PR4G

TRC 9100

VHF/FM ECCM HANDHELD RADIO

- > Wide range of advanced combat radio CNR services
- > Connected to tactical area network (ACNRI)
- > Very high level of EPM protection & embedded encryption
- > Easy to operate and lightweight (<1 Kg)
- > Up to 24 h autonomy
- > Fully interoperable in all modes with other PR4G radios (manpack, vehicle, airborne)

THALES

TRC 9100

TRC 9100 is a 2W handheld radio. It covers 30-88 MHz VHF band. It is fully interoperable in all modes with manpack, vehicular stations and airborne radio system from the PR4G family.

It can be used in the most stringent environments and is designed for all combat situations. It withstands shock & vibrations, immersion, heat, cold & humidity (compliant with MIL-STD-810 E).

Special audio ancillaries, antennas and harness are available to support hand-free communication during fighting. The radio provides also 0.2 W low probability of interception position & whisper mode in ambush operations.
Radio is easy to operate, lightweight (<1kg) and compact with all CNR services required during land, dropping or pick-up air operations: automatic late net entry, late traffic entry, break-in, selective or multiple selective calls, authentication & alerts.

The radio provides interoperability with previous generation radios in fixed frequency (STANAGs 4204 & 4292).
All digital voice & data traffic are encrypted with a built-in high-speed COMSEC device, providing highest security level.

Its autonomy is 18 h with Li-Ion battery and up to 24 h with removable lithium pack.

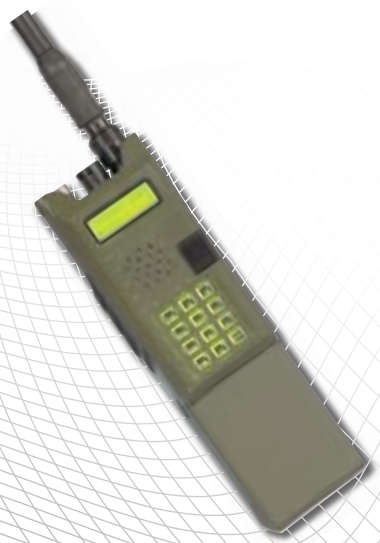
Handheld could be used with multiservice software (TRC 1731A) for e-mail & file transfer applications from a PC.

A VERY HIGH LEVEL OF EPM PROTECTION AGAINST JAMMING

The handheld takes benefits of the best EPM protection of the PR4G radio family.

With three interoperable ECCM modes, Fast Frequency Hopping (FFH), Free Channel Search (FCS) and an automatic mixed FH & FCS mode, the TRC 9100 provides the very best response against barrage & follower jamming. (Fig. 1)

With more than 300 hops/s, PR4G handheld is the fastest radio in service today



PROVIDE VOICE & DATA COMMUNICATIONS INTO HARSHNESS EW ENVIRONMENTS

In addition to the 16 kbps CVSD & analog voice modes, TRC 9100 provides packet mode usable for tactical messaging for instance for robust data transmissions with user data rates up to 4,800 bps. Data transmission includes correction codes (FEC) to maintain effective transmission while jamming usually stops pending communications of weakly protected ECCM radios and other PMR or fixed frequency radios.

Error-free transmission in FFH mode is achieved with up to 70 % of hopping band being jammed

Mix Mode ►

Fig. 1: In mixed FH&FCS mode, radio automatically selects the more appropriate mode, FFH or FCS, according to EW environment.

THE WIDEST RANGE OF ADVANCED COMBAT RADIO CNR SERVICES

- Automatic net initiation, late net and traffic entry for action-free operations
- A very precise synchronisation transmitted periodically throughout radio networks for a very good resistance against jamming
- Break-in facility to allow channel pre-emption by the leader when an order must be urgently transmitted
- Simultaneous multiple selective calls at the same time of conference communications
- Broadcasting of alerts with its number and the sender ID
- Transmission of operational short messages
- Automatic traffic types recognition between voice/data, data rate and operational short messages
- Link quality test to analyse local jamming in order to set appropriate data rates
- Authentication of correspondent on request
- Anti-tampering protection & emergency erasure with alert broadcasting throughout radio net
- Scanning over 8 analog fixed frequencies (hailing)

TRC 9100

GENERAL CHARACTERISTICS

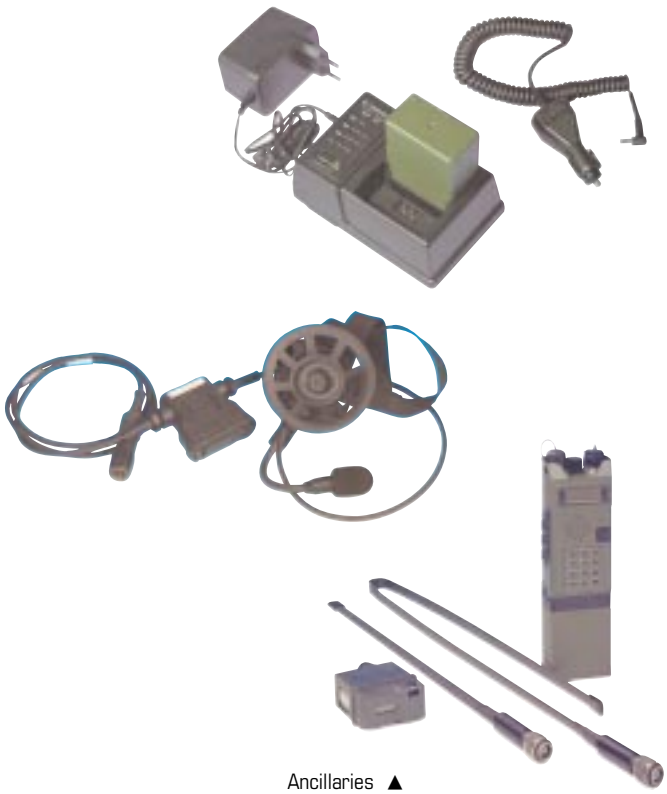
Frequency band	30 to 88 MHz, 25 kHz spacing / 2,320 channels
STANAG 4204 - compliant	F3 modulation
FF Modes	Analog Fixed Frequency (AFF) Digital Fixed Frequency (DFF)
ECCM Modes	Fast Frequency Hopping (FFH) Free Channel Search (FCS) Mixed FH + FCS mode
Autonomy	18 h with Li-Ion battery 24 h with Lithium pack
Weight	980 g with lithium pack
Dimensions (W x H x D)	75 x 238 x 47 mm (with lithium pack)
Temperature range	Operational from - 25° C to + 70° C, MIL-STD-810 E
Humidity	95 % at 35° C, MIL-STD-810 E
Watertightness	Immersion-proof under 1m of water during 2 hours, MIL-STD-810 E

TRANSMISSION & RECEPTION CHARACTERISTICS

RF output power	2 W, 0.2 W
Frequency stability	± 3.3 ppm
Harmonic radiation	Protection better than 40 dB
Spurious radiation	Protection better than 60 dB
Sensitivity	(S + N) / N ratio better than 20 dB for a -113 dBm RF signal

INTERFACES

Audio	AF output power: 200 mW / 300 Ω Audio bandwidth: 400 to 2,400 Hz at ± 3 dB
Data	MIL-STD-188 / 114 or RS 232 data interface



Ancillaries ▲

THALES

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