



Sailor

Rx - R 1117

Sailor

**MONTERINGSFORSKRIFTER FOR
SAILOR KORTBØLGE PROGRAM**

**MOUNTING INSTRUCTIONS FOR
SAILOR SHORT-WAVE PROGRAM**



A/S S. P. RADIO · AALBORG · DENMARK

MOUNTING INSTRUCTIONS FOR SAILOR SHORT-WAVE PROGRAM

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DIMENSIONAL DRAWINGS AND MOUNTING INSTRUCTIONS FOR:

- FIG. 1, SAILOR short-wave station mounted on bulkhead or bulkhead/tabletop. Transmitter T1127 mounted in the cabinet. With one or two power supplies or with one power supply and battery charger.
- FIG. 2, SAILOR short-wave station mounted on bulkhead or bulkhead/tabletop. Remote control unit H1200 mounted in the cabinet. Transmitter T1127 remote-controlled. With one or two power supplies or one power supply and battery charger.
- FIG. 3, SAILOR short-wave station mounted free-standing on table-top. Transmitter T1127 mounted in the cabinet. With one or two power supplies or with one power supply and battery charger.
- FIG. 4, SAILOR short-wave station mounted free-standing on table-top. Remote control H1200 mounted in the cabinet. Transmitter T1127 remote-controlled. With one or two power supplies or with one power supply and battery charger.
- FIG. 5, Transmitter T1127 when remote-controlled.

CONNECTIONS ON MOUNTING PLATE AND INFORMATION ABOUT CABLE TYPES, EARTHBAND ETC, FOR:

- FIG. 6, Mounting plate for SAILOR short-wave station.
- FIG. 7, Mounting plate for remote control unit H1200 and transmitter T1127 when remote-controlled.
- FIG. 8, How to place the units in the cabinet at servicing and when the cables are to be connected.

GENERAL

It is the object of the present manual to give the information necessary to prepare and carry out a correct installation of a SAILOR short-wave station.

Therefore in this manual further to the information about the mechanical dimensions, the dimensions of bolts etc., information will also be given about the choice and installation of cables, aerials and earthbands.

When the station has been installed as described in this manual, it must be run in and tuned up. The procedures to follow will appear from the technical manuals for transmitter and receiver respectively.

TRANSMITTER AERIAL

The transmitter (T1127) is constructed for the type of aerial which will give the best radiation diagram, namely a vertical (or approximately vertical) aerial, which is 10-21 metres long measured from the front panel insulator on T1127 to the top of the aerial.

Out of consideration for the range covered on the high short-wave bands a short aerial should be selected. However it must be considered that as large a part of the aerial as possible will be able to radiate the horizon round. In order to obtain this it may, under certain circumstances, be necessary to use a rather longer aerial than recommended. The length of the aerial, in which the transmitter can be tuned, will depend on the highest used frequency in the range 1,6 - 4 MHz, or in other words, if the transmitter can be tuned in the highest frequency in the range 1,6 - 4 MHz, the aerial is not too long. If the highest frequency is for instance 3,5 MHz, the max. aerial length will be about 26 meters.

The aerial can be either a wire-aerial, a whip aerial or a whip aerial placed high, with the leading-down between whip and deckhead insulator of aerial wire which is functioning as part of the aerial.

Aerials with built-in coils (loaded whips) should under no circumstances be used.

The transmitter aerial must be placed as clear as in any way possible.

From the deckhead insulator to the front panel insulator of T1127 the signal is led through a feeder, which can be made either of 8 - 12 mm copper tube or of aerial wire. The feeder is placed on stand-off insulators in such manner that there is a distance of at least 50 mm between the feeder and the deckhouse roof, the deck or the bulkhead. The feeder must be as short as in any way possible, and it should be no longer than 10% of the total length of the aerial. Should it not be possible to keep the aerial feeder inside the prescribed lengths, the output stage of the transmitter is to be placed at the footpoint of the aerial and to be remote-controlled from the station by means of H1200.

RECEIVER AERIAL

For receiver 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 aerial to receiver use 50 ohm coaxial cable of good quality e.g. RG213U. If there is any danger of pick up on the cable from other installations, use triaxial cable or double screened cable, which as far as impedance and loss are concerned is equivalent to RG213U.

At the footpoint of 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 screen of the coaxial cable and the connection box must be effectively earthed (RF earth) to mast or the like, on which the aerial is mounted

The aerial must be placed as high and as 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 aerial forms with the transmitter aerial, is as large as possible.

MOUNTING

The basic principle of the mounting is a mounting plate belonging to the station. Start mounting by fixing the mentioned mounting plate where required, after which the necessary connections are to be made to the terminal strips on the plate.

Then hang the cabinet into place on the mounting plate and mount the various units therein.

The first step in the mounting procedure will be to find out, which of the fig.s 1 - 4, both included, is applying to the type of station to be mounted (see CONTENTS at the beginning of this manual). The further procedure to be followed will then appear from the drawing in question and from the paragraphs TRANSMITTER AERIAL, RECEIVER AERIAL and EARTHING.

EARTHING

The earthband of the set (100 x min. 0,5 mm copper) is connected to the mounting plate as shown in fig. 6.

In iron vessels the lower earthband is led to the deck (hull) of the vessel in the shortest possible way, whereas the upper earthband is led to the deckhouse roof (deck) in the shortest possible way.

In fibre-glass vessels and wooden vessels the lower earthband is led either to a keel-bolt, if the vessel has an external ballast keel (sailing vessels), or to an external metal plate of at least 1 sqm on the hull below the water-line. The earthband must be as short as possible.

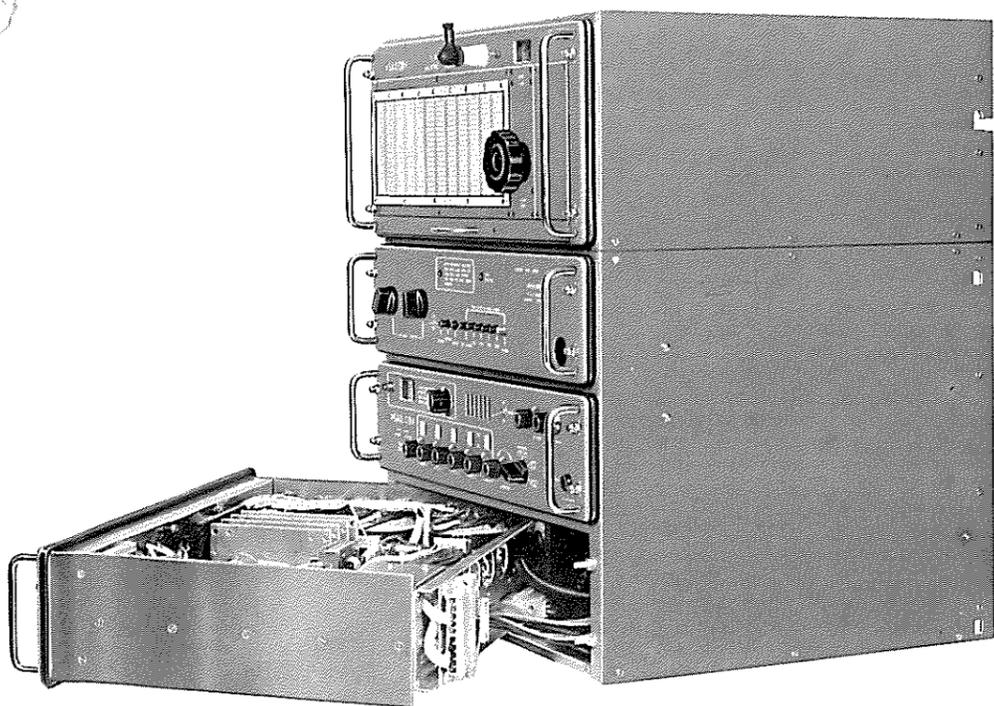
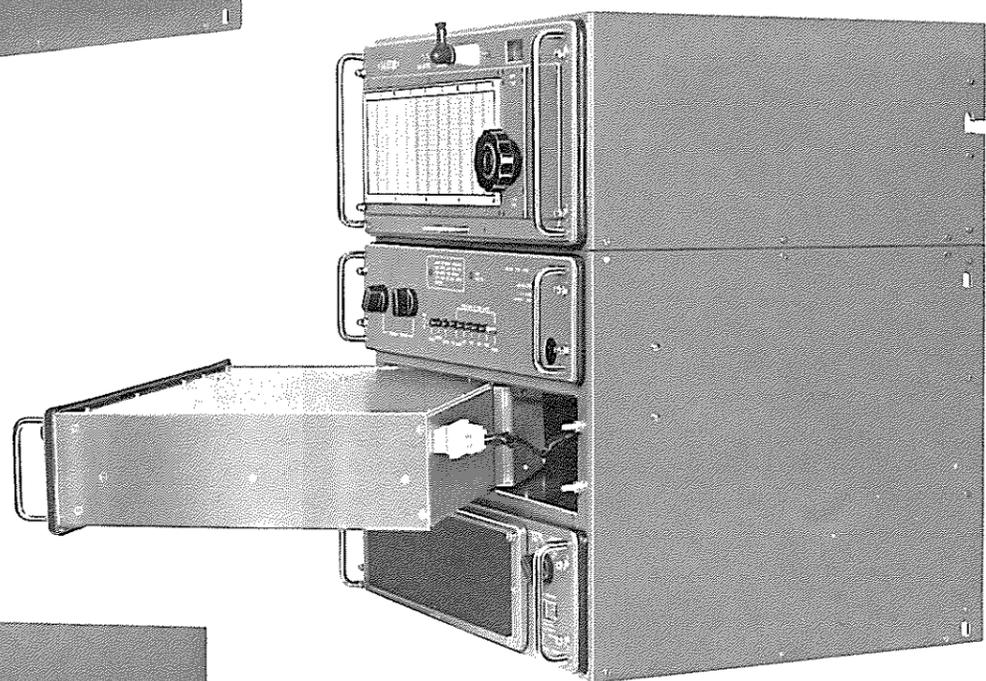
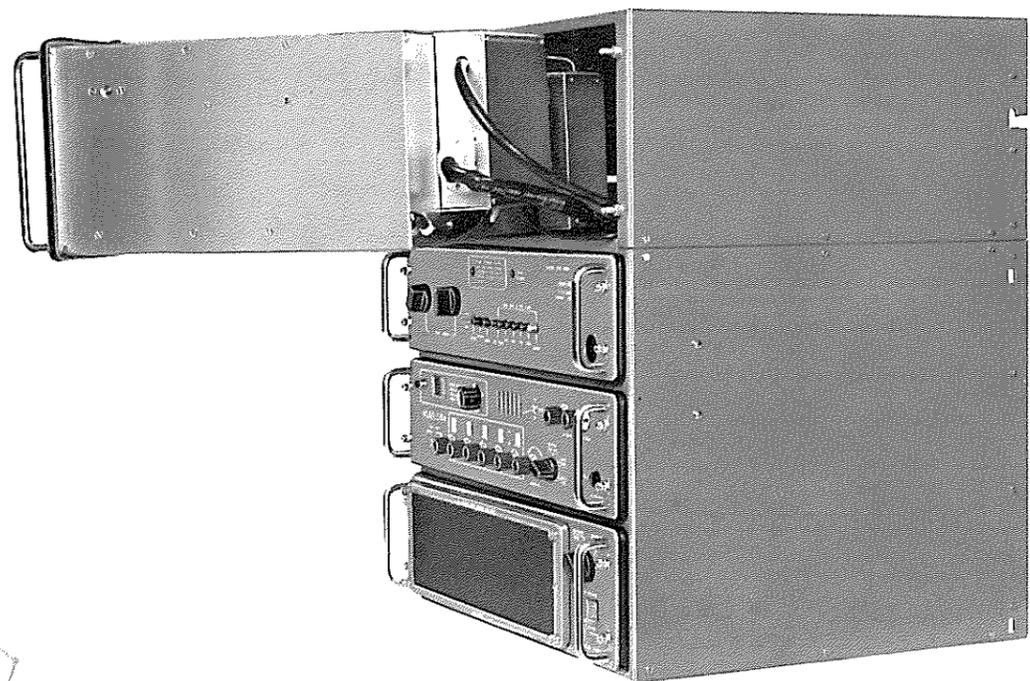
The upper earthband is led to the deckhouse roof, if the vessel has a metal wheel-house.

If the vessel has no metal wheel-house, the upper earthband may not be connected. But, if there are metal rails and stanchions or other large metallic objects placed above the transmitter the earthband may be led to such objects. It is very important that the connection to such objects and between the various objects is very reliable and effective, as otherwise there will be a risk of duplex-noise.

In ships, which are of metal entirely, the earthbands can under certain circumstances be omitted, if the following points are observed:

- a. the mounting panel must be secured by bolts directly to metal bulkhead or outer metal wall.
- b. bulkhead or wall must have a good electric connection to both metal roof and metal deck. If there is a superstructure of aluminium on a steel ship, the transition between steel and aluminium must be secured by wire straps for every half meter.
- c. the bolts securing the mounting panel must be welded to bulkhead or outer wall.

Generally speaking an effective earth connection is just as important as a good aerial.



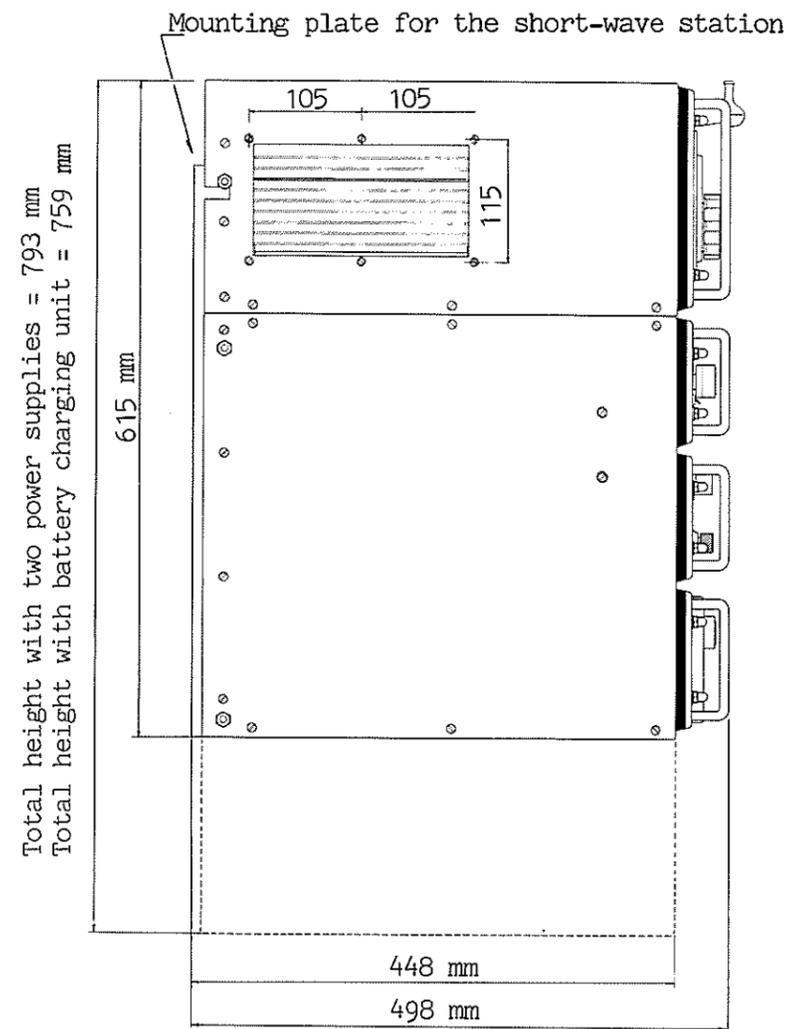
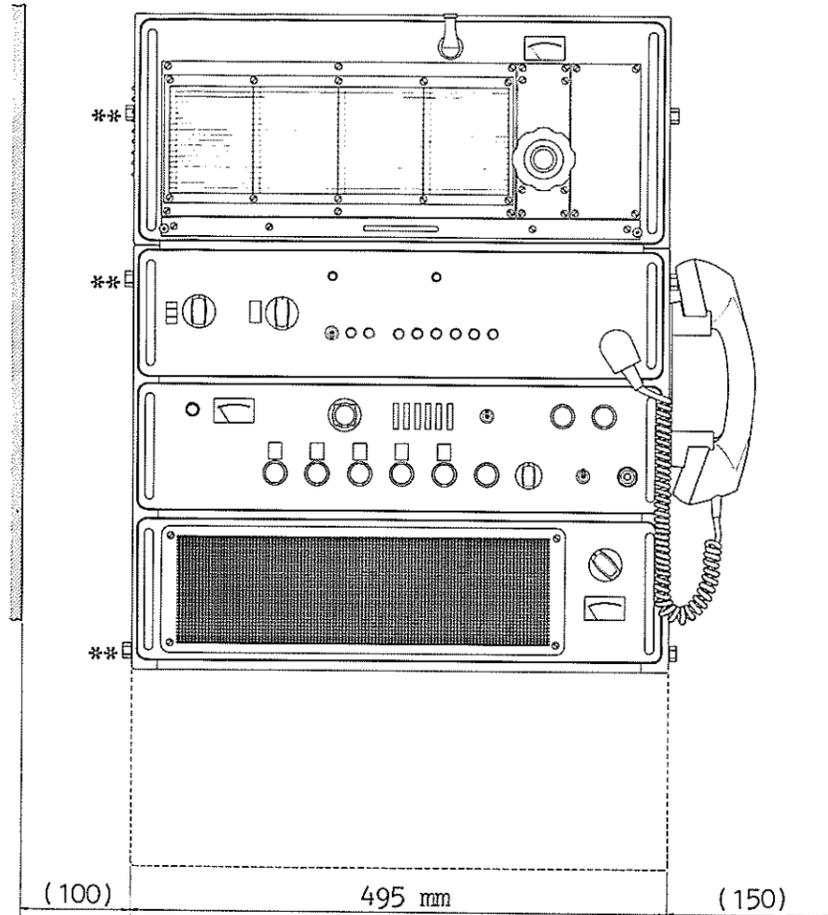
The photos on this page show how the units can be placed in the cabinet. The units need no support but you have to take care that they are not damaged.

If the short-wave station is mounted clearly on the bulkhead it will be a great help to place the units as shown in the above photos both when service is needed and when the cables are to be connected.

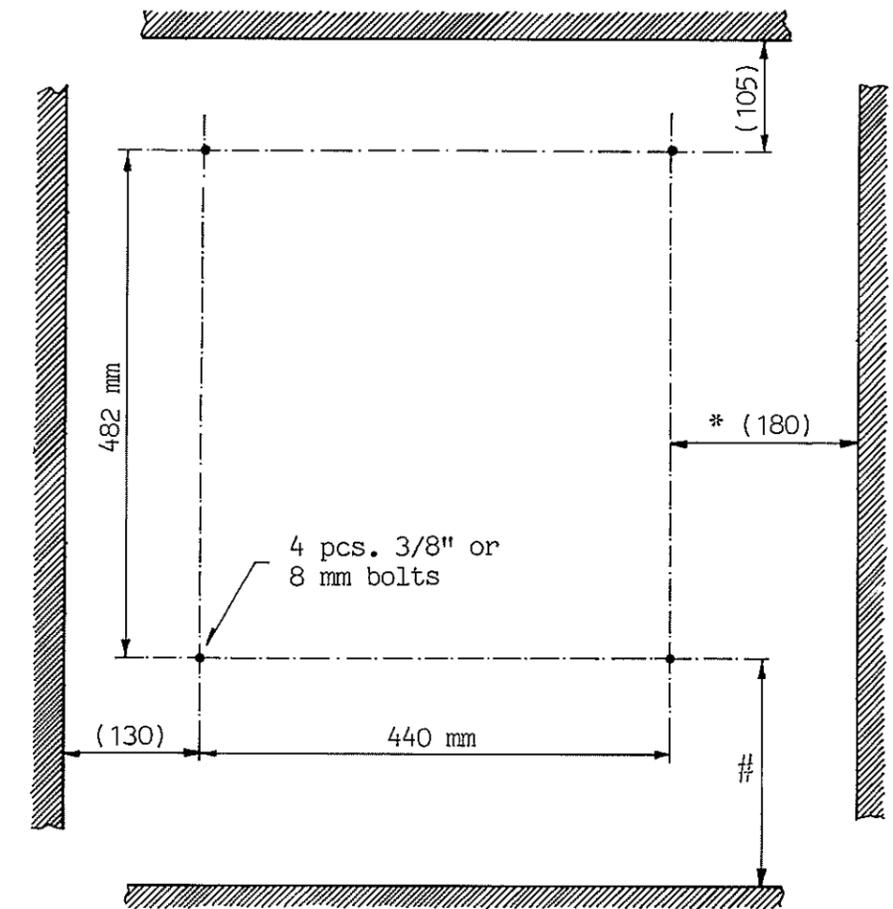
FIG. 8.

How to place the units in the cabinet at servicing and when the cables are to be connected.

DIMENSIONS



DRILLING IN BULKHEAD



Distance to table-top, 40 mm for one power supply and 218 mm for two power supplies.

* (130 mm) if the handset holder is not placed on the cabinet.

Dimensions in brackets are min. free distances in mm.

MOUNTING INSTRUCTIONS

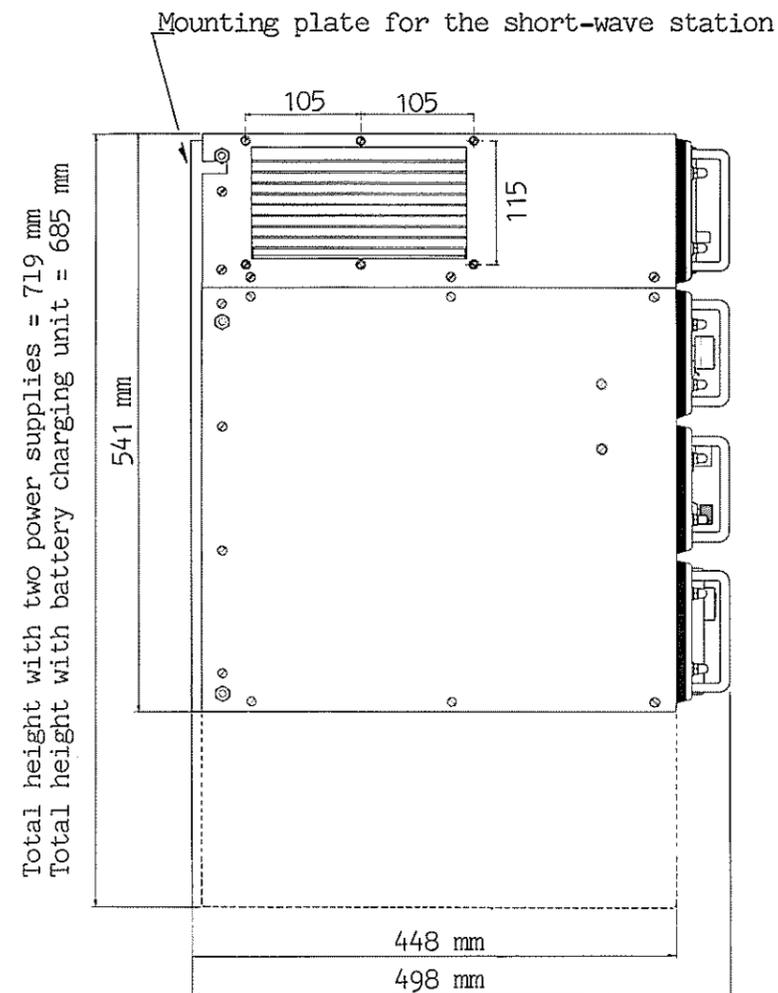
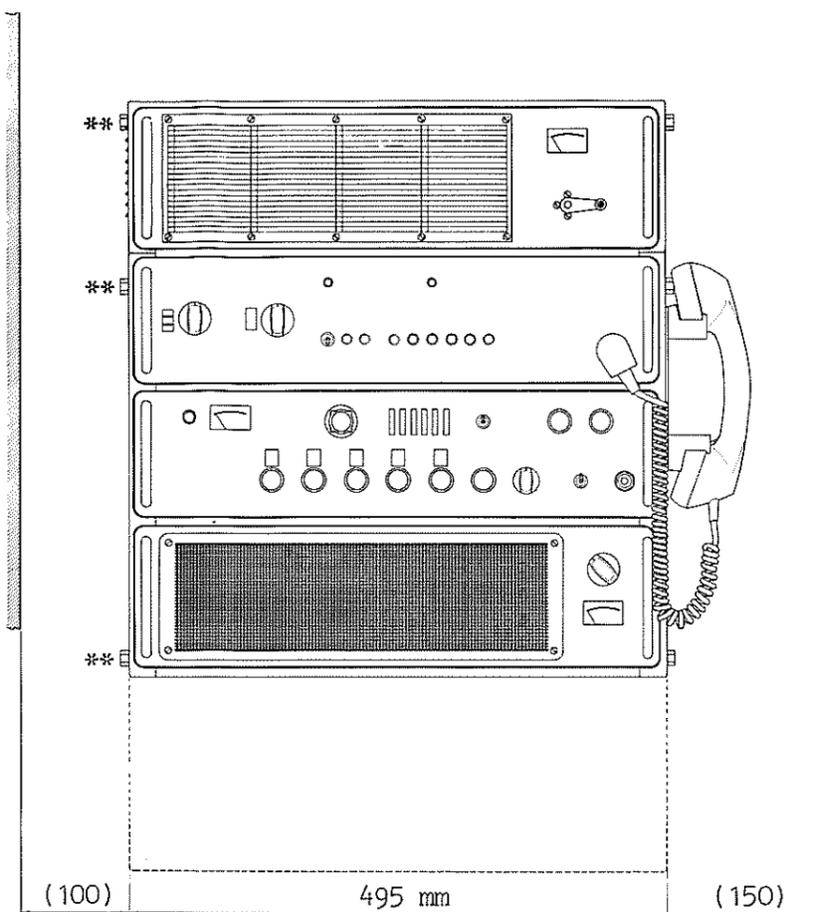
1. Study fig. 6 and 8.
2. Drill the holes as shown under "Drilling in Bulkhead".
3. Remove all units from the cabinet.
4. Remove the mounting plate from the cabinet and fix it to the bulkhead by means of 4 pcs. 3/8" or 8 mm bolts. If needed the bulkhead must be strengthened. Weight of the station is from 110 to 150 kg depending on type.
5. Mount cables, earthband etc. as shown in fig. 6.
6. If the station is to be mounted with its under-side against a table, all 6 bolts are to be removed from the mounting plate (the bolts are marked ** on the drawing above). If the station is to be mounted clear on a bulkhead, only remove the 4 lowest bolts.
7. Place the cabinet on a table, a box or the like, so that the rear side of the cabinet is turned against the mounting plate so close that the connecting of cables between cabinet and mounting plate can be carried out as shown in fig. 6.
8. Put the cabinet into place on the mounting plate either by pushing it in on the mounting plate or by hanging it on the 2 uppermost bolts in the mounting plate (bulkhead mounting). It will require two persons to lift the cabinet into place.
9. Insert all 6 bolts in the mounting plate (marked ** in the drawing) and tighten them well.
10. Mount the units in the cabinet.

NB! Don't forget to adjust the aerial trimmers of the receiver (see instruction manual for the receiver).

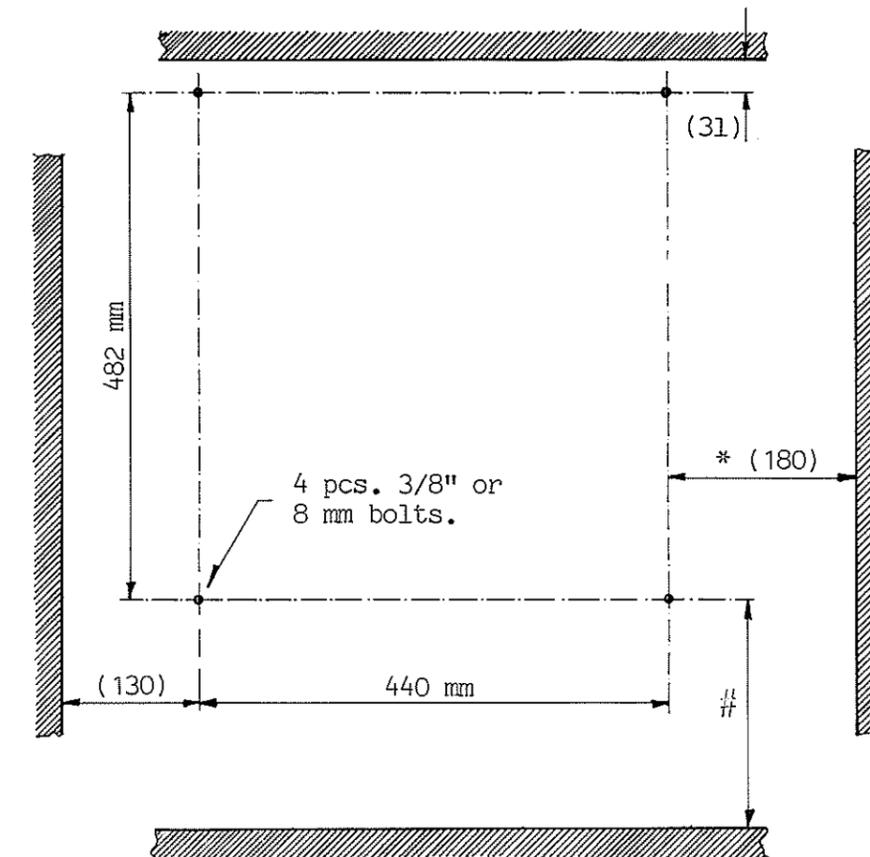
FIG. 1.

SAILOR short-wave station mounted on bulkhead or bulkhead/tabletop. Transmitter T1127 mounted in the cabinet. With one or two power supplies or one power supply and battery charger.

DIMENSIONS



DRILLING IN BULKHEAD



Distance to table-top, 40 mm for one power supply and 218 mm for two power supplies.

* (130 mm) if the handset holder is not placed on the cabinet.

Dimensions in brackets are min. free distances in mm.

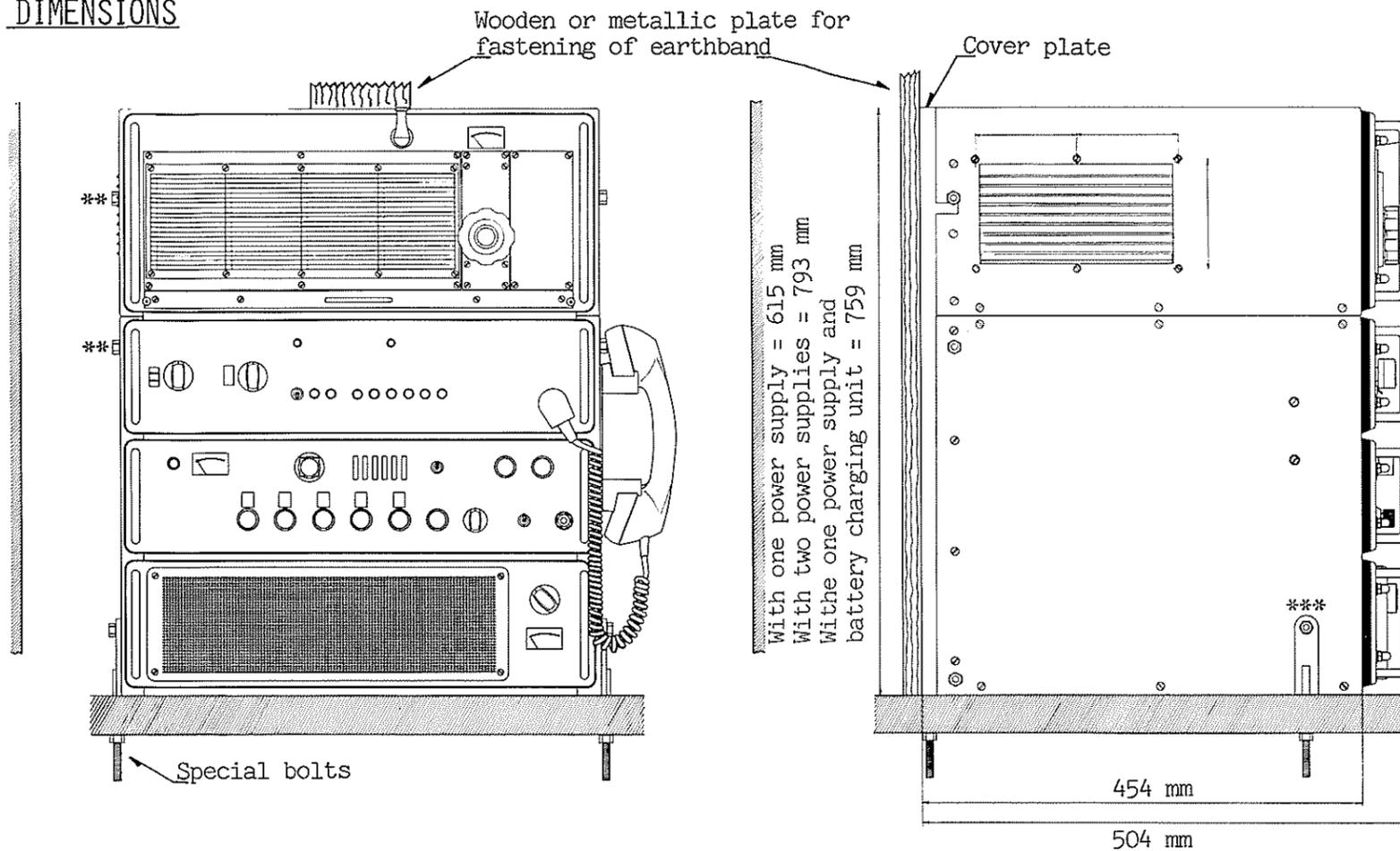
MOUNTING INSTRUCTIONS

1. Study fig. 5, 6, 7 and 8.
 2. Drill the holes as shown under "Drilling in bulkhead".
 3. Remove all units from the cabinet.
 4. Remove the mounting plate from the cabinet and fix it to the bulkhead by means of 4 pcs. 3/8 or 8 mm bolts. If needed the bulkhead must be strengthened. Weight of the set is from 110 to 150 kg depending on type.
 5. Mount cables as shown in fig. 6.
 6. If the station is to be mounted with its under-side against a table, remove all 6 bolts from the mounting plate (the bolts are marked ** in the drawing above). If the station is to be mounted clear on a bulkhead, only remove the 4 lowest bolts.
 7. Place the cabinet on a table, a box or the like, so that the rear side of the cabinet is turned against the mounting plate so close that the connecting of cables between cabinet and mounting plate can be carried out as shown in fig. 6.
 8. Put the cabinet into place on the mounting plate either by pushing it in on the mounting plate or by hanging it on the 2 uppermost bolts in the mounting plate (bulkhead mounting). It will require two persons to lift the cabinet into place.
 9. Insert all 6 bolts in the mounting plate (marked ** in the drawing) and tighten them well.
 10. Mount the cables in H1200 as shown in fig. 7.
 11. Mount all units in the cabinet.
- NB! Don't forget to adjust the aerial trimmers of the receiver (see instruction manual for the receiver).
12. Mount T1127 as shown in fig. 5.

FIG. 2.

SAILOR short-wave station mounted on bulkhead or bulkhead/tabletop. Remote control unit H1200 mounted in cabinet. Transmitter T1127 remote-controlled. With one or two power supplies or one power supply and battery charger.

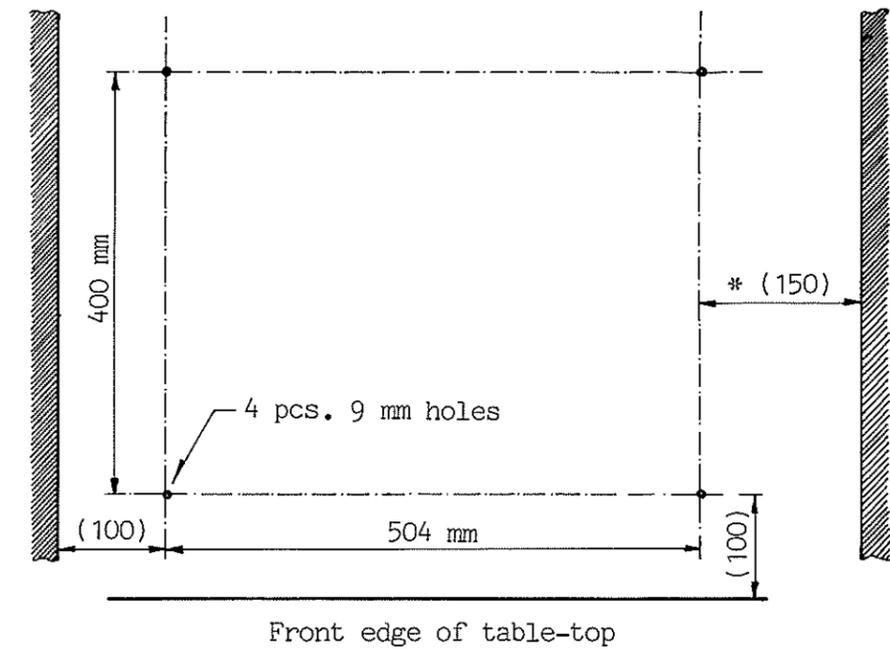
DIMENSIONS



MOUNTING INSTRUCTIONS

1. Study fig. 6 and 8.
 2. Drill 4 holes in the table-top as shown under "Drilling in table-top".
 3. Place the cover plate so that the 2 bolts are sticking through the two holes farthest away from the front edge of the table. Support the plate temporarily, so that its position is vertical. Put washers and nuts on the two bolts and fasten the cover plate.
 4. Remove all units from the cabinet and remove the mounting plate from the cabinet. Remove all 6 bolts (marked ** in the drawing above).
 5. 4 bolts are welded on to the cover plate. Fasten the mounting plate by means of these bolts, so that it is turned as shown in fig. 6.
 6. Provide for the necessary holes in the table-top for the leading-through of earthband, cables etc. The holes are to be as close to the mounting plate as possible.
 7. Connect earthband, cables etc. to mounting plate as shown in fig. 6.
NB! If a metal wheelhouse is concerned, the upper earthband must be led the shortest way to the deckhouse-roof (vertically upwards). The earthband is to be supported by means of a lacquered mahogany board or the like.
 8. Place the cabinet on the table in front of the mounting plate and connect the wires between the cabinet and the mounting plate as shown in fig. 6.
 9. Push the cabinet into place on the mounting plate, insert the 6 bolts without tightening them (the bolts are marked **).
 10. Place the two spade bolts as shown in the drawing and tighten the nuts under the table slightly.
 11. Drill 2 pcs. $\varnothing 9$ holes in the cabinet through the holes of the spade bolts and mount 2 pcs. MC 8 x 16 marked *** in the drawing (nuts inside the cabinet).
 12. Tighten the bolts marked ** and the 4 nuts under the table.
 13. Mount the units in the cabinet.
- NB! Don't forget to adjust the aerial trimmers of the receiver (see instruction manual for the receiver).

DRILLING IN TABLE-TOP



Dimensions in brackets are min. free distances in mm.

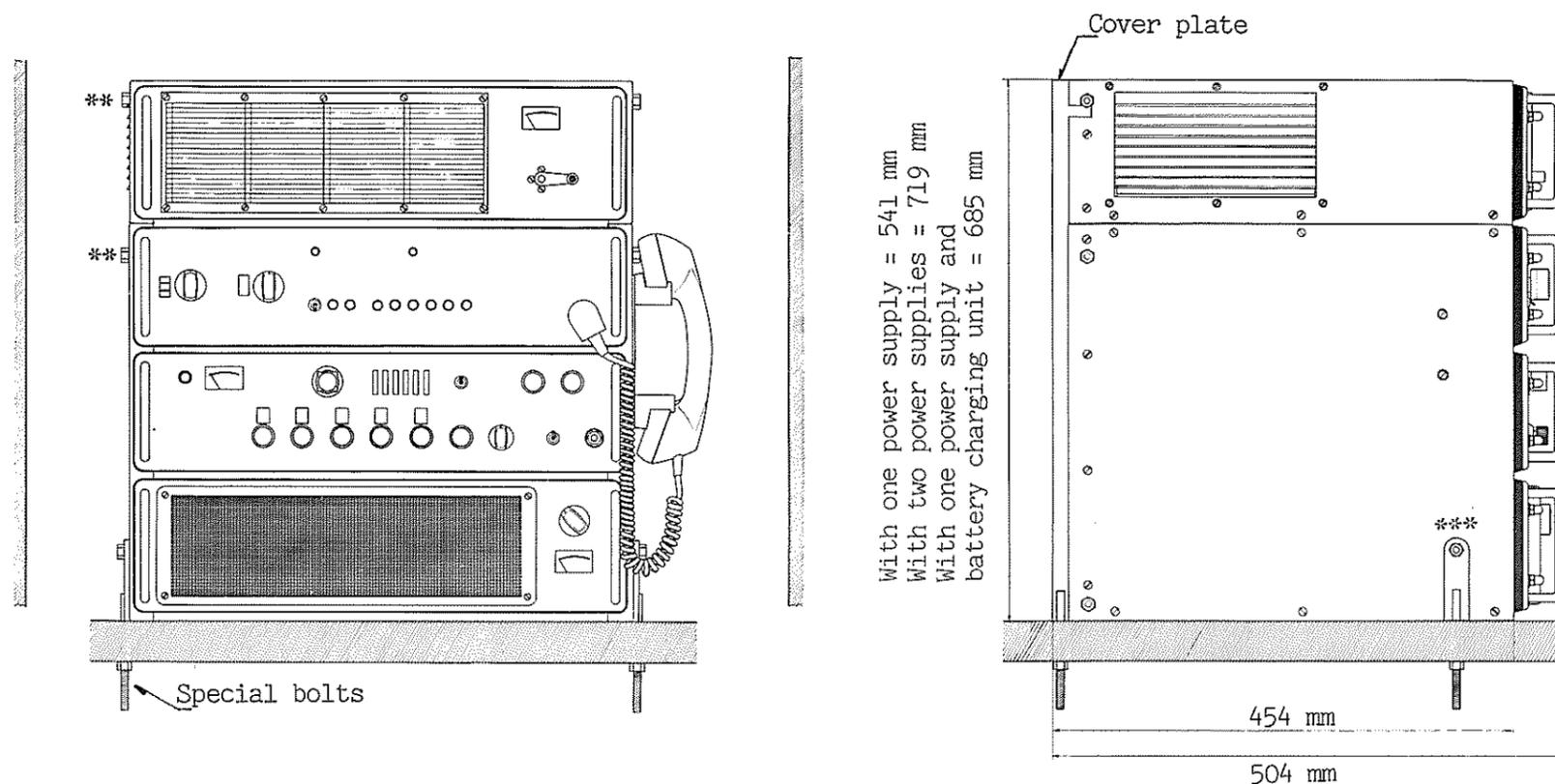
* (100 mm) if the handset holder is not placed on the cabinet.

Cover plate and special bolts are included in the mounting kits H1205 for one power supply and H1206 for two power supplies.

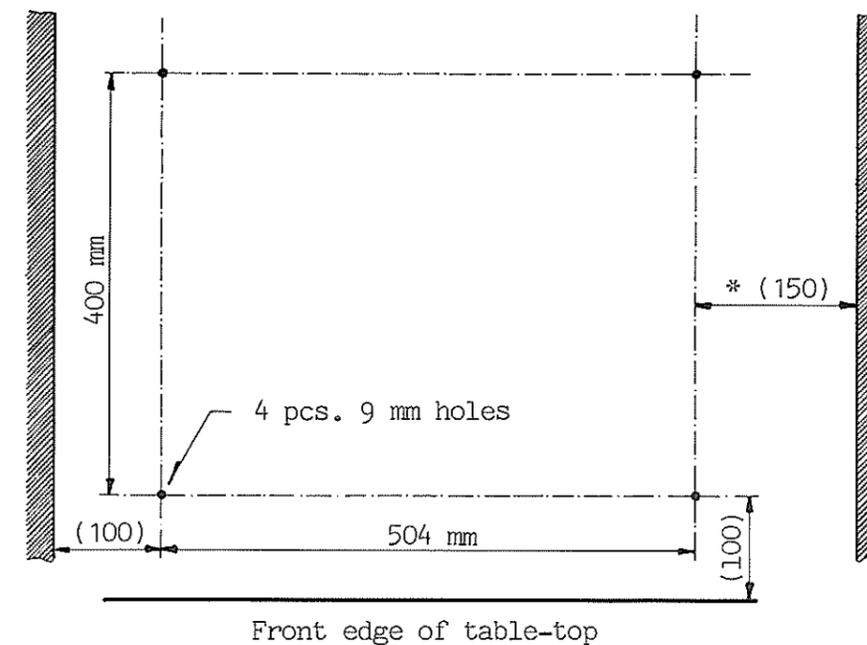
FIG. 3.

SAILOR short-wave station mounted free-standing on tabletop. Transmitter T1127 mounted in the cabinet. With one or two power supplies or one power supply and battery charger.

DIMENSIONS



DRILLING IN TABLE-TOP



MOUNTING INSTRUCTIONS

1. Study fig. 5, 6, 7 and 8.
 2. Drill 4 holes in the table-top as shown under "Drilling in table-top".
 3. Place the cover plate so that the two bolts are sticking through the two holes farthest away from the front edge of the table. Support the plate temporarily, so that its position is vertical. Put washers and nuts on the two bolts and fasten the plate.
 4. Remove all units from the cabinet and remove the mounting plate from the cabinet. Remove all 6 bolts (the bolts are marked ** in the above drawing).
 5. There are 4 bolts welded on to the cover plate. Fasten the mounting plate by means of these bolts, so that it is turned as shown in fig. 6.
 6. Provide for the necessary holes in the table-top for the leading-through of cables. The holes are to be as close to the mounting plate as possible.
 7. Connect cables to mounting plate as shown in fig. 6.
 8. Place the cabinet on the table in front of the mounting plate and connect the wires between cabinet and mounting plate as shown in fig. 6.
 9. Push the cabinet into place on the mounting plate, insert the 6 bolts without tightening them (the bolts are marked **).
 10. Place the two spade bolts as shown in the drawing and tighten the nuts under the table slightly.
 11. Drill 2 pcs. $\phi 9$ holes in the cabinet through the holes of the spade bolts and mount 2 pcs. MG 8 x 16 marked *** in the drawing (nuts inside the cabinet).
 12. Tighten the bolts marked ** and the 4 nuts under the table.
 13. Mount the cables in H1200 as shown in fig. 7.
 14. Mount all the units in the cabinet.
- NB! Don't forget to adjust the aerial trimmers of the receiver (see instruction manual for the receiver).
15. Mount T1127 as shown in fig. 5.

Dimensions in brackets are min. free distances in mm.

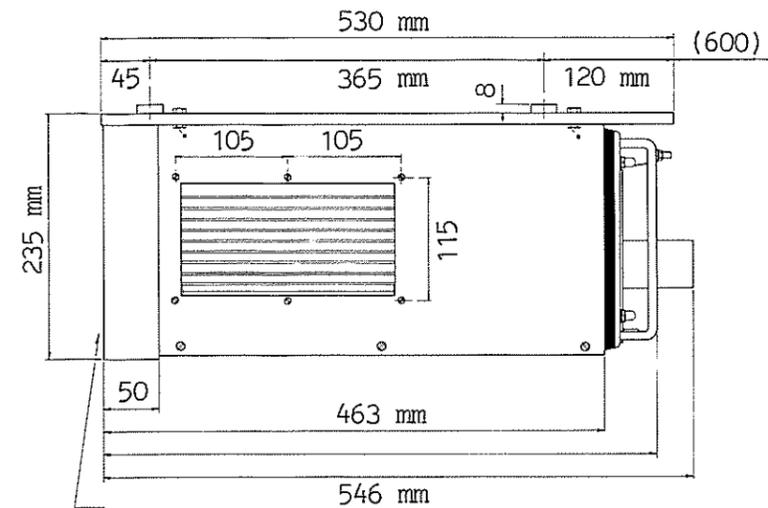
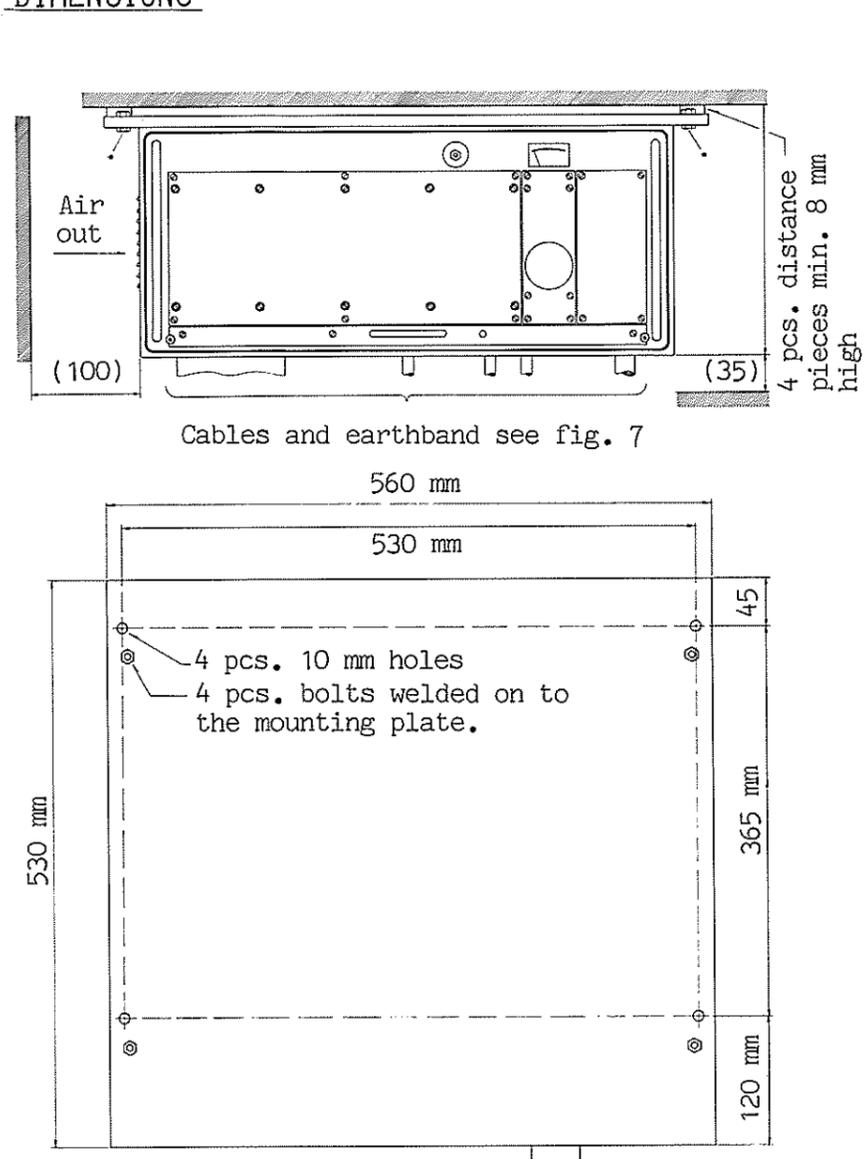
* (100 mm) if the handset holder is not placed on the cabinet.

Cover plate and special bolts are included in the mounting kits H1207 for one power supply and H1208 for two power supplies.

FIG. 4.

SAILOR short-wave station mounted free-standing on tabletop. Remote control H1200 mounted in the cabinet. Transmitter T1127 remote-controlled. With one or two power supplies or one power supply and battery charger.

DIMENSIONS



Dimensions in brackets are min. free distances in mm.

MOUNTING INSTRUCTIONS

1. Take the transmitter unit out of the cabinet and then remove the cabinet from the mounting plate by loosening the 4 bolts marked * in the drawing. Then pull the cabinet forwards in relation to the mounting plate.
2. Now fasten the mounting plate by means of 4 pcs. 3/8" or 8 mm bolts under the deckhouse-roof (deck). Don't forget the 4 distance pieces between mounting plate and roof.

The mounting plate is placed in such manner that the distance between the aerial terminal of the transmitter and the aerial-leading-

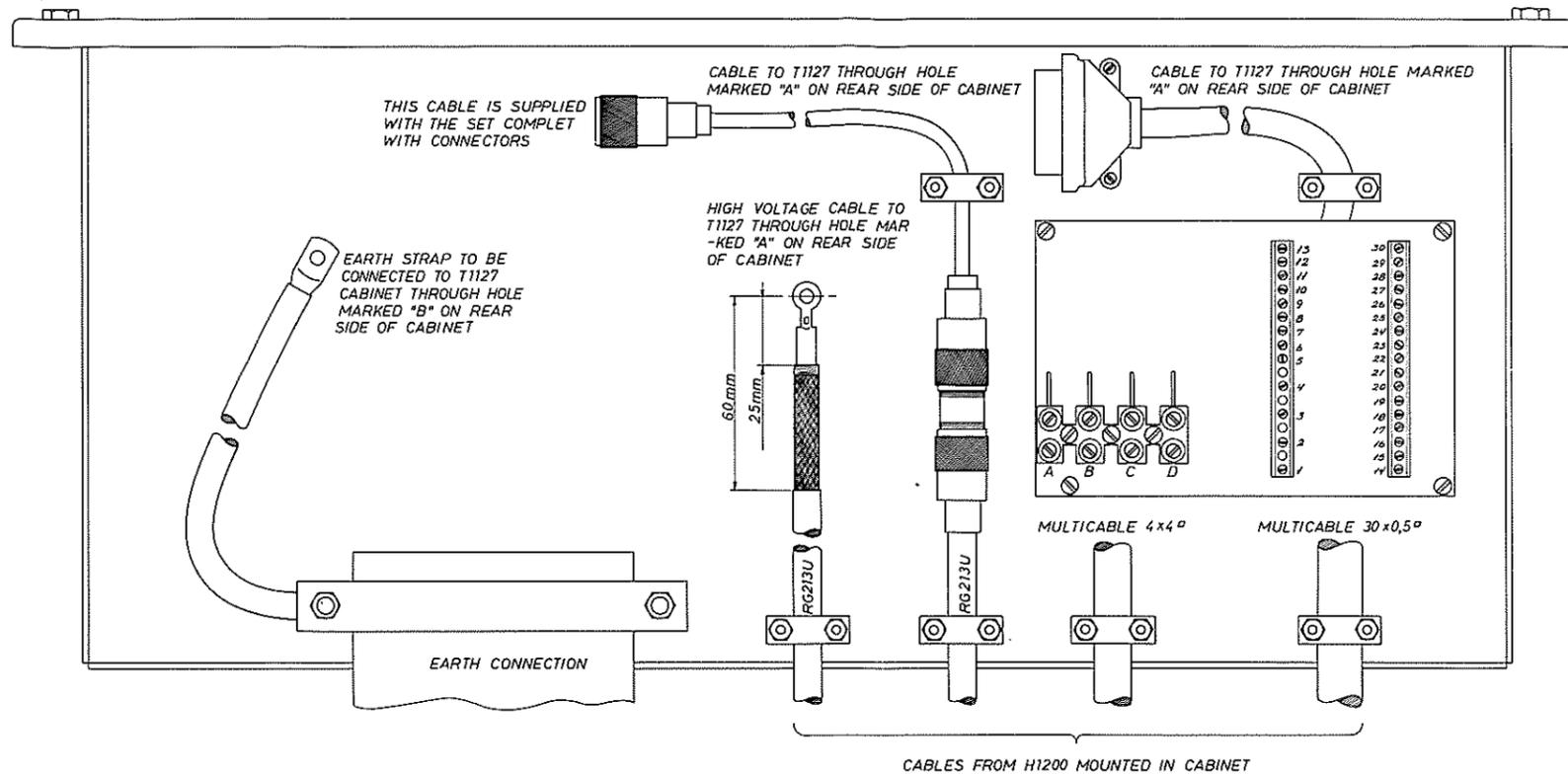
through for the transmitter aerial is as short as possible. However it must also be possible to pull the transmitter-unit out from its box.

3. Mount cables, earthband etc. on the mounting plate as shown in fig. 7.
4. Place the cabinet on the mounting plate. Before the transmitter is put into place, the cables must be pulled through the square holes on the rear side of the cabinet as shown in fig. 7.
5. Connect the earth strap inside the cabinet. High-voltage-, signal- and multicable to be connected to the transmitter.
6. Mount the transmitter in the cabinet.

FIG. 5.

Transmitter T1127 when remote-controlled

MOUNTING PLATE FOR TRANSMITTER T1127 WHEN REMOTE-CONTROLLED



REMOTE CONTROL CABLES FOR T1127

Installations with cable-consumption of up to 25 m

- Coaxial cable (signal cable) RG213U
- Coaxial cable (high voltage cable) RG213U
- Multicable (control- and supply cable) 30x0,5 sqmm; 250V AC

Installations with cable-consumption of between 25 and 200 m

- Coaxial cable (signal cable) RG213U
- Coaxial cable (high voltage cable) RG213U
- Multicable (control- and supply cable) 30x0,5 sqmm; 250V AC
- Multicable (supply cable) 4x4 sqmm; 250V AC

EARTHBAND

For installation use a copper earthband of 100 mm x 0,5 mm (min.)

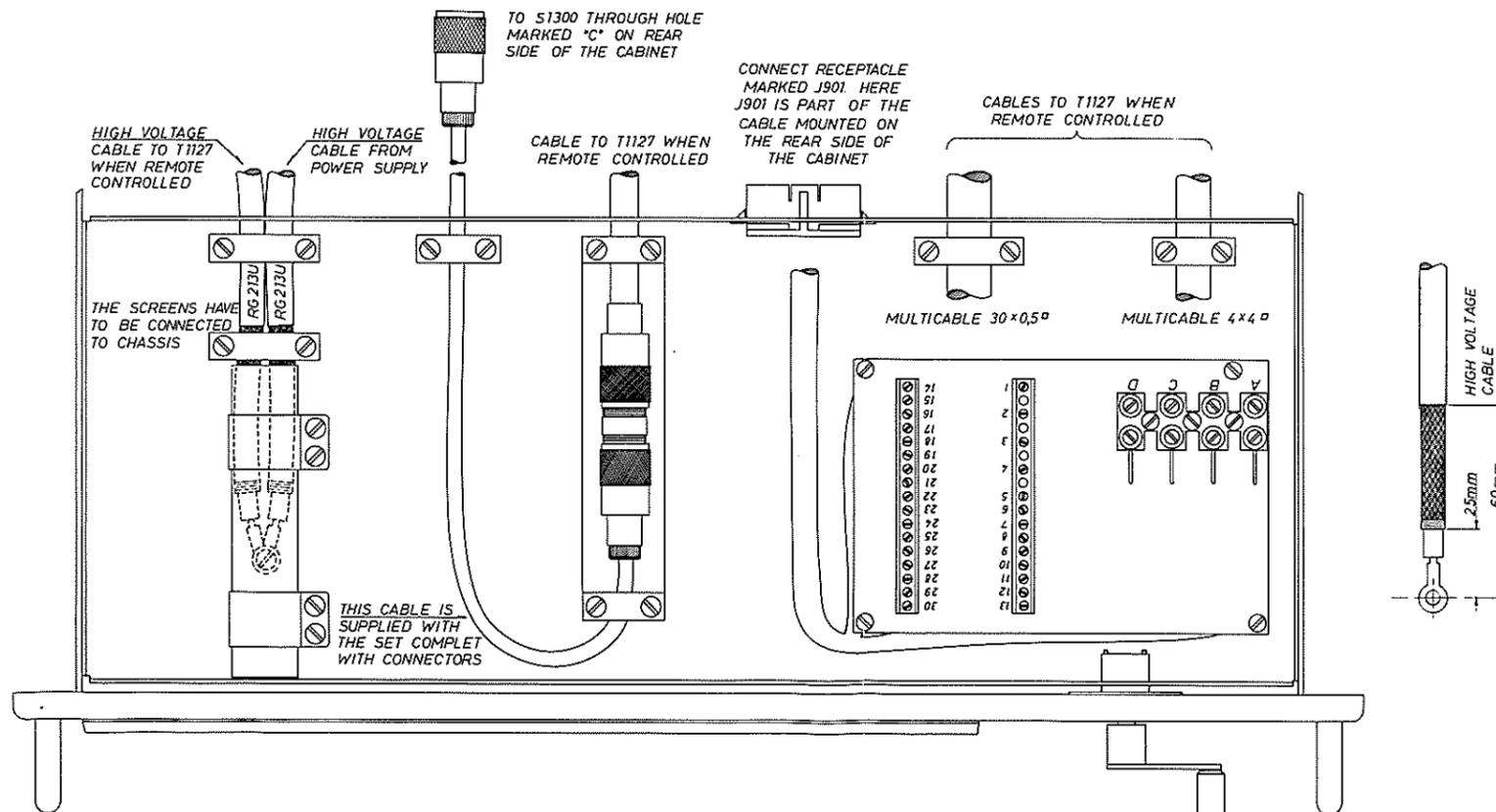


FIG. 7.

Mounting plate for remote control unit H1200 and transmitter T1127 when remote-controlled.