## 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.

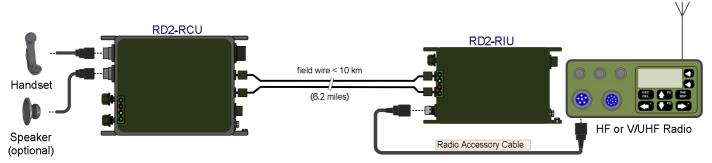


Figure. 1: Typical Remote Tactical Radio Control System.



INTERFACES			
FIELD WIRE CONNECTORS	<ul> <li>Field-wire binding posts (spring-loaded)</li> <li>Not sensitive to polarity reversal</li> <li>ESD Protection: Sacrificial protection board (replaceable) with gas discharge protection</li> </ul>		
RADIO PORT (RD2-RIU)	<ul> <li>Connectors: CMA 5N14RA7-70 (Radio cable supplied)</li> <li>Electrical: RS-232. Port configuration: 9600 / 19200 / 34400 / 57600 / 115200 bps, 8N1</li> <li>DATA_RX, DATA_TX, DATA_RTS, DATA_CTS (CTS, RTS for hardware flow control, if required)</li> </ul>		
	Configuration parameter update: Radio proprietary command set		
	Software update: RapidM DLP over RS 232. Available on request from RapidM		
ACCESSORY PORT (RD2-RCU)	<ul> <li>Connectors: MIL-C-38999/III to D9 (Accessory cable supplied with radio)</li> <li>Electrical: RS-232. Port configuration: 9600 / 19200 / 34400 / 57600 / 115200 bps, 8N1</li> <li>DATA_RX, DATA_TX, DATA_RTS, DATA_CTS (CTS, RTS for hardware flow control, if required)</li> </ul>		
	Configuration parameter update: Radio proprietary command set		
	Software update: RapidM DLP over RS 232. Available on request from RapidM		
HANDSET / SPEAKER PORT (RD2-RCU)	Connector: MIL-C-55116/1-3 waterproof audio connector  Earphone Output: Impedance 8 Ohms  Microphone Input: >1000 Ohm		

Installation		ENVIRONMENTAL	
WEIGHT	• 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> <li>RD2-RCU: 214.3 x 149.3 x 55.4 mm</li> <li>RD2-RIU: 214.3 x 116.1 x 32.6 mm</li> </ul>	ALTITUDE	MIL-STD-810F Method 500.4
MOUNTING	Mounting holes for securing to flat surface	SAFETY	IEC/EN 60950
VIBRATION	<ul> <li>MIL-STD-810F Method 514.5 (Loose Cargo Transportation)</li> <li>MIL-STD-810F Method 514.5 (Helicopter)</li> <li>MIL-STD-810F Method 514.5 (Ground Vehicles)</li> </ul>	Sноск	<ul> <li>MIL-STD-810F Method 516.5 (Functional Shock)</li> <li>MIL-STD-810F Method 516.5 (Bench Handling)</li> </ul>
Power & Grounding	<ul> <li>RIU: 6-36 VDC (designed for MIL-STD-1275B)</li> <li>RCU: 11-36 VDC (to charge), 6-36 VDC (to operate)</li> <li>Power consumption: &lt; 2 Watt</li> <li>GND Screw, 2 m braided copper earth strap, 0.5 m copper earth rod (included)</li> </ul>	ENCLOSURE	<ul> <li>Immersion 3 hours at 2 meter depth</li> <li>IP68: Connectors waterproof when mated and when not mated.</li> </ul>

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 HANDSET **ACCESSORY: TACTICAL SPEAKER**



H-250/U: Lightweight noise cancelling handset NSN: 5965-00-043-3463, 5965-01-247-4723

Available from Sonetronics:

PART NUMBER: HE-250-229

Available from Sonetronics: LS-108M: External speaker

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