

# EOD Remote Detonation Systems



## RDS-6711 and RDS-6713

**Programmable & Multiple firing  
units with Single & ten detonator  
connection Ports**

## System Description

**RDS-67 series Remote Detonation Systems** are field proven products. These are qualified on military standard for safe and reliable initiation of explosives remotely. A hand held Master Control Unit (MCU) can have two way communication with Remote firing units (RFU) under two configurations:-

- Model RDS-6711     Demolition and Bomb Disposal operations; with up to 20 RFUs. This system can also be used for special operations with kit of solar panels/ extended time RFUs up to 72 hours.
- Model RDS-6712     Demolition and Bomb Disposal operations; with up to 81 RFUs.
- Model RDS-6713     Demolition and Battle Field Simulation operations; with up to five RFU; each RFU further having 10 output.

### Main Features

- Confirmation of status and detonation through Close loop communication
- Fully EMC tested & built to meet environmental standards MIL STD 810E
- Operating range 4 to 5 Km in urban areas and 20 to 25 Km in line of sight
- Self-test facility available in both MCU & RFU
- Status update of battery, line impedance and detonation command
- Detonator status :        RFU monitors line impedance & load status
- Cancellation of firing command within the programed time
- Both options of wireless and land line communication in single system
- MCU can be programmed to fire sequence of different RFUs
- Self- Piercing rugged wire connectors
- Micro Controller based Battery charging
- Night Illumination.

### Safety Features

- Designed for maximum reliability & safety
- Two hands operation
- Arming delay safety timer
- Isolation of Charging Capacitor from firing circuit till detonation command is received
- Unique serial numbers and use of encrypted system
- LEDs indications & LCD based Menu
- Data Encryption secure communication between unique serial numbers
- 5 Min. safety timer for user withdrawal

### Master Control Unit (MCU)

The MCU is a hand held, waterproof Aluminum housing having UHF transceiver, along with the micro controller based control circuitry. The MCU is powered up with an internally installed Lithium-Ion battery module. Following are the main features of MCU:

- Self-test Status (Battery, RF/Land Line, Detonator status)
- Communication through Microwave or land Line
- Monitor and Program, Remote Firing Units
- Status display (Battery, RF/LL, Detonator) of RFUs
- Programming of firing sequence
- Self- Piercing rugged wire connectors
- Micro Controller based Battery charging circuitry
- Encrypted communication with RFUs
- Night Illumination




### Remote Firing Unit (RFU)

The Remote Firing Units are waterproof Aluminum housing containing UHF transceiver along with micro Controller based control circuitry. RFUs are powered up with an internally installed Lithium-Ion battery module. RFUs decode and execute the commands received from MCU and acknowledge the status and results to MCU. Following are the main features of RFUs:

- Self-Test circuitry
- Communication through Microwave or Land Line
- Self- Piercing rugged wire connectors
- Micro Controller based Battery charging circuitry
- Encrypted communication
- LED Indicators (Battery, RF/Land Line, Detonator)
- Provide energy to Detonator

## Detailed Technical Specifications



Configurations	 RDS 6711		 RDS 6713	 RDS 6712
Frequency	UHF (429MHz to 436MHz)			UHF
Modulation	FSK			
Operating Range	Line of sight 25 Km, 4-5 Km in Urban/vegetated area			
Number of RFUs	Up to 20	Up to 2 each can further fire 10 circuits.	Up to 81	
Ops Temp. range	-20°C to +55°C			
Store Temp.	-30°C to +65°C			
Humidity	95% RH at 40°C			
TX power MCU	< 5 watts Typical (wattage can be reduced to user requirement)			
MCU Size mm (L x W x H)	225 x 110 x 75 max			220 x 100 x 70 mm
MCU weight	2.3 Kg (with battery) (depending on backup time & battery size )			1.25 Kg with battery
Data entry I/P	12 Keys Key Pad			
MCU Battery	12 V, Lithium-Ion rechargeable			12 Volts NiMH
LCD	4 x 16 characters, with backlit			
RX Sensitivity	-119dBm			
Weight RFU	2.1 Kg with battery	4.4 Kg	0.8 Kg	
	with lesser backup time weight can be reduced			
Battery RFU	12 V, LiFeO4 rechargeable			12 Volts Lithium
Battery Time RFU	75 Hours (Many months with solar charging option)	Up to 20 hours	6 hours continuous	
Antenna Impedance	50 Ohms			
Available energy	0.5 Joules			1.7 Joules
Max line impedance	60 Ohms			
Firing Circuit	Capacitive Discharge			
Battery charging	Utility Power, Vehicle or Solar			Utility Power and Vehicle
Transit Case	ABS shock/water proof			

# Accessories with RDS

## Standard Accessories

1. **Transit case.** Each system is supplied in a rugged case; which can house all the items of the system in cut foam packing where the operator has ease of packing after the operation. Any specialized packing can also be provided on the user request.
2. **Chargers.** Chargers are supplied for each RFU and MCU



## Optional Accessories

1. **Demolition cable.** Dem cable conforms to DEF STAN 61-12 Part 17. We also offer the reels on the specialized requirements of any client.

Conductor					Finished Cable		
No. of Strands	Strand Dia mm	Insulation Thickness mm	Dia. Mm	Mean O/Dia. of each core mm	Dia over sheath. Mm	Conductor DC Resistance @ 20°C	Weight Kg/Km
24	0.2	0.65 nom	2.44 nom	Lower Limit 2.39 Upper Limit 2.49	4.88 nom	26 ohm/km	28 Apprx.
Length							
100 m							
250 m							
500 m							



2. **Tripod Antenna Stand.** A tripod antenna can be provided to extend the range or when in a very thickly vegetated area. This raises the height of the receiver antenna.