

RD2-RCU, RD2-RIU

Remote Tactical Radio Control

Remote Radio Control

The **RD2-RCU** (Radio Control Unit) together with the **RD2-RIU** (Radio Interface Unit) is a robust and reliable remote control solution for tactical radios. It is suitable for use in applications where a physical separation between the operator and the tactical HF or V/UHF radio is required.

Key Features & Benefits

- Remote radio operation over field wire (plain or steel-reinforced)
- Physical separation of operator and HF transceiver
- Remote Channel & Volume control
- Full duplex analogue voice (with standard field handset / loudspeaker)
- Plug and play - no settings
- Long range: up to 10 km
- Up to 32000 bps remote data capability (optional)
- No interference with HF or V/UHF radio
- Battery operated: 9 hrs operation (RCU)
- IP68 rated enclosure
- MIL-STD-810-qualified
- CE-compliant (future)

Radio Control Unit

The **RD2-RCU** is the operator's interface to the remote radio. The unit provides interfaces that are similar to typical tactical radios including 2x MIL-DTL-55116 audio connectors and a single MIL-C-38999/III accessory connector.



The **RD2-RCU** provides for remote channel selection (1...10) and handset and speaker volume control.

Radio Interface Unit

The **RD2-RIU** interfaces to the radio using the supplied BERNIER CMA 5N14RA7-70 connector.



Analogue voice interface

Independent audio channels carry voice between the **RD2-RIU** and the **RD2-RCU**. A standard field handset and speaker may be connected to the **RD2-RCU**. Audio from the radio is transmitted to the **RD2-RCU** and played out on both audio connectors. Voice from the handset is transmitted to the **RD2-RIU** as long as PTT is pressed.

Data interface

For radios with an internal data modem capability a remote data facility is available. Data from the radio is transmitted to the **RD2-RCU** and routed to the accessory connector. Data from the accessory connectors is transmitted to the **RD2-RIU** and routed to the radio.

Field wire interface

The field wire interface is compatible with steel reinforced DON-10 and WD-1/TT cables or copper twisted pairs. Connecting the wire is easy and secure using spring loaded binding posts. The unit is not sensitive to field wire polarity reversal. The LED indicators signal the status of the field wire, radio connection and the data activity on the circuit. It is possible to disable the status LEDs for light sensitive night-time operations.

User equipment such as laptop computers can be connected directly with the **RD2-RCU** via the supplied data cable (D9 plug).

The **DC power supply** of the units is designed for MIL-STD-1275B (hard-skinned military vehicles) and will run off an external 7.2V battery (e.g. BA 2590). The power cord and plug is supplied.

For lightning protection, a grounding kit (strap and copper rod) is available as an accessory.

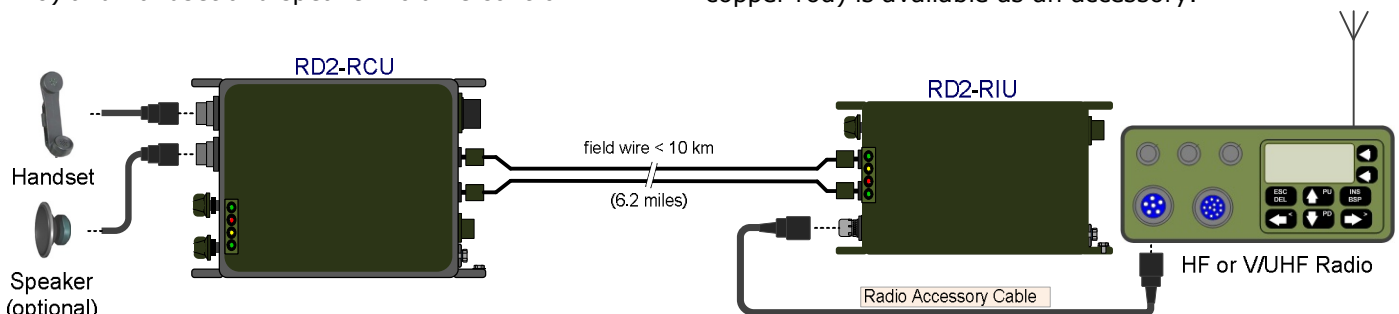




Figure. 1: Typical Remote Tactical Radio Control System.

INTERFACES	
FIELD WIRE CONNECTORS	<ul style="list-style-type: none"> Field-wire binding posts (spring-loaded) Not sensitive to polarity reversal ESD Protection: Sacrificial protection board (replaceable) with gas discharge protection
RADIO PORT (RD2-RIU)	<ul style="list-style-type: none"> Connectors: CMA 5N14RA7-70 (Radio cable supplied) Electrical: RS-232. Port configuration: 9600 / 19200 / 34400 / 57600 / 115200 bps, 8N1 DATA_RX, DATA_TX, DATA_RTS, DATA_CTS (CTS, RTS for hardware flow control, if required)
	Configuration parameter update: Radio proprietary command set
	Software update: RapidM DLP over RS 232. Available on request from RapidM
ACCESSORY PORT (RD2-RCU)	<ul style="list-style-type: none"> Connectors: MIL-C-38999/III to D9 (Accessory cable supplied with radio) Electrical: RS-232. Port configuration: 9600 / 19200 / 34400 / 57600 / 115200 bps, 8N1 DATA_RX, DATA_TX, DATA_RTS, DATA_CTS (CTS, RTS for hardware flow control, if required)
	Configuration parameter update: Radio proprietary command set
	Software update: RapidM DLP over RS 232. Available on request from RapidM
HANDBET / SPEAKER PORT (RD2-RCU)	<ul style="list-style-type: none"> Connector: MIL-C-55116/1-3 waterproof audio connector Earphone Output: Impedance 8 Ohms Microphone Input: >1000 Ohm

INSTALLATION		ENVIRONMENTAL	
WEIGHT	<ul style="list-style-type: none"> RD2-RCU: 1.2 kg RD2-RIU: 0.8 kg 	TEMPERATURE	-40°C to +70°C (operating), -50°C to +80°C (storage)
COLOUR	Olive drab, powder coat (RAL6022)	HUMIDITY	MIL-STD-810F Method 507.4 0 to 95%, non-condensing
SIZE (L X W X H)	<ul style="list-style-type: none"> RD2-RCU: 214.3 x 149.3 x 55.4 mm RD2-RIU: 214.3 x 116.1 x 32.6 mm 	ALTITUDE	MIL-STD-810F Method 500.4
MOUNTING	Mounting holes for securing to flat surface	SAFETY	IEC/EN 60950
VIBRATION	<ul style="list-style-type: none"> MIL-STD-810F Method 514.5 (Loose Cargo Transportation) MIL-STD-810F Method 514.5 (Helicopter) MIL-STD-810F Method 514.5 (Ground Vehicles) 	SHOCK	<ul style="list-style-type: none"> MIL-STD-810F Method 516.5 (Functional Shock) MIL-STD-810F Method 516.5 (Bench Handling)
POWER & GROUNDING	<ul style="list-style-type: none"> RIU: 6-36 VDC (designed for MIL-STD-1275B) RCU: 11-36 VDC (to charge), 6-36 VDC (to operate) Power consumption: < 2 Watt GND Screw, 2 m braided copper earth strap, 0.5 m copper earth rod (included) 	ENCLOSURE	<ul style="list-style-type: none"> Immersion 3 hours at 2 meter depth IP68: Connectors waterproof when mated and when not mated.

BOX CONTENTS IN ADDITION TO THE RD2-RCU AND RD2-RIU	
RADIO CABLE	Plug CMA 7N14 and plug MIL-C-38999 (1m)
POWER CONNECTOR	DC Power Connector & 2 m flex cable
GROUNDING KIT	1 m braided copper earth strap
DOCUMENTATION	CD with user manual in PDF format. A printed quick start guide is included in the box.

ACCESSORY : TACTICAL HANDBET		ACCESSORY : TACTICAL SPEAKER	
	Available from Sonetronics: H-250/U: Lightweight noise cancelling handset <ul style="list-style-type: none"> NSN : 5965-00-043-3463, 5965-01-247-4723 PART NUMBER : HE-250-229 		Available from Sonetronics: LS-108M: External speaker

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