
	540002	22 SWG TINNED CU WIRE			A/R
	530000	24/2 WIRE BLACK			170mm
	530222	" RED			150mm
	530444	" YELLOW			170mm
	530555	" GREEN			195mm
	900003	HEATSINK COMPOUND	RS	554-311	A/R
	530777	24/0.2 WIRE VIOLET			195mm
	530888	" GREY			195mm
	530999	" WHITE			330mm
	605101	13 WAY CRIMP TERMINAL HOUSING + LOCKING RAMP		09-91-1301	1
	605077	GOLD CRIMP	MOLEX	2478 GL	8
	611017	M3 X 16 POZIPAN SCREW	GKN	ZINC PLATED	5
	611027	M3 X 20 POZIPAN SCREW	"	"	2
	612004	M3 X 4 STANDOFF	HARWIN	C52116/B	6
	612022	M3 X 3 STANDOFF	SEE DRG.		2
	613005	M3 INT SHAKEPROOF ST	GKN DISTRIBUTORS	ZINC PLATED	8
	613007	M3 FLAT STEEL WASHER	" "	"	10
	615002	M3 HEX NUT STEEL	" "	"	3
	618008	INSULATING BUSH	ASSMANN / MULLARD	105 358 / 56201 G	2
	611006	M3 X 10mm POZIPAN SCREW	GKN	ZINC PLATED	1
	620003	SOLDER PIN	HARWIN	H2105A	8
	630126	CABLE CLIPS 7.9 DIA	RICHCO	N5	1

NOTES.

SEE SHEET 1 FOR LATEST ISSUE

ISS.																				
E.C.O.																				
DATE																				
CHKD																				


DATE	14-7-81	datron ELECTRONICS LTD	
DRAWN	JR	TITLE	
CHECKED		4000 POWER AMPLIFIER	
APPROVED		POSITIVE HEATSINK ASSY	
DATE		DRAWING NUMBER	400454
		SHEET	3 OF 3

DESIGNATOR	DATRON PART No.	DESCRIPTION	PRINCIPAL MANUFACTURER	MANUFACTURER'S PART No.	No. USED Per Assy.
	530444	24/2 WIRE YELLOW			170mm
	530999	24/2 WIRE WHITE			330mm
	605100	9 WAY 0.156 CRIMP TERMINAL HOUSING + RAMP		09-91-0901	1
	605077	GOLD CRIMP	MOLEX	2478 GL	5
	611017	M3X16 POZIPAN SCREW	GKN	ZINC PLATED	6
	611027	M3X20 POZIPAN SCREW	"	" "	1
	612004	M3X4 STANDOFF 1/16" PCB	HARWIN	C9211G/B	6
	612022	M3X3 STANDOFF 1/16" PCB	SEE DRG.		2
	613005	M3 INT SHAKEPROOF ST	GKN DISTRIBUTORS	ZINC PLATED	8
	613007	M3 FLAT STEEL WASHER	" "	"	10
	618008	INSULATING BUSH	ASSMANN / MULLARD	105 358 / 56201C	2
	611006	M3X10mm POZIPAN SCREW	GKN	ZINC PLATED	1
	620003	SOLDER PIN	HARWIN	H2105A	5
	630004	CABLE CLIP 6.4 DIA	RICHCO	N4	1
	540002	22SWG TINNED CU WIRE			A/R
	615002	NUT M3 FULL HEX STEEL		ZINC PLATED.	2
	590005	SLEEVE MAX CABLE ϕ 4.0	HELLERMAN ELECTRIC	H20X 20mm BLK HELSYN	3
	590004	SLEEVE - PTFE	" "	FE10	A/R
	900003	HEATSINK COMPOUND	RS	554-311	A/R

NOTES.

SEE SHEET 1 FOR LATEST ISSUE

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DATE	14-7-81	
DRAWN	JK	
CHECKED		
APPROVED		
DATE		TITLE 4000 POWER AMPLIFIER NEGATIVE HEATSINK ASSY
		DRAWING NUMBER 400461
		SHEET 3 OF 3

DESIGNATOR	DATRON PART No.	DESCRIPTION	PRINCIPAL MANUFACTURER	MANUFACTURER'S PART No.	No. USED Per Assy.
C1		NOT USED			-
C2	150006	4 μ F 20% 16V DIP TANT	UNION CARBIDE	K4R7E16	1
C3		NOT USED			-
C4	150017	100 μ F 20% 16V DIP TANT	UNION CARBIDE	K100E16	1
C5	180004	4700 μ F 16V AL. ELECT	WIMA	PRINTILYT 1	1
C6	101103	10nF 25% 250V CER DISC	ITT	CD10	1
C7	180026	10 μ F 350V AL. ELECT	ITT	EN12.12 10/350	1
C8	104030	100pF 10% 4kV CER DISC	ITT	HD16	1
C9	102222	2n2F 20% 500V CER DISC	ITT	CD10	1
C10	110005	10nF 20% 250V POLYESTER	MULLARD	C280AE P10K	1
D1	200022	3A 400V GP Si DIODE	MOTOROLA	BY252	2
D2	200022	3A 400V GP Si DIODE	MOTOROLA	BY252	-
D3	210027	2V7 400mW ZENER	MULLARD	BZY88C2V7	1
D4	214012	2V45 30ppm ZENER	FERRANTI	ZN458	1
D5	213006	5V 5W ZENER	UNITRODE	TV5505	1
D6	210068	6V8 400mW ZENER	MULLARD	BZY88C6V8	1
D7	213004	180V 1/2 W ZENER	MOTOROLA	IN5279B	1

NOTES.

SEE SHEET 2 FOR LATEST ISSUE

ISS.																				
E.C.O.																				
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DATE	29.2.84	datron ELECTRONICS LTD
DRAWN	LL	
CHECKED		TITLE
APPROVED		4200 PS(0G) PCB ASSY
DATE		DRAWING NUMBER
		400561
		SHEET OF
		3 OF 5

DESIGNATOR	DATRON PART No.	DESCRIPTION	PRINCIPAL MANUFACTURER	MANUFACTURER'S PART No.	No. USED Per Assy.
W1	209013	1A5 600V BRIDGE RECT	MICRO-ELECTRONICS	W006	1
Q1	250011	Si PNP TRANSISTOR	NATIONAL	BC327/TO18	1
Q2	240024	Si NPN TRANSISTOR	NATIONAL	TIP31A	1
Q3	240018	Si NPN TRANSISTOR	MOTOROLA	MJE340	2
Q4	240018	Si NPN TRANSISTOR	MOTOROLA	MJE340	-
Q5	250016	Si PNP TRANSISTOR	MOTOROLA	MJ2955	2
Q6	250016	Si PNP TRANSISTOR	MOTOROLA	MJ2955	-
M1	260061	3140 OP AMP	RCA	CA3140E	1
	410179-6	PCB			1
	604042	4 WAY WAFER PIN .156"	MOLEX	09-72-2041	2
	605059/A	8WAY DIL SOCKET			1
	611006	M3x10mm POZIPAN STEEL	ZN PL		6
	611004	M3x6mm POZIPAN STEEL	ZN PL		1
	613005	M3 INT. SHAKEPROOF	ZN PL		7
	613007	M3 WASHER STEEL	ZN PL		6
	615002	M3 FULL NUT STEEL	ZN PL		7
	618004	MOUNTING PAD TO18	JERMYN	TO18-008D	1
	620007	TEST POINT TERMINAL	MICROVAR	TYPE C30	9
	630024	STEATITE BEAD 16 SWG	PARK ROYAL PORCELAIN	Nº 2 (LARGE)	6
	900003	HEATSINK COMPOUND	RS	554-311	A/R
	900004	SILICONE RUBBER COMPOUND	RS	555-588	A/R

NOTES.

SEE SHEET 2 FOR LATEST ISSUE

ISS.																				
E.C.O.																				
DATE																				
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DATE	29.2.84	datron ELECTRONICS LTD
DRAWN	LL	
CHECKED		TITLE
APPROVED		4200 PS (0G) PCB ASSY
DATE		DRAWING NUMBER
		400561
		SHEET OF
		4 OF 5

DESIGNATOR	DATRON PART No.	DESCRIPTION	PRINCIPAL MANUFACTURER	MANUFACTURER'S PART No.	No. USED Per Assy.
R24	000471	470R 5% 1/4W CARBON	MULLARD	CR25	—
R25	000331	330R 5% 1/4W CARBON	MULLARD	CR25	1
R26	000471	470R 5% 1/4W CARBON	MULLARD	CR25	—
R27	000102	1k 5% 1/4W CARBON	MULLARD	CR25	2
R28	000102	1k 5% 1/4W CARBON	MULLARD	CR25	—
R29	000561	560R 5% 1/4W CARBON	MULLARD	CR25	4
R30	000561	560R 5% 1/4W CARBON	MULLARD	CR25	—
R31	000561	560R 5% 1/4W CARBON	MULLARD	CR25	—
R32	000561	560R 5% 1/4W CARBON	MULLARD	CR25	—
R33		NOT FITTED			—
R34		NOT FITTED			—
R35	000472	4k7 5% 1/4W CARBON	MULLARD	CR25	—
ANI	090079	5k6 x 8 2% NETWORK	AB	850-91-5k6	2
AN2	090079	5k6 x 8 2% NETWORK	AB	850-91-5k6	—

NOTES.

SEE SHEET 2 FOR LATEST ISSUE

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E.C.O.																				
DATE																				
CHKD																				

DATE 23 5 84	datron ELECTRONICS LTD
DRAWN JA	
CHECKED	TITLE 4200 ANALOG INTERFACE PCB. ASSY.
APPROVED	DRAWING NUMBER 400570
DATE	SHEET 3 OF 9

DESIGNATOR	DATRON PART No.	DESCRIPTION	PRINCIPAL MANUFACTURER	MANUFACTURER'S PART No.	No. USED Per Assy.
C1	104026	47nF $\pm 50\%$ 50V CER-DISC	SIEMENS	B37449	41
C2	104026	47nF " " " "	"	"	—
C3	104026	47nF " " " "	"	"	—
C4	104026	47nF " " " "	"	"	—
C5	104026	47nF " " " "	"	"	—
C6	104026	47nF " " " "	"	"	—
C7	104026	47nF " " " "	"	"	—
C8	104026	47nF " " " "	"	"	—
C9		NOT USED			—
C10		NOT USED			—
C11	104026	47nF $\pm 50\%$ 50V CER DISC	SIEMENS	B37449	—
C12	104026	47nF " " " "	"	"	—
C13	104026	47nF " " " "	"	"	—
C14	104026	47nF " " " "	"	"	—
C15	104026	47nF " " " "	"	"	—
C16	104026	47nF " " " "	"	"	—
C17	104026	47nF " " " "	"	"	—
C18	104026	47nF " " " "	"	"	—
C19	104026	47nF " " " "	"	"	—
C20	104026	47nF " " " "	"	"	—
C21	104026	47nF " " " "	"	"	—
C22	104026	47nF " " " "	"	"	—
C23	104026	47nF " " " "	"	"	—

NOTES.

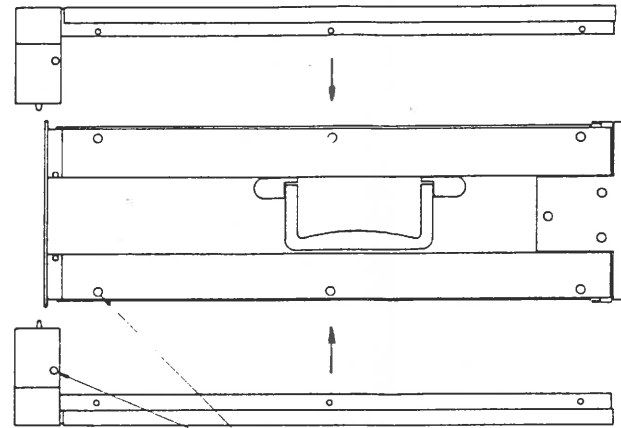
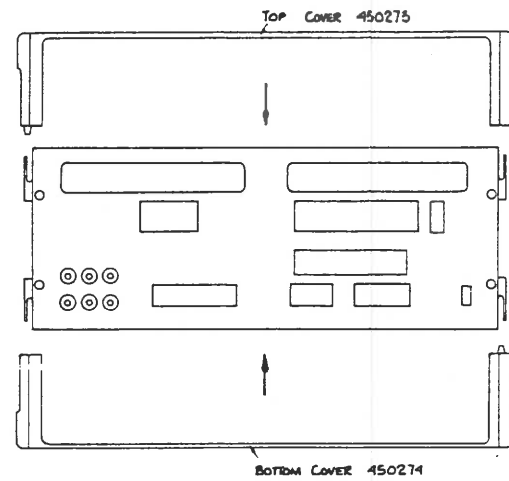
SEE SHEET 2 FOR LATEST ISSUE

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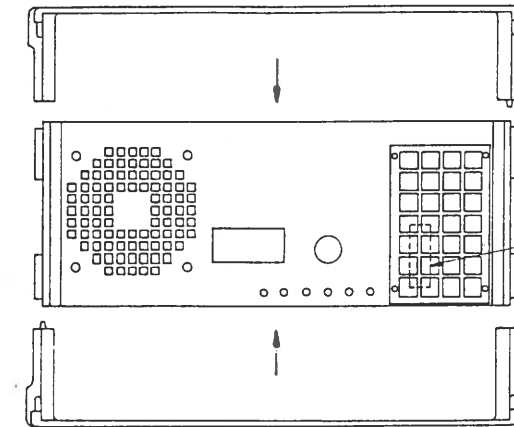
DATE 23 5 84	datron ELECTRONICS LTD
DRAWN JA	
CHECKED	TITLE 4200 ANALOG INTERFACE PCB. ASSY.
APPROVED	DRAWING NUMBER 400570
DATE	SHEET 4 OF 9

DRAWING No.
480436/480436A

ISS	CHANGES
	SEE SHEET 1
1	RELEASED 29-3-82
2	SEE SHT 1
3	SEE SHT 1
4	ECO 1487 400436 & 400460 DELETED 12-4-85
5	SEE SHT. 1
6	SEE SHT. 1
7	SEE SHT. 1
8	SEE SHT. 1
9	SEE SHT. 2
10	SEE SHT. 1
10.0	ECO 1588 UPDATED TO ENG. PROC. II
11	20.8.85
10.1	ECO 2103 LABEL 420058 ADDED
11	13.1.86

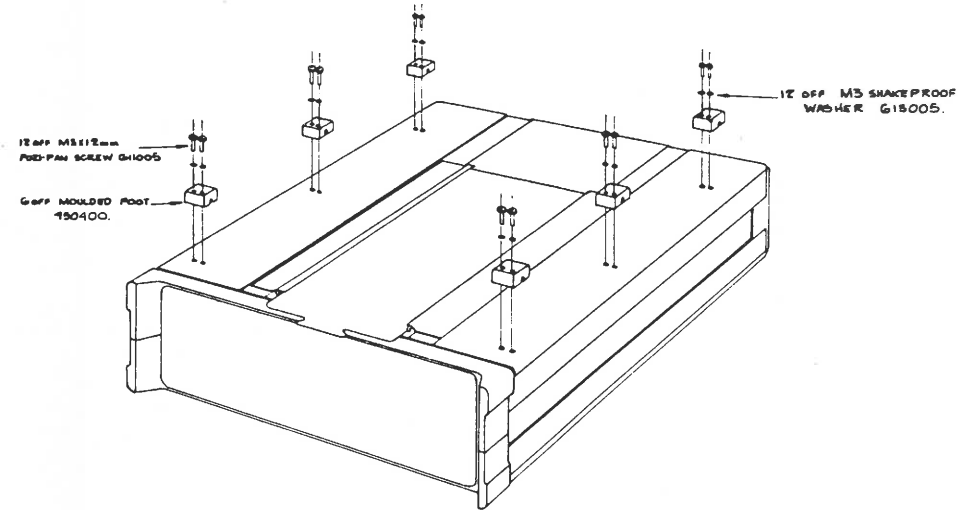
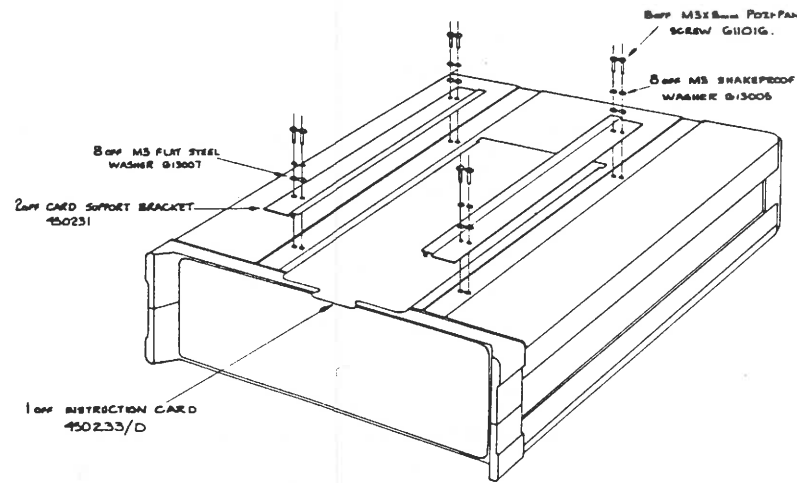


FIT M4x12mm SOCKET HEAD CSK SCREWS
G11058 IN 16 POSITIONS.



SERIAL/MOD. STATUS
LABEL 420058 TO BE
FITTED UNDER FILTER

FIT INTO CAL. & SERV. HANDBOOK :-
1 off 920058 3A 1 1/4" ANTISURGE FUSE
1 off G30109 2.5mm A/F HEX KEY
2 off CAL. SWITCH KEYS (FROM REAR PANEL ASSY)



datron
ELECTRONICS
LIMITED
NORWICH

DRAWN B. JACKSON	DATE 5-2-82	DIMENSIONS IN MILLIMETRES	TOLERANCES DECIMAL TO 2 PLACES ± 0.1mm DECIMAL TO 1 PLACE ± 0.2mm WHOLE DIMENSIONS ± 0.4mm ANGULAR ± 30"
CHECKED [Signature]	DATE 16-4-82	SCALE	UNLESS OTHERWISE STATED FIRST ANGLE PROJECTION
APPR. B. JACKSON	DATE 29-4-82	NOT TO BE SCALED	

MATERIAL	—
FINISH	—

ASSY DRG	—
PARTS LIST	400436(A)
CIRCUIT DIAGRAM	430436(A)
CHECK PROCEDURE	460436(A)
CHECK LIST	470436(A)

TITLE	4000/4000A MAIN ASSEMBLY
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DRAWING No.
480436
480436A
SHEET 3 OF 3

DRAWING No.
480436
480436A

FIRST USED ON

THIRD ANGLE PROJECTION

DRAWN IN ACCORDANCE WITH BS 308

ALL BURRS TO BE REMOVED

NOTES

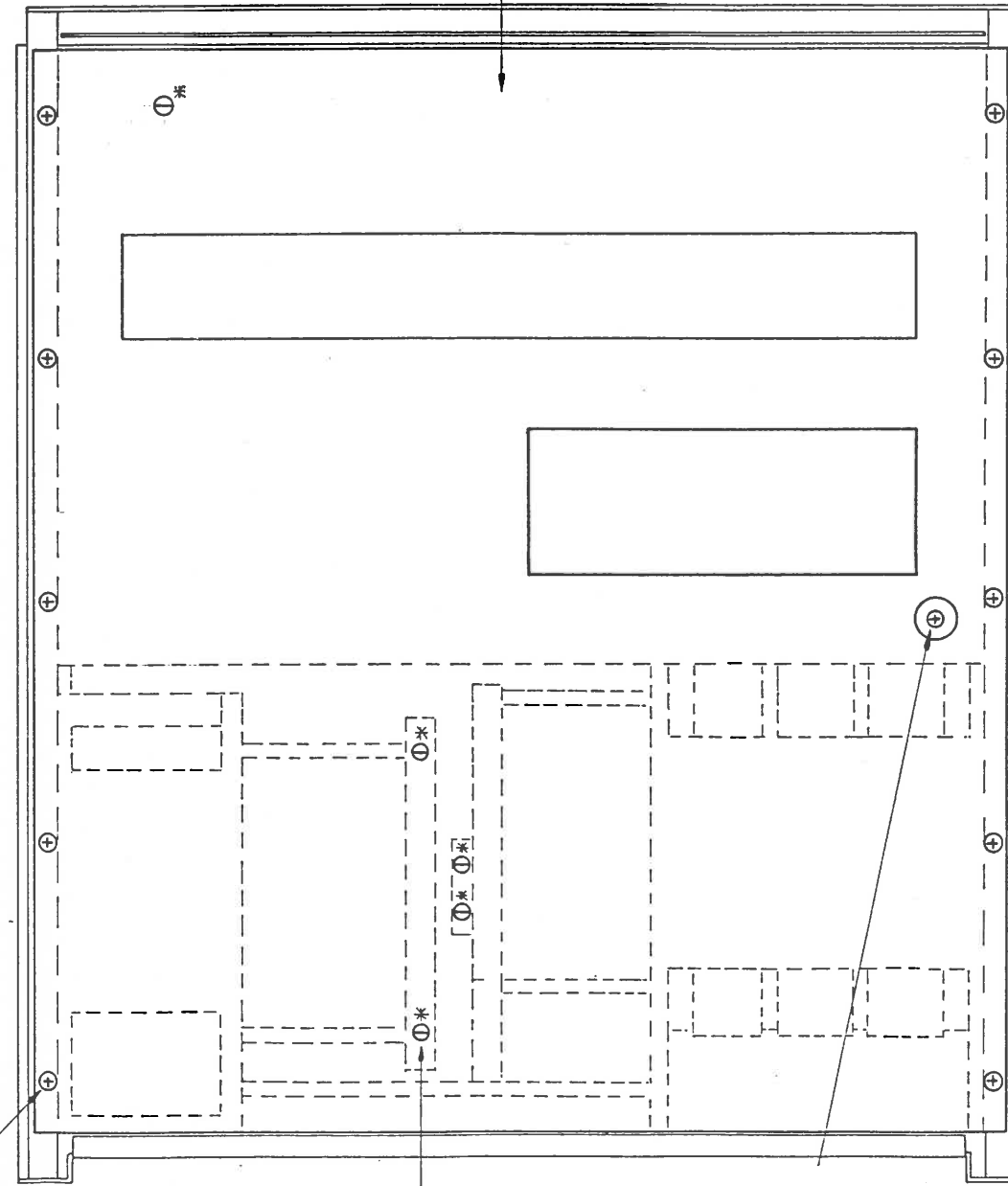
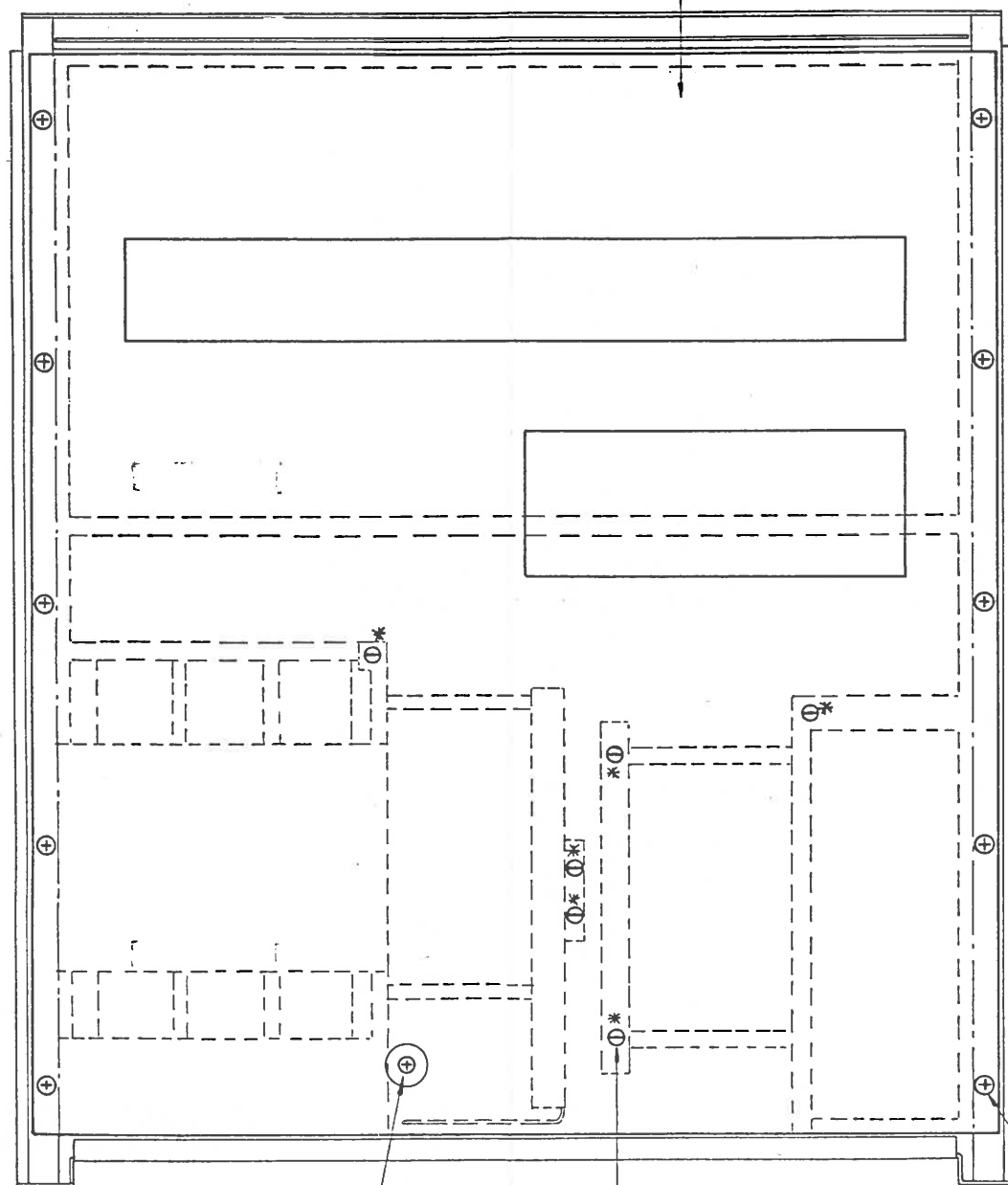
IT IS MORE DIFFICULT TO ASSEMBLE THE BOTTOM EARTH GUARD SHEET. IT FITS IN AN IDENTICAL MANNER BUT CARE MUST BE TAKEN TO ENSURE THAT NO CABLES ARE TRAPPED.

TOP EARTH GUARD ASSY
HAS 3 PCB RETAINING BARS.



TOP EARTH GUARD ASSEMBLY

BOTTOM EARTH GUARD ASSEMBLY



M3x12mm POZI-PAN SCREW G11005
M3 SHAKEPROOF WASHER G13005

FIT M3x6mm SLOTTED PAN SCREW G1107G
IN 6 POSITIONS MARKED *

FIT M4x8mm POZI-DRY SCREWS
G1105B IN 20 POSITIONS.

FIT M3x6mm SLOTTED PAN SCREW G1107G. IN 5 POSITIONS MARKED *.
M3x12mm POZI-PAN SCREW G11005
M3 SHAKEPROOF WASHER G13005

ISS.	CHANGES
	SEE SHEET 1.
1	RELEASED. 23-3-82
2	SEE SHT 1
3	SEE SHT 1
4	ECO 1467. BJ 400459 & 460 DELETED. 12-1-83.
5	SEE SHT. 1
6	SEE SHT. 1
7	SEE SHT. 1
8	SEE SHT. 1.
9	ECO 1666, 1677. 6mm SLOTTED PAN. SCREWS WERE POZI-PAN BJ. 25-7-84
10	SEE SHEET 1
10-0	ECO. 1988 UPDATED TO ENG PROC. 11 11. 20.8.85

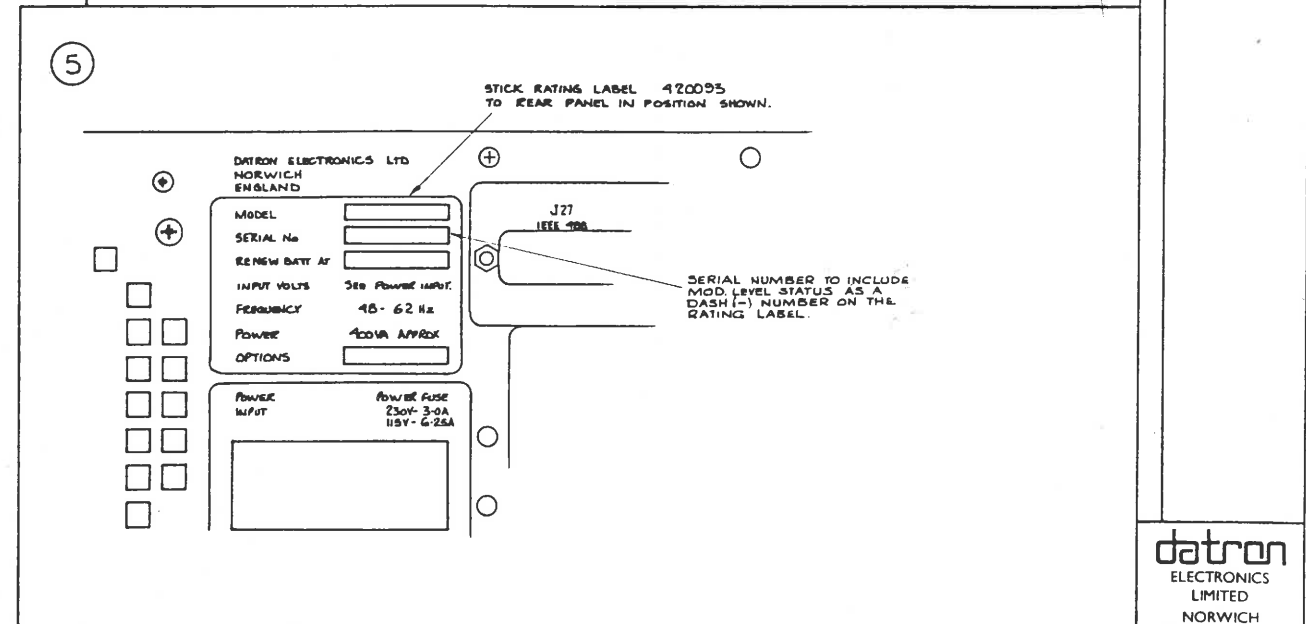
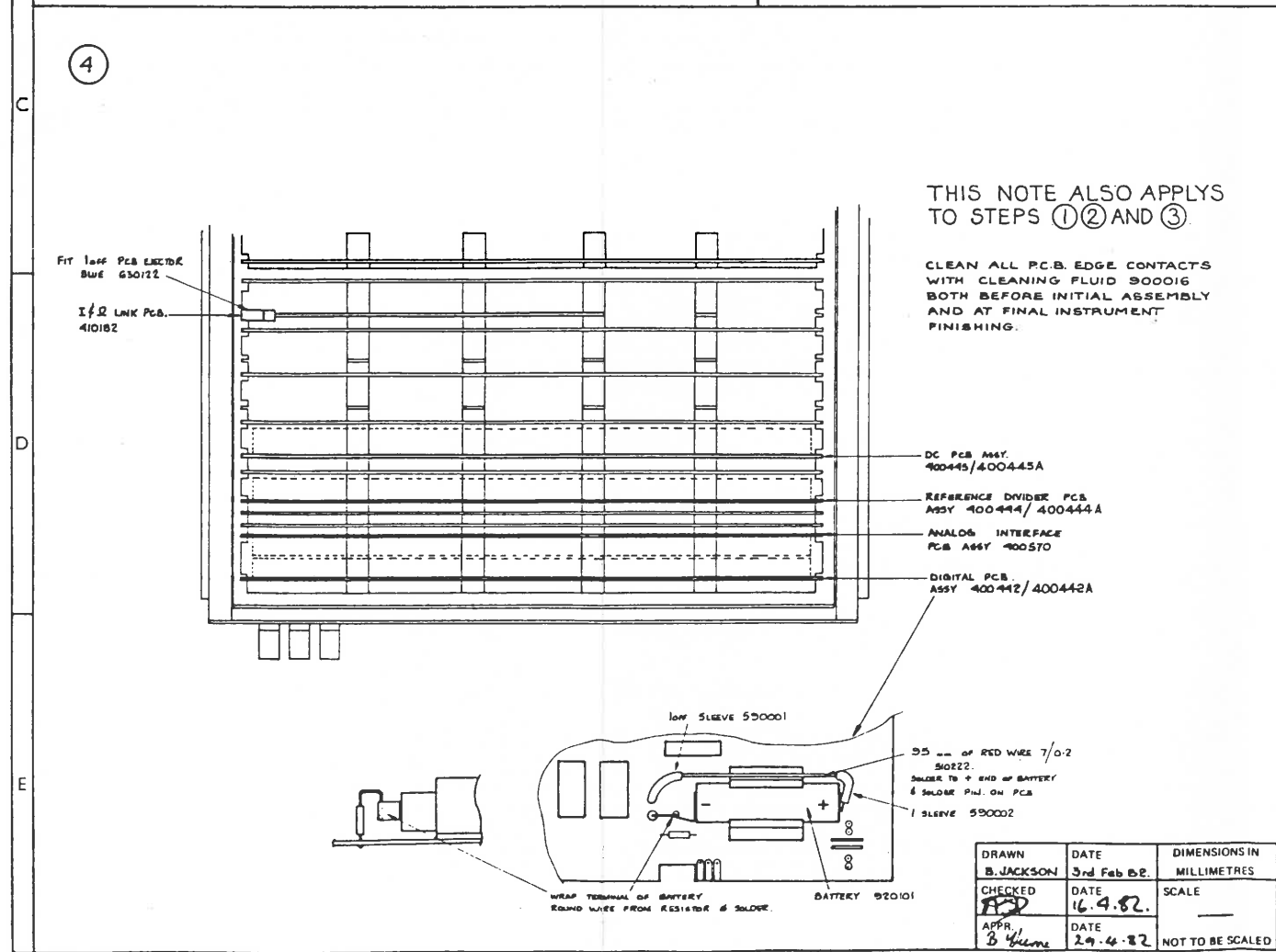
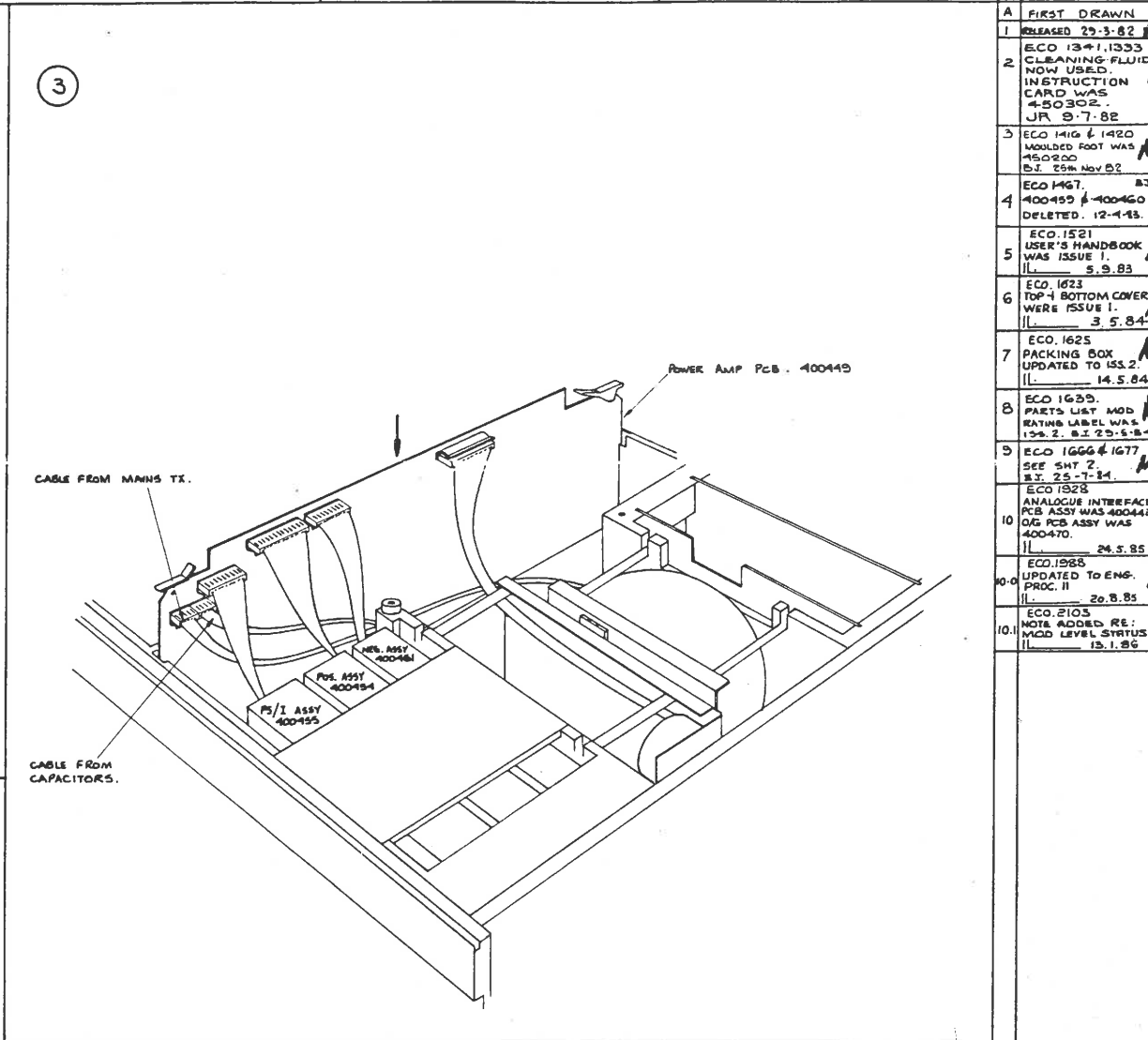
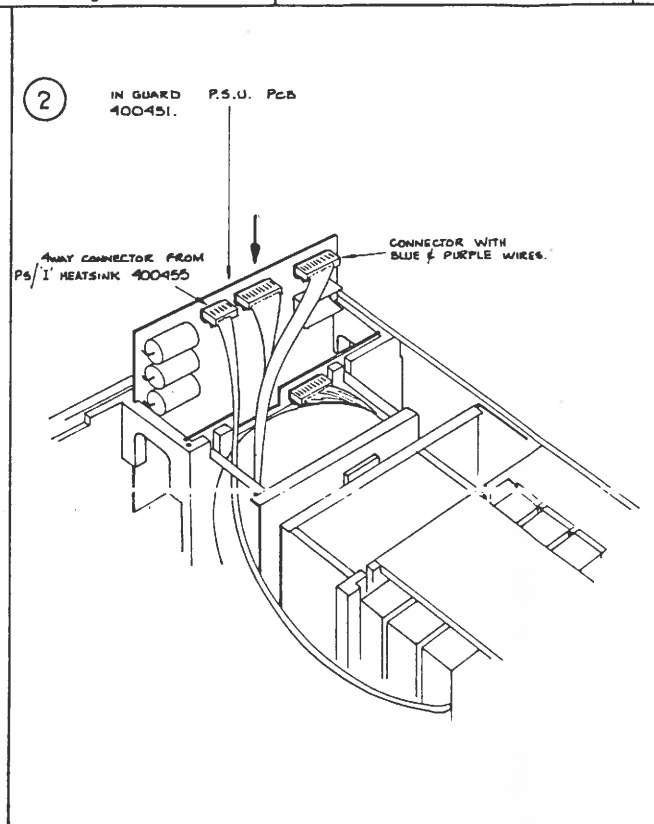
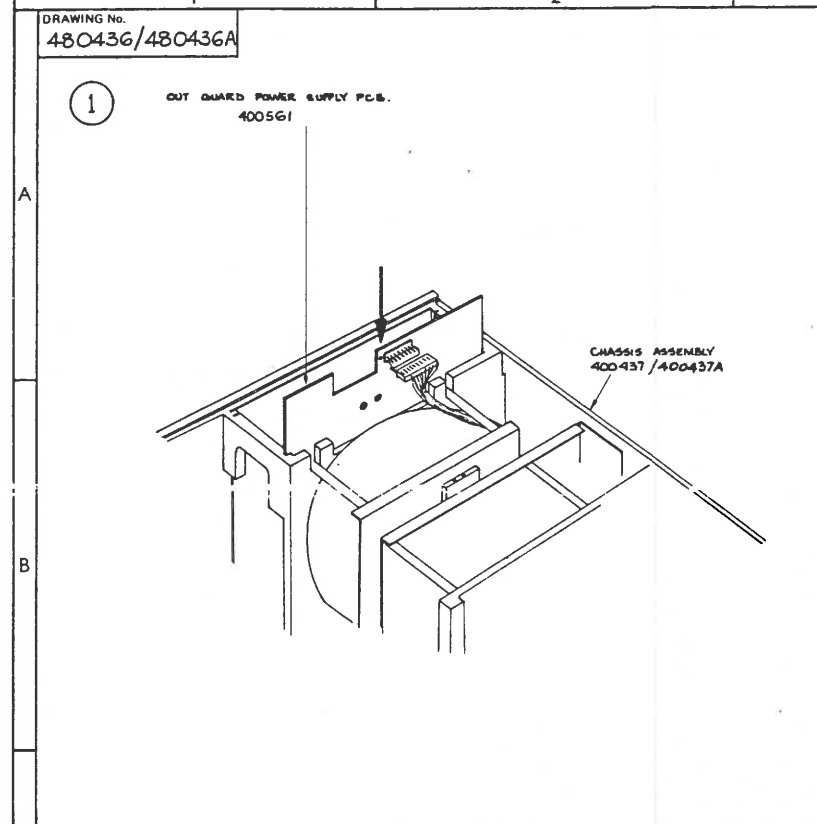
DRAWN B. JACKSON	DATE 3rd Feb 82	DIMENSIONS IN MILLIMETRES	METRIC DIMENSIONS ANGULAR $\pm 1'$ DECIMAL TO 2 PLACES ± 0.1 mm DECIMAL TO 1 PLACE ± 0.2 mm WHOLE DIMENSIONS ± 0.4 mm UNLESS OTHERWISE STATED	MATERIAL —
CHKD MSD	DATE 16.4.82	SCALE —		FINISH —
APPD. B. Home	DATE 29.4.82	NOT TO BE SCALED		

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TITLE
4000 MAIN ASSEMBLY
4000A

DRAWING No.
480436
480436A

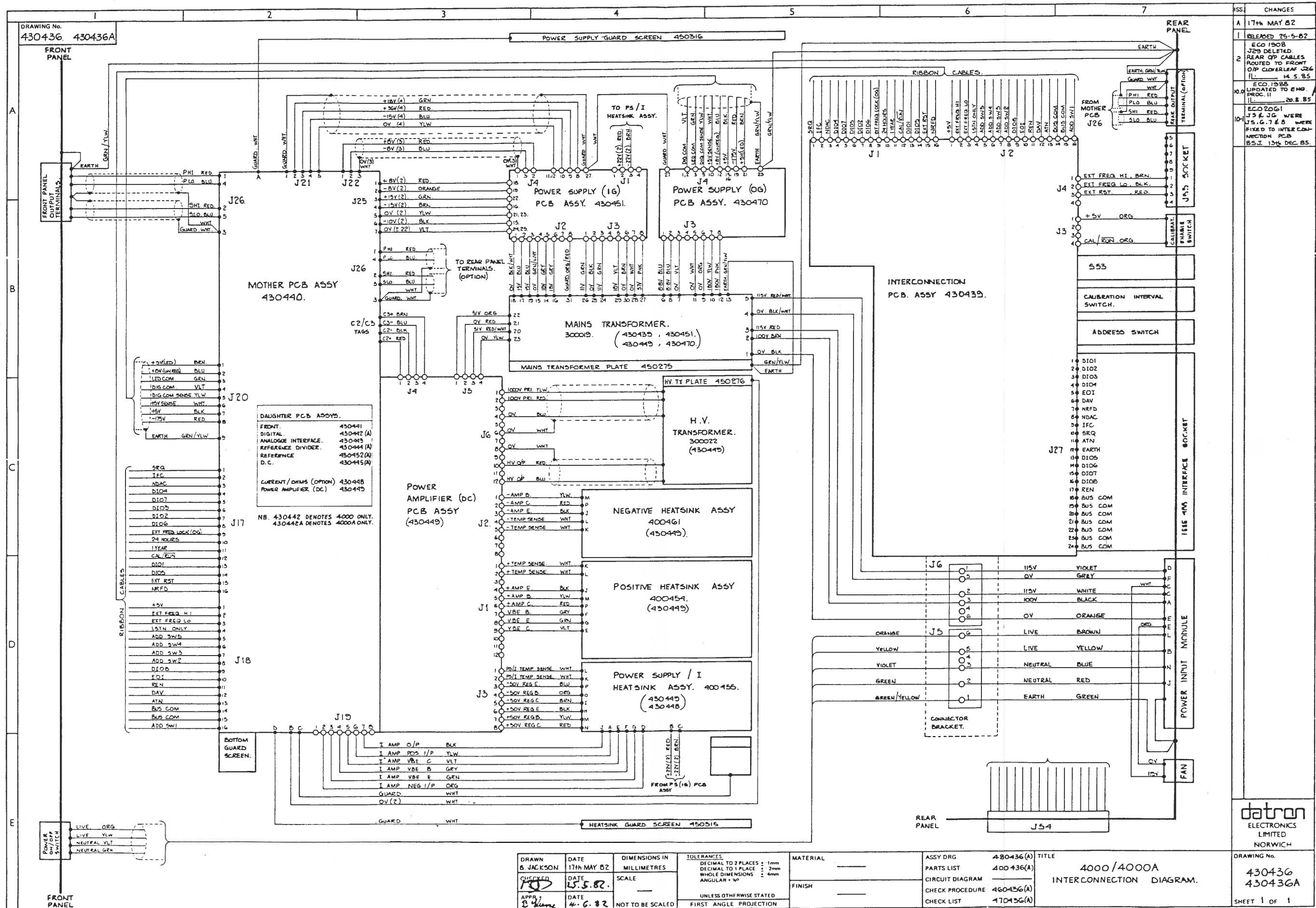
DRAWING SIZE A2	SHEET 2 OF 3
--------------------	-----------------



ISS	CHANGES
A	FIRST DRAWN
1	RELEASED 27-3-82
2	ECO 1341, 1333 CLEANING FLUID NOW USED. INSTRUCTION CARD WAS 4-50302. JFA 9-7-82
3	ECO 1416 & 1420 MOULDED FOOT WAS 450200 B.I. 23rd Nov 82
4	ECO 1467, 400459 & 400460 DELETED. 12-1-83
5	ECO 1521 USER'S HANDBOOK WAS ISSUE 1. I.L. 5-9-83
6	ECO 1623 TOP & BOTTOM COVERS WERE ISSUE 1. I.L. 3-5-84
7	ECO 1625 PACKING BOX UPDATED TO ISS.2. I.L. 14-5-84
8	ECO 1639 PARTS LIST MOD. RATINGS LABEL WAS 12-2-83. B.I. 25-5-84
9	ECO 1666 & 1677 SEE SMT 2. B.I. 25-7-84
10	ECO 1828 ANALOGUE INTERFACE PCB ASSY WAS 400444. O.G. PCB ASSY WAS 400470. I.L. 24-5-85
10	ECO 1885 UPDATED TO ENG. PROC. II I.L. 20-8-85
10	ECO 2103 NOTE ADDED RE: MOD LEVEL STATUS I.L. 13-1-86

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DRAWING No.	480436 480436A
TITLE	4000/4000A MAIN ASSEMBLY
SHEET 1 OF 3	

DRAWN B. JACKSON	DATE 3rd Feb 82	DIMENSIONS IN MILLIMETRES	TOLERANCES DECIMAL TO 2 PLACES : 1mm DECIMAL TO 1 PLACE : 2mm WHOLE DIMENSIONS : 4mm ANGULAR : 30°	MATERIAL	ASSY DRG	TITLE
CHECKED B. JACKSON	DATE 16.4.82	SCALE	UNLESS OTHERWISE STATED FIRST ANGLE PROJECTION	FINISH	PARTS LIST 400436 (A) CIRCUIT DIAGRAM 430436 (A) CHECK PROCEDURE 460436 (A) CHECK LIST 470436 (A)	4000/4000A MAIN ASSEMBLY
APPR. B. JACKSON	DATE 29.4.82	NOT TO BE SCALED				



DRAWING No. 430436 430436A

REV	CHANGES
A	17th MAY 82
1	RELEASED 25-5-82
2	ECO 1908 J26 DELETED REAR QP CABLES ROUTED TO FRONT QP COVER LEAF J26 14.5.85
10.0	ECO 1988 UPDATED TO ENG PROC. II 20.8.85
10.1	ECO 2061 J5 & J6 WERE 15.6.78 B WERE FIXED TO INTER CONNECTION PCB 8.5.134 DEC.85.

DAUGHTER PCB ASSYS.
 FRONT. 430441
 DIGITAL. 430442 (A)
 ANALOGUE INTERFACE. 430443
 REFERENCE DIVIDER. 430444 (A)
 REFERENCE D.C. 430452 (A)
 430445 (A)
 CURRENT/OHMS (OPTION) 430448
 POWER AMPLIFIER (DC) 430449
 NB. 430442 DENOTES 4000 ONLY.
 430442A DENOTES 4000A ONLY.

DRAWN B. JACKSON	DATE 17th MAY 82	DIMENSIONS IN MILLIMETRES	TOLERANCES DECIMAL TO 2 PLACES ± 1mm DECIMAL TO 1 PLACE ± 2mm WHOLE DIMENSIONS ± 4mm ANGULAR ± 30°	MATERIAL	ASSY DRG 430436(A)	TITLE 4000/4000A INTERCONNECTION DIAGRAM.	DRAWING No. 430436 430436A
CHECKED D. YOUNG	DATE 15.5.82		UNLESS OTHERWISE STATED FIRST ANGLE PROJECTION	FINISH	PARTS LIST 400436(A)		SHEET 1 of 1
APPR D. YOUNG	DATE 4.6.82	NOT TO BE SCALED			CHECK PROCEDURE 460436(A)		
					CHECK LIST 470436(A)		

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DRAWING No.
480439
FIRST USED ON
4000

THIRD ANGLE PROJECTION

DRAWN IN ACCORDANCE WITH BS 308

ALL BURRS TO BE REMOVED

NOTES

ISS.	CHANGES
5	5-8-81.
1	29th MAR 82 RELEASED
2	ECO 1466 B.J. CI ADDED. 11-4-83
2-0	ECO 1958 UPDATED TO ENG. PROC II B.J. 4th JULY 85.
3-0	ECO 2061 MAINS CONNECTOR BRKT. ADDED. JS-J8 NOT FITTED. 15J. 2nd DEC. 85.

1 OFF PCB DATRON PART NO 410167-3

TOP VIEW

NOTE SOLDER STANDOFF TO P.C.B. 3 POSITIONS

2 OFF M3X4 STANDOFFS DATRON PART NO 612004 FITTED TO UNDERSIDE OF P.C.B.

* 2 OFF 6mm CLEAR STANDOFFS DATRON PART NO 614003

2 OFF M3X6 STANDOFFS DATRON PART NO 612008

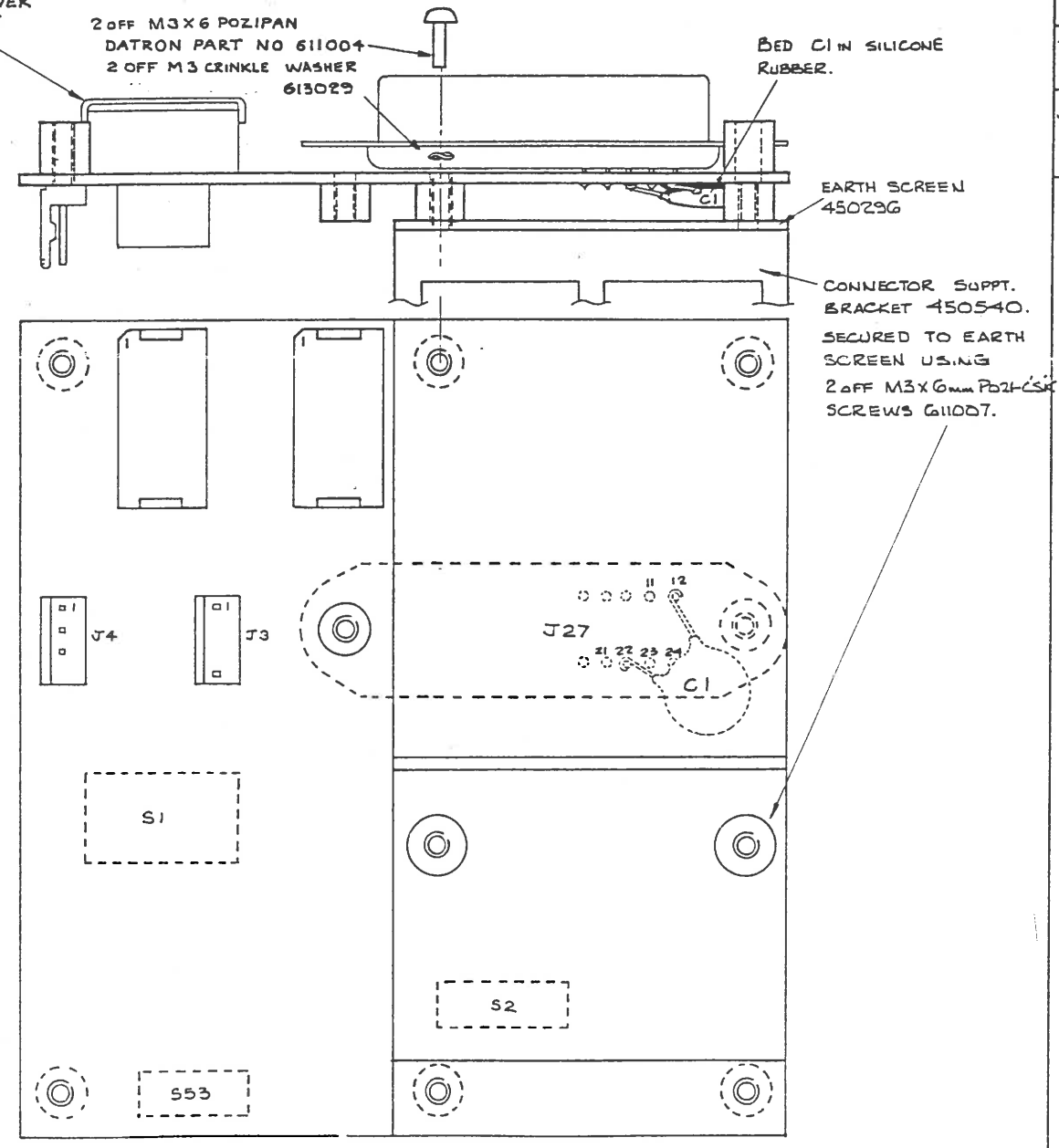
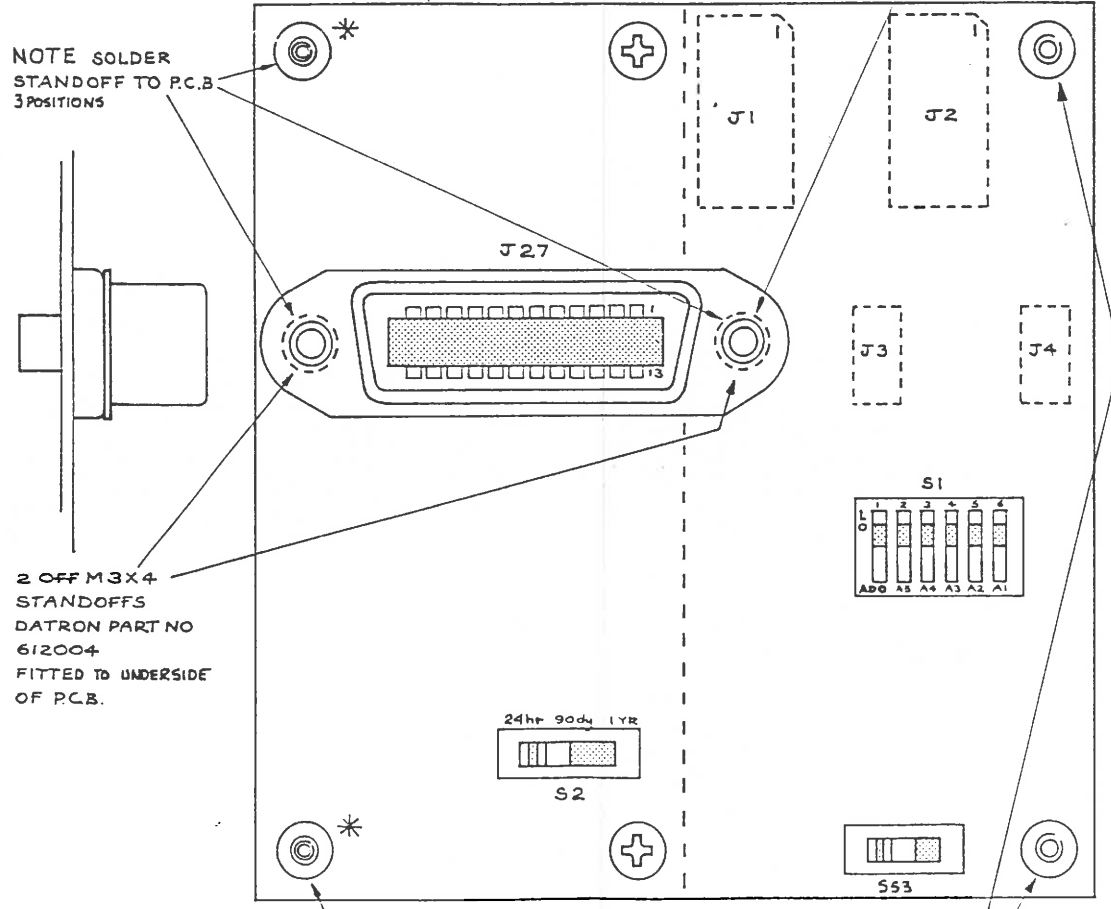
SWITCH COVER 700047

2 OFF M3X6 POZIPAN DATRON PART NO 611004
2 OFF M3 CRINKLE WASHER 613029

BED CI IN SILICONE RUBBER.

EARTH SCREEN 450296

CONNECTOR SUPPT. BRACKET 450540. SECURED TO EARTH SCREEN USING 2 OFF M3X6mm PDZ-CSR SCREWS 611007.

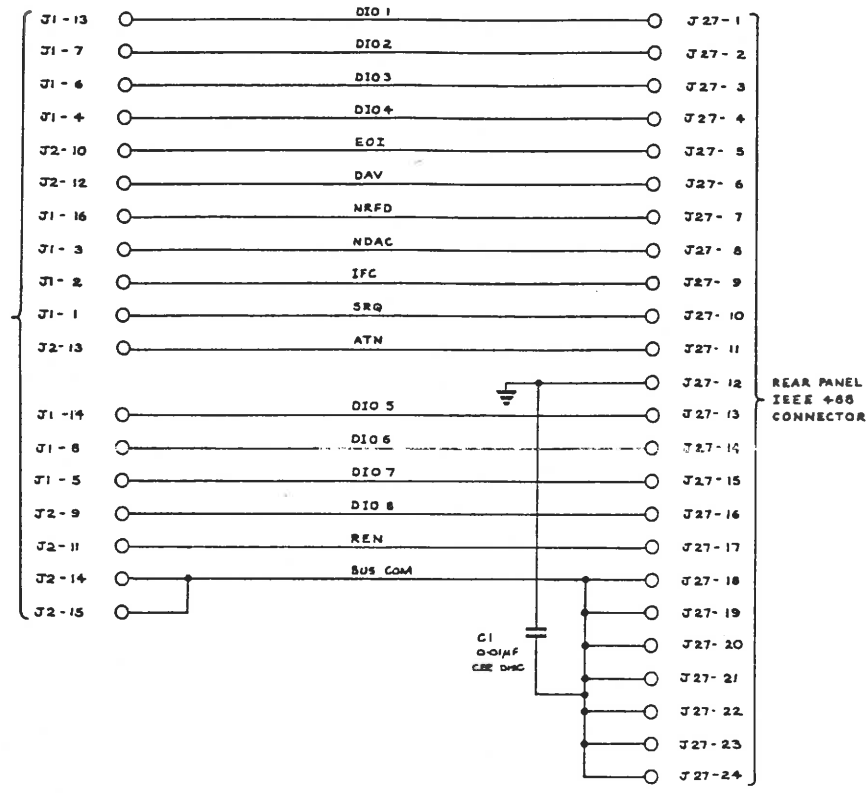


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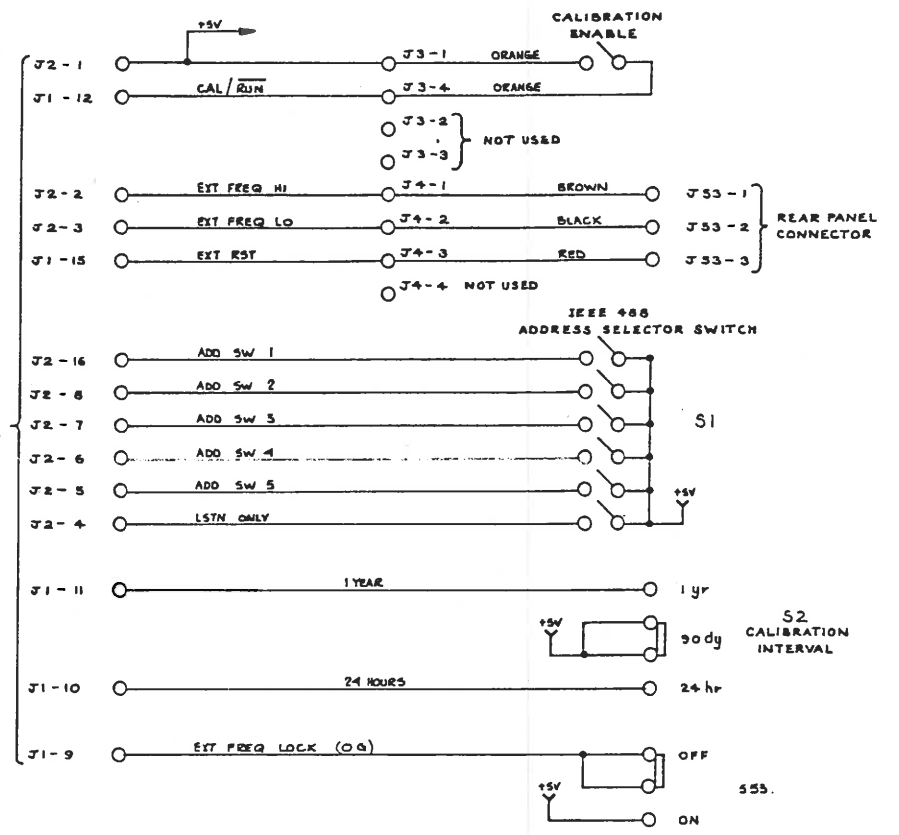
DRAWN J.R.	DATE 24. 7. 81.	DIMENSIONS IN MILLIMETRES	TOLERANCES DECIMAL TO 2 PLACES ± .1mm DECIMAL TO 1 PLACE ± .2mm WHOLE DIMENSIONS ± .4mm ANGULAR ± 30'	MATERIAL _____	ASSY DRG 480439	TITLE	DRAWING No.
CHECKED <i>[Signature]</i>	DATE 29. 3. 82	SCALE 2:1	UNLESS OTHERWISE STATED THIRD ANGLE PROJECTION	FINISH _____	PARTS LIST 400439	4000 INTERCONNECTION PCB ASSY	480439
APPR. 3 <i>[Signature]</i>	DATE 2. 4. 82	NOT TO BE SCALED			CIRCUIT DIAGRAM 430439		

DRAWING No.
430439

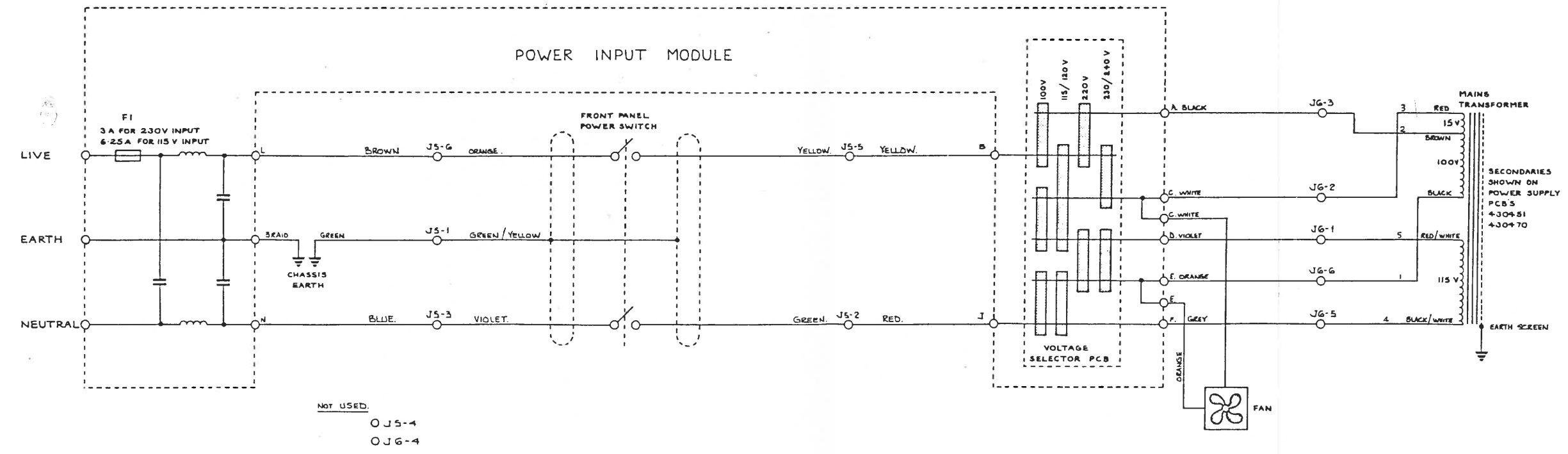
A
B
C
D
E



J1 TO J17
J2 TO J18
MOTHER PCB
430440



POWER INPUT MODULE

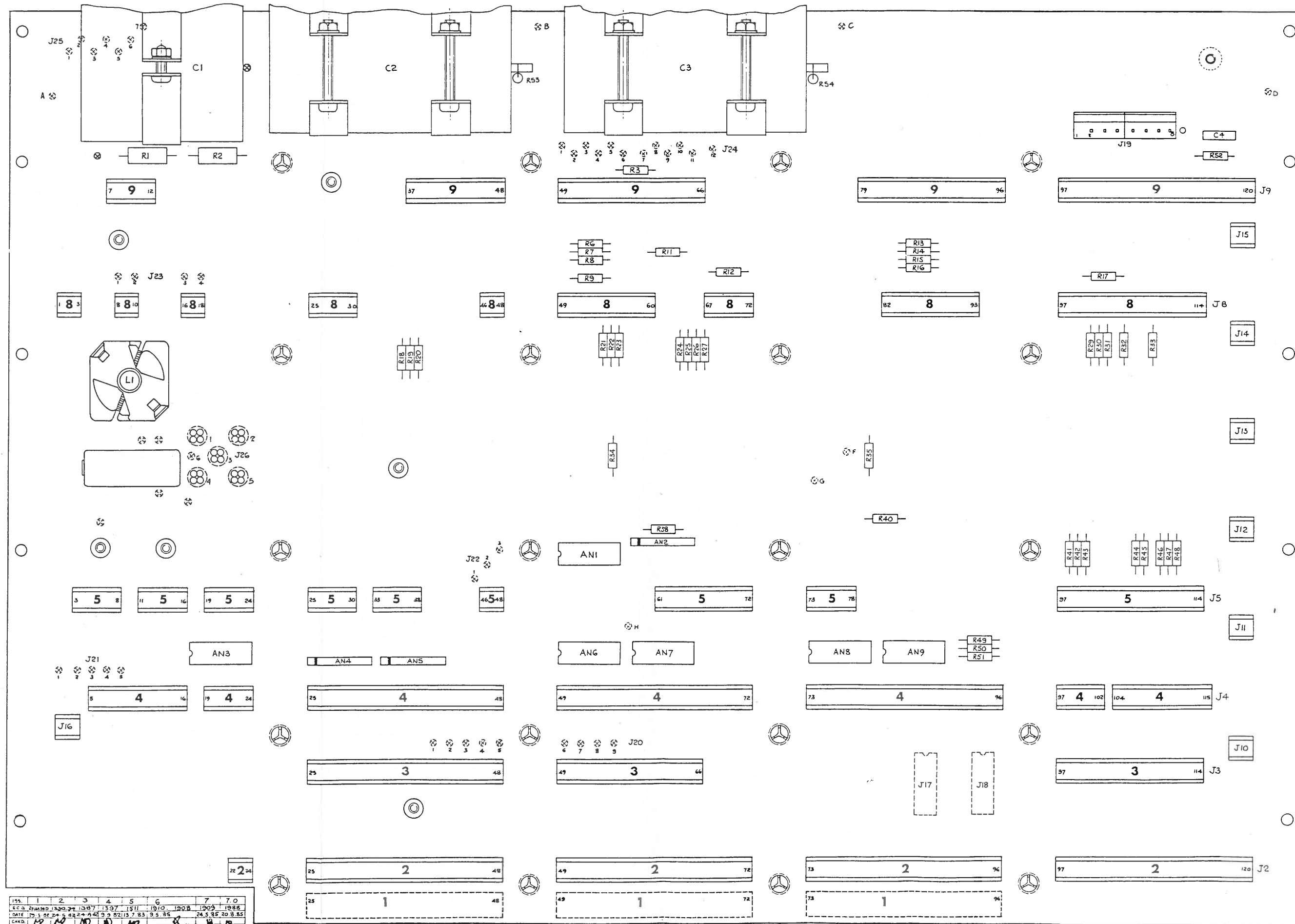


NOT USED
O J5-4
O J6-4

ISS.	CHANGES
B	5-8-81
1	29th MAR 82 RELEASED. 81.
2	C1 ADDED. ECO 1966 BJ. 14th APRIL 83.
3	ECO 1958 2-0 UPDATED TO ENVS. PROC II. BJ. 4th JULY 85.
3-0	ECO 2061 J5 & J6 WITH J5, 6, 7 & 8. B.S.J. 3rd DEC 85.

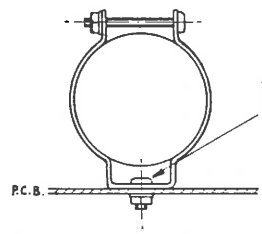
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DRAWN <i>[Signature]</i>	DATE 30.7.81	DIMENSIONS IN MILLIMETRES	TOLERANCES DECIMAL TO 3 PLACES : 1mm DECIMAL TO 1 PLACE : 2mm WHOLE DIMENSIONS : 4mm ANGULAR : 30°	MATERIAL	ASSY DRG PARTS LIST	TITLE 4000 INTERCONNECTION PCB	DRAWING No. 430439
CHECKED <i>[Signature]</i>	DATE 1.8.82	SCALE	UNLESS OTHERWISE STATED FIRST ANGLE PROJECTION	FINISH	CIRCUIT DIAGRAM CHECK PROCEDURE CHECK LIST		SHEET 1 OF 1
APPR. <i>[Signature]</i>	DATE 2.8.82	NOT TO BE SCALED					



DRAWING No.
480440

SCREW M3x10mm POZI-PAN G11006
NUT M3 FULL HEX G15002
WASHER M3 SHAKE PROOF G13005
1 off CAPACITOR CLIP G30131



TYPICAL CAPACITOR CLIP MOUNTING (C1, C2 + C3)

4 off SCREW M3x36mm POZI-PAN G11006
4 off NUT M3 FULL HEX G15002
4 off WASHER M3 SHAKEPROOF G13005
4 off CAPACITOR CLIP G30115

SCREW M3x8 POZI-PAN G11016
NUT M3 HEX FULL G15002
WASHER M3 CRINKLE G13025

TWIST BLUE AND BROWN WIRES TOGETHER AND BLACK + RED WIRES TOGETHER. APPROX ONE TWIST PER 25mm LENGTH.

24/0.2 BLUE WIRE TOP TERMINAL (-VE) 240mm (530666)
24/0.2 BROWN WIRE BOTTOM TERMINAL (+VE) 240mm (530111)
24/0.2 BLACK WIRE TOP TERMINAL (-VE) 350mm (530000)
24/0.2 RED WIRE BOTTOM TERMINAL (+VE) 350mm (530222)

SLEEVE TWISTED PAIRS USING 2 PIECES OF HEATSHRINK SLEEVE Ø3.5 x 20mm. 990025.

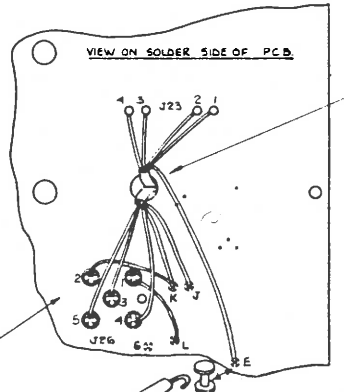
R53 & R54 SOLDERED ACROSS TERMINALS OF C2 & C3 AS ABOVE.

M3x8mm SWAGE STANDOFF G12013 MOUNTED ON UNDERSIDE OF PCB. SOLDER TO PCB.

WIRES FROM C1 SOLDERED TO 2 off SOLDER PINS G20003 & SLEEVED WITH 2 off SLEEVES 590001. (As shown)

5 off CLOVERLEAF TERMINAL G20005 FITTED FROM UNDERSIDE OF PCB.

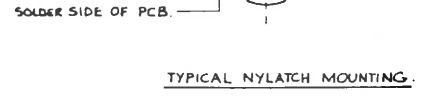
- MIN. WIRE LENGTH (I)
- J25-4 - BROWN 40mm
 - J25-3 - BLUE 40
 - J25-2 - WHITE 40
 - J25-1 - RED 40
 - PIN E - YELLOW 40
 - PIN K - WHITE 40
 - PIN J - RED 40
 - J26-3 - YELLOW 45
 - J26-6 - BROWN 45
 - J26-4 - BLUE 45



LINK J26-1 To PIN L
LINK J26-2 To PIN K
WITH 7/8 WHITE PIPE WIRE G12005

ALL WIRE JOINTS ON BOTTOM OF PCB MUST BE AS SHOWN WITHOUT SLEEVING.

20 off NYLATCH GROMMET G17010
20 off NYLATCH PLUNGER G17011



TYPICAL NYLATCH MOUNTING.

6 off M5x4mm STANDOFF G12004

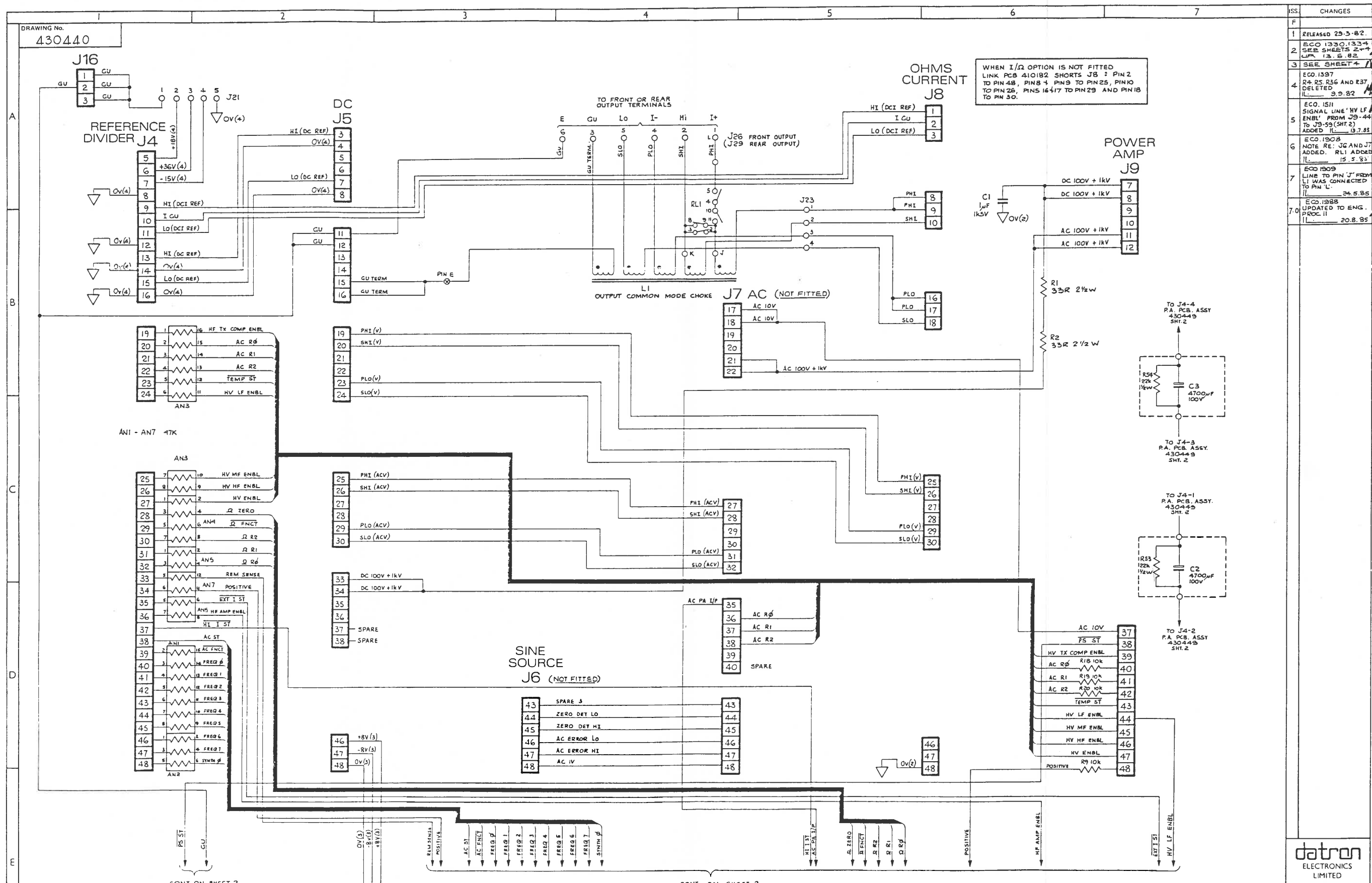
49 off SOLDER TURRET MOUNTED FROM UNDERSIDE (SOLDER SIDE) OF PCB G20006.

N.B. SEE SHEET 2 FOR COMPONENT REFERENCES.

ISS	CHANGES
C	
1	RELEASED 29.1.82
2	ECO 1330, 1334, J27 (+ HARWIN PINS) DELETED. J8 WAS 24 WAY CONNECTOR. CABLE DELETED + SOLDER TURRETS F6+H. JFR 24.5.82
3	ECO 1387 J1 PINS 15 TO 17 DELETED. J1 WAS 6 OFF IEWAY MOLEX PCB WAS ISS 5. JFR 24.8.82
4	ECO 1397 R4, R5, R36 + R37 DELETED. IL 9.9.82
5	ECO 1511 RIO DELETED. LINK BETWEEN J9 PIN 44 AND 39 ADDED. IL 12.7.82
6	ECO 1510 J6 AND J7 REMOVED. IL 3.5.85 ECO 1908 PCB WAS ISS. G NO OF CLOVERLEAFS WAS 10. NO OF SOLDER PINS WAS 47. RLI ADDED. IL 13.5.85
7	ECO 1909 WIRE TO SOLDER PIN J WAS CONNECTED TO PIN L. IL 24.5.85
7.0	ECO 1988 UPDATED TO ENG. PROC. II. IL 20.8.85
7.1	ECO 2030 HEATSHRINK SLEEVE ADDED TO J26 WIRE (NOW TWISTED PAIRS) IL 9.10.85

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DRAWN	DATE	DIMENSIONS IN	TOLERANCES	MATERIAL	ASSY DRG	TITLE	DRAWING No.
CHECKED	DATE	MILLIMETRES	DECIMAL TO 3 PLACES : 1mm DECIMAL TO 1 PLACE : 2mm WHOLE DIMENSIONS : 4mm ANGULAR : 30°		PARTS LIST	4000 MOTHER PCB ASSY.	480440
APPR	DATE	SCALE	UNLESS OTHERWISE STATED FIRST ANGLE PROJECTION	FINISH	CIRCUIT DIAGRAM		
		1:1			CHECK PROCEDURE		
		NOT TO BE SCALED			CHECK LIST		

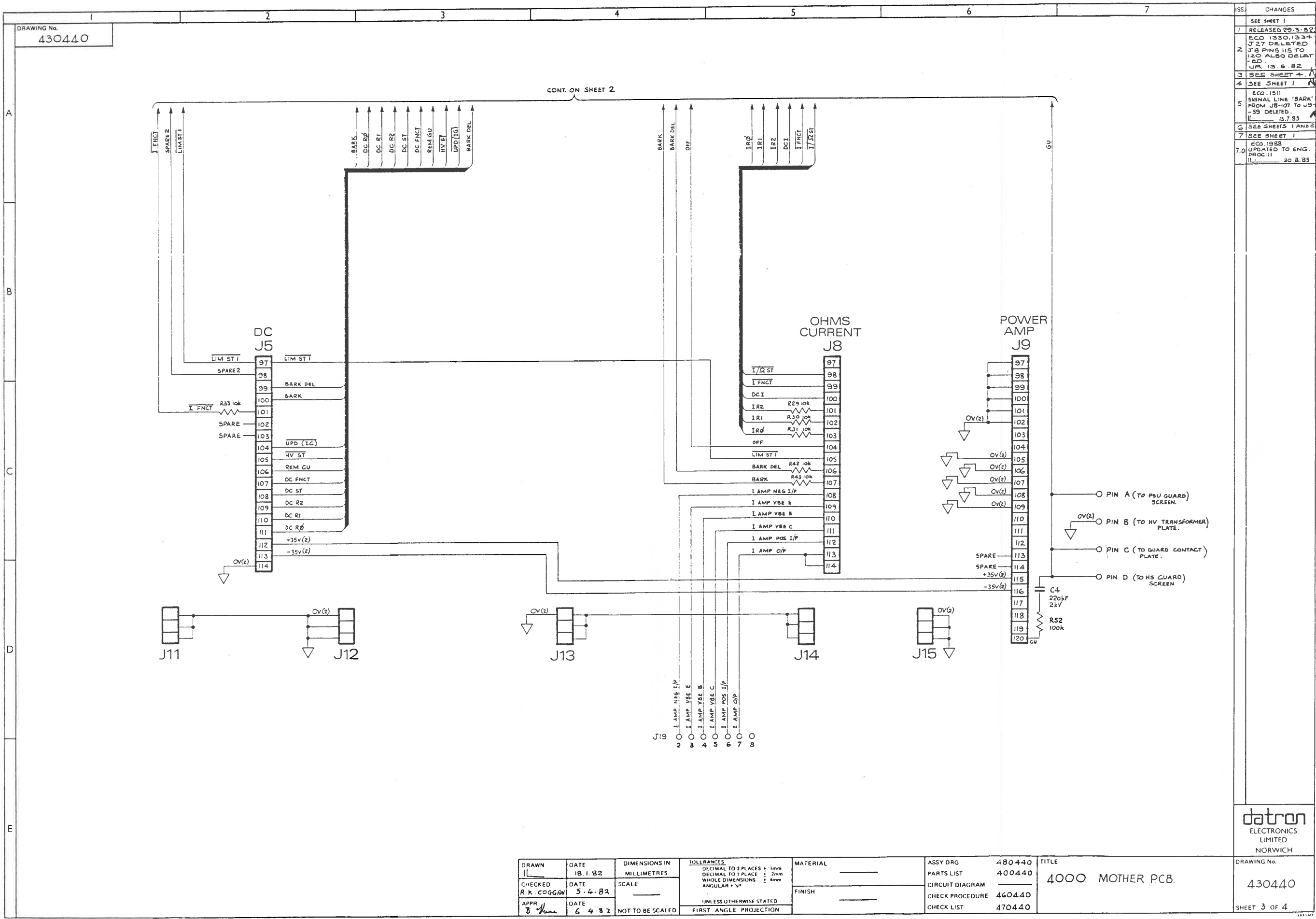


WHEN I/O OPTION IS NOT FITTED
LINK PCB 410182 SHORTS J8 + PIN 2
TO PIN 48, PINS 4 + PINS 9 TO PIN 25, PIN 10
TO PIN 26, PINS 16+17 TO PIN 29 AND PIN 18
TO PIN 30.

ISS.	CHANGES
1	RELEASED 25.5.82.
2	ECO 1330, 1334 SEE SHEETS 2-4 CPLD 13.5.82
3	SEE SHEET 4
4	ECO 1397 R4, R5, R36 AND R37 DELETED 11.9.82
5	ECO 1511 SIGNAL LINE 'HV LF ENBL' FROM J9-44 TO J9-59 (SHT 2) ADDED 'L' 13.7.85
6	ECO 1508 NOTE RE: J6 AND J7 ADDED. R11 ADDED 11.5.83
7	ECO 1509 LINE TO PIN 'J' FROM L1 WAS CONNECTED TO PIN 'L' 24.5.85
7.0	ECO 1588 UPDATED TO ENG. PROC. II 20.8.85

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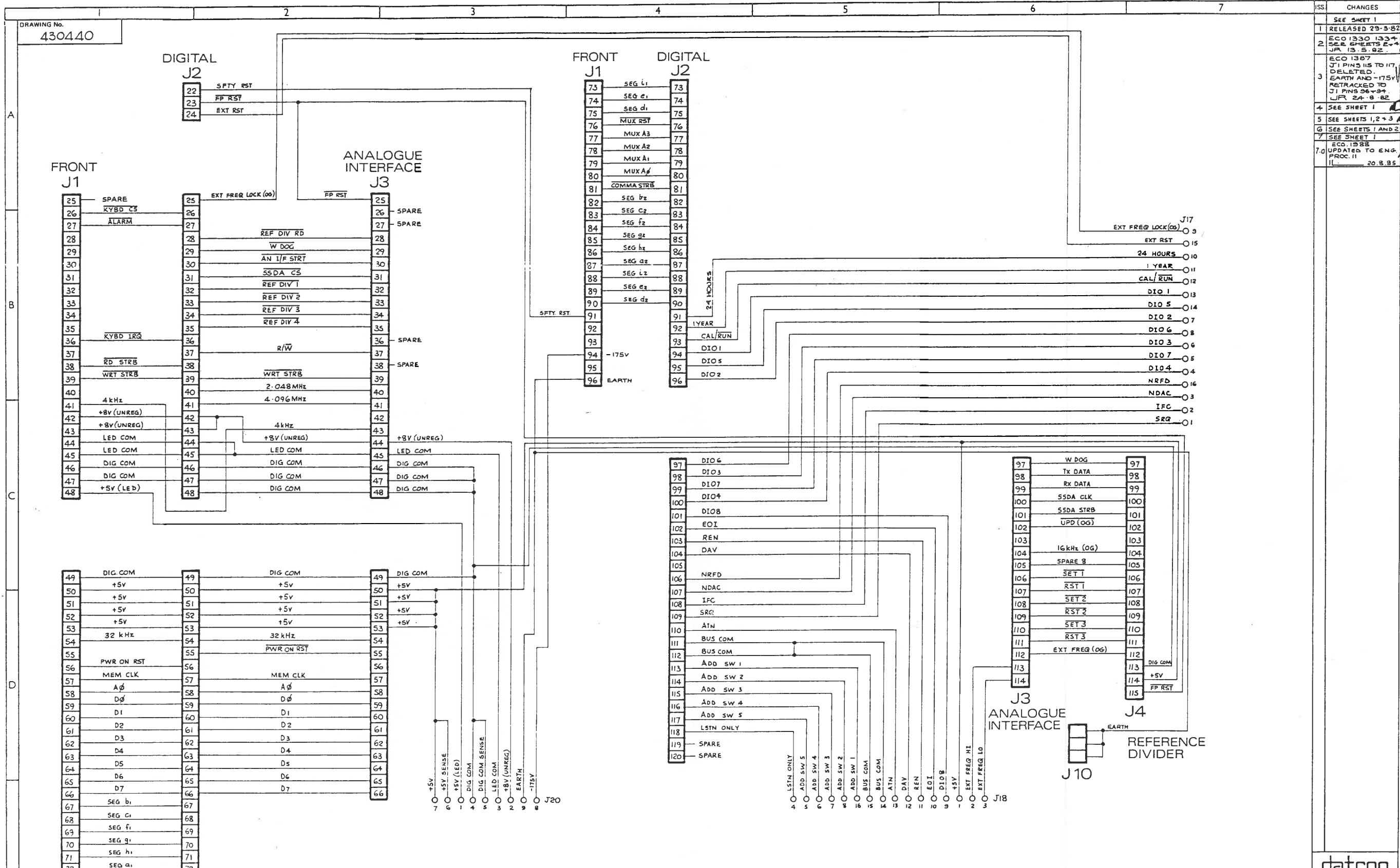
DRAWN 11	DATE 18.1.82	DIMENSIONS IN MILLIMETRES	TOLERANCES DECIMAL TO 2 PLACES : ±1mm DECIMAL TO 1 PLACE : ±2mm WHOLE DIMENSIONS : ±4mm ANGULAR : ±30'	MATERIAL	ASSY DRG 480440	TITLE 4000 MOTHER PCB	DRAWING No. 430440
CHECKED R.K. COGGAN	DATE 5.4.82	SCALE	UNLESS OTHERWISE STATED FIRST ANGLE PROJECTION	FINISH	PARTS LIST 400440		SHEET 1 OF 4
APPR D. Hume	DATE 6.4.82	NOT TO BE SCALED			CHECK PROCEDURE 460440		
					CHECK LIST 470440		



ISS.	CHANGES
1	SEE SHEET 1
1	RELEASED 29.3.82
2	ECO 1330.1334 J27 DELETED J8 PINS 115 TO 120 ALSO DELETED UR 13.8.82
3	SEE SHEET 4
4	SEE SHEET 1
5	ECO 1511 SIGNAL LINE 'BARK' FROM J8-107 TO J9- 59 DELETED. IL: 13.7.83
6	SEE SHEETS 1 AND 2
7	SEE SHEET 1
7.0	ECO 1988 UPDATED TO ENG. PROC II IL: 20.8.85

DRAWN CHECKED APPR R.K. COGGAN B. Hume	DATE 18.1.82 5.4.82 6.4.82	DIMENSIONS IN MILLIMETRES SCALE NOT TO BE SCALED	TOLERANCES DECIMAL TO 2 PLACES ± 0.1mm DECIMAL TO 1 PLACE ± 0.2mm WHOLE DIMENSIONS ± 0.4mm ANGULAR ± 30° UNLESS OTHERWISE STATED FIRST ANGLE PROJECTION	MATERIAL FINISH	ASSY DRG 480440 PARTS LIST 400440 CIRCUIT DIAGRAM CHECK PROCEDURE 460440 CHECK LIST 470440	TITLE 4000 MOTHER PCB.	DRAWING No. 430440 SHEET 3 OF 4
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DRAWING No.
430440

ISS	CHANGES
1	SEE SHEET 1
2	RELEASED 23-3-82
3	ECO 1330 1334 SEE SHEETS 2-4 JPR 13.5.82
4	ECO 1337 J1 PINS 115 TO 117 DELETED. EARTH AND -175V RETRACTED TO J1 PINS 94-95 JPR 24.8.82
5	SEE SHEET 1
6	SEE SHEETS 1 AND 2
7	SEE SHEET 1
7.0	ECO 1588
11	UPDATED TO ENG. PROC. 11 20.8.85

DRAWN 18.1.82	DATE	DIMENSIONS IN MILLIMETRES	TOLERANCES DECIMAL TO 2 PLACES : 1mm DECIMAL TO 1 PLACE : 2mm WHOLE DIMENSIONS : 4mm ANGULAR : 30	MATERIAL	ASSY DRG 480440	TITLE	DRAWING No.
CHECKED R.K. COGGAN	DATE 5-4-82	SCALE	UNLESS OTHERWISE STATED FIRST ANGLE PROJECTION	FINISH	PARTS LIST 400440	4000 MOTHER PCB.	430440
APPR D. Hume	DATE 6.4.82	NOT TO BE SCALED			CHECK PROCEDURE 460440		SHEET 4 OF 4
					CHECK LIST 470440		

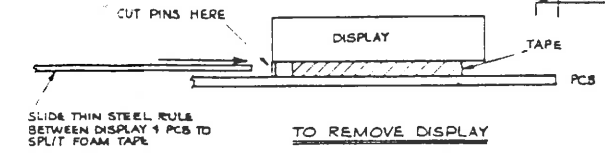
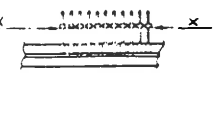
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480441

MOUNTING ICs.
FIT M1 INTO 14 WAY DIL SOCKET 605060/L
FIT M3 INTO 24 WAY DIL SOCKET 605097
FIT M4 INTO 16 WAY DIL SOCKETS 605061/L
FIT M6 INTO 40 WAY DIL SOCKET 605098

EACH DISPLAY TO HAVE 3 PIECES OF PRESSURE SENSITIVE TAPE G30029
25mm LONG STUCK TO THE REVERSE OF DISPLAY IN POSITIONS SHOWN. LINE UP AND PRESS DISPLAY FIRMLY INTO PLACE. THEN SOLDER THE 24 PINS WHICH ARE SHOWN BELOW. (THERE ARE ONLY SOLDER PADS FOR THESE PINS).

PINS OF THE DISPLAYS MUST BE CUT ALONG THE LINE SHOWN 'X-X'. THEN THE PINS MUST BE BENT FROM 'A' TO 'B' BEFORE INSERTION INTO PCB.



ISS	CHANGES	ISS	CHANGES
1	RELEASED 12.5.82	1	RELEASED 12.5.82
2	NOTE ADDED RE: SOLDERING UP SPARE PCB HOLES. IL 14.5.84	2	ECO 1392 MORE TAPE ADDED TO REVERSE OF DISPLAYS. J.R. 1.7.82
3	ECO 1313 PCB WAS ISS 7. DISPLAYS WERE MOUNTED ON TWO PIECES OF TAPE. D.J. 16.11.85	3	ECO 1388 PCB WAS ISS. 5 3 WAY MOLEX DELETED. MATHEE PCB CONN WAS GOFF 604047 R77, R78, AN3 1 ANG ADDED. C28 R76 1 TPE TRACKED IN TO PCB. TP8 4 DIB MOVED. IL 24.8.82
4	ECO 1398 PCB WAS ISS 6. UPDATED TO ENG. PROC. 11 IL 20.8.85	4	ECO 1405, 1430 PCB WAS ISS 6. NEW TPE ADDED. R12, R10 4 R18 MOVED. B.J. 25 NOV 82

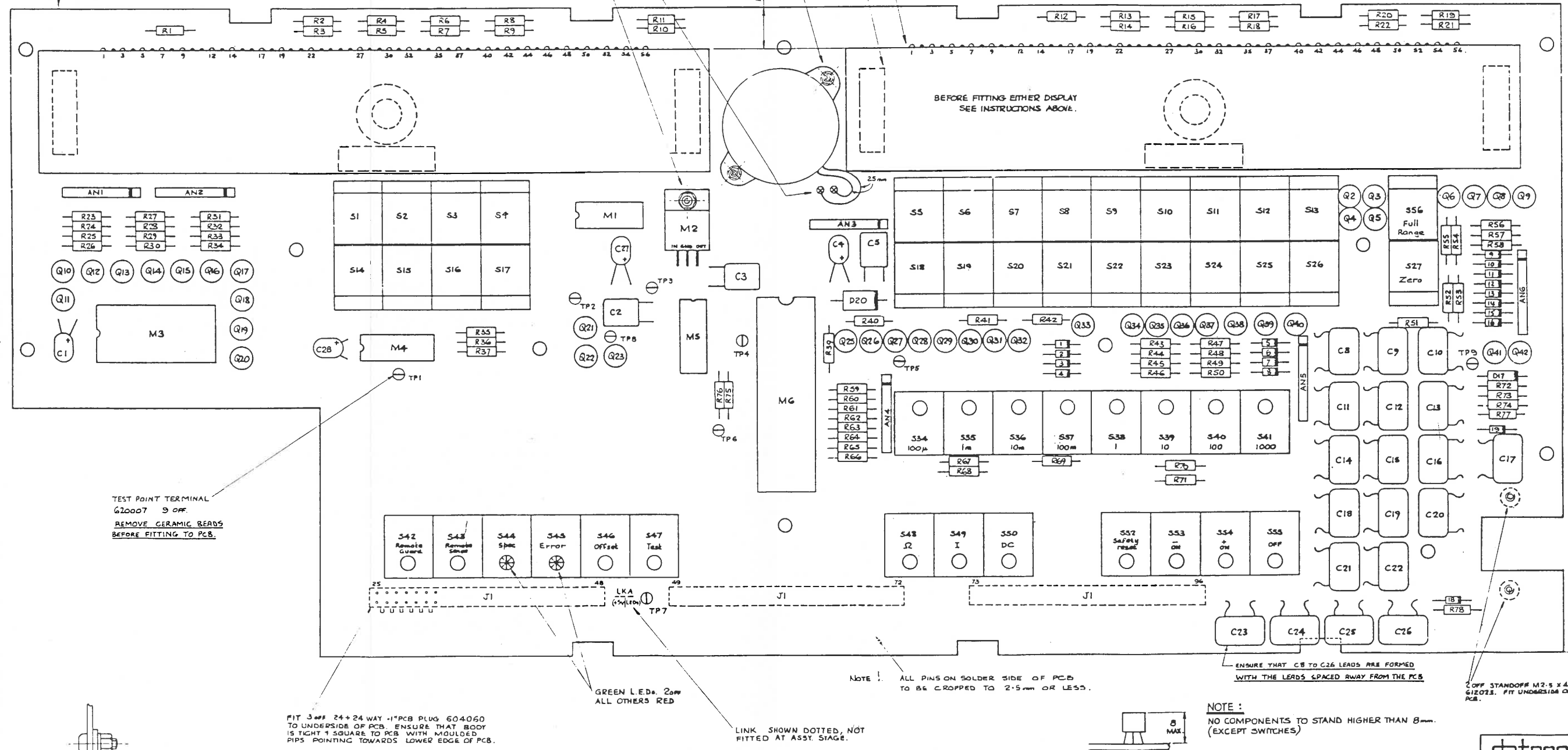
PCB 410144-3

2 OFF SOLDER TERMINAL G20003
TO SECURE M2 SEE FIXING DETAIL AT BOTTOM OF SHEET

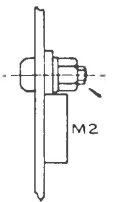
SECURE BUZZER (PART # 920096) WITH
2 OFF M2 6mm SLOT CSK SCREW G11054
2 OFF M2 WASHER G13026
2 OFF M2 INT SHAKEPROOF G13027
2 OFF M2 FULL NUT G15016

2 OFF 8 1/2 DIGIT DISPLAY 800017

SLIDE THIN STEEL RULE BETWEEN DISPLAY & PCB TO SPLIT FOAM TAPE
TO REMOVE DISPLAY



TEST POINT TERMINAL G20007 3 OFF.
REMOVE CERAMIC BEADS BEFORE FITTING TO PCB.



SCREW M3x6 SLOTTED PAN-ND G11076.
WASHER M3 SHAKEPROOF G13005
NUT M3 HEX. FULL G15002

FIT 3 OFF 24x24 WAY 1" PCB PLUG 604060 TO UNDERSIDE OF PCB. ENSURE THAT BODY IS TIGHT & SQUARE TO PCB WITH MOULDED PINS POINTING TOWARDS LOWER EDGE OF PCB.

GREEN LEDs 2 OFF ALL OTHERS RED

LINK SHOWN DOTTED, NOT FITTED AT ASSY STAGE.

NOTE: ALL PINS ON SOLDER SIDE OF PCB TO BE CROPPED TO 2.5mm OR LESS.

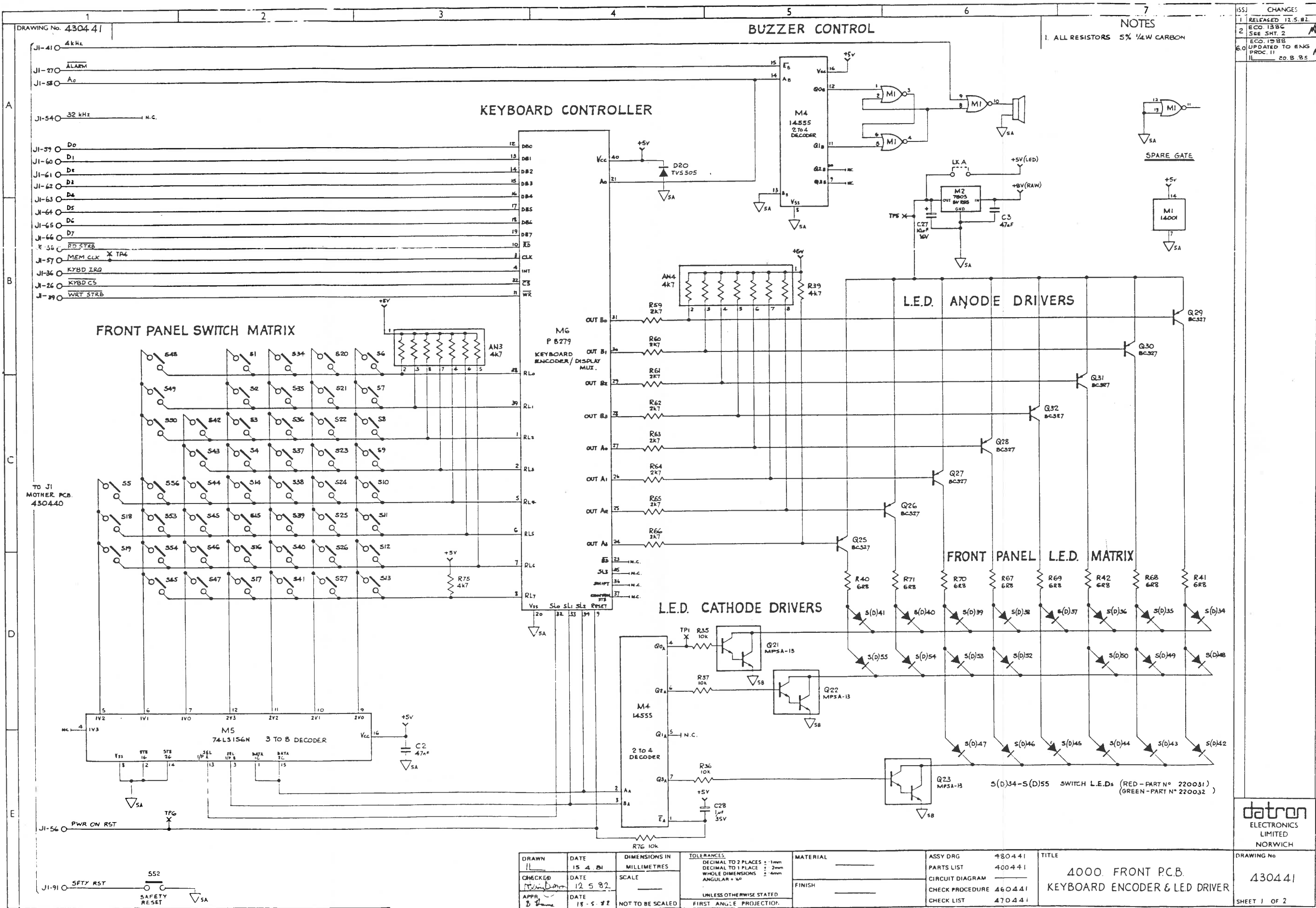
NOTE: NO COMPONENTS TO STAND HIGHER THAN 8mm. (EXCEPT SWITCHES)

2 OFF STANDOFF M2.5 x 4mm G12073. FIT UNDERBUSH OF PCB.

NB: ALL VIA HOLES AND SPARE COMPONENT HOLES MUST BE SOLDERED.

DRAWN 11	DATE 9.4.81	DIMENSIONS IN MILLIMETRES	TOLERANCES DECIMAL TO 2 PLACES ± 1mm DECIMAL TO 1 PLACE ± 2mm WHOLE DIMENSIONS ± 4mm ANGULAR ± 1°	MATERIAL	ASSY DRG	TITLE	DRAWING No.
CHECKED M.D.	DATE 22.10.81	SCALE 2:1	UNLESS OTHERWISE STATED FIRST ANGLE PROJECTION	FINISH	PARTS LIST 400441 CIRCUIT DIAGRAM 430441 CHECK PROCEDURE 460441 CHECK LIST 470441	4000. FRONT PCB ASSY.	480441
APPR. D. Han	DATE 18.5.81	NOT TO BE SCALED					SHEET 1 OF 1

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NOTES
1. ALL RESISTORS 5% 1/4W CARBON

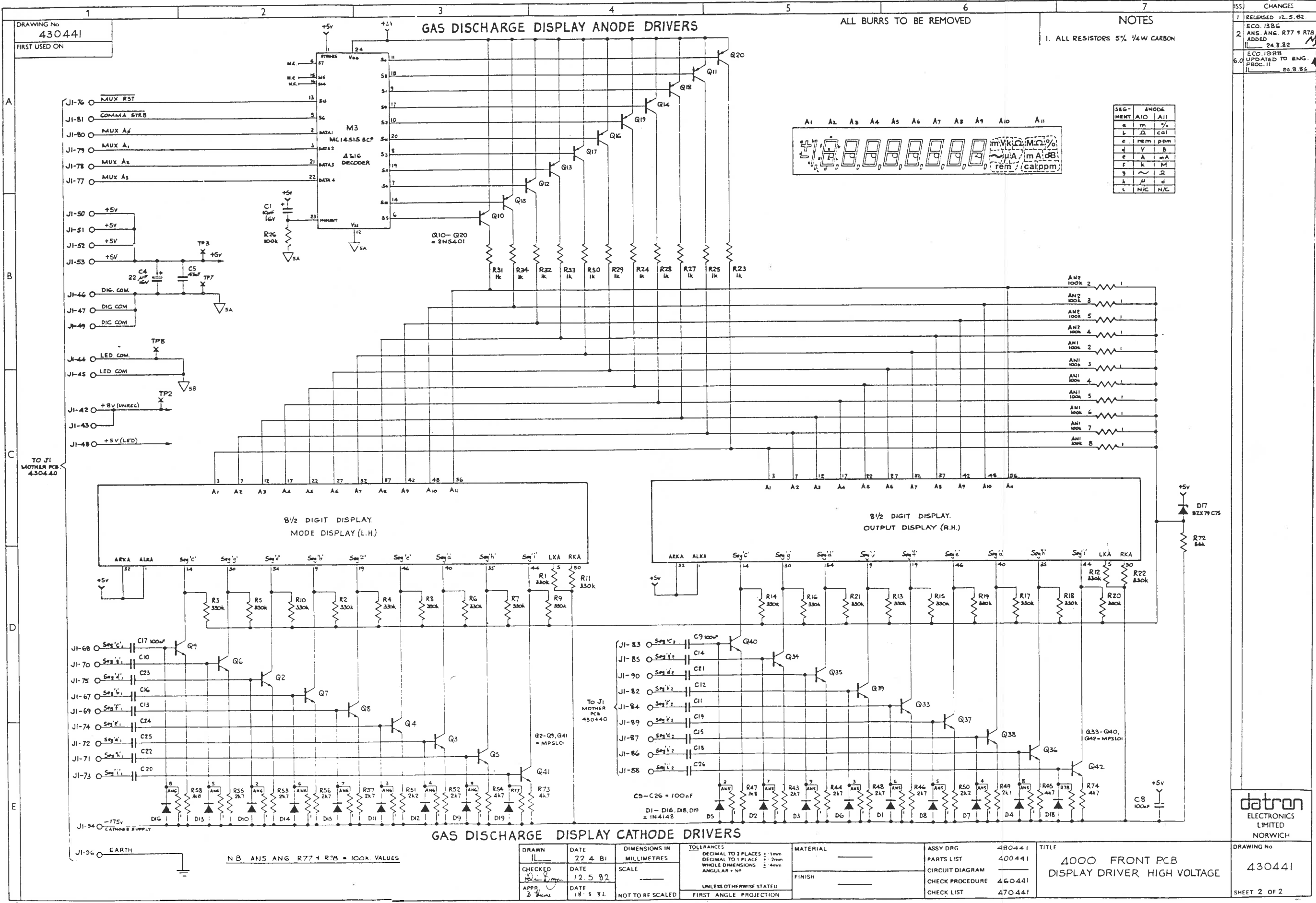
ISS	CHANGES
1	RELEASED 12.5.82
2	ECO 1386
3	SEE SHY. 2
4	ECO 1388
5	UPDATED TO ENG PROC II
6	20.8.85

DRAWING No. 4304 41

A
B
C
D
E

DRAWN	DATE	DIMENSIONS IN MILLIMETRES	TOLERANCES	MATERIAL	ASSY DRG	TITLE	DRAWING No
11	15.4.81	SCALE	DECIMAL TO 2 PLACES : 0.1mm DECIMAL TO 1 PLACE : 2mm WHOLE DIMENSIONS : 0.1mm		480 4 41	4000 FRONT P.C.B. KEYBOARD ENCODER & LED DRIVER	4304 41
CHECKED	DATE		UNLESS OTHERWISE STATED	FINISH	PARTS LIST		SHEET 1 OF 2
APPR	DATE	NOT TO BE SCALED	FIRST ANGLE PROJECTION		CHECK PROCEDURE		
					CHECK LIST		

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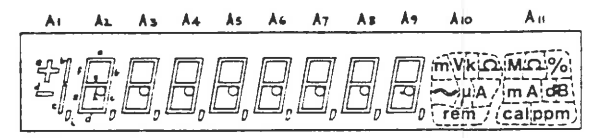
DRAWING No
430441
FIRST USED ON

GAS DISCHARGE DISPLAY ANODE DRIVERS

ALL BURRS TO BE REMOVED

NOTES

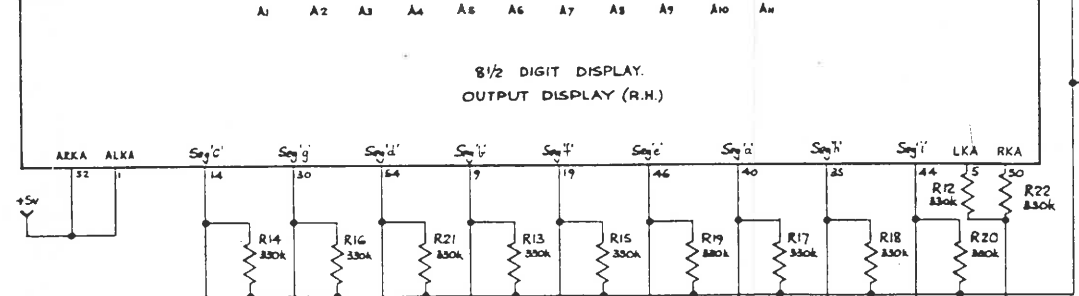
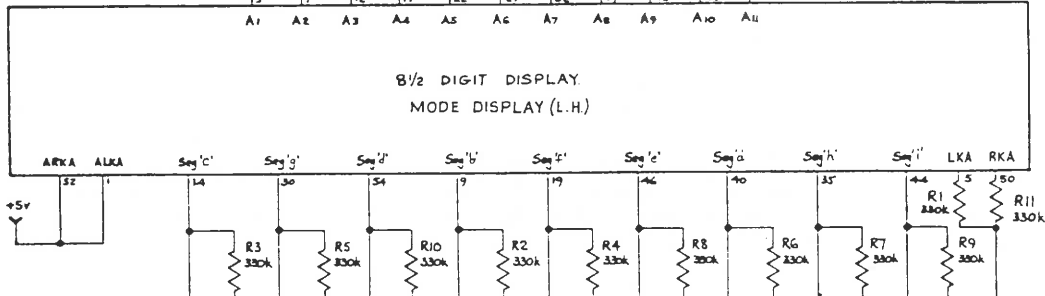
1. ALL RESISTORS 5% 1/4W CARBON



SEG- MENT	A10	A11
a	m	7
b	o	cal
c	rem	pdm
d	y	B
e	A	=A
f	k	M
g	~	Ω
h	μ	d
i	N/C	N/C

ISS	CHANGES
1	RELEASED 12.5.82
2	ECO. 138G ANS. ANG. R77 + R78 ADDED
3	24.8.82
6.0	ECO. 198B UPDATED TO ENG. PROC. 11
	20.9.85

TO J1
MOTHER PCB
430440



GAS DISCHARGE DISPLAY CATHODE DRIVERS

NB AN5 ANG R77 + R78 = 100K VALUES

DRAWN 11	DATE 22.4.81	DIMENSIONS IN MILLIMETRES	TOLERANCES DECIMAL TO 2 PLACES ± 0.1mm DECIMAL TO 1 PLACE ± 0.2mm WHOLE DIMENSIONS ± 0.4mm ANGULAR ± 0°	MATERIAL	ASSY DRG 480441	TITLE 4000 FRONT PCB DISPLAY DRIVER HIGH VOLTAGE	DRAWING No. 430441
CHECKED 10.2	DATE 12.5.82	SCALE	UNLESS OTHERWISE STATED FIRST ANGLE PROJECTION	FINISH	PARTS LIST 400441		
APP. D. J. H.	DATE 18.5.82	NOT TO BE SCALED			CIRCUIT DIAGRAM 460441		
					CHECK PROCEDURE 470441		SHEET 2 OF 2

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DRAWING No.
480442. 480442A
FIRST USED ON

THIRD ANGLE PROJECTION

DRAWN IN ACCORDANCE WITH BS 308

ALL BURRS TO BE REMOVED

NOTES

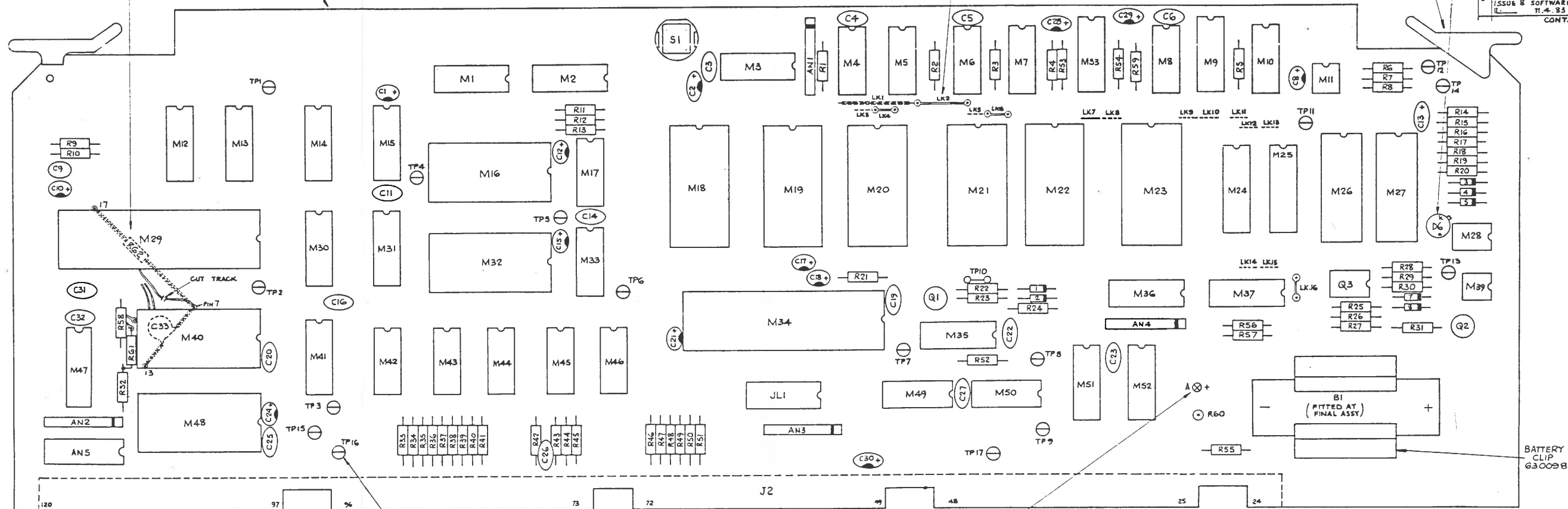
ISS.	CHANGES
1	RELEASED 13.5.82
2	ECO 1339, 1346 C7 DELETED + R26 AND R29 WERE 10M. JFR 30.6.82
3	ECO 1349 SOFTWARE UPDATE - 4 PARTS LIST CHANGE ONLY. JL 23.8.82
4	ECO 1379 M18-M22 WERE TO ISSUE 3 SOFTWARE. JL 14.3.82
5	ECO 1401 M18-M22 WERE TO ISSUE 4 SOFTWARE. JL 14.3.82
6	ECO 1404, 1408, 1409 M18-M22 WERE TO ISSUE 5 SOFTWARE. DG NOW STOOD ON TRANSISTOR MTC. PAD JL 24.11.82
7	ECO 1443, 1453 M18-M22 WERE TO ISSUE 67 SOFTWARE. JL 22.2.83
8	ECO 1455 M18-M22 WERE TO ISSUE 8 SOFTWARE. JL 11.4.83

SLEEVE LEADS OF C33 & RG2 WITH
PTFE SLEEVE 590004 & SECURE
COMPONENTS TO BOARD USING
SILICONE RUBBER COMPOUND 900004.

P.C.B. 410156-5

DO NOT FIT LINKS SHOWN DOTTED
OR TRACKED IN

(BLACK) CIRCUIT BOARD EJECTOR 2 off
630112.



MOUNTING ICs

- FIT M11 + M39 INTO 6-WAY DIL SOCKET G05066 2 off
- FIT M28 + Q3 INTO 8-WAY DIL SOCKET G05059 2 off
- FIT M4-M8, M10, M17, M33, M42-M46, M49 + M50 INTO 14-WAY DIL SOCKET G05060. 15 off
- FIT M1-M3, M9, M12-M15, M30, M31, M35-M37, M41, J11, M47, M51-M53 INTO 16-WAY DIL SOCKET G05061. 19 off
- FIT M24 + M25 INTO 18-WAY DIL SOCKET G05062. 2 off
- FIT M26 + M27 INTO 22-WAY DIL SOCKET G05063/T 2 off
- FIT M16, M18-M23, M32, M40 + M48 INTO 24-WAY DIL SOCKET G05064. 10 off
- FIT M29 + M34 INTO 40-WAY DIL SOCKET G05050 2 off

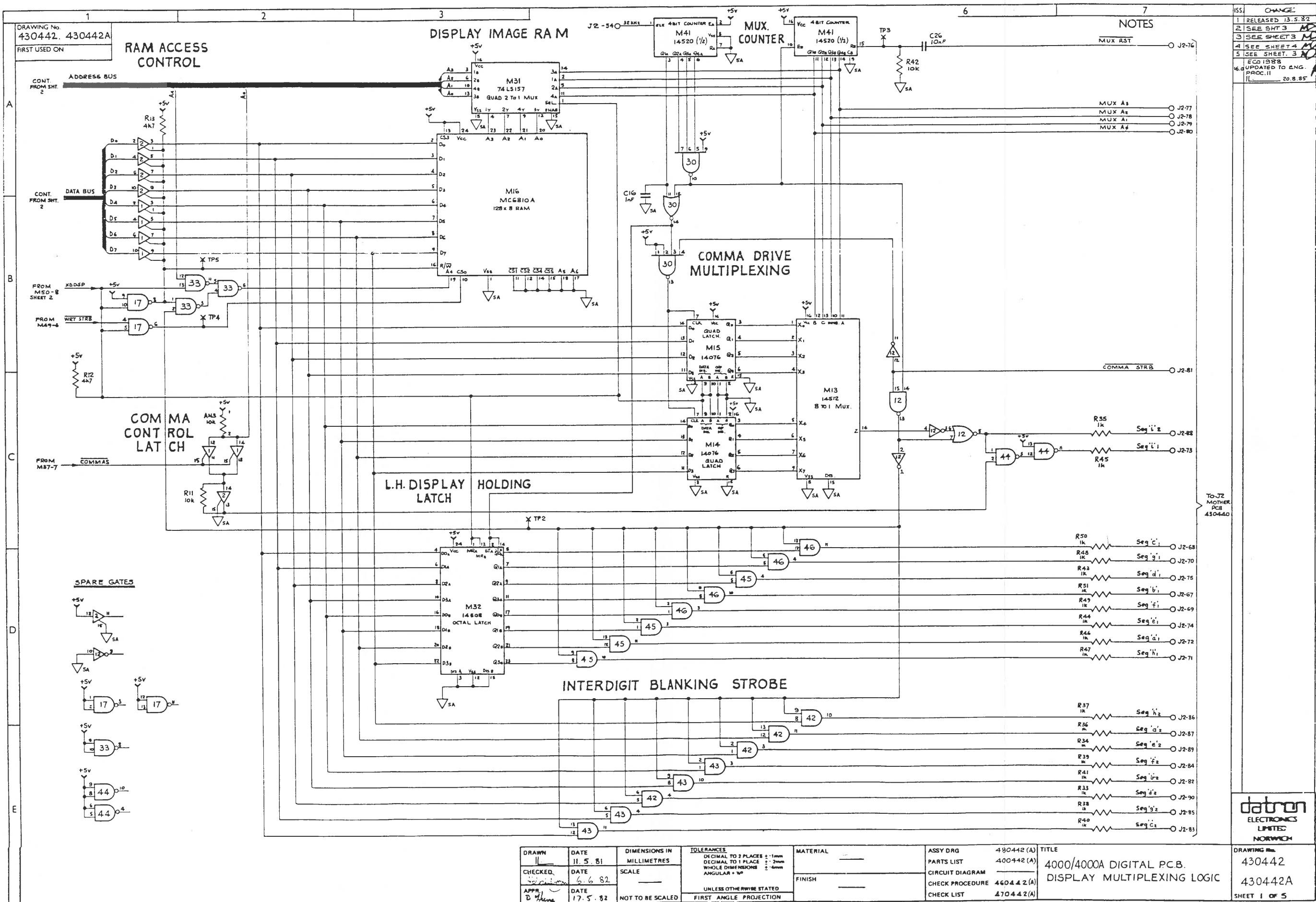
TEST POINT TERMINAL
620007 16 off.

SOLDER TERMINAL
620003. 1 off

ISS.	CHANGES	ISS.	CHANGES	ISS.	CHANGES	ISS.	CHANGES
14	ECO 1680 R61 R62 + C33 ADDED. JL 26-7-84	9	ECO 1488 M18-M22 WERE TO ISSUE 8A SOFTWARE. JL 6.6.83	10	ECO 1511 M18-M22 WERE TO ISSUE 9 SOFTWARE. JL 12.7.85	11	ECO 1533 M18-M22 WERE TO ISSUE 10 SOFTWARE. JL 29.9.85
15	ECO 1749 NV RAM EXT. PCB DELETED. M26/M27 ADDED. JL 1.11.84	10	ECO 1511 M18-M22 WERE TO ISSUE 9 SOFTWARE. JL 12.7.85	11	ECO 1533 M18-M22 WERE TO ISSUE 10 SOFTWARE. JL 29.9.85	12	ECO 1606 M18-M22 WERE TO ISSUE 11 SOFTWARE. JFR 26.4.84
16	ECO 1988 UPDATED TO ENG PROC. 11 JL 20.8.85	11	ECO 1533 M18-M22 WERE TO ISSUE 10 SOFTWARE. JL 29.9.85	12	ECO 1606 M18-M22 WERE TO ISSUE 11 SOFTWARE. JFR 26.4.84	13	ECO 2054 M18-M22 WERE MOUNTED ON G05063 SOCKETS. JL 27.11.85
16.1	ECO 2054 M18-M22 WERE MOUNTED ON G05063 SOCKETS. JL 27.11.85	12	ECO 1606 M18-M22 WERE TO ISSUE 11 SOFTWARE. JFR 26.4.84	13	ECO 2054 M18-M22 WERE MOUNTED ON G05063 SOCKETS. JL 27.11.85	13	ECO 1638 M27 DELETED M26 WAS SIO1 RAM. JFR 21.4.84

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DRAWN 11	DATE 20.5.81	DIMENSIONS IN MILLIMETRES	TOLERANCES DECIMAL TO 3 PLACES ± 1mm DECIMAL TO 1 PLACE ± 2mm WHOLE DIMENSIONS ± 4mm ANGULAR ± 30°	MATERIAL	ASSY DRG	TITLE	DRAWING No.
CHECKED J. J. Jones	DATE 6.6.82	SCALE 2:1	UNLESS OTHERWISE STATED FIRST ANGLE PROJECTION	FINISH	PARTS LIST 400442(A)	4000. DIGITAL PCB ASSY.	480442
APPR J. J. Jones	DATE 17.5.82	NOT TO BE SCALED			CIRCUIT DIAGRAM 460442(A)		480442A
					CHECK PROCEDURE 470442(A)		SHEET 1 OF 1



DRAWING No. 430442. 430442A
FIRST USED ON

RAM ACCESS CONTROL

DISPLAY IMAGE RAM

MUX. COUNTER

COMMA DRIVE MULTIPLEXING

COMMA CONTROL LATCH

L.H. DISPLAY HOLDING

INTERDIGIT BLANKING STROBE

SPARE GATES

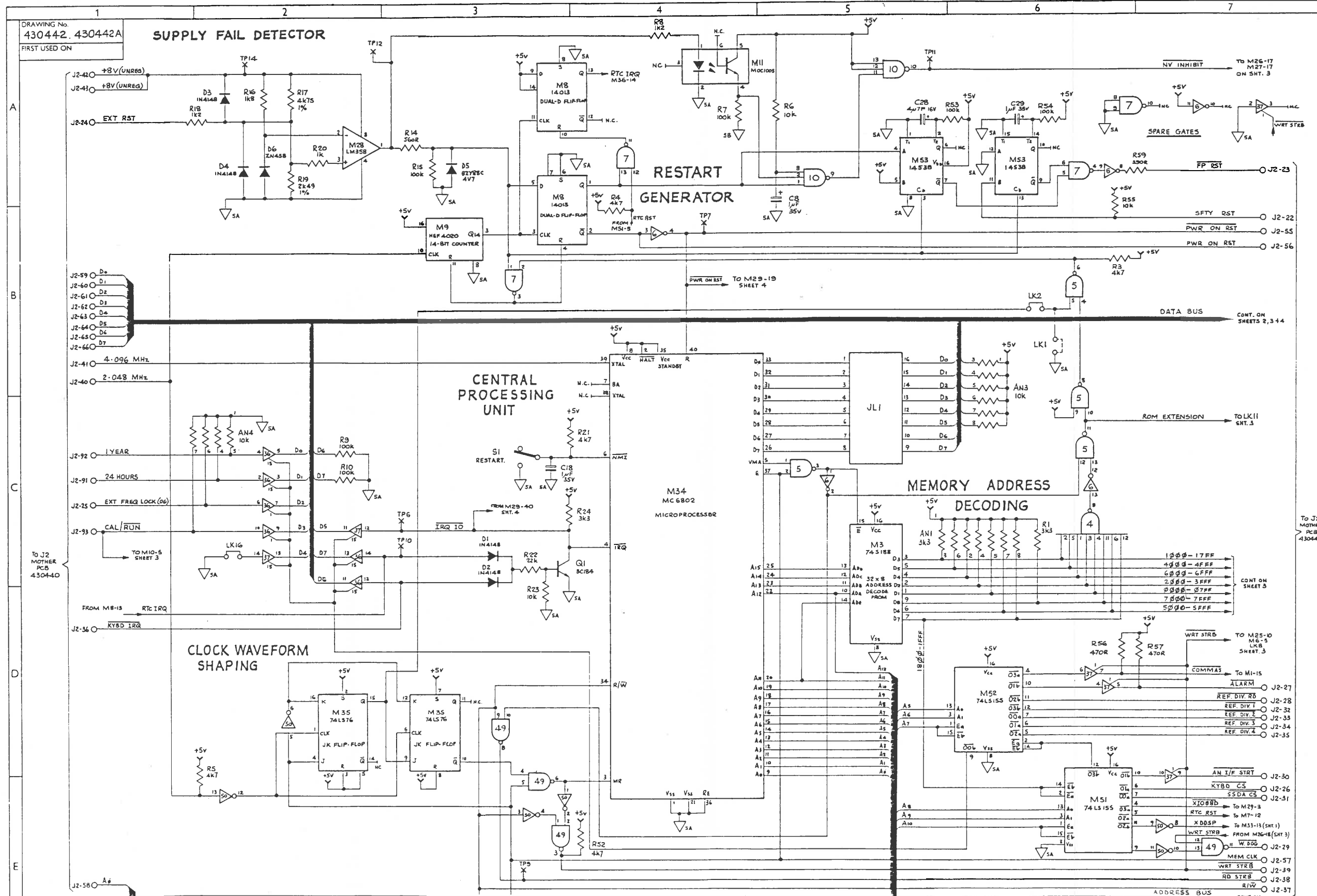
NOTES

ISS.	CHANGE
1	RELEASED 13.5.82
2	SEE SHEET 3
3	SEE SHEET 3
4	SEE SHEET 4
5	SEE SHEET 3
6	ECO 1988 UPDATED TO ENG. PROC. 11
11	20.8.85

TO J2 MOTHER PCB 430440

DRAWN	DATE	DIMENSIONS IN	TOLERANCES	MATERIAL	ASSY DRG	TITLE	DRAWING No.
11	11.5.81	MILLIMETRES	DECIMAL TO 3 PLACES ± 0.1mm DECIMAL TO 1 PLACE ± 0.2mm WHOLE DIMENSIONS ± 0.4mm ANGULAR ± 1°		480442 (A)	4000/4000A DIGITAL PCB. DISPLAY MULTIPLEXING LOGIC	430442
CHECKED	DATE	SCALE	UNLESS OTHERWISE STATED FIRST ANGLE PROJECTION	FINISH	CIRCUIT DIAGRAM		430442A
17.5.82	6.6.82	NOT TO BE SCALED			CHECK PROCEDURE		
APP. D. H. H.	17.5.82				CHECK LIST		
					470442 (A)		SHEET 1 OF 5

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DRAWING No. 430442. 430442A
FIRST USED ON

SUPPLY FAIL DETECTOR

RESTART GENERATOR

CENTRAL PROCESSING UNIT

MEMORY ADDRESS DECODING

CLOCK WAVEFORM SHAPING

ISS.	CHANGES
1	RELEASED 13.5.82
2	SEE SHEET 3
3	SEE SHEET 3
4	SEE SHEET 4
5	SEE SHEET 3
6	ECU10088 UPDATED TO ENG PROC. 11
7	20.8.90

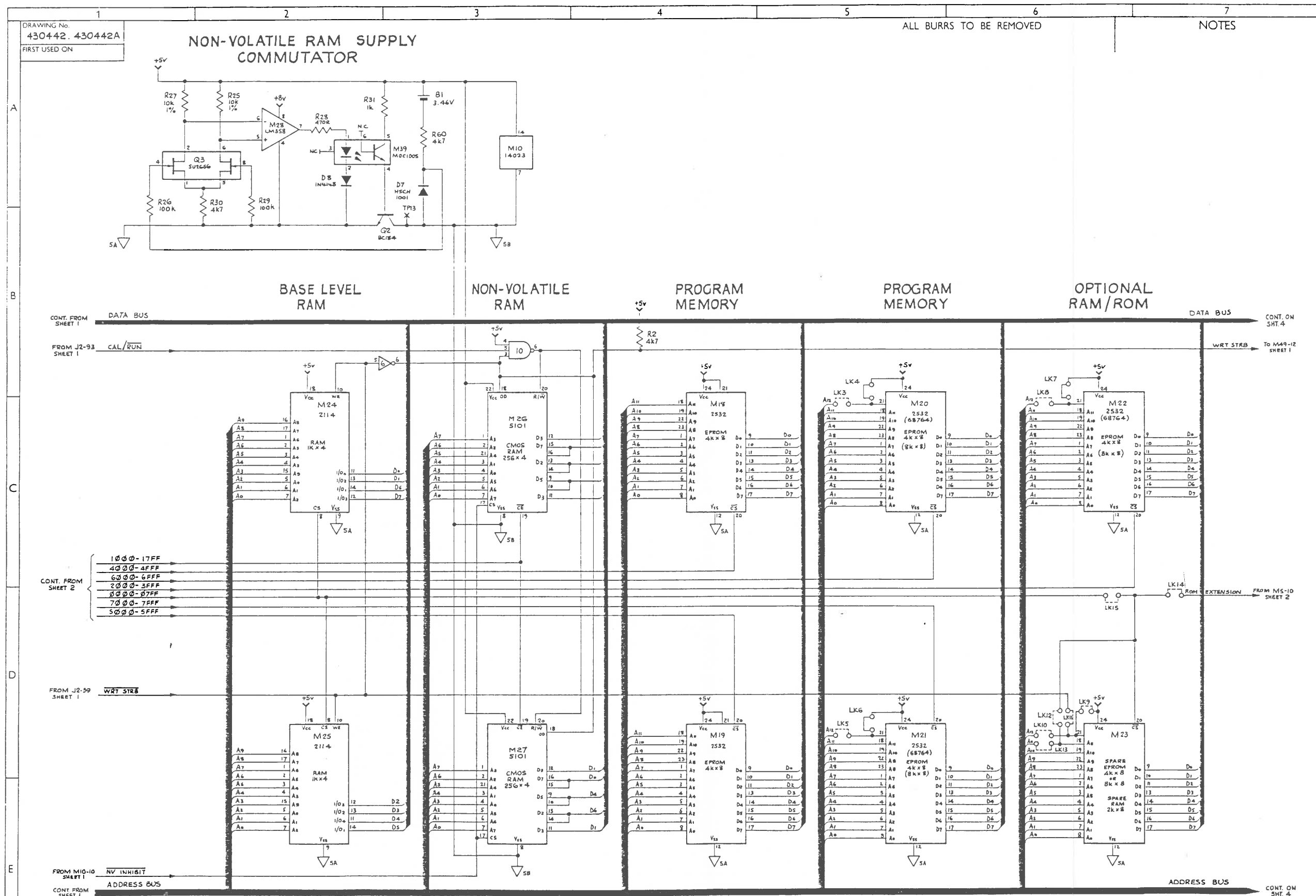
To J2 MOTHER PCB 430440

To J2 MOTHER PCB 430440

DRAWN	DATE	DIMENSIONS IN MILLIMETRES	TOLERANCES	MATERIAL	ASSY DRG	TITLE
11	7.7.81	SCALE	DECIMAL TO 2 PLACES : 1mm DECIMAL TO 1 PLACE : 2mm WHOLE DIMENSIONS : 4mm ANGULAR : °		480442(A)	4000/4000A DIGITAL PCB. MICROPROCESSOR
CHECKED	DATE	NOT TO BE SCALED	UNLESS OTHERWISE STATED		400442(A)	
APPR	DATE	FIRST ANGLE PROJECTION			460442(A)	
	17.5.82				470442(A)	

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DRAWING No. 430442
430442A
SHEET 2 OF 5



DRAWING No.
430442. 430442A
FIRST USED ON

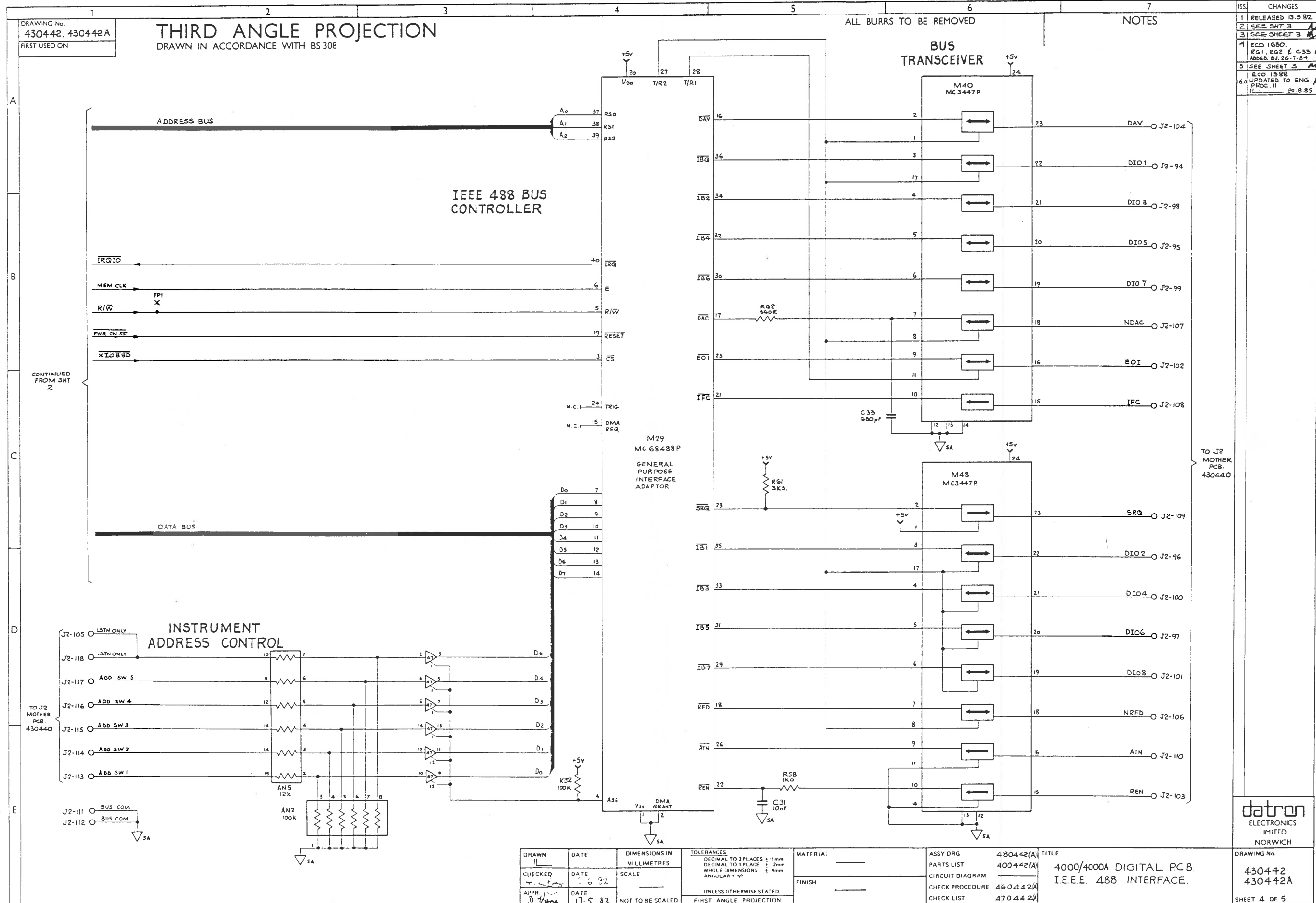
ALL BURRS TO BE REMOVED

NOTES

NO	CHANGES
1	RELEASED 13.5.82
2	ECO 1339 13-4-6 C 7 DELETED R26 AND R29 WERE 10M JFR 30.6.82
3	ECO 1638 M26 WAS S101 RAM M27 DELETED JFR 23.5.84
4	SEE SHEET 4
5	ECO 1745 M26 1 M27 WERE PART OF NV RAM ESTD PCB ASST UNDER M26 REF 11.11.84
6	ECO 1988 160 UPDATED TO ENG PROC. 11 20.8.85

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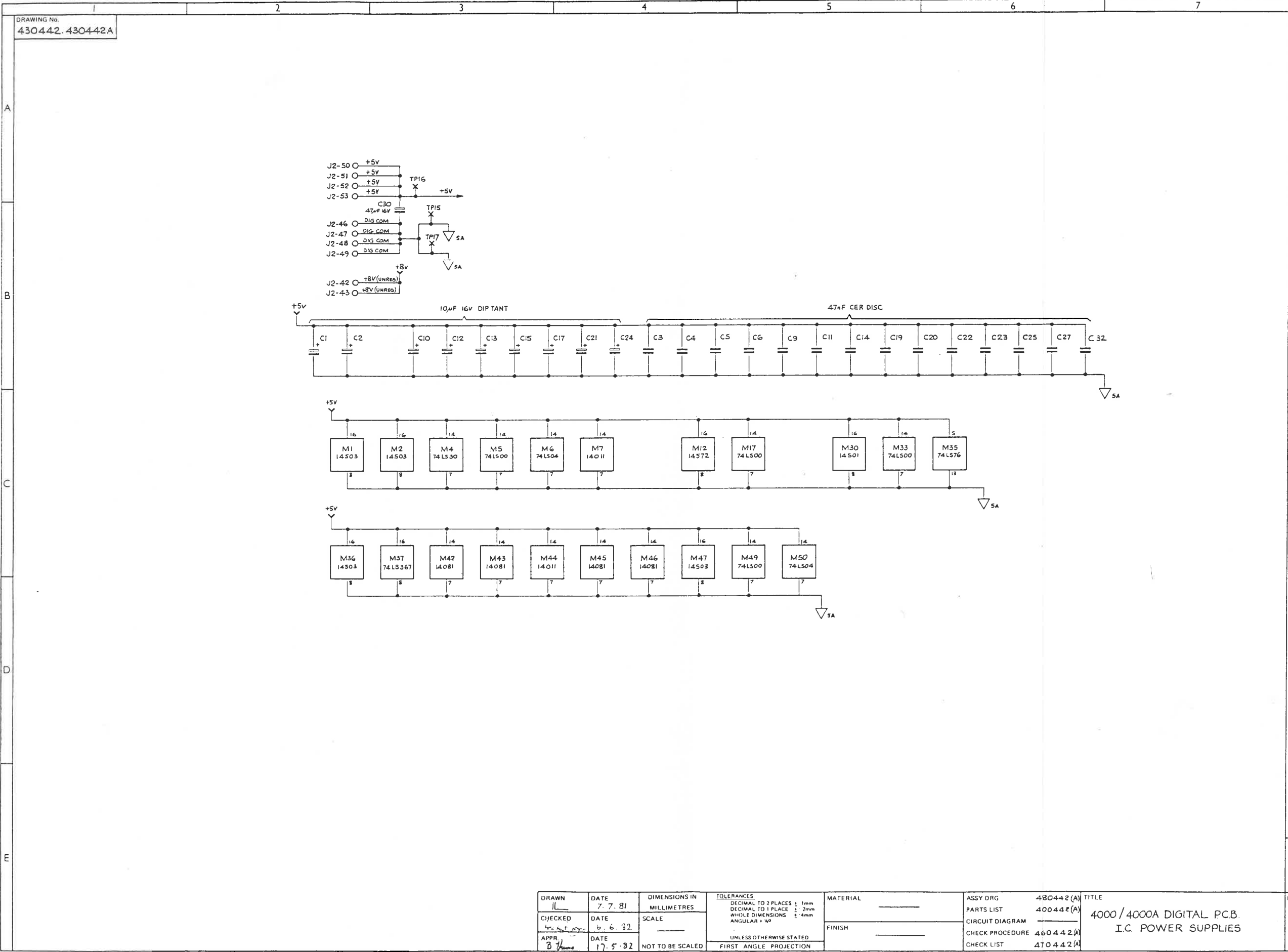
DRAWN 11 CHECKED APPR DATE 7.7.81 DATE 2.6.82 DATE 17.5.82	DIMENSIONS IN MILLIMETRES SCALE NOT TO BE SCALED	TOLERANCES DECIMAL TO 2 PLACES ±.1mm DECIMAL TO 1 PLACE ±.2mm WHOLE DIMENSIONS ANGULAR ± 30° UNLESS OTHERWISE STATED FIRST ANGLE PROJECTION	MATERIAL FINISH	ASSY DRG 430442(A) PARTS LIST 400442(A) CIRCUIT DIAGRAM 460442(A) CHECK PROCEDURE 470442(A)	TITLE 4000/4000A DIGITAL PCB MEMORY & BATTERY BACK-UP	DRAWING No. 430442 430442A SHEET 3 OF 5
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ISS. CHANGES

- 1 RELEASED 13.5.82
- 2 SEE SHT 3
- 3 SEE SHEET 3
- 4 E.C.O. 1980. R.G.1. R.G.2 & C.33 ADDED. B.I. 26-7-81.
- 5 SEE SHEET 3
- 6 E.C.O. 1988. UPDATED TO ENG. PROC. 11
- 7 20.8.85

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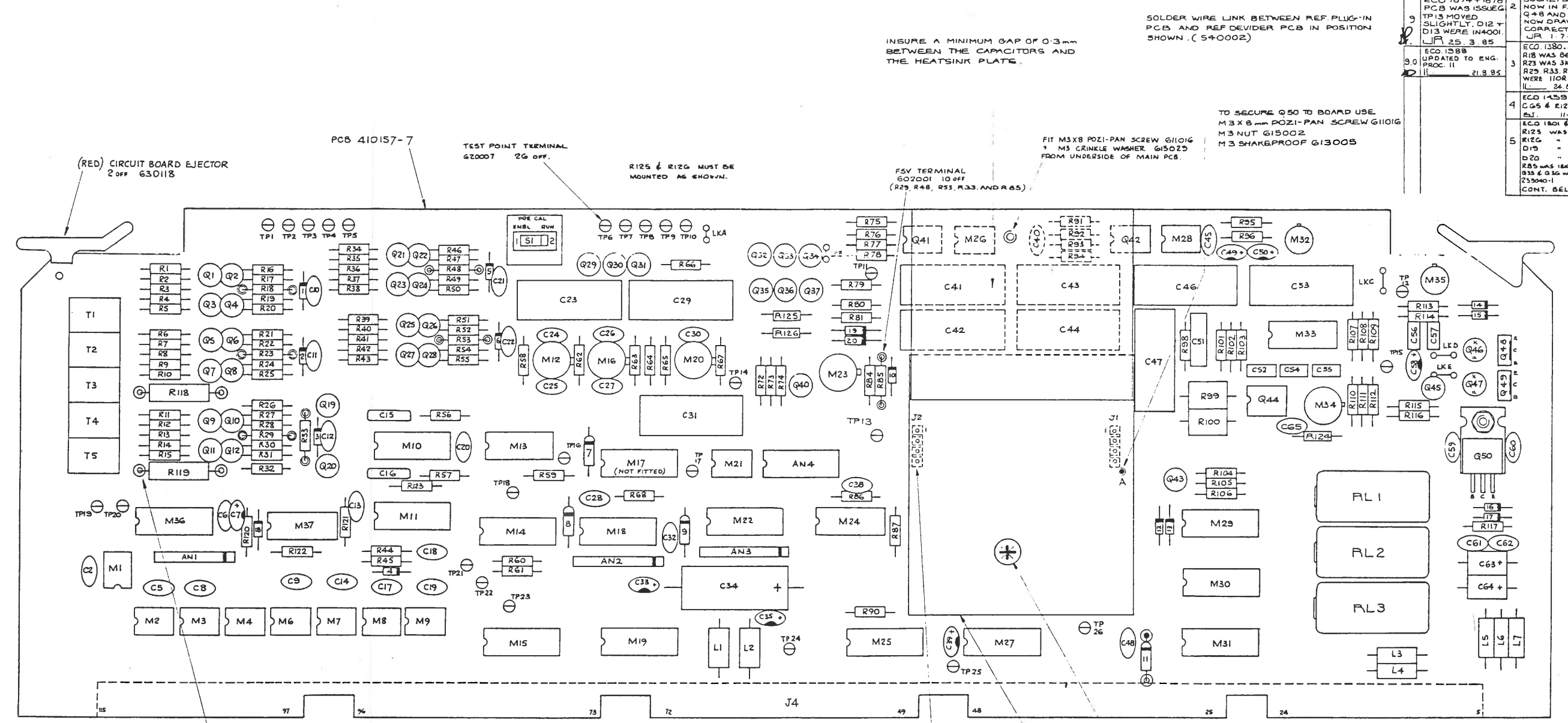
ISS.	CHANGES
1	RELEASED 13.5.82
2	SEE SHT 3
3	SEE SHEET 3
4	SEE SHEET 4
5	SEE SHEET 3
6	ECO 1988
16.0	UPDATED TO ENG PROC. 11
17	20.9.83

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DRAWN IL	DATE 7.7.81	DIMENSIONS IN MILLIMETRES	TOLERANCES DECIMAL TO 2 PLACES : 1mm DECIMAL TO 1 PLACE : 2mm WHOLE DIMENSIONS : 4mm ANGULAR : 90°	MATERIAL	ASSY ORG 480442(A)	TITLE 4000/4000A DIGITAL PCB I.C. POWER SUPPLIES	DRAWING No. 430442 430442A
CHECKED [Signature]	DATE 6.6.82	SCALE	UNLESS OTHERWISE STATED FIRST ANGLE PROJECTION	FINISH	PARTS LIST 400442(A)		
APPR. B [Signature]	DATE 17.5.82	NOT TO BE SCALED			CHECK PROCEDURE 460442(A)		
					CHECK LIST 470442(A)		SHEET 5 OF 5

DRAWING No.
480444
480444A

ISS	CHANGES
1	RELEASED 7.5.82
2	ECO 1354 M32 AND M35 WERE FITTED IN SOCKETS. R23 NOW IN F.S.V. Q48 AND Q49 NOW DRAWN CORRECTLY. JFR 17.7.82
3	ECO 1380, 1383 R18 WAS BEGR R23 WAS 3K83 R29 R33, R48 & R53 WERE 110R. JL 24.8.82
4	ECO 1459. C45 & R24 ADDED. EJF 11-FEB-83
5	ECO 1801 & 1502 R25 WAS Q38. R26 = Q39. D19 = R82 D20 = R85 R85 WAS LK2 Q35 & Q36 WERE 230040-1 CONT. BELOW



MOUNT R18, R19 + D11 ON CERAMIC INSULATING BEAD (1 PER LEAD) G30024 6OFF

4WAY .1" PCB PLUG 604053 24P SOLDERED INTO MAIN PCB. N.B. SOCKETS ON REF PCB ASSY TO PLUG BOARD ONTO PINS, NOT SHOWN.

REFERENCE PCB ASSY
400452 (4000)
400452A (4000A)

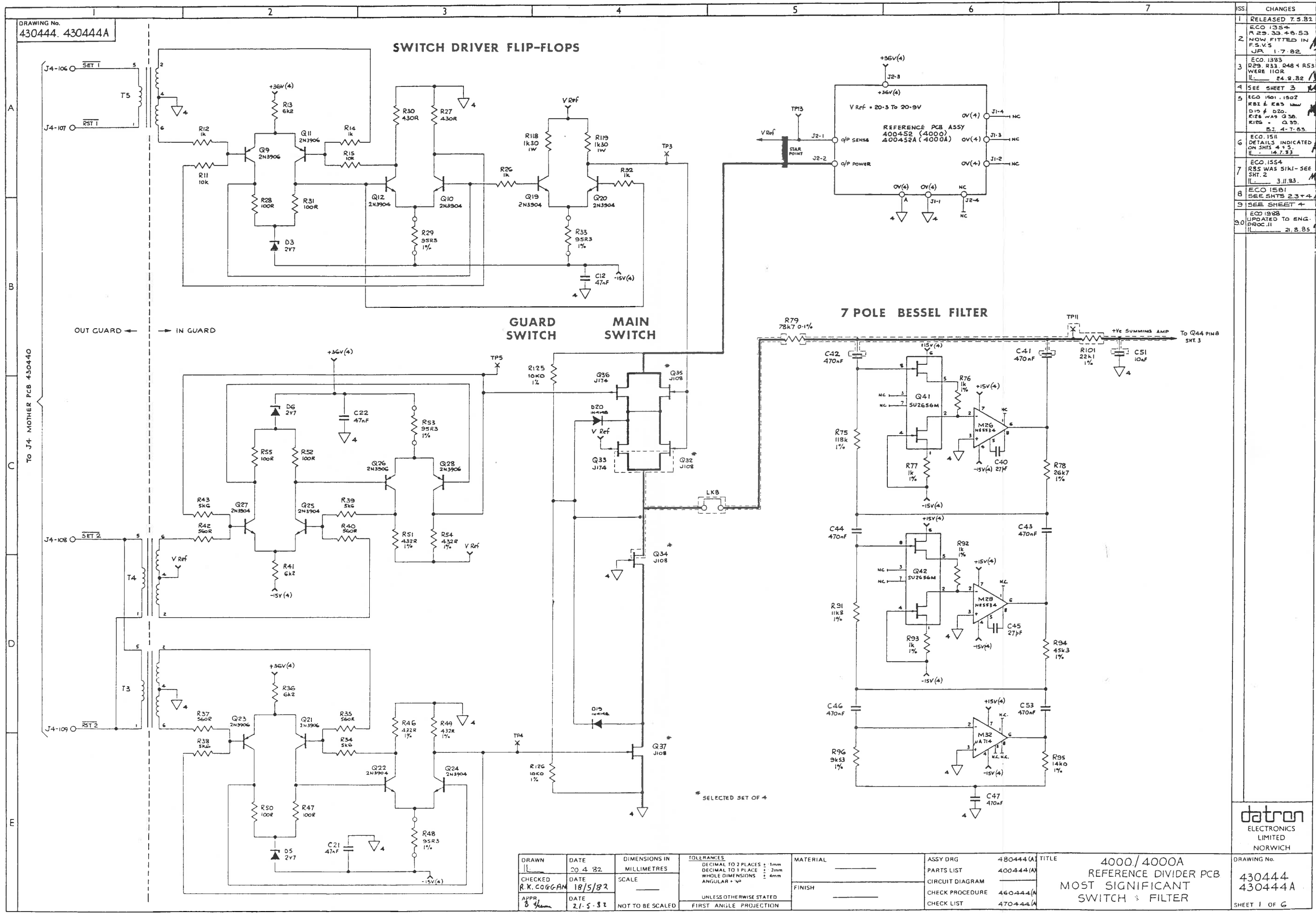
M3x5 SWAGED STANDOFF G12025 SECURED TO REV. DIV. PCB ON COMP. SIDE M3x8 POZI-PAN SCREW G110IG M3 CRINKLE WASHER G13025.

MOUNTING I.C.s.
FIT M1-M4, M6-M9, M21, M26, M28, QN 8WAY DIL. SOCKET 605059 14 OFF Q41, Q42, Q44
FIT M13, M24, M33, M37 ON 14 WAY DIL. SOCKET 605060 4 OFF
FIT M10, M11, M14, M15, M18, M19, M22, M25, M27, M29, M30, M31, M36 ON 16 WAY DIL. SOCKET 605061 13 OFF

5	ECO 1511 R88 R89 + LKF DELETED. TRACK UNDER M24 CUT. WIRE LINKS FROM M13 + M24 ADDED. JL 14.7.83
6	ECO 1554 R85 WAS 51K. 2 GER. BEADS (G30024) ADDED (D11) JL 31.1.83
7	ECO 1581 PCB WAS ISSUED R18 + R23 NOW F.S.V.s. RELAYS WERE A.H.F. TYPE CLUGES NOW TRACKED IN. D13 WAS 210027 JFR 15.2.84 SEE NEXT COLUMN.

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DRAWN	DATE	DIMENSIONS IN MILLIMETRES	TOLERANCES	MATERIAL	ASSY ORG	TITLE	DRAWING No.
IL	18.9.81	2:1	DECIMAL TO 2 PLACES ± 1mm DECIMAL TO 1 PLACE ± 2mm WHOLE DIMENSIONS ± 4mm ANGULAR ± 10° UNLESS OTHERWISE STATED THIRD ANGLE PROJECTION		PARTS LIST CIRCUIT DIAGRAM CHECK PROCEDURE CHECK LIST	400444 (A) 430444 (A) 460444 (A) 470444 (A)	480444 480444A
CHECKED	DATE	SCALE		FINISH			SHEET 1 OF 1
APPR.	DATE	NOT TO BE SCALED					



DRAWING No. 430444. 430444A

TO J4- MOTHER PCB 430440

A
B
C
D
E

SWITCH DRIVER FLIP-FLOPS

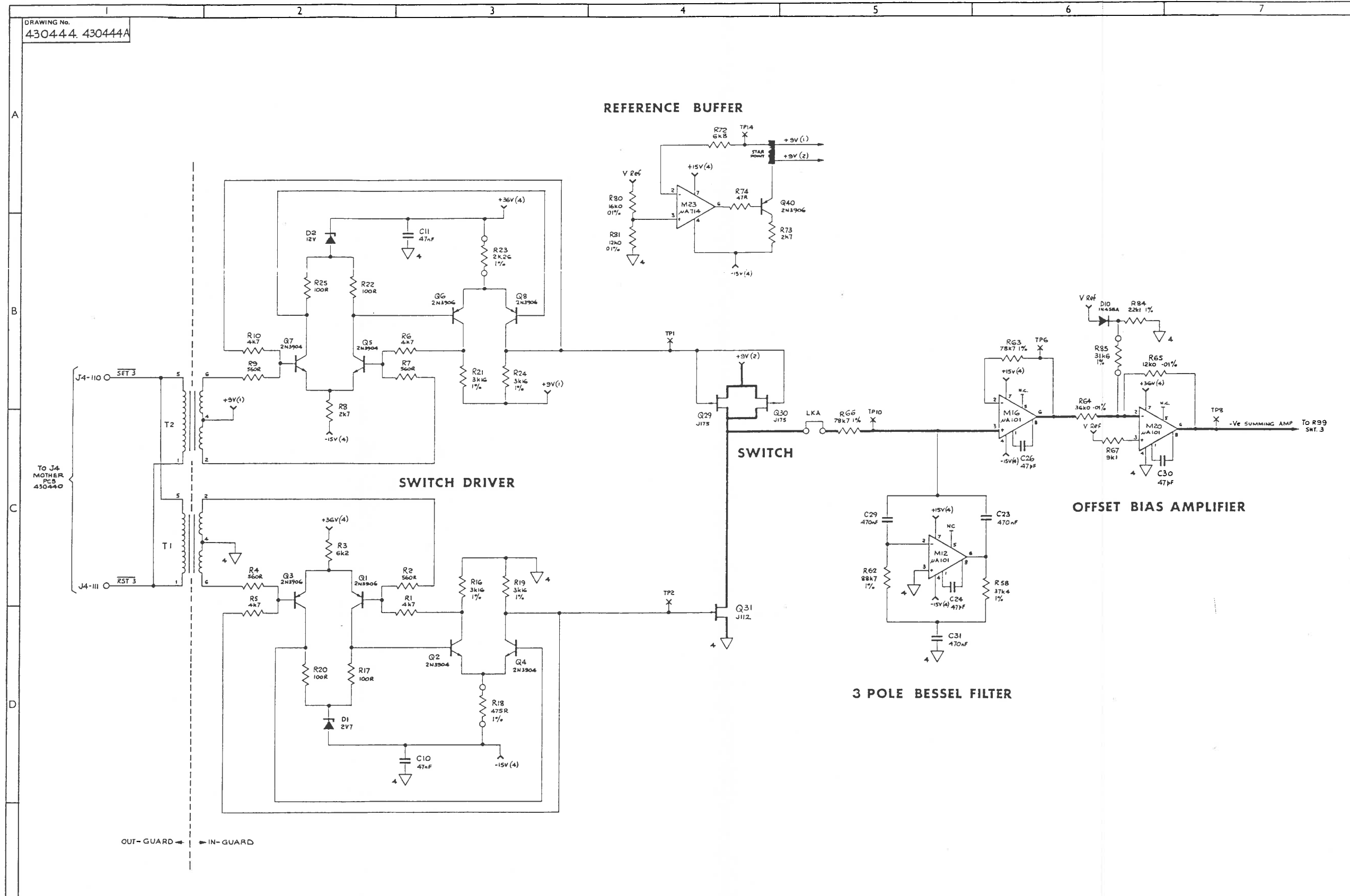
GUARD SWITCH MAIN SWITCH

7 POLE BESSEL FILTER

ISS	CHANGES
1	RELEASED 7.5.82
2	ECO 1354 R 29, 33, 46, 53 NOW FITTED IN P.S.V.5 J.P.R. 1.7.82
3	ECO 1393 R29, R33, R48 + R53 WERE 110R I.L. 24.9.82
4	SEE SHEET 3
5	ECO 1501, 1502 R51 + R53 D15 + D20. R18 WAS 0.55. R18B = 0.55. R18C = 0.55. I.L. 4.7.85
6	ECO 1511 DETAILS INDICATED ON SHTS 4 + 5. I.L. 14.7.83
7	ECO 1554 R55 WAS 51K - SEE SHT 2 I.L. 3.11.83.
8	ECO 1581 SEE SHTS 2, 3 + 4
9	SEE SHEET 4
10	ECO 1928 UPDATED TO ENG. PROC. 11 I.L. 21.8.85

DRAWN I.L. CHECKED R.K. COGGAN APP'D B. G.	DATE 20.4.82 DATE 18/5/82 DATE 21.5.82	DIMENSIONS IN MILLIMETRES SCALE NOT TO BE SCALED	TOLERANCES DECIMAL TO 3 PLACES : 1mm DECIMAL TO 1 PLACE : 2mm WHOLE DIMENSIONS : 4mm ANGULAR : 30° UNLESS OTHERWISE STATED FIRST ANGLE PROJECTION	MATERIAL FINISH	ASSY DRG 480444(A) PARTS LIST 400444(A) CIRCUIT DIAGRAM CHECK PROCEDURE 460444(A) CHECK LIST 470444(A)	TITLE 4000/4000A REFERENCE DIVIDER PCB MOST SIGNIFICANT SWITCH & FILTER	DRAWING No. 430444 430444A SHEET 1 OF 6
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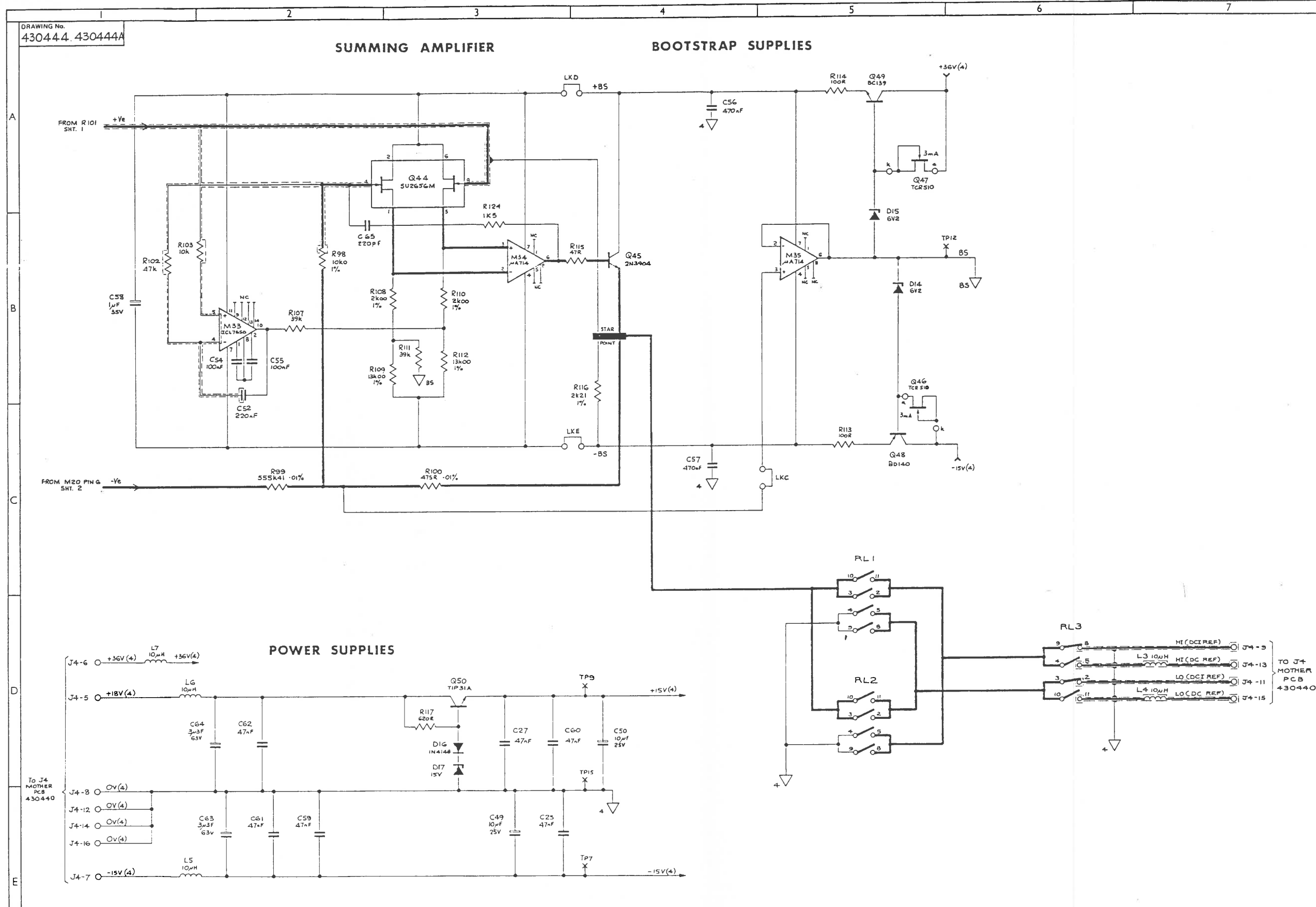
DRAWING No.
430444. 430444A

ISS.	CHANGES
1	RELEASED 7.5.82
2	SEE SHT 1
3	ECO 1383, 1380 R18 WAS 866R R23 WAS 3K63 R85 WAS 28K1 ILL 24.8.82
4	SEE SHEET 3
5	ECO 1501 ECO 1501 4.15.82 ILL 4.7.83 BJ
6	SEE SHTS 4 + 5
7	ECO 1554 R85 WAS 51K1 1% ILL 3.11.83
8	ECO 1581 R18 AND R23 NOW F.S.V.S JFA 16.2.84
9	SEE SHEET 4
10	ECO 1588 UPDATED TO ENG. PROC. 11 ILL 21.8.85

TO J4 MOTHER PCB 430444

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DRAWN 11	DATE 20.4.82	DIMENSIONS IN MILLIMETRES	TOLERANCES DECIMAL TO 2 PLACES ± 0.1mm DECIMAL TO 1 PLACE ± 0.2mm WHOLE DIMENSIONS ± 0.4mm ANGULAR ± 10°	MATERIAL	ASSY DRG 430444(A)	TITLE 4000/4000A REFERENCE DIVIDER PCB LEAST SIGNIFICANT SWITCH AND FILTER	DRAWING No. 430444 430444A
CHECKED A.K.G. GAGAN	DATE 18/5/82	SCALE	UNLESS OTHERWISE STATED FIRST ANGLE PROJECTION	FINISH	CHECK PROCEDURE 460444(A)		SHEET 2 OF 6
APPR 3	DATE 21.5.82	NOT TO BE SCALED			CHECK LIST 470444(A)		



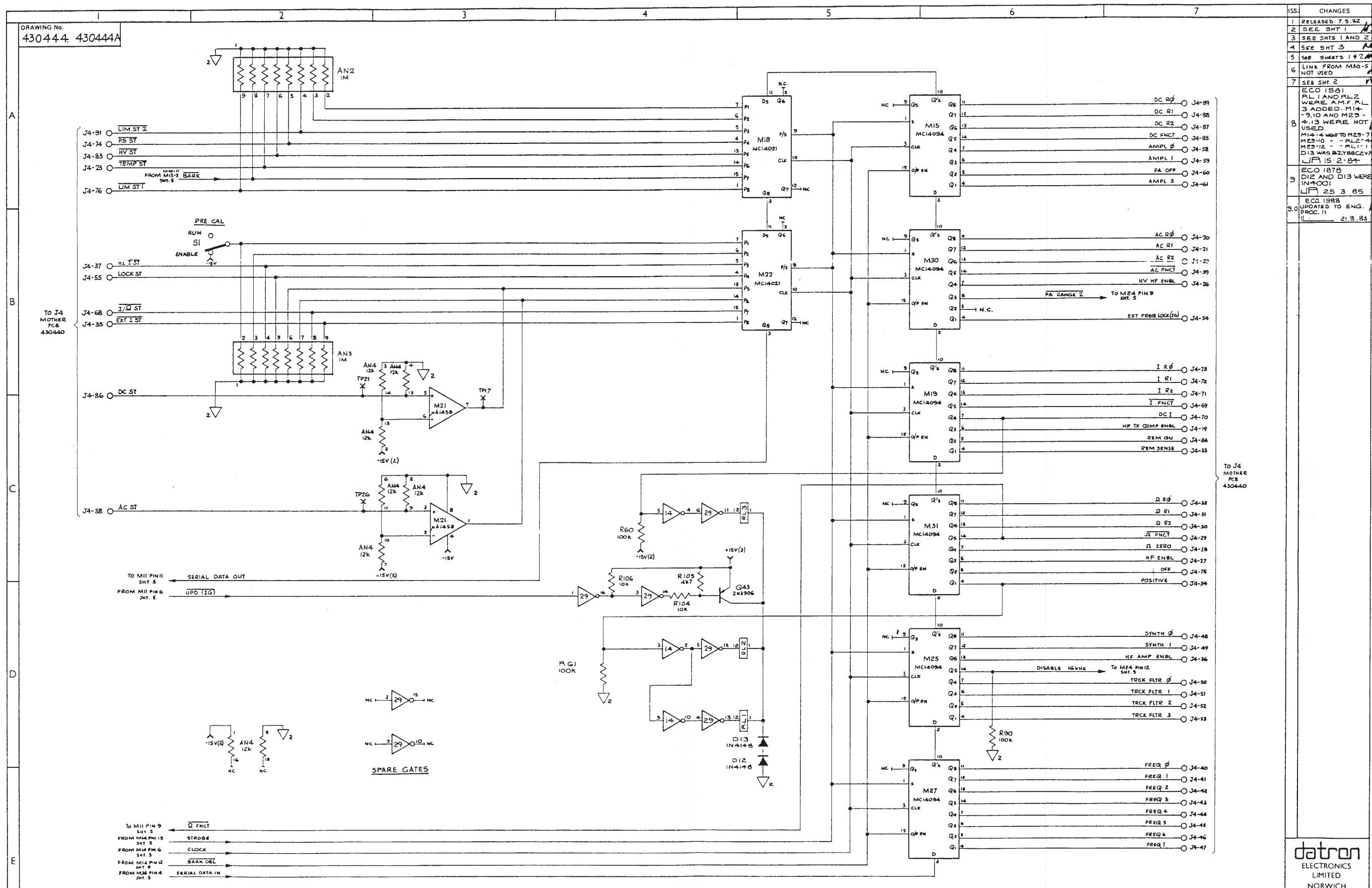
DRAWING No.
430444. 430444A

ISS.	CHANGES
1	RELEASED 1.5.82.
2	SEE SMT 1
3	SEE SMTS 1 AND 2
4	ECO 1439, 11-2-82. R124 & C65 MODD.
5	SEE SMTS 1 & 2
6	SEE SMTS 4 & 5
7	SEE SMT. 2
8	ECO 1581 RELAY 1 AND 2 WERE AMF TYPE RELAY 3 ADDED. SWITCHING RE-DESIGNED. GUARD TRACK NOW SHOWN. JF 16-2-84
9	SEE SHEET 4
10	ECO 1588 UPDATED TO ENG. PROC. 11
11	21.8.85

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DRAWING No.
430444
430444A
SHEET 3 OF 6

DRAWN	DATE	DIMENSIONS IN MILLIMETRES	TOLERANCES	MATERIAL	ASSY DRG	480444(A)	TITLE
11	20.4.82	SCALE	DECIMAL TO 2 PLACES ± 1mm DECIMAL TO 1 PLACE ± 2mm WHOLE DIMENSIONS ± 4mm ANGULAR ± 30°		PARTS LIST	400444(A)	4000/4000A REFERENCE DIVIDER PCB
CHECKED	DATE		UNLESS OTHERWISE STATED	FINISH	CIRCUIT DIAGRAM	460444(A)	SUMMING AMPLIFIER AND COMMON 4 SUPPLIES.
APPR.	DATE	NOT TO BE SCALED	FIRST ANGLE PROJECTION		CHECK PROCEDURE	470444(A)	
					CHECK LIST		

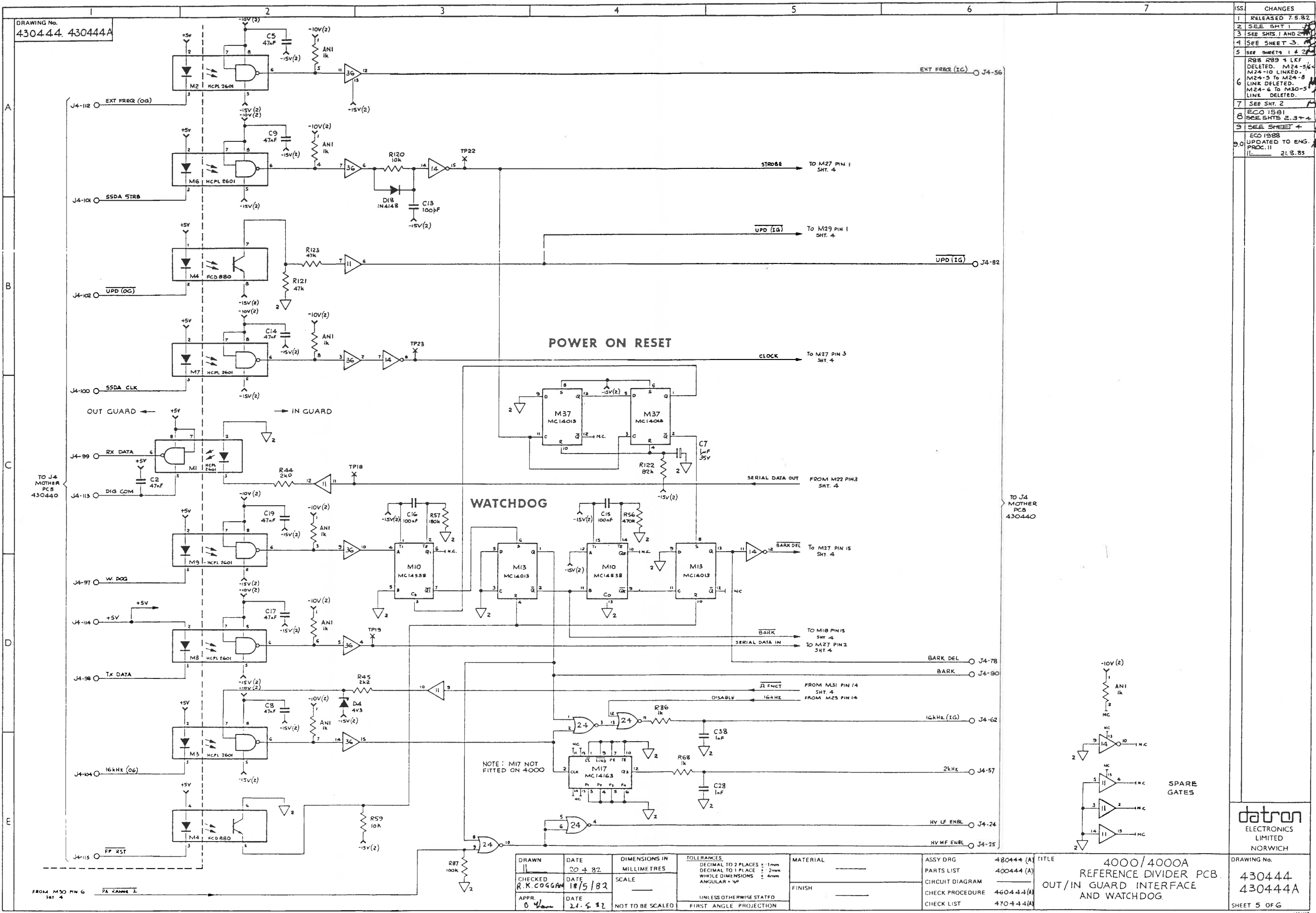


DRAWING No.
430444. 430444A

ISS.	CHANGES
1	RELEASED 7.5.82
2	SEE SHT 1
3	SEE SHTS 1 AND 2
4	SEE SHT 3
5	SEE SHEETS 1 & 2
6	LINE FROM M30-5 NOT USED
7	SEE SHT 2
8	ECO 1878 RL1 AND RL2 WERE A.M.F. RL 3 ADDED. M14- 9,10 AND M23- 4,13 WERE NOT USED. M14-4 WENT TO M23-7 M23-10 - " RL2-74 M23-12 - " RL1-1 D13 WAS B2Y88C2V LFA 15-2-84
9	ECO 1878 D12 AND D13 WERE IN-1001
10	ECO 1988 UPDATED TO ENG. PROC. 11 LFA 25 3 85
11	21.3.85

DRAWN 11	DATE 22.4.82	DIMENSIONS IN MILLIMETRES	TOLERANCES DECIMAL TO 2 PLACES : 1mm DECIMAL TO 1 PLACE : 2mm WHOLE DIMENSIONS : 4mm ANGULAR : 30°	MATERIAL	ASSY DRG PARTS LIST CIRCUIT DIAGRAM CHECK PROCEDURE CHECK LIST	430444(A) 400444(A) 460444(A) 470444(A)	TITLE 4000/4000A REFERENCE DIVIDER PCB SERIAL/PARALLEL DATA CONVERTER	DRAWING No. 430444 430444A
CHECKED R.K. COGGIN	DATE 18/5/82	SCALE	UNLESS OTHERWISE STATED FIRST ANGLE PROJECTION	FINISH				SHEET 4 OF 6
APPR B. Home	DATE 21.5.82	NOT TO BE SCALED						

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ISS.	CHANGES
1	RELEASED 7.5.82
2	SEE SMT 1
3	SEE SMTS 1 AND 2
4	SEE SHEET 3
5	SEE SHEETS 1 & 2
6	R88 R89 & LKF DELETED. M24-5 & M24-10 LINKED. M24-3 TO M24-8 LINK DELETED. M24-6 TO M30-5 LINE DELETED.
7	SEE SMT 2
8	ECO 1501 SEE SMTS 2, 3 & 4
9	SEE SHEET 4
9.0	ECO 1988 UPDATED TO ENG. PROC. 11
11	21.8.85

DRAWN 11 CHECKED R.K. COGGAN APPR. D. [Signature]	DATE 20/82 DATE 18/5/82 DATE 21.8.82	DIMENSIONS IN MILLIMETRES SCALE NOT TO BE SCALED	TOLERANCES DECIMAL TO 3 PLACES : 1mm DECIMAL TO 1 PLACE : 2mm WHOLE DIMENSIONS : 4mm ANGULAR : 90° UNLESS OTHERWISE STATED FIRST ANGLE PROJECTION	MATERIAL FINISH	ASSY DRG 480444 (A) PARTS LIST 400444 (A) CIRCUIT DIAGRAM CHECK PROCEDURE 460444 (A) CHECK LIST 470444 (A)	TITLE 4000/4000A REFERENCE DIVIDER PCB. OUT/IN GUARD INTERFACE AND WATCHDOG.	DRAWING No. 430444 430444A SHEET 5 OF 6
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DRAWING No.
430444. 430444A
FIRST USED ON

THIRD ANGLE PROJECTION

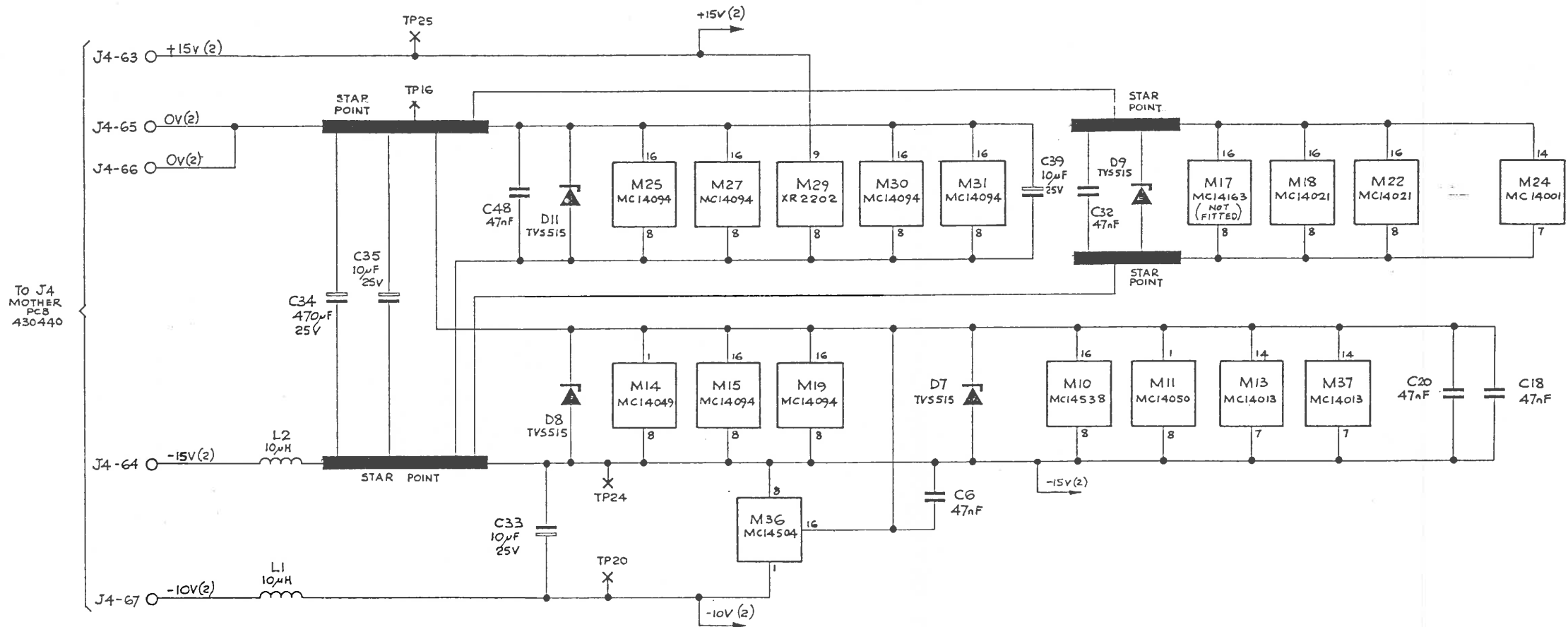
DRAWN IN ACCORDANCE WITH BS 308

ALL BURRS TO BE REMOVED

NOTES

ISS.	CHANGES
1	RELEASED 7.5.82
2	SEE SHT 1
3	SEE SHTS 1 AND 2
4	SEE SHT 3.
5	SEE SHTS 2 & 1
6	SEE SHTS 4 + 5
7	SEE SHT 2
8	ECO 1581 SEE SHEETS 2,3 AND 4.
9	SEE SHEET 4

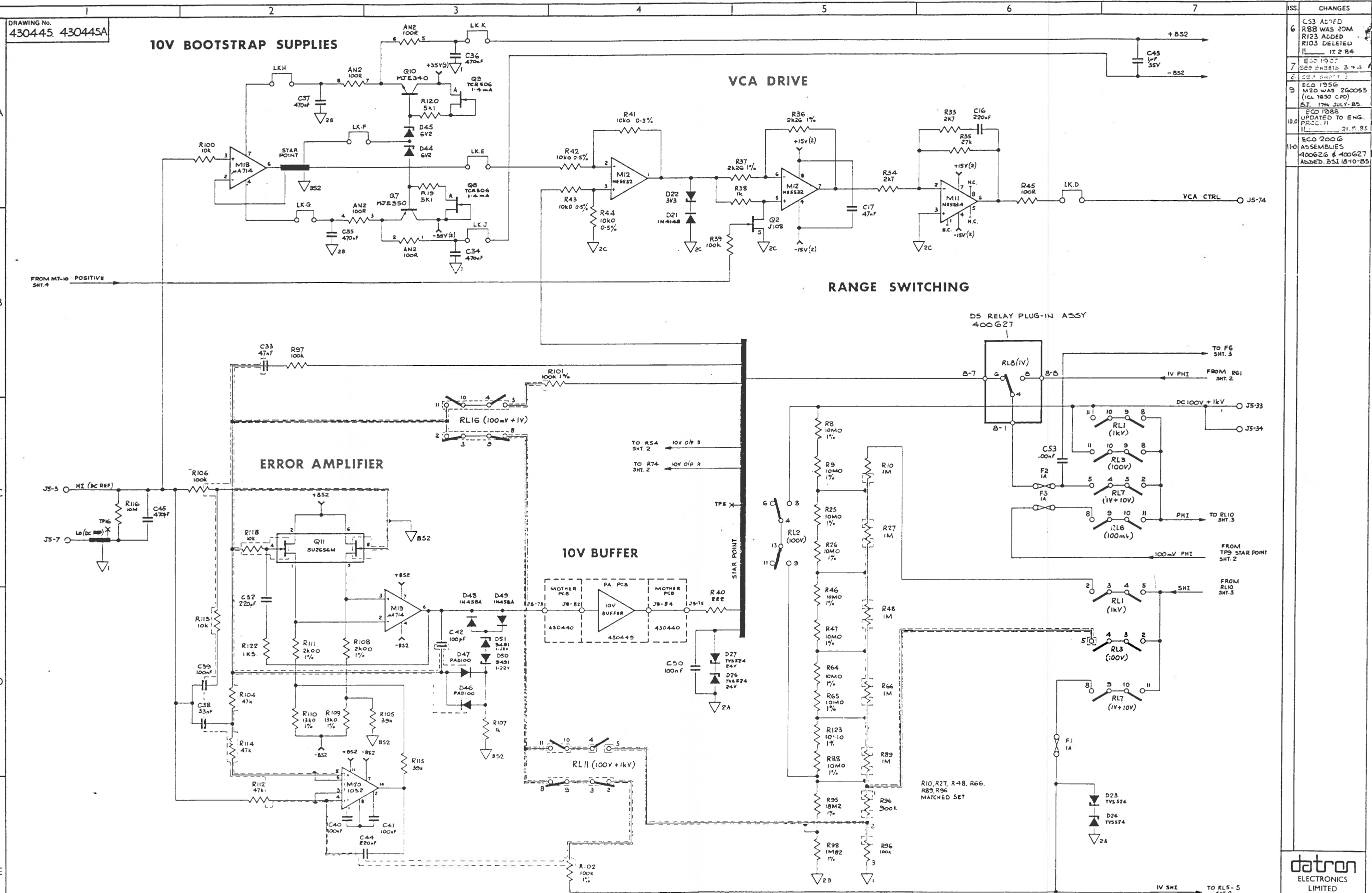
A
B
C
D



TO J4
MOTHER
PCB
430444



DRAWN CHECKED APPR.	DATE 29.4.82 18/5/82 21.5.82	DIMENSIONS IN MILLIMETRES SCALE NOT TO BE SCALED	TOLERANCES DECIMAL TO 2 PLACES ± 0.1mm DECIMAL TO 1 PLACE ± 0.2mm WHOLE DIMENSIONS ± 0.4mm ANGULAR ± 30° UNLESS OTHERWISE STATED FIRST ANGLE PROJECTION	MATERIAL FINISH	ASSY DRG & PARTS LIST } 400444A CIRCUIT DIAGRAM } CHECK PROCEDURE } 460444A CHECK LIST } 470444A	TITLE 4000/4000A REFERENCE DIVIDER PCB COMMON 2. POWER SUPPLIES	DRAWING No. 430444 430444A SHEET 6 OF 6
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DRAWING No. 430445 430445A

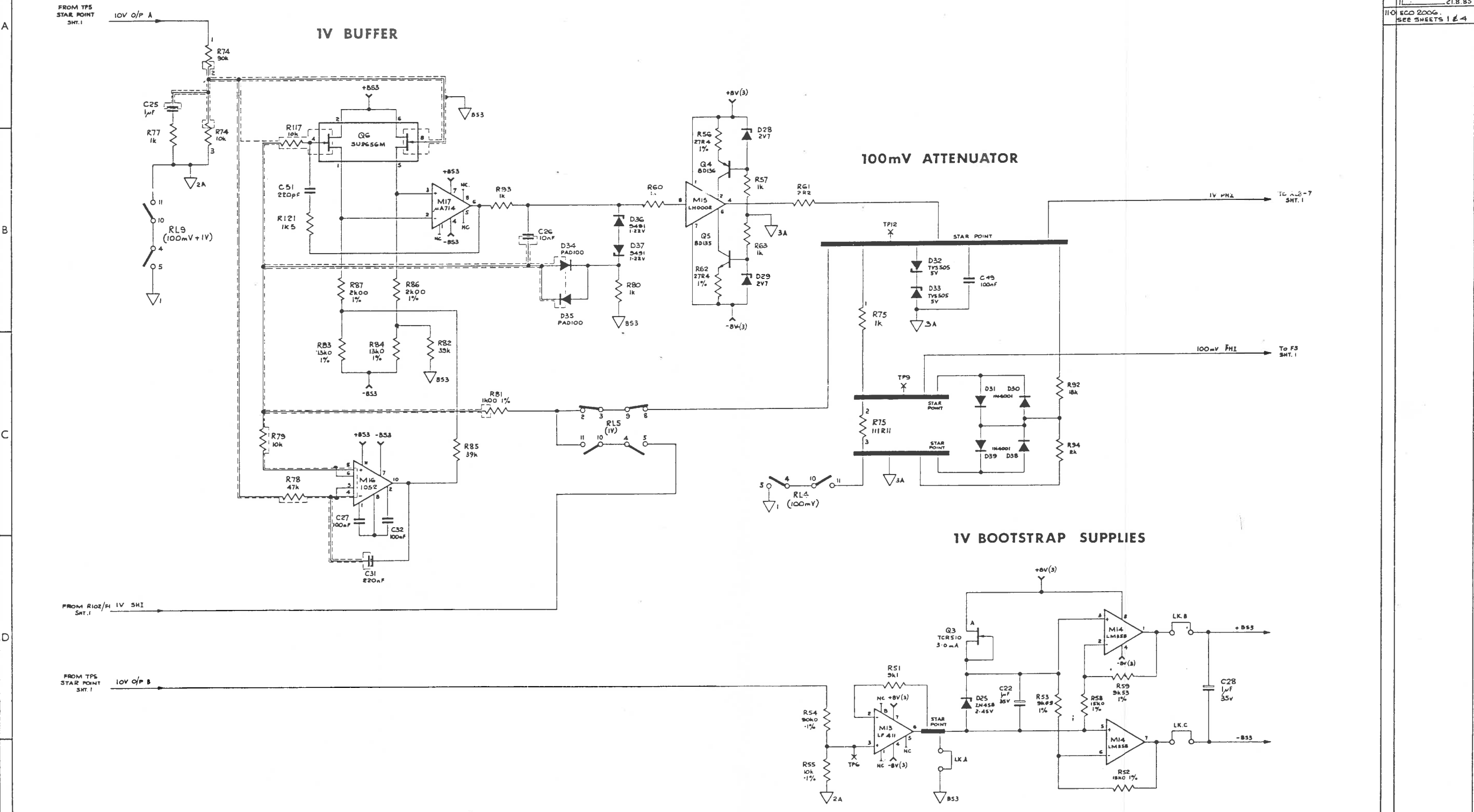
ISS.	CHANGES
6	C53 ADDED R88 WAS 20M R123 ADDED R103 DELETED 11 17.2.84
7	ECO 1907 SEP 1981 B+1
8	ECO 1956 M20 WAS 260053 (ICL 7850 C/P) S.T. 17th JULY-85
10.0	ECO 1988 UPDATED TO ENG. PRCC. 11 31.1.85
11.0	ECO 2006 ASSEMBLIES 400626 & 400627 ADDED. BSI 18-10-85

DRAWN	DATE	DIMENSIONS IN	TOLERANCES	MATERIAL	ASSY DRG	TITLE	DRAWING No.
IL	5.6.82	MILLIMETRES	DECIMAL TO 2 PLACES : 1mm DECIMAL TO 1 PLACE : 2mm WHOLE DIMENSIONS : 4mm ANGULAR : 40°		480445 (A)	4000/4000A DC PCB 10V/100V/1000V OUTPUTS	430445
CHECKED	DATE	SCALE	UNLESS OTHERWISE STATED	FINISH	PARTS LIST		430445A
R K COGGAN	25/6/82		FIRST ANGLE PROJECTION		CIRCUIT DIAGRAM		
APPR	DATE	NOT TO BE SCALED			CHECK PROCEDURE		
B. Yell	2.7.82				CHECK LIST		

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DRAWING No. 430445.430445 A

6	SEE SHTS. 1.3.1.4
7	SEE SHEETS 3.4.4
8	SEE SHEET 3
9	ECO 195G MIG WAS 200053 (ICL 7650 CPD). BJ 17-JULY 85
10	ECO 195S UPDATED TO ENG. PROC. 11
11	ECO 200G. SEE SHEETS 1.4.4



A

B

C

D

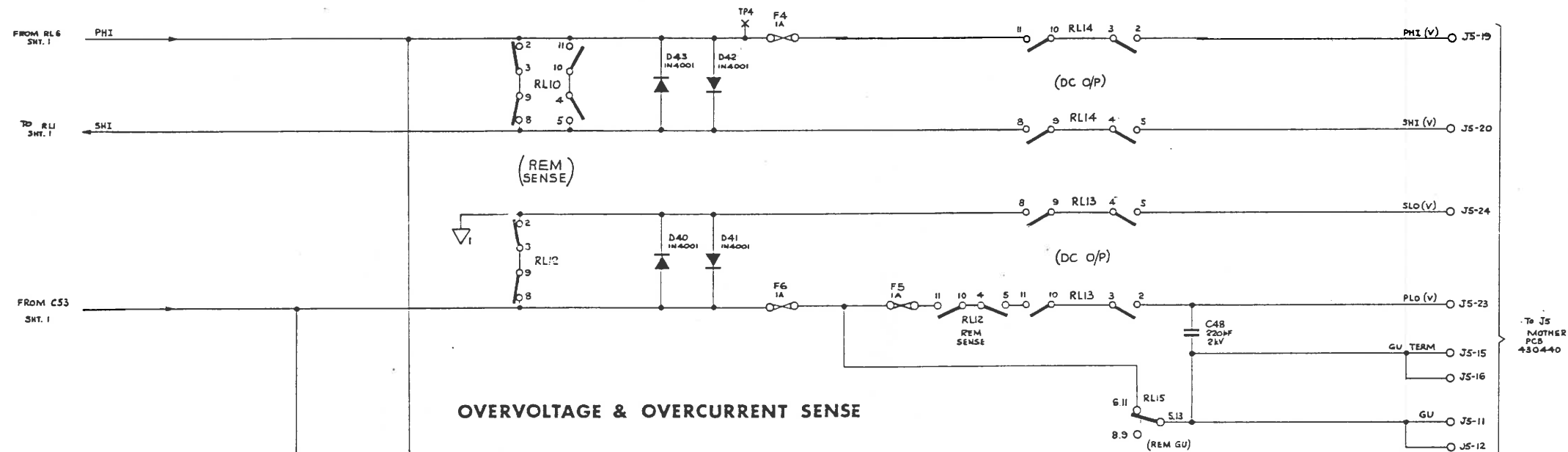
M

DRAWN R.K. COGGAN	DATE 25/6/82	DIMENSIONS IN MILLIMETRES	TOLERANCES DECIMAL TO 2 PLACES : 1mm DECIMAL TO 1 PLACE : 2mm WHOLE DIMENSIONS : 4mm ANGULAR : 30°	MATERIAL	ASSY DRG PARTS LIST CIRCUIT DIAGRAM CHECK PROCEDURE CHECK LIST	480445(A) 400445(A) 460445(A) 470445(A)	TITLE 4000/4000A DC. PCB IV + 100mV OUTPUTS	DRAWING No. 430445 430445A SHEET 2 OF 4
CHECKED R.K. COGGAN	DATE 25/6/82	SCALE	UNLESS OTHERWISE STATED FIRST ANGLE PROJECTION	FINISH				
APP'D R.K. COGGAN	DATE 2.7.82	NOT TO BE SCALED						

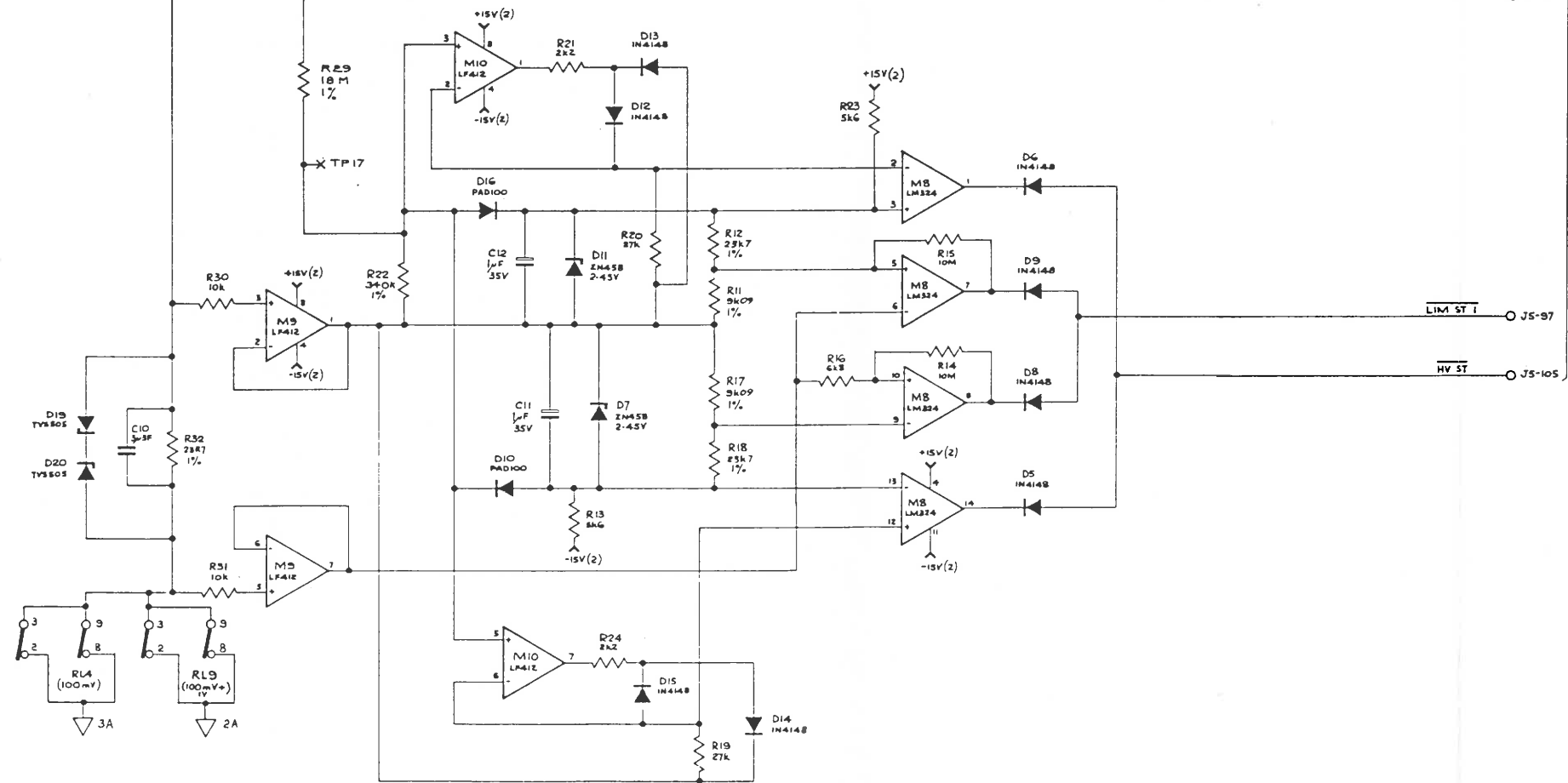
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DRAWING No.
430445 430445A

OUTPUT SWITCHING



OVERVOLTAGE & OVERCURRENT SENSE



ISS	CHANGES
6	ECO 1582 RELAYS WERE CRADLE TYPE 17.2.84
7	ECO 1507 RL10 & RL12 WERE 4-POLE RELAYS. LK'L ADDED 14.5.85
8	ECO 1909 LINK 'L' DELETED 22.5.85
10.0	ECO 1956 SEE SHEETS 1 & 2 BY 17.2.85
11.0	ECO 1988 UPDATED TO ENG PROC. II 21.8.85
12.0	ECO 2006 SEE SHEETS 1 & 4

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ISS	CHANGES
6	ECO 1582 RELAYS WERE CRADLE TYPE 17.2.84
7	ECO 1507 RL10 & RL12 WERE 4-POLE RELAYS. LK'L ADDED 14.5.85
8	ECO 1909 LINK 'L' DELETED 22.5.85
10.0	ECO 1956 SEE SHEETS 1 & 2 BY 17.2.85
11.0	ECO 1988 UPDATED TO ENG PROC. II 21.8.85
12.0	ECO 2006 SEE SHEETS 1 & 4

DRAWN 11	DATE 9.6.82	DIMENSIONS IN MILLIMETRES	TOLERANCES DECIMAL TO 2 PLACES : 1mm DECIMAL TO 1 PLACE : 2mm WHOLE DIMENSIONS : 4mm ANGULAR : 30°	MATERIAL	ASSY DRG PARTS LIST CIRCUIT DIAGRAM CHECK PROCEDURE CHECK LIST	480445 (A) 400445 (A) 460445 (A) 470445 (A)	TITLE 4000/4000A D.C. PCB OUTPUT SWITCHING AND OVERLOAD SENSE	DRAWING No. 430445 430445A
CHECKED R K COGGAN	DATE 25/6/82	SCALE	UNLESS OTHERWISE STATED FIRST ANGLE PROJECTION	FINISH				SHEET 3 OF 4
APP'D B	DATE 2.7.82	NOT TO BE SCALED						

DRAWING No.
480448
FIRST USED ON

THIRD ANGLE PROJECTION

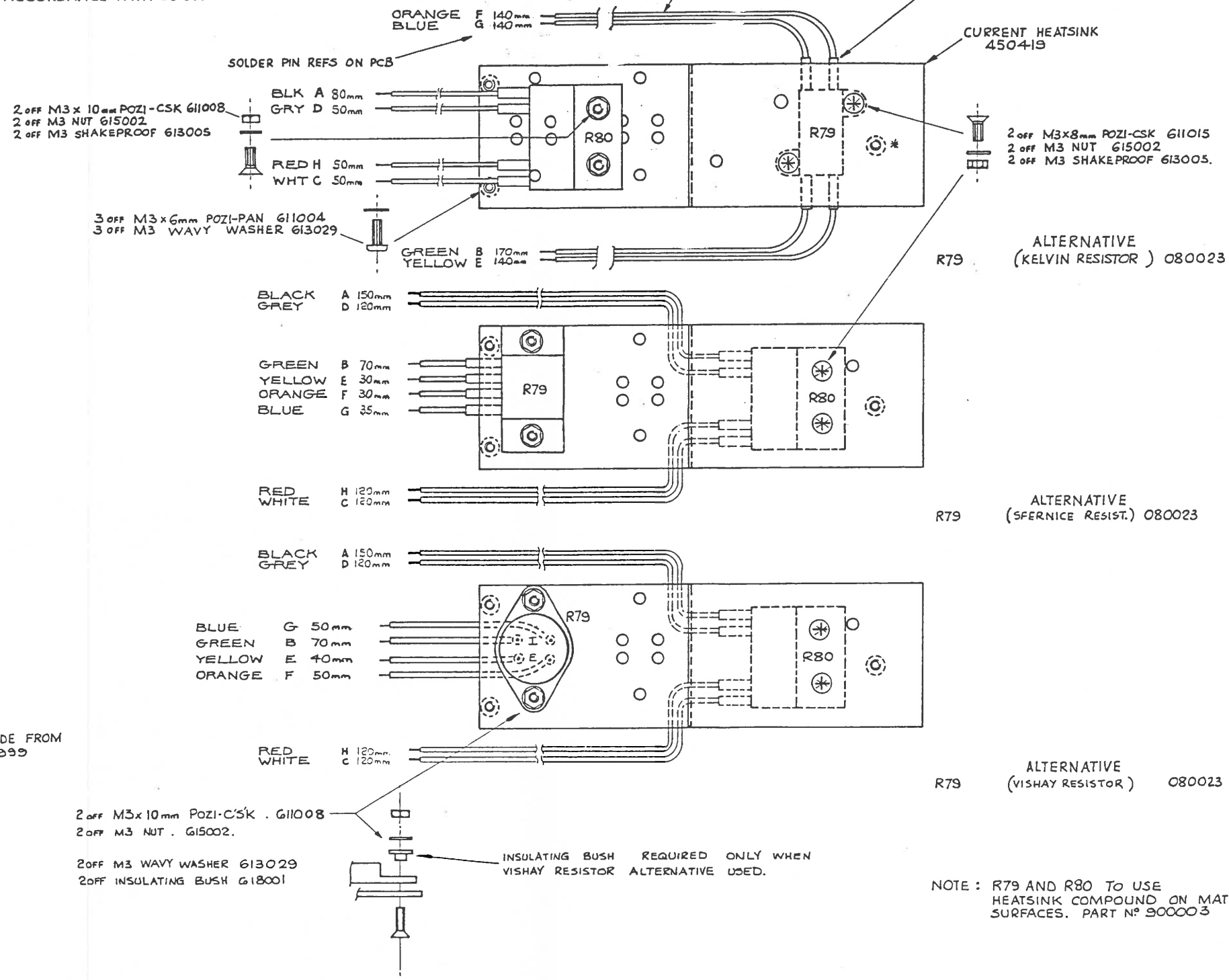
DRAWN IN ACCORDANCE WITH BS 308

ALL BURRS TO BE REMOVED

NOTES

WIRING SCHEDULE.		
RELAY/PIN	DESTINATION	WIRE LENGTH
PIN J	PIN P	120
PIN J	PIN Q	330
RL23-10	J8-29	45
RL23-9	J8-30	45
RL9-4	PIN N	210
RL23-2	J8-10	70
RL23-5	J8-8/9	60
RL18-2	RL17-10	70
RL17-9	RL18-5	100
RL18-5	CLOVERLEAF 1	105
RL18-2	RL25-2	130
RL19-2	RL20-2	80
RL20-5	RL19-5	70
RL8-13	J8-16/17	100
RL9-13	CLOVERLEAF 3	105
RL24-8	J8-16/17	75
RL23-11	J8-16/17	75
RL23-8	J8-18	50
RL24-5	J8-18	60
RL25-8	J8-8/9	50
CLOVERLEAF 4	J8-8/9	40
RL25-5	J8-10	30
RL25-11	CLOVERLEAF 2	30

NOTE:-
ALL RELAY WIRE CONNECTIONS TO BE MADE FROM
7/2 PTFE COVERED WHITE WIRE. 512999



ISS.	CHANGES
4	ECO1481 KELVIN ALT. ADDED I.L. 10.5.83.
5	SEE SHEET 1
6	SEE SHEET 1
7	SEE SHEET 1
8	SEE SHEET 1
9	ECO 1565 HEATSINK 450419-2 WAS ISS.1, NOW ISS.2 I.L. 22.12.83
10	ECO 1572 R80 ADDED I.L. 4.1.84
11	SEE SHEET 1
12	ECO 1641 PCB WAS 25 B.J. 29.5.84
13	ECO 1767 ALL COLOURED WIRES WERE WHITE. I.L. 22.11.84
14	ECO 1821 T03 VERSION OF R79 WAS DRAWN INCORRECTLY I.L. 24.1.85
15	ECO 1842 INSULATING BUSHES ADDED & M3x12mm SCREWS ADDED. B.J. 19th Feb 85.
16	SEE SHEET 1
17	ECO 1914 HEATSINK COMP. TO BE USED ON R79 AND R80 I.L. 9.5.85
18	ECO 1969 SCREWS FOR R79 FIXINGS WERE M3 x 12mm WAVY WASHER REPLACES FLAT SHAKEPROOF WASHERS. I.L. 5.8.85
18.0	ECO 1988 UPDATED TO ENG PROC.11 I.L. 21.8.85
19.0	ECO 2010 SEE SHEET 1 B.S.J. 21-10-85

DRAWN IL DATE 22.4.83 DIMENSIONS IN MILLIMETRES SCALE NOT TO BE SCALED	METRIC DIMENSIONS ANGULAR ± 5' DECIMAL TO 2 PLACES ± 0.1mm DECIMAL TO 1 PLACE ± 0.2mm WHOLE DIMENSIONS ± 0.4mm UNLESS OTHERWISE STATED	MATERIAL FINISH	datron ELECTRONICS LTD. NORWICH. TITLE 4000 I/Ω PCB ASSEMBLY	DRAWING No. 480448 SHEET 2 OF 2
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DRAWING No. 480448

MOUNTING I.C.s.			
Nº OF WAYS	PART Nº	Nº OFF	M.S. M8, M9, M10, M18, M16, M17, M19.
14	605060	8	M6, M12, M13, M14, M18, M20.
B	605059	1	M4

MOUNT R2, R3, R4, R35, FI-F3 & D3 RELAY ASSY 400631. ON SMALL CERAMIC BEADS G30036 17 off.

ALL TEST LINKS & LINKS USE 22SWG BTC WIRE 540002 WHEN SLEEVING IS REQUIRED USE SLEEVE 590004.

ADD WIRE LINKS TO REDUNDANT HOLES AS SHOWN, SLEEVE NOT REQD.

COMPONENTS WITHIN THIS AREA DEFINED BY DOTTED LINE, SHOULD BE NO HIGHER THAN 7mm.

FIXING HOLE FOR MOUNTING ALTERNATIVE RES/HEATSINK ASSYS - SEE SH2.

10off TEST POINT TERMINAL 620007

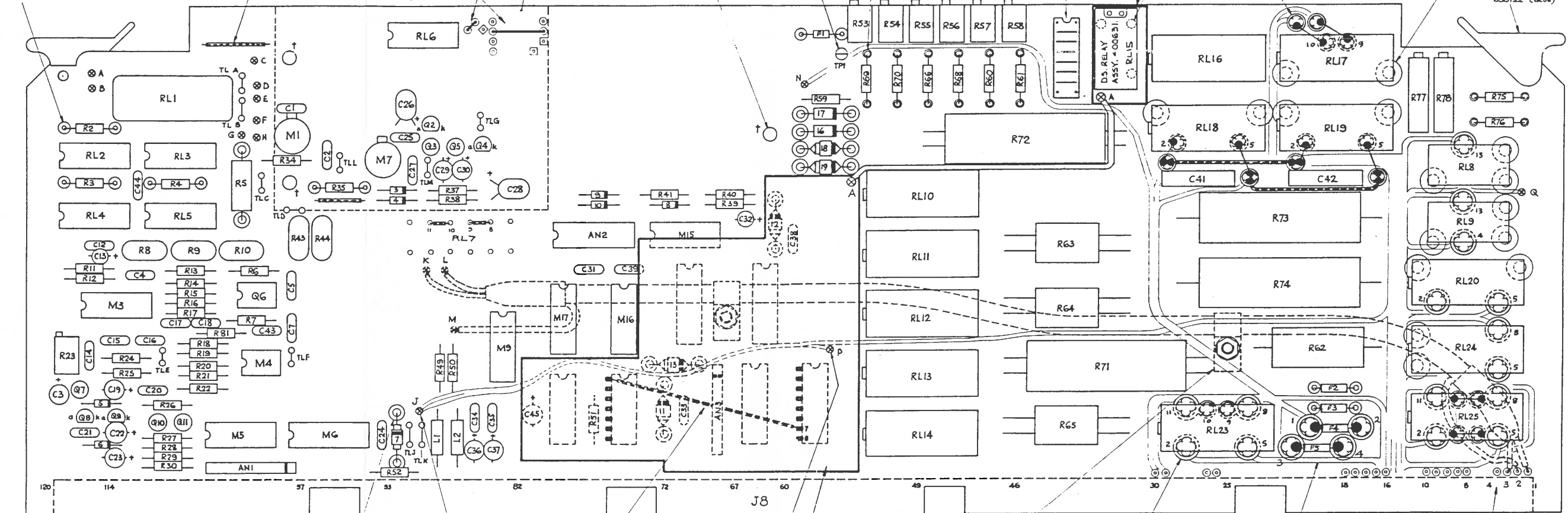
MOUNT R60, R61, R66, R68, R69, R70, R75, R76, ON FSV TERMINALS G02001 - 1G OFF.

FIT G04037 LINK PLUG. (REMOVE LINKS 1-16 & 23)

USE 3 SMALL CERAMIC BEADS, FITTED TO WIRE AS SHOWN TO SPACE PCB OFF MAIN BOARD.

18 OFF SMALL CLOVERLEAF TERMINAL 620001

2 OFF CIRCUIT BOARD EJECTOR 630122 (BLUE)



410262-2C

MOUNT R5, D7, D11, D12, D13, D16-D19 ON LARGE CERAMIC BEAD 630024 18 off

14 OFF SOLDER TERMINAL G20003 MOUNT PINS K, L & M ON UNDERSIDE OF PCB.

NOTE: ALL CONNECTION TO THESE SOLDER PINS TO BE SLEEVED USE SLEEVE 590001 (x 1/2) EXCEPT THOSE ON UNDERSIDE OF PCB.

1 off SOLDER TURRET 620006

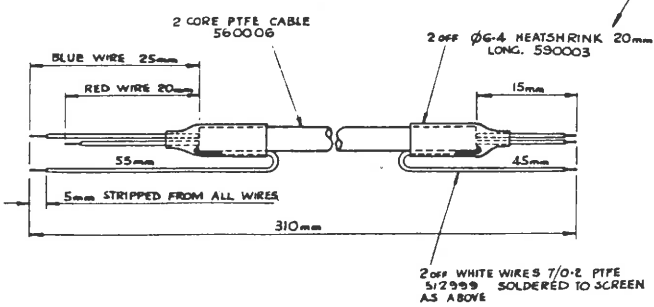
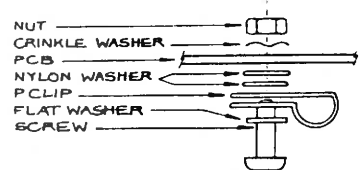
I/Ω CONSTANT CURRENT RELAY DRIVE ASSEMBLY 400630.

- 2 off P CLIP G30003
- 2 off SCREW M3 X 8 POZI-PAN G10116
- 2 off NUT M3 HEX FULL 615002
- 2 off M3 WAVY WASHER 613029
- 2 off M3 PLAIN WASHER 613007
- 4 off M3 FLAT NYLON WASHER 613017

19 OFF LARGE CLOVERLEAF TERMINAL 620005

EASE WIRES INTO PATHS BETWEEN COMPONENTS AS NEATLY AS POSSIBLE. SEE SHEET 2 FOR POINT TO POINT WIRING SCHEDULE.

RED WIRE TO PIN 1 & PIN L
WHITE WIRE TO PIN 2 & PIN M
BLUE WIRE TO PIN 3 & PIN K

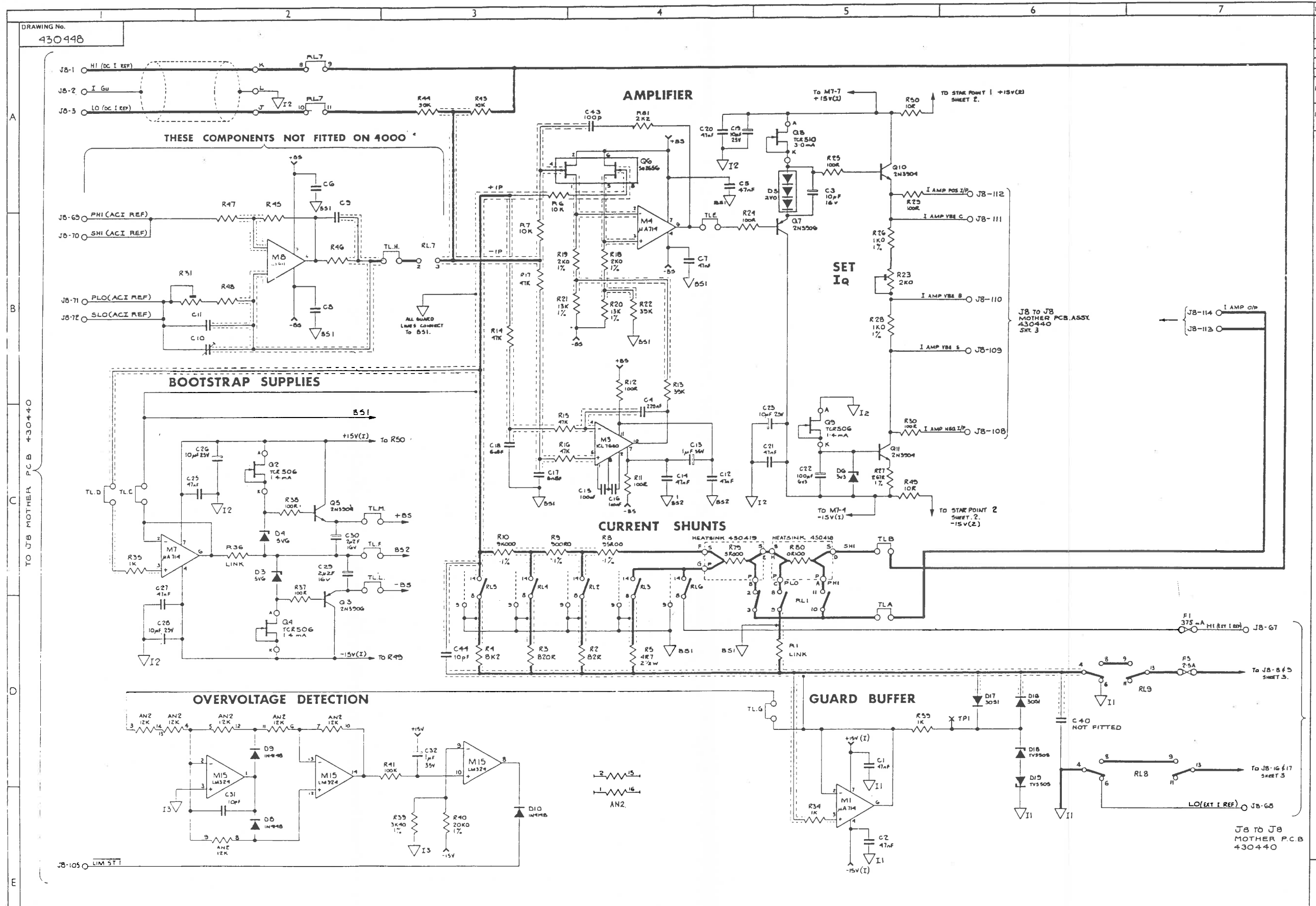


2 off WHITE WIRES 7/0-2 PIPE 512999 SOLDERED TO SCREEN AS ABOVE

ISS	CHANGES	ISS	CHANGES	ISS	CHANGES
15	ECO 2045 30 M3 NYLON WASHERS ADDED TO RELAY PINS 20.10.85	9	ECO 1565 HEATSINK 450493 WAS 155.1 (SHT 2) 22.12.83	4	ECO 1491 NEW PCB LAYOUT, ZL 10.3.85
16	ECO 2135 TWO NYLON WASHERS UNDER R13 PIN 1 ADDRESS 20.3.85	10	ECO 1572 R80 ADDED TO SH2Z 4.1.84	5	ECO 1490, 1491 PARTS LIST CHANGES TO RESISTOR SET ISSUES 7.6.83
17	ECO 1814 SEE SHEET 2	11	ECO 1579 M3 X 8mm WAS M3 X 10mm POZI-PAN 2 NYLON WASHERS ADDED. LJF 14-2-84	6	ECO 1529 D10 AND D17 WERE 200010, P.C.B. WAS ISSUE 2.A. LJF 15.3.83
18	ECO 1868 SEE SHEET 2	12	ECO 1641 P.C.B. UPDATED TO 15948 E.C. 19-04-00630 & 400631 ASSYS. ADDED. VARIOUS COMPNTS. DELETED. 6.5.7, 23-10-85	7	ECO 1537 TRACE TO M20-7 IS CUT. M19-1 + M20-7 LINKED. 11.29.83
19	ECO 1910 UPDATE TO ENG. PROC. II 21.8.85	13	SEE SHEET 2	8	ECO 1548 D2 WAS 2Y7 ZEMER 20.10.83
20	ECO 2010 19-04-00630 & 400631 ASSYS. ADDED. VARIOUS COMPNTS. DELETED. 6.5.7, 23-10-85	14	SEE SHEET 2		
21	SEE SHEET 2	15	SEE SHEET 2		

DRAWN	DATE	DIMENSIONS IN MILLIMETRES	TOLERANCES	MATERIAL	ASSY DRG	TITLE	DRAWING No.
CHECKED	DATE	SCALE	DECIMAL TO 2 PLACES : 1mm DECIMAL TO 1 PLACE : 2mm WHOLE DIMENSIONS : 4mm ANGULAR : 10'	FINISH	PARTS LIST	400448	480448
APPR.	DATE	NOT TO BE SCALED	UNLESS OTHERWISE STATED FIRST ANGLE PROJECTION		CIRCUIT DIAGRAM	430448	
					CHECK PROCEDURE	460448	
					CHECK LIST	470448	
							SHEET 1 OF 2

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DRAWING No. 43044B

NO.	CHANGES
3	ECO1481 AN2, RL8 #9 NEW PIN # I.L. 10.5.83.
4	SEE SHT. 2 ECO15370
5	SEE SHT. 2 ECO15481
6	SEE SHT. 3 ECO1641
7	SEE SHT. 3 ECO18771
8	ECO1958
10	UPDATED TO ENG. PROC. 11 21.8.85
	ECO 2010
10	40044B & 40045I ASSEMBLIES ADDED B.S. 22nd OCT. 85.

TO JB MOTHER PCB 430440

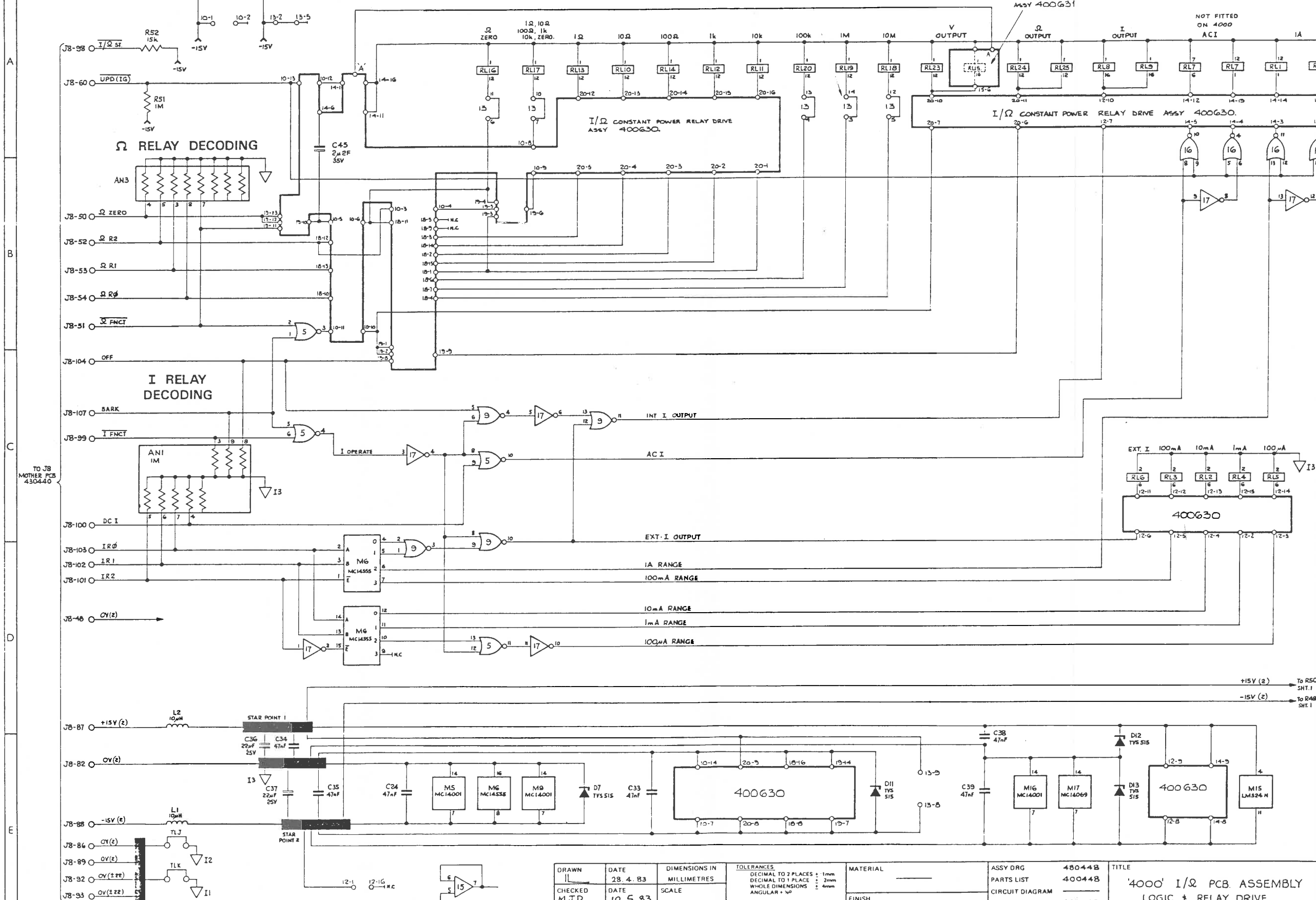
JB TO JB MOTHER PCB ASSY 430440 SHT. 3

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DRAWN	DATE	DIMENSIONS IN	TOLERANCES	MATERIAL	ASSY DRG	TITLE	DRAWING No.
11	26.4.83	DECIMAL TO 3 PLACES : 1mm DECIMAL TO 1 PLACE : 2mm WHOLE DIMENSIONS : 4mm ANGULAR : 1/2°	UNLESS OTHERWISE STATED FIRST ANGLE PROJECTION	---	48044B	4000 I/O PCB ASSEMBLY.	43044B
CHECKED	DATE	SCALE		FINISH	PARTS LIST	VOLTAGE TO CURRENT CONVERTER	
M.J.D.	10.5.83	---		---	40044B		
APPR.	DATE	NOT TO BE SCALED			CIRCUIT DIAGRAM		
					CHECK PROCEDURE		
					CHECK LIST		
					47044B		SHEET 1 OF 3

DRAWING No. 430448

NOTE: M13 SHORTED BY LINKS.

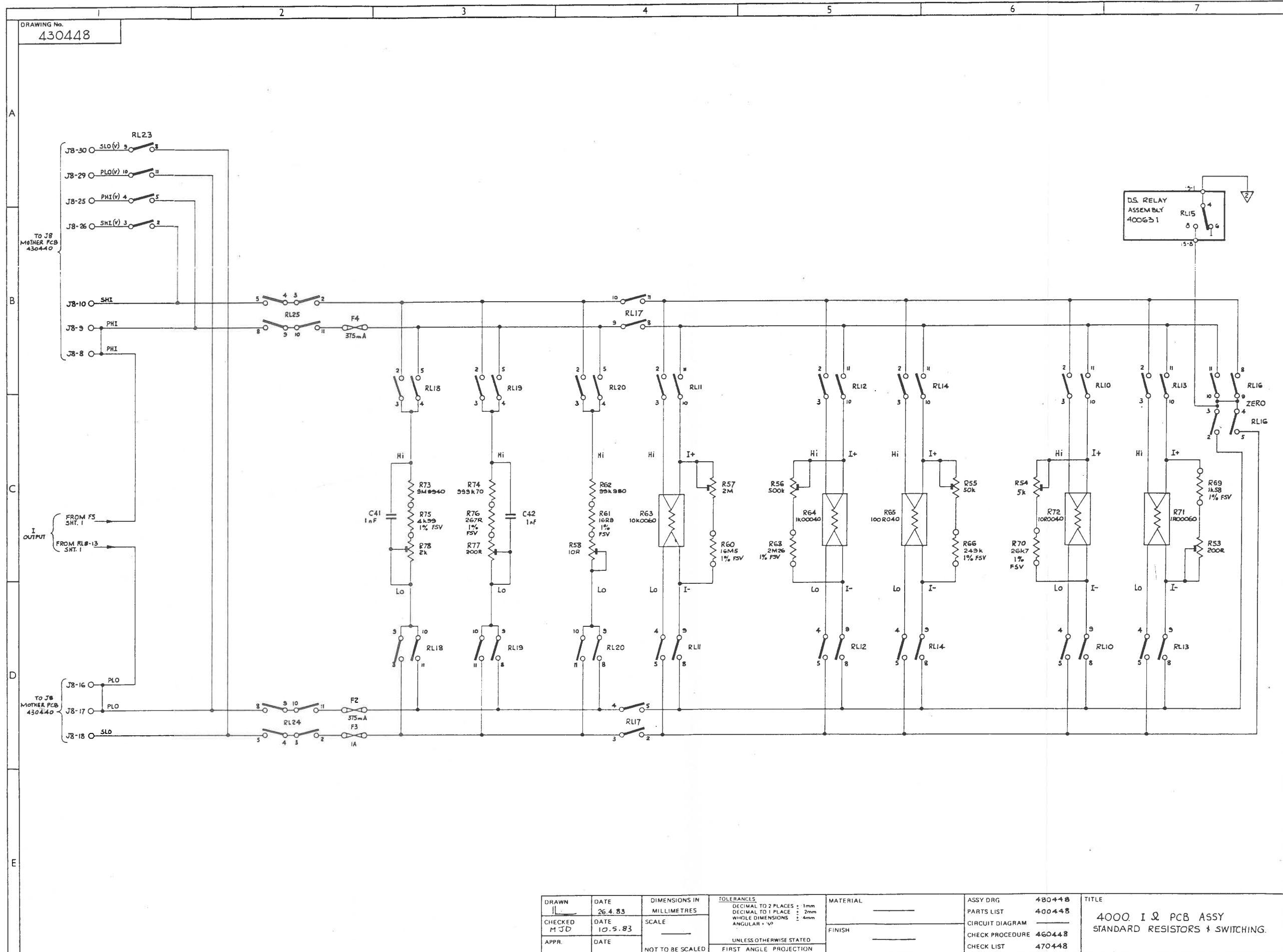


NO.	CHANGES
3	ECO1481 NEW OHMS RELAYS & LOGIC M.D. I.L. 10.5.83
4	ECO 1457. Ω FNCT TO M20-7 DELETED (BUFFERED) M20-7 LINKED M19-1 I.L. 29.9.83
5	ECO 1348 D2 WAS 2W7 ZENER WITH CATHODE TO IS. I.L. 20.10.83
6	SEE SHEET 3, ECO 1641
7	SEE SHEET 3, ECO 1877
18	ECO 1888 UPDATED TO ENG. PRD.C. II I.L. 21.8.85
19	ECO 2010. 400630 & 400631 ASSEMBLIES ADDED. R32, R33, D1, D2, Q1, M10, M12, M13, M14, M15, M19 & M20 DELETED. B.S.J. 23 OCT 85.

TO J8 MOTHER PCB 430440

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DRAWN IL	DATE 28.4.83	DIMENSIONS IN MILLIMETRES	TOLERANCES DECIMAL TO 2 PLACES : 1mm DECIMAL TO 1 PLACE : 2mm WHOLE DIMENSIONS : 4mm ANGULAR : 1/2°	MATERIAL	ASSY DRG 480448	TITLE '4000' I/O PCB ASSEMBLY LOGIC & RELAY DRIVE	DRAWING No. 430448
CHECKED M.J.D.	DATE 10.5.83	SCALE	UNLESS OTHERWISE STATED FIRST ANGLE PROJECTION	FINISH	CIRCUIT DIAGRAM 400448		SHEET 2 OF 3
APPR.	DATE	NOT TO BE SCALED			CHECK PROCEDURE 460448		
					CHECK LIST 470448		



DRAWING No. 430448

ISS.	CHANGES
3	ECO1481 NEW REAR SWITCHING. CAPS WERE 10µF 25V. 10.5.83
4	SEE SHY. 2
5	SEE SHY. 2
6	ECO 1841. 4 WIRE 12 SEED TRACKS CORRECTED. 21.3.84
7	ECO 1877. R60 WAS 15MΩ. R61 WAS 15R. R66 WAS 22k. R70 WAS 22k. R76 WAS 200R. 20.3.85
18A	ECO 1888. UPDATED TO ENG. PROC. II. 21.8.85
19	ECO 2010. 400630 & 400631 ASSEMBLIES ADDED. 23.08.85.

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DRAWN	DATE	DIMENSIONS IN MILLIMETRES	TOLERANCES	MATERIAL	ASSY DRG	480448	TITLE	DRAWING No.
CHECKED	DATE	SCALE	DECIMAL TO 2 PLACES : 1mm DECIMAL TO 1 PLACE : 2mm WHOLE DIMENSIONS : 4mm ANGULAR : 4°	FINISH	PARTS LIST	400448	4000 I & O PCB ASSY STANDARD RESISTORS + SWITCHING.	430448
APPR.	DATE	NOT TO BE SCALED	UNLESS OTHERWISE STATED		CIRCUIT DIAGRAM	460448		
			FIRST ANGLE PROJECTION		CHECK PROCEDURE	460448		
					CHECK LIST	470448		

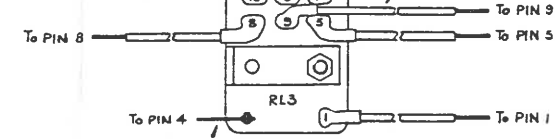
SHEET 3 OF 3

DRAWING No. 480449

RELAY PIN #	WIRE LENGTH
1	30mm
4	20mm
5	50mm
6	60mm
7	90mm
8	90mm
9	100mm
10	60mm

SLEEVE ALL WIRE CONNECTIONS BEFORE SOLDERING—USING SLEEVE 590001 (X1/2)

ALL RELAY LEADS MADE FROM 7/2 PIPE INSULATED (WHITE) WIRE 512999 CUT + STRIP EACH END 5mm BEFORE SLEEVING + SOLDERING.



FIT LI-L3 + L6 TO PCB AFTER 'FLOW-SOLDERING' BOARD.

HEATSINK (TO 220 VERT) 920091 4 off
SCREW M3 X 8mm POZI-PAN. G11016 4 off
WASHER M3 FLAT PLAIN. G13007 4 off
WASHER M3 SHAKEPROOF G13005 4 off
NUT M3 HEX FULL G15002 4 off

HEATSINK (TO 220 HORZ) 920105 2 off
SCREW M3 X 8mm POZI-PAN G11016 2 off
WASHER M3 SHAKEPROOF G13005 2 off
NUT M3 HEX FULL G15002 2 off

SOLDER TERMINAL 15 off G20003

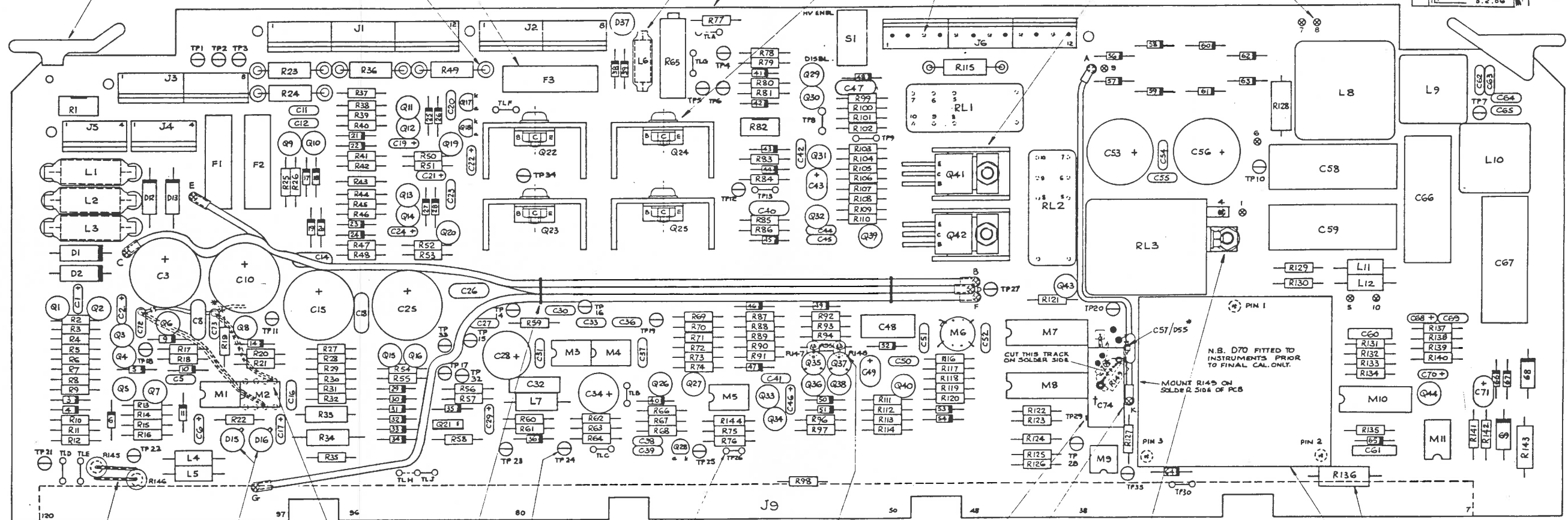
(VIOLET) CIRCUIT BOARD EJECTOR 2 off G30123.

FUSE HOLDER (F1, F2 + F3) 920126

MOUNT R23, R24, R36, R49, R115, LI-L3 ON CERAMIC BEADS G30024 16 off.

WIRE LINK (X20mm) 540002

REMOVE 5 PINS SHOWN THUS:



SLEEVE LEADS OF R145/R146 BEFORE SOLDERING. USE PTFE SLEEVE 590004. FIT CERAMIC BEAD G30036 (2mm) UNDER BODY OF RESISTOR.

MOUNT DIS + DIG ON MOUNTING PAD G18004 2 off

CUT TRACK AT POSITION MARKED * (NEXT C73). CUT TRACK BETWEEN C72 + C73. TOP SIDE OF PCB. LINK CAPS AS SHOWN TO HD ON UNDERSIDE OF PCB. SLEEVE WIRE BEFORE SOLDERING. 540002/570004.

LACING CORD 590007 2 POSITIONS

TEST POINT TERMINAL G20007 30 off.

TEST POINT LOOPS MADE FROM 22 SWG BTC WIRE 540002

FIT R147 + R148 THUS.

WIRE LEAD BETWEEN SOLDER TERMINALS A 1K, B 4C ETC. 7/2 PIPE COVERED WIRE (WHITE) 512999 SLEEVE TERMINATIONS WITH SLEEVE 590001 (X1/2)

WIRE LENGTH
A to K 100mm
B to C 240mm
D to E 220mm
F to G 220mm

N.B. FIT TP25 WITHOUT CERAMIC COLLAR IN VERT POSN, AS SHOWN

RELAY BRACKET 459112 1 off
RELAY NUT 3-48 UNC G15005 1 off
SCREW M3 X 8mm POZI-PAN G11016 1 off
WASHER M3 SHAKEPROOF G13005 1 off
NUT M3 HEX FULL G15002 1 off
WASHER M2.5 SHAKEPROOF G13014 1 off (RELAY)

'CONSTANT CURRENT' PLUG-IN PCB ASSY 400472 MOUNT ON CERAMIC BEAD G30036 3 off.

BEND RESISTOR LEADS MIN. OF 1.5 FROM ENDS OF COMP BODY.

I.C. MOUNTING			
N° WAYS	PART N°	N° OFF	USED TO MOUNT
B	605059/A	6	MI-M5, M11
14	605060/A	1	M10
16	605061/A	2	M7, M8
G	605066/A	1	M3

NOTE: USE HEATSINK COMPOUND BETWEEN MATING SURFACES OF Q22, Q23, Q24, Q25, Q41 + Q42 AND THE RESPECTIVE HEATSINKS 920003 A TORQUE OF 0.5 Nm. SHOULD BE APPLIED TO TIGHTEN COMPONENT FIXING.

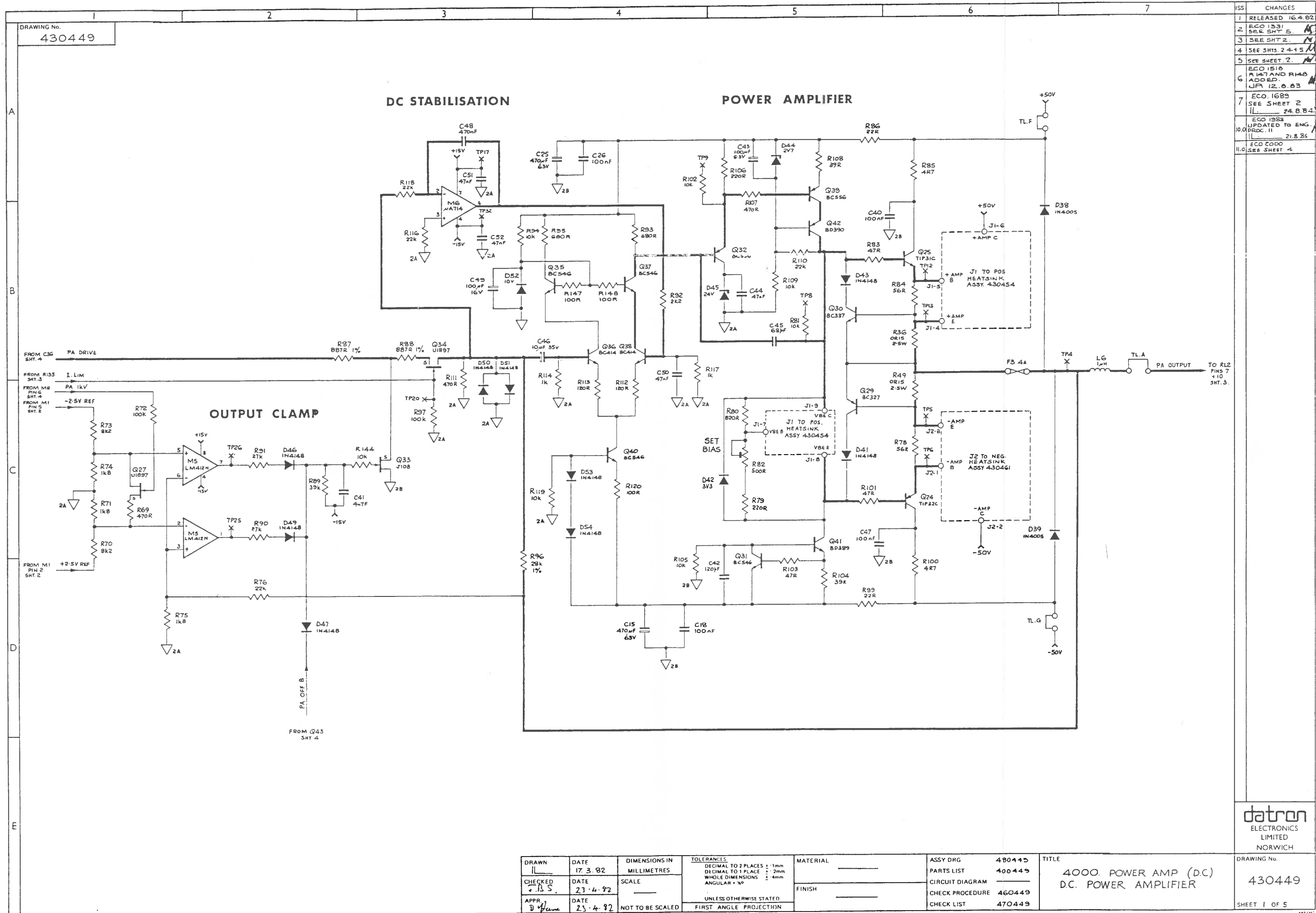
SLEEVE LEADS 590004 BEFORE M3/SOLDERING C74 TO PCB AS SHOWN

WRAP C57 LEADS AROUND THICKER LEADS OF D55 AND SOLDER JOINTS BEFORE ASSY INTO PCB.

ISS	CHANGES
1	RELEASED 16.4.82
6	ECO 1518 R147 AND R148 ADDED JFA 16.8.83
7	ECO 1529 D1, 2, 12 AND 13 WERE 200010 PCB WAS 159.4 JFA 15.10.83
8	ECO 1689 C71 C13 DELETED 24.8.84
9	ECO 1812 R136 WAS 5% 43W 10.1.85
10	ECO 1934 D56 WAS PART N° 214015 BLZ. NOW PART N° 214013 DFMTZ 26.6.85
10.0	ECO 1988 UPDATED TO ENG. PROC. II 21.8.87
11.0	ECO 2000 C74 AND R145 ADDED 4.9.85
11.1	ECO 2020 D70 ADDED 18.9.85
11.2	ECO 2115 6 OFF BEADS ADDED FOR LI-L3 5.2.86

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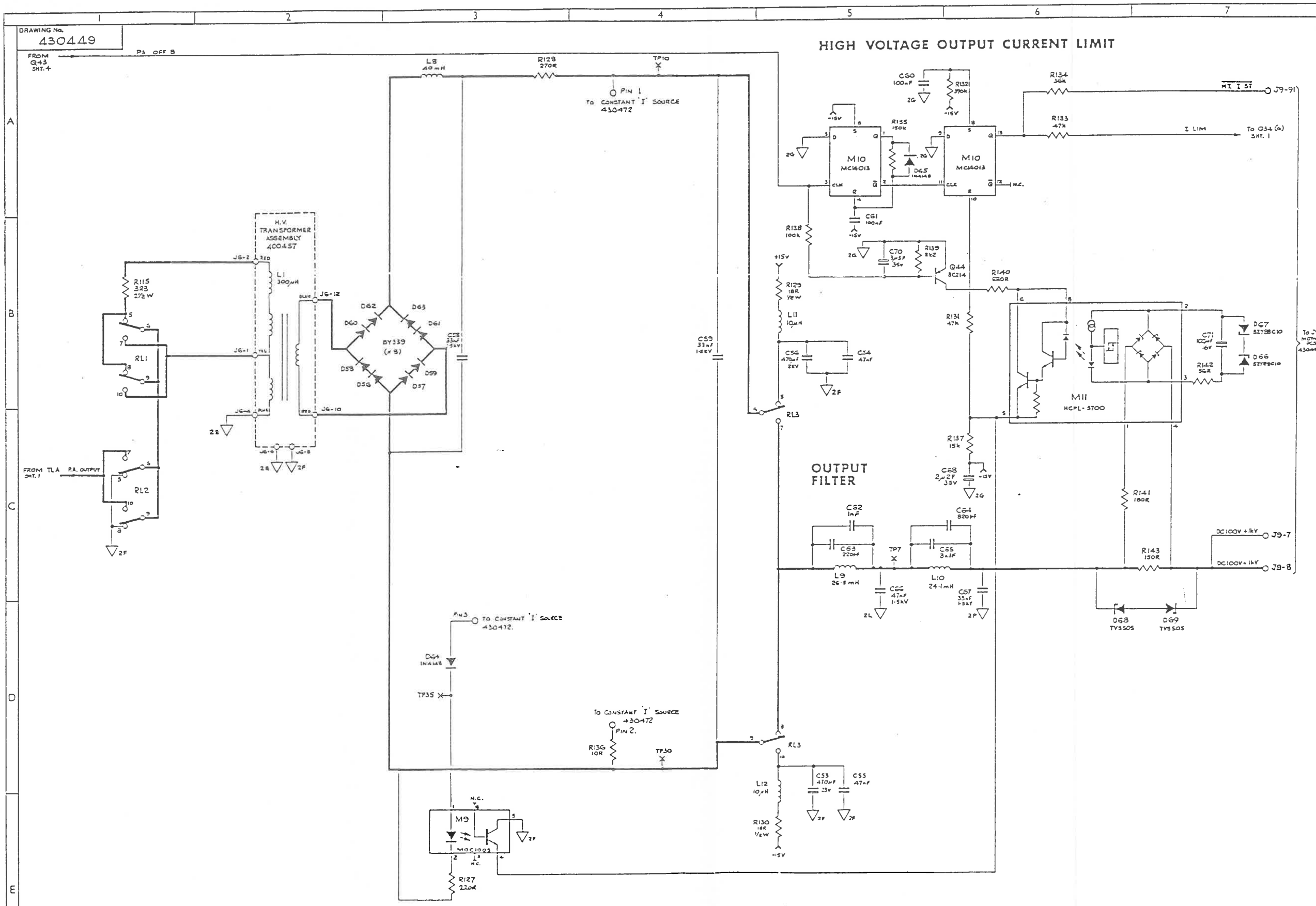
DRAWN	DATE	DIMENSIONS IN MILLIMETRES	TOLERANCES	MATERIAL	ASSY DRG	TITLE	DRAWING No.
11	1.3.82		DECIMAL TO 2 PLACES ± 1mm DECIMAL TO 1 PLACE ± 2mm WHOLE DIMENSIONS ± 4mm ANGULAR ± 30°			4000 POWER AMP (DC) PCB. ASSY.	480449
CHECKED	DATE	SCALE	UNLESS OTHERWISE STATED	FINISH	PARTS LIST		
MSP	16.4.82	2:1	FIRST ANGLE PROJECTION		400449		
APPR.	DATE	NOT TO BE SCALED			CHECK PROCEDURE		
B. Hume	23.4.82				470449		



ISS	CHANGES
1	RELEASED 16.4.82
2	ECO 1331 SEE SHT 5.
3	SEE SHT 2.
4	SEE SHTS 2-4-15
5	SEE SHEET 2.
6	ECO 1518 R147 AND R148 ADDED. UFR 12.0.83
7	ECO 1683 SEE SHEET 2 UFR 24.8.84
10	ECO 1988 UPDATED TO ENG. PRDC. II
11	ECO 0000 21.8.85
11.0	SEE SHEET 4

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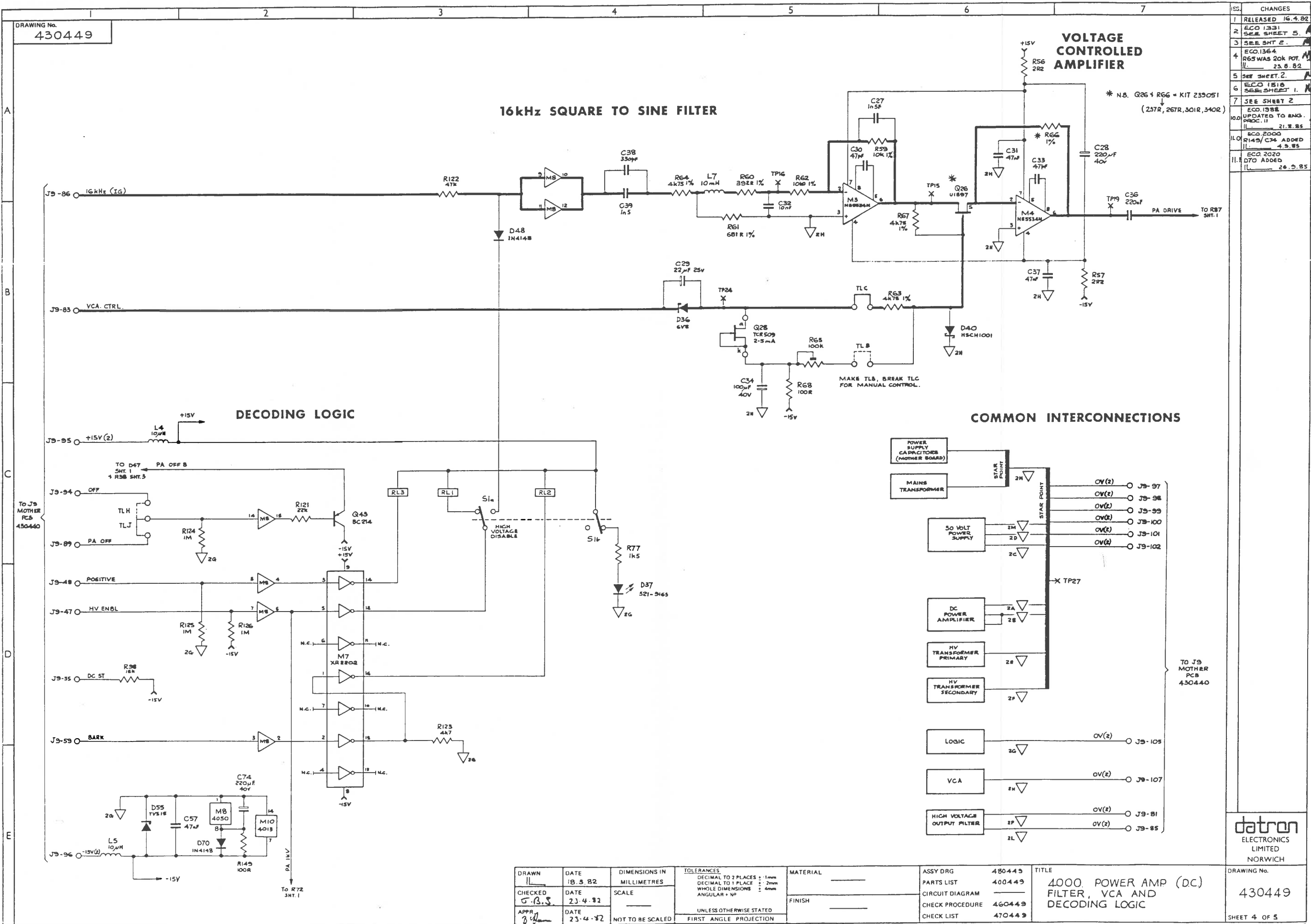
DRAWN ILL	DATE 17.3.82	DIMENSIONS IN MILLIMETRES	TOLERANCES DECIMAL TO 2 PLACES : ±0.1mm DECIMAL TO 1 PLACE : ±0.2mm WHOLE DIMENSIONS : ±0.4mm ANGULAR : ±0°	MATERIAL	ASSY DRG 480445	TITLE	DRAWING No.
CHECKED J.S.S.	DATE 21.4.82	SCALE	UNLESS OTHERWISE STATED FIRST ANGLE PROJECTION	FINISH	PARTS LIST 400449	4000. POWER AMP (D.C.) D.C. POWER AMPLIFIER	430449
APPR. D. J. P.	DATE 23.4.82	NOT TO BE SCALED			CIRCUIT DIAGRAM 460449		SHEET 1 OF 5
					CHECK PROCEDURE 470449		



ISSI	CHANGES
1	RELEASED I.G. 4 B2
2	ECCO 1331 18.12 SHT 5.
3	SEE SHT 2.
4	SEE SHTS. 2, 4, 5, 11
5	SEE SHT 2
6	ECCO 1518 18.12 SHEET 1.
7	SEE SHEET 2
8	ECCO 1288 18.12 UPDATED TO ENG. PROC. II
11	21.8.85
11.01	SEE SHEET 4

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DRWN	DATE	DIMENSIONS IN MILLIMETRES	TOLERANCES	MATERIAL	ASSY DRG	TITLE	DRAWING No.
11	17.3.82	—	DECIMAL TO 2 PLACES : 1mm DECIMAL TO 1 PLACE : 2mm WHOLE DIMENSIONS : 5mm ANGULAR : °	—	480449	400W. POWER AMP (DC) HIGH VOLTAGE OUTPUT.	430449
CHECKED	DATE	SCALE	UNLESS OTHERWISE STATED	FINISH	PARTS LIST		
APPR.	DATE	NOT TO BE SCALED	FIRST ANGLE PROJECTION	—	CIRCUIT DIAGRAM		
—	—	—	—	—	CHECK PROCEDURE		
—	—	—	—	—	CHECK LIST	470449	SHEET 3 OF 5



DRAWING No.
430449

ISS.	CHANGES
1	RELEASED 16.4.82
2	ECO 1331 SEE SHEET 5.
3	SEE SHEET 2.
4	ECO 1364 R65 WAS 20k POT. 23.6.82
5	SEE SHEET 2.
6	ECO 1510 SEE SHEET 1.
7	SEE SHEET 2.
10.0	ECO 1388 UPDATED TO ENG. PROC. II 21.8.85
10.0	ECO 2000 R149/C24 ADDED 4.9.85
11.0	ECO 2020 D70 ADDED 26.9.85

STAR POINT	CONNECTION	TO J9 MOTHER PCB 430440
2A	OV(2)	J9-97
2B	OV(2)	J9-98
2C	OV(2)	J9-99
2D	OV(2)	J9-100
2E	OV(2)	J9-101
2F	OV(2)	J9-102
2G	OV(2)	J9-105
2H	OV(2)	J9-107
2I	OV(2)	J9-81
2J	OV(2)	J9-85

DRAWN	DATE	DIMENSIONS IN	TOLERANCES	MATERIAL	ASSY DRG	480445	TITLE	4000 POWER AMP (DC)	DRAWING No.
CHECKED	DATE	MILLIMETRES	DECIMAL TO 2 PLACES ± 0.1mm		PARTS LIST	400445	FILTER, VCA AND		430449
APP'D	DATE	SCALE	DECIMAL TO 1 PLACE ± 0.2mm		CIRCUIT DIAGRAM		DECODING LOGIC		
			WHOLE DIMENSIONS ± 0.4mm		CHECK PROCEDURE	460449			
			ANGULAR ± 9°		CHECK LIST	470449			
NOT TO BE SCALED			UNLESS OTHERWISE STATED						
			FIRST ANGLE PROJECTION						

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DRAWING No.
430449
FIRST USED ON

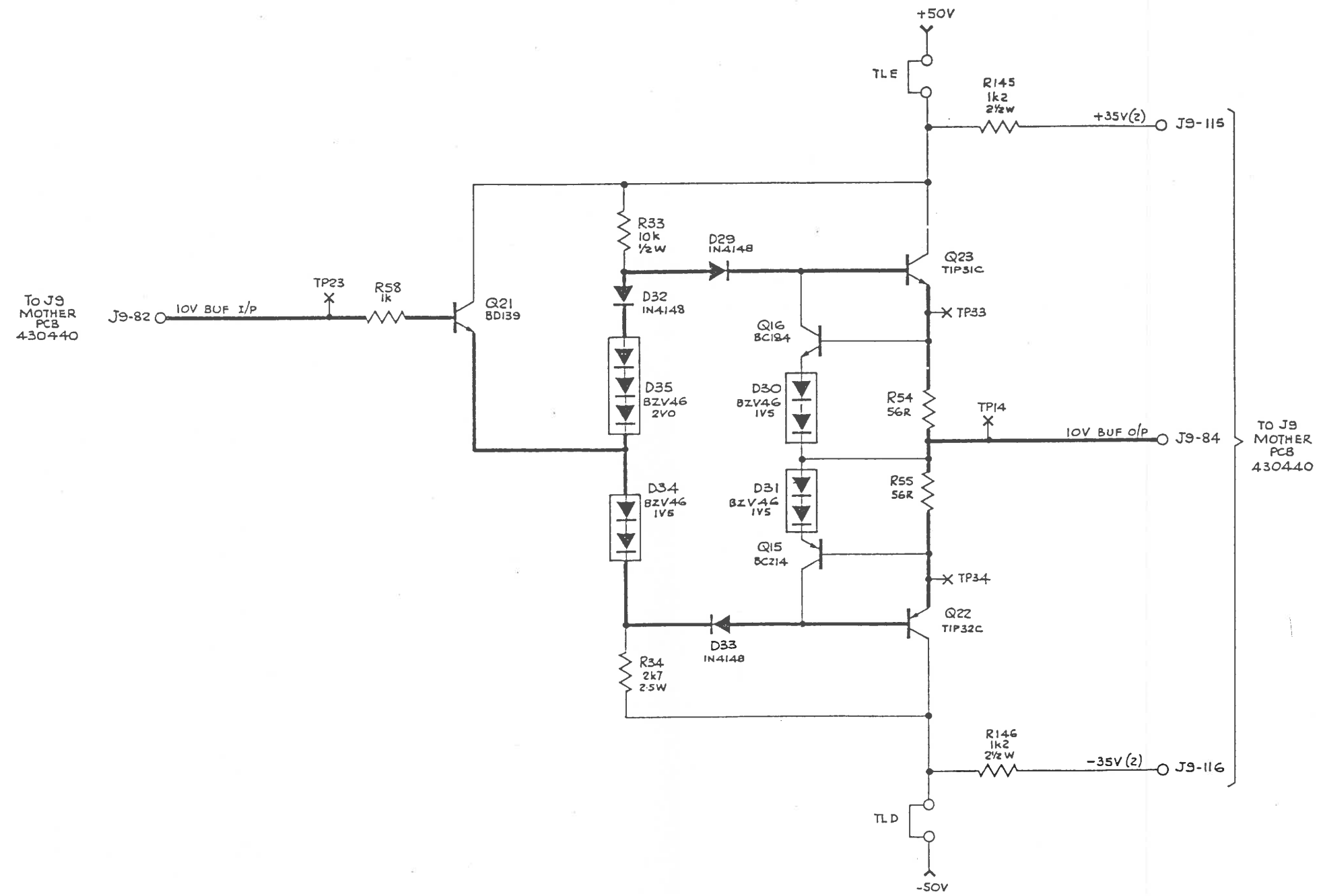
THIRD ANGLE PROJECTION
DRAWN IN ACCORDANCE WITH BS 308

ALL BURRS TO BE REMOVED

NOTES

1	RELEASED 16.4.82
2	ECO 1331 D7 AND D8 WERE BZY98C-15V JA 17.5.82
3	SEE SHT 2
4	ECO 1375 D7/D8 DELETED R145/R146 ADDED IL 23.8.82
5	SEE SHEET 2
6	ECO 1518 SEE SHEET 1
7	SEE SHEET 2
10.0	ECO 1988 UPDATED TO ENG. PROC. II IL 21.8.85
11.0	SEE SHEET 4

A
B
C
D



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DRAWN <i>IL</i>	DATE 18.3.82	DIMENSIONS IN MILLIMETRES	TOLERANCES DECIMAL TO 2 PLACES ± 0.1mm DECIMAL TO 1 PLACE ± 0.2mm WHOLE DIMENSIONS ± 0.4mm ANGULAR + 0°	MATERIAL	ASSY DRG 480449	TITLE	DRAWING No.
CHECKED <i>J.B.S.</i>	DATE 23.4.82	SCALE	UNLESS OTHERWISE STATED FIRST ANGLE PROJECTION	FINISH	PARTS LIST 400449	4000. POWER AMP (DC) 10V DC BUFFER AMP	430449
APPR. <i>B.Hunt</i>	DATE 23.4.82	NOT TO BE SCALED			CIRCUIT DIAGRAM 460449 CHECK LIST 470449		

DRAWING No.
480451

ISS.	CHANGES
1	RELEASED 9-3-82
2	ECO 1325 DG WAS 18V JPA 13.5.82.
3	ECO 1523 D1, D2, D3 AND D4 WERE 200010 P.C.B WAS 155 G JPA 15.3.83
4	ECO 1926 C3 C4 WERE PART N° 180025. JPA 24.5.85
4.0	ECO 1988 UPDATED TO ENG. PROC. II JPA 21.8.85

BED C1 TO C4 AND C21 TO C24 IN SILICONE RUBBER (900004)

MAKE ALL TEST POINT LOOPS FROM 22 SWG BTC WIRE 54.0002

4 OFF FUSE HOLDER 92012G
2 OFF FUSE (4A 5/8) 920128 - F1, F2
2 OFF FUSE (2A 5/8) 920127 - F3, F4

M1, M2 & Q4 FIXINGS
3 OFF SCREW M3x8mm POZIPAN 611016
3 OFF NUT M3 FULL HEX 615002
3 OFF WASHER M3 SHAKEPROOF 613005

HEATSINK-PCB FIXING
3 OFF HEATSINK (TO 220x2) 920090
3 OFF SCREW M3x8mm POZIPAN 611016
3 OFF NUT M3 FULL HEX 615002
3 OFF WASHER M3 SHAKEPROOF 613005

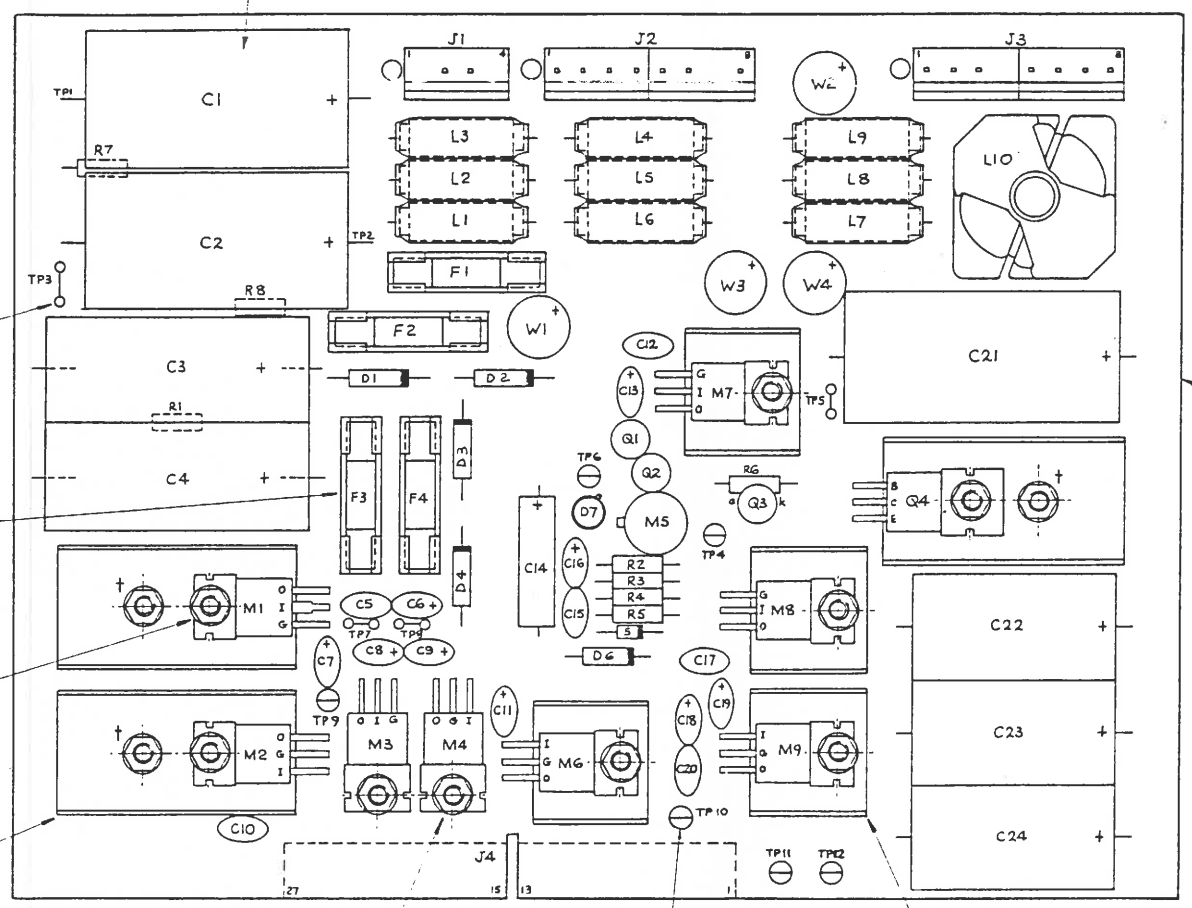
2 OFF SCREW M3x8mm POZIPAN 611016
2 OFF NUT M3 FULL HEX 615002
2 OFF WASHER M3 SHAKEPROOF 613005

TEST POINT TERMINAL 620007 6 OFF.

4 OFF HEATSINK (TO 220) 920089
4 OFF SCREW M3x8 POZIPAN 611016
4 OFF NUT M3 FULL HEX 615002
4 OFF WASHER M3 SHAKEPROOF 613005.

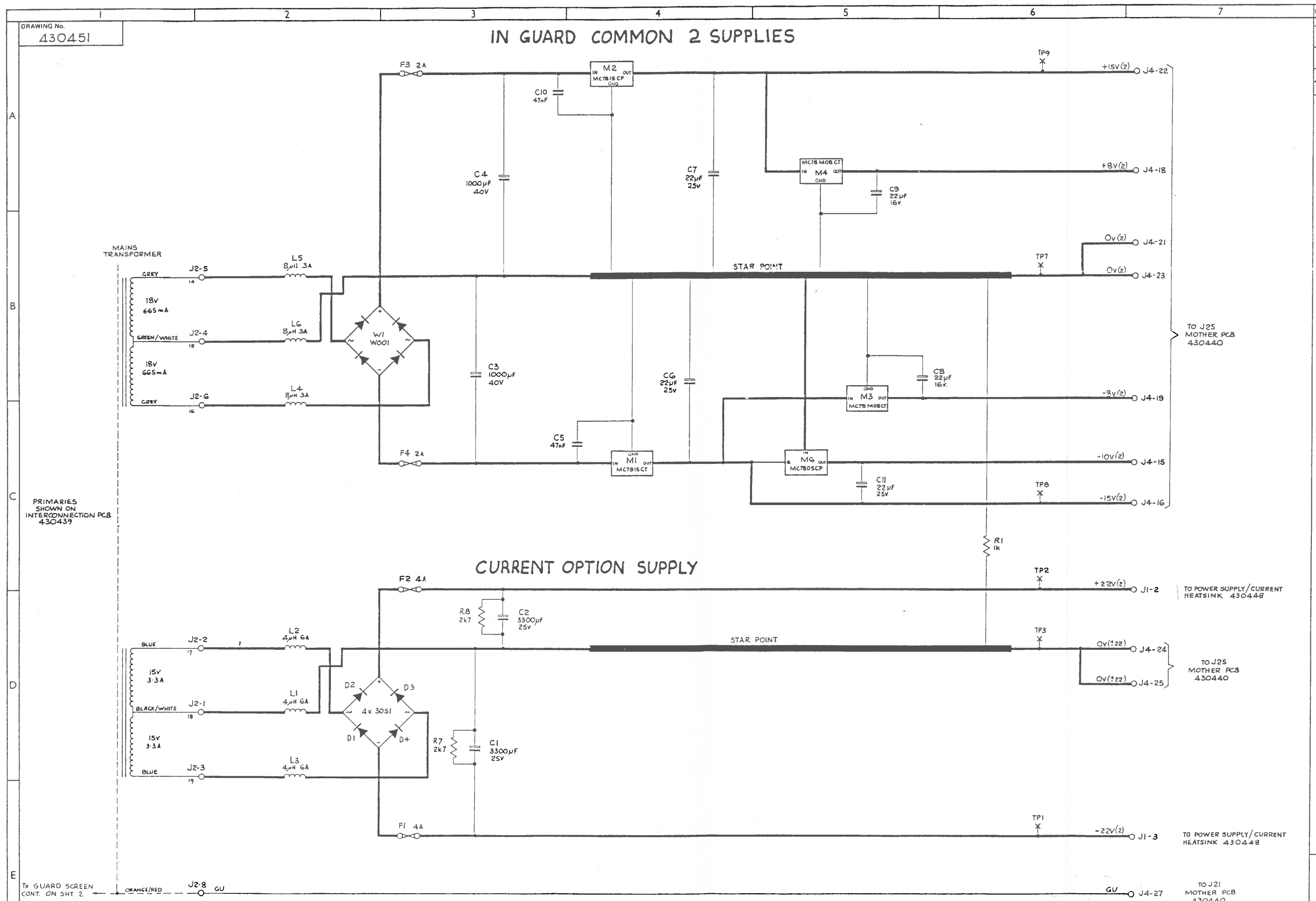
NOTE: USE HEATSINK COMPOUND (900003) BETWEEN MATING SURFACES OF Q4, M1-M2, M6-M9 AND THE RESPECTIVE HEATSINKS. A TORQUE OF 0.5Nm SHOULD BE APPLIED TO TIGHTEN COMPONENT FIXINGS.

PCB 410160-6A



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DRAWN 11	DATE 3.3.82	DIMENSIONS IN MILLIMETRES	TOLERANCES DECIMAL TO 2 PLACES : 1mm DECIMAL TO 1 PLACE : 2mm WHOLE DIMENSIONS : 4mm ANGULAR : ± 0°	MATERIAL	ASSY DRG	TITLE	DRAWING No.
CHECKED MJD	DATE 9.3.82	SCALE 2:1	UNLESS OTHERWISE STATED FIRST ANGLE PROJECTION	FINISH	PARTS LIST 400451 CIRCUIT DIAGRAM 430451 CHECK PROCEDURE 460451 CHECK LIST 470451	4000. IN-GUARD POWER SUPPLY PCB ASSY.	480451
APPR B. Home	DATE 17-3-82	NOT TO BE SCALED					SHEET 1 OF 1



DRAWING No.
430451

IN GUARD COMMON 2 SUPPLIES

CURRENT OPTION SUPPLY

PRIMARIES SHOWN ON INTERCONNECTION PCB 430439

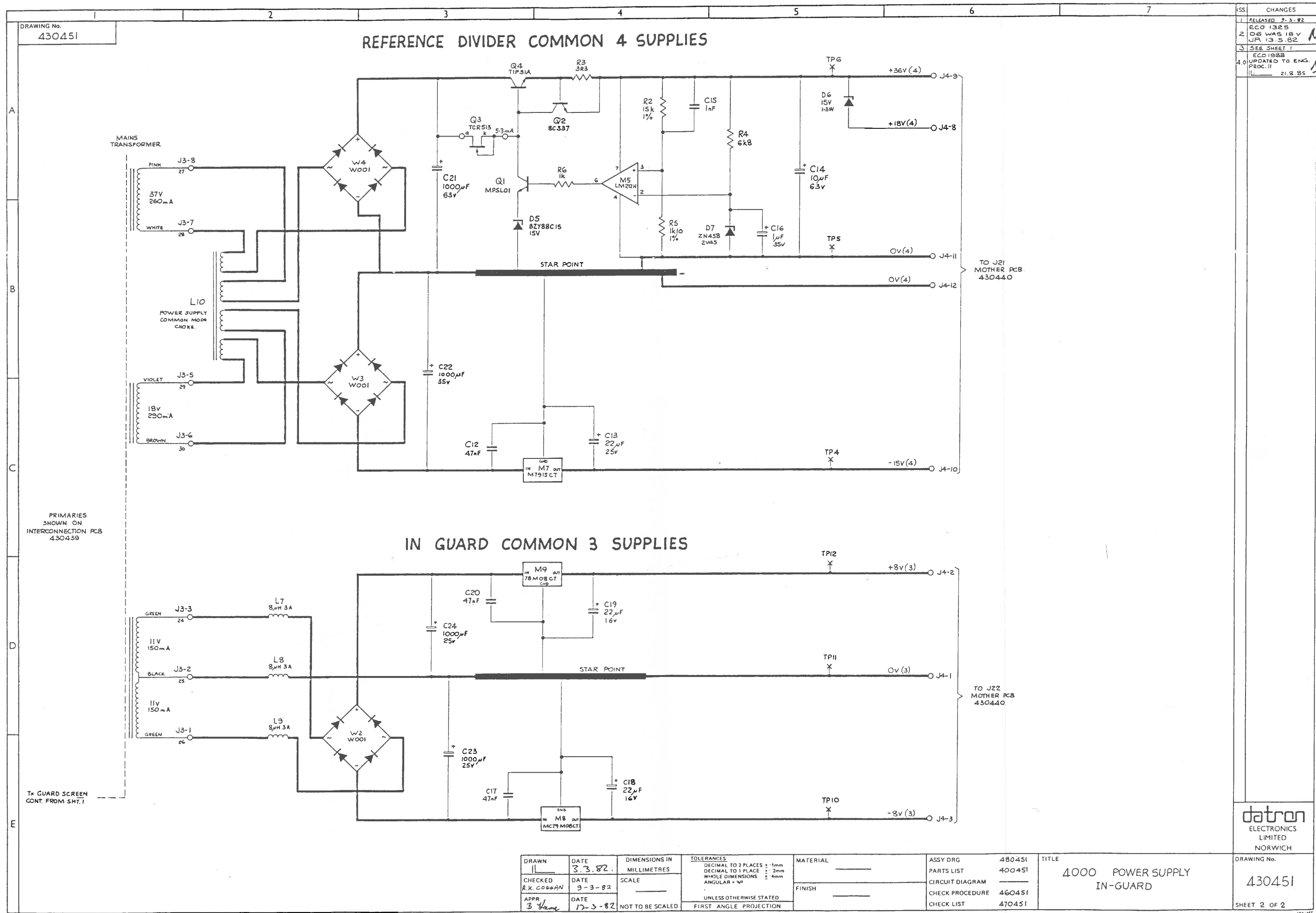
TX GUARD SCREEN CONT. ON SHT. 2

- TO J25 MOTHER PCB 430440
- TO POWER SUPPLY/CURRENT HEATSINK 430448
- TO J25 MOTHER PCB 430440
- TO POWER SUPPLY/CURRENT HEATSINK 430448
- TO J21 MOTHER PCB 430440

ISS	CHANGES
1	RELEASED 9-3-82
2	ECO 1325 DG WAS 18V JFA 13.5.82
3	ECO 1326 C3/C4 WERE 25V 11.24.85
4	ECO 1388 UPDATED TO ENG. PROC. II 11.21.85

DRAWN 11	DATE 3.3.82	DIMENSIONS IN MILLIMETRES	TOLERANCES DECIMAL TO 2 PLACES : 1mm DECIMAL TO 1 PLACE : 2mm WHOLE DIMENSIONS : 4mm ANGULAR + 90°	MATERIAL	ASSY DRG 480451	TITLE 4000 POWER SUPPLY IN-GUARD	DRAWING No. 430451
CHECKED R.R. COGGAN	DATE 9-3-82	SCALE	UNLESS OTHERWISE STATED FIRST ANGLE PROJECTION	FINISH	PARTS LIST 400451		
APPR. B. Home	DATE 17-3-82	NOT TO BE SCALED			CHECK PROCEDURE 460451		
					CHECK LIST 470451		SHEET 1 OF 2

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DRAWING No.
430451

REFERENCE DIVIDER COMMON 4 SUPPLIES

IN GUARD COMMON 3 SUPPLIES

PRIMARIES SHOWN ON INTERCONNECTION PCB 430439

TX GUARD SCREEN CONT. FROM SHT. 1

ISS	CHANGES
1	RELEASED 7.3.82
2	ECO 1325
3	DO WAS 18V
4	JR 13.5.82
5	SEE SHEET 1
6	ECO 1928
7	UPDATED TO ENG. PROC. II
8	21.8.85

TO J21 MOTHER PCB 430440

TO J22 MOTHER PCB 430440

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DRAWN 11	DATE 3.3.82	DIMENSIONS IN MILLIMETRES	TOLERANCES DECIMAL TO 2 PLACES ±.1mm DECIMAL TO 1 PLACE ±.2mm WHOLE DIMENSIONS ±.4mm ANGULAR ±.0°	MATERIAL	ASSY ORG 480451	TITLE 4000 POWER SUPPLY IN-GUARD	DRAWING No. 430451
CHECKED R.K. COGAN	DATE 9-3-82	SCALE	UNLESS OTHERWISE STATED FIRST ANGLE PROJECTION	FINISH	PARTS LIST 400451		
APPR 3	DATE 17-3-82	NOT TO BE SCALED			CHECK PROCEDURE 460451		
					CHECK LIST 470451		SHEET 2 OF 2

DRAWING No.
480452
480452A
FIRST USED ON
4000/4000A

THIRD ANGLE PROJECTION

DRAWN IN ACCORDANCE WITH BS 308

ALL BURRS TO BE REMOVED

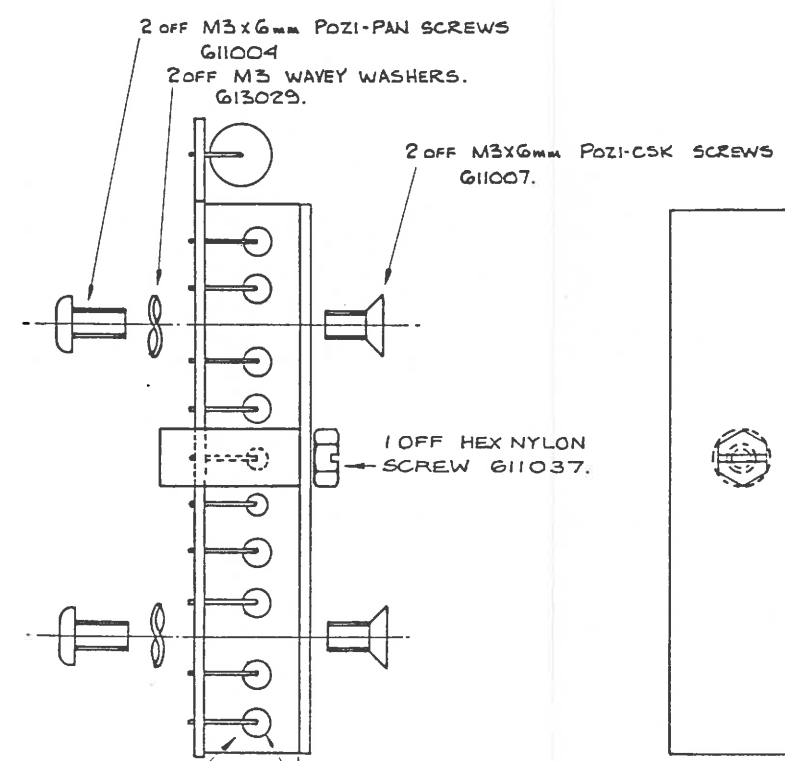
NOTES

ISS.	CHANGES
4	ECO 1445 . BJ ISS-G PCB. RE-DRAWN. 14-2-83
5	ECO 1452 ATTY SET 090099 WAS ISSUE 2 11. 7.6.83
6	ECO 1685 NYLON SCREW ADDED. HT-SNK. PLATE WAS ISS 2. JFR 1-8-84
7	ECO 1760 ZENER DIODE KIT WAS 219015-2 11. 15.11.84
7.0	ECO 1988 UPDATED TO ENG PROC. 11 11. 21.8.85

ZENER DIODE KIT 219015 FITTING INSTRUCTIONS.

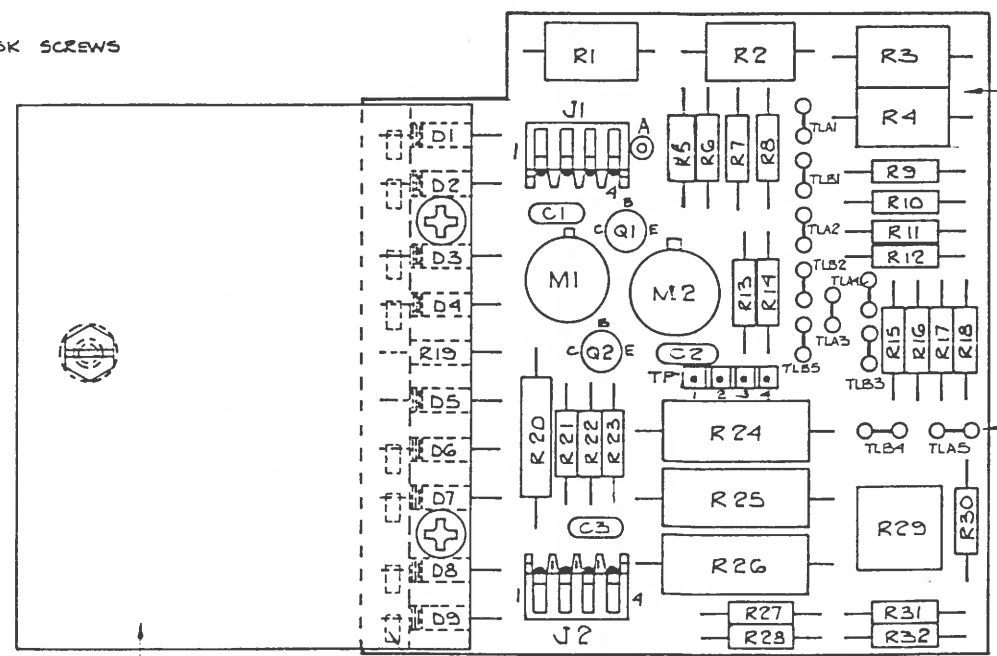
CARE MUST BE TAKEN THAT EACH DIODE IS FITTED TO ITS CORRECT POSITION ON THE BLOCK. DO NOT REMOVE DIODE SERIAL N^o LABELS. FIT DIODES TO THE CORRECT POSITION AS INDICATED ON THE RECORD SHEET IF ANY COMPONENT IS LOST OR DAMAGED REFER TO QA.

- FIT CONTENTS OF BAG 'A' TO D2, D4, D7, D9 & R3.
- FIT CONTENTS OF BAG 'B' TO D1, D3, D6, D8 & R4.
- FILL IN REFERENCE RECORD SHEET :-
 - ASSEMBLY SERIAL NO.
 - ASSEMBLY ISSUE NO.
 - ASSEMBLY DATE.
- CUT TEST LINKS INDICATED ON THE RECORD SHEET.
- THE RECORD SHEET MUST ACCOMPANY THE FINISHED ASSEMBLY.

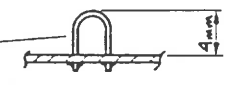


HEATSINK BLOCK 450372.

WHEN ASSEMBLING DIODES INTO HEATSINK BLOCK APPLY A SMALL AMOUNT OF HEATSINK COMPOUND AROUND THE BODY OF EACH DIODE. ALSO APPLY HEATSINK COMPOUND BETWEEN THE BLOCK & THE PLATE. (HEATSINK COMPOUND 900003).



PCB 410162-6



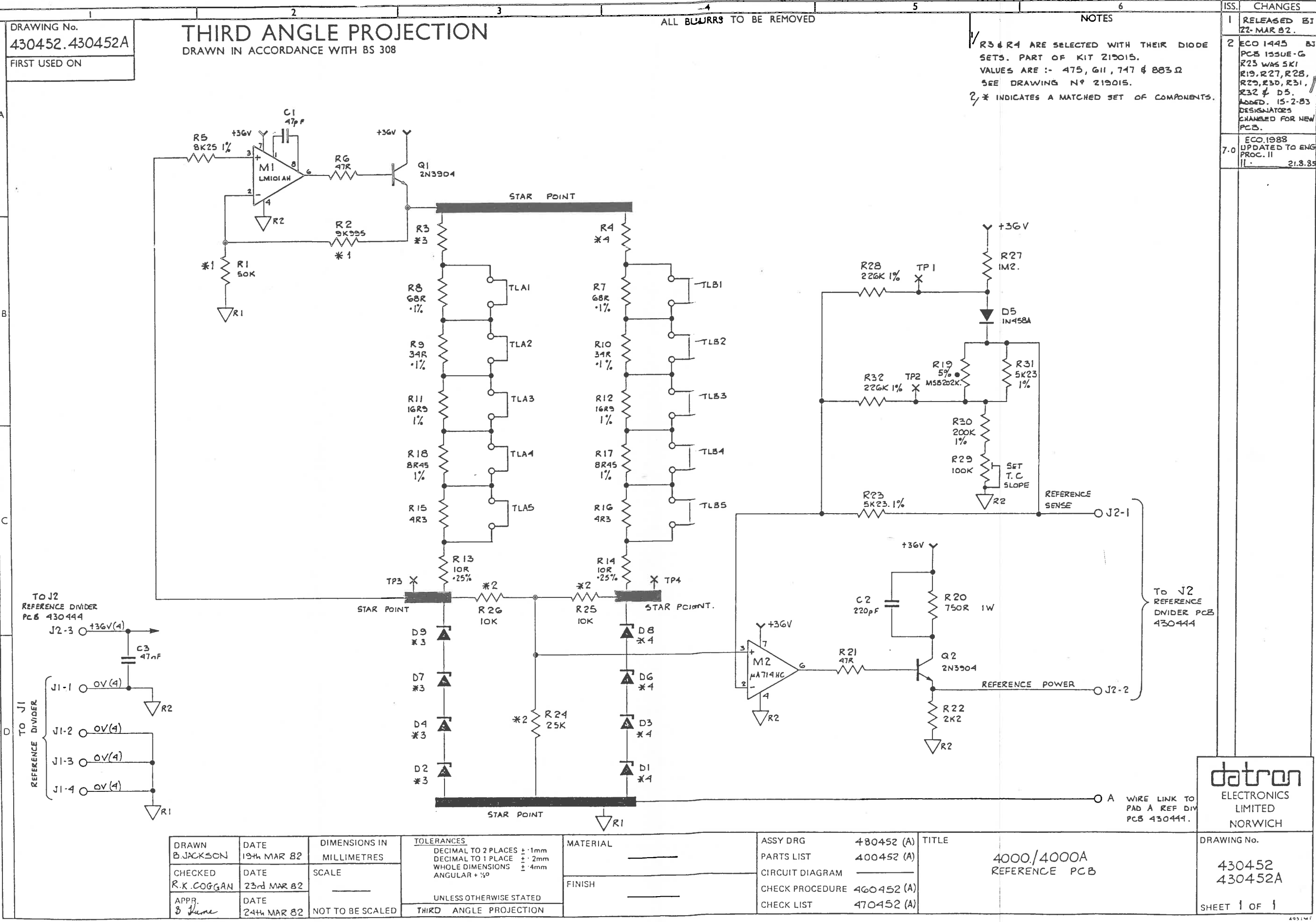
MAKE ALL TEST LINKS 1mm HIGH. USE 22 SWG BTC WIRE 540002.

HEATSINK PLATE 450373.

DIODE LABELS

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DRAWN	DATE	DIMENSIONS IN MILLIMETRES	TOLERANCES	MATERIAL	ASSY DRG	TITLE	DRAWING No.
B. JACKSON	15th Feb 83		DECIMAL TO 2 PLACES ±.1mm DECIMAL TO 1 PLACE ±.2mm WHOLE DIMENSIONS ±.4mm ANGULAR +.5°				
CHECKED MSD	DATE 21.2.83	SCALE 2:1		FINISH	PARTS LIST 400452(A) CIRCUIT DIAGRAM 430452(A) CHECK PROCEDURE 460452(A) CHECK LIST 470452(A)	4000. REFERENCE PCB ASSEMBLY. 4000A	480452 480452A
APPR.	DATE	NOT TO BE SCALED	UNLESS OTHERWISE STATED FIRST ANGLE PROJECTION				SHEET 1 OF 1



DRAWING No.
430452.430452A
FIRST USED ON

THIRD ANGLE PROJECTION

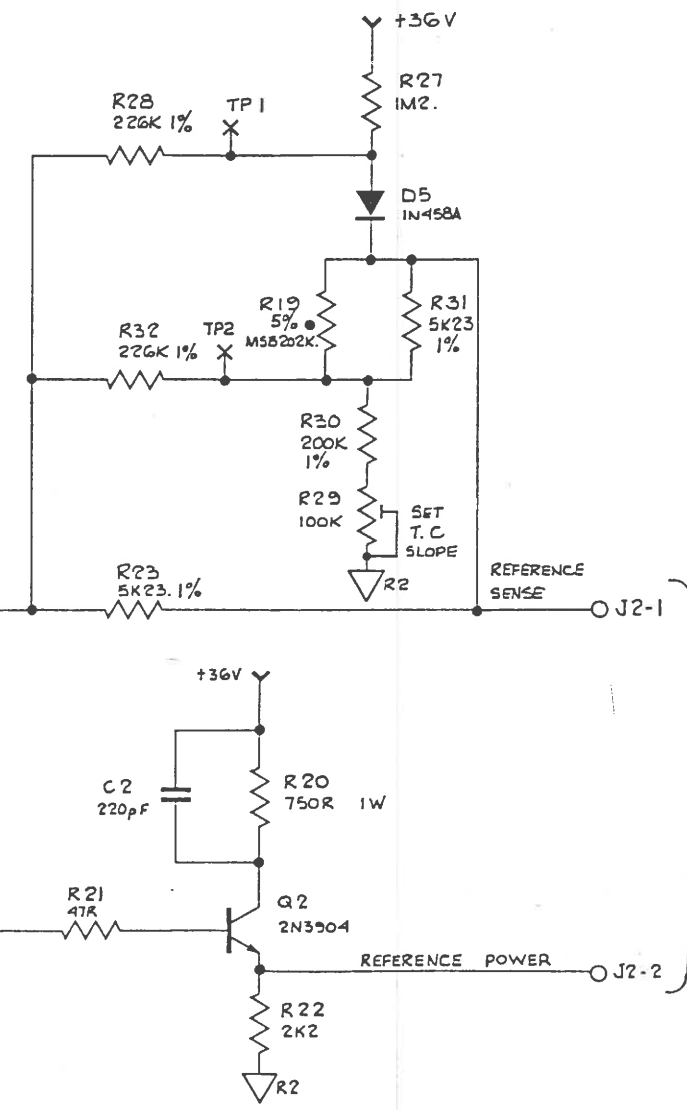
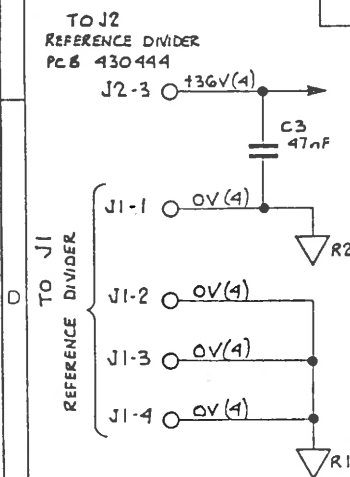
DRAWN IN ACCORDANCE WITH BS 308

ALL BURRS TO BE REMOVED

NOTES

R3 & R4 ARE SELECTED WITH THEIR DIODE SETS. PART OF KIT Z19015. VALUES ARE :- 475, 611, 747 & 883Ω
SEE DRAWING N° Z19015.
2, * INDICATES A MATCHED SET OF COMPONENTS.

ISS.	CHANGES
1	RELEASED BY 27-MAR 82.
2	ECO 1445 BY PCB ISSUE-G. R25 WAS 5K1. R19, R27, R28, R29, R30, R31, R32 & D5. ADDED. 15-2-83 DESIGNATORS CHANGED FOR NEW PCB.
7.0	ECO 1088 UPDATED TO ENG PROC. 11
11	21.8.85



To J2 REFERENCE DIVIDER PCB 430444

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DRAWN B.JACKSON	DATE 19th MAR 82	DIMENSIONS IN MILLIMETRES	TOLERANCES DECIMAL TO 2 PLACES ± 0.1mm DECIMAL TO 1 PLACE ± 0.2mm WHOLE DIMENSIONS ± 0.4mm ANGULAR + 30°	MATERIAL _____	ASSY DRG 480452 (A)	TITLE 4000/4000A REFERENCE PCB	DRAWING No. 430452 430452A
CHECKED R.K. COGGAN	DATE 23rd MAR 82	SCALE _____	UNLESS OTHERWISE STATED THIRD ANGLE PROJECTION	FINISH _____	CIRCUIT DIAGRAM _____		
APP'D. B. June	DATE 24th MAR 82	NOT TO BE SCALED			CHECK PROCEDURE 460452 (A)		
					CHECK LIST 470452 (A)		SHEET 1 OF 1

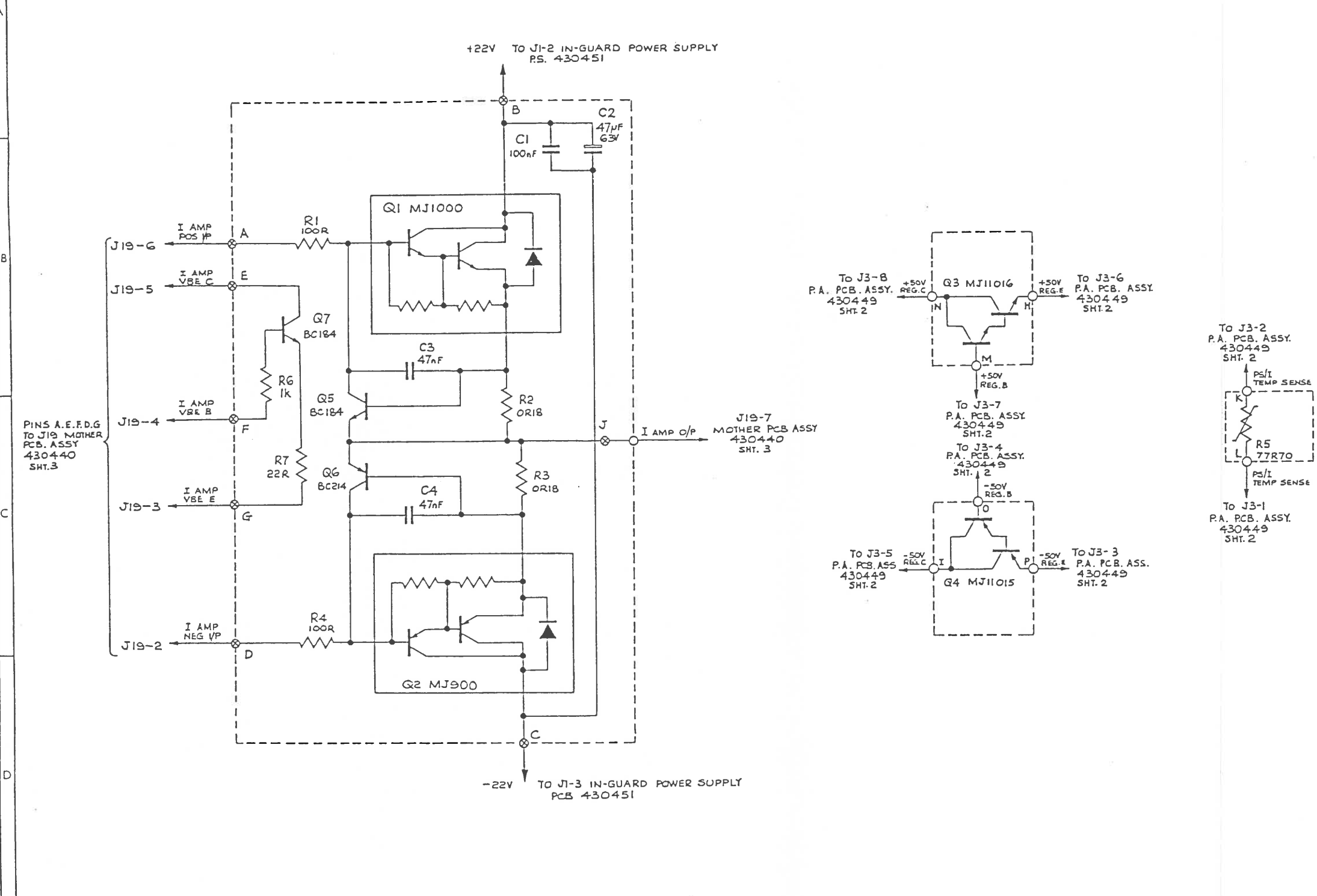
DRAWING No.
430455
FIRST USED ON

THIRD ANGLE PROJECTION
DRAWN IN ACCORDANCE WITH BS 308

ALL BURRS TO BE REMOVED

NOTES

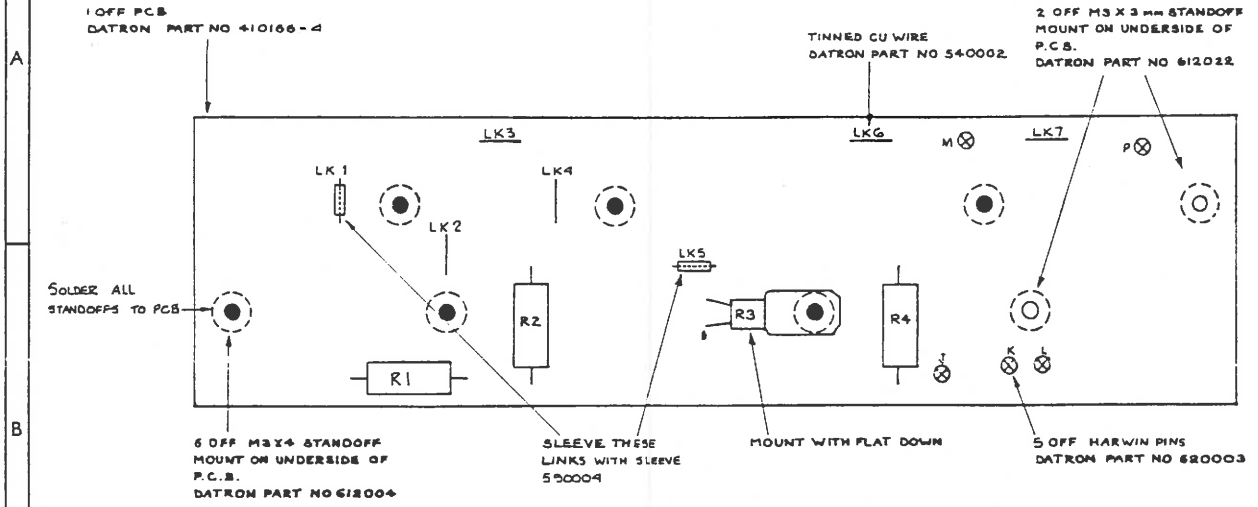
ISS.	CHANGES
3.0	ECO. 1988 UPDATED TO ENG. PROC. II 11.9.85



DRAWN IL	DATE 11.9.85	DIMENSIONS IN MILLIMETRES	METRIC DIMENSIONS ANGULAR ± ½° DECIMAL TO 2 PLACES ± 0.1mm DECIMAL TO 1 PLACE ± 0.2mm WHOLE DIMENSIONS ± 0.4mm UNLESS OTHERWISE STATED	MATERIAL _____	datron ELECTRONICS LTD. NORWICH.	DRAWING No. 430455	SHEET 1 OF 1
CHKD [Signature]	DATE 11.9.85	SCALE _____	FINISH _____	TITLE 4000 P.S. I H/S PCB. ASSY.			
APPD.	DATE	NOT TO BE SCALED					

DRAWING No.
480461

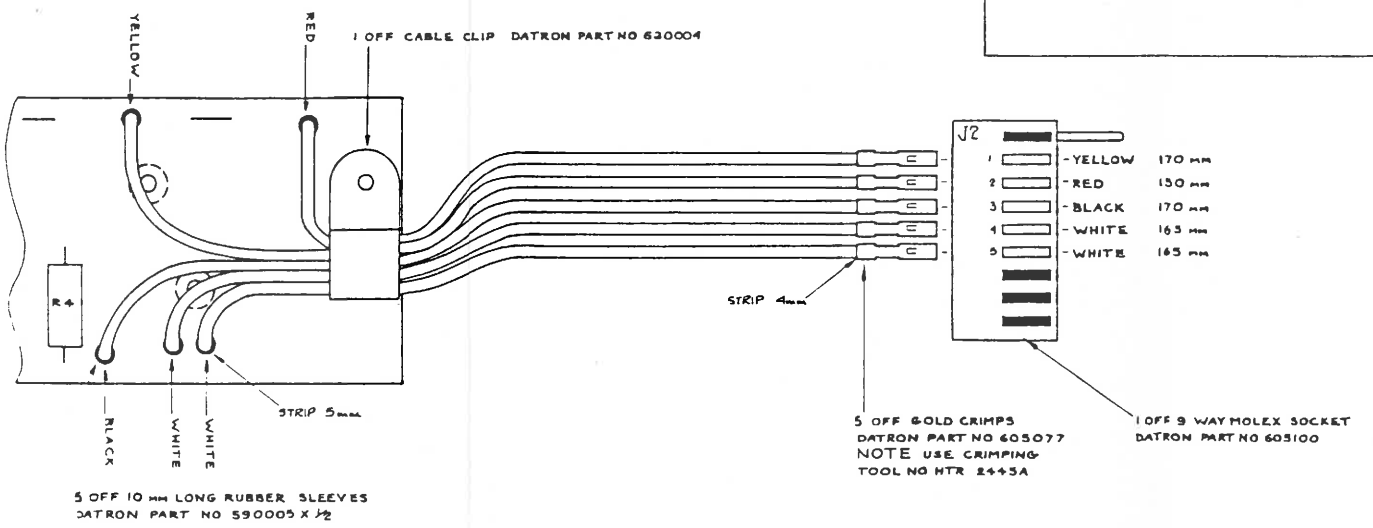
ISS	CHANGES
C	7-7-81
1	RELEASED 15-APR-82
2	ECO 19 G1 590005 SLEEVE WAS 590001 AT 29-7-85
3	ECO 1978 R3 PARTS LIST CHANGE 12.8.85
3.0	ECO 1988 UPDATED TO ENG. PROC. 11 21.8.85



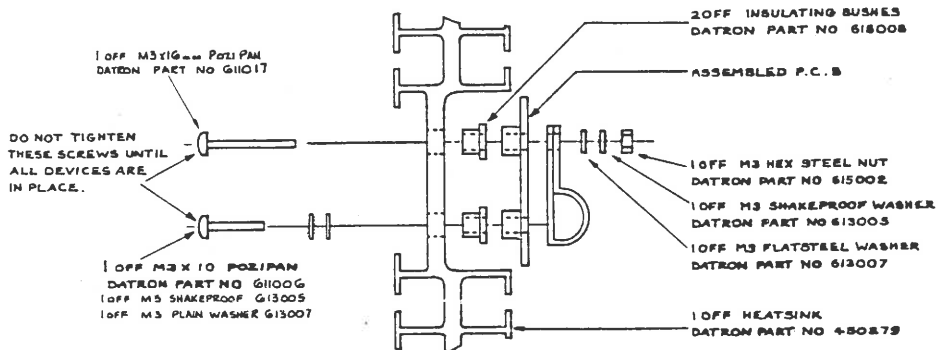
PROCEDURE

1) ASSEMBLE BOARD
ALIGN THE HOLE IN R3 WITH THE STANDOFF

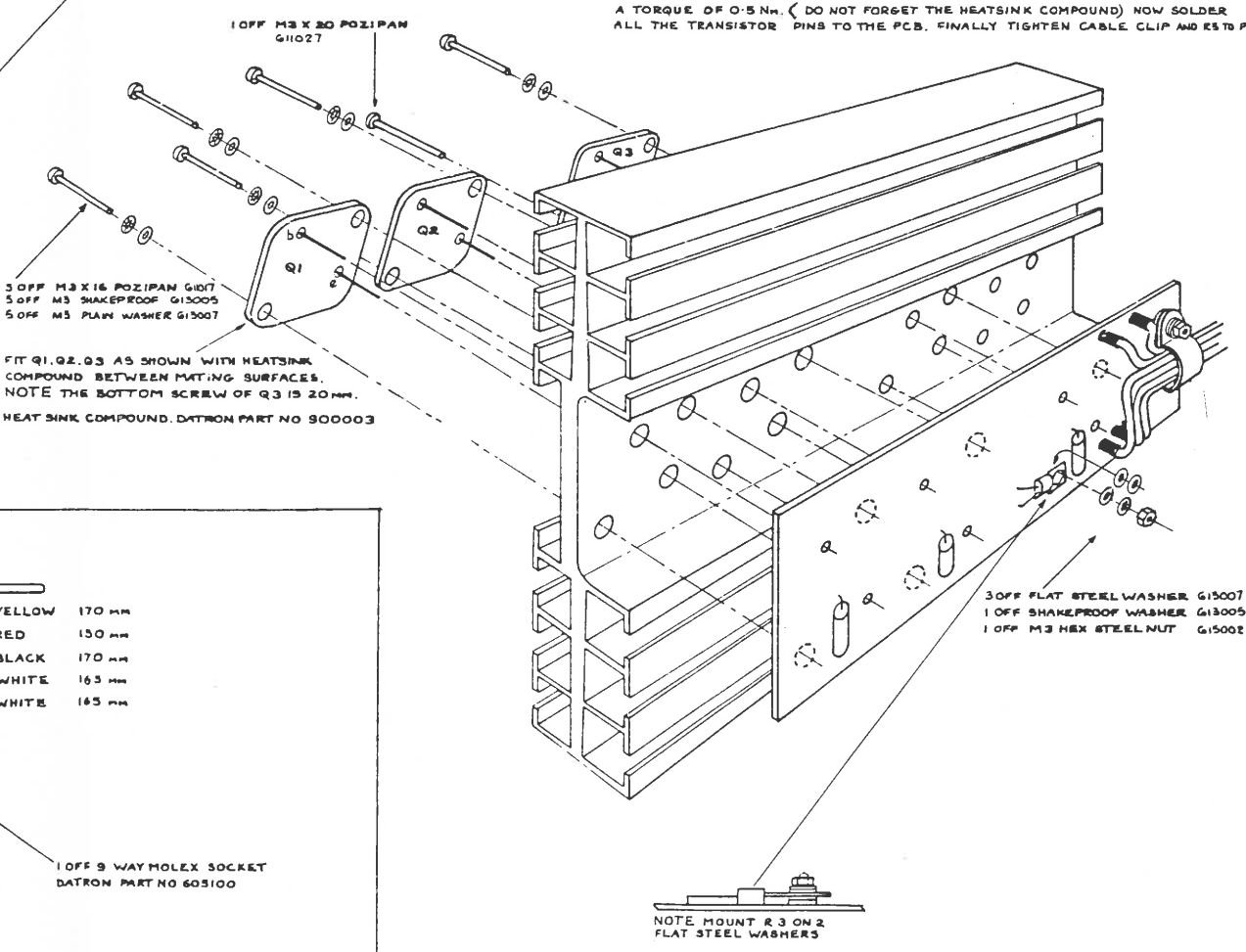
2) WIRE CABLE AS SHOWN



3) PLACE PCB IN RECESS OF HEATSINK WITH CUT AWAY FLANGES, WITH BOARD FACING AS IN PROCEDURE 1). START AT RIGHTHAND END AND FIT 2 OFF SCREWS AS SHOWN BELOW.



4) NOW THAT THE PCB IS HELD IN POSITION INSERT TRANSISTOR Q1 Q2 & Q3 AS SHOWN, THEN USING A TORQUE SCREW DRIVER TIGHTEN THE SCREWS TO A TORQUE OF 0.5 Nm. (DO NOT FORGET THE HEATSINK COMPOUND) NOW SOLDER ALL THE TRANSISTOR PINS TO THE PCB, FINALLY TIGHTEN CABLE CLIP AND ESTO PCB.



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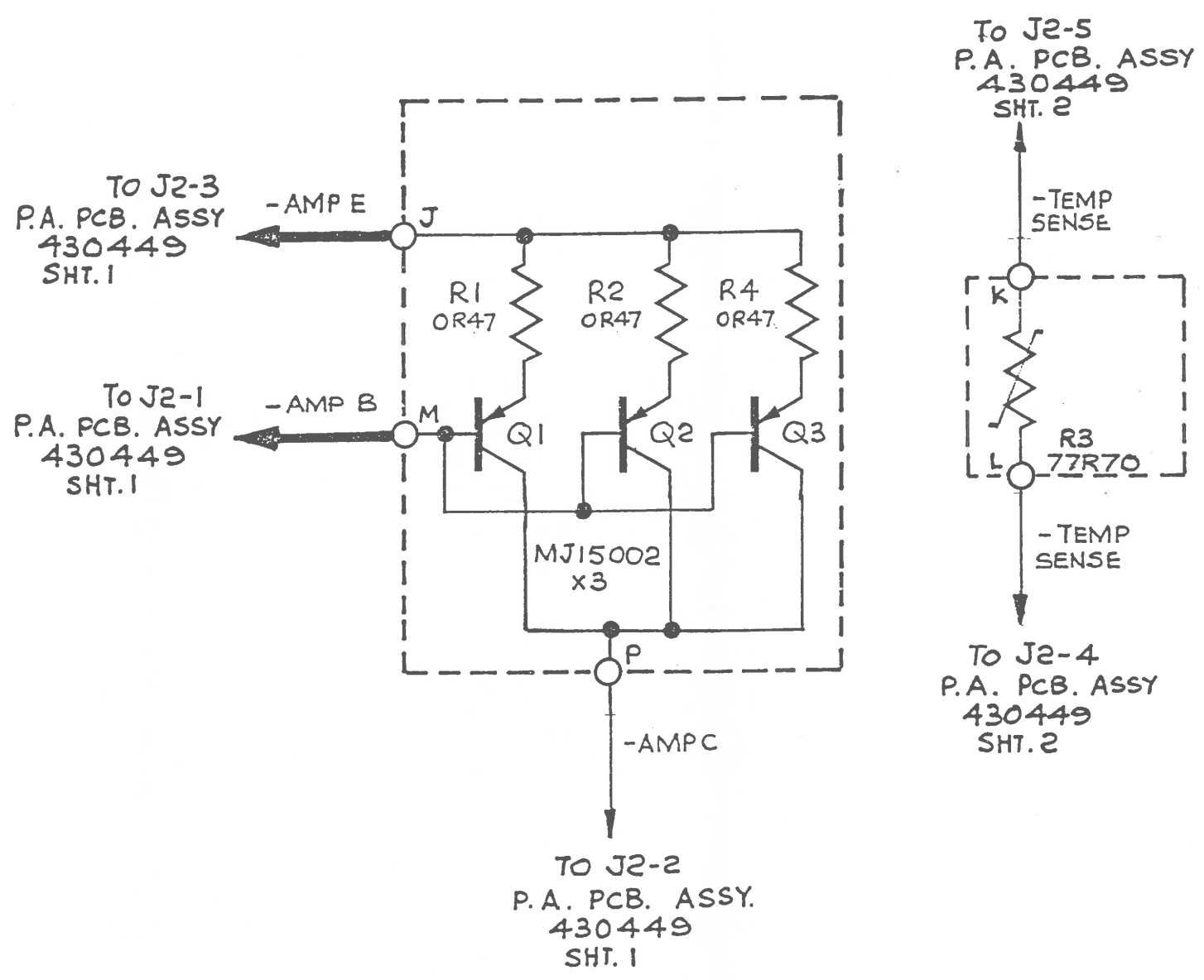
DRAWN	DATE	DIMENSIONS IN MILLIMETRES	TOLERANCES	MATERIAL	ASSY DRG	TITLE	DRAWING No.
SK	7-7-81	SCALE	DECIMAL TO 2 PLACES ± 0.1mm DECIMAL TO 1 PLACE ± 0.2mm WHOLE DIMENSIONS ± 0.4mm ANGULAR ± 30'		PARTS LIST 400461 CIRCUIT DIAGRAM 430461 CHECK PROCEDURE 460461 CHECK LIST 470461	4000 POWER AMPLIFIER NEGATIVE HEATSINK ASSY	480461
CHECKED	DATE			FINISH			
MSD	23.4.82						
APPR	DATE	NOT TO BE SCALED	UNLESS OTHERWISE STATED FIRST ANGLE PROJECTION				
B.Hume	29.6.82						

DRAWING No.
430461

DO NOT SCALE THIS DRAWING

ALL BURRS TO BE REMOVED

ISS	CHANGES
3.0	ECO 1988 UPDATED TO ENG PROC. 11 2.9.85



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ENGLAND.

DRAWN 11	DATE 2.9.85	PROJECTION 	TOLERANCES: ANGULAR $\pm 1/2^\circ$	MATERIAL	TITLE 4000 NEG. HEATSINK ASSY.	DRAWING No. 430461
CHKD 11	DATE 11.9.85		DECIMAL TO 2 PLACES $\pm 1\text{mm}$	FINISH		SHEET 1 OF 1
APPD	DATE	SCALE: _____	DECIMAL TO 1 PLACE $\pm 2\text{mm}$			
			WHOLE DIMENSIONS $\pm 4\text{mm}$			
			DIMENSIONS IN mm.			

DRAWING No.
480561

ISS.	CHANGES
1	RELEASED 3.1.84
2-0	ECO 1958 UPDATED TO ENG. PROC. II. BY: 44 JULY 85
2-1	ECO 2054 PCB UPDATED. BSJ 14/6 OCT 85

BED C5 & C7 ON P.C.B WITH SILICONE
RUBBER COMPOUND 900004.

2 OFF 4 WAY .156" LOCKING RAMP
604042
MOUNT ON UNDER SIDE.

20FF TO220 HEATSINK 920144
20FF M3 X10mm POZIPAN SCREW 611006
20FF M3 SHAKEPROOF WASHER 613005
20FF M3 HEX NUT 615002
20FF M3 FLAT STEEL WASHER 613007
USE M3 X10mm ON Q3 AND Q4 WITH A
FLAT AND SHAKEPROOF WASHER
UNDER NUT

1 OFF 4A FUSE 20mm 320123
1 OFF PCB MT-FUSE HOLDER 320126

1 OFF M3 X6mm POZIPAN SCREW 611004
1 OFF M3 SHAKEPROOF WASHER 613005
1 OFF M3 HEX NUT 615002

1 OFF 8 WAY DIL SOCKET 605059/A
MOUNT D4 ON MOUNTING PAD 618004

MOUNT R7 ON
STEATITE BEADS
630024 4 OFF

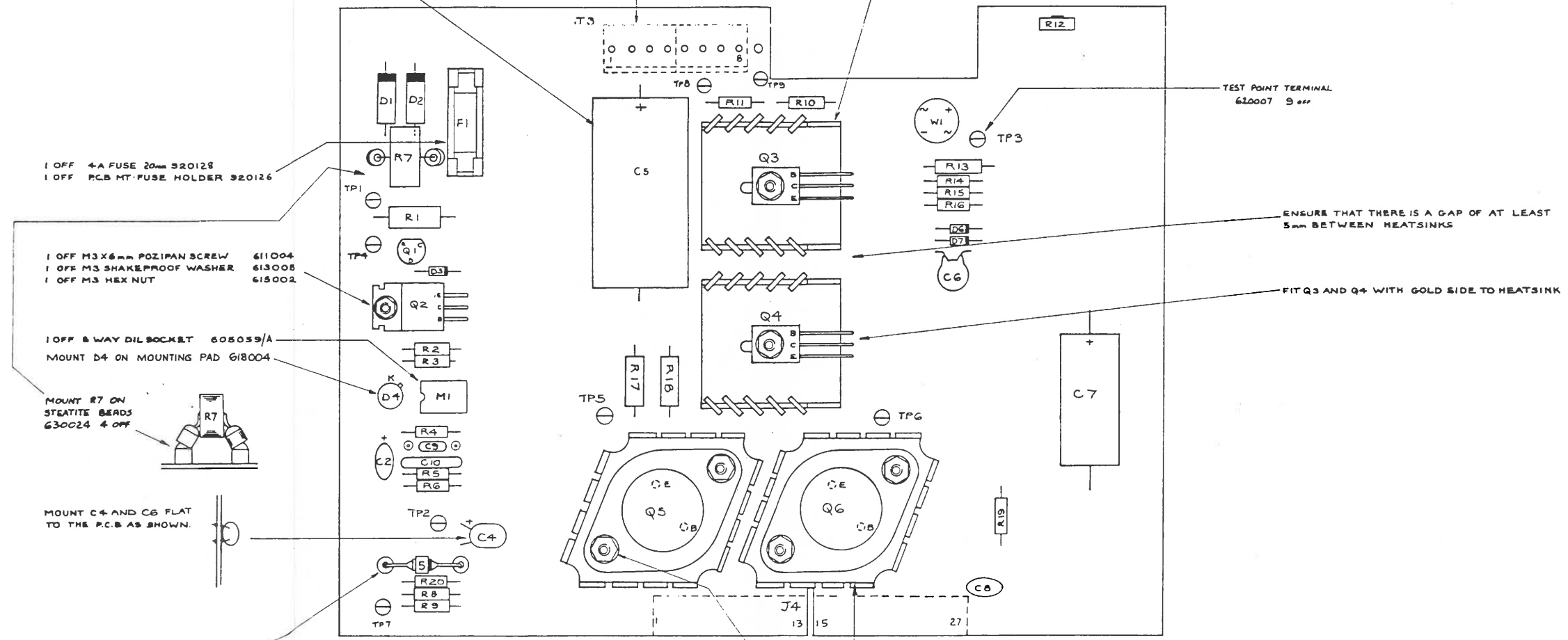
MOUNT C4 AND C6 FLAT
TO THE P.C.B AS SHOWN.

MOUNT D5 ON
CERAMIC BEADS
2 OFF 630024

PCB 410179-G

NOTE USE HEAT SINK COMPOUND
BETWEEN MATING SURFACES OF
Q3, Q4, Q5 & Q6 AND THE HEAT SINKS.
THEN USING A TORQUE SCREW
DRIVER TIGHTEN TO TORQUE
OF 0.5 Nm.
(HEAT SINK COMPOUND 900003)

2 OFF TO3 HEATSINK 320098
4 OFF M3 X10mm POZIPAN SCREW 611006
4 OFF M3 SHAKEPROOF WASHER 613005
4 OFF M3 HEX NUT 615002
4 OFF M3 FLAT STEEL WASHER 613007
USE FLAT STEEL WASHERS UNDER
SCREW HEADS ON BACK OF PCB.



TEST POINT TERMINAL
620007 5 OFF

ENSURE THAT THERE IS A GAP OF AT LEAST
5mm BETWEEN HEAT SINKS

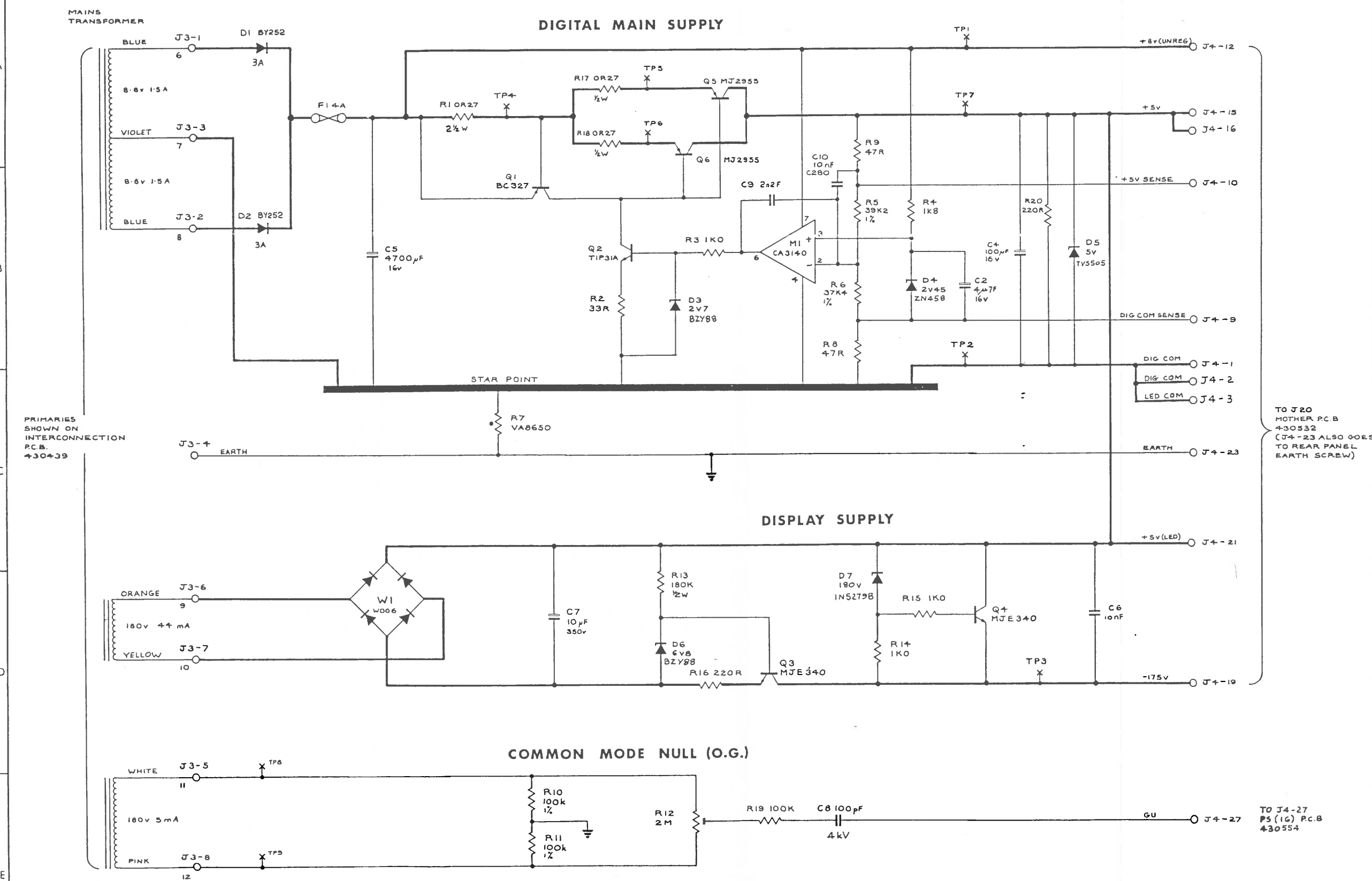
FIT Q3 AND Q4 WITH GOLD SIDE TO HEAT SINK

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DRAWN		DATE		DIMENSIONS IN		TOLERANCES:		MATERIAL		ASSY DRG.		TITLE		DRAWING No.	
11		21.12.83		MILLIMETRES		DECIMAL TO 2 PLACES : 0.1mm DECIMAL TO 1 PLACE : 0.2mm WHOLE DIMENSIONS : 0.5mm ANGULAR : 45°		---		480561		4200 OUT GUARD POWER SUPPLY ASSY		480561	
CHECKED		DATE		SCALE		UNLESS OTHERWISE STATED		FINISH		PARTS LIST		CIRCUIT DIAGRAM		SHEET 1 OF 1	
R.S.C.		3.1.84		2:1		FIRST ANGLE PROJECTION		---		480561		480561			
APPR.		DATE		NOT TO BE SCALED						CHECK PROCEDURE		480561			
J. Hume		3.1.84								CHECK LIST		480561			

DRAWING No. 430561

ISS CHANGES
 1 RELEASED 3.1.84
 ECO 1558
 2-0 UPDATED TO ENG
 PROD II
 5.7 4th JULY 85



PRIMARIES SHOWN ON INTERCONNECTION P.C.B. 430439

TO J20 MOTHER P.C.B. 430532 (J4-23 ALSO GOES TO REAR PANEL EARTH SCREW)

TO J4-27 P5 (16) P.C.B. 430554

DRAWN CHECKED APPR.	DATE 21.12.83 3.1.84 3.1.84	DIMENSIONS IN MILLIMETRES SCALE NOT TO BE SCALED	TOLERANCES DECIMAL TO 2 PLACES ± 0.1mm DECIMAL TO 1 PLACE ± 0.2mm WHOLE DIMENSIONS ± 0.4mm ANGULAR ± 30° UNLESS OTHERWISE STATED FIRST ANGLE PROJECTION	MATERIAL FINISH	ASSY DRG 480561 PARTS LIST 400561 CIRCUIT DIAGRAM 430561 CHECK PROCEDURE 460561 CHECK LIST 470561	TITLE 4200 POWER SUPPLY OUT GUARD	DRAWING No. 430561 SHEET 1 OF 1
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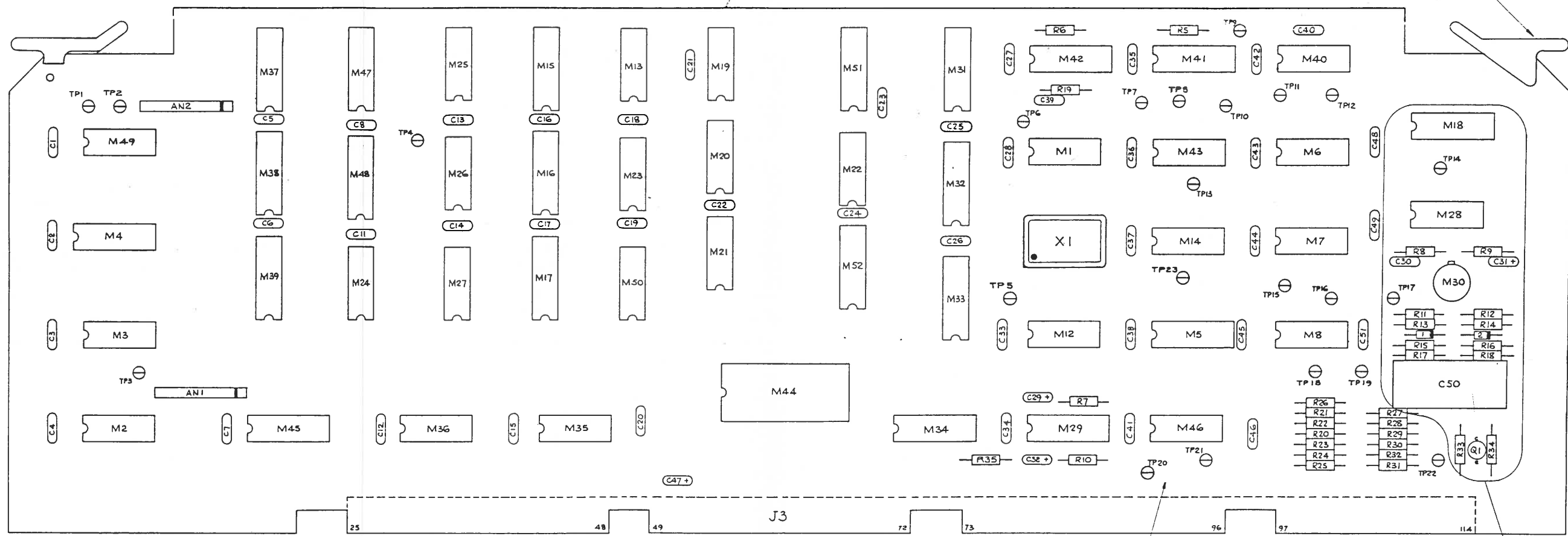
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DRAWING No.
480570

ISS.	CHANGES
1	RELEASED 31 5 84
1.0	ECO 1954 UPDATED TO ENG. PROC. 11 B.S. 5 JULY 85.
1.1	ECO 2076 NOTE ADDED RE: COMPS. NOT FITTED 11. 3.12.85

PCB 410155-5

(BROWN) CIRCUIT BOARD EJECTOR
630117. 2 off



TEST POINT TERMINAL
(620007) 23 OFF

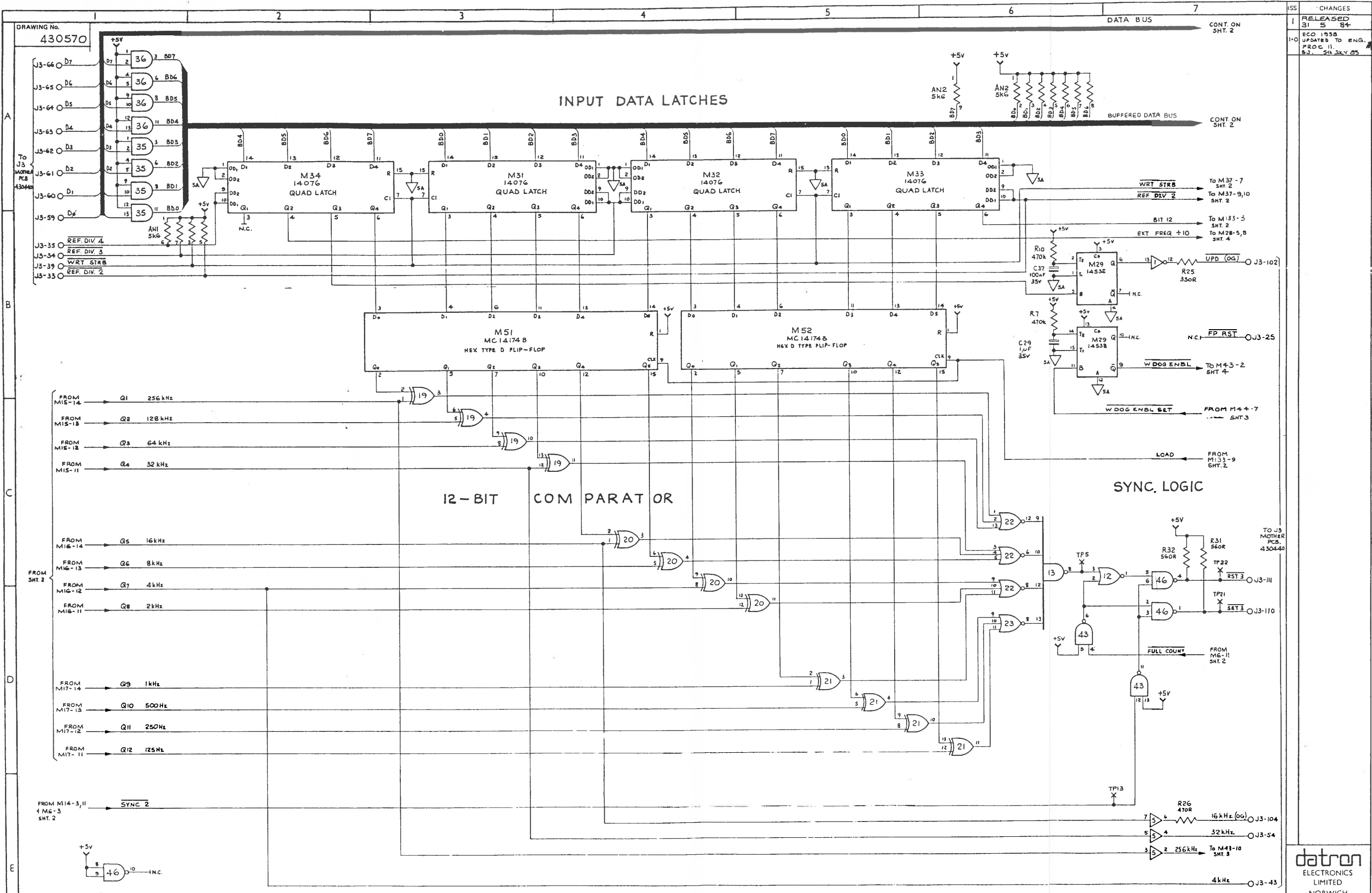
N.B. THE FOLLOWING COMPONENTS
NOT FITTED: R8, R9, R11-R18,
R33, R34, C30, C31, C50,
D1, D2, G1, M18, M28, M30,
TP14

MOUNTING IC's.			
N° WAYS	PART N°	USED TO MOUNT	N° OFF
14	605060/A	1-3, 6-8, 12-14, 19-27, 35, 36, 40, 43, 46, 49 + 50	25
16	605061/A	4-5, 15-17, 29, 31-34, 37-39, 41, 42, 45, 47, 48, 51, 52	20
24	605064/A	44	1

M9 - M11 NOT USED.

DRAWN R3C	DATE 24.5.84	DIMENSIONS IN MILLIMETRES	TOLERANCES DECIMAL TO 2 PLACES : 1mm DECIMAL TO 1 PLACE : 2mm WHOLE DIMENSIONS : 4mm ANGULAR : 4°	MATERIAL	ASSY DRG 480570	TITLE	4200 ANALOGUE INTERFACE PCB. ASSY.	DRAWING No. 480570 SHEET 1 OF 1
CHECKED R3C	DATE 31.5.84	SCALE 2:1	UNLESS OTHERWISE STATED FIRST ANGLE PROJECTION	FINISH	PARTS LIST 400570			
APPR. -01.	DATE 31.5.84	NOT TO BE SCALED			CIRCUIT DIAGRAM 430570			
					CHECK PROCEDURE 460570			
					CHECK LIST 470570			

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DRAWING No.
430570

INPUT DATA LATCHES

12-BIT COMPARATOR

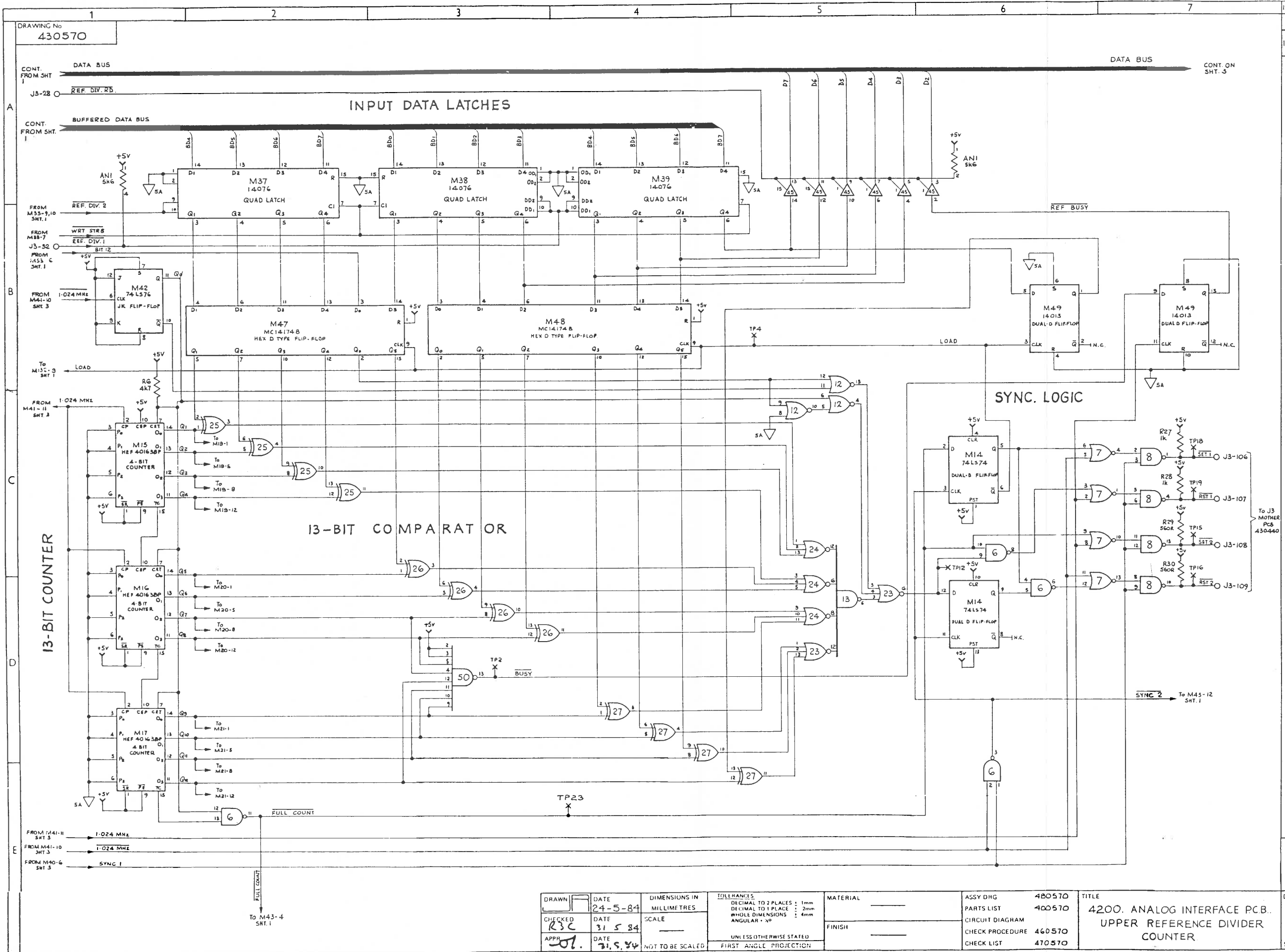
SYNC. LOGIC

SPARE GATES

ISS CHANGES
1 RELEASED 31 5 84
1-0 ECO 1958
UPDATED TO ENG.
PROC 11.
83-513KLY 05

DRAWN R3C	DATE 24 5 84	DIMENSIONS IN MILLIMETRES	TOLERANCES DECIMAL TO 2 PLACES : 1mm DECIMAL TO 1 PLACE : 2mm WHOLE DIMENSIONS : 4mm ANGULAR : 1/4°	MATERIAL	ASSY DRG 480570	TITLE 4200 ANALOG INTERFACE P.C.B. LOWER REFERENCE DIVIDER COUNTER	DRAWING No. 430570
CHECKED R3C	DATE 31 5 84	SCALE	UNLESS OTHERWISE STATED FIRST ANGLE PROJECTION	FINISH	CIRCUIT DIAGRAM CHECK PROCEDURE 460570 CHECK LIST 470570		
APPR 01.	DATE 31 5 84	NOT TO BE SCALED					SHEET 1 OF 4

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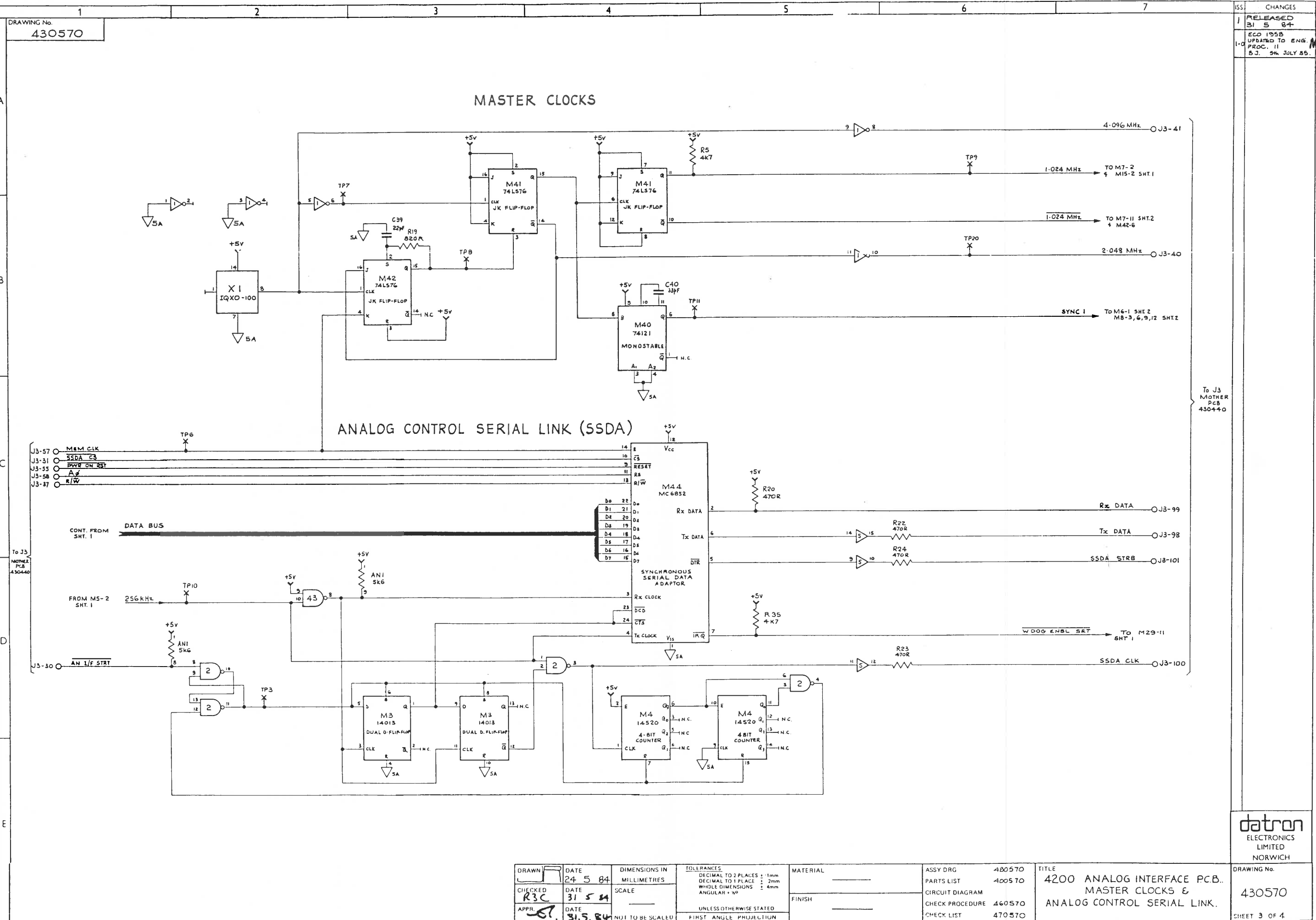


DRAWING No
430570

CHANGES	
1	RELEASED 31 5 84
10	ECO 1955 UPDATED TO ENG. PROC. II. 03. 5th JULY 85.

DRAWN R3C CHECKED APPH DATE 24-5-84 DATE 31 5 84 DATE 31 5 84	DATE 24-5-84 DATE 31 5 84 DATE 31 5 84	DIMENSIONS IN MILLIMETRES SCALE NOT TO BE SCALED	TOLERANCES DECIMAL TO 2 PLACES : 1mm DECIMAL TO 1 PLACE : 2mm WHOLE DIMENSIONS : 4mm ANGULAR : 30° UNLESS OTHERWISE STATED FIRST ANGLE PROJECTION	MATERIAL FINISH	ASSY DRG 480570 PARTS LIST 400570 CIRCUIT DIAGRAM 460570 CHECK PROCEDURE 470570 CHECK LIST 470570	TITLE 4200. ANALOG INTERFACE PCB. UPPER REFERENCE DIVIDER COUNTER	DRAWING No. 430570 SHEET 2 OF 4
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DRAWING No.
430570

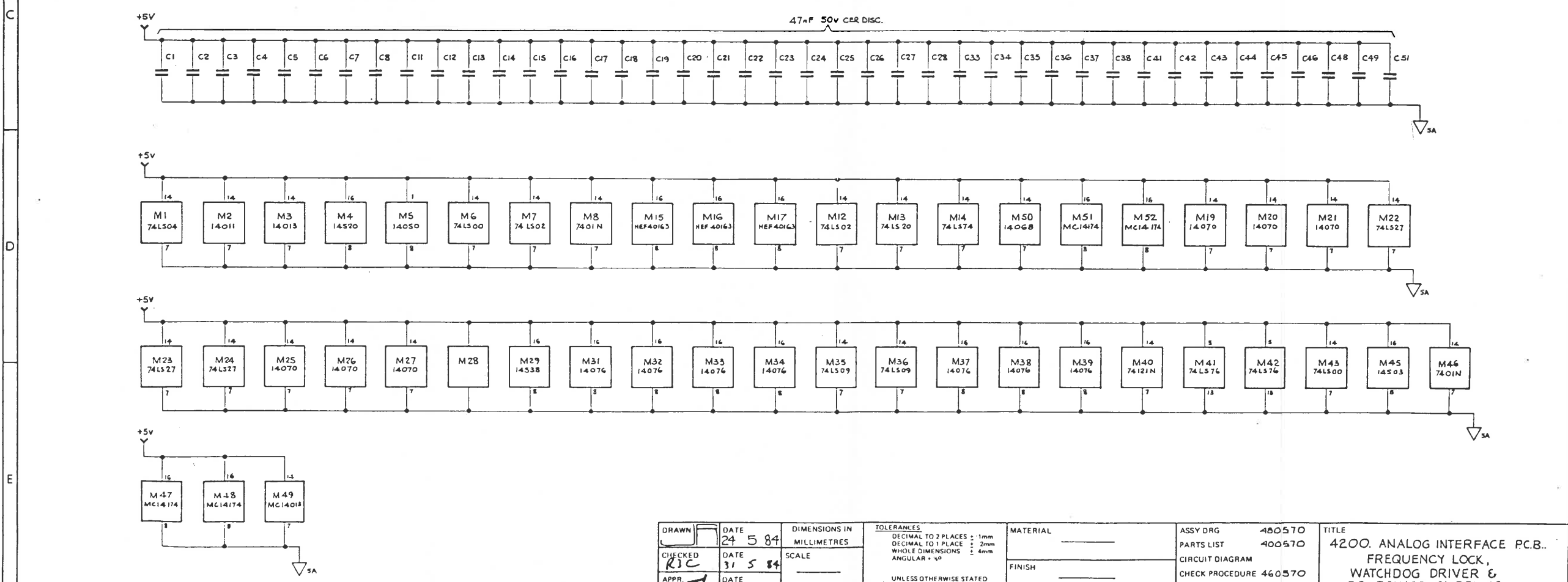
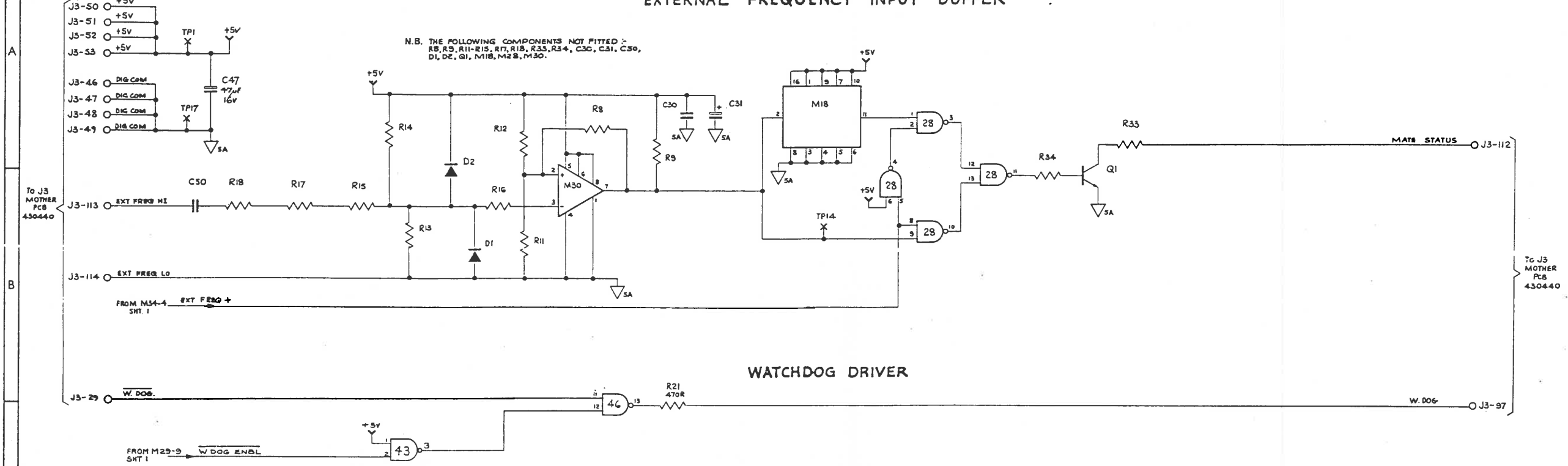
ISS	CHANGES
1	RELEASED 31 5 84
1-0	ECO 195B UPDATED TO ENG PROC. 11 E.J. 5th JULY 85

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DRAWN		DATE		DIMENSIONS IN		TOLERANCES		MATERIAL		ASSY DRG		TITLE		DRAWING No.	
R3C		24 5 84		MILLIMETRES		DECIMAL TO 2 PLACES : 0.1mm		_____		480570		4200 ANALOG INTERFACE PCB..		430570	
APPL		31 5 84		SCALE		DECIMAL TO 1 PLACE : 2mm		FINISH		PARTS LIST		MASTER CLOCKS &		430570	
EJ		31.5.84		NOT TO BE SCALED		WHOLE DIMENSIONS : 4mm		_____		CIRCUIT DIAGRAM		ANALOG CONTROL SERIAL LINK.		430570	
						ANGULAR : 30°				CHECK PROCEDURE				470570	
						UNLESS OTHERWISE STATED				CHECK LIST				470570	
						FIRST ANGLE PROJECTION								SHEET 3 OF 4	

DRAWING No.
430570

EXTERNAL FREQUENCY INPUT BUFFER



ISS.	CHANGES
1	RELEASED 31 5 84
1.0	ECO 1958 UPDATED TO ENG PEDC II E.J. 5th JULY 85.
1.1	ECO 2076 NOTE ADDED RE: COMPS NOT FITTED ILL. 3.12.86

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DRAWN	DATE 24 5 84	DIMENSIONS IN MILLIMETRES	TOLERANCES DECIMAL TO 2 PLACES : ±1mm DECIMAL TO 1 PLACE : ±2mm WHOLE DIMENSIONS : ±4mm ANGULAR : ±0°	MATERIAL	ASSY DRG 480570	TITLE
CHECKED RJC	DATE 31 5 84	SCALE	UNLESS OTHERWISE STATED FIRST ANGLE PROJECTION	FINISH	CIRCUIT DIAGRAM 400570	4200. ANALOG INTERFACE P.C.B. FREQUENCY LOCK, WATCHDOG DRIVER & I.C. POWER SUPPLIES.
APPR. -01-	DATE 21 9 84	NOT TO BE SCALED			CHECK PROCEDURE 460570	DRAWING No. 430570
					CHECK LIST 470570	SHEET 4 OF 4

