H1275/H1238

Sailor

Sailor

MOUNTING INSTRUCTION FOR SAILOR PROGRAMME 1000B/1250W AND INSTRUCTION BOOK FOR CONNECTION BOX H1275/H1246 AND INSTRUCTION BOOK FOR RACK H1237/H1238

A/S S. P. RADIO · AALBORG · DENMARK

PACKING LIST FOR SAILOR SHORT WAVE PROGRAMME 1000/B, 1250W

EQUIPMENT

☐ ☐ H1238 Rack

- ☐ Microtelephone
- ☐ Microtelephone hook
- ☐ Frequency table

☐ ☐ T1135 Transmitter

☐ ☐ S1303 Exciter for telephony, telegraphy and telex. Radio officer operated.

☐ ☐ S1304 Exciter for telephony, telegraphy and telex. Skipper operated.

☐ ☐ R1119 Receiver, Communication

☐ ☐ R1120 Receiver, Main

☐ ☐ AT1505 Aerial Coupler

- ☐ 1 pc. manual tuning indicator
- ☐ 1 pc. manual tuning key
- ☐ 1 pc. plug for AT1505

☐ H1275 Connection Box

☐ Strain reliefs and screws for H1275

MANUALS

☐ Operating instructions

☐ Mounting instructions 1000/B

H1238 A

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H1238

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FILTER SWITCH UNIT (MODULE 2/200)
LP FILTER 4 (MODULE 4/400)
LP FILTER 5 (MODULE 5/500)
LP FILTER 6 (MODULE 6/600)
LP FILTER 7 (MODULE 7/700)
LP FILTER 8 (MODULE 8/800)
LP FILTER CHASSIS (MODULE 10/1000)

7.3. ADJUSTMENT LOCATION, STRAPPING POSSIBILITIES AND COMPONENT LOCATION FOR MAIN SWITCH BOARD (MODULE 1/100)

7.4. INTERCONNECTION CABLE DIAGRAM FOR H1238 AND SCHEMATIC DIAGRAM MAIN SWITCH BOARD (MODULE 1/100) AND SCHEMATIC DIAGRAM AERIAL SWITCH UNIT (MODULE 9/900)

7.5. PARTS LIST FOR H1238

H123S GRON

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1. GENERAL DESCRIPTION SAILOR PROGRAMME 1000/B, 1250W

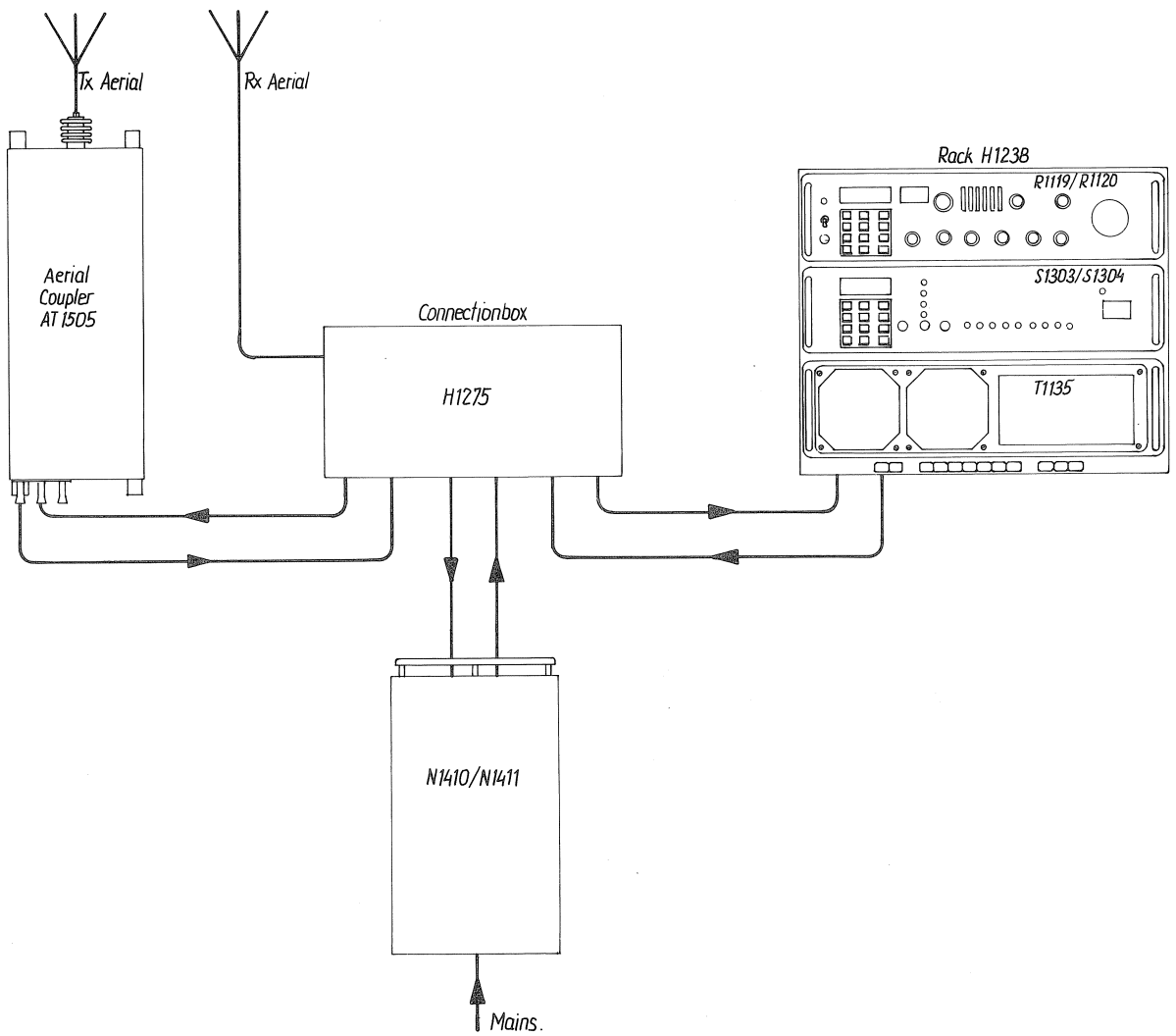
SAILOR Programme 1000/B, 1250W is a flexible short wave communication system. The system consists of the following main units:

three receivers	R1119, R1120, R1121
two exciters	S1303, S1304
one transmitter	T1135
two power supplies	N1410, N1411
one aerial coupler	AT1505
one radiotelex modem	H1240

For technical data, see the manual for the units in question.

The above units can be combined to fit any demand. The units are placed in SAILOR standard rack system.

The basic system consists of the four units shown below:



GENERAL

All connections to tuner are made via specially designed multiplug. Multi- and coaxial cable can be connected to this plug without soldering.

The plug is inserted in the bottum of the tuner.

To insert plug, free space under the tuner must be min. 250 mm.

The set is designed for shelf or tabletop mounting.

The set has a forced air cooling system. The cooling air is leaving the set on the rear side. Free space behind the set must be min. 40 mm.

If the set is installed in a fully enclosed box leaving only the front panel exposed, there must be holes of min. 200 cm^2 area to allow hot air to escape from the rear. If this is not possible, min. 40 mm free space must be left above the equipment.

All cables are leaving the set at the rear side near the bottum.

All cables and connections are connected through the bottum of the connection box.

H1238 CRON

CONTENTS

2. INSTALLATION ELECTRICAL

Connections between set and connection box are:

2 multicables with plugs
1 multicable without plug
2 coaxial cables
2 supply cables (42V PS to PA, 28V PS to PA)

All the above cables (standard length 1.3 metres) are supplied with the set.

Connections between connection box and aerial coupler:

1 multicable 16 x 0.5 m^2 up to 100 m, see note 2
1 triaxial coaxial cable H1213, see note 2

Connections between connection box and power supply:

2 supply cables +42V, see note 1
1 supply cable +28V, see note 1
1 multicable 18x0.5 mm^2, see note 1

Connections between power supply and mains:

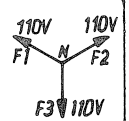
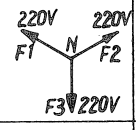
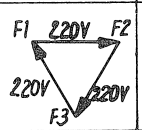
2, 3 or 4 supply cables, see note 1

External connections such as duplex antenna (if any), telex, remote control of transmitter, extra microtelephone, extra loudspeaker, mute, etc. are connected in connection box.

H1238 A

Note 1

Cable dimensions in mm^2

Distance	4 m	6 m	9 m	12m	17m	Mains fuse
Ground to PA	16	16	16			
28V PS to PA	2.5	2.5	2.5			
42V/38V PS to PA	16	16	16			
Power supply control cable	18x0.5	18x0.5	18x0.5			
24V mains cable	16	25	35	50	70	
110V 1 phase	2.5	4	4	4	(4)	25A
220V 1 phase	1.5	1.5	1.5	1.5	2.5	16A
240V 1 phase	1.5	1.5	1.5	1.5	2.5	16A
3x110V with neutral 	1.0	1.0	1.0	1.0	1.5	3x10A
3x220V with neutral 	1.0	1.0	1.0	1.0	1.0	3x10A
3x127V 	1.0	1.0	1.0	1.0	1.0	3x10A

Note 2

Tuner Control Cable:

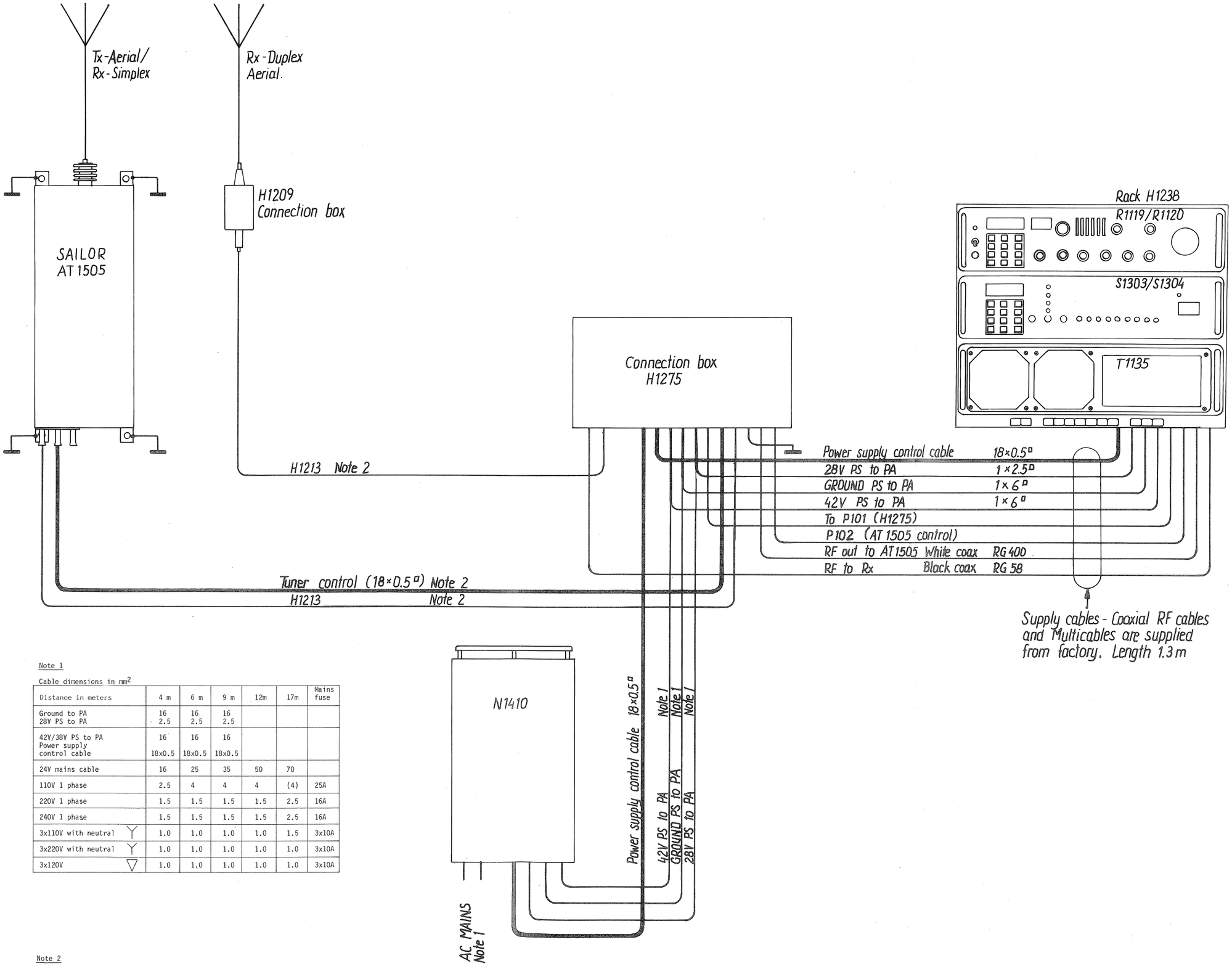
Multicable: Length	Max. diameter Ø14.5 mm Type
0 - 100 m	16 x 0.5
100 - 200 m	18 x 0.5 Leads connected to terminals 1 and 3 to be doubled.
200 - 400 m	2 pcs. 18 x 0.5 in parallel. Terminals 1 and 3 have 4 leads in parallel, other terminals have 2 leads.

H1213

This cable is a triaxial cable. You can also use a good quality 50 ohm coaxial cable e.g. RG213U. If you want to use the transmitter aerial as simplex receive aerial, use H1213 or RG213U in a metal tube. For further information, see chapter RECEIVER AERIAL.

H1213 outer diameter ø 14.5 mm
RG213U outer diameter ø 10.3 mm

H1238
Tg. 4-0-25212



Note 1

Cable dimensions in mm^2

Distance in meters	4 m	6 m	9 m	12m	17m	Mains fuse
Ground to PA 28V PS to PA	16 2.5	16 2.5	16 2.5			
42V/38V PS to PA Power supply control cable	16 18x0.5	16 18x0.5	16 18x0.5			
24V mains cable	16	25	35	50	70	
110V 1 phase	2.5	4	4	4	(4)	25A
220V 1 phase	1.5	1.5	1.5	1.5	2.5	16A
240V 1 phase	1.5	1.5	1.5	1.5	2.5	16A
3x110V with neutral Y	1.0	1.0	1.0	1.0	1.5	3x10A
3x220V with neutral Y	1.0	1.0	1.0	1.0	1.0	3x10A
3x120V ▽	1.0	1.0	1.0	1.0	1.0	3x10A

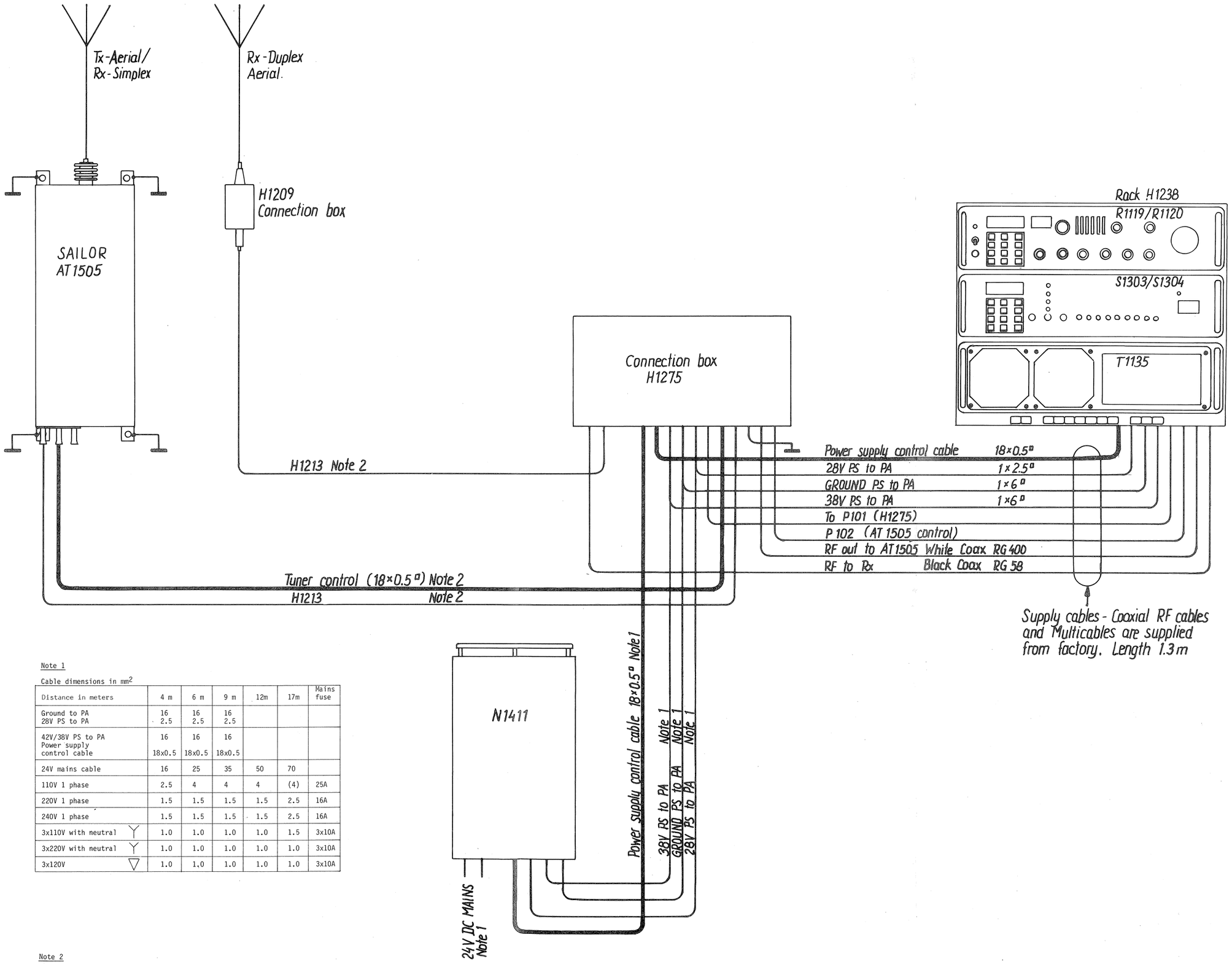
Note 2

Tuner Control Cable:

Multicable: Length	Max. diameter Φ14.5 mm Type
0 - 100 m	16 x 0.5
100 - 200 m	18 x 0.5 Leads connected to terminals 1 and 3 to be doubled.
200 - 400 m	2 pcs. 18 x 0.5 in parallel. Terminals 1 and 3 have 4 leads in parallel, other terminals have 2 leads.

2.1 MAIN CABLE PLAN WHEN SUPPLIED FROM AC

H1238
Tg. 4-0-25213



Note 1

Cable dimensions in mm^2

Distance in meters	4 m	6 m	9 m	12m	17m	Mains fuse
Ground to PA 28V PS to PA	16 2.5	16 2.5	16 2.5			
42V/38V PS to PA Power supply control cable	16 18x0.5	16 18x0.5	16 18x0.5			
24V mains cable	16	25	35	50	70	
110V 1 phase	2.5	4	4	4	(4)	25A
220V 1 phase	1.5	1.5	1.5	1.5	2.5	16A
240V 1 phase	1.5	1.5	1.5	1.5	2.5	16A
3x110V with neutral Y	1.0	1.0	1.0	1.0	1.5	3x10A
3x220V with neutral Y	1.0	1.0	1.0	1.0	1.0	3x10A
3x120V ▽	1.0	1.0	1.0	1.0	1.0	3x10A

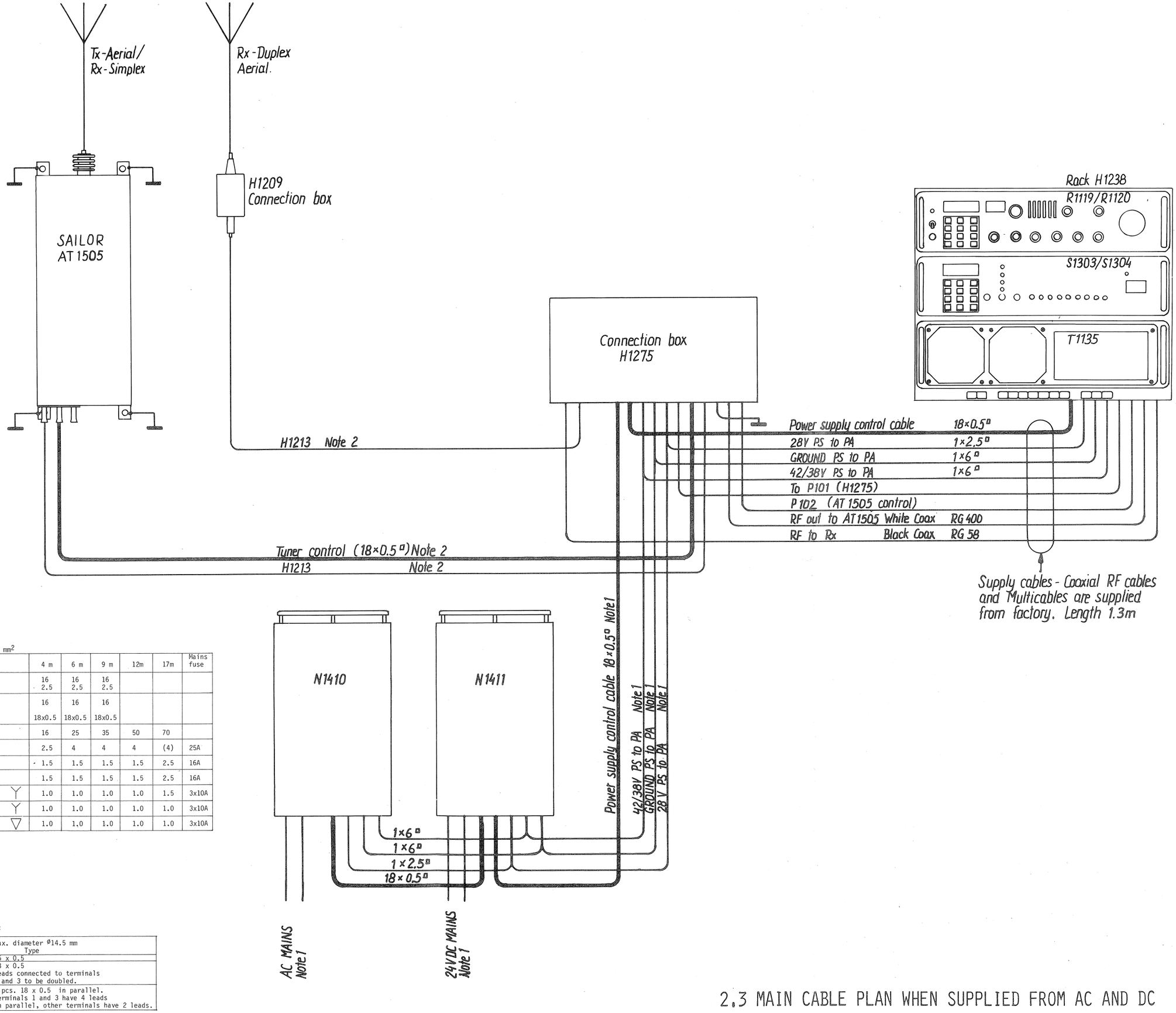
Note 2

Tuner Control Cable:

Multicable: Length	Max. diameter ⌀14.5 mm Type
0 - 100 m	16 x 0.5
100 - 200 m	18 x 0.5 Leads connected to terminals 1 and 3 to be doubled.
200 - 400 m	2 pcs. 18 x 0.5 in parallel. Terminals 1 and 3 have 4 leads in parallel, other terminals have 2 leads.

2.2 MAIN CABLE PLAN WHEN SUPPLIED FROM DC

H1238
Tg. 4-0-25214



Note 1

Cable dimensions in mm^2

Distance in meters	4 m	6 m	9 m	12m	17m	Mains fuse
Ground to PA 28V PS to PA	16 2.5	16 2.5	16 2.5			
42V/38V PS to PA Power supply control cable	16 18x0.5	16 18x0.5	16 18x0.5			
24V mains cable	16	25	35	50	70	
110V 1 phase	2.5	4	4	4	(4)	25A
220V 1 phase	1.5	1.5	1.5	1.5	2.5	16A
240V 1 phase	1.5	1.5	1.5	1.5	2.5	16A
3x110V with neutral Y	1.0	1.0	1.0	1.0	1.5	3x10A
3x220V with neutral Y	1.0	1.0	1.0	1.0	1.0	3x10A
3x120V ▽	1.0	1.0	1.0	1.0	1.0	3x10A

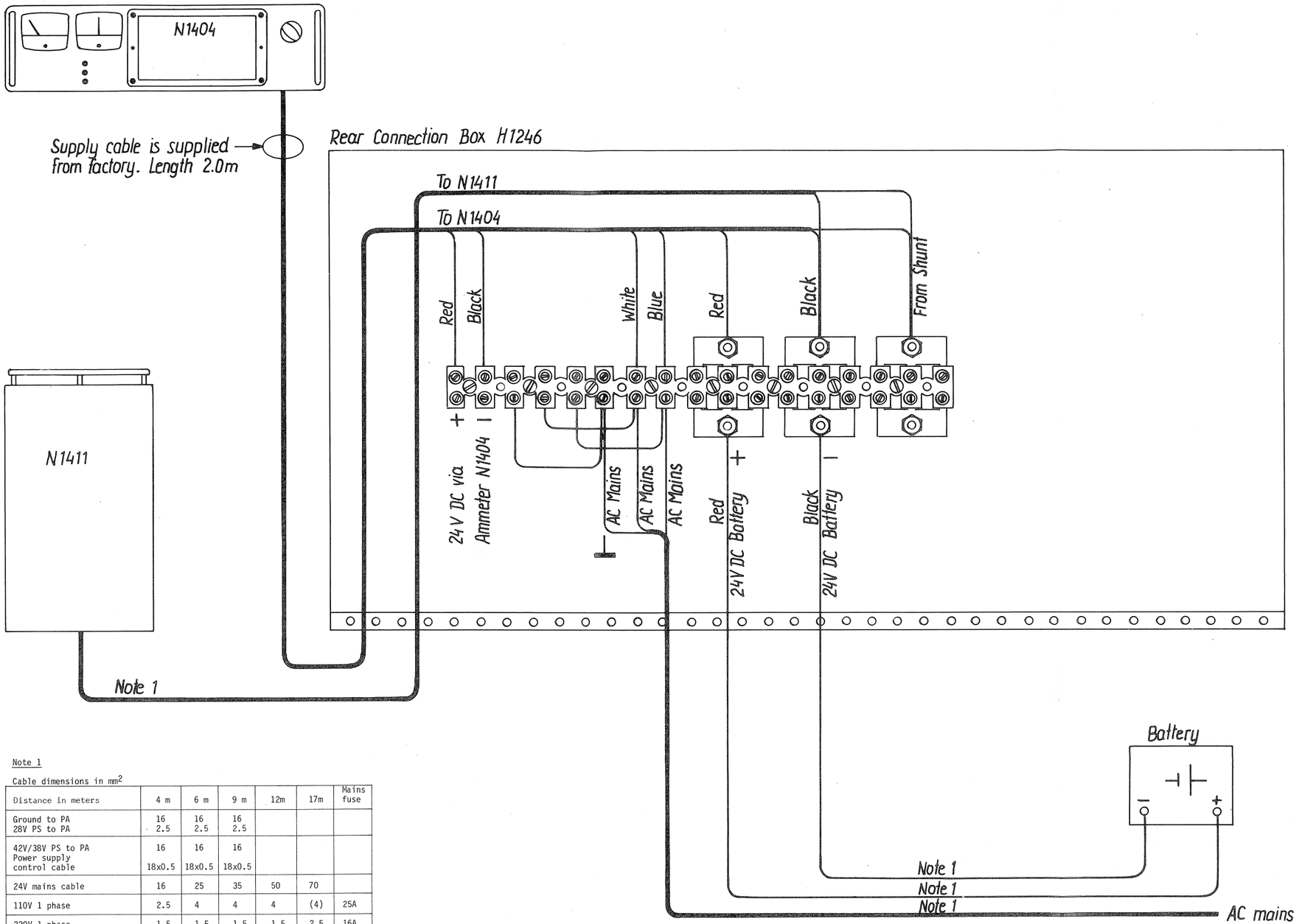
Note 2

Tuner Control Cable:

Multicable: Length	Max. diameter Ø14.5 mm Type
0 - 100 m	16 x 0.5
100 - 200 m	18 x 0.5 Leads connected to terminals 1 and 3 to be doubled.
200 - 400 m	2 pcs. 18 x 0.5 in parallel. Terminals 1 and 3 have 4 leads in parallel, other terminals have 2 leads.

2.3 MAIN CABLE PLAN WHEN SUPPLIED FROM AC AND DC

H1238
Tg. 4-0-25223



Note 1

Cable dimensions in mm^2

Distance in meters	4 m	6 m	9 m	12m	17m	Mains fuse
Ground to PA 28V PS to PA	16 2.5	16 2.5	16 2.5			
42V/38V PS to PA Power supply control cable	16 18x0.5	16 18x0.5	16 18x0.5			
24V mains cable	16	25	35	50	70	
110V 1 phase	2.5	4	4	4	(4)	25A
220V 1 phase	1.5	1.5	1.5	1.5	2.5	16A
240V 1 phase	1.5	1.5	1.5	1.5	2.5	16A
3x110V with neutral Y	1.0	1.0	1.0	1.0	1.5	3x10A
3x220V with neutral Y	1.0	1.0	1.0	1.0	1.0	3x10A
3x120V ▽	1.0	1.0	1.0	1.0	1.0	3x10A

2.4 CABLE PLAN BATTERY CHARGER N1404

2.5. CABLE SPECIFICATIONS FOR CUSTOMER SUPPLIED CABLES

Following cables have to be supplied by the customer:

Cables between connection box and aerial coupler:

1 multicable 16 x 0.5 m^2 up to 100 m, see note 2
1 triaxial coaxial cable H1213, see note 2

Cables between connection box and power supply:

2 supply cables +42V, see note 1
1 supply cable +28V, see note 1
1 multicable 18x0.5 mm^2, see note 1

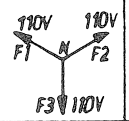
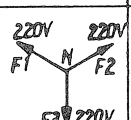
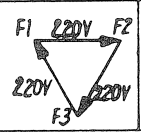
Cables between power supply and mains:

2, 3 or 4 supply cables, see note 1

Cables for external connections such as duplex antenna, telex, remote control of transmitter, extra loudspeaker, mute, etc.

Note 1

Cable dimensions in mm^2

Distance	4 m	6 m	9 m	12m	17m	Mains fuse
Ground to PA	16	16	16			
28V PS to PA	2.5	2.5	2.5			
42V/38V PS to PA	16	16	16			
Power supply control cable	18x0.5	18x0.5	18x0.5			
24V mains cable	16	25	35	50	70	
110V 1 phase	2.5	4	4	4	(4)	25A
220V 1 phase	1.5	1.5	1.5	1.5	2.5	16A
240V 1 phase	1.5	1.5	1.5	1.5	2.5	16A
3x110V with neutral 	1.0	1.0	1.0	1.0	1.5	3x10A
3x220V with neutral 	1.0	1.0	1.0	1.0	1.0	3x10A
3x127V 	1.0	1.0	1.0	1.0	1.0	3x10A

H1238 A

Note 2

Tuner Control Cable:

Multicable: Length	Max. diameter Ø14.5 mm Type
0 - 100 m	16 x 0.5
100 - 200 m	18 x 0.5 Leads connected to terminals 1 and 3 to be doubled.
200 - 400 m	2 pcs. 18 x 0.5 in parallel. Terminals 1 and 3 have 4 leads in parallel, other terminals have 2 leads.

H1213

This cable is a triaxial cable. You can also use a good quality 50 ohm coaxial cable e.g. RG213U. If you want to use the transmitter aerial as simplex receive aerial, use H1213 or RG213U in a metal tube. For further information, see chapter RECEIVER AERIAL.

H1213 outer diameter ø 14.5 mm
RG213U outer diameter ø 10.3 mm

H1238
Tg. 4-6-25064 A
Tg. 9-0-25064 C

CONNECTION BOARD H1275

WHITE AMP JACK A (P101)

CLOCK FROM TELEX
TT FROM TELEX
Tx BLOCK
HT ON
DATA FROM TELEX
MUTE OUT
Tx READY
TUNE READY
MUTE R1121
MUTE IN
SLOW MUTE
+ 22V int. ext. Vcc
R1119/20 in rack H1235/38
R1121 in rack H1235/38

ST102
15 Ext. Vcc
14 AF from Telex
13 AF from Telex
12 TT from Telex
11 TT from Telex
10 Clock from Telex
9 Clock from Telex
8 Data from Telex
7 Data from Te ex
6 Tune Ready
5 Tune Ready
4 HT. On
3 HT. On
2 Tx Ready
1 Tx Ready

ST103
18 Slow Mute
17 Slow Mute
16 Mute
15 Mute
14 AF to Telex
13 AF to Telex
12 DF.
11 DF.
10 Aux.
9 Mute R1121 Simplex Relay N1405
8 LS.
7 LS.
6 Handset Key
5 Earphone
4 Ground
3 Mike
2 ⊥ Mike & Telex
1 22V To Phone Patch

ST101
6 Mute
5 Mute
4 22V To Key
3 Key
2 Tx Block
1 Tx Block

To Transmitter

To Power Supply
18 Battery
17 PU1 Start
16 Blower 1
15 Blower 1
14 Blower 2
13 Blower 2
12 Transmitter Start
11 Supply Block
10 +22V To AT1505
9 Supply Reduction
8 +22V
7 +22V
6 -45V
5 +8V
4 +8V
3 -3 dB
2 AC/DC
1 Ground

ST105 ST106

AC SUPPLY for N1409
+28V
Joining Point for T1135 and N1410/11 or Battery Supply for T1130
+ 42.V
DC
Ground

To Aerial Coupler
Control 1
Control 2
Control 3
Control 4
Control 5
Control 6
Control 7
Control 8
Control 9
Control 10
Control 11
Motor/Aerial Current 12
Invalid Tuning/180°13
Motor/Aerial current 14
Aerial current 15
Aerial Relay 16
ST104

BLUE AMP JACK B (P102)

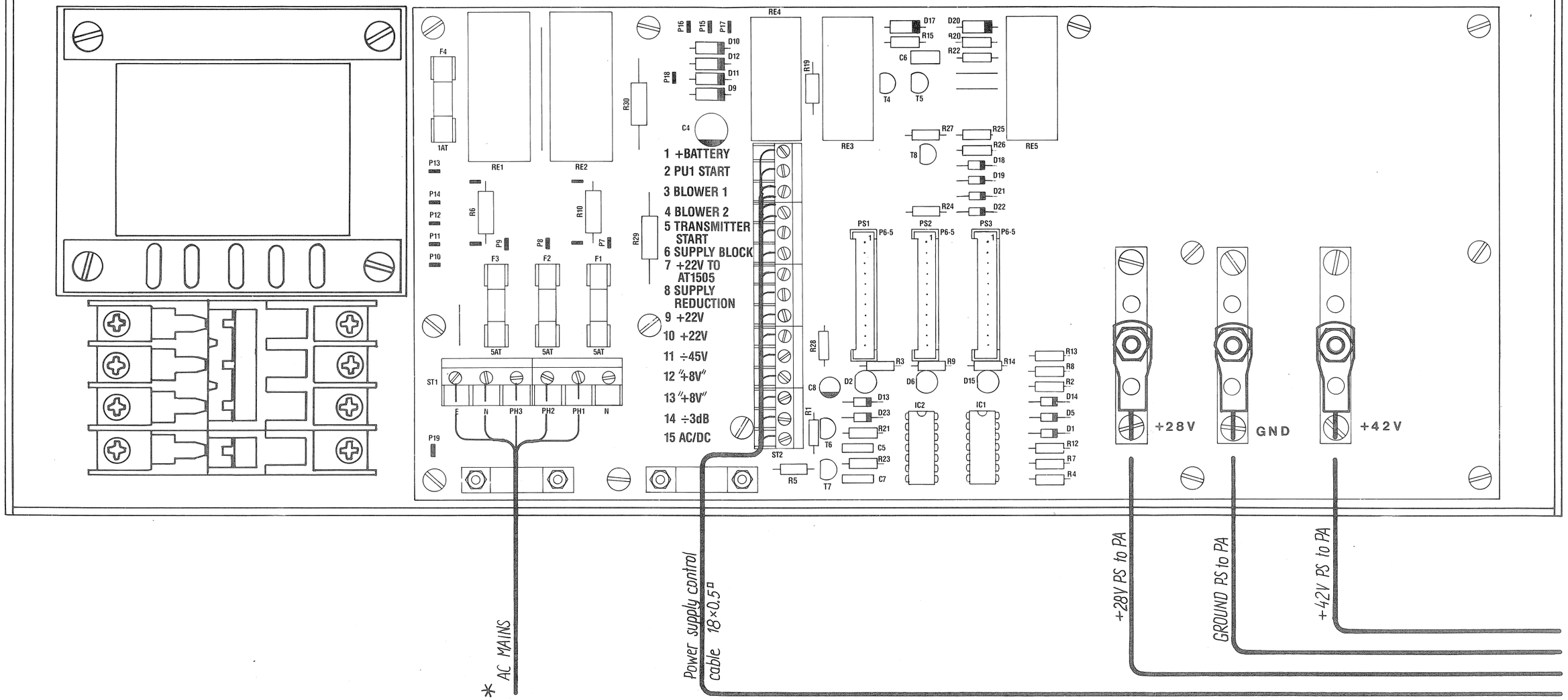
Coax to Aerial Coupler
White coax from Tx

From Receiver
(Black coax) (To Rx Aerial)
Rx Aerial

RF to Rx
Black coax RG58
Rx aerial
H1213
Power control cable
Power control cable
+42V PS to PA
+42V PS to PA
GROUND PS to PA
GROUND PS to PA
28V PS to PA
28V PS to PA
To P101 H1275
Tuner control 18×0.5
RF to AT1505 H1213
RF out to AT1505 White coax RG400
To P102 AT1505 Control

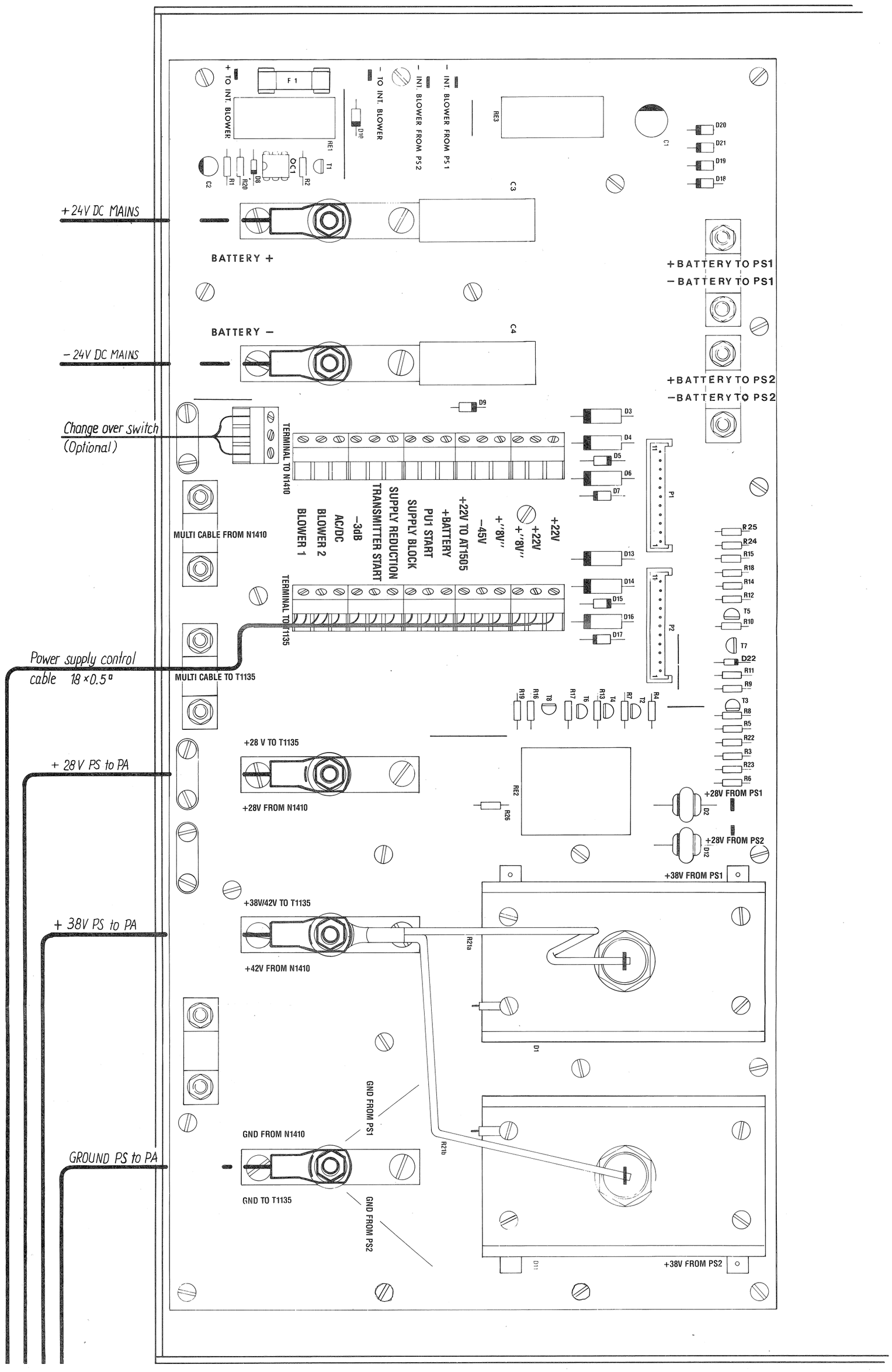
2.6 CONNECTIONS TO H1275 CONNECTION BOX

H1238
Tg. 4-6-24992 B
Tg. 9-0-24992

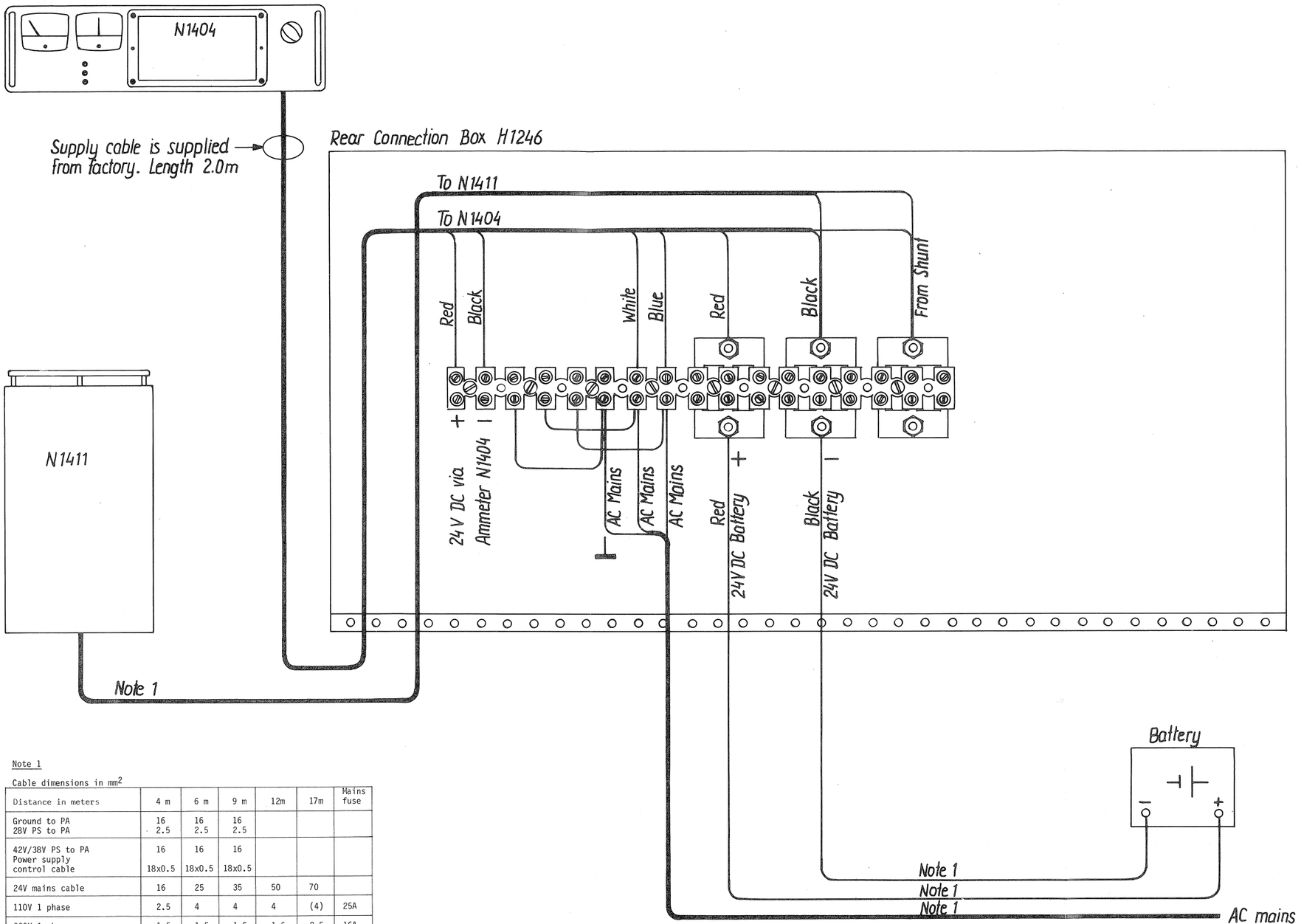


* For information about electrical connections, see section 2. Installation in N1410 instruction book.

Note: In Blower 1, 2 wires in parallel.
In Blower 2, 2 wires in parallel.



Note: In Blower 1, 2 wires in parallel.
In Blower 2, 2 wires in parallel.



Note 1

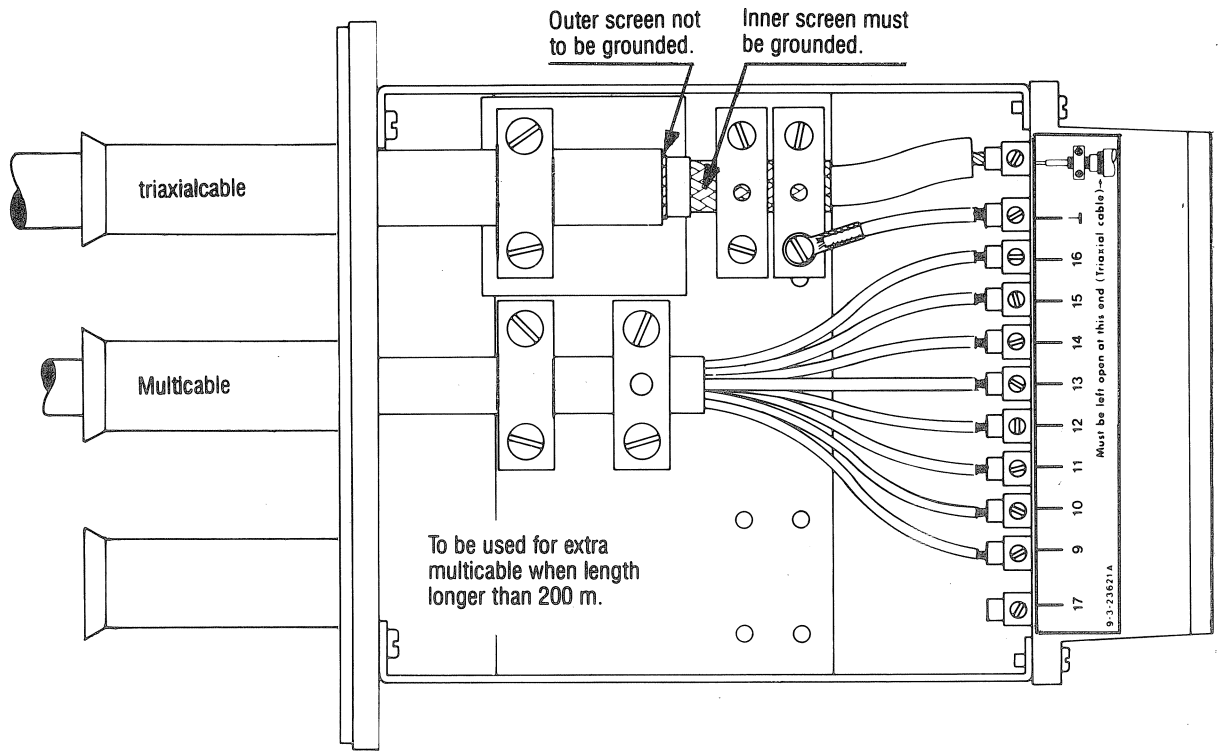
Cable dimensions in mm^2

Distance in meters	4 m	6 m	9 m	12m	17m	Mains fuse
Ground to PA 28V PS to PA	16 2.5	16 2.5	16 2.5			
42V/38V PS to PA Power supply control cable	16 18x0.5	16 18x0.5	16 18x0.5			
24V mains cable	16	25	35	50	70	
110V 1 phase	2.5	4	4	4	(4)	25A
220V 1 phase	1.5	1.5	1.5	1.5	2.5	16A
240V 1 phase	1.5	1.5	1.5	1.5	2.5	16A
3x110V with neutral Y	1.0	1.0	1.0	1.0	1.5	3x10A
3x220V with neutral Y	1.0	1.0	1.0	1.0	1.0	3x10A
3x120V ▽	1.0	1.0	1.0	1.0	1.0	3x10A

2.9 CONNECTIONS TO BATTERY CHARGER N1404

2.10 CONNECTIONS TO AT1505

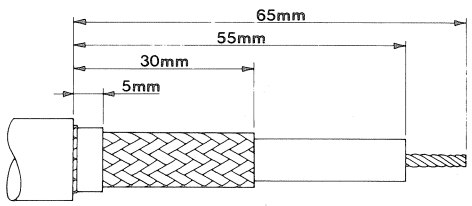
CABLE MOUNTING DETAILS IN PLUG FOR AT1500



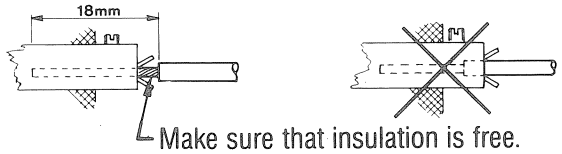
Multicable: lead 9 - 16 incl. to be connected on this side.
Lead 1 - 8 incl. to be connected on rear side.
The numbers in plug for AT1500 correspond with the number on the supply terminal block in rear connection box H1233 (control 1, control 2, etc.).

H1238

WIRE STRIPPING FOR TRIAXIALCABLE H1213



WIRE STRIPPING FOR MULTICABLE



Multicable:	Max. diameter ø14.5 mm.
Length	Type
0 - 100 m	16×0.5°.
100 - 200 m	18×0.5°
	Leads connected to terminals 1 and 3 to be doubled.
200 - 400 m	2 pcs. 18×0.5° in parallel. Terminals 1 and 3 have 4 leads in parallel, other terminals have 2.

2.11. BATTERY REQUIREMENTS

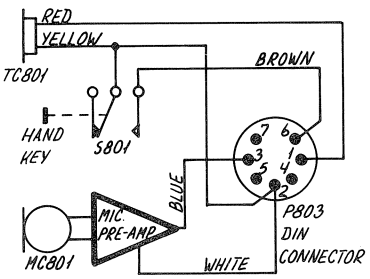
The battery capacity is calculated as shown below:

short wave:	3 hours max. consumption of 70 A	210.0AH
short wave:	3 hours stand-by of 4.5A	13.5AH
	6 hours emergency light	4.0AH
VHF:	3 hours max. consumption of 7A	21.0AH
VHF:	3 hours stand-by of 1A	3.0AH
		251.5AH
	+20% for faster discharge	50.3AH
	Total	301.8AH

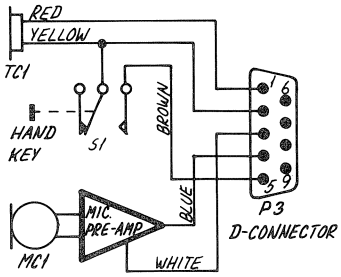
The nearest bigger battery type is chosen.

2.12 MICROTELEPHONE INSTALLATION.

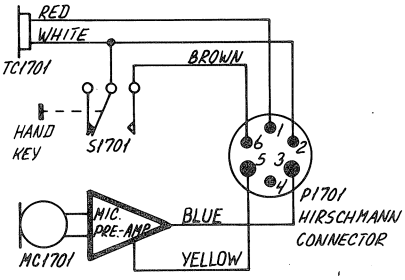
VHF RT2047 and T2031

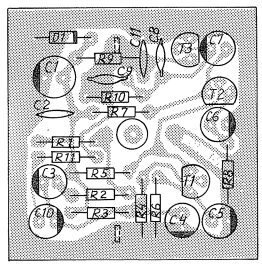


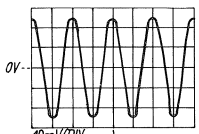
SCRAMBLER CRY2001

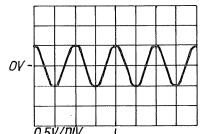


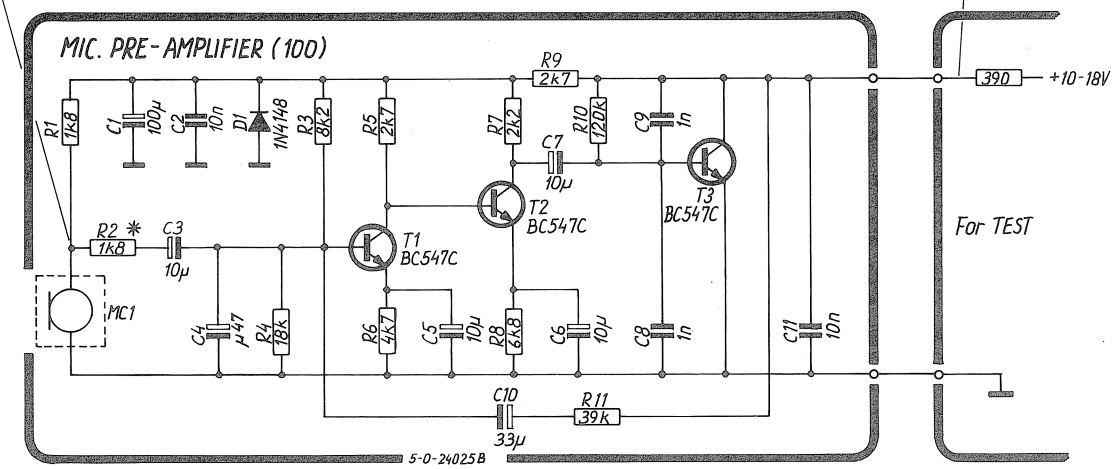
SHORTWAVE S130X











* In orange marked microtelephone cartridge R2 is changed from 1k8 to 5k6 ohm.

(C)

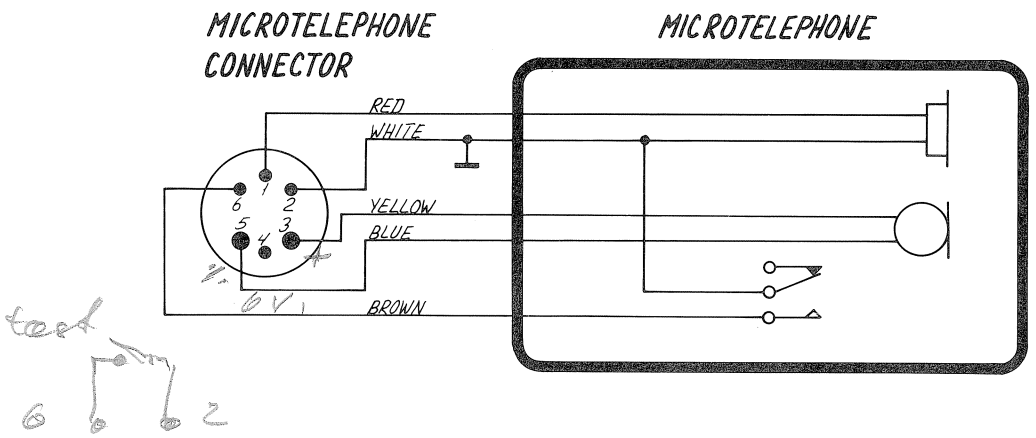
H1235/38 4-6-24025B
4-0-24025C 4-0-24293B

POSITION	DESCRIPTION		MANUFACTOR	TYPE	S.P.NUMB
	MICROTELEPHONE	WITH ELECTRET MIC. AMP.	ESPERA	PRINT NR.5-0-24025B	600875
C1	CAPACITOR ELECTROLYTIC	100uF 20% 10V	*ERO	EKI 00 BB 310 C	14.607
C2	CAPACITOR CERAMIC	10nF -20/+80% 50V	#KCK	HE70SJYF103Z	15.170
C3	CAPACITOR ELECTROLYTIC	10uF 20% 35V	* ERO	EKI 00 AA 210 F	14.512
C4	CAPACITOR ELECTROLYTIC	0.47uF 20% 50V	ERO	EKI 00 AA 047 H	14.504
C5	CAPACITOR ELECTROLYTIC	10uF 20% 35V	* ERO	EKI 00 AA 210 F	14.512
C6	CAPACITOR ELECTROLYTIC	10uF 20% 35V	* ERO	EKI 00 AA 210 F	14.512
C7	CAPACITOR ELECTROLYTIC	10uF 20% 35V	* ERO	EKI 00 AA 210 F	14.512
C8	CAPACITOR CERAMIC	1nF 10% 100V	*PHILIPS	2222 630 03102	16.149
C9	CAPACITOR CERAMIC	1nF 10% 100V	*PHILIPS	2222 630 03102	16.149
C10	CAPACITOR ELECTROLYTIC	33uF 20% 16V	* ERO	EKI 00 AA 233 D	14.518
C11	CAPACITOR CERAMIC	10nF -20/+80% 50V	#KCK	HE70SJYF103Z	15.170
D1	DIODE	1N4148	* ITT	1N4148	25.131
MC1	MICROPHONE ELECTRET	WM-034BY	MATSUSHITA	WM-034BY	46.012
R1	RESISTOR	1.8 KOHM 5% 0.33W	BEYSCHLAG	MBA 0204-00-BX-5%	01.707
R2	RESISTOR	1.8 KOHM 5% 0.33W	BEYSCHLAG	MBA 0204-00-BX-5%	01.707
R3	RESISTOR	8.2 KOHM 5% 0.33W	BEYSCHLAG	MBA 0204-00-BX-5%	01.723
R4	RESISTOR	18 KOHM 5% 0.33W	BEYSCHLAG	MBA 0204-00-BX-5%	01.732
R5	RESISTOR	2.7 KOHM 5% 0.33W	BEYSCHLAG	MBA 0204-00-BX-5%	01.711
R6	RESISTOR	4.7 KOHM 5% 0.33W	BEYSCHLAG	MBA 0204-00-BX-5%	01.717
R7	RESISTOR	2.2 kOHM 5% 0.33W	BEYSCHLAG	MBA 0204-00-BX-5%	01.709
R8	RESISTOR	6.8 kOHM 5% 0.33W	BEYSCHLAG	MBA 0204-00-BX-5%	01.721
R9	RESISTOR	2.7 KOHM 5% 0.33W	BEYSCHLAG	MBA 0204-00-BX-5%	01.711
R10	RESISTOR	120 kOHM 5% 0.33W	BEYSCHLAG	MBA 0204-00-BX-5%	01.753
R11	RESISTOR	39 KOHM 5% 0.33W	BEYSCHLAG	MBA 0204-00-BX-5%	01.740
S1	MICROSWITCH	E62-10H PDT	CHERRY	E62-10H PDT	44.025
T1	TRANSISTOR	BC547C	SGS	BC547C	28.068
T2	TRANSISTOR	BC547C	SGS	BC547C	28.068
T3	TRANSISTOR	BC547C	SGS	BC547C	28.068
TC1	TELEPHONE CARTRIDGE	200 OHM	S.E.K. (KIRK)	0113.2518 (0113.2510)	46.010

MICROTELEPHONE INSTALLATION 1000/B

It is possible on request to get a special two microphone installation as described on the schematic diagram below.

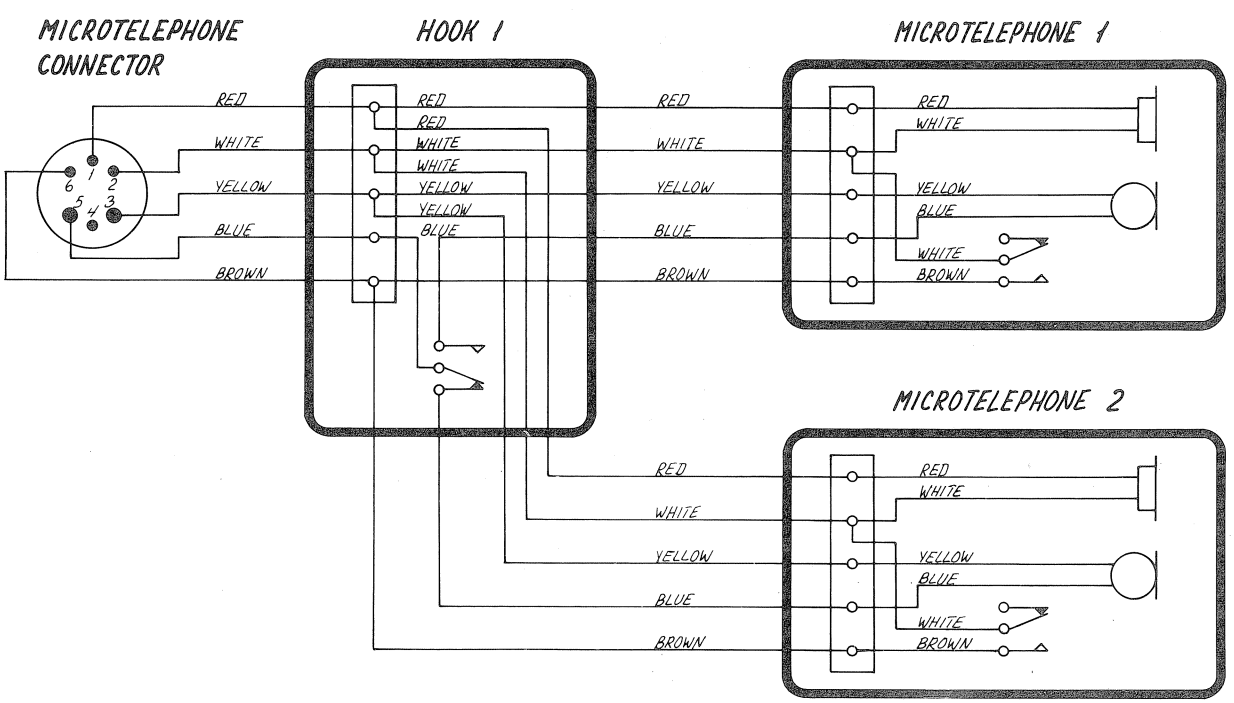
NORMAL INSTALLATION WITH ONE MICROTELEPHONE



H1235

SPECIAL INSTALLATION WITH TWO MICROTELEPHONES

Microtelephone one with preference.



CONTENTS

183 mm

150 mm

Free space for microtelephone
(When mounted left side.)

50 mm

400 m

ø10

Right side view

40 mm

Free. space for air

Front v

)0 mm

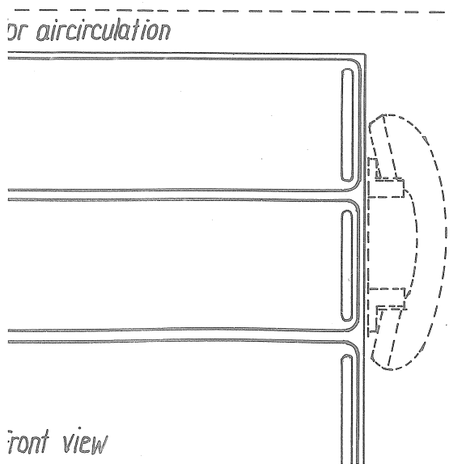
50 mm

150 mm

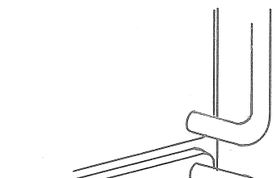
Free space for microtelephone
(When mounted right side)

ø10

or aircirculation



front view



H1238 4-0-25226

290mm

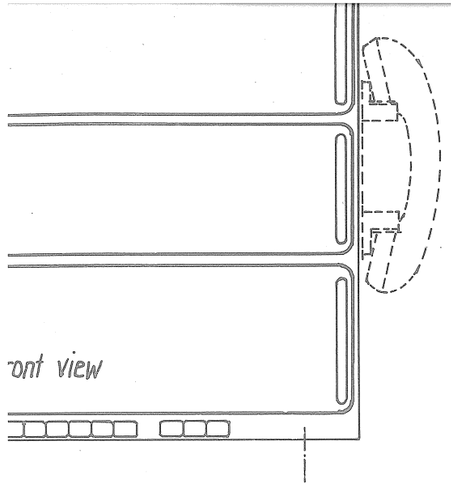
Right side view

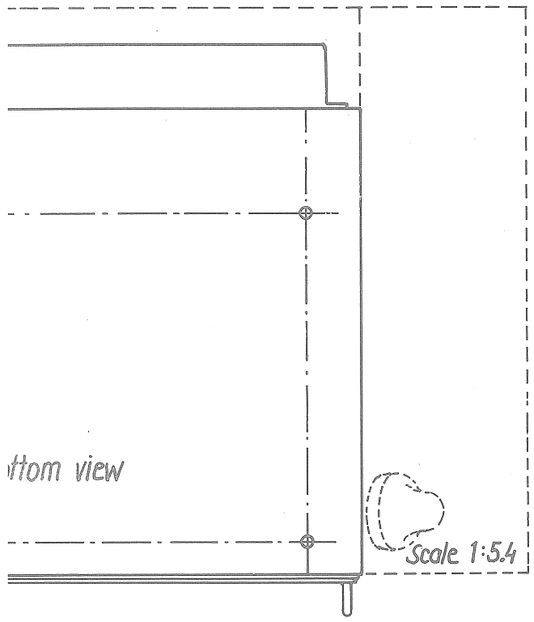
Fron

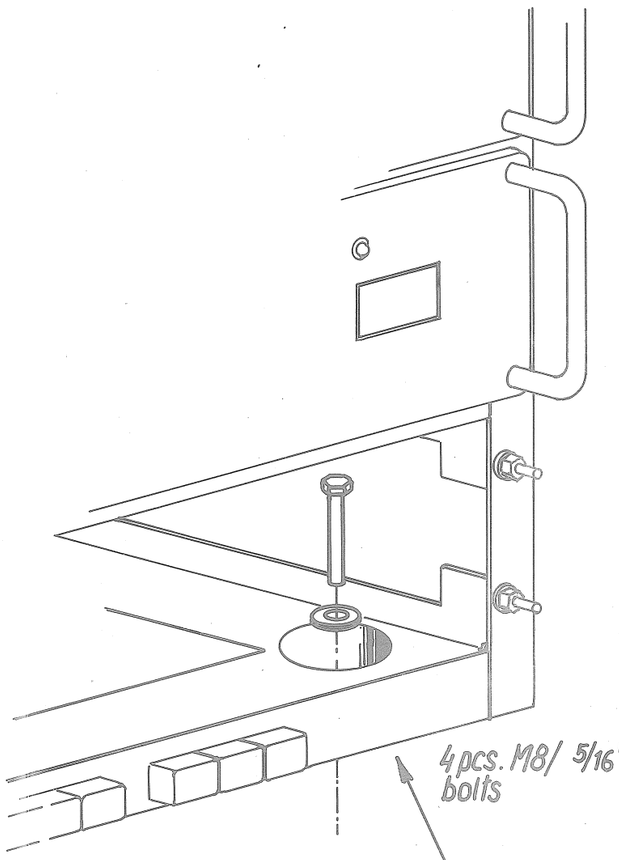
Top/botto

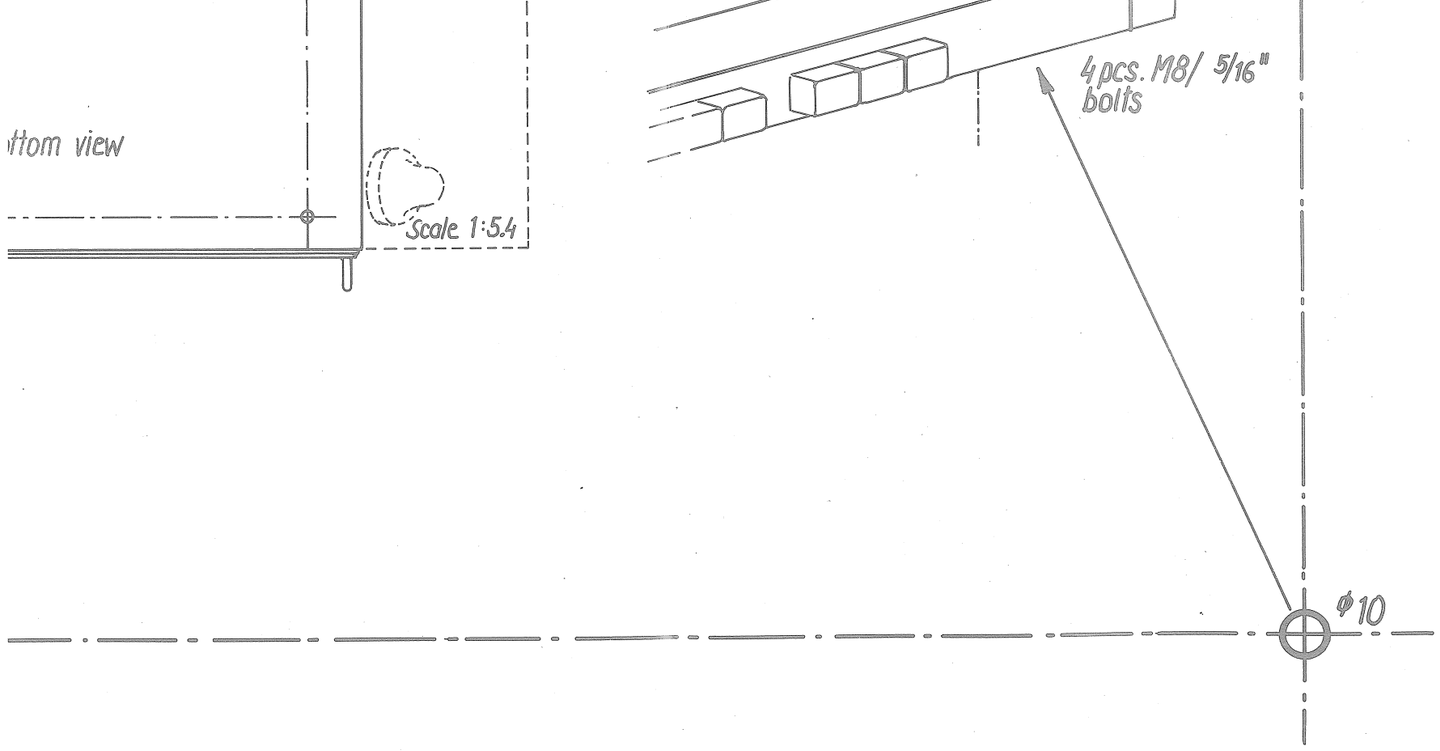
30mm

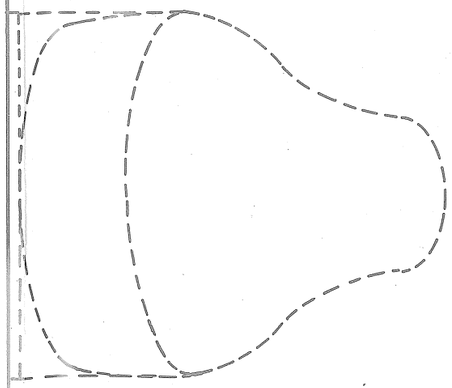
ϕ10





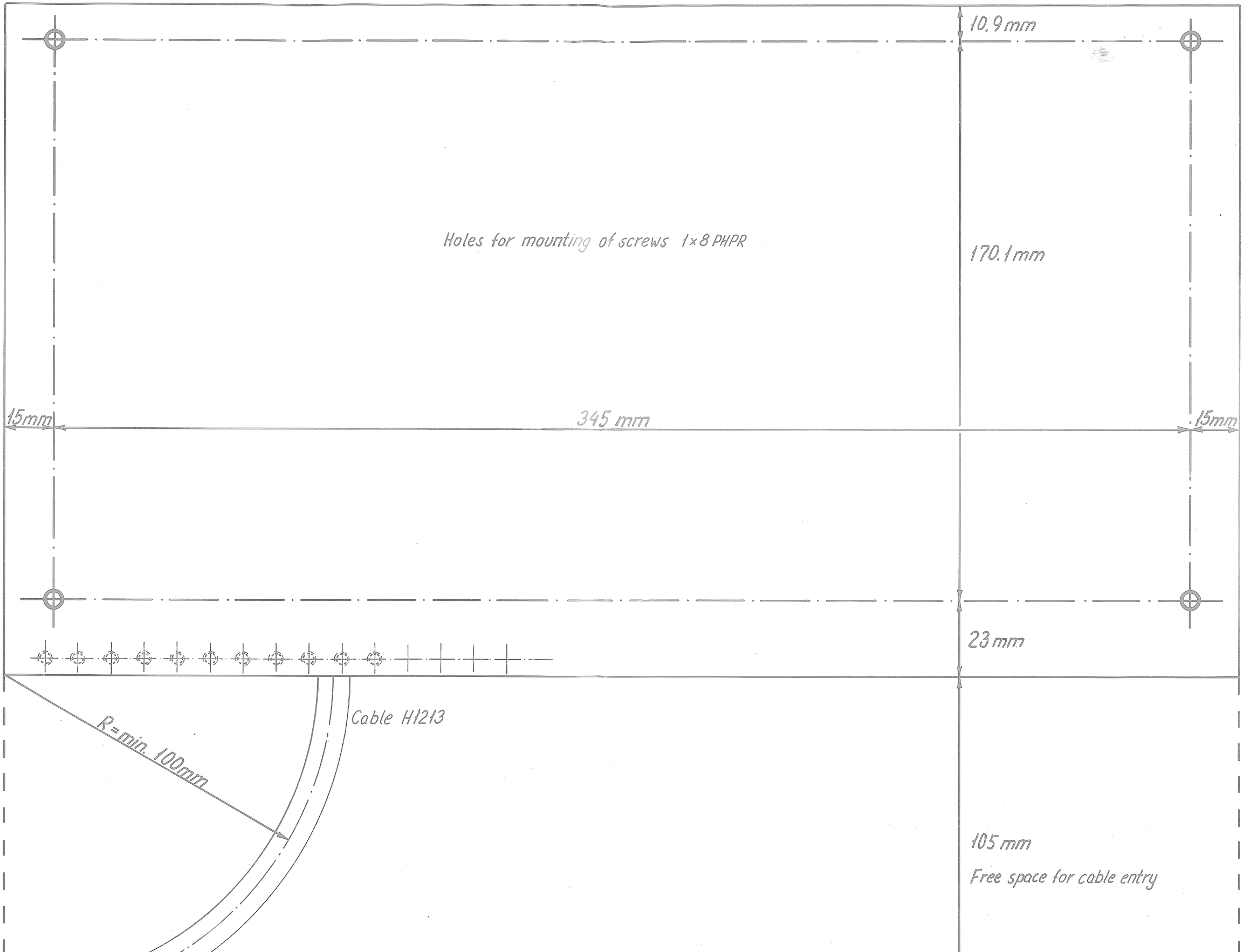






Scale 1:1

3.2 DRILLING PLAN AND DIMENSIONS FOR H1238



H1238 4-0-25229B

H1238 4-0-25229B

Holes for mounting of screws 1×8 PHPR

170.1 mm

15mm

345 mm

15mm

23 mm

Cable H1213

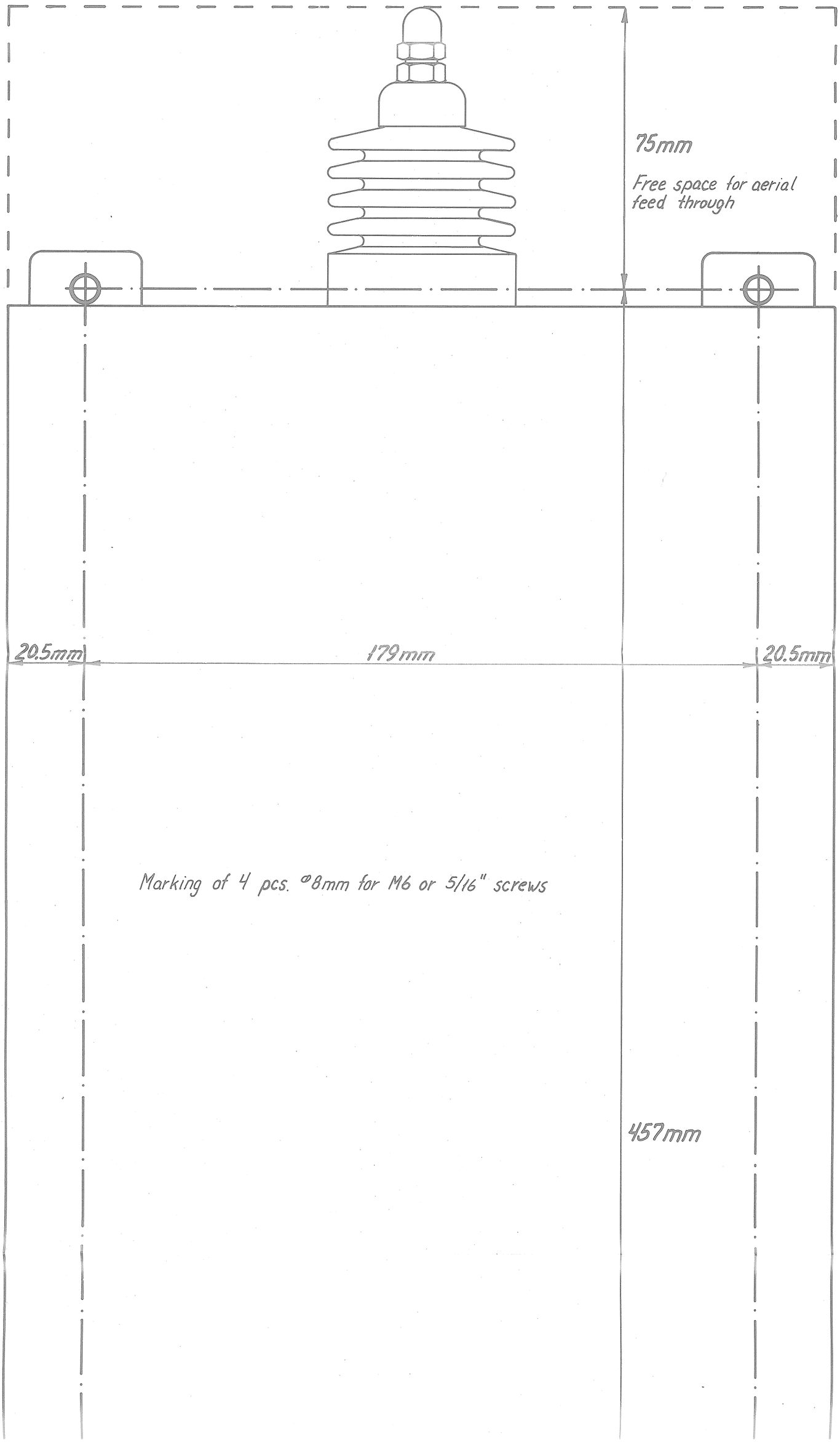
R = min. 100mm

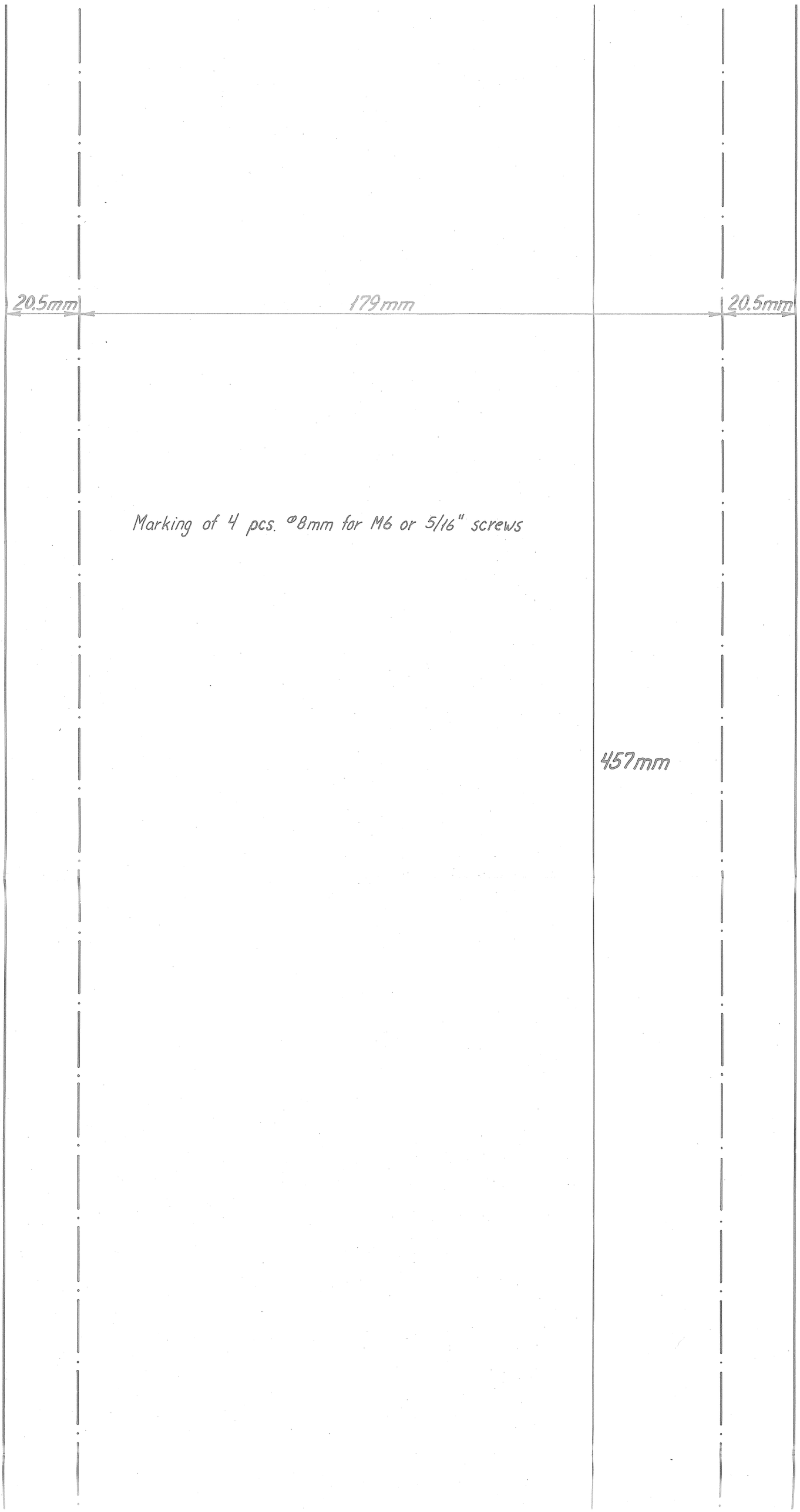
105 mm

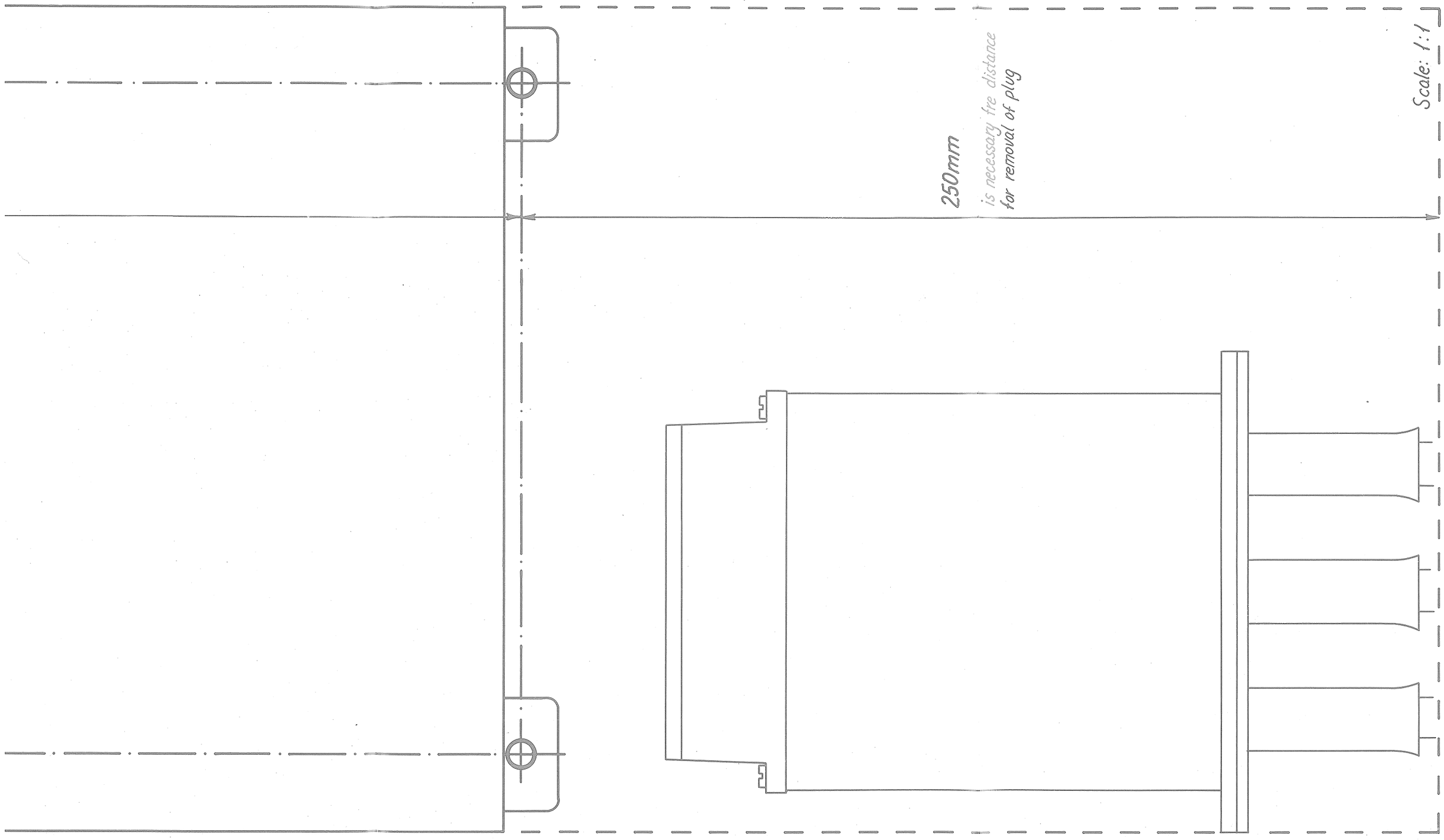
Free space for cable entry

SCALE 1:1

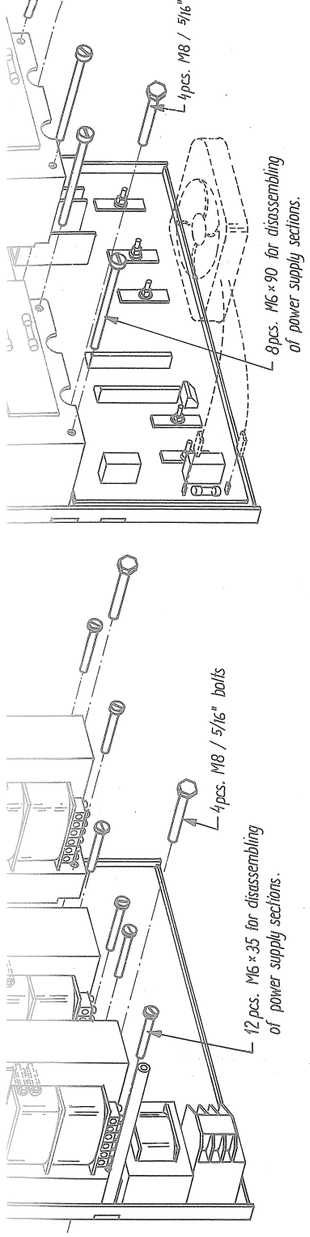
3.3. DRILLING PLAN AND DIMENSIONS FOR H1275


75mm
Free space for aerial feed through
20.5mm
179mm
20.5mm
Marking of 4 pcs. ⌀8mm for M6 or 5/16" screws
457mm


20.5mm
179mm
20.5mm
Marking of 4 pcs. ⌀8mm for M6 or 5/16" screws
457mm



3.4 DRILLING PLAN AND DIMENSIONS FOR AT1505



Only N1411

Only N1410

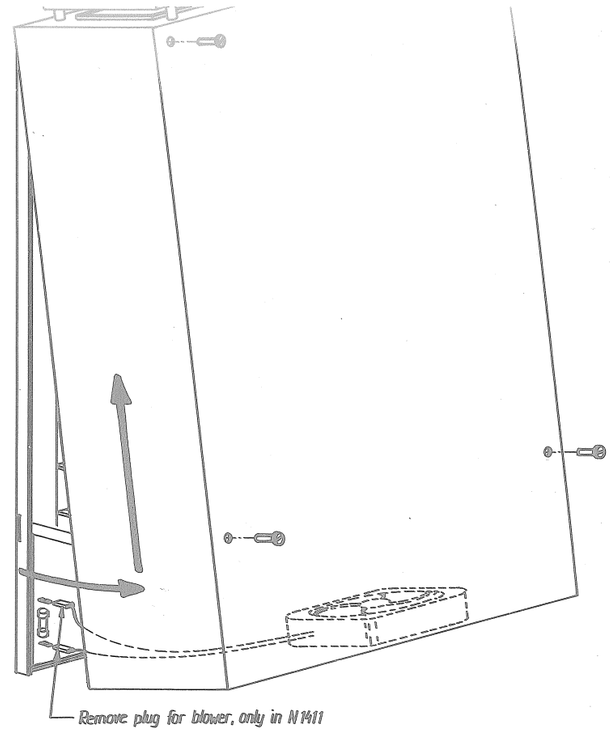
240 mm

ϕ10

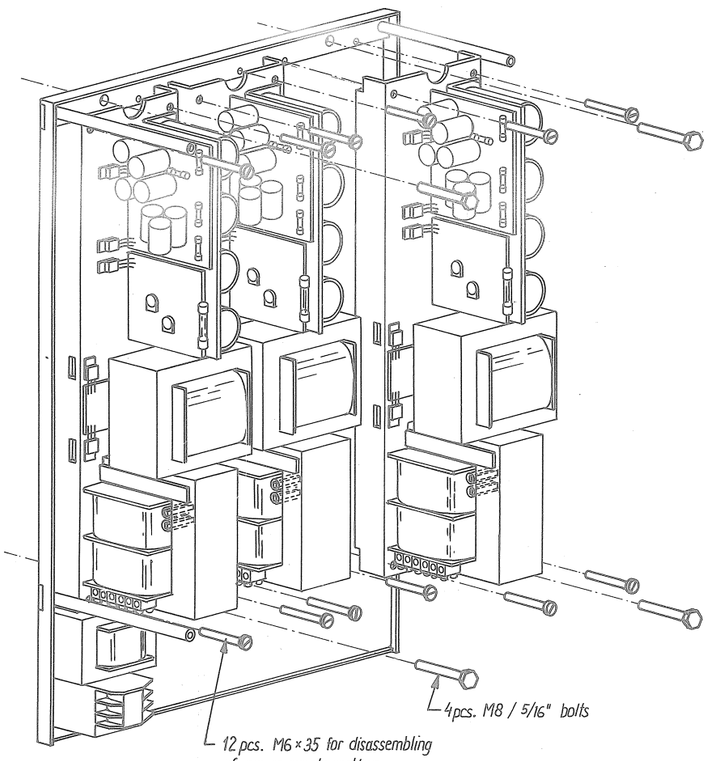
ϕ10

73mm

3.5 DRILLING PLAN AND DIMENSIONS FOR N1410 & N1411

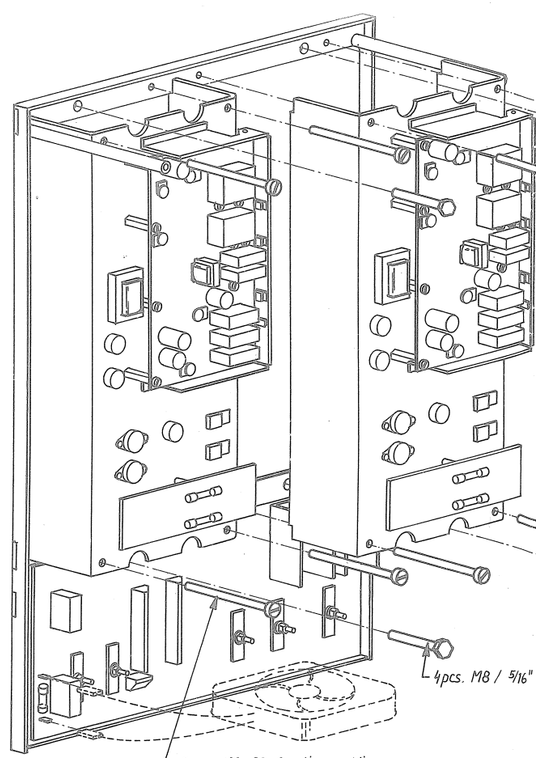


Remove plug for blower, only in N1411



4pcs. M8 / 5/16" bolts

12 pcs. M6 × 35 for disassembling of power supply sections.



4pcs. M8 / 5/16"

8pcs. M6 × 90 for disassembling of power supply sections.

ø10

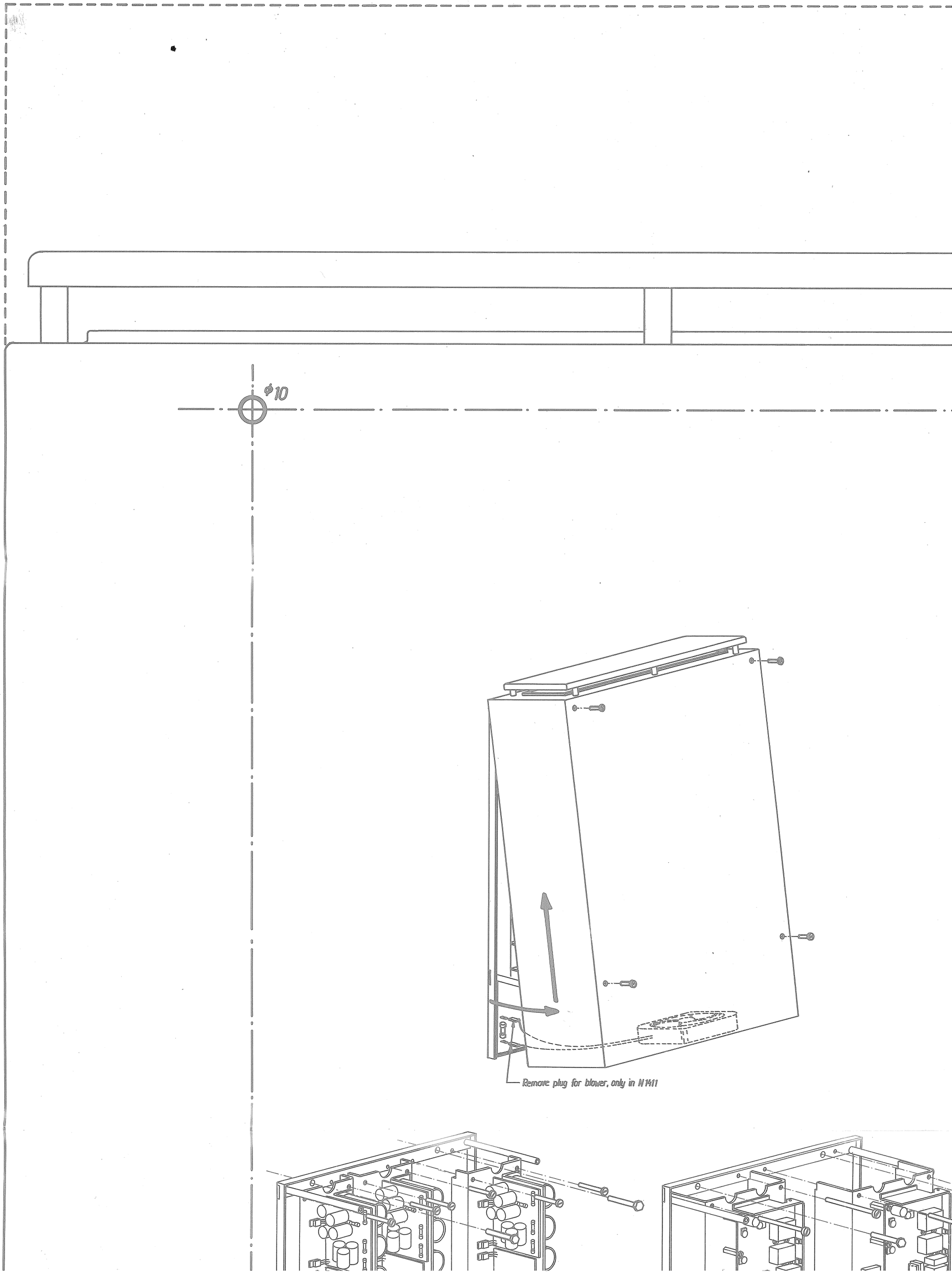
Only N1411

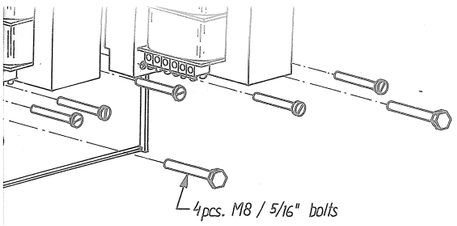
ø10

Only N1410

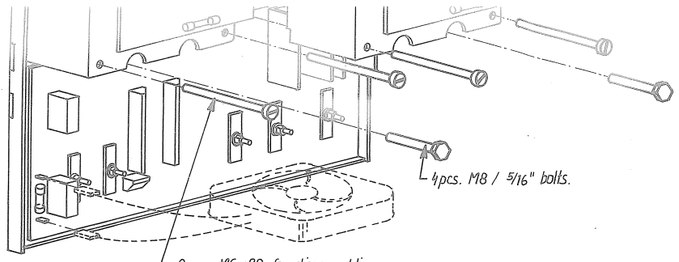
73mm

240 mm


ϕ10
Remove plug for blower, only in N1411



s. M6 × 35 for disassembling
ower supply sections.



Only N1411

ϕ10

Only N1410

ϕ10

240 mm

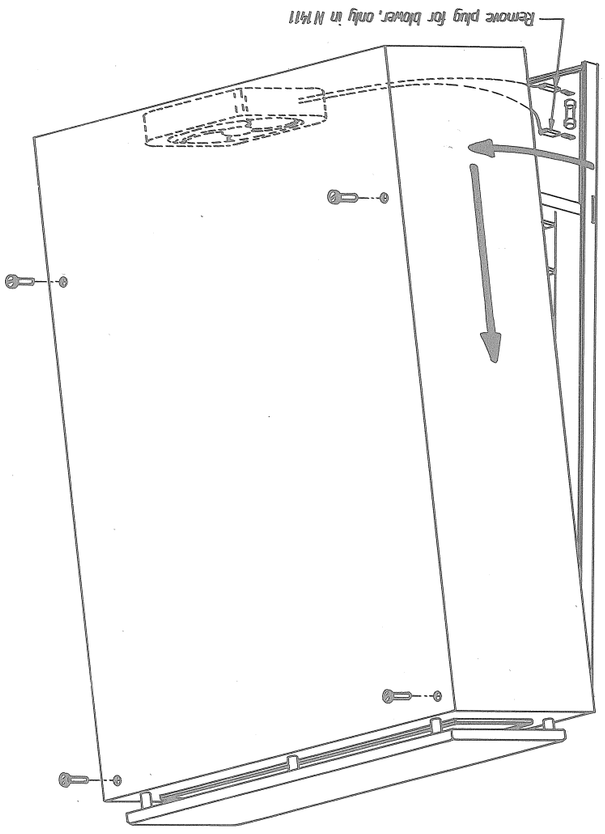
73mm

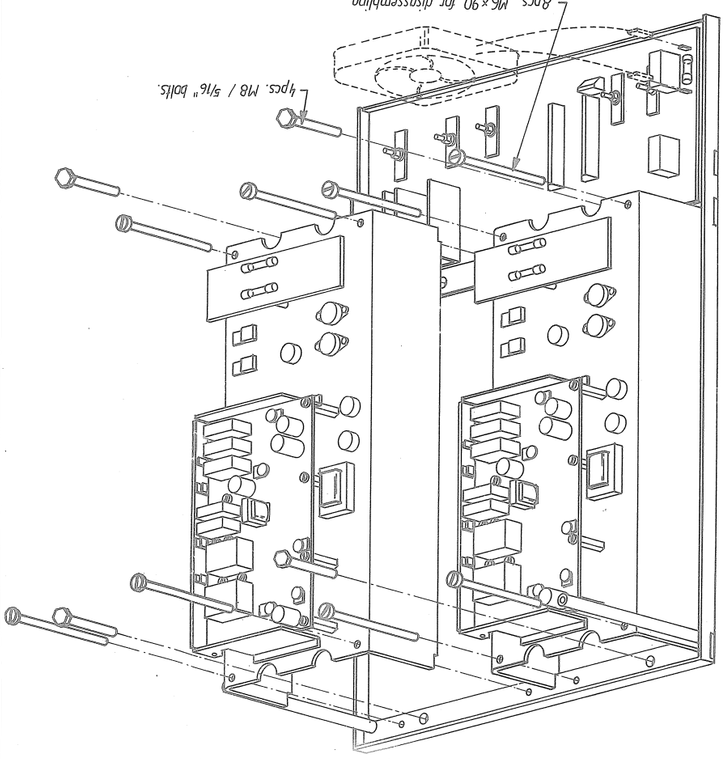
193 mm

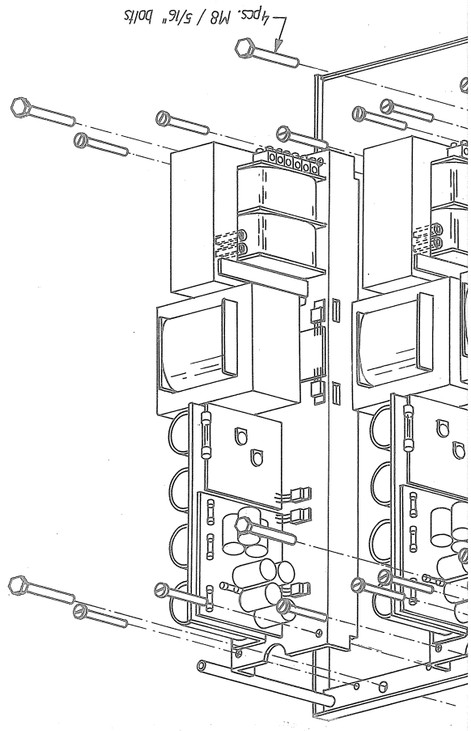
143 mm

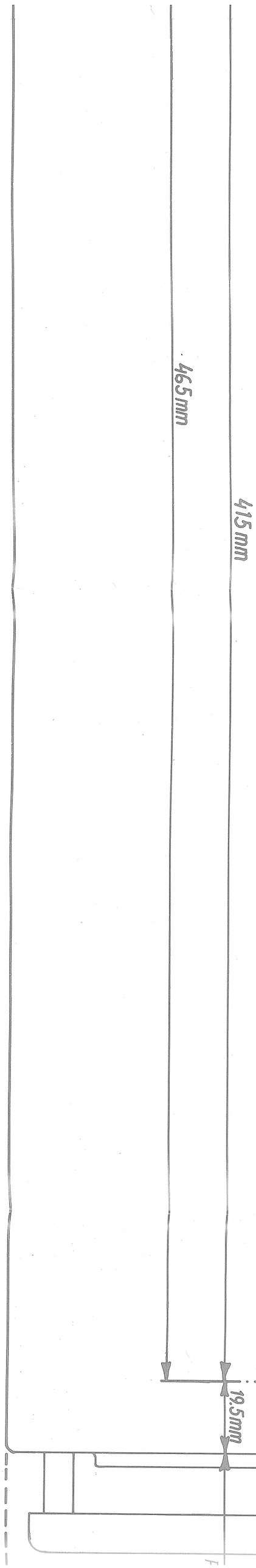
100 mm

Free space for aircirculation and cable entery

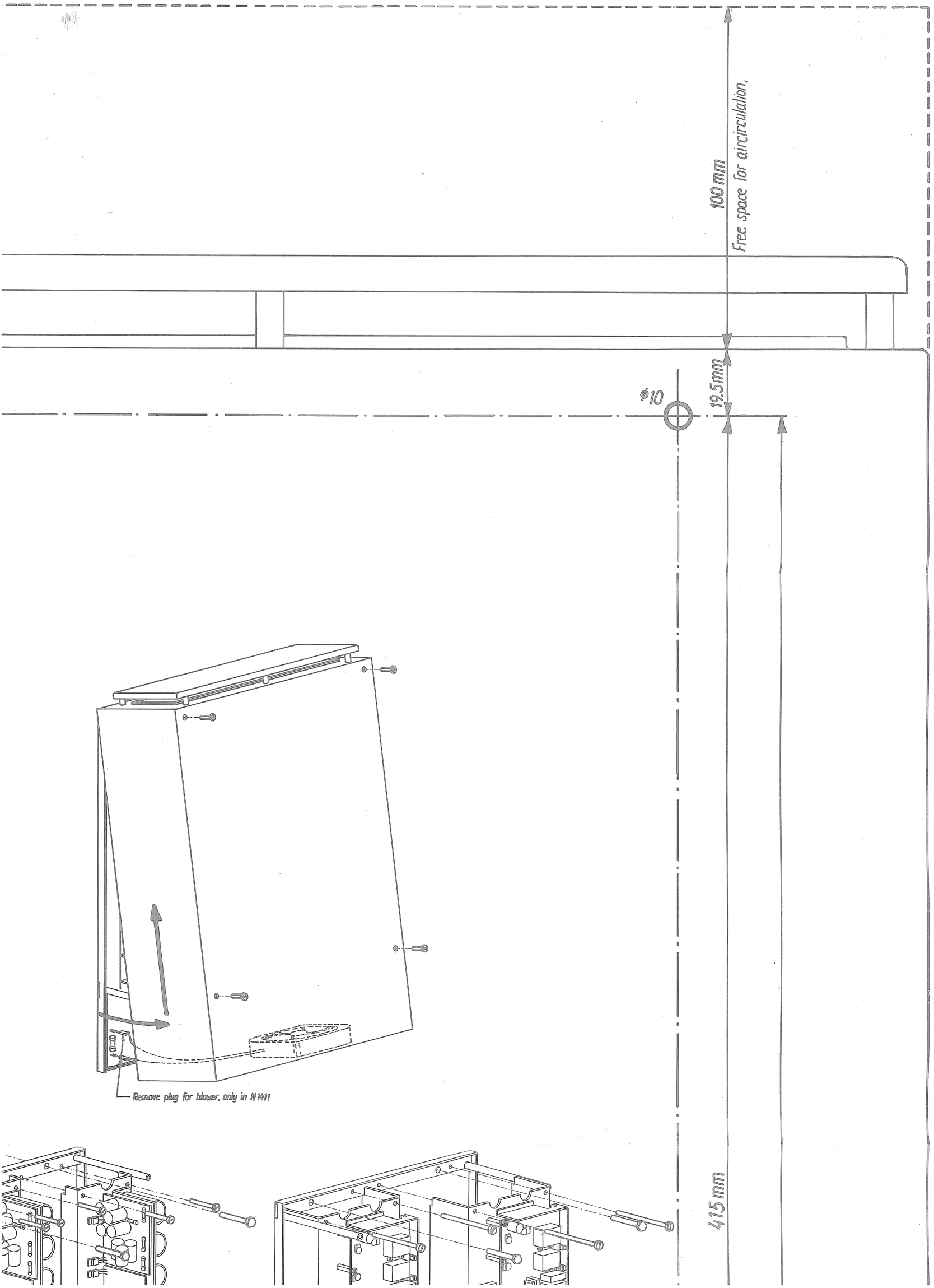

Remove plug for blower, only in N141

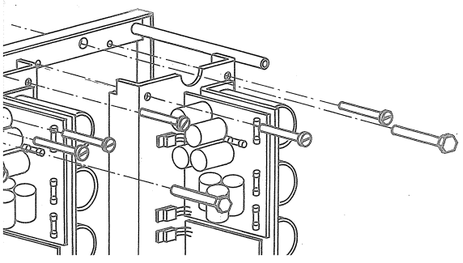

8pcs. M6×90 for disassembling
of power supply sections.
4pcs. M8 / 5/16" bolts.

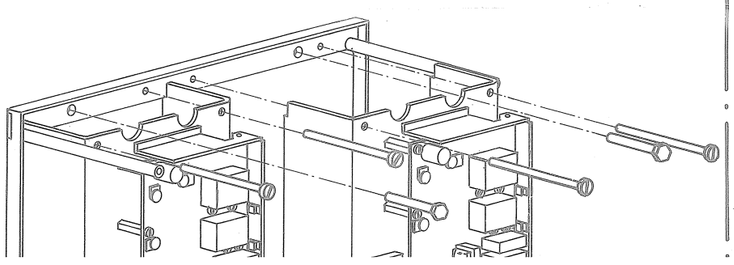

4pcs. M8 / 5/16" bolts
cs. M6×35 for disassembling
power supply sections.

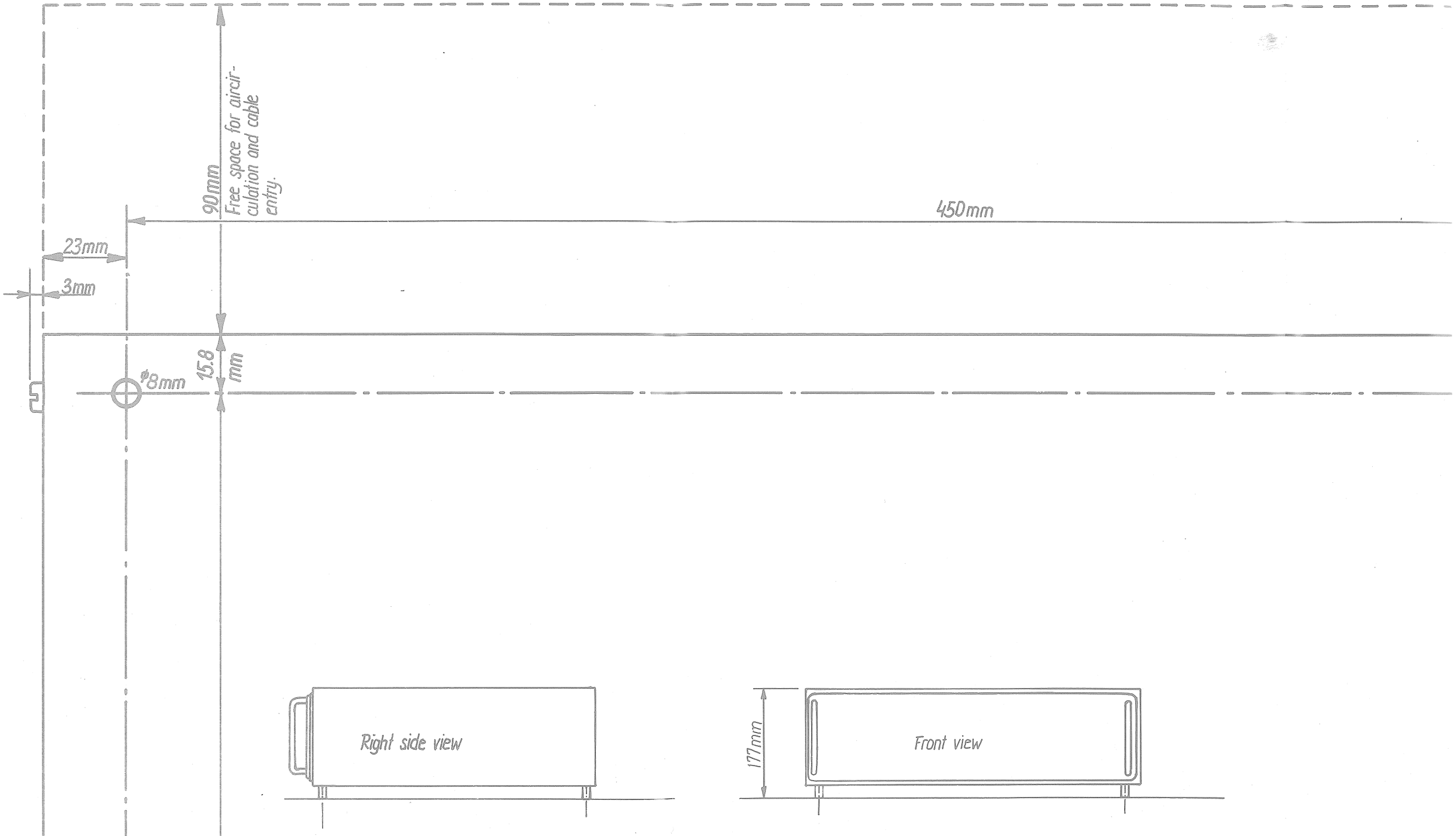

465mm
415mm
19.5mm
ϕ10

H1238 4-0-25227A
4-0-23231A, 4-0-25232, 4-0-25233A



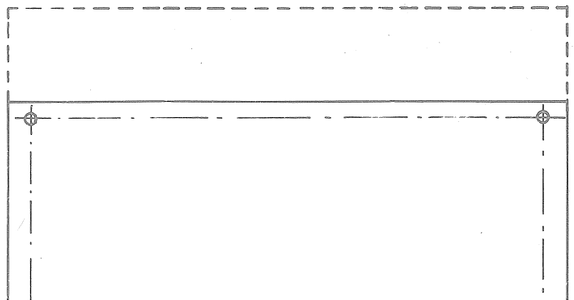





90mm
Free space for aircir-
culation and cable
entry.
450mm
23mm
3mm
15.8
mm
Φ8mm
80 mm

Right side view

177mm
Front view



450mm

23mm

3mm

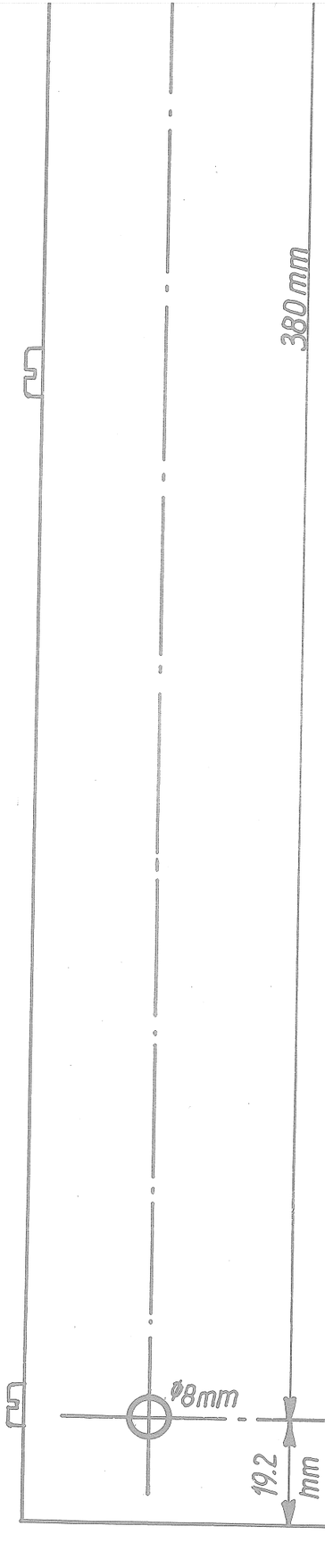
ϕ8mm

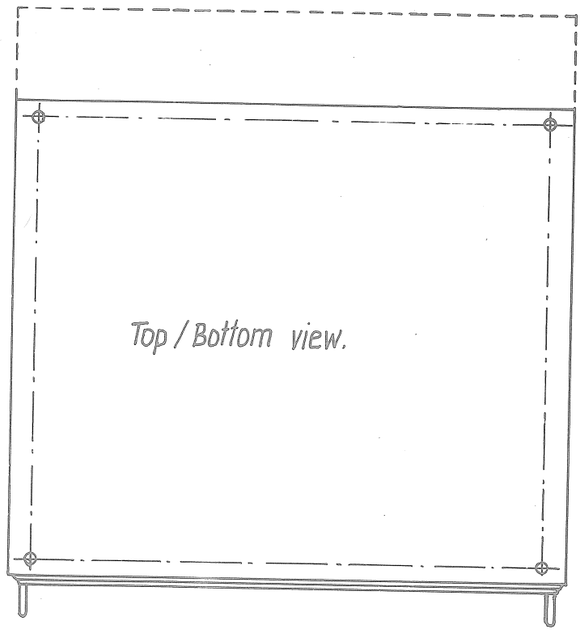
Right side view

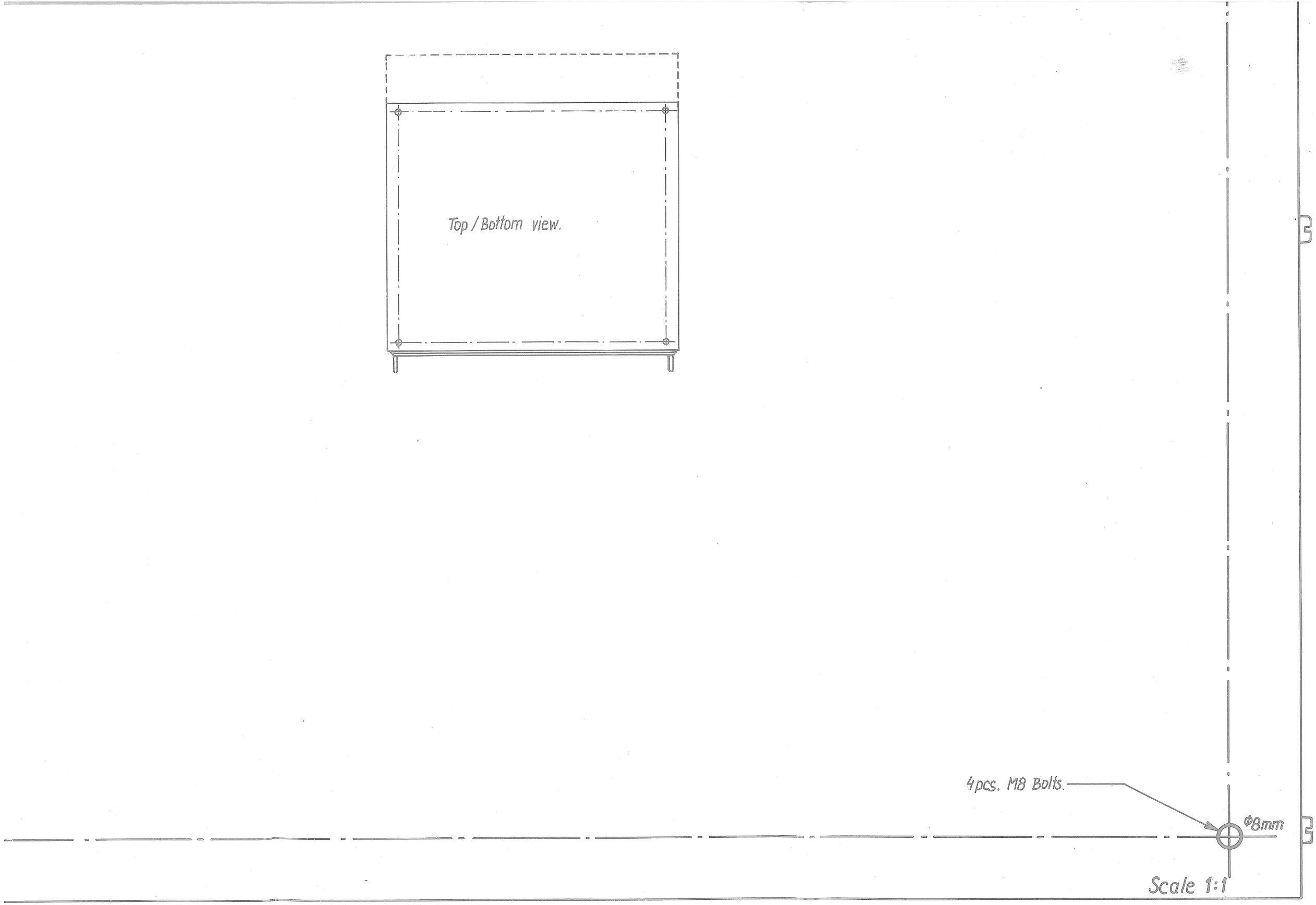
177mm

Front view

H1238 4-0-25243







3,6 DRILLING PLAN AND DIMENSIONS FOR N1404/H1229

H1238 GRØN

CONTENTS

4. AERIALS AND RF GROUNDING RF REQUIREMENTS

DUPLEX RX AERIAL
The set will work simplex and semi-duplex without this aerial.

For receiver duplex aerial use either a whip aerial 6-9 metres or a wire aerial of at least 6 metres. The whip aerial will normally give the best result owing to its radiation characteristics.

For the leading-down from the aerial to receiver use 50 ohm coaxial cable of good quality e.g. RG213U in metal tube or triaxial cable H1213.

At the footpoint of the aerial, mount a junction box, e.g. SAILOR H1209 for the connection of aerial and coaxial cable. The box must be designed for outside mounting in maritime environments.

IMPORTANT! The aerial must be connected directly to the cable. No transformer or protection diode must be used.

The aerial must be placed as high and clear as possible, and for duplex reasons as far from the transmitter aerial as possible.

If wire aerial is used, it will for duplex reasons be preferable that the angle, which the leading-down of the receiver forms with the transmitter aerial, is as large as possible.

Mounted with Triaxial Cable

H1238

To be grounded effectively.

If metal mast, to mast.

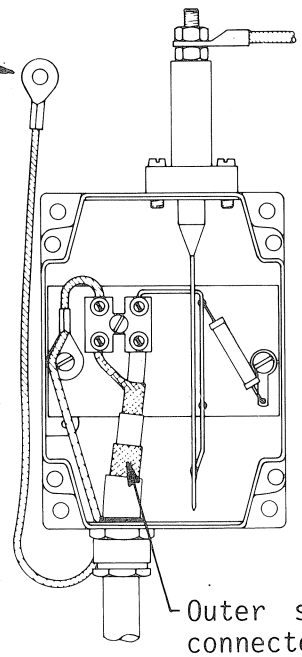
Metal mast must be connected to either metal hull or to grounding system.

If wooden mast, to cu-strip (50x1) fastened to the mast.

In the lower end, the strip must be connected to deck (if metal ship) or to separate grounding system (equal to transmitter system) close to mast.

All standing rigging must in the top end be connected to metal mast or cu-strip and in the receiver end to cu-strip or grounding system.

To avoid crackling noise, make all connections by welding, bolting or soldering.



Outer screen is not connected to ground at this end.

NOTE! Do not use other cables than 50 ohm triaxial cable with the same electical data as RG213U. E.g. SP type H1213.

4. AERIALS AND RF GROUNDING REQUIREMENTS cont.

Mounted with coaxial cable

To be grounded effectively.

If metal mast, to mast.

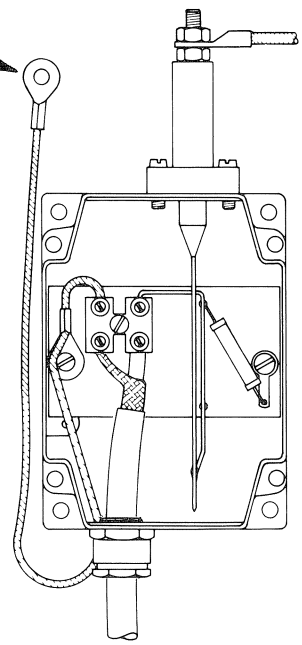
Metal mast must be connected to either metal hull or to grounding system.

If wooden mast, to cu-strip (50x1) fastened to the mast and connected to tube around RG213U.

In the lower end, the strip must be connected to hull (if metal ship) or to separate grounding system (equal to transmitter system) close to mast.

All standing rigging must in the top end be connected to metal mast or cu-strip and in the receiver end to cu-strip or grounding system.

To avoid crackling noise, make all connections by welding, bolting or soldering.



NOTE! Do not use other cables than 50 ohm coaxial cable with the same electrical data as RG213U.

H1238

TRANSMITTER AERIAL

Most important for good communication is the aerial and the RF ground. The best efficiency of the aerial will be with the aerial coupler AT1505 mounted outdoors close to the footpoint of the aerial and the aerial placed as high and free as possible. The aerial coupler AT1505 has to be grounded carefully.

Aerial Length

Max. length 16 metres, min. length 9 metres. Aerial length measured from insulator on AT1505 to the top of the aerial.

If the transmitter has to work mainly on frequencies below 4 MHz, a total aerial length of 16 metres is recommended.

If the transmitter has to work mainly on frequencies higher than 4 MHz, a 9 metre whip aerial is recommended.

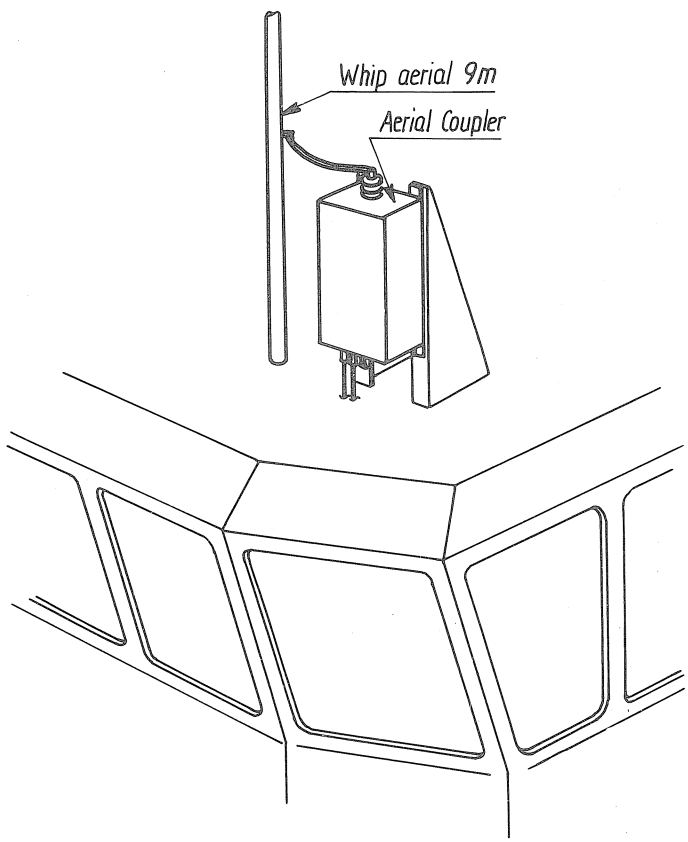
Ground

AT1505 has to be grounded at the footpoint of the aerial.

If a metal wheel house, weld up a pillar for AT1505 and bolt it to the pillar. This is the best way of getting a good ground for the aerial system.

If a wooden or fibre glass boat, connect all accessible metal parts together and connect them to the aerial coupler (one or more of the four mounting screws) with a copper strip (100 x 0.5 mm) making the copper strip as short as possible. You can also make an artificial ground under the aerial as shown in ex. 5.

Ex. 1. AT1505 mounted on top of a wheel house with a whip aerial.

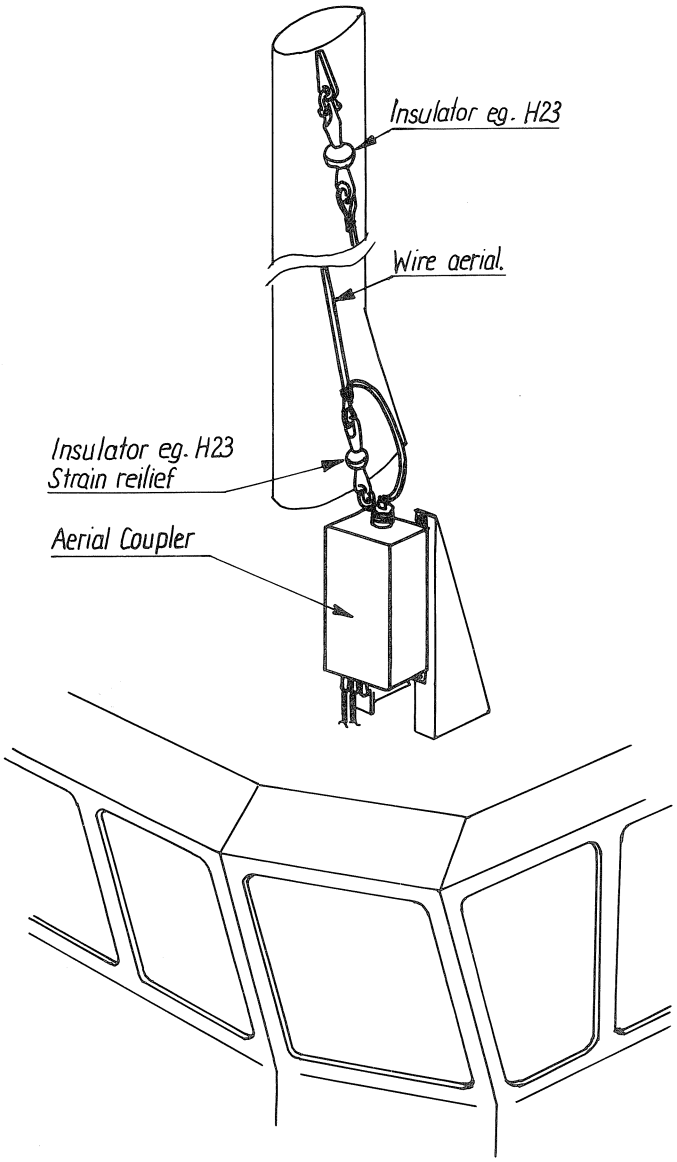


AT1505 has to be grounded through the four mounting holes.

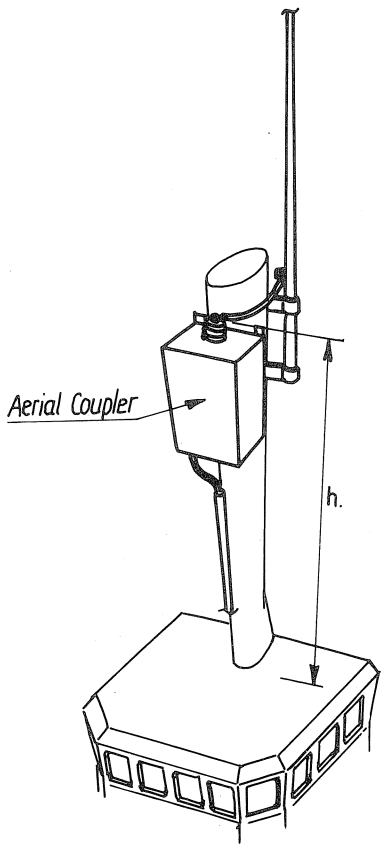
H1238 4-0-25234

4. AERIALS AND RF GROUNDING REQUIREMENTS cont.

Ex. 2 AT1505 mounted on top of a wheel house with wire aerial.



Ex. 3. AT1505 mounted on top of a mast.



AT1505 has to be grounded to the mast, if a metal mast.
If h > 8 metres, then the coaxial cable will work as ground and an acceptable performance will be obtained.
If h < 8 metres, then a copper strip (10 x 0.5 mm) has to be connected from a T1505 to ground (see chapter GROUND).

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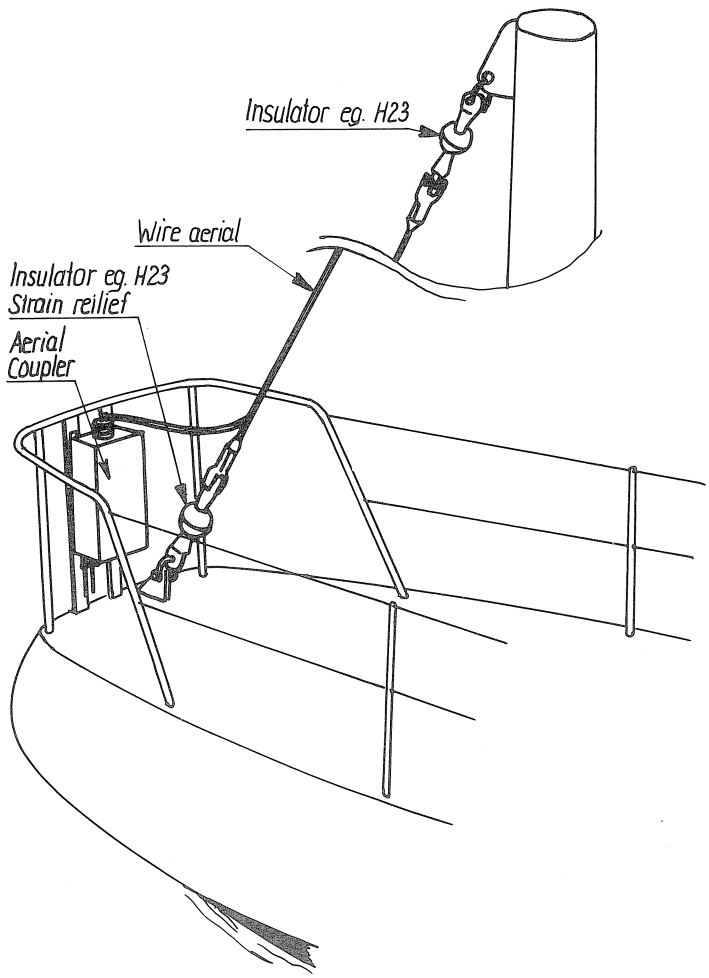
4-0-25235 4-0-25236

4. AERIALS AND RF GROUNDING REQUIREMENTS cont.

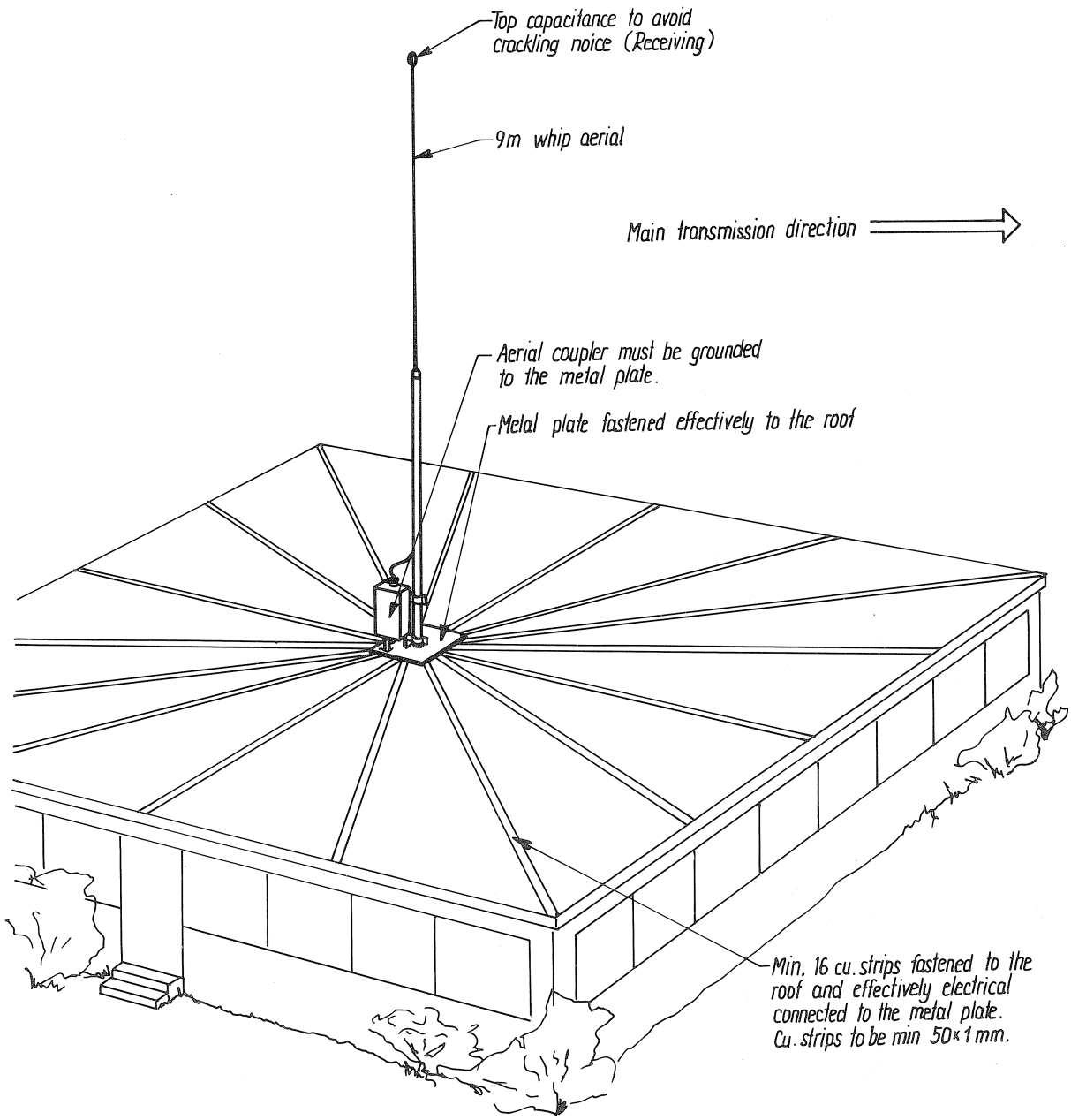
Ex. 4. AT150S mounted on a sailing ship.



AT150S has to be grounded e.g. to the handrail or other metal parts.

4. **AERIALS AND RF GROUNDING REQUIREMENTS** cont.

Ex. 5. AT1505 mounted on top of a building.



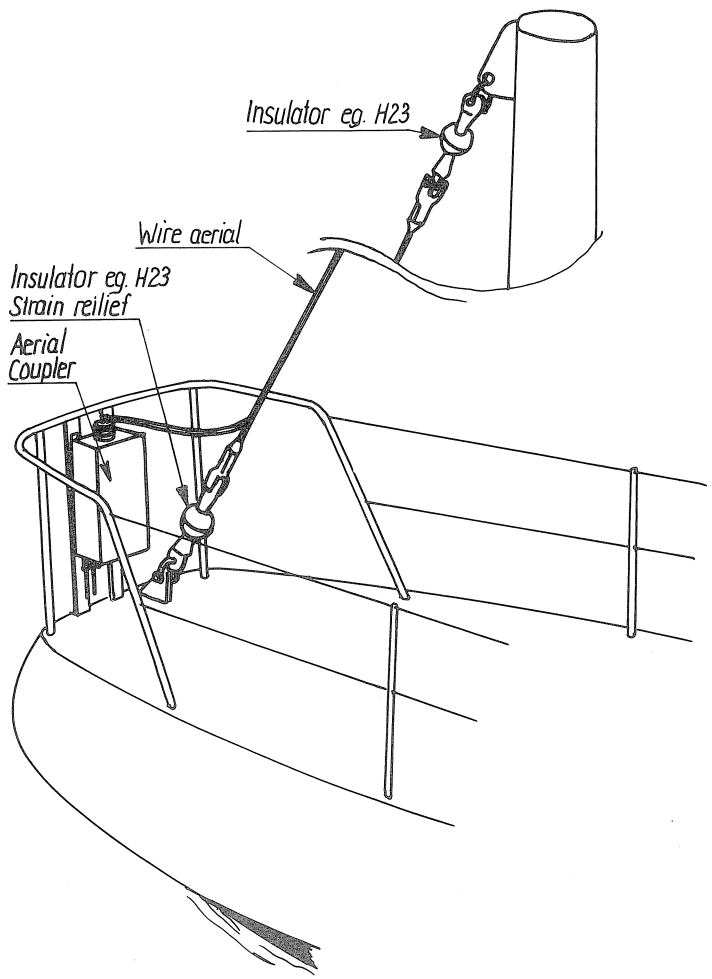
H1238 4-0-25239

H1238 GRØN

CONTENTS

4. AERIALS AND RF GROUNDING REQUIREMENTS cont.

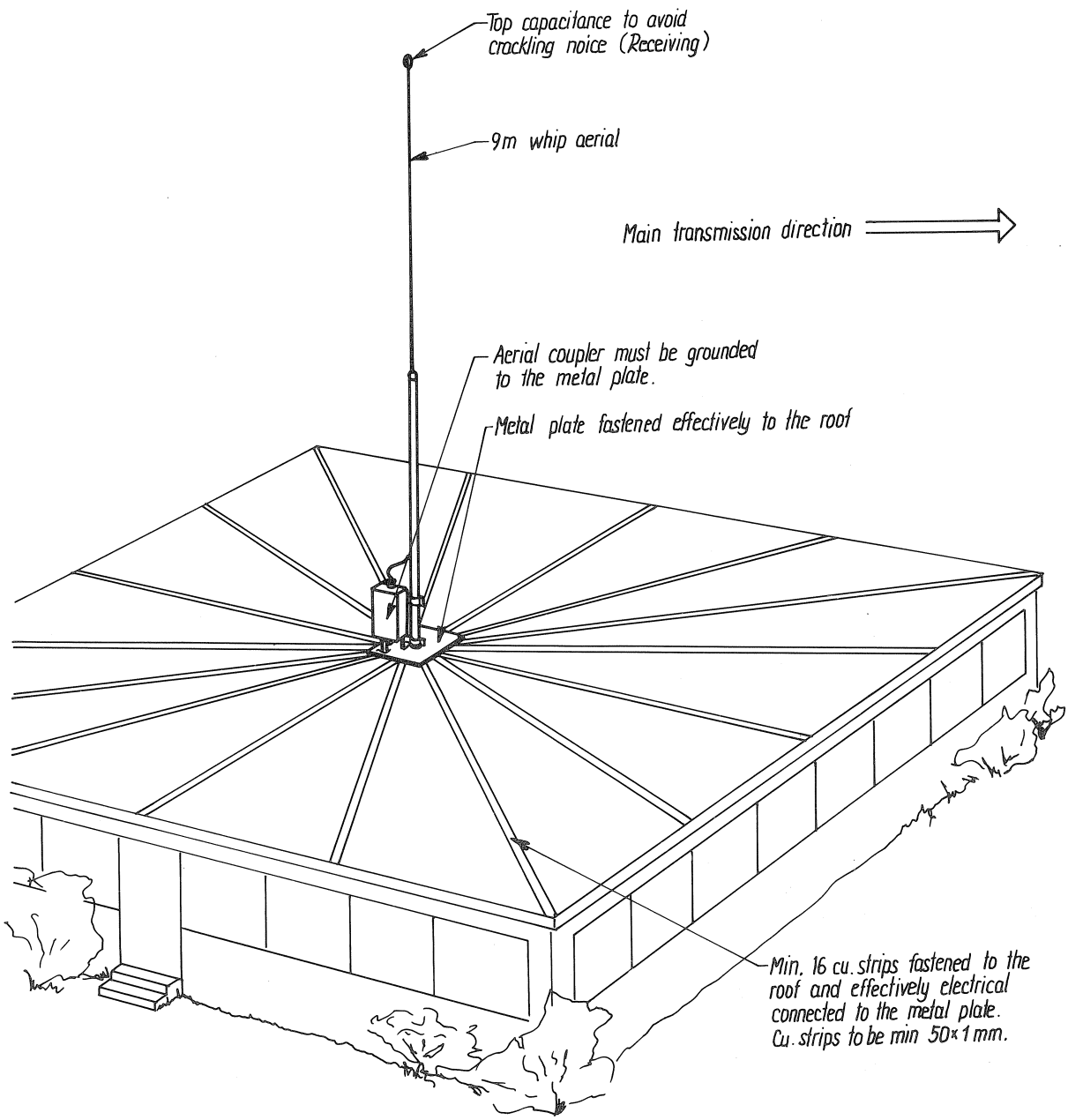
Ex. 4. AT1505 mounted on a sailing ship.



AT1505 has to be grounded e.g. to the handrail or other metal parts.

4. **AERIALS AND RF GROUNDING REQUIREMENTS** cont.

Ex. 5. AT1505 mounted on top of a building.



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CONTENTS

SAILOR SHORT WAVE PROGRAMME 1000/B

INTRODUCTION

The SAILOR short wave programme 1000/B has been designed and produced by one of Europe's leading manufacturers of maritime radio communication equipment.

The SAILOR short wave programme 1000/B complies with all international specifications such as CEPT, MPT 1224 (UK), R.S.S. 181 (Canada) and R.B. 211D (Australia). All units, except the T1135, also comply with F.C.C. (USA).

FEATURES

* High transmitter output, 400 or 1250 Watt PEP, automatic aerial coupler and professional receiver design ensure maximum range and penetration under all conditions.
* Full duplex as standard.
* Automatic radiotelex - even with one aerial.
* Unique receiver design enables the station to be operated without blocking calls on radiotelex.
* Rack system ensures flexibility and ease of servicing.
* Professional, mechanical construction. Nylon-coated cabinet and front panel. All controls in mirror-finish, chromium plated brass or impact-proof plastic. Aerial coupler in mirror-finish, acid-proof, stainless steel. Insulator in teflon.
* Very compact construction of station and aerial coupler.
* Simple to install, aerial switch and dummy aerial as integral parts of the equipment.

H1238

THE SAILOR PROGRAMME 1000/B CONSISTS OF THE FOLLOWING UNITS:

TRANSMITTERS

T1130 and T1135

are both fully transistorized. Frequency range and transmission modes as for the exciter.
Load impedance: 50 ohm.

Output Speech or ARQ Telex		
Transmitter	AC supply	DC supply
T1130	500W PEP $^{+\ 0}_{-1.4}$ dB	500W PEP $^{+\ 0}_{-1.4}$ dB
T1135	1250W PEP $^{+\ 0}_{-1.4}$ dB	1000W PEP $^{+\ 0}_{-1.4}$ dB

SAILOR SHORT WAVE PROGRAMME 1000/B cont.:

EXCITERS

S1303

Frequency Range: 1.6 - 8.5 MHz plus the maritime HF bands 12 - 16 - 22 and 25 MHz. Continuous 1.6 - 28 MHz as option.

Transmission Modes: (speech, telegraphy, telex), A3J, A3A, A3H, F1, A1 and A2A. Optional switching between USB and LSB. Independent sidebands as option.

Frequency Stability: $0^{o}C$ - $40^{o}C$, less than $\pm$25 Hz.
Optional: less than $\pm$10 Hz.

Long Term Stability: Less than $\pm$25 Hz. Optional: less than $\pm$10 Hz.

Short Term Stability: Less than $\pm$2 Hz

Remote control from automatic telex equipment possible.

S1304

The S1304 has the same data as the S1303 except that the frequency selection is limited to a maximum of 256 programmed frequencies.

AERIAL COUPLERS

AT1500
is used in connection with the T1130. Automatic tuning time is typically less than 5 seconds.

Aerial length: 5 - 16 metres

All connections are by means of a specially developed multiple plug in the base of the aerial coupler. (16x0.5 multi-cable + 50 ohm coaxial cable).

When installing, the aerial coupler need not be opened.

No tuning or pre-adjusting in the aerial coupler necessary.

The aerial coupler is to be installed outdoors.

AT1505
is used with the T1135 and has the same data as the AT1500 except:

Aerial length: 9 - 16 metres.

RECEIVERS

Telephony Receiver R1119

Frequency Range: 10 kHz - 30 MHz

Reception Modes: A2, A2H, A3, A3A, A3H, A3J, F1, 2.4F4.

SAILOR SHORT WAVE PROGRAMME 1000/B cont.:

Frequency Stability: 0°C - 40°C, less than ±25 Hz.
Optional: less than ±10Hz.

Long Term Stability: less than ±25 Hz. Optional: less than ±10 Hz.

Short Term Stability: less than ±2 Hz

Optional telex filter

Optional switching between USB and LSB.

Main Receiver R1120

The R1120 has the same data as the R1119 plus extra telegraphy and telex facilities. Complies with MPT 1201 and other specifications for main receivers.

Scanning Receiver R1121

is used in connection with automatic telex.

Remote controlled from automatic telex equipment.

Frequency Range: maritime telex band from 1.6 - 26 MHz. Extra bands as option.

Reception Modes: F1, 0.3F4. A3J optional.

Frequency Stability: as for R1119

All receivers can be supplied in a separate cabinet.

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POWER SUPPLY UNITS

N1407

24V DC power supply for use in connection with T1130. The N1407 is installed in the T1130.

N1409

220V AC power supply for use in connection with T1130. The N1409 is installed in the T1130. With 110V AC supply use the external transformer H1248.

N1410

AC power supply for T1135. Separately installed as convenient, at a maximum of 15 metres from the station. The N1410 consists of three identical power supply units, connected in parallel on the secondary side. The supply voltage can be connected as 220V/110V AC 1-phase or as 220V/127V/110V AC 3-phase.

Optional the supply voltage can be connected as
240V/220V/110V AC 1-phase or as 240V/220V/127V/110V AC 3-phase.

In the case of a fault in one of the three power supply units or a drop-out of one or two of the phases, the equipment will continue to function with reduced power output.

N1411

24V DC power supply for T1135. The N1411 consists of two separate DC power supply units installed in the same cabinet. The N1411 is to be installed separately at a maximum of 15 metres from the station. The two DC power supply units are combined in such a way that a drop-out of one of the units will merely result in reduced power output.
The N1410 and the N1411 can be combined in such a way that the station can be supplied with both DC and AC.

CURRENT CONSUMPTION FOR THE SAILOR 1000/B STATION:

Transmitter frequency range	Supply	Transmitter not keyed	2-tone signal	Normal speech A3J
T1130 1.6-30 MHz	AC	0.35A	5.1A	3A
	DC	2.5 A	30 A	17A
T1135 1.6- 4 MHz	AC	0.35A	5.1A	3A
	DC	2.5 A	30 A	17A
T1135 4 -30 MHz	AC	0.4 A	12 A	7A
	DC*	3.0 A*	60 A*	35A*

* With a switch from AC to emergency batteries, current consumption can be adjusted to that of the frequency range 1.6 - 4 MHz. Power output will then be reduced to 400W making it possible to use smaller emergency batteries.

H1238

BATTERY CHARGER N1404

Automatic 40 Amp. battery charger which can be built into the SAILOR 1000/B rack system. The N1404 can be supplied in a separate cabinet.

DIMENSIONS

TYPE	Dimensions in mm		
	H	W	D
T1130 + Exciter + Receiver in Cabinet	423	500	470
T1135 + Exciter + Receiver in Cabinet	423	500	540
AT1500 (insulator not included)	475	220	110
AT1505 (insulator not included)	475	220	150
N1410	656	386	198
N1411	656	386	198
Receiver in separate Cabinet H1225	145	500	425
N1404 in separate Cabinet H1229	180	500	470

Specifications subject to change without notice.

SAILOR RADIOTELEX SYSTEM

The SAILOR radiotelex system consists of the following units.

RADIOTELEX MODEM ARQ H1240

The SAILOR ARQ H1240 is designed for reliable service in demanding applications, providing a broad range of operating features and for simple but efficient control.

All operational controls can be carried out from the keyboard by easy-to-use commands.

The intelligence provided by the H1240 radiotelex modem enables fully automatic control of the complete radio station. Start the transmitter, tune it, establish the connection, and transmit and/or receive messages. It can even control the scanning receiver searching for incoming calls, set-up the transmitter frequency (Programme 1000/B only), and handle the traffic without any operator intervention.

All H1240 radiotelex modems have storage capacity for 105 user programmed frequency pairs and call codes.

The built-in 256 kbyte character comprehensive text editor adds powerful dimensions to telex handling and becomes familiar to any user with a minimum of training. A large number of different messages can be stored in the text memory for later transmission (separately or in groups).

H1238

The H1240 radiotelex modem supports a number of automatic modes, including unprotected/protected mode, public/secret save mode, operator programmable group command mode, and scan mode with automatic call controlled by the reception of "FREE" signals. Software controlled channel quality evalutation and frequency tracking ensures optimum selection of frequency channels.

The H1240 radiotelex modem operates with standard 50 Baud transmission speed (100 Baud on radio side). As option H1240 can operate with dual speed twinplex modulation resulting in 100 Baud transmission (also 100 Baud on radio side).

KEYBOARD PROCESSOR H1249

The SAILOR H1249 keyboard processor includes full soft-key operation of system and editing commands for easy operation. Screen-oriented text editing facilities with 9600 Baud console transfer speed for fast file editing/display, file manipulation, and communication control.

PRINTER H1252

SAILOR H1252 hard-copy printer for multi-copying of communication message and file listening. Up to four different printers may be connected to the T-BUS system for dedicated printing of information.

VIDEO MONITOR H1253

SAILOR H1253 video monitor is for use with keyboard processor H1249.

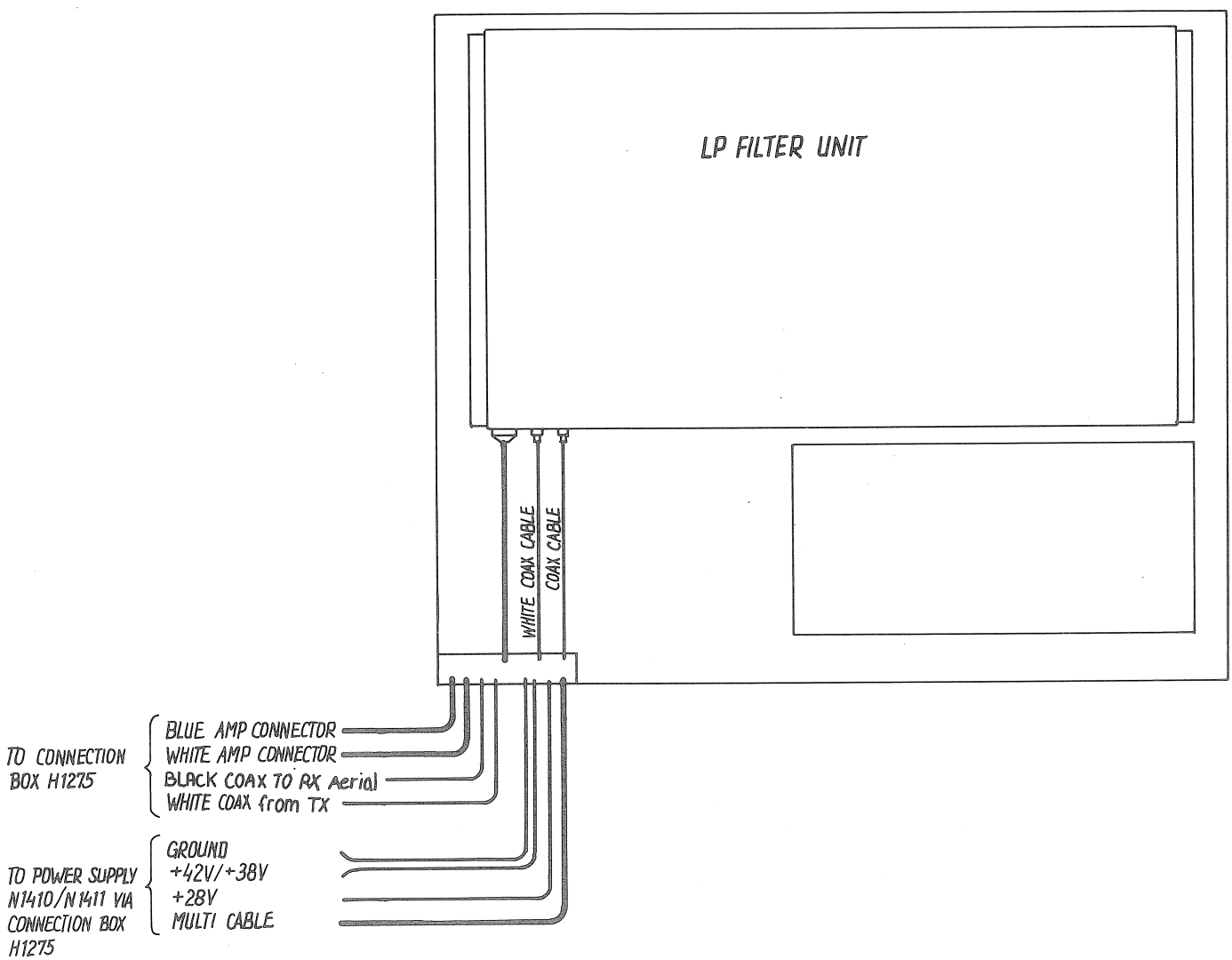
SAILOR RADIOTELEX SYSTEM cont.:

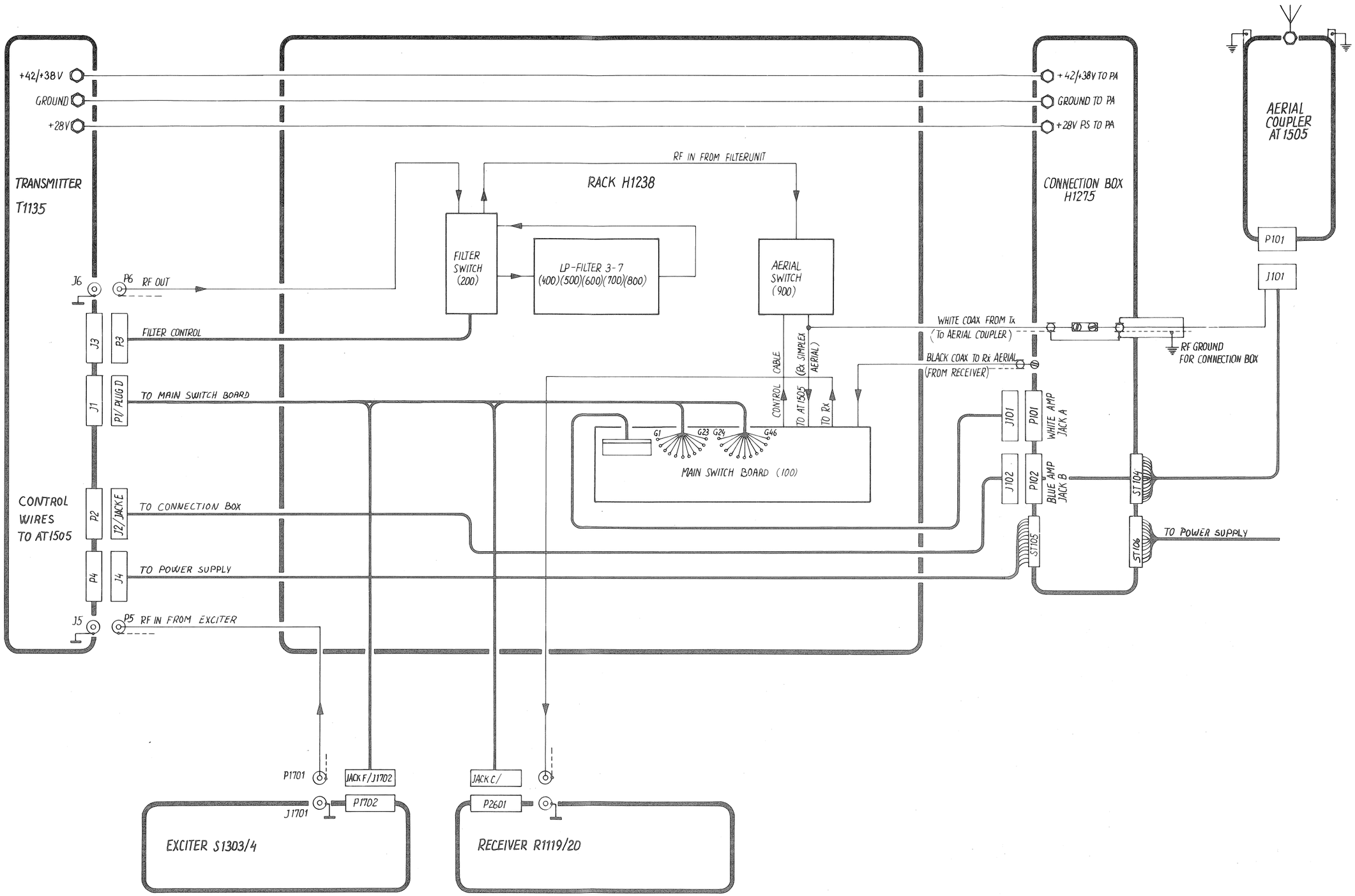
FEATURES

* Unattended transmission and reception of telex messages - 24 hours a day.
* Built-in high security telex cipher.
* Telex memory with 256 kbyte storage capacity and public/secret message handling.
* Automatic control of communciation equipment with "FREE" signal scanning automatic power-up of transmitter.
* Automatic channel quality evaluation and frequency tracking for optimum channel selection.
* Print spooler for message printing while other tasks are performed on the modem.
* Simple operation by use of soft-keys.
* Screen-oriented word-processor with 256 kbyte text memory.
* File packing for optimum usage of memory stage.
* Storage capacity for 105 user programmable frequency pairs and call codes.
* IBM-PC/XT communications software.
* Optional "FREE" signal generation.

H1238
4-0-25090A

CONNECTIONS ON THE REAR OF H1238



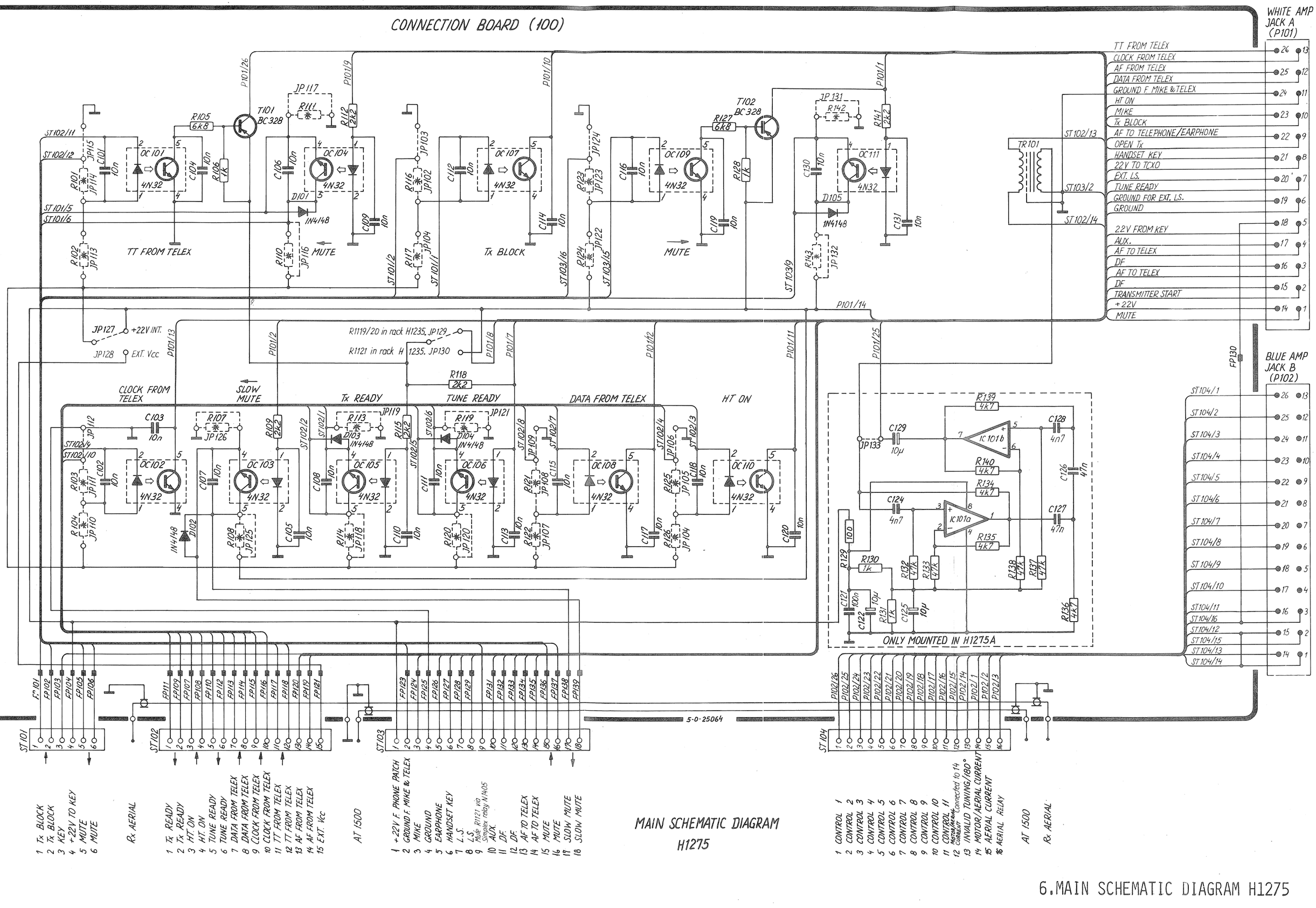


5.1. SYSTEM BLOCK DIAGRAM.

H1238 GRØN

CONTENTS

CONNECTION BOARD (100)



MAIN SCHEMATIC DIAGRAM
H1275

STRAPPING POSSIBILITIES IN CONNECTION BOX H1233/H1275.

The supply voltage for the optocoupler can be chosen either from the internal +22V or from an external power source via ST102 pin 15 Ext. Vcc (+) and ST103 pin 2 Ground for Mike and Telex (÷).

Max. ratings for Optocoupler 4N32:

LED forward voltage nominal 1.2V.

LED forward current nominal 10 mA.

Transistor collector emitter voltage V_{ceo}= 30V.

Transistor collector current max. 30 mA.

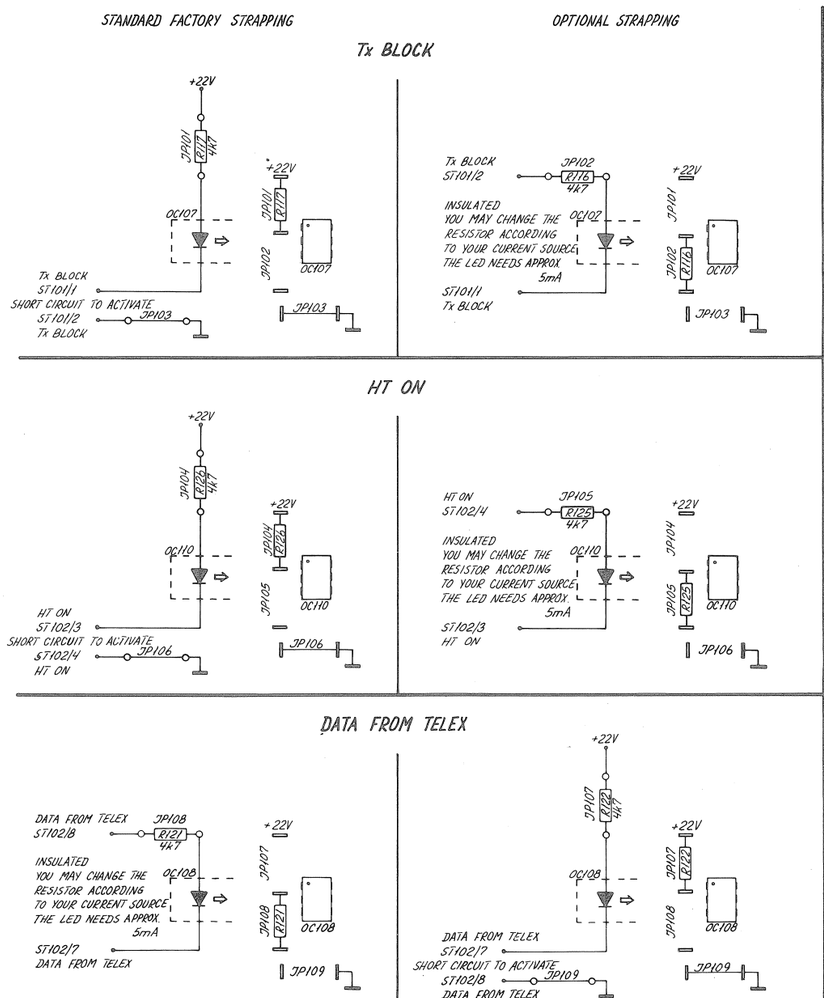
Collector emitter saturation voltage.

(IC=2 mA) V_{ce}(sat) = 1V.

STANDARD FACTORY STRAPPING FOR H1233/H1275.

JP101	4.7 Kohm	JP117	Jumper
JP102	Not used	JP118	4.7 Kohm
JP103	Jumper	JP119	Jumper
JP104	4.7 Kohm	JP120	4.7 Kohm
JP105	Not used	JP121	Jumper
JP106	Jumper	JP122	4.7 Kohm
JP107	Not used	JP123	Not used
JP108	4.7 Kohm	JP124	Jumper
JP109	Not used	JP125	4.7 Kohm
JP110	Not used	JP126	Jumper
JP111	4.7 Kohm	JP127	Jumper
JP112	Not used	JP128	Not used
JP113	4.7 Kohm	JP129	Jumper
JP114	Not used	JP130	Not used
JP115	Jumper	JP131	4.7 Kohm
JP116	4.7 Kohm	JP132	Jumper

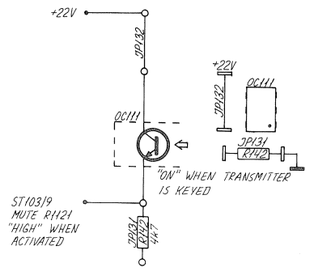
OPTIONAL STRAPPING INFORMATION.



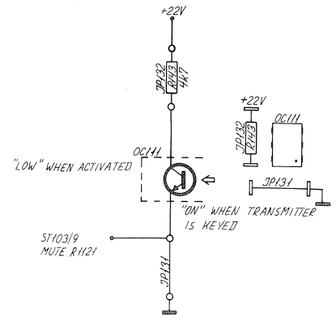
6.1 STRAPPING POSSIBILITIES IN CONNECTION BOX.

MUTE

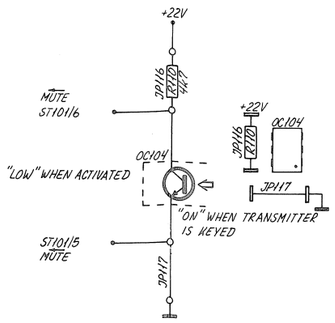
STANDARD FACTORY STRAPPING



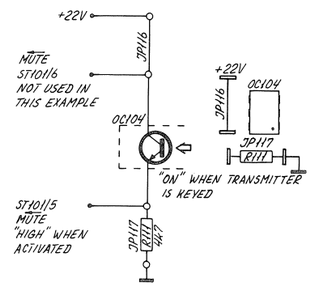
OPTIONAL STRAPPING



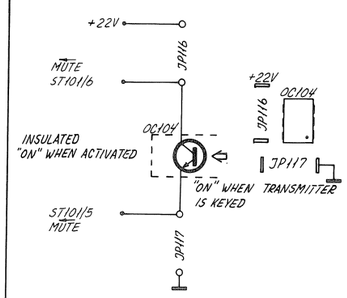
STANDARD FACTORY STRAPPING



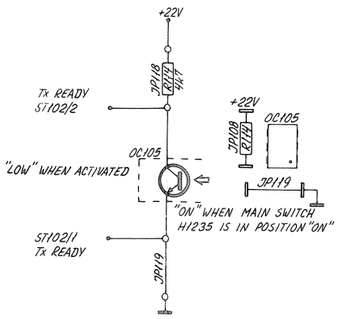
OPTIONAL STRAPPING

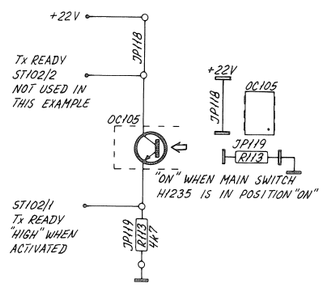


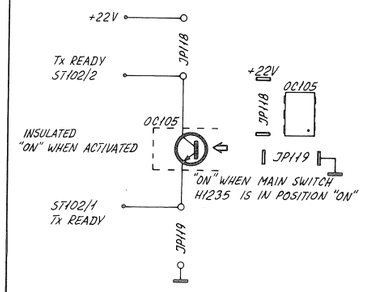
OPTIONAL STRAPPING



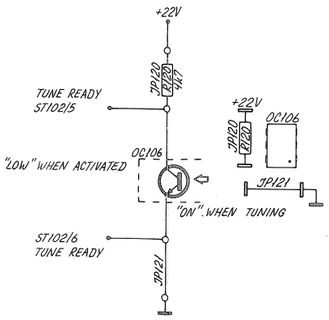
Tx READY

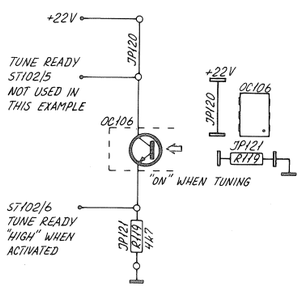


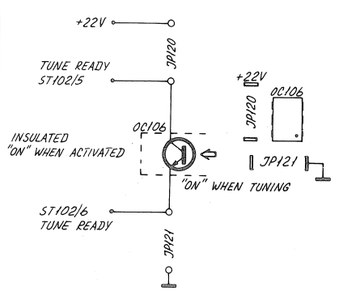




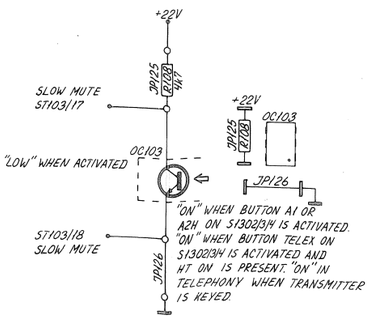
TUNE READY

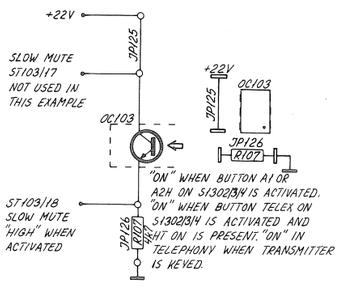


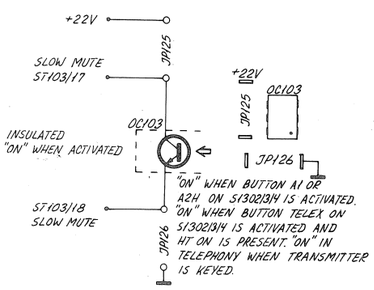




SLOW MUTE

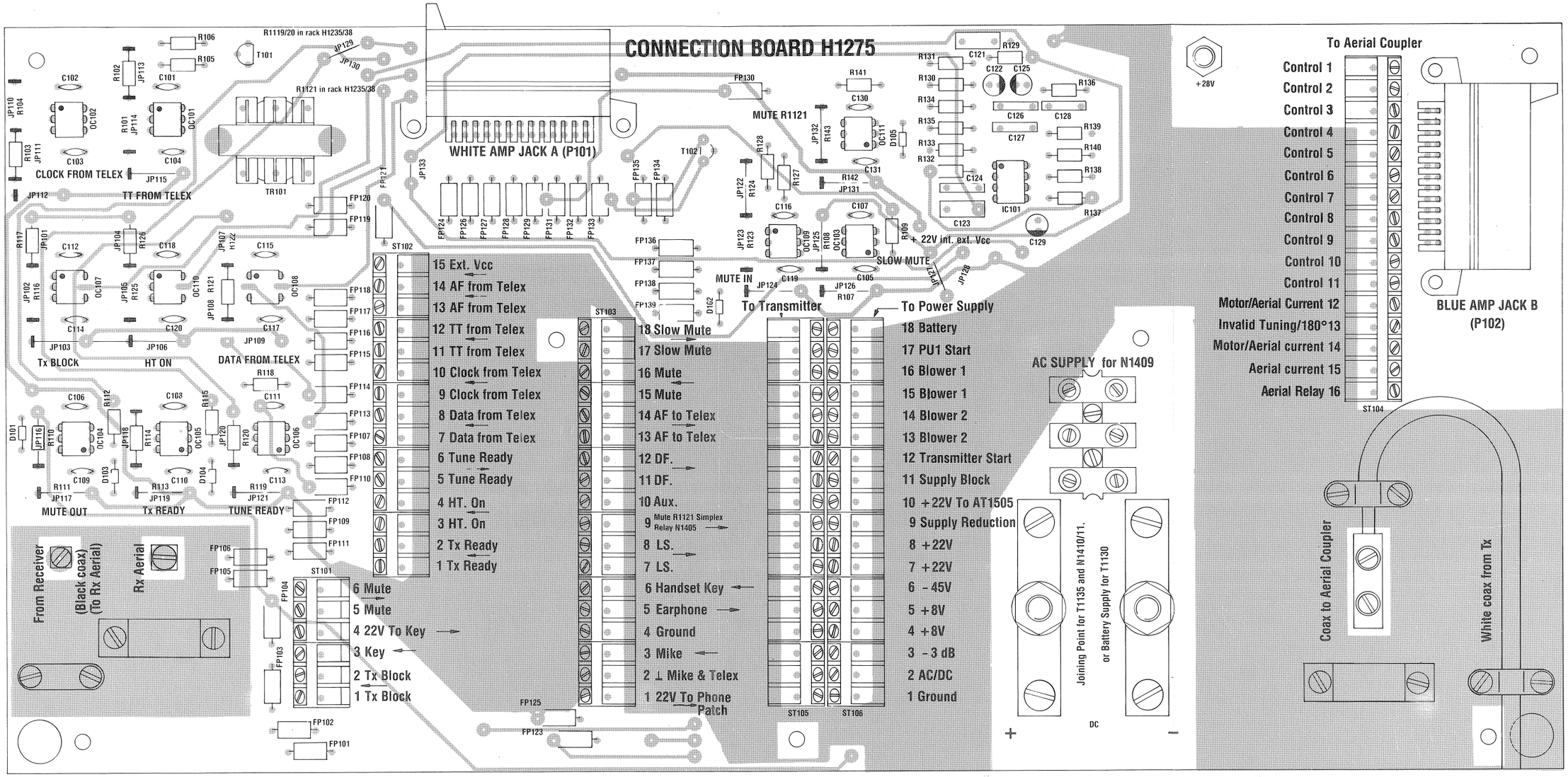






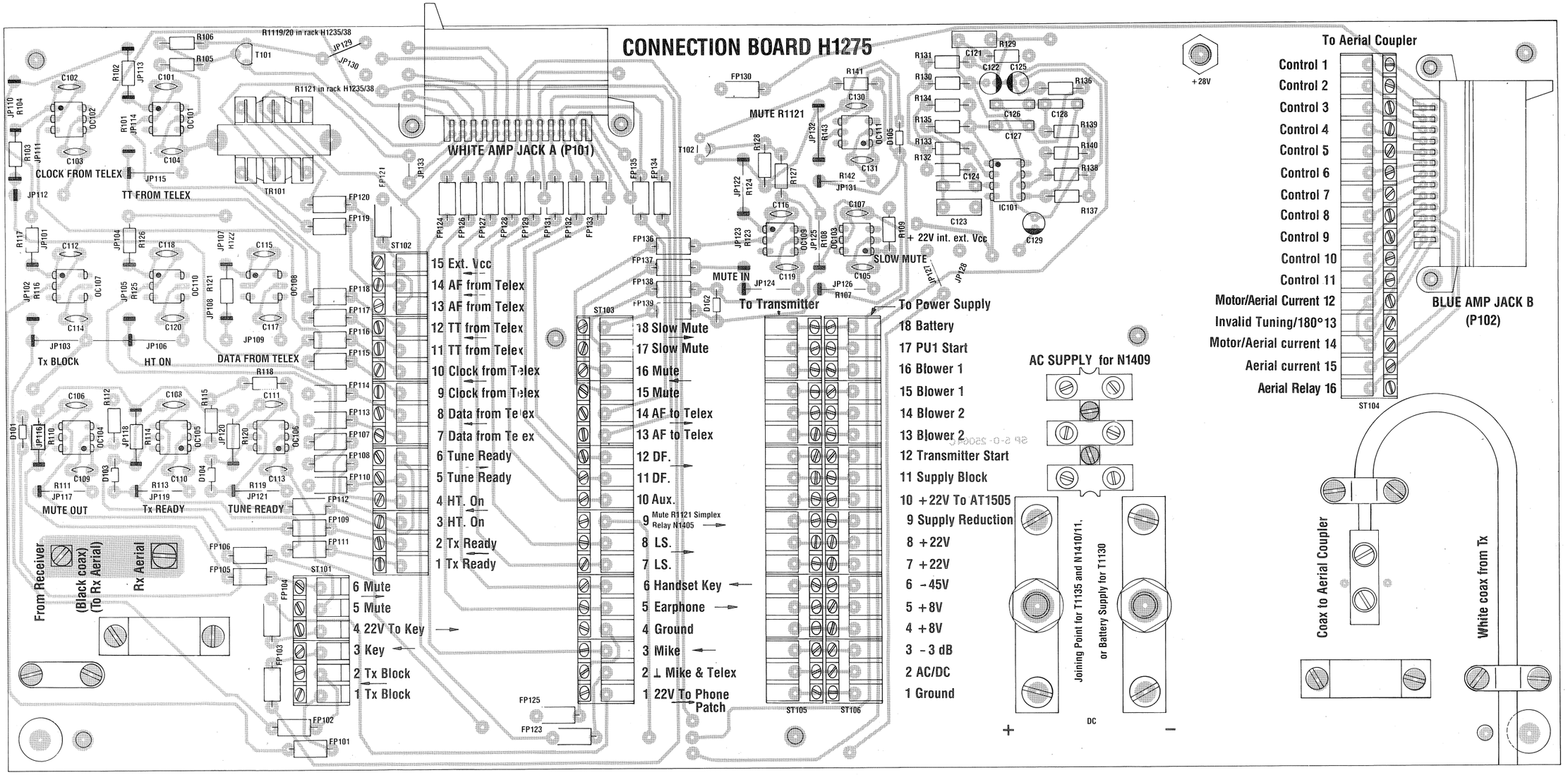
H1233A - 4-0-24162A

H1238
Tg. 5-0-25064C
Tg. 9-0-25064C



View from component side with upper side tracks

6.2 COMPONENT LOCATIONS FOR CONNECTIONS BOX H1275



View from component side with lower side tracks

6.2 COMPONENT LOCATIONS FOR CONNECTIONS BOX H1275

H1238
Tg. 5-0-250640
Tg. 9-0-250640

POSITION	DESCRIPTION		MANUFACTOR	TYPE	S.P.NUMB
	CONNECTION BOX H1275		ESPERA	PRINT NR. 5-0-25064A	600884
C101	CAPACITOR CERAMIC	10nF -20/+80% 50V	#KCK	HE70SJYF103Z	15.170
C102	CAPACITOR CERAMIC	10nF -20/+80% 50V	#KCK	HE70SJYF103Z	15.170
C103	CAPACITOR CERAMIC	10nF -20/+80% 50V	#KCK	HE70SJYF103Z	15.170
C104	CAPACITOR CERAMIC	10nF -20/+80% 50V	#KCK	HE70SJYF103Z	15.170
C105	CAPACITOR CERAMIC	10nF -20/+80% 50V	#KCK	HE70SJYF103Z	15.170
C106	CAPACITOR CERAMIC	10nF -20/+80% 50V	#KCK	HE70SJYF103Z	15.170
C107	CAPACITOR CERAMIC	10nF -20/+80% 50V	#KCK	HE70SJYF103Z	15.170
C108	CAPACITOR CERAMIC	10nF -20/+80% 50V	#KCK	HE70SJYF103Z	15.170
C109	CAPACITOR CERAMIC	10nF -20/+80% 50V	#KCK	HE70SJYF103Z	15.170
C110	CAPACITOR CERAMIC	10nF -20/+80% 50V	#KCK	HE70SJYF103Z	15.170
C111	CAPACITOR CERAMIC	10nF -20/+80% 50V	#KCK	HE70SJYF103Z	15.170
C112	CAPACITOR CERAMIC	10nF -20/+80% 50V	#KCK	HE70SJYF103Z	15.170
C113	CAPACITOR CERAMIC	10nF -20/+80% 50V	#KCK	HE70SJYF103Z	15.170
C114	CAPACITOR CERAMIC	10nF -20/+80% 50V	#KCK	HE70SJYF103Z	15.170
C115	CAPACITOR CERAMIC	10nF -20/+80% 50V	#KCK	HE70SJYF103Z	15.170
C116	CAPACITOR CERAMIC	10nF -20/+80% 50V	#KCK	HE70SJYF103Z	15.170
C117	CAPACITOR CERAMIC	10nF -20/+80% 50V	#KCK	HE70SJYF103Z	15.170
C118	CAPACITOR CERAMIC	10nF -20/+80% 50V	#KCK	HE70SJYF103Z	15.170
C119	CAPACITOR CERAMIC	10nF -20/+80% 50V	#KCK	HE70SJYF103Z	15.170
C120	CAPACITOR CERAMIC	10nF -20/+80% 50V	#KCK	HE70SJYF103Z	15.170
C121	CAPACITOR MKT	100nF 10% 250V	SIEMENS	B32510-D3104-K000	11.309
C122	CAPACITOR ELECTROLYTIC	10uF 20% 35V	* ERO	EKI 00 AA 210 F	14.512
C123	CAPACITOR MKT	47nF 10% 250V	SIEMENS	B32510-D3473-K000	11.303
C124	CAPACITOR MKT	4.7nF 10% 400V	SIEMENS	B32510-D6472-K000	11.373
C125	CAPACITOR ELECTROLYTIC	10uF 20% 35V	* ERO	EKI 00 AA 210 F	14.512
C126	CAPACITOR MKT	47nF 10% 250V	SIEMENS	B32510-D3473-K000	11.303
C127	CAPACITOR MKT	47nF 10% 250V	SIEMENS	B32510-D3473-K000	11.303
C128	CAPACITOR MKT	4.7nF 10% 400V	SIEMENS	B32510-D6472-K000	11.373
C129	CAPACITOR ELECTROLYTIC	10uF 20% 35V	* ERO	EKI 00 AA 210 F	14.512
C130	CAPACITOR CERAMIC	10nF -20/+80% 50V	#KCK	HE70SJYF103Z	15.170
C131	CAPACITOR CERAMIC	10nF -20/+80% 50V	#KCK	HE70SJYF103Z	15.170
D101	DIODE	1N4148	* ITT	1N4148	25.131
D102	DIODE	1N4148	* ITT	1N4148	25.131
D103	DIODE	1N4148	* ITT	1N4148	25.131
D104	DIODE	1N4148	* ITT	1N4148	25.131
D105	DIODE	1N4148	* ITT	1N4148	25.131
FP101	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201 405 442 075 021	35.011
FP102	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201 405 442 075 021	35.011
FP103	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201	35.011

H1238/9-86

POSITION	DESCRIPTION		MANUFACTOR	TYPE	S.P.NUMB
				405 442 075 021	
FP104	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201 405 442 075 021	35.011
FP105	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201 405 442 075 021	35.011
FP106	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201 405 442 075 021	35.011
FP107	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201 405 442 075 021	35.011
FP108	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201 405 442 075 021	35.011
FP109	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201 405 442 075 021	35.011
FP110	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201 405 442 075 021	35.011
FP111	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201 405 442 075 021	35.011
FP112	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201 405 442 075 021	35.011
FP113	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201 405 442 075 021	35.011
FP114	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201 405 442 075 021	35.011
FP115	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201 405 442 075 021	35.011
FP116	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201 405 442 075 021	35.011
FP117	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201 405 442 075 021	35.011
FP118	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201 405 442 075 021	35.011
FP119	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201 405 442 075 021	35.011
FP120	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201 405 442 075 021	35.011
FP121	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201 405 442 075 021	35.011
FP123	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201 405 442 075 021	35.011
FP124	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201 405 442 075 021	35.011
FP125	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201 405 442 075 021	35.011
FP126	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201	35.011

POSITION	DESCRIPTION		MANUFACTOR	TYPE	S.P.NUMB
FP127	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	405 442 075 021 HZ4,2/2,1/7A K1201 405 442 075 021	35.011
FP128	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201 405 442 075 021	35.011
FP129	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201 405 442 075 021	35.011
FP130	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201 405 442 075 021	35.011
FP131	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201 405 442 075 021	35.011
FP132	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201 405 442 075 021	35.011
FP133	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201 405 442 075 021	35.011
FP134	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201 405 442 075 021	35.011
FP135	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201 405 442 075 021	35.011
FP136	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201 405 442 075 021	35.011
FP137	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201 405 442 075 021	35.011
FP138	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201 405 442 075 021	35.011
FP139	FERRITE BEAD	HZ4,2/2,1/7A K1201	KASCHKE	HZ4,2/2,1/7A K1201 405 442 075 021	35.011
IC101	INTEGRATED CIRCUIT	LM1458N	PHILIPS	LM1458N	31.015
OC101	OPTO COUPLER	4N32	MOTOROLA	4N32	32.510
OC102	OPTO COUPLER	4N32	MOTOROLA	4N32	32.510
OC103	OPTO COUPLER	4N32	MOTOROLA	4N32	32.510
OC104	OPTO COUPLER	4N32	MOTOROLA	4N32	32.510
OC105	OPTO COUPLER	4N32	MOTOROLA	4N32	32.510
OC106	OPTO COUPLER	4N32	MOTOROLA	4N32	32.510
OC107	OPTO COUPLER	4N32	MOTOROLA	4N32	32.510
OC108	OPTO COUPLER	4N32	MOTOROLA	4N32	32.510
OC109	OPTO COUPLER	4N32	MOTOROLA	4N32	32.510
OC110	OPTO COUPLER	4N32	MOTOROLA	4N32	32.510
OC111	OPTO COUPLER	4N32	MOTOROLA	4N32	32.510
R101	RESISTOR	4.7 KOHM 5% 0.33W	PHILIPS	2322 181 53472	01.216
R102	RESISTOR	4.7 KOHM 5% 0.33W	PHILIPS	2322 181 53472	01.216
R103	RESISTOR	4.7 KOHM 5% 0.33W	PHILIPS	2322 181 53472	01.216
R104	RESISTOR	4.7 KOHM 5% 0.33W	PHILIPS	2322 181 53472	01.216
R105	RESISTOR	6.8 KOHM 5% 0.33W	PHILIPS	2322 181 53682	01.220

POSITION	DESCRIPTION		MANUFACTOR	TYPE	S.P.NUMB
R106	RESISTOR	1 KOHM 5% 0.33W	PHILIPS	2322 181 53102	01.200
R107	RESISTOR	4.7 KOHM 5% 0.33W	PHILIPS	2322 181 53472	01.216
R108	RESISTOR	4.7 KOHM 5% 0.33W	PHILIPS	2322 181 53472	01.216
R109	RESISTOR	2.2 KOHM 5% 0.33W	PHILIPS	2322 181 53222	01.208
R110	RESISTOR	4.7 KOHM 5% 0.33W	PHILIPS	2322 181 53472	01.216
R111	RESISTOR	4.7 KOHM 5% 0.33W	PHILIPS	2322 181 53472	01.216
R112	RESISTOR	2.2 KOHM 5% 0.33W	PHILIPS	2322 181 53222	01.208
R113	RESISTOR	4.7 KOHM 5% 0.33W	PHILIPS	2322 181 53472	01.216
R114	RESISTOR	4.7 KOHM 5% 0.33W	PHILIPS	2322 181 53472	01.216
R115	RESISTOR	2.2 KOHM 5% 0.33W	PHILIPS	2322 181 53222	01.208
R116	RESISTOR	4.7 KOHM 5% 0.33W	PHILIPS	2322 181 53472	01.216
R117	RESISTOR	4.7 KOHM 5% 0.33W	PHILIPS	2322 181 53472	01.216
R118	RESISTOR	2.2 KOHM 5% 0.33W	PHILIPS	2322 181 53222	01.208
R119	RESISTOR	4.7 KOHM 5% 0.33W	PHILIPS	2322 181 53472	01.216
R120	RESISTOR	4.7 KOHM 5% 0.33W	PHILIPS	2322 181 53472	01.216
R121	RESISTOR	4.7 KOHM 5% 0.33W	PHILIPS	2322 181 53472	01.216
R122	RESISTOR	4.7 KOHM 5% 0.33W	PHILIPS	2322 181 53472	01.216
R123	RESISTOR	4.7 KOHM 5% 0.33W	PHILIPS	2322 181 53472	01.216
R124	RESISTOR	4.7 KOHM 5% 0.33W	PHILIPS	2322 181 53472	01.216
R125	RESISTOR	4.7 KOHM 5% 0.33W	PHILIPS	2322 181 53472	01.216
R126	RESISTOR	4.7 KOHM 5% 0.33W	PHILIPS	2322 181 53472	01.216
R127	RESISTOR	6.8 KOHM 5% 0.33W	PHILIPS	2322 181 53682	01.220
R128	RESISTOR	1 KOHM 5% 0.33W	PHILIPS	2322 181 53102	01.200
R129	RESISTOR	100 OHM 5% 0.33W	PHILIPS	2322 181 53101	01.175
R130	RESISTOR	1 KOHM 5% 0.33W	PHILIPS	2322 181 53102	01.200
R131	RESISTOR	1 KOHM 5% 0.33W	PHILIPS	2322 181 53102	01.200
R132	RESISTOR	47 KOHM 5% 0.33W	PHILIPS	2322 181 53473	01.241
R133	RESISTOR	47 KOHM 5% 0.33W	PHILIPS	2322 181 53473	01.241
R134	RESISTOR	4.7 KOHM 5% 0.33W	PHILIPS	2322 181 53472	01.216
R135	RESISTOR	4.7 KOHM 5% 0.33W	PHILIPS	2322 181 53472	01.216
R136	RESISTOR	4.7 KOHM 5% 0.33W	PHILIPS	2322 181 53472	01.216
R137	RESISTOR	47 KOHM 5% 0.33W	PHILIPS	2322 181 53473	01.241
R138	RESISTOR	47 KOHM 5% 0.33W	PHILIPS	2322 181 53473	01.241
R139	RESISTOR	4.7 KOHM 5% 0.33W	PHILIPS	2322 181 53472	01.216
R140	RESISTOR	4.7 KOHM 5% 0.33W	PHILIPS	2322 181 53472	01.216
R141	RESISTOR	2.2 KOHM 5% 0.33W	PHILIPS	2322 181 53222	01.208
R142	RESISTOR	4.7 KOHM 5% 0.33W	PHILIPS	2322 181 53472	01.216
R143	RESISTOR	4.7 KOHM 5% 0.33W	PHILIPS	2322 181 53472	01.216
T101	TRANSISTOR	BC328	MOTOROLA	BC328	28.050
T102	TRANSISTOR	BC328	MOTOROLA	BC328	28.050
TR101	TRANSFORMER	TD2296	TRADANIA	TD2296	22.130

H1238 GRØN

CONTENTS

7. GENERAL DESCRIPTION SAILOR 1000/B, 1250W - RACK H1238

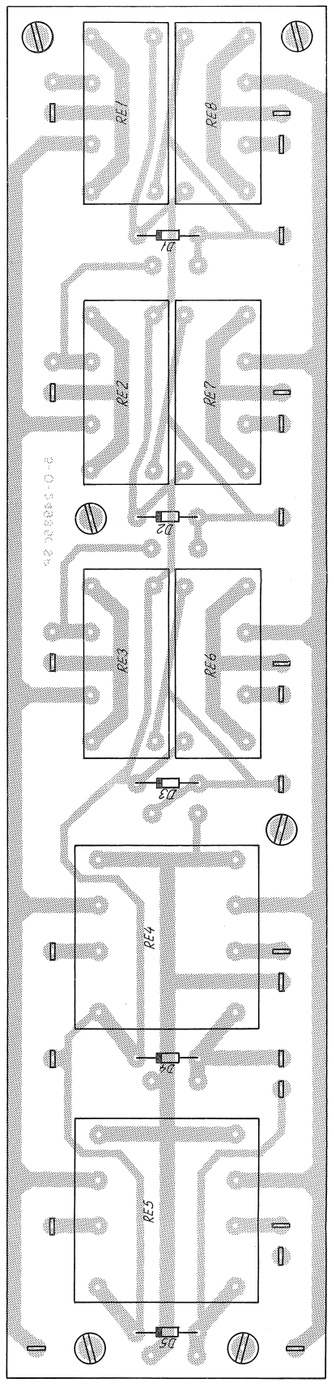
The rack contains the main switch board and the lowpass filter unit.

The main switch board is located at the bottom of the rack, see fig. 1.

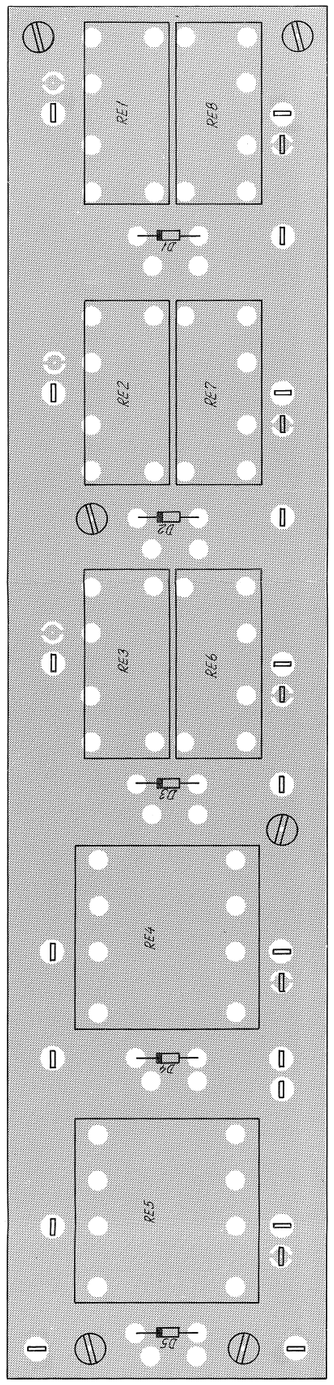
The lowpass filter is located at the rear side of the rack, see fig. 2.

All interconnections between units in the rack is one Hairness cable.

FILTER SWITCH UNIT (MODULE 2/200)



View from component side with lower side tracks.



View from component side with upper side tracks.

T1130, T1135

4-6-24985 A

H1238
4-0-24985B

LP-FILTER 16.9-28 MHz (module 6/600)
C1 26p7 C2 36p5 L1 214n L2 146n L3 530n L4 542n L5 542n L6 530n C3 147p C4 163p C5 147p
R5-10 100

LP-FILTER 8.5 - 16.9 MHz (module 5/500)
C1 50p2 C2 68p7 L1 404n L2 275n L3 530n L4 940n L5 940n L6 530n C3 255p C4 282p C5 255p
R4-10 100

LP-FILTER 4.3 - 8.5 MHz (module 4/400)
C1 99p1 C2 136p L1 798n L2 545n L3 1µ06 L4 1µ87 L5 1µ87 L6 1µ06 C3 508p C4 536p C5 508p
R3-10 100

LP-FILTER 2.6 - 4.3 MHz (module 8/800)
C1 164p C2 225p L1 1µ32 L2 901n L3 2µ09 L4 3µ70 L5 3µ70 L6 2µ09 C3 1n0 C4 1n1 C5 1n0
R2-10 100

LP-FILTER 1.6 - 2.6 MHz (module 7/700)
C1 267p C2 365p L1 2µ1 L2 1µ5 L3 3µ6 L4 6µ9 L5 6µ9 L6 3µ6 C3 1n9 C4 2n1 C5 1n9
R1-10 100

FILTER SWITCH UNIT (module 2/200)

From LP-FILTER 6 — To LP-FILTER 6 — RE8 RE1 D1 BAV21
From LP FILTER 5 — To LP-FILTER 5 — RE7 RE2 D2 BAV21
From LP FILTER 4 — To LP-FILTER 4 — RE6 RE3 D3 BAV21
From LP-FILTER 8 — To LP-FILTER 8 — RE4 D4 BAV21
From LP-FILTER 7 — To LP-FILTER 7 — RE5 D5 BAV21
+22V
5-0-24985

RED FILTER 7 control
WHITE FILTER 8 control
YELLOW FILTER 4 control
GREEN FILTER 5 control
BLUE FILTER 6 control
BROWN

1 4 7 10 13
2 5 8 11 14
3 6 9 12 15

RF-out
RF-in

LP-FILTER UNIT H1238 (module 10/1000)

7.2 SCHEMATIC DIAGRAM OF LP FILTER UNIT

H1238.

Tg. 4-0-23254L

TO PIN/PRINT NUMBER	COLOUR		FUNCTION
F4	WHITE/BLUE	0.5°	+22V TO Ex
C7	WHITE/GREY		-45V TO Rx
C1	GREEN/BLACK	0.5°	+8V TO Rx
C11	BROWN	0.5°	+22V TO Rx
G41	BROWN/GREEN		Rx ON
G34	RED/WHITE	0.5°	+22V TO RT1500
F6	WHITE		-45V TO Ex
F5	GREEN/WHITE	0.5°	+8V TO Ex
G30	BROWN/ORANGE		CONTROL IN
G26	GREY	0.5°	GROUND FROM TH30
F35	BLACK	0.5°	S BAND CONTROL
C3	BLACK/GREY	0.5°	GROUND
F16	BROWN/YELLOW		Y BAND CONTROL
F15	WHITE/VIOLET		X BAND CONTROL
F14	BROWN/WHITE		V BAND CONTROL
F13	BLACK/GREEN		T BAND CONTROL
G19	WHITE/BLUE		TRANSMITTER START
F19	RED/GREY		TUNE LAMP
F18	BLUE/YELLOW		TUNE
F17	BROWN/BLUE		Z BAND CONTROL
G10	WHITE/ORANGE		HT ON
F23	BROWN/RED		DRIVE LEVEL 2
F22	BLACK/WHITE		DRIVE LEVEL 1
F21	BLUE/ORANGE		BLOCK
G20	RED/YELLOW		EXT Tx BLOCK
F27	RED/BLUE		METER +
F26	BLACK/BLUE		METER -
G6	RED/WHITE		TUNE READY
GV2	BROWN/GREY		START PU 1
G33	RED/GREEN		CONTROL 3 OUT
G37	RED/ORANGE		DUMMYLOAD
G7	ORANGE/GREY		OPEN Tx
G32	YELLOW/GREY		-45V
G39	BLACK/YELLOW		ON
G35	BLACK/RED		+22V
G43	BROWN/BLACK		+BAT

MOLEX PLUG D TO TH30

TO PIN/PRINT NUMBER	COLOUR		FUNCTION
D4	WHITE/BLUE	0.5°	+22V TO Ex
G16	BROWN/ORANGE		RELAY BLOCK
G14	GREEN/BLUE		SIMPLEX RELAY Rx
G44	WHITE/ORANGE		AF FROM MIKE
G5	ORANGE/GREEN		TT FROM TELEX
G8	RED/ORANGE		AF FROM TELEX
D6	WHITE		-45V TO Ex
D5	GREEN/WHITE	0.5°	+8V TO Ex
G24	WHITE/ORANGE	0.5°	AF TO Tx
G3	BLACK/RED		DATA FROM TELEX
G12	RED/GREEN		+22V FROM KEY
D16	BROWN/YELLOW		Y BAND CONTROL
D15	WHITE/VIOLET		X BAND CONTROL
D14	BROWN/WHITE		V BAND CONTROL
D13	BLACK/GREEN		T BAND CONTROL
G18	YELLOW/GREEN		TRANSMITTER START
D19	RED/GREY		TUNE LAMP
D18	BLUE/YELLOW		TUNE
D17	BROWN/BLUE		Z BAND CONTROL
G9	WHITE/YELLOW		HT ON
D23	BROWN/RED		DRIVE LEVEL 2
D22	WHITE/BLACK		DRIVE LEVEL 1
D21	BLUE/ORANGE		BLOCK
G28	GREEN/GREY		AF TO MICROTELEPHONE
D27	RED/BLUE		METER +
D26	BLUE/BLACK		METER -
G4	BLACK/YELLOW		CLOCK FROM TELEX
G31	WHITE/GREEN		+22V SIMPLEX
G46	WHITE/RED		GROUND FOR MIKE AND TELEX
G36	BLACK/GREY		DUMMYLOAD
G29	BLUE/GREY		OPEN Tx
G11	YELLOW/GREY		+22V TO TCXO
D10	BLACK	0.5°	S BAND CONTROL
G45	WHITE/GREY		HANDSET KEY
G22	WHITE/BROWN	0.5°	AF TO Rx

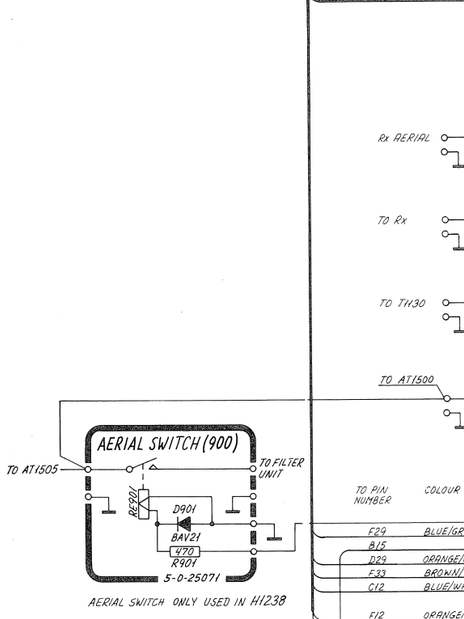
MOLEX JACK F TO S1302/3/4

TO PIN/PRINT NUMBER	COLOUR		FUNCTION
G1	WHITE/VIOLET		AF TO TELEX
D9	GREY/BLACK	0.5°	GROUND
D2	GREEN/BLACK	0.5°	+8V TO Rx
G2			AF TO TELEX
D3	WHITE/GREY		-45V TO Rx
G23	BLUE/WHITE	0.5°	AF TO Rx
D1	BROWN	0.5°	+22V TO Rx
G17	GREY/BLACK		Rx BLOCK
G21	BROWN/BLACK		Rx BLOCK
G25	WHITE/GREEN	0.5°	AF TO Tx
G15	BLUE/BLACK		SIMPLEX RELAY
G27	GREEN		Rx ON
G13	WHITE/BLACK	0.5°	GROUND FOR EXT. LOUDSPEAKER
G40	BLUE/ORANGE		Rx ON

MOLEX JACK C TO R1149/20

MOLEX JACK E TO TH30

TO PIN NUMBER	COLOUR	FUNCTION
H26	YELLOW/WHITE	CONTROL 1 RT1500
H25	PINK	CONTROL 2 RT1500
H24	WHITE	CONTROL 3 RT1500
H23	YELLOW	CONTROL 4 RT1500
H22	GREEN	CONTROL 5 RT1500
H21	GREY	CONTROL 6 RT1500
H20	WHITE/GREEN	CONTROL 7 RT1500
H19	BLUE	CONTROL 8 RT1500
H18	RED/BLUE	CONTROL 9 RT1500
H17	YELLOW/BROWN	CONTROL 10 RT1500
H16	BLACK	CONTROL 11 RT1500
H14	GREY/BROWN	INVALID TUNING/TBD
H1	WHITE/GREY	MOTOR/AERIAL CURR
H2	RED	AERIAL CURRENT
H3	VIOLET	AERIAL RELAY



AERIAL SWITCH ONLY USED IN H1238

TO PIN NUMBER	COLOUR		PRINT NUMBER	FUNCTION
F29	BLUE/GREY		G29	OPEN Tx
B15				OPEN Tx
D29	ORANGE/GREY		G7	OPEN Tx
F33	BROWN/WHITE	0.5°	G22	AF TO Rx
C12	BLUE/WHITE	0.5°	G23	AF TO Rx
F12	ORANGE/WHITE	0.5°	G24	AF TO Tx
C20	GREEN/WHITE	0.5°	G25	AF TO Tx
B24				EXT L.S
B25				AUX

TO PIN NUMBER	COLOUR		PRINT NUMBER	FUNCTION
D11	GREY	0.5°	G26	GROUND
B13				AF TO TELEPHONE
B23				TRANSMITTER START
D26	BLUE/WHITE		G19	TRANSMITTER START
F20	YELLOW/GREEN		G18	TRANSMITTER START
F28	GREEN/GREY		G28	AF TO MICROTELEPHONE
B4				AF TO TELEX
C8	WHITE/BLACK		G2	AF TO TELEX
B5				AF TO TELEX
C4	WHITE/VIOLET		G1	AF TO TELEX
C27	BLUE/ORANGE		G40	Rx ON
D8	BROWN/GREEN		G41	Rx ON
D28	RED/YELLOW		G20	EXT Tx BLOCK
B19				EXT Tx BLOCK
B6				DF
B7				DF
B8				+22V TO TCXO
F32	GREEN/WHITE		G31	+22V SIMPLEX
D12	BROWN/ORANGE		G30	CONTROL 3 IN
D36	YELLOW/GREY		G32	-45V
D7	RED/WHITE		G34	+22V TO RT1500
B26				AUX
D31	RED/GREEN		G33	CONTROL 3 OUT
D32	BROWN/GREY		G42	START PU 1
F30	BLACK/GREY		G36	DUMMYLOAD
D30	RED/ORANGE		G37	DUMMYLOAD
B18				+22V
D34	BLACK/RED		G35	+22V
D35	BLACK/YELLOW		G39	ON
F36	YELLOW/GREY		G11	+22V TO TCXO
D33	BROWN/BLACK		G43	MAINS

TO PIN NUMBER	COLOUR		PRINT NUMBER	FUNCTION
C28	BLACK/WHITE	0.5°	G13	GROUND FOR E
B21				GROUND FOR E
B11				GROUND F MIK
F34	RED/WHITE		G46	GROUND F MIK
F34	GREY/WHITE		G45	HANDSET KEY
B12				HANDSET KEY
B10				AF FROM MIKE
F1	ORANGE/WHITE		G44	AF FROM MIKE
F24	YELLOW/WHITE		G9	HT ON
D24	ORANGE/WHITE		G10	HT ON
B17				HT ON
B22				MUTE
F2	GREEN/BLUE		G14	SIMPLEX RELA
F3	BROWN/ORANGE		G16	Rx BLOCK
C9	GREY/BLACK		G17	Rx BLOCK
C13	BROWN/BLACK		G21	Rx BLOCK
C17	BLUE/BLACK		G15	SIMPLEX RELA
C23	GREEN		G27	Rx ON
B9				GROUND
B20				+22V FROM K
F9	RED/GREEN		G12	+22V FROM K
F7	RED/ORANGE		G8	AF FROM TELE
B16				AF FROM TELE
B14				TUNE READY
D25	RED/WHITE		G6	TUNE READY
F8	ORANGE/GREEN		G5	TT FROM TELE
B1				TT FROM TELE
B2				CLOCK FROM
F25	BLACK/YELLOW		G4	CLOCK FROM
F11	BLACK/RED		G3	DATA FROM T
B3				DATA FROM T

* Strap in S1-C Loudspeaker on in duplex

* Strap in S1-D Loudspeaker on in Simplex

AUX.	EXTERN LOUDSP.

Two Aerials DUPLEX	Two Aerials SIMPLEX	One Aerial SIMPLEX NORMAL	One Aerial SIMPLEX NARROW	GROUND AERIAL	D.F.	DUMMY LORD HEAT

OFF	Rx ONLY	ON

CABLE BETWEEN TH130 AND H1233

MOLEX JACK F TO S1302/3/4

TO PIN/PRINT NUMBER	COLOUR		FUNCTION
G1	WHITE/VIOLET		RF TO TELEX
D9	GREY/BLACK	0.5²	GROUND
D2	GREEN/BLACK	0.5²	+8V TO Rx
G2			RF TO TELEX
D3	WHITE/GREY		-45V TO Rx
G23	BLUE/WHITE	0.5²	RF TO Rx
D1	BROWN	0.5²	+22V TO Rx
G17	GREY/BLACK		Rx BLOCK
G21	BROWN/BLACK		Rx BLOCK
G25	WHITE/GREEN	0.5²	RF TO Tx
G15	BLUE/BLACK		SIMPLEX RELAY
G27	GREEN		Rx ON
G13	WHITE/BLACK	0.5²	GROUND FOR EXT. LOUDSPEAKER
G40	BLUE/ORANGE		Rx ON

MOLEX JACK C TO R1119/20

MOLEX JACK E TO TH130

TO PIN NUMBER	COLOUR	FUNCTION
H26	YELLOW/WHITE	CONTROL 1 AT1500
H25	PINK	CONTROL 2 AT1500
H24	WHITE	CONTROL 3 AT1500
H23	YELLOW	CONTROL 4 AT1500
H22	GREEN	CONTROL 5 AT1500
H21	GREY	CONTROL 6 AT1500
H20	WHITE/GREEN	CONTROL 7 AT1500
H19	BLUE	CONTROL 8 AT1500
H18	RED/BLUE	CONTROL 9 AT1500
H17	YELLOW/BROWN	CONTROL 10 AT1500
H16	BLACK	CONTROL 11 AT1500
H14	GREY/BROWN	INVALID TUNING/180°
H1	WHITE/GREY	MOTOR/AERIAL CURRENT
H2	RED	AERIAL CURRENT
H3	VIOLET	AERIAL RELAY

BLUE AMP JACK H FOR H1233

TO PIN NUMBER	FUNCTION
E1	CONTROL 1 AT1500
E2	CONTROL 2 AT1500
E3	CONTROL 3 AT1500
E4	CONTROL 4 AT1500
E5	CONTROL 5 AT1500
E6	CONTROL 6 AT1500
E7	CONTROL 7 AT1500
E8	CONTROL 8 AT1500
E9	CONTROL 9 AT1500
E10	CONTROL 10 AT1500
E11	CONTROL 11 AT1500
E15	AERIAL RELAY
E14	AERIAL CURRENT
E12	INVALID TUNING/180°
E13	MOTOR/AERIAL CURRENT

WHITE AMP JACK A FOR H1233

TO PIN NUMBER	FUNCTION
B2	CLOCK FROM TELEX
B1	TT FROM TELEX
B3	DATA FROM TELEX
B16	AF FROM TELEX
B17	HT ON
B11	GROUND FOR MIKE AND TELEX
B19	EXT Tx BLOCK
B10	AF FROM MIKE
B15	OPEN Tx
B13	AF TO TELEPHONE
B8	+22V TO TCXO
B12	HANDSET KEY
B14	TUNE READY
B24	EXT LS
B9	GROUND
B21	GROUND FOR EXT LS
B20	22V FROM KEY
B26	AUX
B5	AF TO TELEX
B25	AUX
B4	AF TO TELEX
B7	DF
B23	TRANSMITTER START
B6	DF
B22	MUTE
B18	+22V

CABLE BETWEEN SWITCH BOARD AND TH130

TO PIN NUMBER	COLOUR		PRINT NUMBER	FUNCTION
D11	GREY	0.5²	G26	GROUND
B13				RF TO TELEPHONE
B23				TRANSMITTER START
D20	BLUE/WHITE		G19	TRANSMITTER START
F20	YELLOW/GREEN		G18	TRANSMITTER START
F28	GREEN/GREY		G28	RF TO MICROTELEPHONE
B4				RF TO TELEX
C8	WHITE/BLACK		G2	RF TO TELEX
B5				RF TO TELEX
C4	WHITE/VIOLET		G1	RF TO TELEX
C27	BLUE/ORANGE		G40	Rx ON
D8	BROWN/GREEN		G41	Rx ON
D28	RED/YELLOW		G20	EXT Tx BLOCK
B19				EXT Tx BLOCK
B6				DF
B7				DF
B8				+22V TO TCXO
F32	GREEN/WHITE		G31	+22V SIMPLEX
D12	BROWN/ORANGE		G30	CONTROL 3 IN
D36	YELLOW/GREY		G32	-45V
D7	RED/WHITE		G34	+22V TO AT1500
B26				AUX
D31	RED/GREEN		G33	CONTROL 3 OUT
D32	BROWN/GREY		G42	START PU 1
F30	BLACK/GREY		G36	DUMMYLOAD
D30	RED/ORANGE		G37	DUMMYLOAD
B18				+22V
D34	BLACK/RED		G35	+22V
D35	BLACK/YELLOW		G39	ON
F36	YELLOW/GREY		G11	+22V TO TCXO
D33	BROWN/BLACK		G43	MAINS

TO PIN NUMBER	COLOUR		PRINT NUMBER	FUNCTION
C28	BLACK/WHITE	0.5²	G13	GROUND FOR EXT L.S.
B21				GROUND FOR EXT L.S.
B11				GROUND F MIKE AND TELEX
F31	RED/WHITE		G46	GROUND F MIKE AND TELEX
F34	GREY/WHITE		G45	HANDSET KEY
B12				HANDSET KEY
B10				AF FROM MIKE
F1	ORANGE/WHITE		G44	AF FROM MIKE
F24	YELLOW/WHITE		G9	HT ON
D24	ORANGE/WHITE		G10	HT ON
B17				HT ON
B22				MUTE
F2	GREEN/BLUE		G14	SIMPLEX RELAY
F3	BROWN/ORANGE		G16	Rx BLOCK
C9	GREY/BLACK		G17	Rx BLOCK
C13	BROWN/BLACK		G21	Rx BLOCK
C17	BLUE/BLACK		G15	SIMPLEX RELAY
C23	GREEN		G27	Rx ON
B9				GROUND
B20				+22V FROM KEY
F9	RED/GREEN		G12	+22V FROM KEY
F7	RED/ORANGE		G8	AF FROM TELEX
B16				AF FROM TELEX
B14				TUNE READY
D25	RED/WHITE		G6	TUNE READY
F8	ORANGE/GREEN		G5	TT FROM TELEX
B1				TT FROM TELEX
B2				CLOCK FROM TELEX
F25	BLACK/YELLOW		G4	CLOCK FROM TELEX
F11	BLACK/RED		G3	DATA FROM TELEX
B3				DATA FROM TELEX

BLUE AMP PLUG B ON SWITCH BOARD H1235

FUNCTION	
AUX	26
RF TO TELEPHONE	25
AUX	24
HANDSET KEY	23
EXT L.S.	22
GROUND FOR MIKE AND TELEX	21
TRANSMITTER START	20
AF FROM MIKE	19
MUTE	18
GROUND	17
GROUND FOR EXT L.S.	16
+22V TO TCXO	15
+22V FROM KEY	14
D.F.	13
EXT Tx BLOCK	12
D.F.	11
+22V	10
RF TO TELEX	9
HT ON	8
RF TO TELEX	7
RF FROM TELEX	6
DATA FROM TELEX	5
OPEN Tx	4
CLOCK FROM TELEX	3
TUNE READY	2
TT FROM TELEX	1

BLUE AMP JACK B FOR SWITCH BOARD H1235

TO PIN NUMBER	FUNCTION
A18	AUX
A22	RF TO TELEPHONE
A17	AUX
A21	HANDSET KEY
A20	EXT L.S.
A24	GROUND FOR MIKE AND TELEX
A2	TRANSMITTER START
A23	AF FROM MIKE
A1	MUTE
A6	GROUND
A19	GROUND FOR EXT L.S.
A8	+22V TO TCXO
A5	+22V FROM KEY
A16	DF
A10	EXT Tx BLOCK
A15	DF
A14	+22V
A4	RF TO TELEX
A11	HT ON
A3	RF TO TELEX
A25	RF FROM TELEX
A12	DATA FROM TELEX
A9	OPEN Tx
A13	CLOCK FROM TELEX
A7	TUNE READY
A26	TT FROM TELEX

D.F. | DUMMY LOAD HEAT | OFF | Rx ONLY | ON

○ INTERCONNECTION CABLE DIAGRAM FOR H1235 AND H1238

7.4 INTERCONNECTION CABLE DIAGRAM FOR H1235 AND H1238.

POSITION	DESCRIPTION		MANUFACTOR	TYPE	S.P.NUMBER
	LP FILTER H1238	for T1135	ESPERA	LP-FILTER f.H1238	700825
-2	FILTER SWITCH H1238	MODULE 2/200	ESPERA	5-0-24985E	600828
C1-4	CAPACITOR MICA	99,1pF	ESPERA	KOND.C41 HP-FILTER 4 3-0-25136	707124
C2-4	CAPACITOR MICA	136pF	ESPERA	KOND.C42 HP-FILTER 4 3-0-25137	707123
C3-4	CAPACITOR MICA	508pF	ESPERA	KOND.C43 LP-FILTER 4 3-0-25138	707111
C4-4	CAPACITOR MICA	536pF	ESPERA	KOND.C44 LP-FILTER 4 3-0-25139	707112
C5-4	CAPACITOR MICA	508pF	ESPERA	KOND.C43 LP-FILTER 4 3-0-25138	707111
C1-5	CAPACITOR MICA	50,2pF	ESPERA	KOND.C51 HP-FILTER 5 3-0-25143	707126
C2-5	CAPACITOR MICA	68,7pF	ESPERA	KOND.C52 HP-FILTER 5 3-0-25144	707125
C3-5	CAPACITOR MICA	255pF	ESPERA	KOND.C53 LP-FILTER 5 3-0-25140	707113
C4-5	CAPACITOR MICA	282pF	ESPERA	KOND.C54 LP-FILTER 5 3-0-25141	707114
C5-5	CAPACITOR MICA	255pF	ESPERA	KOND.C53 LP-FILTER 5 3-0-25140	707113
C1-6	CAPACITOR MICA	26,7pF	ESPERA	KOND.C61 HP-FILTER 6 TG.3-0-25145A	707128
C2-6	CAPACITOR MICA	36,5pF	ESPERA	KOND.C62 HP-FILTER 6 3-0-25146	707127
C3-6	CAPACITOR MICA	147pF	ESPERA	KOND.C63 HP-FILTER 6 3-0-25142	707115
C4-6	CAPACITOR MICA	163pF	ESPERA	KOND.C64 HP-FILTER 6 3-0-25147	707116
C5-6	CAPACITOR MICA	147pF	ESPERA	KOND.C63 HP-FILTER 6 3-0-25142	707115
C1-7	CAPACITOR MICA	267pF	ESPERA	KOND.C71 HP-FILT.7 3-0-25124A	707118
C2-7	CAPACITOR MICA	365pF	ESPERA	KOND.C72 HP-FILT.7 3-0-25125	707117
C3-7	CAPACITOR MICA	1,87nF	ESPERA	KOND.C73 LP-FILTER 7 3-0-25149	700840
C4-7	CAPACITOR MICA	2,05nF	ESPERA	KOND.C74 LP-FILTER 7 3-0-25148	700841
C5-7	CAPACITOR MICA	1,87nF	ESPERA	KOND.C73 LP-FILTER 7 3-0-25149	700840

H1238-1/89

POSITION	DESCRIPTION		MANUFACTOR	TYPE	S.P.NUMBER
C1-8	CAPACITOR MICA	158pF	ESPERA	KOND.C81 HP-FILT.8 TG.3-0-25150	700908
C2-8	CAPACITOR MICA	217pF	ESPERA	KOND.C82 HP-FILT.8 3-0-25151	700900
C3-8	CAPACITOR MICA	1nF	ESPERA	KOND.C83 LP-FILT.8 3-0-25134	707109
C4-8	CAPACITOR MICA	1,1nF	ESPERA	KOND.C84 LP-FILT.8 3-0-25135	707110
C5-8	CAPACITOR MICA	1nF	ESPERA	KOND.C83 LP-FILT.8 3-0-25134	707109
L1-4	INDUCTOR	798nH	ESPERA	6-0-23169B	400317
L2-4	INDUCTOR	545nH	ESPERA	6-0-23170A	400318
L3-4	INDUCTOR	1,06uH	ESPERA	6-0-23175	400323
L4-4	INDUCTOR	1,87uH	ESPERA	6-0-23176	400324
L5-4	INDUCTOR	1,87uH	ESPERA	6-0-23176	400324
L6-4	INDUCTOR	1,06uH	ESPERA	6-0-23175	400323
L1-5	INDUCTOR	404nH	ESPERA	6-0-23171B	400319
L2-5	INDUCTOR	275nH	ESPERA	6-0-23172A	400320
L3-5	INDUCTOR	530nH	ESPERA	6-0-23177	400325
L4-5	INDUCTOR	940nH	ESPERA	6-0-23178	400326
L5-5	INDUCTOR	940nH	ESPERA	6-0-23178	400326
L6-5	INDUCTOR	530nH	ESPERA	6-0-23177	400325
L1-6	INDUCTOR	214nH	ESPERA	6-0-23173C	400321
L2-6	INDUCTOR	146nH	S.P.RADIO	6-0-23174A	400322
L3-6	INDUCTOR	530nH	ESPERA	6-0-23177	400325
L4-6	INDUCTOR	542nH	ESPERA	6-0-23179	400327
L5-6	INDUCTOR	542nH	ESPERA	6-0-23179	400327
L6-6	INDUCTOR	530nH	ESPERA	6-0-23177	400325
L1-7	INDUCTOR	2,14uH	ESPERA	6-0-23163C	400311
L2-7	INDUCTOR	1,46uH	ESPERA	6-0-23164B	400312
L3-7	INDUCTOR	3,6uH	ESPERA	6-0-25076 A	400460
L4-7	INDUCTOR	6,9uH	ESPERA	6-0-25077	400461
L5-7	INDUCTOR	6,9uH	ESPERA	6-0-25077	400461
L6-7	INDUCTOR	3,6uH	ESPERA	6-0-25076 A	400460
L1-8	INDUCTOR	1,32uH	ESPERA	6-0-25121B	400469
L2-8	INDUCTOR	901nH	ESPERA	6-0-25122A	400470
L3-8	INDUCTOR	2,09uH	ESPERA	6-0-23182	400330
L4-8	INDUCTOR	3,7uH	ESPERA	6-0-23181A	400329
L5-8	INDUCTOR	3,7uH	ESPERA	6-0-23181A	400329
L6-8	INDUCTOR	2,09uH	ESPERA	6-0-23182	400330

POSITION	DESCRIPTION		MANUFACTOR	TYPE	S.P.NUMB
	FILTER SWITCH H1238	MODULE 2/200	ESPERA	PRINT NR.5-0-24985C	600828
D1-2	DIODE	BAV21	PHILIPS	BAV21	25.340
D2-2	DIODE	BAV21	PHILIPS	BAV21	25.340
D3-2	DIODE	BAV21	PHILIPS	BAV21	25.340
D4-2	DIODE	BAV21	PHILIPS	BAV21	25.340
D5-2	DIODE	BAV21	PHILIPS	BAV21	25.340
RE1-2	RELAY	24VDC 1SH.8A	SDS	ST1-24V	21.189
RE2-2	RELAY	24VDC 1SH.8A	SDS	ST1-24V	21.189
RE3-2	RELAY	24VDC 1SH.8A	SDS	ST1-24V	21.189
RE4-2	RELAY	24V DC 6A 2 SK	PASI	MZ/K-19C BV1222	21.021
RE5-2	RELAY	24V DC 6A 2 SK	PASI	MZ/K-19C BV1222	21.021
RE6-2	RELAY	24VDC 1SH.8A	SDS	ST1-24V	21.189
RE7-2	RELAY	24VDC 1SH.8A	SDS	ST1-24V	21.189
RE8-2	RELAY	24VDC 1SH.8A	SDS	ST1-24V	21.189

POSITION	DESCRIPTION		MANUFACTOR	TYPE	S.P.NUMBER
	MAIN SWITCH BOARD	MODULE 1/100 H1235/H1238	ESPERA	PRINT NR. 5-0-23415E	607911
C1-1	CAPACITOR MKT	100nF 10% 100V	*SIEMENS	B32510-D1104-K000	11.219
C2-1	CAPACITOR MKT	100nF 10% 100V	*SIEMENS	B32510-D1104-K000	11.219
C3-1	CAPACITOR MKT	100nF 10% 100V	*SIEMENS	B32510-D1104-K000	11.219
C4-1	CAPACITOR MKT	100nF 10% 100V	*SIEMENS	B32510-D1104-K000	11.219
C5-1	CAPACITOR MKT	100nF 10% 100V	*SIEMENS	B32510-D1104-K000	11.219
C6-1	CAPACITOR MKT	100nF 10% 100V	*SIEMENS	B32510-D1104-K000	11.219
C7-1	CAPACITOR MKT	100nF 10% 100V	*SIEMENS	B32510-D1104-K000	11.219
C8-1	CAPACITOR MKT	0.47uF 10% 100V	* ERO	MKT1822	11.077
C9-1	CAPACITOR CERAMIC	10nF -20/+80% 50V	#KCK	HE70SJYF1037	15.170
C10-1	CAPACITOR CERAMIC	10nF -20/+80% 50V	#KCK	HE70SJYF1037	15.170
C11-1	CAPACITOR MKT	10nF 10% 250V	SIEMENS	B32510-D3103-K000	11.290
C12-1	CAPACITOR ELECTROLYTIC	10uF 25V	ERO	EL	14.660
C13-1	CAPACITOR MKT	10nF 10% 400V	* ERO	MKT1822-310/405	12.212
C14-1	CAPACITOR CERAMIC	10nF -20/+80% 50V	#KCK	HE70SJYF1037	15.170
C15-1	CAPACITOR CERAMIC	10nF -20/+80% 50V	#KCK	HE70SJYF1037	15.170
C16-1	CAPACITOR CERAMIC	10nF -20/+80% 50V	#KCK	HE70SJYF1037	15.170
C17-1	CAPACITOR CERAMIC	10nF -20/+80% 50V	#KCK	HE70SJYF1037	15.170
C18-1	CAPACITOR ELECTROLYTIC	10uF 25V	ERO	EL	14.660
C19-1	CAPACITOR MKT	0.33uF 10% 250V	*ERO	MKT1822	11.106
C20-1	CAPACITOR MKT	0.33uF 10% 250V	*ERO	MKT1822	11.106
C21-1	CAPACITOR CERAMIC	1.8nF -20/+80% 400V	FERROPERM	9/0141/9	15.735
C22-1	CAPACITOR CERAMIC	1.8nF -20/+80% 400V	FERROPERM	9/0141/9	15.735
C23-1	CAPACITOR ELECTROLYTIC	4.7uF 20% 50V	* ERO	ERI 00 AA 147 H	14.510
D1-1	DIODE	1N4148	* ITT	1N4148	25.131
D2-1	DIODE	1N4148	* ITT	1N4148	25.131
D3-1	DIODE	1N4148	* ITT	1N4148	25.131
D4-1	DIODE	1N4148	* ITT	1N4148	25.131
D5-1	DIODE	1N4148	* ITT	1N4148	25.131
FP1-1	FERRITE BEAD	HZ4/2/2/1/7A K1201	KASCHKE	HZ4/2/2/1/7A K1201 405 442 075 021	35.011
IC1-1	INTEGRATED CIRCUIT	MC1458CP1	* MOTOROLA	MC1458CP1	31.215
J1-1	PLUG (FEMALE)	MEB 60HDK	HIRSCHMANN	973031-100DK 6 pole Female for Chassis	78.316
J2-1	PLUG (FEMALE)	MEB 60HDK	HIRSCHMANN	973031-100DK 6 pole Female for Chassis	78.316
PLUG B	PLUG 26 POLE (MALE)	(BLUE AMP)	AMP	827880-3	78.008
R1-1	RESISTOR	390 OHM 5% 0.33W	PHILIPS	2322 181 53391	01.189
R2-1	RESISTOR	390 OHM 5% 0.33W	PHILIPS	2322 181 53391	01.189
R3-1	RESISTOR	390 OHM 5% 0.33W	PHILIPS	2322 181 53391	01.189
R4-1	RESISTOR	390 OHM 5% 0.33W	PHILIPS	2322 181 53391	01.189
R5-1	RESISTOR	390 OHM 5% 0.33W	PHILIPS	2322 181 53391	01.189

POSITION	DESCRIPTION		MANUFACTOR	TYPE	S.P.NUMBER
R6-1	RESISTOR	390 OHM 5% 0.33W	PHILIPS	2322 181 53391	01.189
R7-1	RESISTOR	150 OHM 5% 0.33W	PHILIPS	2322 181 53151	01.179
R8-1	RESISTOR	150 OHM 5% 0.33W	PHILIPS	2322 181 53151	01.179
R9-1	RESISTOR	18 KOHM 5% 0.33W	PHILIPS	2322 181 53183	01.231
R10-1	RESISTOR	2.7 KOHM 5% 0.33W	PHILIPS	2322 181 53272	01.210
R11-1	RESISTOR	2.7 KOHM 5% 0.33W	PHILIPS	2322 181 53272	01.210
R12-1	POTENTIOMETER TRIMMING	2.2 KOHM 20% 0.05W	PHILIPS	2322 410 03355	07.572
R13-1	RESISTOR	10 KOHM 5% 0.33W	PHILIPS	2322 181 53103	01.225
R14-1	RESISTOR	22 OHM 5% 0.33W	PHILIPS	2322 181 53229	01.158
R15-1	RESISTOR	4.7 KOHM 5% 0.33W	PHILIPS	2322 181 53472	01.216
R16-1	RESISTOR	560 OHM 5% 0.33W	PHILIPS	2322 181 53561	01.193
R17-1	RESISTOR	10 KOHM 5% 0.33W	PHILIPS	2322 181 53103	01.225
R18-1	RESISTOR	47 KOHM 5% 0.33W	PHILIPS	2322 181 53473	01.241
R19-1	RESISTOR	4.7 KOHM 5% 0.33W	PHILIPS	2322 181 53472	01.216
R20-1	RESISTOR	4.7 KOHM 5% 0.33W	PHILIPS	2322 181 53472	01.216
R21-1	RESISTOR	4.7 KOHM 5% 0.33W	PHILIPS	2322 181 53472	01.216
R22-1	RESISTOR	1 KOHM 5% 0.33W	PHILIPS	2322 181 53102	01.200
R23-1	RESISTOR	6.8 KOHM 5% 0.33W	PHILIPS	2322 181 53682	01.220
R24-1	RESISTOR	100 OHM 5% 0.33W	PHILIPS	2322 181 53101	01.175
RE1-1	RELAY	NF2E-12V	*MEW	NF2E-12V	21.193
RE2-1	RELAY	15V DC 2A 1 SK.	SIEMENS	V23040-A0003-B101	21.061
RE3-1	RELAY	15V DC 3A 1 SK.	NATIONAL	DR-15V	21.190
RE4-1	RELAY	LZ12H-12V	TAKAMISAWA	LZ12H-12V	21.136
S1-1	SWITCH	2xF20	ITT SCHADOW	11025-02004	43.501
S2-1	SWITCH	7xF20	ITT SCHADOW	11075-04001	43.508
S3-1	SWITCH	3xF20	ITT SCHADOW	11035-02001	43.502
T1-1	TRANSISTOR	BC640	PHILIPS	BC640	28.124
T2-1	TRANSISTOR	BC548B	* PHILIPS	BC548B	28.076
T3-1	TRANSISTOR	BC328	MOTOROLA	BC328	28.050
	AERIAL SWITCH H1238	MODULE 9/900 H1238	ESPERA	AERIAL SWITCH 5-0-25071A	600922
D1-9	DIODE	BAV21	PHILIPS	BAV21	25.340
R1-9	RESISTOR	470 OHM 5% 0.33W	PHILIPS	2322 181 53471	01.191
RE1-9	REED RELAY	12VDC 1MAKE 6A	FR ELECTRONICS	R09-1023	21.325