



ROTHENBUHLER ENGINEERING

HOME OF THE *Talkie Tooter!*

1673 Remote Firing Device

*For export, Department of
Commerce license may be required*

THE 1673 REMOTE FIRING DEVICE (RFD) is an intelligent and discrete 2-way radio controlled remote blast initiation system. The radio system's signal is digitally encoded (addressed). The latest microprocessor and message encoding/validation technology has been combined to prove a **SAFE**, **RELIABLE** and **ACCURATE** Remote Firing Device. Rothenbuhler Engineering engineered this system using over 20 years of military and commercial RFD experience.

HIGHLIGHTS AND NEW FEATURES:

FIRE UP TO 64 DUAL-OUTPUT REMOTES

The Controller Unit is capable of commanding up to 64 remotes that can be either electric or non-electric, in 8-Remote groups.

EVENT LOG WITH GPS

The history event log keeps a record of information such as unit state, post blast motion detect value, firing voltage level, battery level and the date and time the event was logged. With the GPS included, each event will also have the longitude and latitude of where the unit was when the event was recorded.

POST BLAST MOTION DETECTION

Each Remote unit has a sensor that measures the seismic motion that may be expected when a successful blast detonation has occurred. The Controller unit then reports that a post-fire motion was detected, useful in subsurface operations when the successful initiation of a blast cannot be easily determined.

AUTOMATIC DISARM WITH TIMER

The automatic-disarming function ensures that the unit returns to a safe state in the event of a loss of communications, after a time out period.



SEQUENTIAL FIRING MODE

The Sequential Fire feature allows the user to space the firings of each Remote unit so that they do not fire at the same time, 0-2 seconds between the firing of each Remote. This feature is particularly useful when firing multiple blocks where a delay is needed between each block.

STANDBY MODE

Both the Controller and Remote Units can run on standby for typically 10-14 hours before recharging is required.

RETRACTABLE & GUARDED ANTENNA

Raised vertically during operation and retracted into an antenna guard for extra protection during transport and storage.

LCD DISPLAY WITH BACKLIGHTING

The LCD display provides information that is supplemental to the basic operation of the 1673 RFD. Whenever a switch is pressed, the LCD display's backlighting function will be enabled. After 30 seconds of inactivity, the backlighting will automatically turn off to save battery power. The LCD is rated for -20 to 70°C (-4 to 158°F).

INCREASED FIRING CAPACITY

Minimum of 350V, allowing for approximately 75 electric caps in series, or a maximum circuit resistance of 150Ω



MODEL 1673 REMOTE FIRING DEVICE

STANDARD FEATURES & FUNCTIONS

All UNITS

Low battery & unit status indications
EMI shielded, shock mounted, solid state circuitry
Watertight cases
Long-life rechargeable NiMH batteries – 4 hr. charge
Programmable for leaky feeder & repeaters

SYSTEM BASICS

Controller, 1 to 64 Remotes, Antennas,
Battery chargers, Shock Tube tips
Electronic Keys

CONTROLLER

Interactive keypad
Polls for and displays status of all Remotes
Transmit and confirmation indicators
Controls up to 8 Remotes at one time.

REMOTE

Spring loaded terminal posts
0 Voltage on posts until "Fire"
Uses replaceable 500 shot spark tip & standard 1/8" shock tube

CERTIFICATIONS: US-Federal Communications Commission (FCC)
CANADA-Department of Communications (DOC)

GENERAL

Carrier Frequency VHF – 150 to 174 MHz

Operating Temperature -30°C to +60°C**
-22°F to +140°F

FCC & IC Certified

**Optimum battery range 0°C to 50°C

CONTROLLER

Frequency Stability ± 1.5 ppm
Modulation 11K2F3D (FSK)
Transmit Power 1 – 5 Watts
Operating Voltage 7.5 VDC
Transmission Range 1 – 5 miles**
Receiver Sensitivity 12 dB SINAD:<0.45uV
Size (in) 10W x 12D x 4.5H
Size (cm) 25.5W x 30.5D x 11.5H
Weight 6.5 lbs.
Weight 3.0 kg
Case Waterproof Pelican 1200
Color Yellow
Battery Pack Rechargeable NiMH
Battery Life
 Standby 10-14 hours
 Complete Recharge 4 hours
Current Draw
 Standby 135 mA
 Transmitting 1 – 2.5 Amps

REMOTE

Frequency Stability ± 1.5 ppm
Modulation 11K2F3D (FSK)
Transmit Power 1 – 5 Watts
Operating Voltage 7.5 VDC
Transmission Range 1 – 5 miles**
Receiver Sensitivity 12 dB SINAD:<0.45uV
Size (in) 10W x 12D x 4.5H
Size (cm) 25.5W x 30.5D x 11.5H
Weight 7.0 lbs.
Weight 3.2 kg
Case Waterproof Pelican 1200
Color Orange
Battery Pack Rechargeable NiMH
Battery Life
 Standby 10-14 hours
 Complete Recharge 4 hours
Current Draw
 Standby 135 mA
 Transmitting 1 – 2.5 Amps
Fire Capacity (Electric) 150Ω (350V @ 5 Joules)
Fire Output (Non-electric) 2.5 kV (0.6 Joules)

BATTERY CHARGER

100-240V / 47-63Hz auto switching
Max. current draw 12VDC, 2.1A
Typical charge time 3-4 hours

** Line-of-sight. Typical transmission range based on power level, frequency, terrain, and local interference.

WARRANTY

The 1673 Remote Firing Device is guaranteed for 2 years (batteries - 1 year, spark tips excluded) against defects in workmanship and materials. If the equipment should fail during this period, we will repair it at our factory or at the nearest authorized service facility. Warranty service on this equipment must be performed only by an authorized dealer. Unauthorized service procedures or parts will void and cancel your warranty, and may cause radio equipment to fail, resulting in accidents and/or personal injury. This is a limited warranty and is given in place of legally implied warranties of merchantability and fitness for a particular purpose. Our liability is expressly limited to the cost of repair or replacement of the RFD under this guarantee, and does not extend to additional or consequential damages resulting from the operation of equipment.



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