



Wireless Remote Fire Gun User Guide

Scope:

This manual pertains to the product listed in Table 1 below. Associated FCC and IC identification numbers are listed, as well as page number for the specific sensor's installation instructions. Table 2 includes the FCC Label design and Intended installation location.

Sensor Model#: Description	FCCID	IC ID
WRFG: Wireless Remote Fire Gun WPP: Wireless Power Probe	Q5Q-WRFG	10048A-WRFG

Table 1

Both of the above utilize the same electronic PCB, Antenna, Battery, and run the same Firmware. The PCB in each case is packaged in a fully enclosed stainless steel enclosure. Each model includes different transducers wired to the PCB (such as a strain gauge, or thermistor, or microphone, or current sensor).

The instructions and pictures below depict the **WRFG** model. All other models will be similar except for differences in the physical form factor.

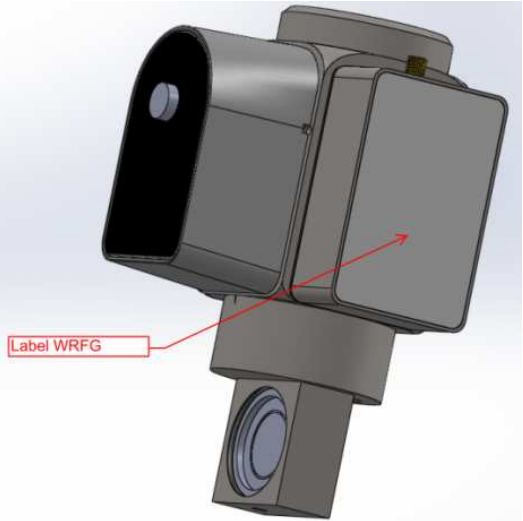
FCC/IC Label Design	FCC/IC Label Location
	

Table 2

The Wireless Remote Fire Gun, (WRFG) is a component of the **Echometer Well Analyzer** and designed to be used with the **Echometer WB100 Wireless Base**, providing a wireless



Wireless Remote Fire Gun User Guide

option for calculating liquid level depth and bottom hole pressure. The data is analyzed by the Echometer TAM software and utilized to provide analysis of well performance. Please refer to the **Echometer TAM User Manual** for instruction specific to software operation and to **Echometer WB100 Wireless Base User Manual** for instructions specific to that device.

-
- **WARNING:** *Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.*
 - **NOTE:** This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at the user's expense.
 - This equipment complies with the FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the antenna and your body.
 - This Class A digital apparatus complies with Canadian ICES-003. (Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada)
 - This device has been designed to operate with the antennas listed below. The specific models listed or substitutes as specified below may be used.
 - o Pulse W1030
 - o Linx Tech ANT-2.4-CW-RAH-RPS: 2.4GHz
 - o Substitutes may be used, as long as they meet the 50Ω, ≤2dBi gain, RPSMA Male requirements.

(((ECHOMETER)))

Wireless Remote Fire Gun User Guide

WRFG Installation:

1. Install the **Wireless Remote Fire Gun, (WRFG)** to the well using instructions in the **Wireless Well Analyzer** manual.
2. Install the antenna as shown.
3. Press the **POWER** button on the **WRFG** as indicated below:



- a. The **POWER** LED will indicate current status as indicated below:
 - LED Off – Sensor is off.
 - When the Power button is pressed, the LED will proceed with the LED test, flashing 3 times **GREEN**, then 3 times **RED**
 - Battery status is indicated by 1 to 10 quick **GREEN** flashes, (1 is low battery charge, 10 is full battery charge), immediately following the LED test
 - The LED will flash **GREEN** once per second to indicate the Sensor is READY
 - The LED will flash **GREEN** twice every five seconds to indicate the sensor is operating
 - Any ERROR will be reflected by 3 quick **RED** flashes on the LED
4. Press the **ACQUIRE** button as shown below to initiate data acquisition. Use the TAM software and its instructions to complete the test. Pressing **ACQUIRE** again will stop acquisition.



- a. The **Acquire** LED will reflect these conditions with the indicated feedback from the LED:
 - LED Off- Not Acquired

(((ECHOMETER)))

Wireless Remote Fire Gun User Guide

- When the button is pressed, the LED will flash 3 quick **GREEN** flashes.
- While starting, the LED will flash **GREEN** approximately once per second.
- While running, the LED will flash **GREEN** quickly, (approximately 10 times per second)
- Any error will be indicated by the LED flashing **RED** three times quickly.

5. Press the Fire button to charge and/or fire the gun.
 - a. The LED will reflect status as indicated below:
 - LED Off- Not Ready
 - While charging to fire, the LED will flash **GREEN**, once per second.
 - When ready to fire, the LED will flash **GREEN** 10 times per second.



6. To turn off the **WRFG**, simply press the *Power* button for two seconds.