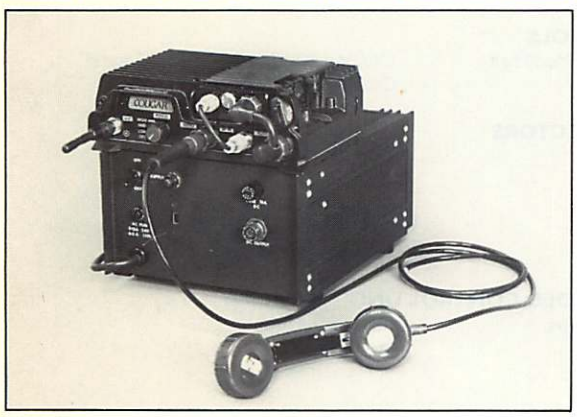
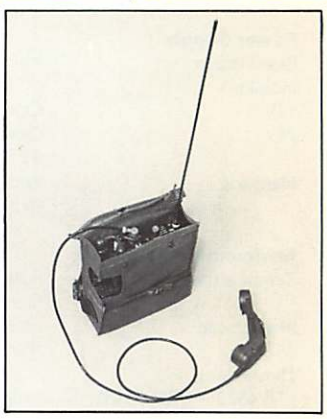
III

COUGARNET





STATIC/MOBILE/TRANSPORTABLE SYSTEM SRM 4515

FLEXIBLE SYSTEM CAPABILITY

VHF OR UHF COVERAGE **OPTIONAL SPEECH SECURITY**

EXTREMELY RUGGED AND SEALED CONSTRUCTION

The Static, Mobile and Transportable (SMT) unit is an integral part of the Racal Cougarnet system which can be configured as a base station, a vehicle station or as a manpack radio. The COUGAR personal radio type PRM 4515 simply plugs into the SMT unit for instant conversion to a high power radio system capable of multirole operation dependant upon power supply. A quick release mechanism allows an operator to remove the PRM 4515 at any time for use as a normal personal radio.

Operating in the VHF and UHF personal frequency bands the transmitter output may be 20W, 10W or 2W at VHF or 10W, 5W and 2W at UHF. Ten pre-programmed operating channels are available with channel frequencies easily changed with a fill gun. Any of the channels, no matter in which role the SMT is used, may be nominated for single or two frequency simplex operation. A minimum of external controls ensures easy operation and thereby operator confidence. Secure speech operation is available by incorporating a personal radio fitted with digital encryption.

RACAL

COUGARNET EQUIPMENT

A complete range of ancillaries is available including a covert installation for mobile applications. Special shock mountings enable the SRM 4515 to be used for airborne operations. A special control unit interfaces with the aircraft's existing system.

STATIC

In static applications the SMT unit fitted with a personal radio and Extended Control Unit becomes a simple compact base station. It can provide simplex and two-frequency simplex operation and may be used as the control station for a simplex net. It can be used with other equipment which provides full remote control facilities.

MOBILE

When used in its mobile configuration, the SMT unit can be located in any convenient position, such as the boot of a vehicle, and all control functions carried out by a dash mounted Extended Control Unit. Power is obtained from the vehicle supply system and a 24/12V converter is available for 24V vehicle systems.

A complete range of ancillaries is available for covert installation. In the airborne configuration, a special control unit interfaces with the aircraft's existing system.

TRANSPORTABLE

In its transportable mode the SMT unit is attached to a specially designed lightweight harness for conversion to an extremely compact manpack which allows the operator to move freely in difficult terrain. Secondary battery packs are used for the transportable role and these may be replaced without removing the radio from the harness.

OVERALL SYSTEM

Further extension of the Cougarnet System common equipment philosophy is the use of 2 SMT radios working back-to-back forming the basis of talkthrough or link stations, details of which are to be found on separate data sheets.

Operational control of the COUGARNET system can be effected over the air from any Personal radio or SMT station, equipped with an Outstation Link Control Unit (OLCU) type MA 4527A. The OLCU provides full functional control of all Talkthrough/Link stations in the system.

Status and alarm indications generated by the talkthrough links are fed back to the OLCU. A hard copy of all data traffic can be provided by connecting a printer to the OLCU.

Remote control over cables can be provided by use of an Extended/Local Control Panel (ELCP) which provides similar full function control.

MAIN TECHNICAL PARAMETERS*

GENERAL

Frequency Range

TA 4523L	66-88MHz
TA 4523HA	132-156MHz
TA 4523HB	148-174MHz
TA 4523UA	380-440MHz
TA 4523 UB	420-470MHz

Power Supply

Base Station:	Mains PSU. MA 4107C
Mobile:	
12V	Operates directly via 2-way connector
24V	Operates via 24/12V vehicle adaptor ST 791750
Manpack:	Rechargeable 12V battery MA 4025D Optional 5-way battery charger MA 4529A

Environmental

Temperature:	Full spec −20 to +55°C Storage −40 to +85°C
Mechanical:	Drop and sealing tests to DEF STD 07-55 (Part 2) and MIL STD 810C

Dimensions: (TA 4523 + PRM 4515)	Without battery	With battery
Height:	75mm	75mm
Width:	230mm	230mm
Depth:	150mm	240mm
Weight:	2.8kg	5.2kg

RECEIVE

Maximum Usable Sensitivity:	Voice:	Application of 0.5μV pd maximum at the receiver input at the normal frequency of the receiver, with ±3kHz deviation @ 1kHz will produce an audio output having a SINAD of 12dB
	Data:	Less than 10% synchronous bit error rate @ 0.5μV
Current Consumption:		150mA max Receive 100mA Standby

TRANSMIT

RF Power Output		
TA 4523 L and H:	20/10/2W	The 2W level is the RF output of the personal radio switched direct
TA 4523 U:	10/5/2W	
Harmonics:	Below −70dB relative to carrier	
Current Consumption:	5.6A typical	

CONTROLS

Off/Low/Med/High	Off/2W/10W/20W	TA 4523 L and H
4 position	Off/2W/5W/10W	TA 4523 U

CONNECTORS

RF in:	From PRM 4515
RF out:	To antenna
Audio 1:	From PRM 4515
Audio 2:	To Spkr/Mic or ECU (Clansman compatible)
Power:	To external DC supply

EXTENDED CONTROL UNIT – MA 4730A

Connectors:	Microphone (front) Speaker (rear) SMT unit (rear)
Controls and Indicators	
Off/Volume:	8 position including squelch override and whisper
Channel:	10 position channel switch
Mode:	4 position; clear, secure A, secure B and zeroise (with mechanical interlock)
Display:	ON/OFF pushbutton (LAMP) controls LED display and transmit indicator

*For technical parameters of PRM 4515 fitted to SMT unit, see relevant data sheet PRM 4515 warning tones are fed through to the SMT and ECU if fitted.

RACAL

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