

# Sailor

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OPERATING INSTRUCTIONS  
FOR  
SAILOR TANDEM STATION



A/S S. P. RADIO · AALBORG · DENMARK

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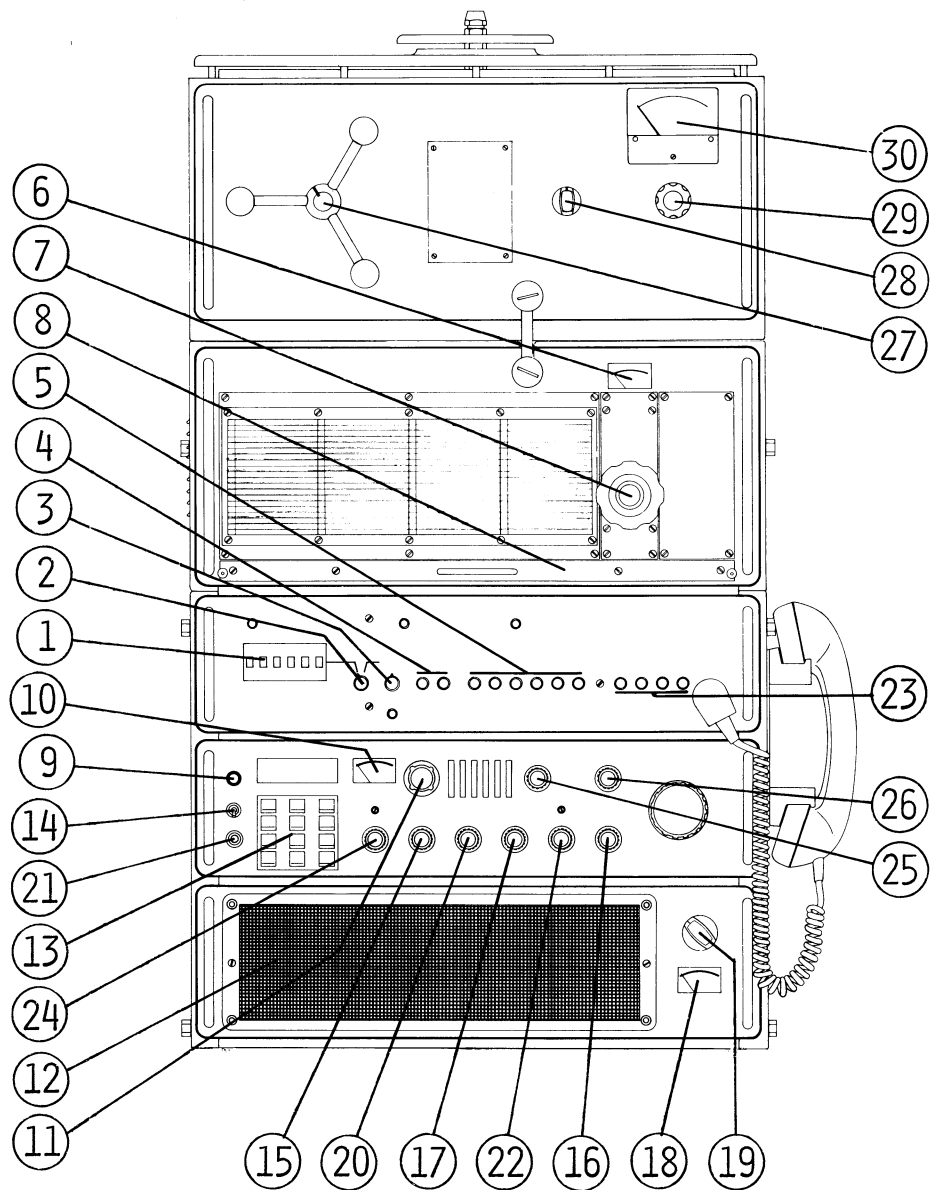
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# CONTROLS



# CONTROLS

- ① FREQUENCY SELECTOR  
For selection of the transmitting frequency in the maritime bands.
  - ② DISTRESS (2182 kHz)  
For selection of the distress frequency 2182 kHz.
  - ③ POWER  
Normally to be in position FULL. Under certain circumstances it can be advantageous to reduce the output power of the transmitter. The output power can be reduced in four 5 dB steps to about -20 dB.
  - ④ SIMPLEX - DUPLEX  
Switching between simplex and duplex operations.
  - ⑤ A3A, A3J (SSB) and A3H (AM)  
Selection of transmission mode.  
  
TUNE  
For tuning of T1127, a two-tone signal is generated.  
  
TEST ALARM  
Activate TEST ALARM and the two-tone-alarm will be heard in the micro-telephone handset.  
  
ALARM  
Activate TEST ALARM and ALARM for transmitting two-tone-alarm signal on the DISTRESS frequency 2182 kHz.
  - ⑥ AERIAL METER  
Shows the aerial current in Amp.
  - ⑦ AERIAL TUNE  
For tuning of aerial.  
Keep the button TUNE ⑤ pressed and tune for max. aerial current.
  - ⑧ AIR FILTER - TRANSMITTER  
See special paragraph in this manual.
  - ⑨ NOISE GENERATOR  
Disconnects the aerial and activates the built-in noise generator.
  - ⑩ METER  
The meter shows the field strength of the received signal.
  - ⑪ RF TUNE  
Tunes the RF filters to the selected frequency, when the noise generator ⑨ has been activated. Note: Frequencies below 150 kHz are not tuneable.
  - ⑫ AIR FILTER - POWER SUPPLY  
See special paragraph in this manual.  
The fuses are placed behind the filter. Also spare fuses are stored there.
  - ⑬ FREQUENCY SELECTOR  
For selection of receiving frequency. Key in the frequency. Press the NOISE GENERATOR button ⑨, and tune the RF TUNE ⑪ for maximum deflection on the METER ⑩.
- NOTE: For use of the continuous tuning facility. Read the chapter: DIRECTIONS FOR USE in the receiver manual.
- ⑭ LOUDSPEAKER ON/OFF  
Switches ON, all the loudspeakers.

CONTROLS cont.:

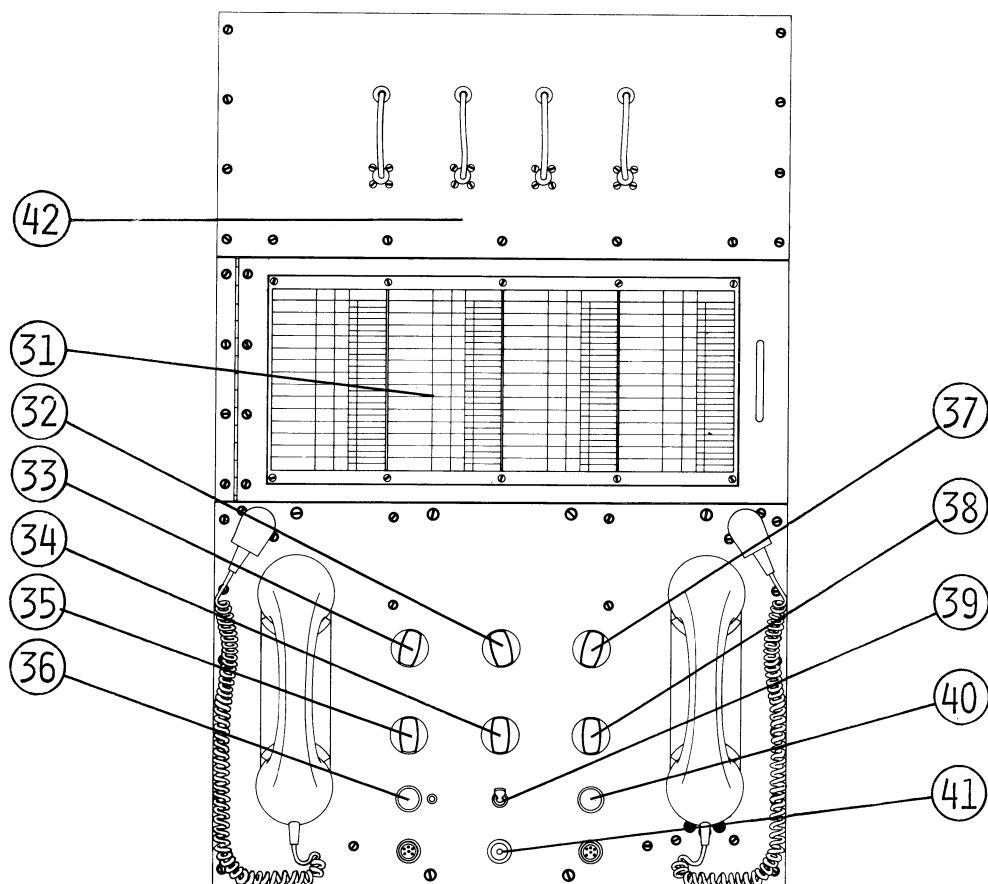
- (15) CLARIFIER  
Corrects for small frequency errors in SSB signals.  
To be set for clearest reception of SSB signals.
- (16) MODE SWITCH  
Switches between reception of SSB (A3A and A3J) signals, AM (A3, A3H, A2 and A2H) signals and distress frequency signals (2182 kHz).
- (17) RF-GAIN  
Controls the amplification in the IF-amplifier.
- (18) SUPPLY VOLTAGE  
Shows the input voltage to the station.  
Must be in the green area, also when the transmitter is keyed.
- (19) MAIN SWITCH  
Main switch for the station.  
Switches between the positions:  
OFF.....The station is switched off  
RECEIVER ONLY...Only the receiver is switched ON  
STAND BY.....The receiver is switched ON and the transmitter is ready for immediate use.  
ON.....Both receiver and transmitter are switched on.  
The transmitter is ready for use if the delay time (30 secs) has passed, either in position STAND BY or ON.  
The positions STAND BY and ON should not be used more than necessary, as this will result in unnecessary power consumption, wear and tear on the output tube of the transmitter and dirty air filters.
- (20) AGC SWITCH  
ON..... For normal SSB purpose (long decay time).  
OFF..... Automatic gain control off.  
TELEX..... To be used in telex operation and for very noisy telephony reception (short decay time).
- (21) HEADPHONES  
When the headphone is connected, the loudspeakers are switched off.
- (22) AF-GAIN  
Controls the audio output.
- (23) TELEPHONY - TELEGRAPHY - TELEX  
TELEPHONY: To be activated for normal telephony use.  
TELEGRAPHY: Activate the buttons A1 or A2H together with the button A3H (5) . The telegraph key is now connected to transmitter.  
TELEX: Activate the button TELEX together with the button A3J (5) . The teleprinter is now connected via the simplex TOR equipment to the receiver and transmitter.
- (24) DIMMER  
Controls the light intensity from the frequency display and from the METER (10) .

- (25) BFO ( only with R1120)  
Adjust the beat note in A1 mode.
- (26) FILTER ( only with R1120)  
Chooses the wanted bandwidth in A1 - and A2 mode, and disables the BFO in the AUX position.  
As option a special telex filter or an LSB filter can be inserted in AUX position.
- (27) BAND SWITCH  
Pos. BAND I, BAND II and BAND III.  
To be used when transmitting in the range 405 - 535 kHz.  
Select band corresponding to the table on front plate of T1127L.  
Pos. TEST: 405 - 535 kHz.  
Output from H1201 is connected to a built-in dummy load.  
Pos. TEST 2 MHz BAND  
Output from T1127L is connected to a dummy load in H1201.  
Pos. 1.6 - 26 MHz  
To be used when transmitting in this frequency band.
- (28) LOAD SWITCH  
To be used only in the range 405 - 535 kHz.  
To be set corresponding to the table on the front plate of T1127L.
- (29) AERIAL TUNE 405 - 535 kHz  
For tuning of aerial, only to be used in the frequency range 405 - 535 kHz.  
Select frequency (1) .  
Set BAND SWITCH (24) and LOAD SWITCH (25) corresponding to table on T1127L.  
Select transmitting mode A1 or A2H on (23) .  
Press telegraphy key and tune for max. meter reading on AERIAL METER 405 - 535 kHz.
- (30) AERIAL METER 405 - 535 kHz

C

C

# CONTROLS FOR CENTER SECTION

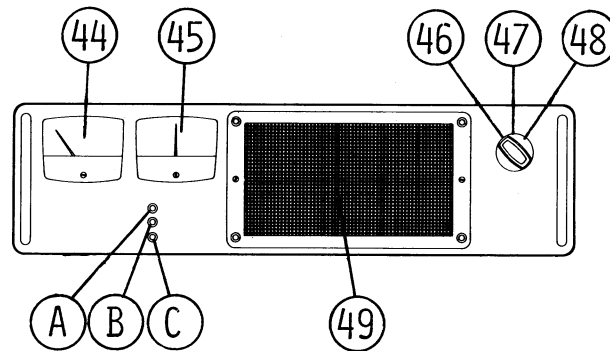


- (31) FREQUENCY TABLE  
Hatch for inspection of fuses and supply cables.
- (32) MUTE  
ON: Both the Main and the Reserve Receivers are muted from the transmitter in operation (with full break-in).  
OFF: The Main Receiver only is muted of the Main Transmitter and the Reserve Receiver only is muted from the Reserve Transmitter.
- (33) TELEX  
The Simplex TOR equipment can be switched from the Main Transmitter and Receiver to the Reserve Transmitter and Receiver.
- (34) TIME SIGNAL  
An extra loudspeaker in the chart room can be connected to the Main or Reserve Receiver.
- (35) PHONE PATCH  
MAIN: The ship's interphone network is connected to the Main Transmitter and Receiver for duplex telephone connections ashore. The transmitter is automatically keyed.  
RESERVE: The ship's interphone network is connected to the Reserve Transmitter and Receiver for duplex telephone connections ashore. The transmitter is automatically keyed.  
OFF: The ship's interphone network is disconnected.



- 36 PHONE PATCH LEVEL  
The level from the interphone network has to be adjusted so that the lamp is just flashing.
- 37 TAPE RECORDER  
For tape recording of information from the Main or Reserve Receiver.
- 38 LINE OUTPUT  
Output from the Main or the Reserve Receiver for auxiliary amplifier equipment.
- 39 EMERGENCY LIGHT  
The emergency light in the radioroom can be switched on here or at the door.
- 40 SIDE TONE LEVEL  
Level of side tone when key down or TUNE on.
- 41 LEAD LIGHT  
For connection of lead light or a small solder iron (25 Watt).
- 42 RECEIVER AERIAL SELECTOR PANEL  
Possibility for selecting of four aerials to the receivers.

## CONTROLS FOR BATTERY CHARGER N1404



(44)

### VOLTMETER

Indicates the battery voltage.

(45)

### AMMETER

Indicates the charge - or discharge current.

(46)

### MAIN SWITCH - OFF

The battery charger is switched off with the voltmeter (44) and ammeter (45) in function.

(47)

### MAIN SWITCH - AUTOMATIC

The battery charger is switched on and automatically controlling the charge current.

The control lamp (A) SUPPLY is ON and indicates that AC Mains is present.

The control lamp (B) CHARGE is ON until the battery is fully charged.

The control lamp (C) BATTERY is ON when the battery is fully charged (trickle-charging).

(48)

### MAIN SWITCH - MANUAL

This position is used should the automatic charge system fail.

By manual control, the voltmeter reading (44) shall be kept between 26 and 29 volts. If the voltmeter reading is more than 29 volts, switch off the charger unit. If the voltmeter reading is less than 26 volts, switch on the charger unit pos. MANUAL. When the transmitter is ON the charger unit should be ON too in pos. MANUAL.

If it is impossible to increase the battery voltage to 29 volts with the ammeter (45) indicating charge current, the reason may be a defective battery or a leakage.

In position MANUAL the control lamps (A) (B) (C) are of no consequence.

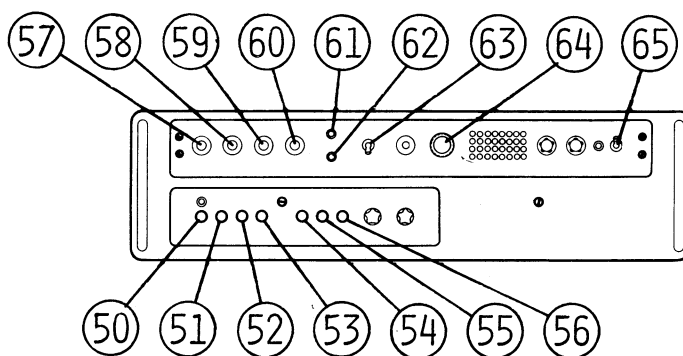
(49)

### AIR FILTER

The AIR FILTER has to be cleaned at regular intervals (look up the section CLEANING OF AIR FILTER in the OPERATING INSTRUCTIONS FOR SAILOR MF/HF TELEPHONY STATION).



# CONTROLS FOR AKD AND AUTO ALARM RECEIVER



- (50) POWER  
Press POWER button to connect power supply with AKD/H1218.
- (51) MONITOR  
The built-in sound transducer will be activated by the automatic key after pressing the MONITOR button.
- (52) TEST  
For testing the Automatic Keying Device and the connected Auto Alarm Receiver press the TEST button. AKD/H1218 will then key the selected sequence (54) only to the Auto Alarm Receiver.
- (53) RESET  
When pressing the RESET button AKD/H1218 will momentarily stop in neutral position. When releasing the RESET button AKD/H1218 will start keying from the initial stage of the selected sequence (54).
- (54) DISTRESS ONLY  
While the DISTRESS ONLY button is pressed AKD/H1218 will only key the distress message. In released position AKD/H1218 will key the alarm signal followed by the distress message.
- (55) MAIN TX  
The main telegraph transmitter is keyed by AKD/H1218 in the selected mode (54) while the MAIN TX button is pressed.
- (56) RESERVE TX  
Operation as for the MAIN TX button.
- (57) KEY  
For manually testing the Auto Alarm Receiver select Auto Alarm Service (63) and make the marks of the alarm signal by pressing the KEY button. The signal lamp (62) should light when a mark is keyed, and the alarm circuit should operate when four marks have been keyed.
- (58) NORMAL TEST  
The external alarm bells are silenced while the NORMAL TEST button is pressed.
- (59) HIGH TEST  
Operation as for the NORMAL TEST button but the input level is increased.

60

RESET

Press the RESET button to reset the alarm circuit and to stop the alarm bells.

61

ALARM LAMP

When Auto Alarm Service is selected (63) the ALARM LAMP lights when four marks of the alarm signal have been detected.

62

SIGNAL LAMP

The SIGNAL LAMP will light when a 500 kHz signal, large enough to operate the alarm circuit, is being received.

63

AUTO ALARM/WATCHKEEP SWITCH

While the switch is in AUTO ALARM position the Auto Alarm Receiver will give alarm when four marks of the alarm signal have been detected.

While the switch is in WATCHKEEP position the Auto Alarm Receiver acts like a normal 500 kHz receiver.

64

AF GAIN

Control for the audio level.

65

SUPPLY

ON/OFF power switch for the Auto Alarm Receiver.

# OPERATING INSTRUCTIONS FOR TELEPHONY - TELEGRAPHY - TELEX AND PHONE PATCH

SAILOR R1119 and R1120 are capable of receiving on all frequencies in the frequency range 10 kHz - 30 MHz.

SAILOR S1301 can be set for any frequency in the maritime bands between 1.6 and 26 MHz.

SAILOR T1127 is capable of transmitting the signal generated in the exciter S1301.

## TELEPHONY

1. Switch on the station by turning the MAIN SWITCH (19) in the power supply N1400 or N1401 to pos. ON.
2. Set the loudspeaker switch LOUDSPEAKER ON/OFF (14) to pos. ON and the AGC SWITCH (20) to pos. ON.
3. Turn the radio frequency amplification control RF-GAIN (17) clockwise to its extreme position.
4. Select the mode of reception wanted A3H/AM or A3J/SSB by means of the MODE SWITCH (16) .
5. Set FREQUENCY SELECTOR (13) to the wanted frequency and the CLARIFIER (15) to center position.
6. Activate NOISE GENERATOR (9) and tune RF TUNE (11) for max. METER (10) deflection.
7. Turn the volume control AF-GAIN (22) clockwise for suitable volume.
8. If the received signal is an SSB signal, the CLARIFIER (15) is to be set for max. clearness.
9. If necessary the RF TUNE (11) can be finely adjusted on the received signal.
10. If the reception of SSB signals is disturbed by noise from rigging etc., turn the AGC SWITCH (20) to TELEX position and turn the RF-Gain (17) counter clockwise, until the volume is just reduced.
11. Set FREQUENCY SELECTOR (1) to the wanted transmitting frequency.
12. Set POWER (3) to full.
13. Activate the buttons TUNE (5) and tune the AERIAL TUNE (7) for max. deflection on AERIAL METER (6) .
14. Select transmitting mode by activating one of the buttons A3A, A3J (SSB) or A3H (AM) (5) .



## TELEPHONY cont.:

15. Select simplex or duplex operation by activating SIMPLEX - DUPLEX (4) .
16. Remove the handset from its holder and when the handset key is activated the transmitter is started.

## TELEGRAPHY

1. Switch on the station as described in TELEPHONY points 1 - 11 incl.
2. Select transmitting mode A1 or a2H:  
For A1 activate both the buttons A1 (23) and A3H (5) .  
For A2H activate both the buttons A2H (23) and A3H (5) .
3. Set BAND SWITCH (27) to pos. 1.6 - 26 MHz if the selected frequency is in that range.  
If the frequency is in the range 405 - 535 kHz set the BAND SWITCH (27) and the LOAD SWITCH (28) to the positions shown on the table on the front plate of T1127L.
4. Press the key and tune for max. AERIAL METER reading.  
In the frequency range 1.6 - 26 MHz use AERIAL METER 1.6 - 26 MHz (6) and AERIAL TUNE 1.6 - 26 MHz (7) .  
In the frequency range 405 - 535 kHz use AERIAL METER 405 - 535 kHz (30) and AERIAL TUNE 405 - 535 kHz (29) .

## TELEX

1. Switch on the station as described in TELEPHONY 1 - 14  
  
IMPORTANT: The working frequency for Simplex TOR communication is given as assigned frequency (centerfrequency for the modulation).  
Set the FREQUENCY SELECTOR on the Receiver and Exciter to the assigned frequency minus the modulation centre frequency. Depending on your Simplex TOR equipment the modulation centre frequency is 1,5 kHz - 1,7 kHz or 1,9 kHz.
2. Activate the buttons A3J (5) and the TELEX 23
3. For use in conjunction with Simplex TOR equipment activate the button Simplex (4) .
4. The transmitter and receiver is now controlled from the teleprinter via the Simplex TOR equipment.

## PHONE PATCH

1. Switch on the station as described in TELEPHONY 1 - 14.
2. When there is radio contact with the coast station and the intertelephone connection is established, set the switch PHONE PATCH (35) in pos. MAIN or RESERVE for SAILOR tandem station and for phone patch H1224 set the switch in position PHONE PATCH
3. Hang up the local microtelephone and adjust the PHONE PATCH LEVEL (36) so that the lamp is just flashing.
4. Monitoring of the duplex communication is possible with the loudspeaker.
5. If there are problems with cross-talk, read the deflection on the METER (10) . Set the AGC switch (20) to pos. OFF. Turn the RF-GAIN (17) to same deflection on the METER (10) .

# OPERATING INSTRUCTIONS FOR DISTRESS CALLS 2182 KHz

## Transmitter

1. Turn MAIN SWITCH (19) in the power supply N1400 or N1401 to position ON.
2. Set AERIAL SWITCH to desired position (if installed).
3. Turn BAND SWITCH (27) to 1,6 - 26 MHz.
4. Turn the DISTRESS SELECTOR (2) to position DISTRESS 2182 kHz.
5. Activate the button SIMPLEX (4) .

## RECEIVER

1. Turn RF-GAIN (17) fully clockwise.
2. Turn MODE SWITCH (16) to position 2182 Distress.
3. Set AGC SWITCH (20) to ON position.
4. Turn AF-GAIN (22) to suitable volume.

## TRANSMITTER (30 seconds after switching ON the transmitter (19) ).

6. Activate TUNE (5) and tune the AERIAL TUNE (7) for max. deflection on AERIAL METER (6) .
7. Press the two buttons marked TEST ALARM (5) and ALARM (5) simultaneously and keep them pressed for about 30 seconds (after 45 seconds the distress signal will automatically be interrupted).
8. Release buttons TEST ALARM (5) and ALARM (5) .
9. Take the handset, press the key and make your distress call (MAY-DAY - name of ship - position etc.).  
Release the handset key and listen for an answer.



# OPERATING INSTRUCTIONS FOR DISTRESS CALLS 2182 KHz

## TRANSMITTER

1. Turn MAIN SWITCH (19) in the power supply N1400 or N1401 to position ON.
2. Set AERIAL SWITCH to desired position (if installed).
3. Turn BAND SWITCH (27) to 1.6 - 26 MHz.
4. Turn the DISTRESS SELECTOR (2) to position DISTRESS 2182 kHz.
5. Activate the button SIMPLEX (4) .

## RECEIVER

1. Turn RF-gain (17) fully clockwise.
2. Turn MODE SWITCH (16) to position 2182 Distress.
3. Turn AGC SWITCH (20) to ON position.
4. Turn AF-GAIN (22) to suitable volume.

## TRANSMITTER (30 seconds after switching ON the transmitter (19) ).

6. Activate TUNE (5) and tune the AERIAL TUNE (7) for max. deflection on AERIAL METER (6) .
7. Press the two buttons marked TEST ALARM (5) and ALARM (5) simultaneously (after 45 seconds the distress signal will automatically be interrupted).
8. Press the button A3H (5) .
9. Take the handset, press the key and make your distress call (MAY-DAY - name of ship - position etc.).  
Relase the handset key and listen for an answer.



# OPERATING INSTRUCTIONS FOR DISTRESS CALLS 500 KHz

## TRANSMITTER

1. Set MAIN SWITCH (19) to ON on power supply N1400 or N1401.
2. Set AERIAL SWITCH to desired position (if installed).
3. Set BAND SWITCH (27) to the setting for 500 kHz shown in table on T1127L.
4. Set LOAD (28) to the setting for 500 kHz shown in table on T1127L.
5. Set the FREQUENCY SELECTOR (1) to 500 kHz.
6. Press the buttons A3H (5) and A2H (23) .
7. Press the Key for the one used.
8. Turn AERIAL TUNE 405 - 535 kHz (29) for max. deflection on the AERIAL CURRENT METER (30) .
9. Press the button POWER (51) on the A.K.D.-Unit.
10. Release the button DISTRESS ONLY (54) .
11. Press the button MAIN TX (55) or RESERVE TX (56) the one used.
12. The ALARM SIGNAL followed by the S.O.S., the SHIP'S CALL SIGN and TWO LONG DASHES are being sent.





## CLEANING OF AIR FILTERS

The station has three air filters, one at the front of each of the two power supplies and one at the front of the transmitter. (See drawing under the section CONTROLS).

These filters must be cleaned, maybe replaced, at regular intervals.

How often this must be done naturally depends on the conditions under which the station is working (quantity of dust in the air), and therefore it is impossible to give general rules for how often the filters must be cleaned.

Therefore, we recommend that you at the beginning keep an eye on how fast the filters become dirty (at least once a month) and then you can determine the cleaning intervals.

Normally it will be sufficient to clean once every second month.

The filter on the power supply must be cleaned as follows:

1. Remove the 4 milled nuts and take off the cover with the mounted filter.
2. The filter mat is fixed on the back of the cover by means of two round rods.  
By passing the filter mat perpendicular over these rods along the back of the cover, the filter mat can be taken out and put back.  
If the filter mat goes too high this can be remedied by slackening off one of the two screws on the front of the cover.
3. Clean the filter mat in lukewarm water or by vacuum cleaning followed by wash in lukewarm water.
4. Put the filter mat back as described under 2. (However not until the mat is quite dry).
5. Mount the cover again on the front of the power supply.

If the filter mat is very damaged, it must be replaced. With every station we deliver an extra filter mat. If necessary you can ask for more.

The filter in the transmitter must be cleaned as follows:

1. Remove the two milled nuts.
2. Pull out the filter drawer.
3. Clean the filter in lukewarm water (without removing the filter mat from the drawer) or by vacuum cleaning followed by cleaning in lukewarm water.
4. Let the filter drawer dry completely and put it then back in the station.

If the filter material is damaged, the filter mat must be replaced by removing the frame, which keeps the mat in place (4 screws), then the new filter can be mounted.

We deliver an extra filter mat with every set, and if necessary you can ask for more.

## MONTHLY RUN-IN OF THE STATION

In order to obtain a greater reliability of operation for the transmitter it must, out of consideration for the PA-tubes, be used for at least 10 minutes once a month, or it should be tested regularly once a month in accordance with the procedure below:

1. Set FREQUENCY SELECTOR (1) (2) to a frequency lower than 4 MHz (not 2182 kHz).
2. Set POWER (3) to low and activate A3J (5).
3. Set MAIN SWITCH (19) to ON, and key the transmitter for 10 minutes by means of the microphone plug marked KEY, supplied with the station, (to be inserted in the exciter instead of the handset plug).

## RUN-IN OF THE STATION AFTER A LONGER LAY UP PERIOD

1. Set FREQUENCY SELECTOR (1) (2) to a frequency lower than 4 MHz (not 2182 kHz).
2. Set POWER (3) to low and activate A3J (5).
3. Turn MAIN SWITCH (19) to STAND BY for 30 minutes.
4. Turn MAIN SWITCH (19) to ON and key the transmitter for 60 minutes by means of the microphone plug marked KEY, supplied with the station, (to be inserted in the exciter instead of the handset plug).
5. The station will now be ready for use.

# FUNCTION TEST FOR SHORT-WAVE STATION

## INITIAL SETTINGS:

1. If the station has not been used for a month or a longer period look up the section MONTHLY RUN-IN OF THE STATION etc. and do the necessary run-in, else:
2. Remove the two covers (the extreme left and the extreme right) on the T1127 and the AIR-FILTER on power supply (12) .
3. Check that the three switches located at the extreme left PCB on the T1127 are in the following positions:

TEST SWITCH:  $I_{k1}$

POWER: ON

MOTOR: AUTOM.

4. Set FREQUENCY SELECTORS (1) (2) to the first frequency indicated in the table below.
5. Set POWER (3) to FULL.
6. Press DUPLEX (4) push button.
7. Press A3J push button (5) .
8. Set LOUDSPEAKER ON/OFF (14) to pos. ON.
9. Set MODE SWITCH (16) to A3J.
10. Turn RF-GAIN (17) fully clockwise.
11. Turn AF-GAIN (22) fully counter clockwise.
12. Set the AGC SWITCH (20) to ON position.
13. Make sure that the aerials are connected to the T1127 and the R1119 or R1120

1	1600.0	2	1911.1	3	2022.2	4	2233.3	5	2444.4
6	2655.5	7	2866.6	8	3177.7	9	3488.8	10	3799.9
11	4100.0	12	6200.0	13	8200.0	14	12300.0	15	16500.0
16	22000.0	17	25000.0						

FUNCTION TEST FOR SHORT-WAVE STATION cont.:

CHECKS:

1. Set MAIN SWITCH (19) to pos. RECEIVER ONLY.
2. Check that the SUPPLY VOLTAGE (18) meter pointer is in green area.
3. Turn test meter switch located behind the AIR FILTER on power supply (12) through all positions.
4. Check that the readings are:  
In green area: +22V and input  
Zero: All other settings
5. Choose 1611.1 kHz on the FREQUENCY SELECTOR (13). Press the NOISE GENERATOR (9) and adjust RF TUNE (11) for max. reading on the METER (10).
6. Turn AF-GAIN (22) to suitable volume.
7. Check that noise is heard in the loudspeakers.
8. Check that LOUDSPEAKER ON/OFF (14) is functional.
9. Turn RF-GAIN (17) fully counter clockwise.
10. Check that the noise disappears and the METER (10) pointer is turned extremely right.
11. Turn RF-GAIN (17) fully clockwise.
12. Set FREQUENCY SELECTOR (13) to 152.2 - 528.8 - 543.3 - 1577.7 - 1611.1 - 3999.9 - 4464.4 - 6888.8 - 7777.7 - 13666.6 - 15325.5 - 29200.0 - 1111.1 - 2222.2 - 8888.8 kHz in turn and repeat point 13.
13. Press NOISE GENERATOR (9) and adjust RF TUNE (11) for max. METER (10) reading. Check meter reading to be approx. 2.
14. Technical staff only: Set MODE SWITCH (16) to pos. 2182 kHz and adjust AERIAL TUNE 2182 for max. noise or signal in the loudspeaker on max. METER (10) deflection (the location of the AERIAL TUNE 2182 is shown in the instruction book for R1119/R1120).
15. Turn MAIN SWITCH (19) to pos. STAND BY.
16. Turn test meter switch located behind the AIR FILTER on power supply (12) through all positions and check that the readings are:  
In green area: +22V,  $V_g1$  and input  
Zero: All other settings
17. Check that the blower in the N140X and the blower in the T1127 are running.
18. Turn MAIN SWITCH (19) to pos. ON.
19. Repeat point 17 and check:  
N1400: Green area: +22V,  $V_g1$  and input  
Zero: All other settings  
N1401: Green area: +22V,  $V_g1$ ,  $V_a$  and input  
All other settings

CHECKS cont.:

20. Check that the drum switch located behind the frequency table of the T1127 has stopped and the band block lamp on the S1301 is off.
21. Insert the plug labelled KEY to the handset socket (plug supplied with the trimming kit from the factory).
22. Check that the extreme right test meter on T1127 is in the range 2.5 - 4 scale division.
23. Set the TEST SWITCH in the T1127 to pos.  $I_k2$ .
24. Repeat point 22 and return TEST SWITCH to pos.  $I_k1$ .
25. Press TUNE push button (5) and adjust AERIAL TUNE (7) for max. deflection on AERIAL METER (6).
26. Check that the aerial current corresponds to the value indicated on the TUNING CHART T1127. The obtained value is dependent on environment, aerial condition and the supply voltage.
27. Technical staff only: Execute point 25 and adjust DRIVE LEVEL as described in the instruction book for the T1127 section SERVICE paragraph 5.4., and execute point 26.
28. Press A3J push button (5).
29. Set test meter switch located behind the AIR FILTER (12) on power supply to pos.  $V_a$ .
30. Check that the SUPPLY VOLTAGE (18) meter pointer is below the green area (approx. half scale deflection).
31. Remove the KEY and insert the handset.
32. Set FREQUENCY SELECTOR (13) to the transmitter frequency, mode switch (16) to A3J and press NOISE GENERATOR (9) and adjust RF TUNE (11) for max. METER (10) deflection.
33. Press TUNE push button (5) and adjust AERIAL TUNE (7) for max. deflection on AERIAL METER (6).
34. Set POWER (3) to LOW and press A3J push button (5).
35. Key the transmitter.
36. Execute a modulation test by listening to your own speech.
37. Press A3A push button (5) and repeat points 35 and 36.
38. Press A3H push button (5) and set MODE SWITCH (16) to pos. A3H and repeat points 35 and 36.
39. Set POWER (3) to FULL.
40. Set FREQUENCY SELECTORS (1) (2) to next frequency indicated in the table.
41. Repeat the points 25, 26, 27 and 28.
42. Repeat the points 32, 35 and 36.
43. Repeat the points 41, 42 and 43 on the remaining frequencies in the table.



CHECKS cont.:

44. Key the transmitter and check that the SUPPLY VOLTAGE (18) meter pointer is in the green area, depending upon the input voltage.
45. Set test meter switch located behind the AIR FILTER on power supply (12) to pos. INPUT.
46. Set FREQUENCY SELECTORS (1) (2) to the first frequency indicated in the table.
47. Press TUNE push button (5) and adjust AERIAL TUNE (7) for max. deflection on AERIAL METER (6).
48. Press A3A push button (5).
49. Set FREQUENCY SELECTOR (13) to the frequency 1 kHz below the transmitter frequency.
50. Press NOISE GENERATOR (9) and adjust RF TUNE (11) for max. METER (10) reading.
51. Key the transmitter and check that a 1 kHz beat note is heard in the earphone.
52. Turn the CLARIFIER (15) and check that the beat note frequency varies.
53. Press the TUNE push button (5) and check that the aerial current decreases corresponding to POWER (3) settings.
54. Press the TEST ALARM push button (5) and check that the alarm signal appears in the earphone.
55. Press the SIMPLEX (4) push button.
56. Press the TUNE push button (5) and check that the noise in the loudspeaker disappears.
57. Set FREQUENCY SELECTORS (2) to 2182 kHz.
58. Press TUNE push button (5) BEWARE OF SILENT PERIOD ON DISTRESS FREQUENCY.
59. Repeat point 26.
60. Technical staff only: Execute point 58 and tune for max. deflection on AERIAL METER (6) by means of 2182 AERIAL TUNE, refer instruction book for T1127. Repeat point 27 and repeat INITIAL SETTINGS point 3.
61. Mount the two covers on the T1127.
62. Check the two AIR FILTERS. Refer section CLEANING OF AIR FILTERS.