



Sailor

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INSTRUKTIONSBOG FOR
SAILOR H1603 BUS INTERFACE

INSTRUCTION BOOK FOR
SAILOR H1603 BUS INTERFACE

INSTRUKTIONSBUCH FÜR
SAILOR H1603 BUS INTERFACE

INSTRUCTIONS POUR
SAILOR H1603 BUS INTERFACE

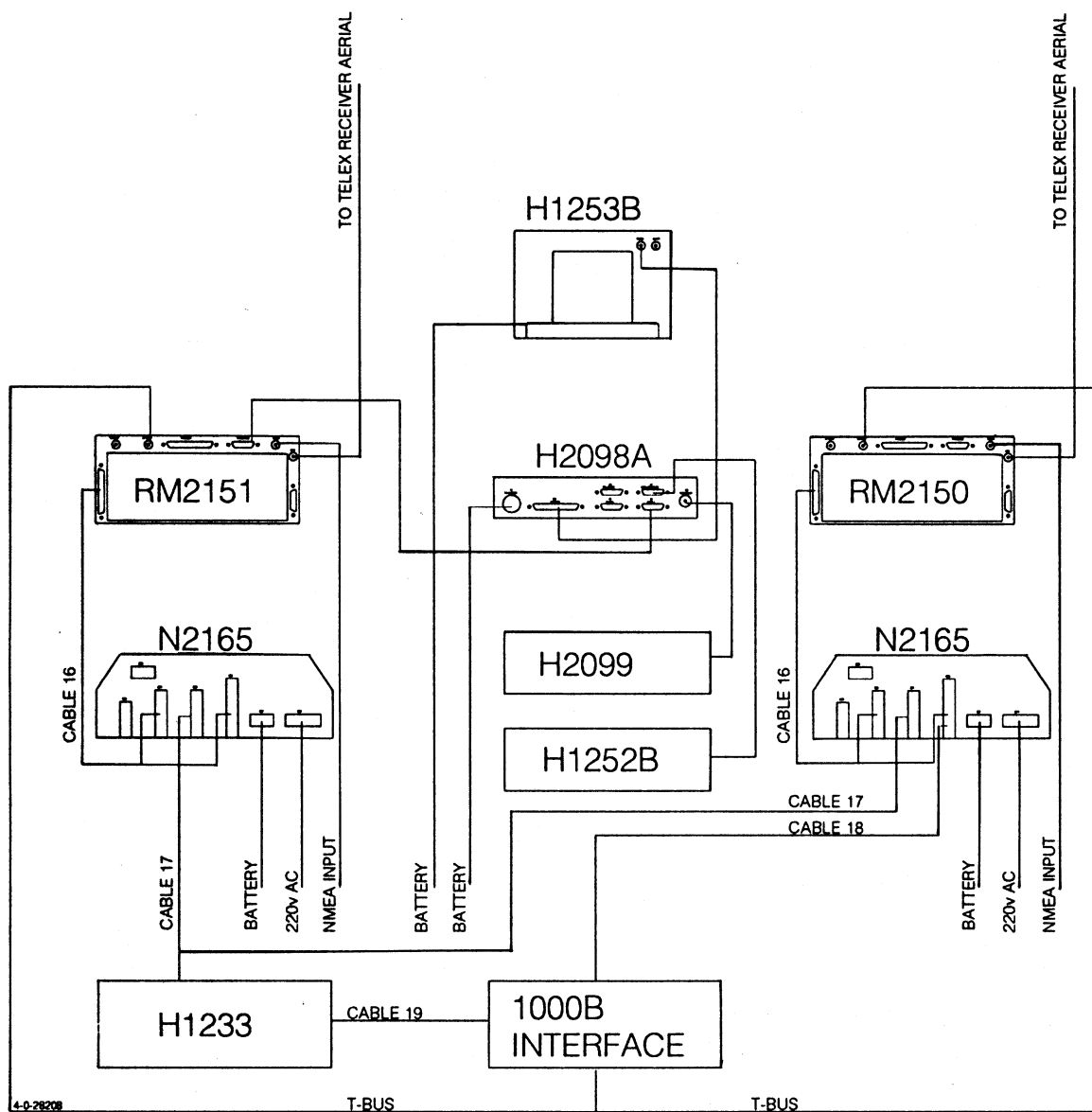
INSTRUCCIONES PARA
SAILOR H1603 BUS INTERFACE



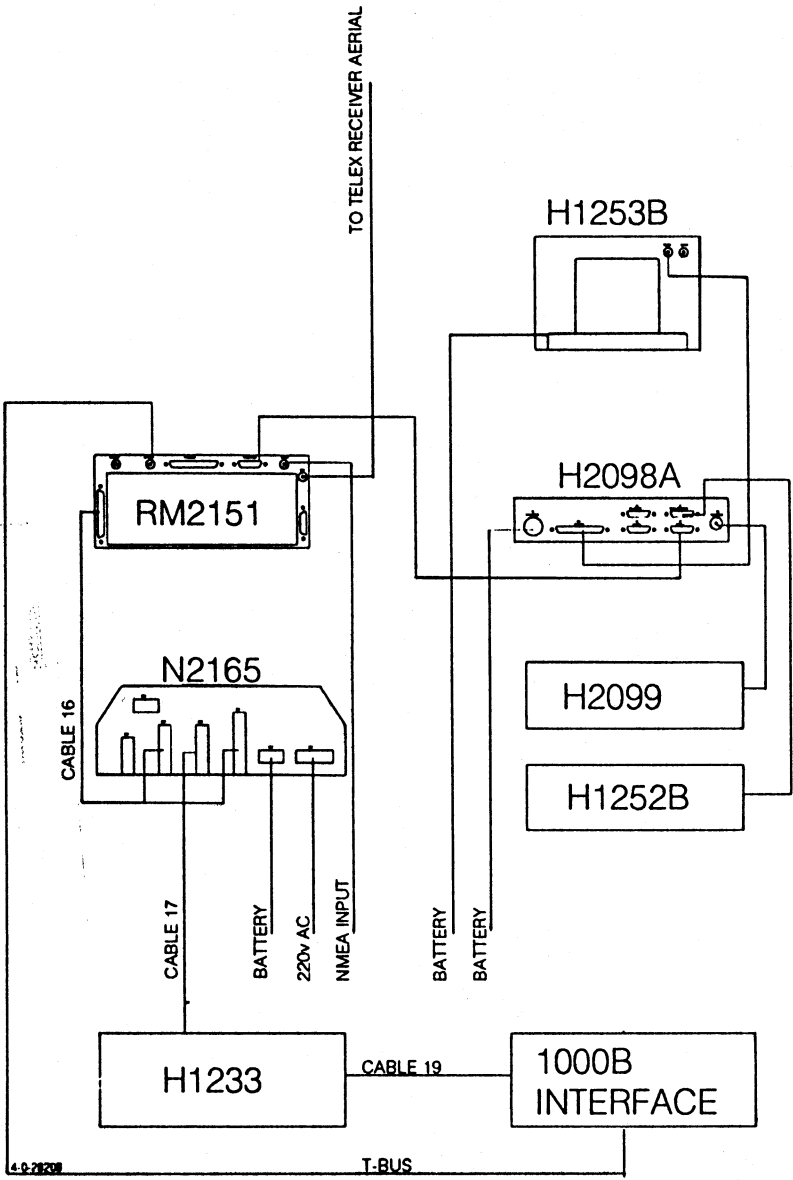
A/S S. P. RADIO · AALBORG · DENMARK



INTERCONNECTION DIAGRAM FOR 1000B



INTERCONNECTION DIAGRAM FOR 1000B



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- 1.1 OPERATING INSTRUCTION
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1 INTRODUCTION

H1603 is an interface, which has to be used together with short wave programme 1000B and HF SSB programme 2000 telex and DSC equipment.

H1603 makes it possible to make automatic frequency setup of short wave programme 1000B from the HF SSB programme 2000 telex and DSC equipment.

1.1 OPERATING INSTRUCTION

1. Select telex mode on S130X.
2. Select extern frequency control on S130X.
3. Then operate the DSC / TELEX unit, in accordance with the operation manual

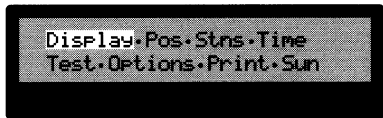
2 INSTALLATION

When installing H1603 you have to programme the DSC / TELEX unit as follows:

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

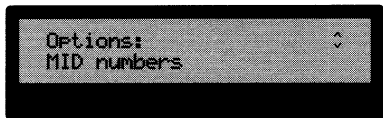
Remove the backplate and the cabinet, set the switch S2-4 on (please see enclosure 2 in the check liste - good advises). Turn on the RM2150/51 and wait until the displaymenu show the scan running menu.

Activate **FUNC:** and the displaymenu change to.



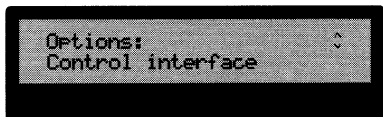
```
Display.Pos.Stns.Time
Test.Options.Print.Sun
```

Chose the Options menu and activate the **NEXT** key, the displaymenu change to.



```
Options:
MID numbers
```

Use the up/down arrow key until the displaymenu show.



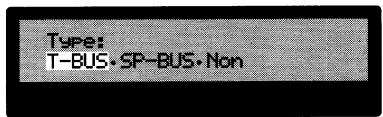
```
Options:
Control interface
```

Activate the **NEXT** key, the displaymenu change to.



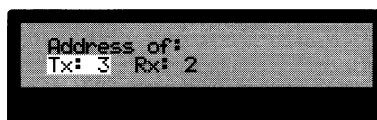
```
Type:
T-BUS.SP-BUS.Non
```

Use the up/down arrow key until the displaymenu show.

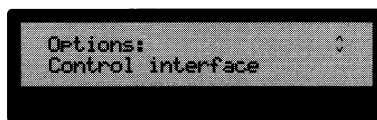


```
Type:
T-BUS.SP-BUS.Non
```

The T-Bus is chosen for serial communication activate the **NEXT** key, the displaymenu change 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**, the displaymenu change again to.



Turn the RM2150/51 off.

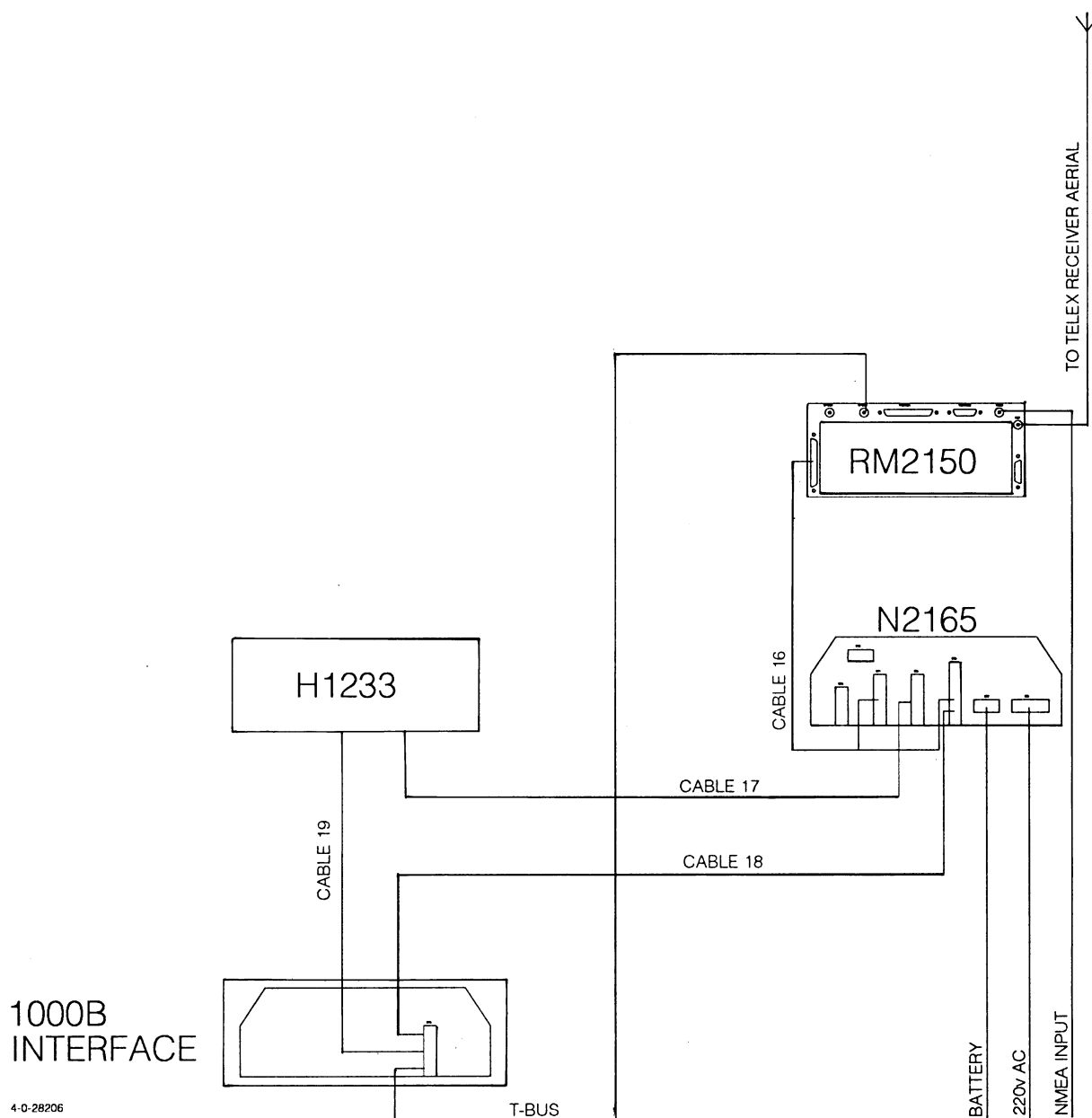
The setting of the switch **S1-1/2** shall be according to the enclosure 4 or 5 in INSTALLATION INSTRUCTION FOR HF SSB WITH DSC AND TELECOM. When T-BUS is chosen the switch **S1-1/2** shall be in on position.

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

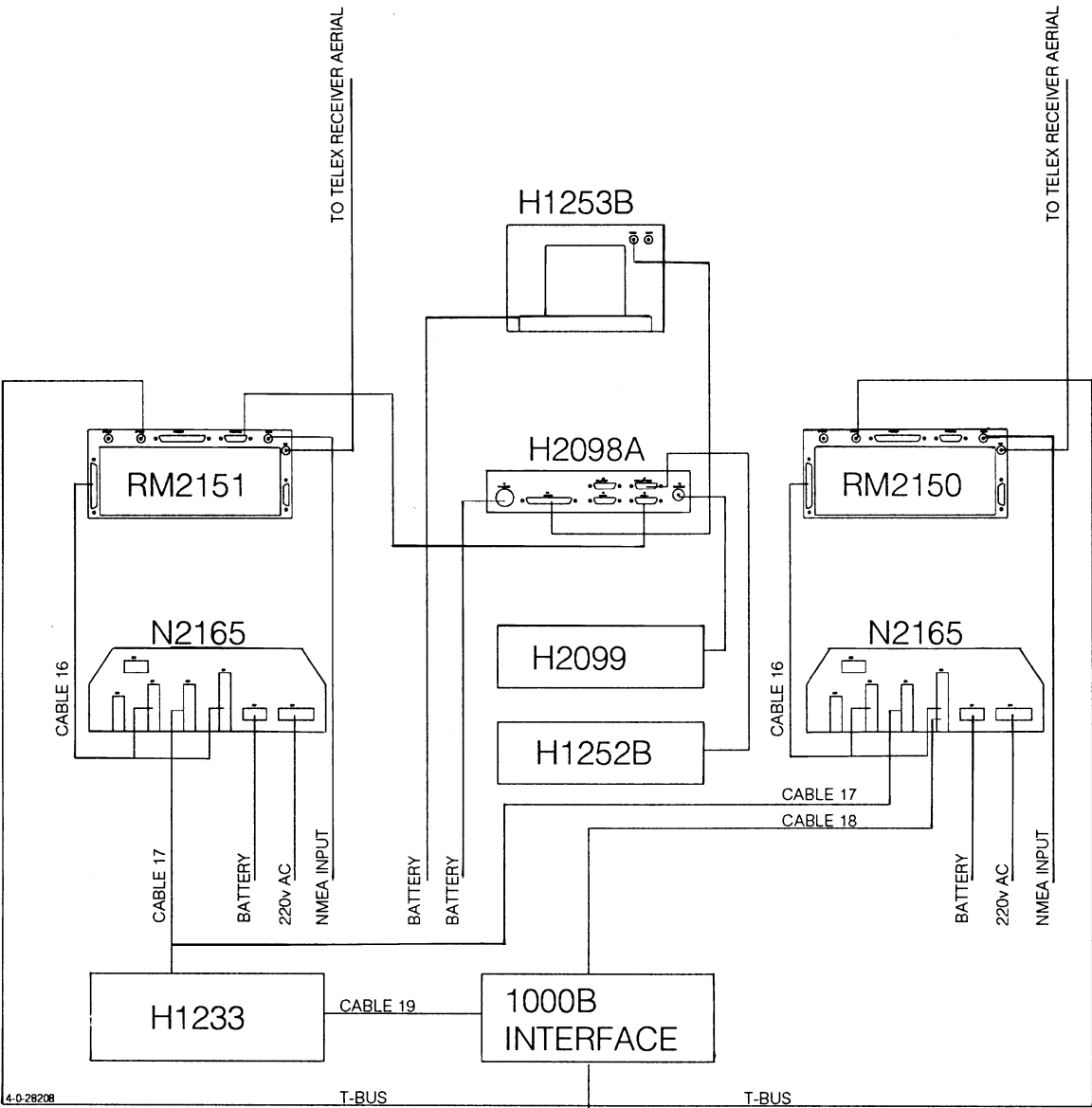
IT IS VERY IMPORTANT TO REMEMBER THE SWITCH S2_4.

INTERCONNECTION DIAGRAM FOR 1000B

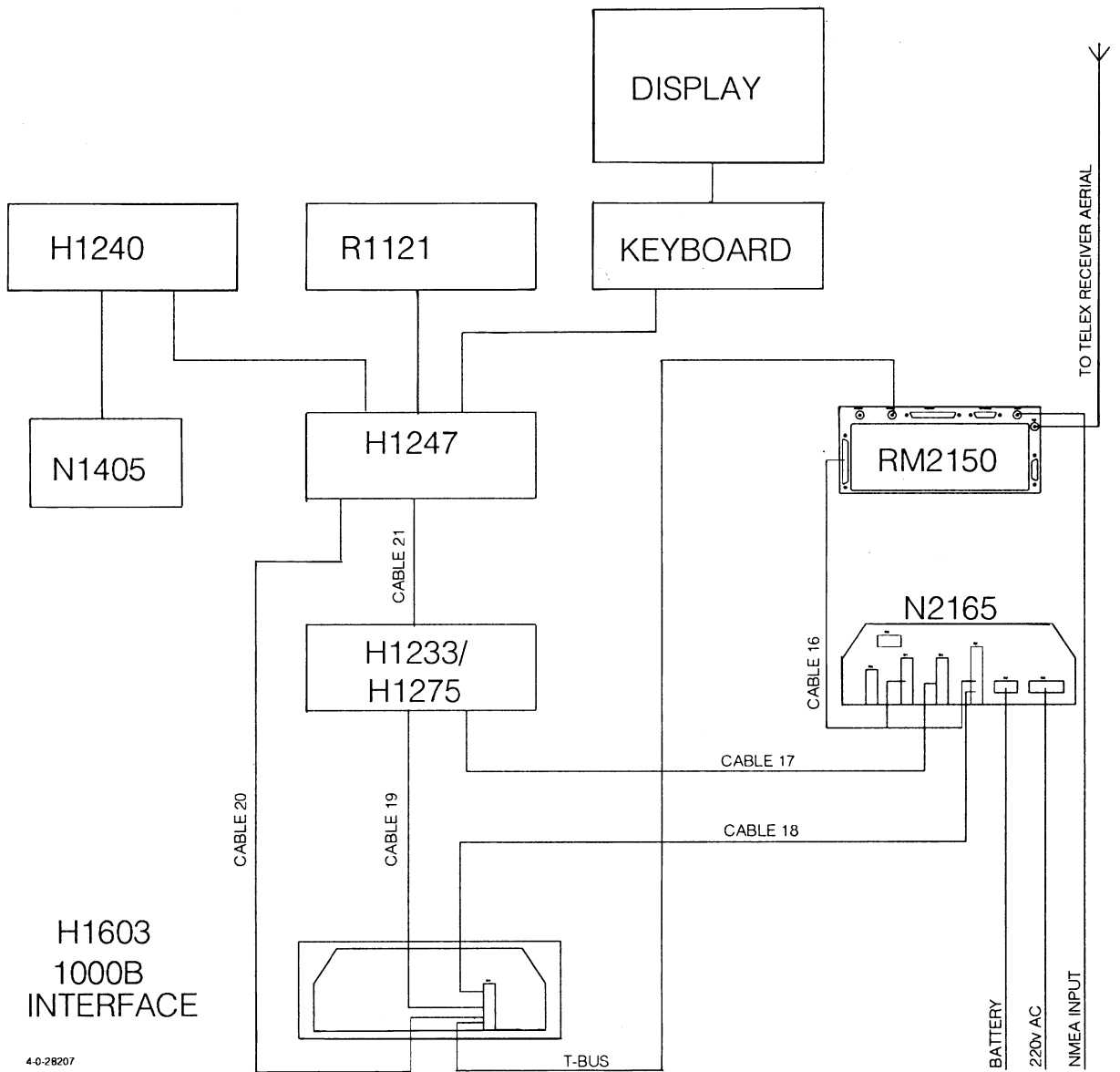
WITH DSC WATCH RECEIVER RM2150



INTERCONNECTION DIAGRAM FOR 1000B



INTERCONNECTION DIAGRAM FOR 1000B WITH DSC WATCH RECEIVER RM2150 AND R1121-H1240



CABLE 17

H1233	N2165	SIGNAL
ST102	ST4	
3	4	HT-ON
5	2	TUNE READY
11	6	TT FROM TELEX
12	3	GROUND
13	7	AF FROM TELEX
14	8	AF FROM TELEX

CABLE 18

N2165	1000B INTERFACE H1603	SIGNAL
ST3	ST1	
3	1	+18V
4	3	-18V
5	2	+9V
6	4	GROUND

CABLE 19

H1233/ H1275		1000B INTERFACE H1603	SIGNAL
ST102	ST103	ST2	
7+9	2	9	GROUND
8		5	DATA TO 1000B
10		6	CLOCK TO 1000B

T-BUS

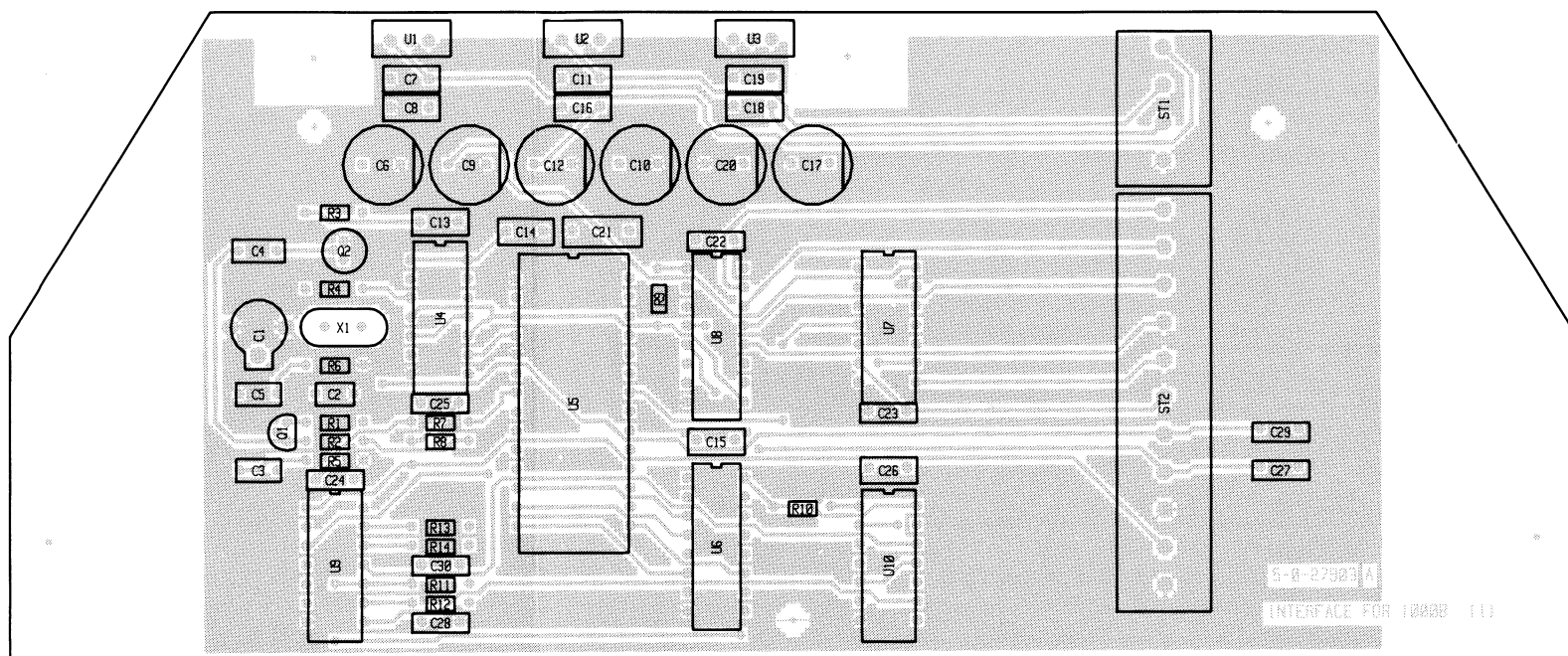
Coax cable, inner core to ST2 pin 10 and screen to ST2 pin 11 in the 1000B interface box.

CABLE 20

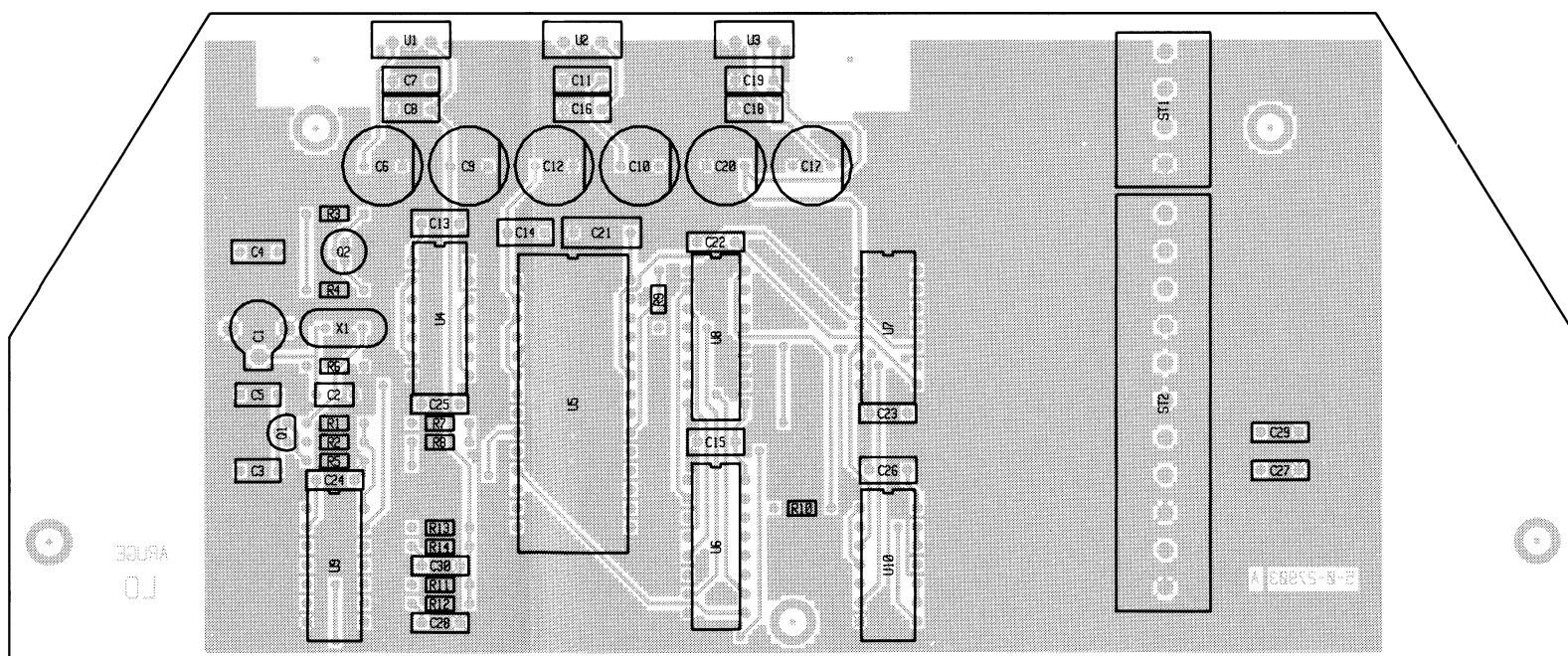
H1247	1000B INTERFACE H1603	SIGNAL
	ST2	
5	7	DATA FROM R1121
4	8	CLOCK FROM R1121
3	9	GND

CABLE 21

H1247	H1233/H1275		SIGNAL
	ST102	ST103	
21	13		AF FROM TELEX
20	14		AF FROM TELEX
19	11		TT FROM TELEX
18	12		TT FROM TELEX
17	3		HT ON
16	5		TUNE READY
7	7+9	2	GROUND

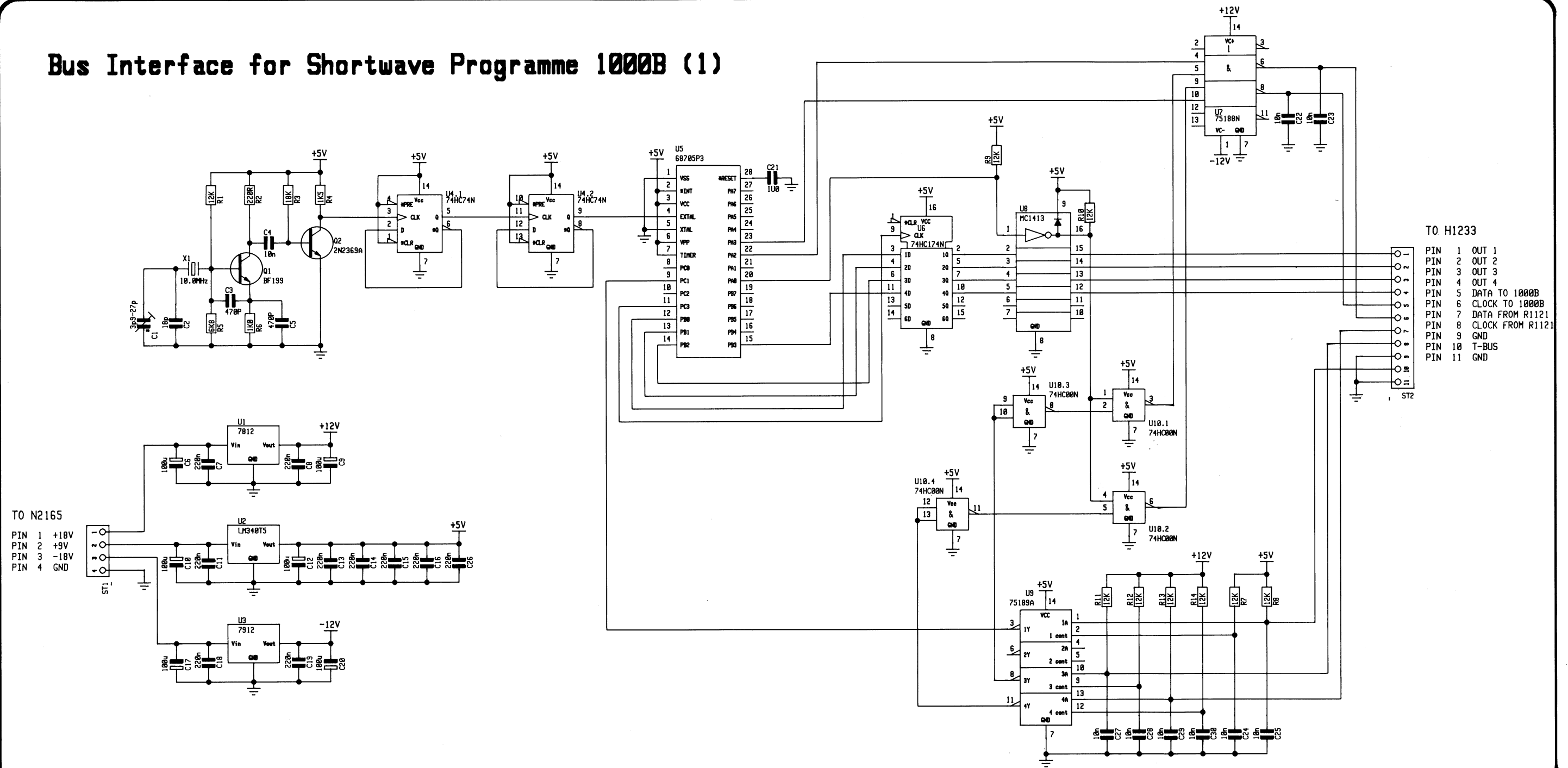


View from component side with upper side tracks.



View from component side with lower side tracks.

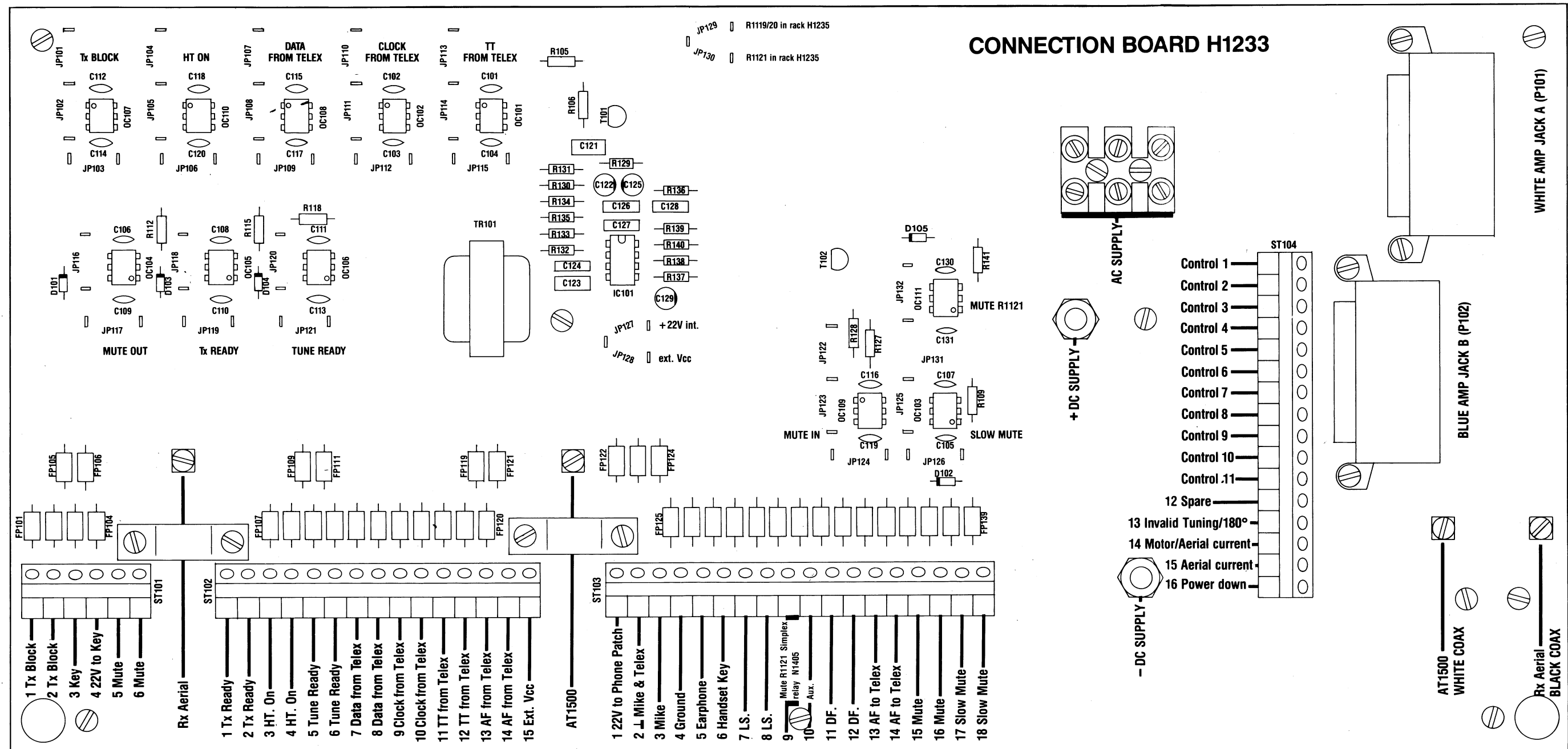
Bus Interface for Shortwave Programme 1000B (1)

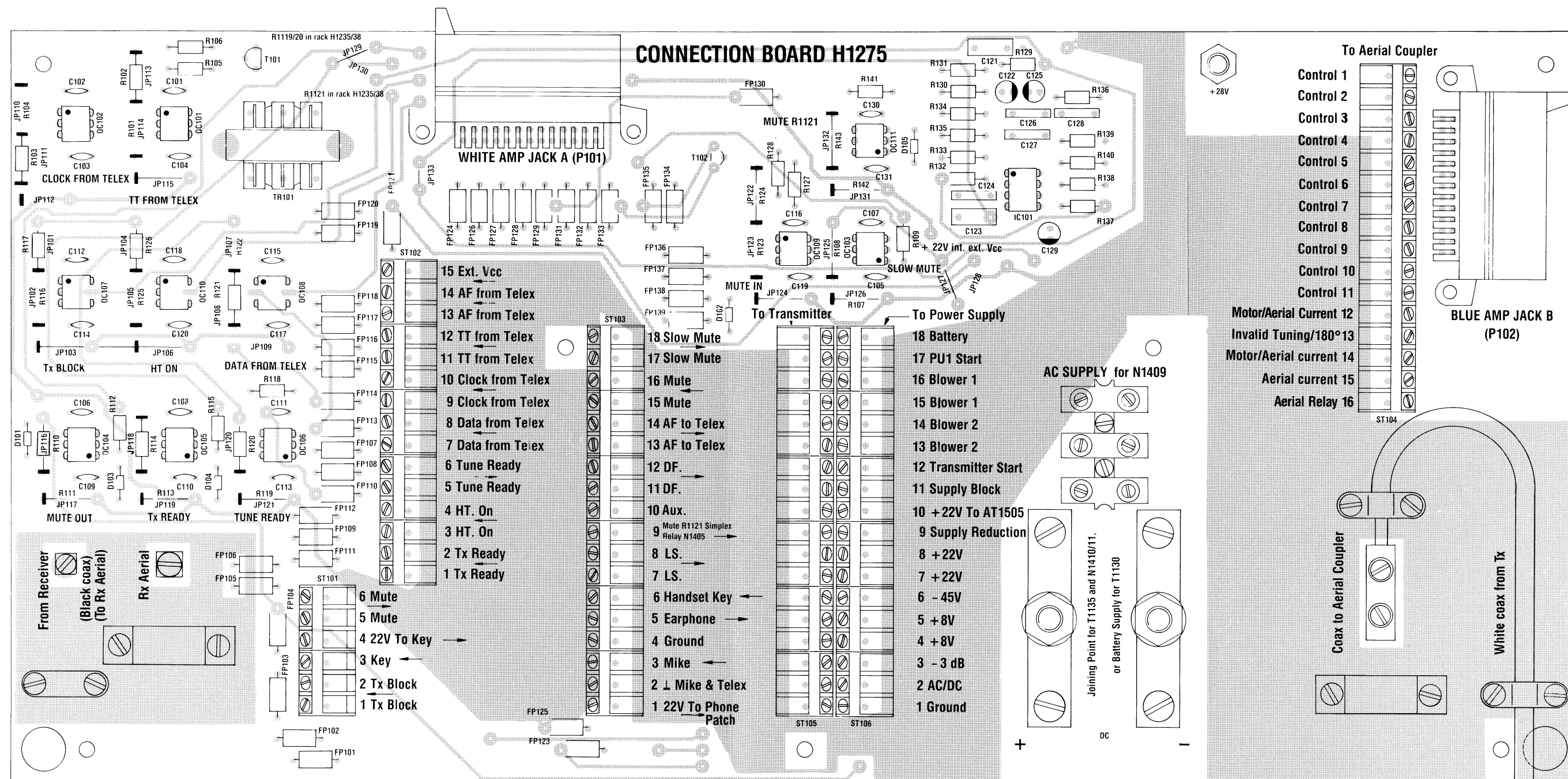


4-0-27903C

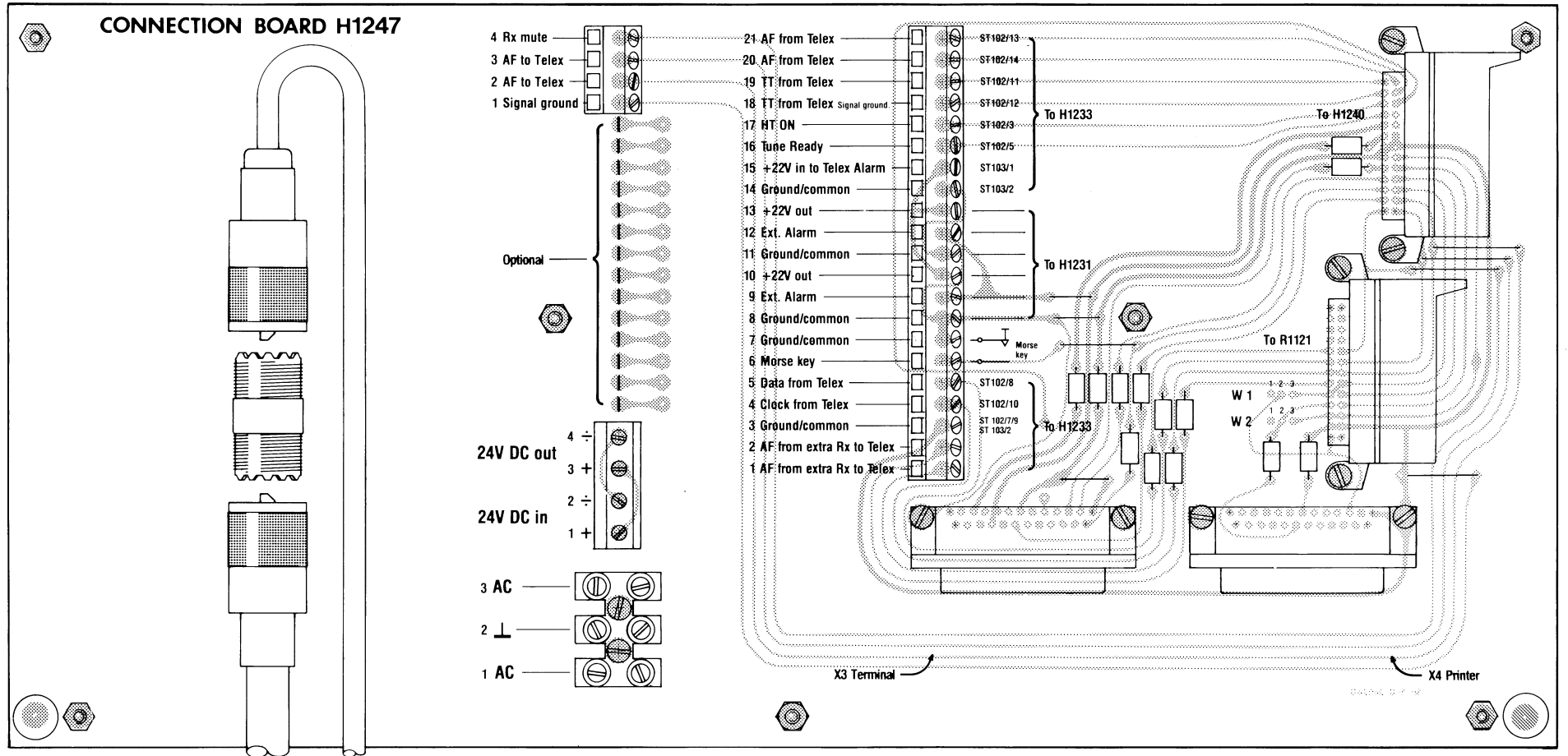
POSITION	DESCRIPTION	MANUFACTOR	TYPE	S.P. NUMBER
	BUS INTERFACE FOR SHORT	WAVE PROG.1000/B H1603	S.P.RADIO	5-0-27903A 627903
-		#MOTOROLA	T078 72A001	30.545
C1-1	CAPACITOR TRIMMING	DAU	107.3901.027	17.110
C2-1	CAPACITOR CERAMIC	NKE	DT 340 758S PH 180 J 50V	15.061
			FLAT PACK	
C3-1	CAPACITOR CERAMIC	NKE	DT35-0465 758L 471BK 500V	16.095
			FLAT PACK	
C4-1	CAPACITOR CERAMIC	NKE	DT 350 758L F 103 Z 50V	15.170
			FLAT PACK	
C5-1	CAPACITOR CERAMIC	NKE	DT35-0465 758L 471BK 500V	16.095
			FLAT PACK	
C6-1	CAPACITOR ELECTROLYTIC	ERO	EKM 05 DE 310 J 05	14.620
C7-1	CAPACITOR MKT	ERO	MKT 1826-422/06 6-G	11.183
C8-1	CAPACITOR MKT	ERO	MKT 1826-422/06 6-G	11.183
C9-1	CAPACITOR ELECTROLYTIC	ERO	EKM 05 DE 310 J 05	14.620
C10-1	CAPACITOR ELECTROLYTIC	ERO	EKM 05 DE 310 J 05	14.620
C11-1	CAPACITOR MKT	ERO	MKT 1826-422/06 6-G	11.183
C12-1	CAPACITOR ELECTROLYTIC	ERO	EKM 05 DE 310 J 05	14.620
C13-1	CAPACITOR MKT	ERO	MKT 1826-422/06 6-G	11.183
C14-1	CAPACITOR MKT	ERO	MKT 1826-422/06 6-G	11.183
C15-1	CAPACITOR MKT	ERO	MKT 1826-422/06 6-G	11.183
C16-1	CAPACITOR MKT	ERO	MKT 1826-422/06 6-G	11.183
C17-1	CAPACITOR ELECTROLYTIC	ERO	EKM 05 DE 310 J 05	14.620
C18-1	CAPACITOR MKT	ERO	MKT 1826-422/06 6-G	11.183
C19-1	CAPACITOR MKT	ERO	MKT 1826-422/06 6-G	11.183
C20-1	CAPACITOR ELECTROLYTIC	ERO	EKM 05 DE 310 J 05	14.620
C21-1	CAPACITOR MKT	ERO*	MKT1818	11.138
C22-1	CAPACITOR MKT	PHILIPS	2222 370 38103	11.168
C23-1	CAPACITOR MKT	PHILIPS	2222 370 38103	11.168
C24-1	CAPACITOR MKT	PHILIPS	2222 370 38103	11.168
C25-1	CAPACITOR MKT	PHILIPS	2222 370 38103	11.168
C26-1	CAPACITOR MKT	PHILIPS	2222 370 38103	11.168
C27-1	CAPACITOR MKT	PHILIPS	2222 370 38103	11.168
C28-1	CAPACITOR MKT	PHILIPS	2222 370 38103	11.168
C29-1	CAPACITOR MKT	PHILIPS	2222 370 38103	11.168
C30-1	CAPACITOR MKT	ERO	MKT 1826-422/06 6-G	11.183
Q1-1	TRANSISTOR RF	PHILIPS	RF199	28.178
Q1-2	TRANSISTOR RF SWITCH	MOTOROLA	2N2369A	28.315
R1-1	RESISTOR MF	PHILIPS	2322 180 73123	02.498
R2-1	RESISTOR MF	PHILIPS	2322 180 73221	02.456
R3-1	RESISTOR MF	PHILIPS	2322 180 73183	02.502
R4-1	RESISTOR MF	PHILIPS	2322 180 73152	02.476

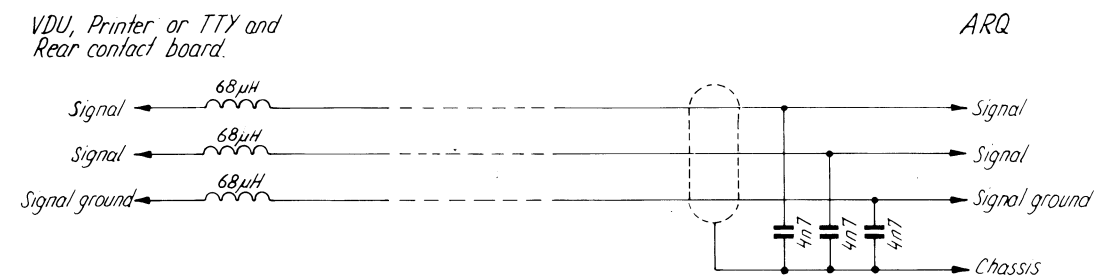
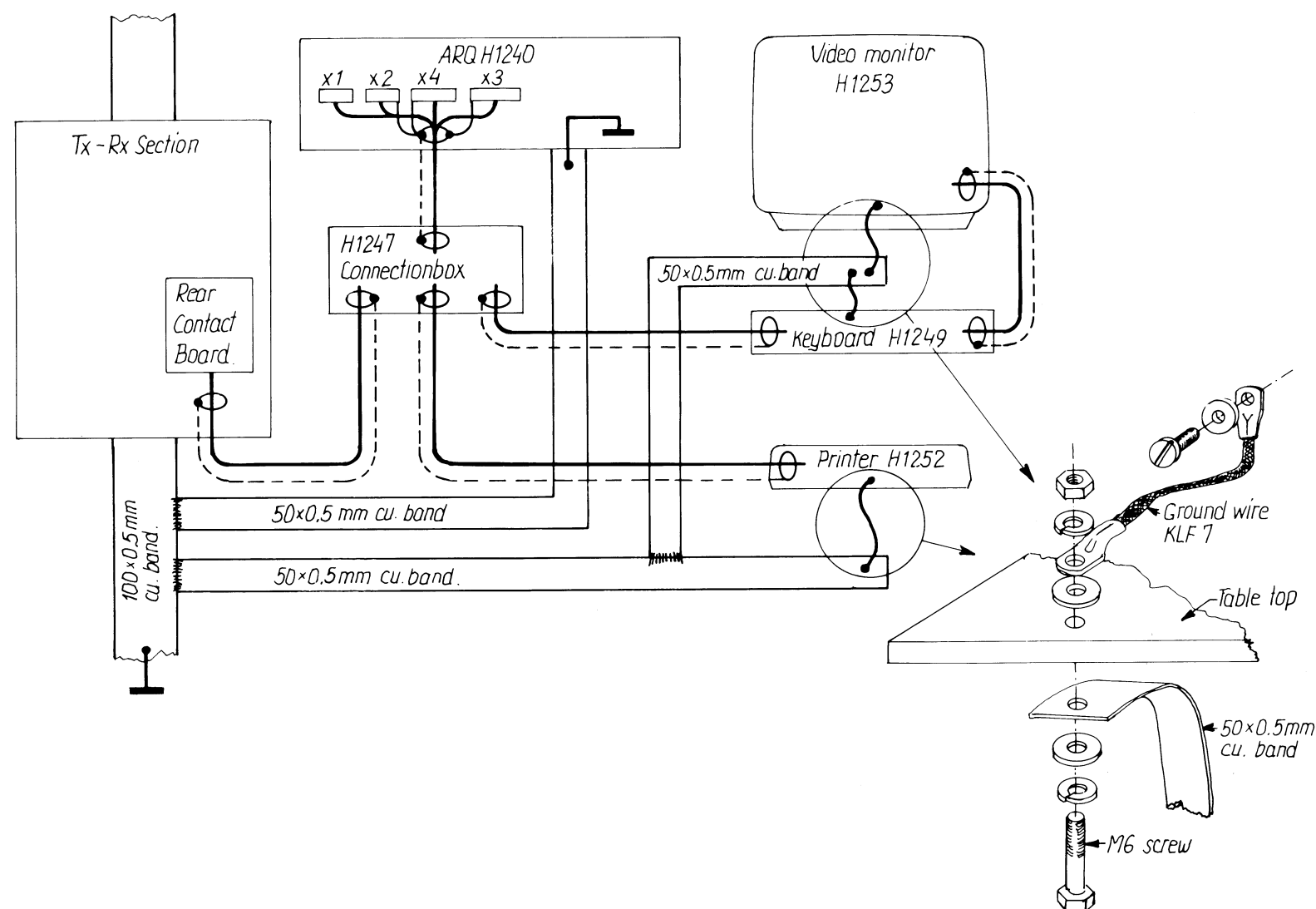
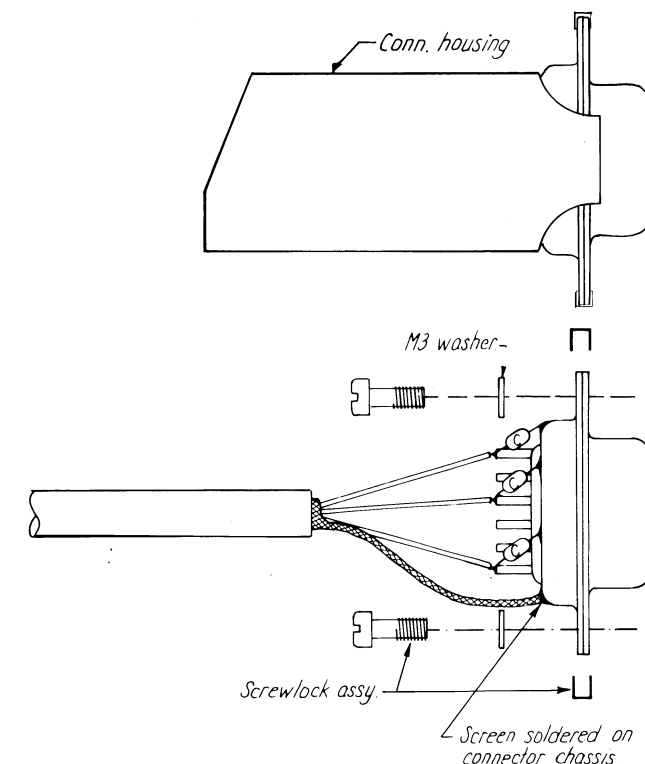
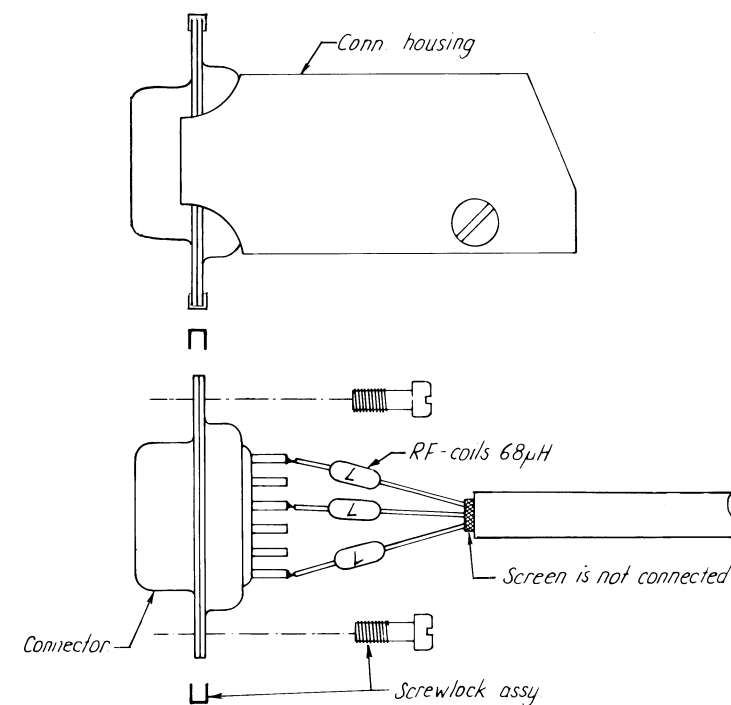
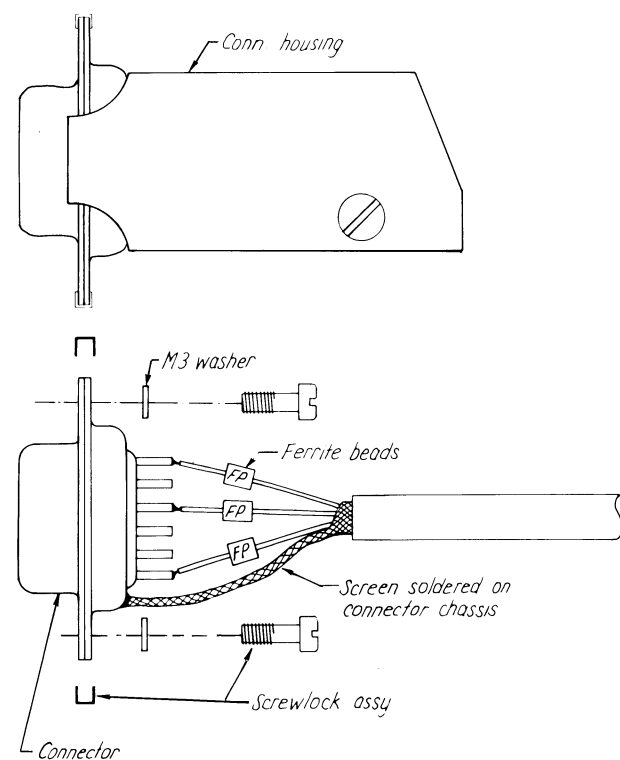
POSITION	DESCRIPTION	MANUFACTOR	TYPE	S.P. NUMBER
R5-1	RESISTOR MF	PHILIPS	2322 180 73682	02.492
R6-1	RESISTOR MF	PHILIPS	2322 180 73102	02.472
R7-1	RESISTOR MF	PHILIPS	2322 180 73123	02.498
R8-1	RESISTOR MF	PHILIPS	2322 180 73123	02.498
R9-1	RESISTOR MF	PHILIPS	2322 180 73123	02.498
R10-1	RESISTOR MF	PHILIPS	2322 180 73123	02.498
R11-1	RESISTOR MF	PHILIPS	2322 180 73123	02.498
R12-1	RESISTOR MF	PHILIPS	2322 180 73123	02.498
R13-1	RESISTOR MF	PHILIPS	2322 180 73123	02.498
R14-1	RESISTOR MF	PHILIPS	2322 180 73123	02.498
ST1-1	TERMINAL BLOCK	PTR	AK300/4b M:MESS.SKRUER	81.025
			BLA	
ST2-1	TERMINAL BLOCK	PTR	AK300/11b m.MESS.SKRUER	81.027
U1-1	VOLTAGE REGULATOR	MOTOROLA*	MC7812CT	31.260
U2-1	POS. VOLTAGE REG. FIXED	MOTOROLA	MC7805CT	31.250
U3-1	VOLTAGE REGULATOR	MOTOROLA	MC7912CT	31.268
U4-1	DUAL D-FF POS TRIG.	TEXAS	SN74HC74N	34.501
U5-1	PROGRAMMED uC U5-1	S.P.RADIO A/S	0-0-27845 / C1104 - 7EE4	727845
U6-1	HEX D-FLIP-FLOP w.CLEAR	TEXAS	SN74HC174N	34.504
U7-1	QUADRUPLE LINE DRIVER	TEXAS	SN75188N	34.304
U8-1	DARL.DRIVERS HI.CURR/VOLT	TEXAS	ULN2003A	31.077
U9-1	QUAD LINE RECEIVERS	TEXAS	SN75189AN	34.305
U10-1	QUAD 2-INPUT NAND GATE	TEXAS	SN74HC00N	34.515
X1-1	CRYSTAL	MEIDEN	MQX-3H2-10000-20	39.774





View from component side with upper side tracks





CABLE INTERCONNECTION AND GROUNDING EXAMPLE

CABLE INTERCONNECTION WITH BAD GROUNDING AND HEAVY RF INTERFERENCE EX. IN LAND BASED INSTALLATION