

HF950

HF SSB transceiver

THOMSON-CSF HF950 SSB transceiver

The HF950 transceiver is a state of the art, 125 Watt HF transceiver designed specifically to satisfy the long distance communications requirements of government, private organisations and individuals operating in remote and rugged environments. Utilising the "free to air" nature of HF communications spectrum, the HF950 transceiver provides remote communications with no ongoing call charges.

Housed in an extremely strong corrosion resistant, custom extruded aluminium chassis, with generous heat dissipating capabilities, the HF950 will operate in both voice and high duty cycle data modes in mobile and fixed stations. The HF950 is built to the specifications of European Standard ETS 300 373, a standard developed for the exacting role of international maritime distress communications.

In addition to the standard features you would expect in a professional HF transceiver, the HF950 offers optional features such as selective calling for simplified network operation, an internal GPS receiver to enable vehicle tracking, a voice scrambler module for security and a FED STD 1045 / MIL-STD-188-141A internal fit ALE module.

Teamed with Thomson-CSF's large range of mobile and base station antennas, HF data modems and automatic HF telephone interconnects, the HF950 transceiver will provide long distance voice and data communications for all environments.

HF950



advanced HF transceiver



A complete system

The HF950 is not only a HF transceiver but a part of a complete system offered by Thomson-CSF. This HF900 system can answer to most of the communication requirements asked by the users for fixed stations or mobile stations such as network interconnection, E-mail and data transmission, position reporting ...

HF Fax and Data

With the widespread use of HF as a data transmission medium, the HF950 transceiver is specifically designed for high duty cycle operation and has as standard an auxiliary connector that is fully featured to interface to a variety of external modems including the Thomson-CSF HF923 fax and data modem.

GPS tracking

For position tracking applications, an internally fitted GPS receiver module or external GPS receiver with NMEA 0183 data output can provide position information to a HF950 transceiver which can be interrogated from another HF950 station using a special selcall sequence. This, combined with a base station that has a Thomson-CSF HF977 PC based mapped location package, provides both logistic and safety management of a vehicle or vessel fleet.

Direct dial telephone calls

The "Selcall - Telcall" option provides direct dial telephone access using a Thomson-CSF HF960 telephone interconnect as the interface between HF network and the telephone network.

Radiomessage "Pagecall"

An option that enables a PC connected to the HF950 transceiver to send a 32 digit alpha numeric message to any HF950 transceiver fitted with selcall.

Advanced services

The HF950 proposes a wide range of advanced services which allows the radio operator to optimize the use of his HF equipment and to establish reliable and secure communications.

ALE - Automatic Link Establishment

The ALE option simplifies the operation of HF networks, automating many of the procedures necessary to establish and maintain an HF link.

The internally fitted option is fully interoperable with FED STD 1045 ALE / MIL-STD-188-141A systems. It is also capable of full 16 digit telephone dialling (using FED STD 1045 ALE as the signalling medium) with Thomson-CSF HF960 ALE equipped telephone interconnects.

Scanning

Channel scanning combined with the "Selcall Option" means calls will always get through, no matter what frequency or channel is operational due to propagation. Two scan tables are available, channels can be programmed as members of either table or both.

Scan resume - no missed calls

If the transceiver has been left unattended it automatically returns to scanning and is ready to receive calls on any channel.

Telediagnostic "Statcall"

A selcall based diagnostic tool that enables interrogation of remote transceivers to retrieve vital transceiver operating parameters.

Selective call - "Selcall"

Selective call - Selcall - provides a simple and efficient method of calling stations within a network. With the combined Selcall - Telcall" option fitted - all current derivatives of CCIR 493 format can be programmed into the HF950 transceiver on a channel by channel basis.

Emergency Selcall's with geographical position

The HF950 displays and annunciates emergency selective calls, also showing the position of the station sending the emergency call if it is fitted with a GPS receiver.





Voice Security

When message confidentiality is required a «scrambler» option is available which provides a medium level of voice encryption for message privacy even under the most arduous propagation conditions.

Security function

A built-in function allows a network operator, using a HF950 transceiver, to send a unique coded selective call to "kill" a stolen transceiver. Once "killed" the transceiver must be unlocked using a special code sequence.

Transceiver programming

Programming is achieved either using the front panel (depending on local legislation) or a personal computer loaded with a Thomson-CSF HF900 series transceiver programming package, connected to the HF950 auxiliary socket from the computer's communications port. Once one transceiver has been programmed all other HF950 transceivers that are to be used in a network can be "cloned" with identical data by using a Thomson-CSF "cloning" cable plugged between their auxiliary sockets.

HF950 features

Simple functional display

All operational information is easily viewed on a temperature compensated LCD display that has adjustable back-light features for night operation.

Syllabic mute (squelch)

Only responds to human voice and is immune to noise including noise burst.

Selcall mute (quiet line)

When using Selcall scanning this mute only opens when a selcall is directed to a specific transceiver. This reduces operator fatigue as the operator is not obliged to listen to HF noise or traffic not directed to him.

Noise blanker

A separate receiver within the HF950 transceiver generates the noise gating pulses which gate a new technology high speed switch providing superior impulse noise blanking performance.

Transmit time out function

If the transceiver has inadvertently been left in transmit i.e. a microphone jammed under a seat - after a fixed period of time the transmitter is disabled. It is re-enabled by pressing the push to talk momentarily.

BITE - Built In Test Equipment

To enable simple in field diagnostics of suspected faults the BITE tests receiver performance, selcall operation, syllabic mute operation, VCO operation and serial communications port viability.

Built in antenna VSWR indication

For field staff to check the correct operation of antennas, the tune function displays antenna forward and reverse power.

Second antenna connector

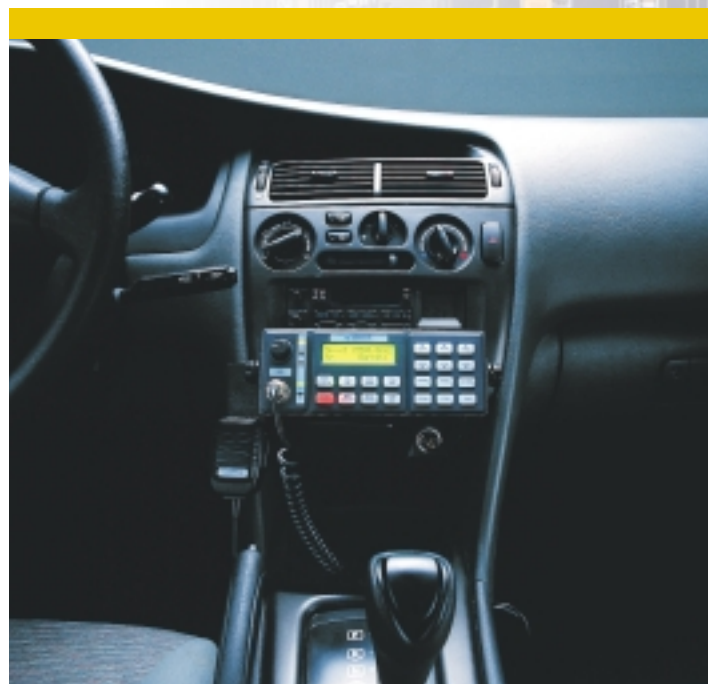
An optional second antenna connector allows each channel to select one of two antennas - ideal when long and short distance antennas are used.

Rugged construction

An extruded aluminium chassis combined with a rugged weather resistant glass reinforced nylon front panel has been designed to withstand harsh and hostile environments. Extensive vibration testing and temperature cycling has proved the HF950 will operate in the world's toughest environments.

Compact, easy to install remote control head for vehicles

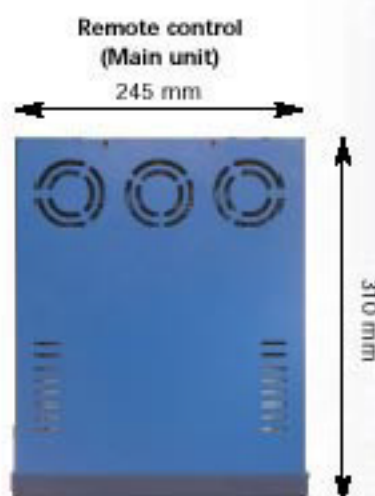
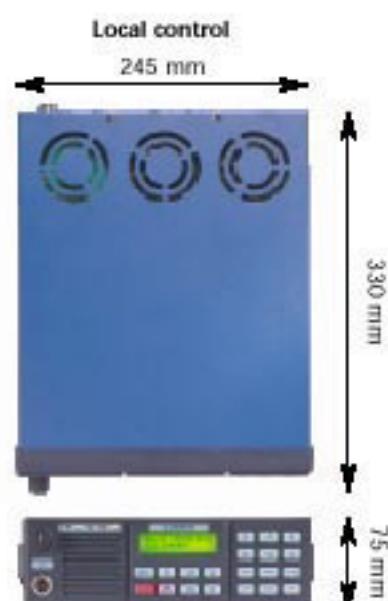
Available in a remote control configuration the HF950 transceiver is ideal for installation into today's compact vehicles. In specialised applications the HF950 transceiver can be used in a dual control configuration with both a front panel and a control head.



HF950

Technical specifications

Transmit frequency range	1.6 MHz to 30 MHz (continuous)
Receive frequency range	500 kHz to 30 MHz (continuous)
Power output	125 W PEP voice, 100 W PEP two tones
Channel capacity	Up to 450 programmable channels (simplex or semi-duplex)
Frequency resolution	10 Hz program mode 1 Hz tuneable receiver
Frequency stability	Standard ± 50 Hz (0 to + 55° C) Optional ± 10 Hz (- 15 to + 55° C)
Operating modes	J3E (USB, LSB) - H3E (AM) - J2A (CW) - J2B (AFSK) - optional J2B (AFSK) with narrow filter
Sensitivity	0.25 μ V (- 119 dBm) for 10 dB SINAD - J3E Mode (With RF pre-amp on)
Audio Output	4 W into 4 ohms, 2 W into 8 ohms at less than 5% distortion
Operating temperature	- 30° C to + 55° C
Humidity	95 % relative, non condensing
Current consumption standby	HF950 local control 840 mA (muted, back-light off) HF950 remote control 850 mA (muted, back-light off)
Current consumption transmit	Voice average less than 9 A typical Two tones less than 15 A typical
Weight	HF950 local control model 3.7 kg HF950 remote control model, main unit 3.45 kg HF950 remote control model, remote head 0.4 kg



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