

IIT

Marine

MARINE VHF Radiotelephone Type STR 60-A^B

42
41 channels, simplex and duplex. *including private banks freq.*
Two-channel listening.
Completely transistorized.
20 Watts RF output.
Extremely low power consumption.
Small size, simple installation.
Modular construction.
Sealed I. F. crystal filter.
Manual/automatic selection of up to 4 control units.

APPLICATION

The marine VHF radiotelephone provides excellent ship-to-ship and ship-to-shore telephone service. It is carefully designed to meet international specifications (The Hague Conference 1957).

The radiotelephone set is easy to install and easy to operate, all functions are remotely controlled from up to 4 control boxes.

The radiotelephone has two channel selectors. One main selector for 28 international marine channels, and 2 private channels. One auxiliary selector for channels 6, 12, 13 and 16; and 7 channels for international or private service.

SPECIAL FEATURES

The radiotelephone is supplied with a built-in VHF hybrid permitting simultaneous transmission-reception on one antenna. This feature is of great importance on ships, where usually it is difficult to find suitable installation positions for two antennas. The VHF hybrid is extremely efficient, the loss from antenna to receiver being only max. 0.7 dB and the loss from transmitter to antenna only 0.7 dB. The station has two-channel listening between



STR 60-A
cabinet version



STR 60-A 19" rack version

one channel chosen by the main selector and one channel chosen by the auxiliary selector.

DESIGN INFORMATION

All the units (transmitter, receiver, power supply, ~~duplex antenna filter~~, and main control unit) are mounted on a swing frame in a cabinet or on slides for 19" standard rack mounting.

Transmitter and receiver are transistorized, built in Ministac system which gives advantages as: high reliability, high resistance against shocks and vibrations, easy and simple maintenance and minimum of spares stocking.

For maintenance the front plate is easily removed, and the frame can be swung out, and after removal of the covers all parts of the equipment are accessible with the set still working.

ACCESSORY EQUIPMENT

A special purpose switch makes it possible to operate the equipment from another 3 offices, with control unit mounted, e.g. in the master's saloon, in the deck office, and in the engine office.

* Easy conversion to 25 Kc Channel spacing possible - Modification kit available from Factory. This conversion makes additional channels available in the same unit.

Order number for additional sheets

16-7- 30.004 -2E

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ITT**Marine**

MARINE VHF Radiotelephone Type STR20-A

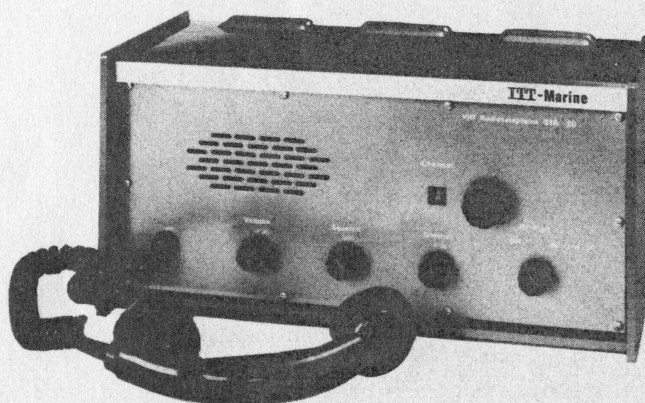
- 16 CHANNELS, SIMPLEX AND DUPLEX
- COMPLETELY TRANSISTORIZED
- 10 WATTS RF OUTPUT
- EXTREMELY LOW POWER CONSUMPTION
- MODULAR CONSTRUCTION
- COMPLETELY SPLASHPROOF
- SMALL SIZE, SIMPLE INSTALLATION

APPLICATION

The STR 20-A is a 10 W fully transistorized 16 channel VHF-FM marine radiotelephone to be used in small vessels like fishing vessels. The station provides excellent ship-to-ship and ship-to-shore VHF radio telephone communication in the international marine band where the application to-day may be grouped under five main headings, namely: safety, traffic control, port information, general port work, and correspondence. Marine stations are provided with channel selection of up to 16 channels, distributed on 8 simplex and 8 duplex channels. By using the modular technique it has been possible to construct a marine station with very small dimensions. Control unit and transceiver are placed in a completely splashproof cabinet, which can very easily be installed on a bulkhead, on or under a shelf.

SPECIAL FEATURES

The Radiotelephone can be supplied with a built-in VHF hybrid permitting simultaneous transmitting and receiving on one antenna on all duplex channels. This feature is of importance on ships, where it is usually difficult to find suitable installation positions for two antennas. The hybrid is extremely efficient, the loss from transmitter to antenna being only 1 dB. By making



the STR 20-A fully transistorized a reduction in power consumption to an extremely low figure has been obtained so that the station can work a long time on emergency batteries.

DESIGN INFORMATION

All units (transmitter, receiver, channel selector, and antenna hybrid) are mounted on the control panel in the splashproof cabinet and are removable for easy maintenance.

Both transmitter and receiver are built in the Ministac module system which gives advantages such as high reliability, high resistance against shock and vibration, easy and simple maintenance, and a minimum of spares. The Ministac modules are built with all connections fused in a frame of thermoplastic material. All components are placed between the thermoplastic end pieces of the Ministac modules. The individual modules forming the circuitry are mounted on a printed circuit board as plug-in unit with all connections gold-plated.

By using this technique it has been possible to construct a radio station with qualities up till now unknown within the radio industry.

Order number for additional sheets

16-7-30.015 -1E

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STR34

VHF-FM radio telephone

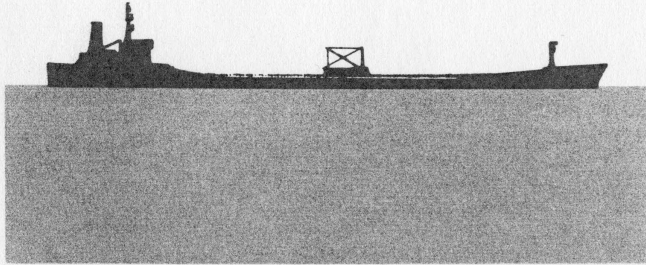


VHF radio telephony is the most important means of short-distance marine communication. Excellent speech quality and a minimum of interference, makes VHF a preferred alternative for ship-to-shore contacts in coastal areas. And it is permitted for use during port stays, contrary to the MFH/HF services.

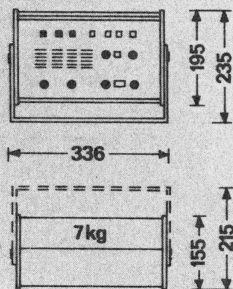
The STR34 is a synthesized, full duplex VHF radio telephone with remote control facilities:

- 55 international channels included by synthesis
- Dual channel 16 generation makes the STR34 operable even with the synthesizer removed
- Dual watch with simultaneous listening to channel 16 and one working channel
- Instant channel 16 switch
- Full duplex on a single antenna, built-in duplex filter
- Optional remote control with bridge priority
- Optional phone patch
- Dual power supply, 110/220 V AC with automatic switching to 24/32 V DC reserve battery in case of mains failure
- Optional auxiliary channels available for private or national frequencies

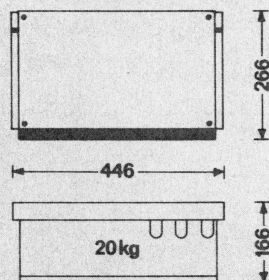
STR 65 marine VHF FM radiotelephone



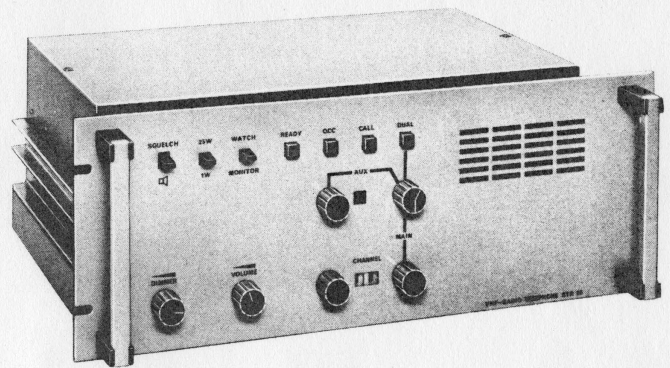
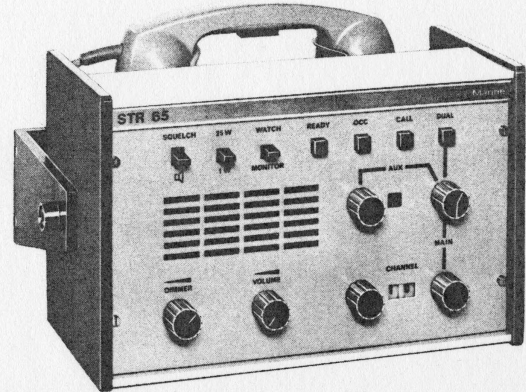
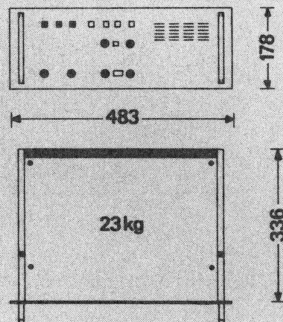
CONTROL BOX IN CABINET



TRANSCIVER



CONTROL BOX INCL. TRANSCIVER



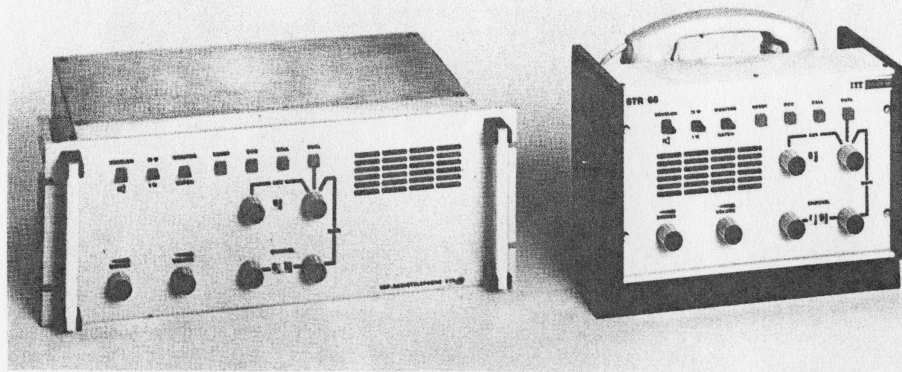
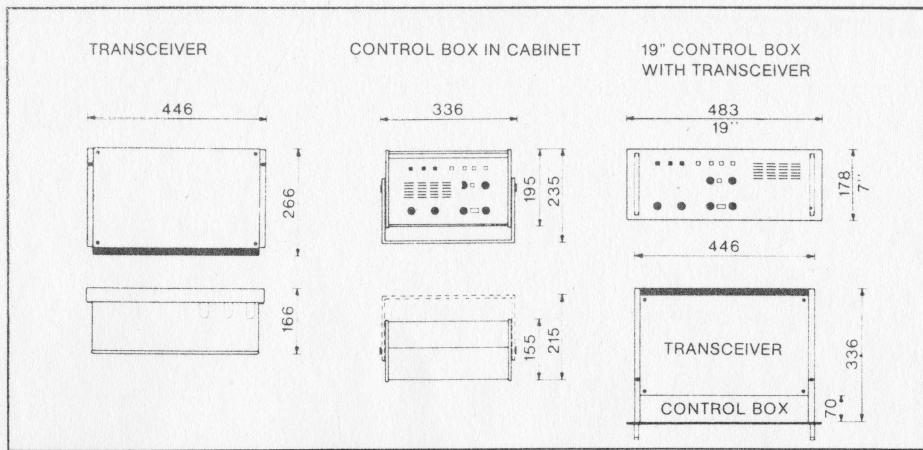
The STR65 for up to date ship to ship and ship to shore telephone service, carefully designed to meet the new international specifications. STR 65 is easy to install and easy to operate, all functions are remotely controlled from up to 4 controlboxes for 19" rack mounting or desk/wall mounting.

All the control boxes are identical which simplifies the operation. One of the boxes has the priority, usually the one on the bridge. The radiotelephone can be supplied with a built-in VHF hybrid permitting simultaneous transmission-reception on one antenna. The station has 2 channel listening, one channel chosen by the main selector and one channel chosen by the auxiliary selector.

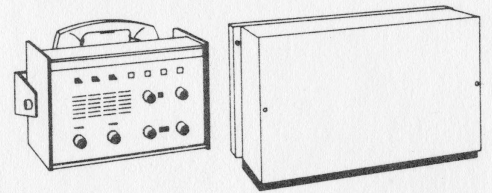
Transmitter and receiver are completely transistorized.

Microtelephones and loudspeakers on the bridge wings can be connected to the control boxes.

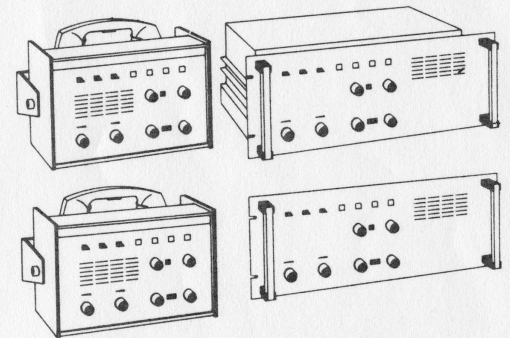
- 65 channels, simplex and duplex
- Two channel listening
- Completely transistorized
- Integrated synthesizer
- 25 Watts output power
- Low power consumption
- Small size, simple installation
- Modular construction
- Sealed I F crystal filter
- Automatic selection of up to 4 control units
- Optional extra channel 13 receiver



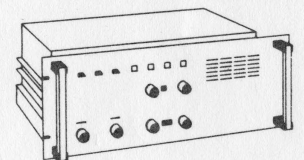
The most common system is the wall mounted transceiver with separate control box for desk or wall mounting.



A more advanced system is the rack or wall mounted transceiver with up to four 19" rack or bulk-head mounted control boxes.



The most simple system is a 19" rack mounted transceiver with control box mounted on the front. Bridge wing extension with micro-telephones and loudspeakers can be connected to all control boxes.



Marine VHF FM Radiotelephone STR 65

TECHNICAL DATA

The STR 65 complies with relevant specifications for international maritime VHF Radiotelephones in most countries.

General

- Frequency range : 156.025-157.425 MHz
160.625-162.025 MHz
(private range:
157.425-157.825 MHz)
- Number of channels : 65 (57 international maritime VHF channels and provision for up to 8 dual or private national channels)
- Operation mode : Simplex and duplex
- Channel spacing : 25 kHz
- Modulation : F3 pre-deemphasis 6 dB/oct.
- Crystals : Synthesizer to obtain the 57 international channels. Dual and private channels require additional crystals
- Transistorization : Fully transistorized
- Power supply variation : $\pm 10\%$ for all performances
+ 15%-20% for reduced performance
- Power consumption : stand-by : 25 Watts
transmit full power : 130 Watts
transmit reduced power : 80 Watts
- Supply voltage : 230, 220, 210, 115, 110, 105 Volts. 50-60 Hz
- RF impedance : 50 ohms

Transmitter

- Power output at standard voltage : 25 Watts - 1 Watt
- Max. deviation : ± 5 kHz

Receiver

- Sensitivity : $< 0.5 \mu V$ (1 μV EMF)
20 dB signal/noise (on private channels the sensitivity might be reduced to 1.8 μV EMF)
- IF frequency : 10.7 MHz
- Output power : $> 2 W$

- Simultaneous reception : Receiver switched between 2 channels. Channel I is switched on for 1/10 second every second, and if a signal is received the receiver stops on this channel. Channel II is received with 1/10 second interruption. This will not affect the intelligibility.
- Selective call : Space is provided for selective call receiver

Control unit includes

- Switch for reduced power
- Squelch on/off
- Volume control knob
- Auxiliary channel selector (channel 16 or optional other dual or/and private channels)
- Light dimmer
- Two channel listening switch (dual watch)
- Main channel selectors (decimal selector channel 1-28 and 60-88)
- Lamp indicator of
 - (1) ready
 - (2) set occupied
 - (3) two channel listening
 - (4) call

Performance figures and data quoted in this specification are typical and must be specifically confirmed in writing by Standard Electric A/S, Copenhagen before they become applicable to any tender, order or contract.

Standard Electric A/S
31 Fabriksparken
DK-2600 Glostrup
Denmark
Telephone: 01-45 00 45

When you are thinking of acquiring a radiotelephone for your boat, it's important to choose the system you can have total confidence in. Namely VHF.

This is the system used by commercial shipping for communications at sea, for ship-to-shore contact with harbour authorities or bridge watchmen - and to ring home over the telephone network via the coastal stations.

Channel 16 is the international emergency and call channel. It is constantly monitored by all ships and coastal stations - so you can always be quite certain you are being heard.

which takes up no more space than a car radio, there is no need to wait any longer.

The STR 12. Large 25 watt VHF radiotelephone in a compact format.

international VHF marine band frequencies.

Up to 10 extra channels.

Room for channel numbers and frequency chart behind the front glass panel.

brightly illuminated display panel with large digits makes it impossible to take an incorrect reading. The brightness can be regulated with a dimmer control.

Dual watch.

While you are listening to one of the other channels, the STR 12 automatically monitors channel 16. When

answered, or during an emergency, the channel 16 knob can be pressed immediately, regardless of channel setting.

Automatic squelch control.

In the normal position the squelch control keeps all noise effectively suppressed so that you only hear the STR 12 when someone is talking on the monitored channels. When the knob is pressed in the automatic squelch is disconnected so that even the weakest stations can be heard.

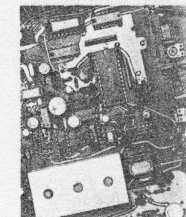
25 watt/1 watt

The STR 12 normally transmits at 25 watts, which is the maximum output permitted for transmission. For transmitting over short distances the output can be reduced to 1 watt. On channels 15 and 17 the STR 12 automatically reduces power to avoid possible interference with channel 16.

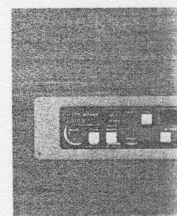
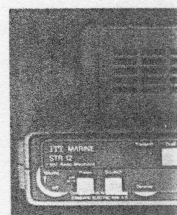
on the latest electro keeps servicing problem and ensures a dependability.

Fits almost any

Small outer dimensions enable you to



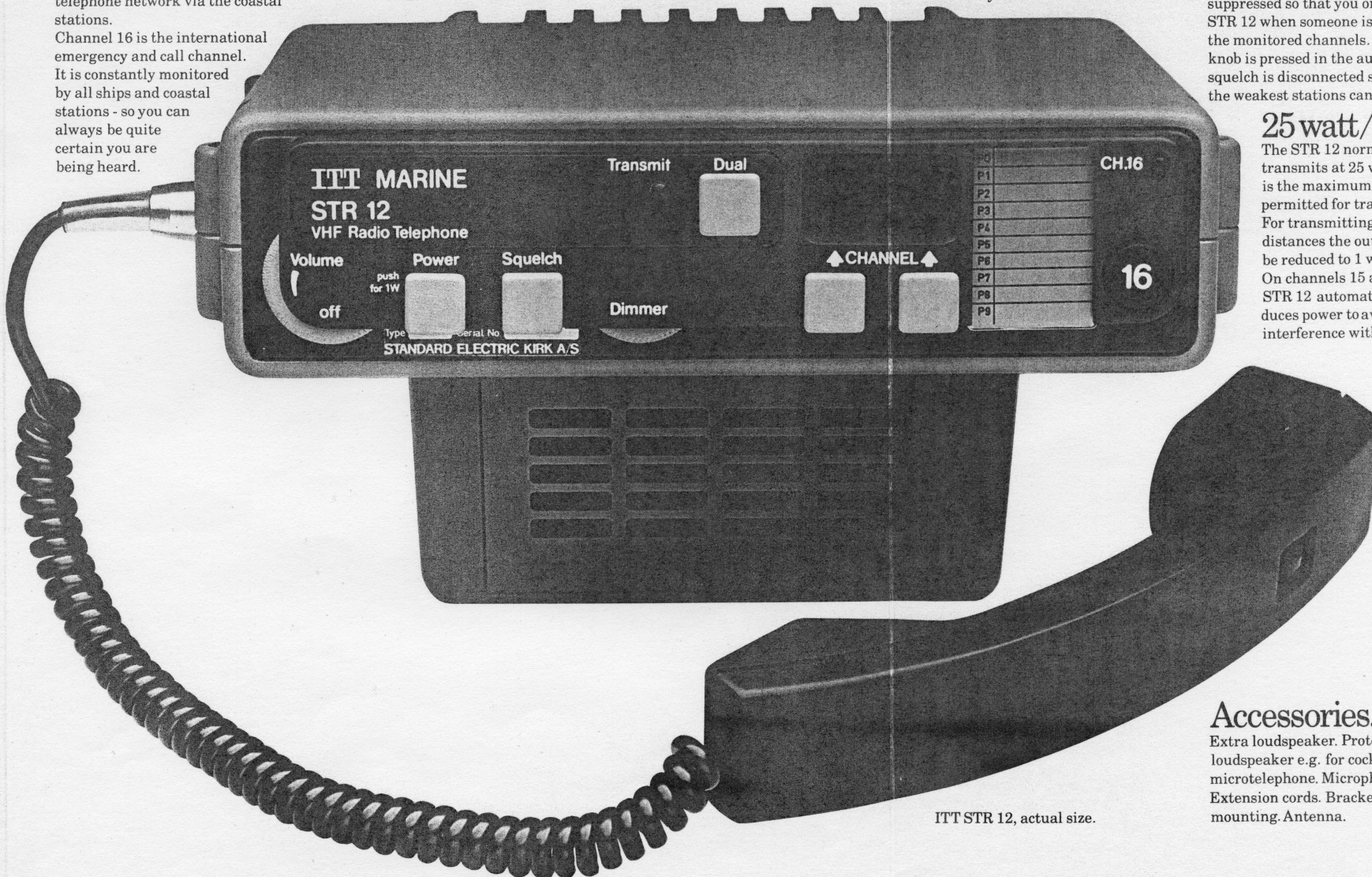
exactly where it is needed. On the navigation table, head, in the instrument deck on a shelf or just anywhere else. The loudspeaker can be placed either above or below the radio, depending on the size of the cabinet or where you can have the best with a separate loudspeaker to place as you wish.



Accessories.

Extra loudspeaker. Protected extra loudspeaker e.g. for cockpit. Extra microtelephone. Microphone. Extension cords. Bracket for console mounting. Antenna.

ITT STR 12, actual size.



STR 25

VHF-FM radio telephone



STR 25 is a fully solid state 55 channel marine VHF radiotelephone based on the latest technology.

The STR 25 is as the basic version, a 55 channel VHF radiotelephone for simplex and semiduplex operation.

An optional remote control box may be connected for flybridge installation.

The compact STR 25 fits well into the limited space available in smaller crafts, facilitated through table mounting on wedge or mounting bracket.

The dual watch feature is enabling simultaneous listening on channel 16 and one selectable channel.

An extension handset and an external loud-speaker are available as accessories.

- 55 channels
- 25 watts RF output
- dual watch
- plug-in subunits simplifies service

AS OPTION:

- 5 private channels by plug-in subunit
- extra channel 13 receiver
- remote control box unit with 10 metres connecting cable
- 110/220 VAC, 24 VDC/32 VDC