



# Remote Detonation System RDS-6711

## Single & Multi Port Remote Firing Units



Technology – Reliability – Performance

## System Description

**RDS-6711** is a close loop UHF radio Control Unit, designed for the remote initiation of munitions & explosives. It comprises of one transmitter & multiple Receiver units under following configurations:

- Master Control Unit (MS6711). It can be operated with any of the following RFU options:
  - Remote Firing Unit (SL6711) with single Detonator port, max 20 RFUs can be used with one Master Control unit
  - Remote Firing Unit (SL6711A) with ten Detonator Ports. Each port is addressable separately. Five such units can be operated through one Master Control unit

## Main Features

- Confirmation of status and detonation through Close loop communication
- Self-test facility in MCU & RFU
- Fully EMC tested & built to MIL STD 810E
- Cancellation of Firing command
- Operating range 4 to 5 Km in urban areas and 20 to 25 Km in line of sight

## Safety Features

- Designed for maximum reliability & safety
- Two hands operation
- 5 min. Arming delay safety timer
- Isolation of Charging Capacitor from firing circuit
- Unique serial numbers and use of encrypted system
- LEDs indications & LCD based Menu

## Master Control Unit (MCU)

The MCU is a hand held, waterproof Aluminum housing having the 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)
- Communication through Microwave or land Line
- Monitor and Program, Remote Firing Units
- Status display (Battery, Detonator) of RFUs
- Firing of individual, multiple or all RFUs
- Firing a programmed 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 Status Indicators (Battery, RF/Land Line, Detonator)
- Provide energy to Detonator
- 5 Min. safety timer for user withdrawal

## System Technical Specifications

- Frequency : UHF band (429MHz to 436MHz)
- Modulation : FSK
- Operating Range : Open terrain up to 4 to 5Km & line of sight up to 25Km
- Operational Temp. range : -10°C to +55°C
- Store Temp. range : -20°C to +65°C
- Humidity : 95% RH at 40°C
- Max. configurable RFUs : MCU can program up to 20 RFUs (single port) & 05 RFUs (10 ports)
- RFUs Options : Single O/P Port & Ten O/P ports
- Max. TX power : 5 watts Typical (MCU & RFUs)
- MCU Size : 225 x 110 x 75 mm (L x W x H)
- MCU weight : 2.3Kg with battery
- LCD : 4 x 16 characters, with backlit
- Data entry I/P : 12 Keys Key Pad
- Communication : Microwave or Land Line
- RX Sensitivity : -119dBm
- RFU Size (single port) : 170 x 75 mm (D x H)
- RFU weight (single port) : 2.1Kg with battery
- Power Source : 12V/2.3AH, Lithium-Ion battery (MCU & RFUs)
- Battery operation time : 75 hours on RF and 150 hours on Land Line
- Data Encryption : Available
- Self-test facility : Available in both MCU & RFU
- Detonator status : RFU monitors line impedance & load status
- Max line impedance : 60 Ohms (RFU port & Detonator)
- Firing Circuit : Capacitive Discharge
- Available energy : 0.5 Joules per output port
- Antenna Impedance : 50 Ohms
- Battery charging options : Utility Power, Vehicle & Solar PV
- Cancellation of firing command within the specified time

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