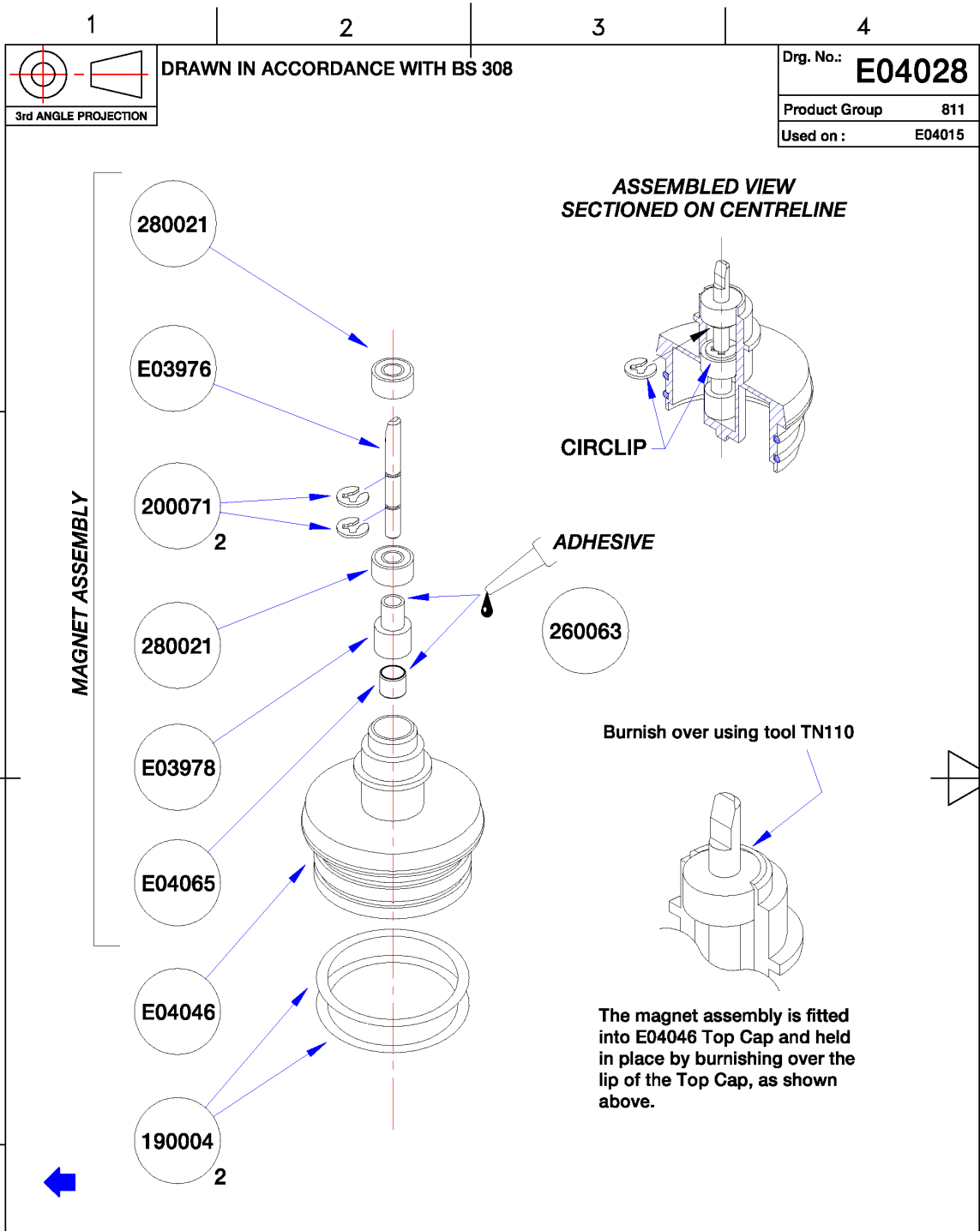


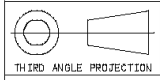


**IS12 INSTRUMENT SYSTEM**

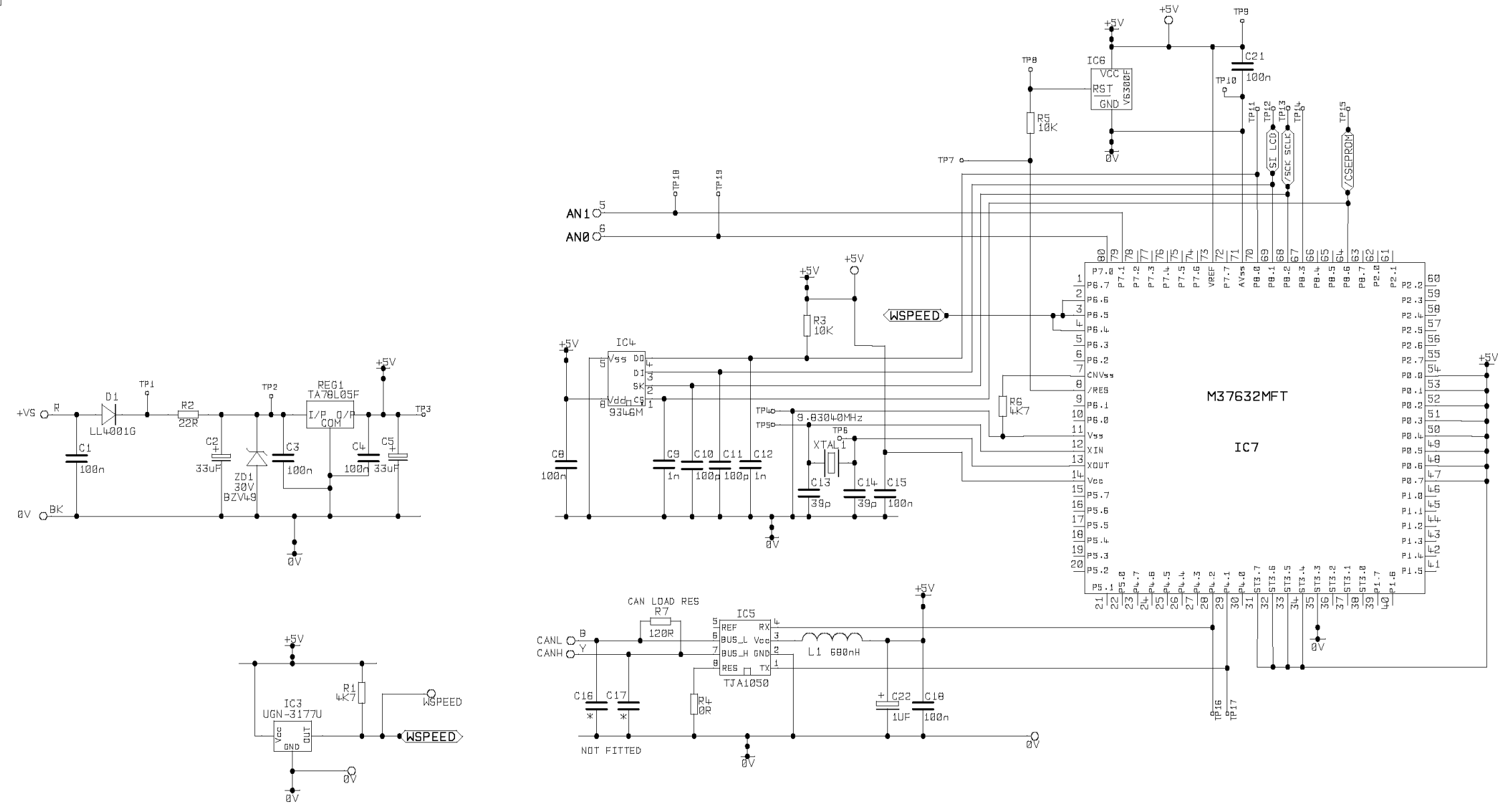
**SERVICE MANUAL EXTRACT**



<b>DO NOT SCALE</b>		<b>IF IN DOUBT ASK</b>		1642	2	30:10:02	Assembly notes added – Drawing updated		
		Mod.No.	Issue	Date	Modifications				
<b>SIMRAD</b> <small>A. KONGSBERG Company</small>	STAR LANE, MARGATE, KENT CT9 4NP TEL: 01843 290290   FAX: 01843 290471 +44 1843 290290			Drawn: <b>B.P.L</b> Date: 30:10:02	Checked:  Date:	Approved:  Date:	Tolerances + & - 0. = 0.50 0.0 = 0.25 0.00= 0.10 ANG. = 0.5°	ALL DIMENSIONS mm <b>SIMRAD</b> MARGATE 2002 Sht. 1 of 1	
	Material: <b>SEE ABOVE</b>			COMPUTER GENERATED DRAWING MANUAL MODIFICATION INVALIDATES CAD FILE.					
	Finish: _____			<b>IS12 MASTHEAD</b>					
	Date: <b>08:01:02</b>		Original Scale: <b>1 : 1</b>		Title: <b>ASSEMBLY: TOP CAP MASTHEAD</b>		Drg No.: <b>E04028</b>		Issue: <b>2</b>



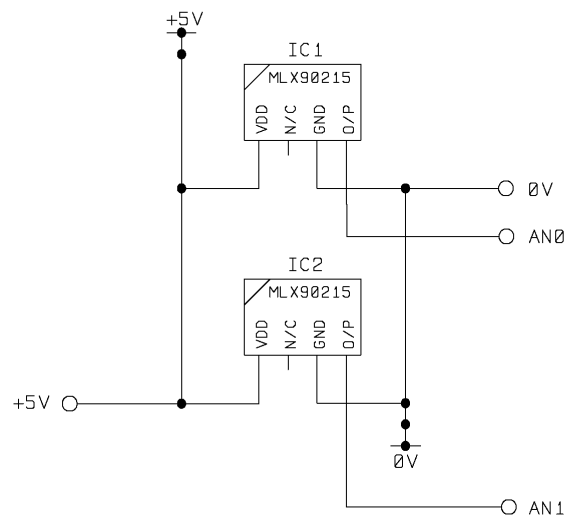
DRG No: E03724



DRAWN BY: R.F.  
 CHECKED: DATE: 16-10-00  
 APPROVED: DATE:

DO NOT SCALE IF IN DOUBT ASK		No		DATE		MODIFICATIONS	
SIMRAD A KONGSBERG Company	STAR LANE, HARGATE, KENT CT8 4NP TEL: 0843 280280 FAX: 0843 280471			THIS DRAWING IS COMPUTER GENERATED ANY MANUAL MODIFICATION WILL INVALIDATE THE C.A.D. FILE			
	MATERIAL:			MODEL: IS12 MAST HEAD MOTHERBOARD		LIMITS MET + & - 0. = .50	LIMITS IMP + & - 0. = .015
	DATE: 21-01-02			SCALE:		0.0 = .25 .00 = .10 ANG = 0.5	0.00 = .010 .000 = .005 ANG = 0.5
TITLE: PCB CIRCUIT DIAGRAM			DRG No: E03724		ISSUE: 1		

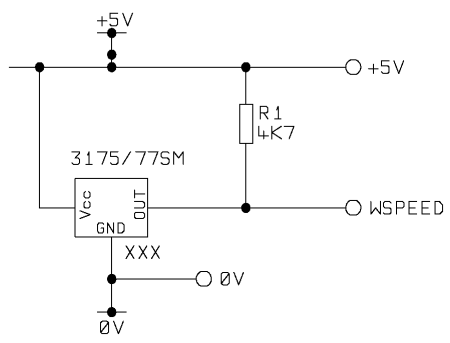
DRG No:  
E03931



DRAWN BY: R.F.  
CHECKED: DATE: 19-9-00  
APPROVED: DATE:

DO NOT SCALE		IF IN DOUBT ASK		MODIFICATIONS			
No	ISS	DATE					
BTAR LANE, HARBATE, KENT CTB WAP TEL: 0843 88888 FAX: 0843 88888		THIS DRAWING IS COMPUTER GENERATED ANY MANUAL MODIFICATION WILL INVALIDATE THE C.A.D. FILE		LIMITS MET + % - 0. = .50		LIMITS IMP + % - FRAC = .015	
MATERIAL:		MODEL: IS12 MASTHEAD LINEAR ANALOGUE		0.0 = .25 .00 = .10 ANG = 0.5		.00 = .010 .000 = .005 ANG = 0.5	
DATE: 02-07-02	SCALE:	TITLE: PCB CIRCUIT DIAGRAM		DRG No: E03931		ISSUE: 1	

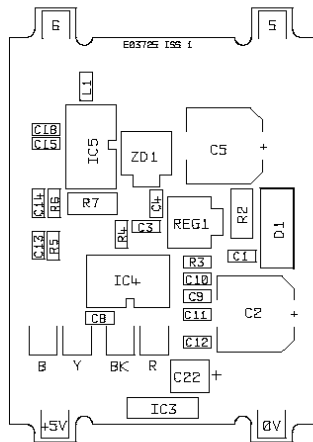
DRG No:  
E03934



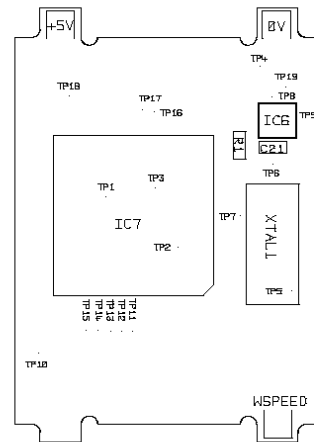
DRAWN BY: R.F.	CHECKED: DATE: 19-8-00	APPROVED: DATE:
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DO NOT SCALE	IF IN DOUBT ASK	No	ISS	DATE	MODIFICATIONS
STAR LANE, HARGATE, KENT CT8 1AP TEL: 01424 888888 FAX: 01424 888877		THIS DRAWING IS COMPUTER GENERATED ANY MANUAL MODIFICATION WILL INVALIDATE THE C.A.D. FILE		LIMITS MET + 5 - + 2 -	LIMITS IMP + 2 - + 5 -
MATERIAL:		MODEL: IS12 MASTHEAD DIGITAL		0.0 = .50 0.0 = .25 .00 = .10 ANG = 0.5	FRAC = .015 .00 = .010 .000 = .005 ANG = 0.5
DATE: 21-01-02	SCALE:	TITLE: PCB CIRCUIT DIAGRAM	DRG No: E03934	ISSUE: 1	

FRONT VIEW



REAR VIEW



SURFACE MOUNT COMPONENTS

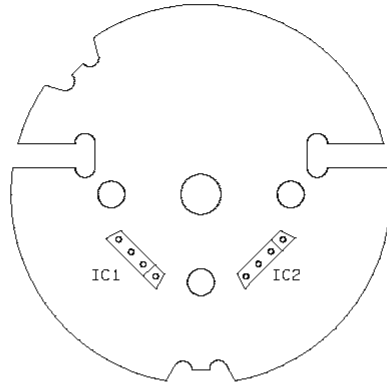
ITEM	QTY	PART No.	COMP REF	DESCRIPTION
1	1	E03725	-	PCB DRILLED
2	1	100126	R2	1206 22R
3	1	100174	R7	1206 120R
4	2	100346	R1,R6	0603 4K7
5	2	100350	R3,R5	0603 10K
6	1	100385	R4	0603 0R
7	2	110102	C2,C5	33UF ELECT
8	1	110154	C22	NRS106M10 1UF TANT
9	2	110194	C9,C12	0603 1n
10	7	110199	C1,C3,C4,C8,C15,C18,C21	0603 100n
11	2	110218	C13,C14	0603 39p
12	2	110223	C10,C11	0603 100p
13	1	120038	ZD1	BZV49 30V
14	1	120040	D1	LL4-001G
15	1	140077	IC4	9346M
16	1	140092	REG1	TA78L05F
17	1	140147	IC6	V6300F
18	1	140187	IC5	TJA1050
19	1	160066	XTAL1	HC49-4 9.83040MHZ
20	1	240059	L1	0603 CHOKE 680nH
21	1	E04007	IC7	PROG'D MICRO

NOTE :- IC3 NOT FITTED



DD NOT SCALE		IF IN DOUBT ASK		No	ISS	DATE	MODIFICATIONS	
SIMRAD A. KUNIGBERG Company	STAR LINE, MARGATE, KENT CT9 9NP TEL: 0843 888888 FAX: 0843 888877			THIS DRAWING IS COMPUTER GENERATED ANY MANUAL MODIFICATION WILL INVALIDATE THE C-A-D FILE				L.DIGITS MET + E - S. - .00
	MATERIAL:			MODEL: IS12 MAST HEAD MOTHERBOARD				L.DIGITS IMP + E - REAC - .015 .00 - .010 .000 - .005 ANG - B-3
DATE: 19-02-02	SCALE:	TITLE: PCB ASSEMBLY DETAIL	DRG No: E03726	ISSUE: 1				
DRAWN BY: R.F. DATE: 27-03-01	CHECKED:	APPROVED:						

DRG No: E03933



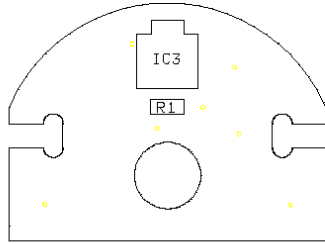
SURFACE MOUNT COMPONENTS

ITEM	QTY	PART No.	COMP REF	DESCRIPTION
1	1	E03932	-	PCB DRILLED
2	2	E04066	IC1,IC2	MLX90215

DO NOT SCALE		IF IN DOUBT ASK		NO	ISS	DATE	MODIFICATIONS	LINETS MET + E - B - .00	LINETS DMP + E - FRAC - .015
STATE LAWS, WARRANTS, EJECT CTS MAP TEL. 804-688-8888 FAX 804-688-8888		MATERIAL:		THIS DRAWING IS COMPUTER GENERATED ANY MANUAL MODIFICATION WILL INVALIDATE THE C.A.D. FILE		MODEL: IS12 MASTHEAD LINEAR ANALOGUE		E.G. - .25 J.D. - .10 A.H. - 8.5	.02 - .010 .002 - .005 A.H. - 8.5
DRAWN BY: R.F. DATE: 27-03-01	CHECKED:	APPROVED:	DATE: 17-04-02	SCALE:	TITLE: PCB ASSEMBLY DETAIL	DRG No: E03933	ISSUE: 1		



**SIMRAD**  
COMPANY  
A KONGSBERG



SURFACE MOUNT COMPONENTS

ITEM	QTY	PART No.	COMP REF	DESCRIPTION
1	1	E03935	-	PCB DRILLED
2	1	140182	IC3	UGN-3177U

NOTE:- R1 NOT FITTED



DD NOT SCALE		IF IN DOUBT ASK		NO	ISS	DATE	MODIFICATION		
<b>SIMRAD</b> COMPANY A. KONGSBERG	STAR LINE, MARGATE, WEST CTY 64P TEL: 0184 588888 FAX: 0184 288871			THIS DRAWING IS COMPUTER GENERATED ANY MANUAL MODIFICATION WILL INVALIDATE THE C.A.D. FILE				LENGTHS MET + E - 2. - .20	LENGTHS IMP + E - FRAC - .015
	MATERIAL:			MODEL:				0.25 - .25 .20 - .10 .003 - .005 .010 - 0.25	
	DATE:	SCALE:	TITLE:		DRG No:		ISSUE:		
21-01-02		PCB ASSEMBLY DETAIL		E03936		1			
DRAWN BY: <b>R.F.</b> DATE: 26-03-01	CHECKED:	APPROVED:							