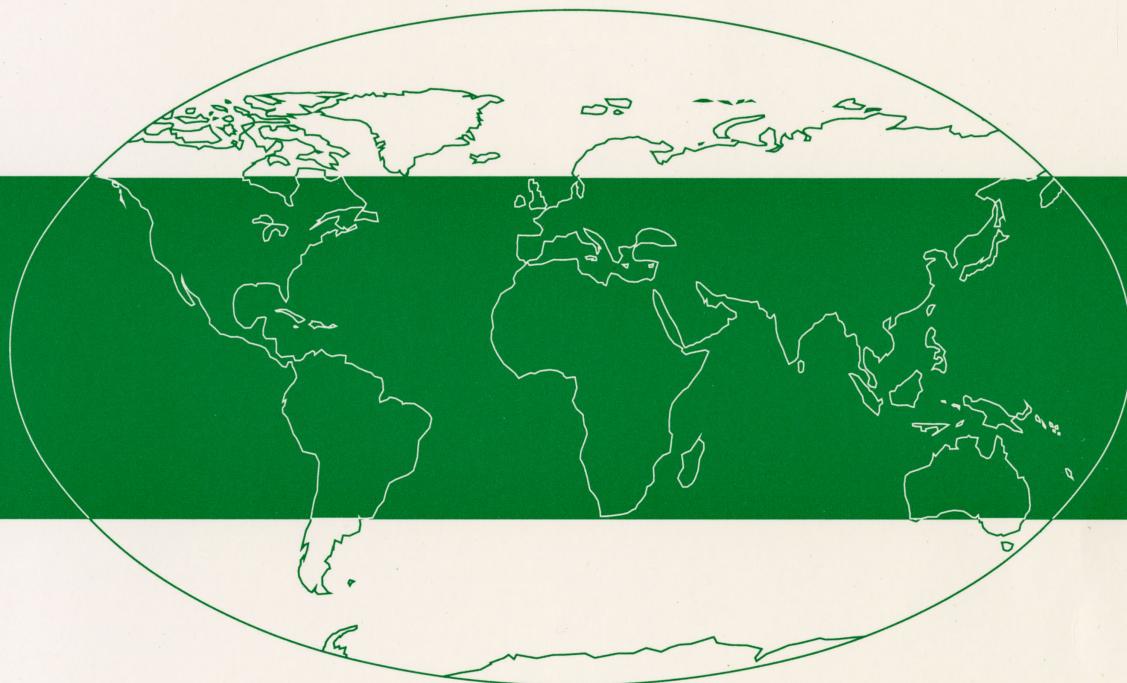


SAILOR



TECHNICAL MANUAL
FOR
DELAY UNIT H1680



S.P. RADIO A/S · AALBORG · DENMARK

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1 GENERAL INFORMATION

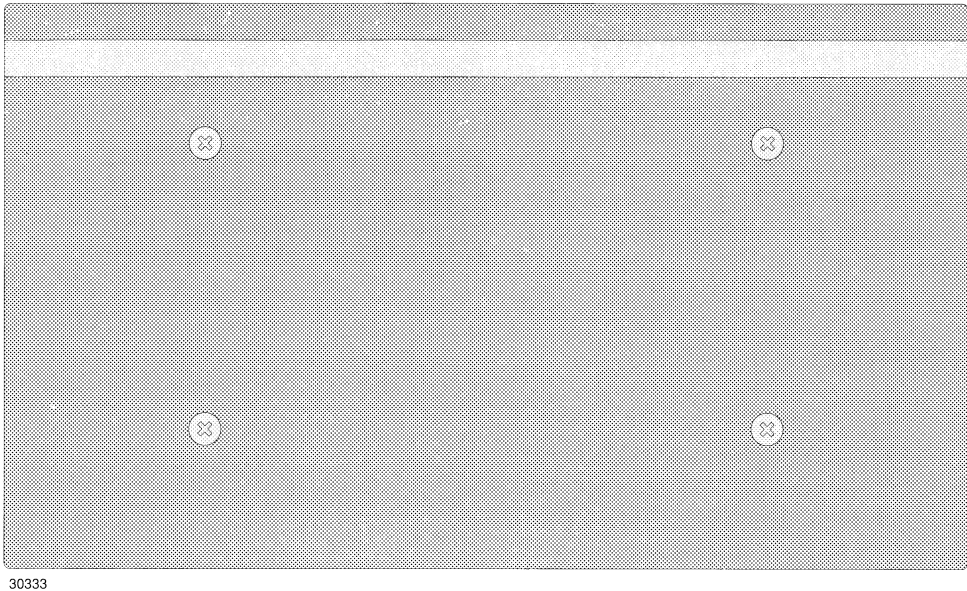
1.1 INTRODUCTION

H1680 is an interface which has to be used in an installation between the Skanti series of Trp 8000 transmitters and the SAILOR RM2150 and RM2151 DSC/Telex modems.

In a DSC or Telex call, the RM2150 or the RM2151 will automatically set up the transmitter frequency and transmitter mode on the Skanti 8000 serie.

The H1680 adapts the RM2150/51 to the Skanti system and enables full automatic telex and DSC operation.

Please always check that the above application is type approved for installation onboard the ship in question.



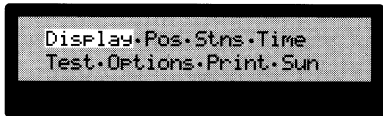
2 INSTALLATION

When installing H1680, you have to programme the DSC/Telex unit as follows:

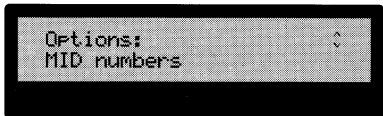
T-BUS programming using the Options menu of the RM2150/51.

Remove the back plate and the cabinet on the RM2150/51, set the switch S2-4 on. Turn on the RM2150/51 and wait until the display menu shows the scan running menu.

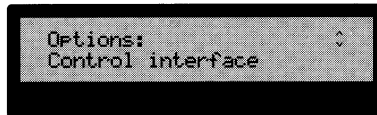
Activate **FUNC** and the display menu changes to:



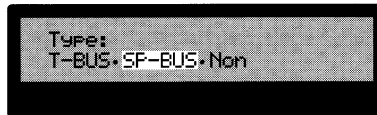
Choose the Options menu and activate the **NEXT** key, the display menu changes to:



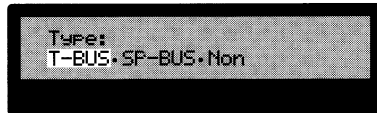
Use the up/down arrow key until the display menu shows:



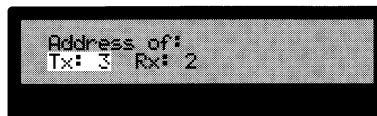
Activate the **NEXT** key, the display menu changes to:



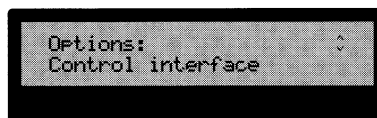
Use the up/down arrow key until the display menu shows:



The T-BUS is chosen for serial communication. Activate the **NEXT** key, the display menu changes to:



The address can now be changed. In this case, bus address 3 is chosen for TX and address 2 for RX. Activate the **NEXT** key, and the display menu again changes to:



Turn off the RM2150/51.

The setting of the switch S1-1/2 shall be according to the Service and Identity Programming for RM2150/51, part 6 and 8. When T-BUS is chosen, the switch S1-1/2 shall be in on position.

Change the switch S2-4 to off and mount the cabinet and the back plate again.

IT IS VERY IMPORTANT TO REMEMBER THE SWITCH S2-4.

2.1 SKANTI TRP 8250 CHECK LIST.

SERVICE PROGRAMME

With TX turned OFF, watch is shown in the TX display. Key 245 + ENTER. The RX display shows the address and the TX display shows the data.

ADR is chosen with DIM ▲ and ▼.

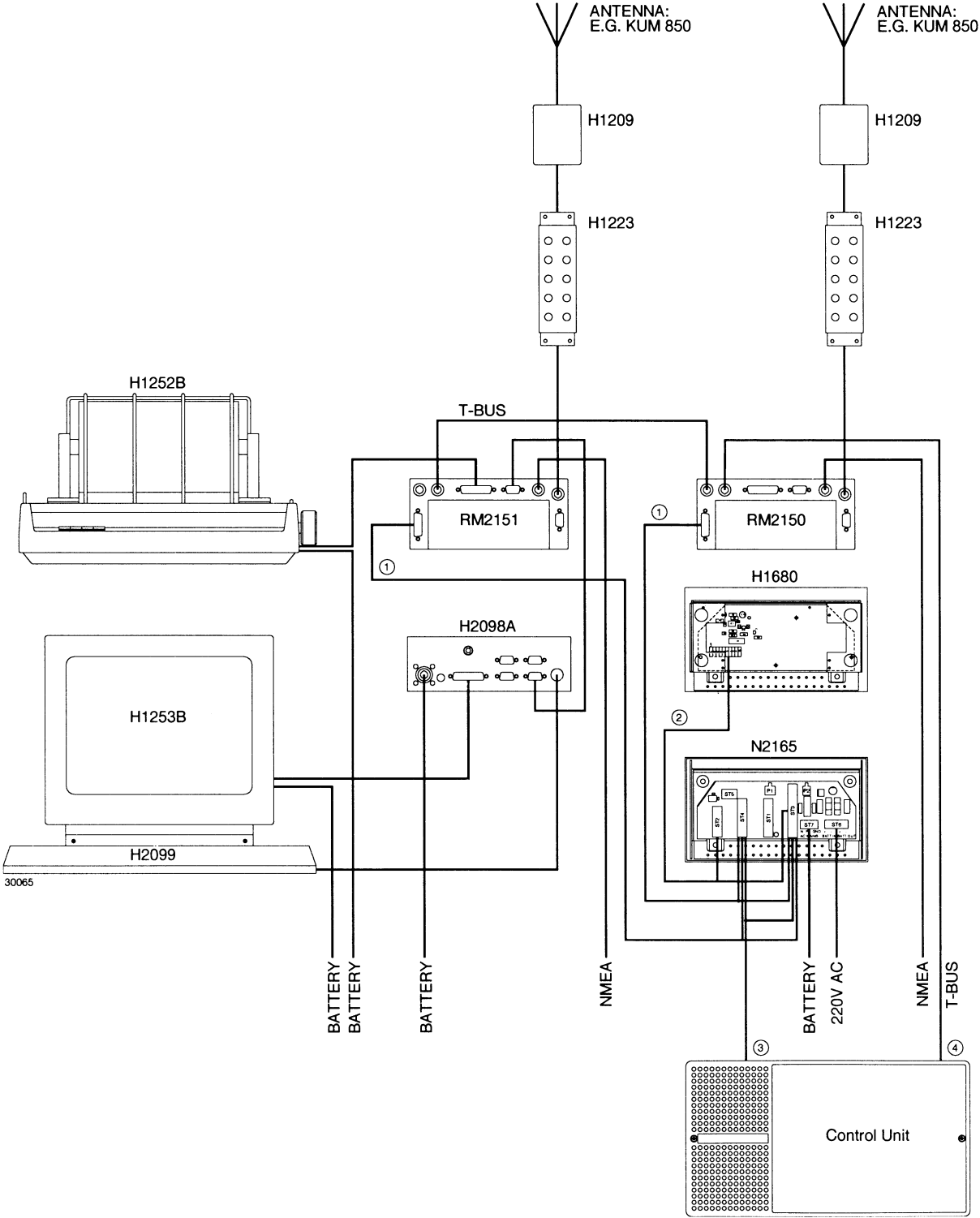
RM2150/51 is using 1700 Hz +/-85 Hz tones to modulate the transmitter. Please check that ADR 4095 show the data 255 (for default) or 23Dec./17Hex.

Frequencies for DSC and TLX must also be open. The Prom is called GMDSS PROM when a new one is ordered at SKANTI.

A telex filter has to be installed in case the TRP 8250 is not a telex edition.

If the transmitter TRP 8250 has a very low serial number or/and if the TRP is not prepared for telex the modules 600 and 624 have to be replaced.

INTERCONNECTION DIAGRAM FOR SKANTI TRP8000 AND SAILOR RM2150 AND RM2151



Cable 1 is connections between RM2150/51 and N2165.

N2165	RM2150/51	COLOUR	SIGNAL
ST3	P2-5		
1	13	BROWN/PINK	SUPPLY ON/OFF
2	25	RED/BLUE	-BATT
3	12	WHITE	+18V
4	10	VIOLET	-18V
5	11	GREY	+9V
6	22	WHITE/BLUE	GND
7	4	PINK	EXT. ALARM
8	2	BROWN	ALARM IN
9	7	GREEN	ALARM OUT
10	3	RED	TX READY
11	16	BROWN/GREY	HT ON
12	1	BLACK	EXT. MUTE
13			
14	23	WHITE/GREY	COMMON

Cable 2 is connections between H1680 and N2165.

H1680	N2165	COLOUR	SIGNAL
ST1/4	ST2/4	YELLOW	TX READY
ST1/5	ST2/5	BLACK	HT ON
ST1/7	ST3/3	RED	+18V
ST1/10	ST3/6	BROWN	GND

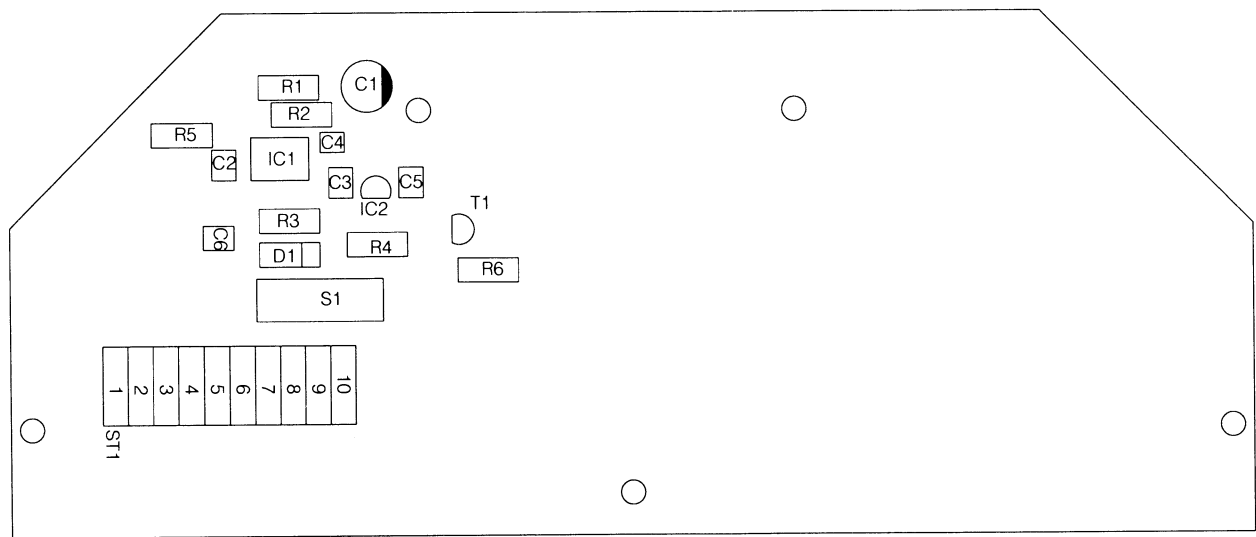
Cable 3 is connections between SKANTI CONTROL UNIT , N2165.

SKANTI TS1	N2165	COLOUR	SIGNAL
9	ST4/6	RED	TX KEY
10	ST3/6	BROWN	GND
13	ST4/7	YELLOW	TLX IN/AF TO TX
14	ST4/8	BLUE	GND/AF TO TX COMMON

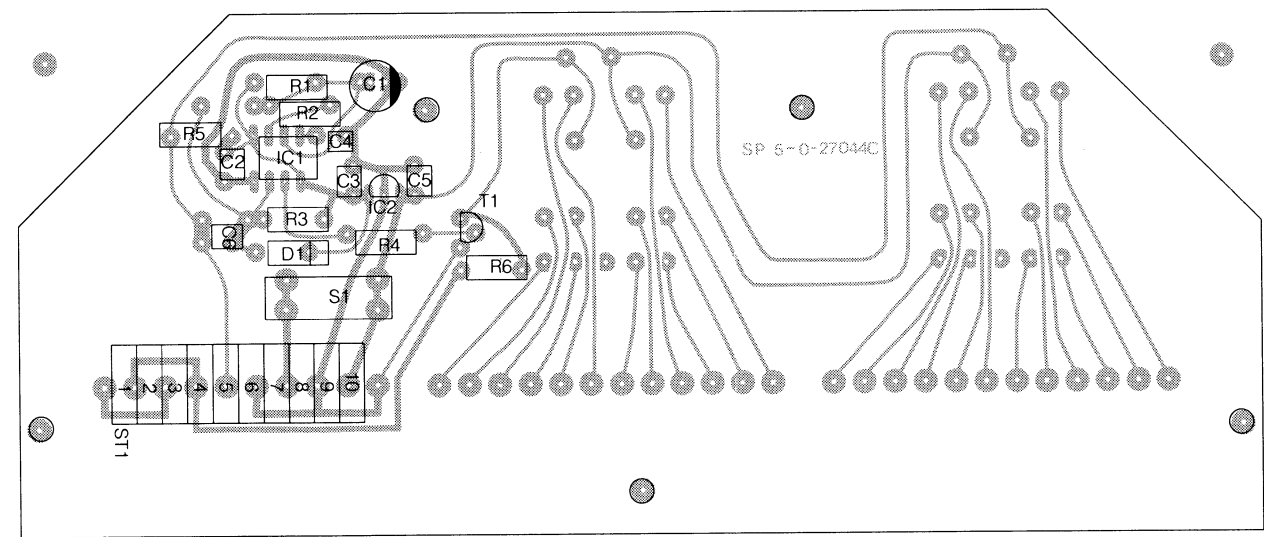
Cable 4 is connections between SKANTI CONTROL UNIT and RM2150/51.

SKANTI TS1	RM2150/51	SIGNAL
1	BLUE COAX	T-BUS
2 SCREEN	BLUE COAX	T-BUS GND

COMPONENT LOCATION DELAY UNIT



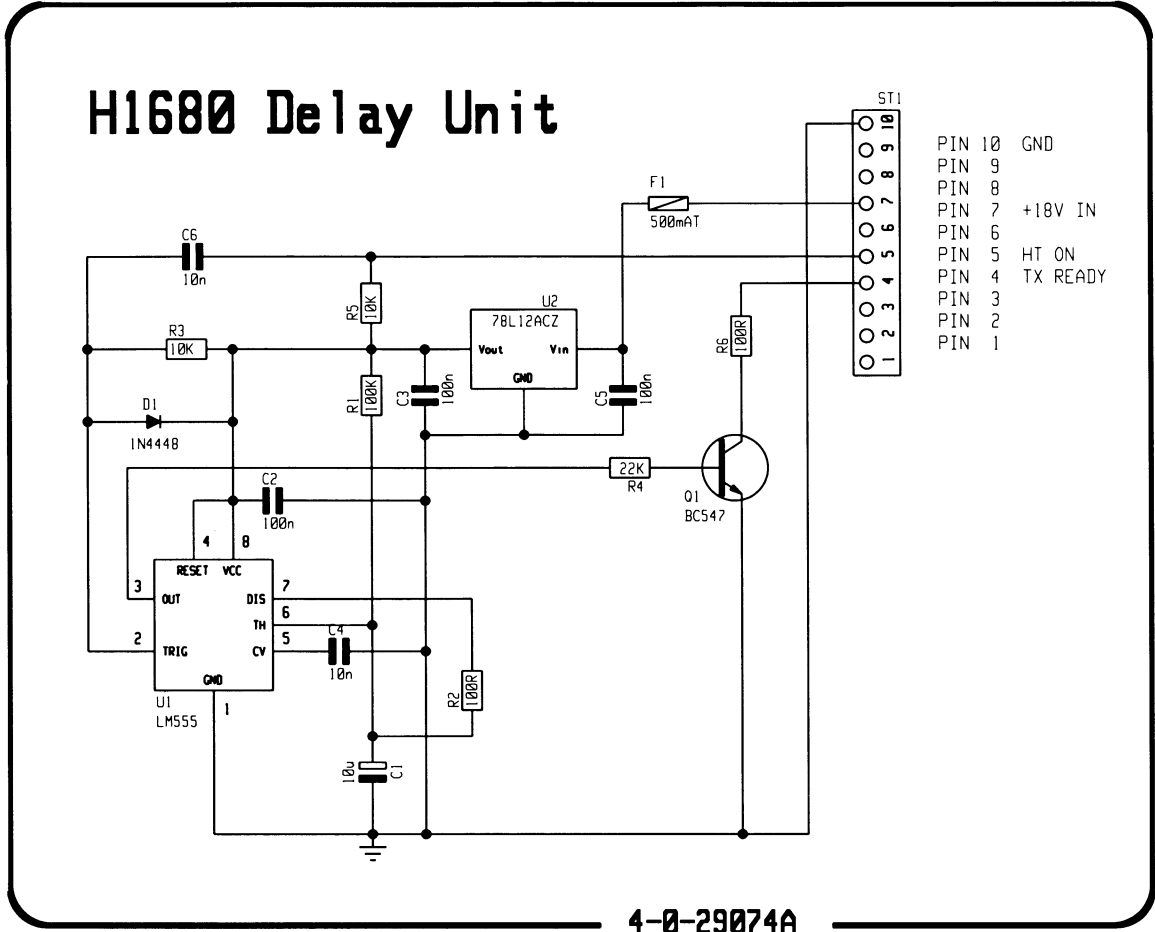
View from component side with upper side tracks.



View from component side with lower side tracks.

PCB rev. 27044C

DIAGRAM DELAY UNIT



This diagram is valid for PCB rev. 27044C

3 PARTS LIST

DELAY UNIT H1680		ECI A/S	5-0-27044C/4-0-29074A 629074	
POSITION	DESCRIPTION	MANUFACTOR	TYPE	Part No.
	MULTIPLE MUTE OUTPUT		5-0-27044C / 1-0-27044	52.080
C1	CAPACITOR EL.LYTIC 10uF 20% 35VDC	ELNA	RJ2-35-V-100-M-T34(T58)	14.512
C2	CAPACITOR MKT 100nF 5% 63VDC	PHILIPS	2222 370 79104	11.135
C3	CAPACITOR MKT 100nF 5% 63VDC	PHILIPS	2222 370 79104	11.135
C4	CAPACITOR MKT 10nF 5% 63VDC	PHILIPS	2222 370 89103	11.134
C5	CAPACITOR MKT 100nF 5% 63VDC	PHILIPS	2222 370 79104	11.135
C6	CAPACITOR MKT 10nF 5% 63VDC	PHILIPS	2222 370 89103	11.134
D1	DIODE HIGH SPEED 1N4448	PHILIPS	1N4448	25.147
F1	FUSE 500mA 250V 5x20mm	WICKMANN	19 195 500mA	45.504
FH1	FUSE HOLDER FOR PCB	SHURTER	OG 751 0042	78.421
FH2	FUSE HOLDER FOR PCB	SHURTER	OG 751 0042	78.421
IC1	TIMER "555" DIL 8	TEXAS	NE 555 P	31.205
IC2	VOLTAGE REG.15V 5% 0.1A 78L15AC	NATIONAL	LM78L15ACZ	31.140
R1	RESISTOR MF 100k OHM 5% 0.4W	PHILIPS	2322 181 53104	01.250
R2	RESISTOR MF 100 OHM 5% 0.4W	PHILIPS	2322 181 53101	01.175
R3	RESISTOR MF 10k OHM 5% 0.4W	PHILIPS	2322 181 53103	01.225
R4	RESISTOR MF 22k OHM 5% 0.4W	PHILIPS	2322 181 53223	01.233
R5	RESISTOR MF 10k OHM 5% 0.4W	PHILIPS	2322 181 53103	01.225
R6	RESISTOR MF 100 OHM 5% 0.4W	PHILIPS	2322 181 53101	01.175
ST1	TERMINAL BLOCK 10 POLES 1.5mm2	PTR	AK300/10b m.MESS.SKRUER	81.017
T1	TRANSISTOR AF BC547B NPN TO-92	PHILIPS	BC547B	28.067