

# OptionFinder® IQ



## The Most Advanced Radio Frequency Wireless Keypad Available

The next generation wireless response keypad, OptionFinder IQ is an ideal solution for large meetings or classrooms. This advanced handset uses the latest radio frequency technology to transmit responses faster than any large audience response system. This makes it possible for a group of 300 people to respond to polling or test questions in less than two seconds.

OptionFinder IQ's participant login tracks responses by individual. Ideal for conducting tests and tracking voting results, this feature allows users to identify themselves by entering a user-specific code on their handset. IQ is the only system available that sends an acknowledgement back to the user when their keypad is logged in. LCD window displays login status and receives messages from the software (verification that response has been received, prompts to respond to a question, verification of user ID). Because IQ uses spread spectrum transmission, it can be adjusted to meet radio frequency requirements anywhere in the world.

OptionFinder IQ wireless audience response keypads include 0-10 scale, send feature for login, clear and backspace options that make it easy to change responses. IQ Receiver/Base Stations are small, light, and portable. One base station can receive votes from up to 300 keypads.

## Technical Specification for Wireless Keypad Model: OptionFinder IQ 2100K

### Enclosure

Sleek, shapely, compact, and rugged molded plastic case.

Dimensions: 5.7" L x 2.8" W x 0.9" H. (The cubic volume is 50% smaller than OptionFinder Audience Response System SR or EZ keypads!)

Weight: 5.3 ounces. (This is 20% lighter than OptionFinder SR or EZ keypads!)

### User Input

A total of 21 keys are placed in common use zones that don't intimidate or confuse the user.

Natural focus is on the practical-sized numeric keys for entering multi-value, multiple digit information.

Soft keys across the top are well-separated from the numeric keys to clearly stand out as alternative inputs for items displayed on the LCD directly above.

Special function keys (alert/raised hand, backspace, clear, send) are shaped and colored differently than the other input keys. Input can be "speed scored" to a 0.05 second (50 millisecond)

resolution to accurately distinguish user response sequence for gaming and other time-sensitive applications.

A "moment-to-moment" function with a variable resolution setting as fine as 0.25 second (250 millisecond) facilitates continuous polling for advertising testing and other real-time perception measurement/analysis applications.

### Display

Large backlighted graphics LCD. Size: 128 x 64.

Displays multiple lines of easily readable alphanumeric text and symbols for dynamic messaging. Up to 5 lines of 20 characters message length per line can be viewed. This messaging function is commonly used to show a question with its associated response choices, deliver feedback to user entries, and report interactive session results.

A reserved user entry line displays/echoes user inputs up to 16 characters in length. These characters are larger than the message lines to optimize viewing and user validation.

## Power

Powered by 3 x AAA replaceable cells or AAA rechargeable cells. Rechargeable system requires separately purchase charging case. LED on keypad illuminates to indicate charging state.

Power management and "sleep" functions in software control extend battery life.

## User Identification

Each keypad has a unique programmable address between 1 and 1500 and a radio frequency (RF) channel number.

Using the numeric keyboard, and the keypad LCD, users can request authorization to enter a polling session "on-the-fly" and receive confirmation of successful registration. Default configuration supports identification codes of up to 16 characters in length.

## RF Technology

Proprietary radio design provides reliable, barrier-free operation between keypads and their associated Base Station. Integrated error checking ensures data accuracy.

UHF radio transceiver modules. There are 2 module styles: spread spectrum (frequency-hopping), and synthesized single frequency (multi-channel).

Wireless Keypad uses license-free/license-exempt frequencies for communicating key presses to the Base Station and receiving Base Station control and message information. FCC rules allow both modules for US operation in the 900 MHz spectrum, whereas EC rules permit use of synthesized modules on both 868 and 433 MHz.

Innovative narrowband radio circuitry is more immune to both in-band and out-of-band interference than competitive RF technologies.

## Range

(Spread Spectrum models) Designed for reliable operation in an indoor area 500 x 500 feet, with multiple barriers present.

(Synthesized single frequency models) Designed for reliable operation in an indoor area 300 x 300 feet.

Elevating the base station to improve line-of-sight operation results in a range advantage. Range also increases outdoors.

Various base station configurations are available for both types of systems to expand coverage area.

## Communications Security

A proprietary response verification protocol integral to the patented/patent pending radio design provides a high degree of signal security.

## Patents

Covered by U.S. and European patents and patents pending.



## Base Station: OptionFinder IQ 2100B

**Dimensions:** 11.5" W x 4.5" D x 1.9" H.

Unit Weight: Approx. 2 pounds (3.5 pounds with cables and power supply).

**Design Capacity:** Up to 1,500 audience response keypads per base station. Each base station ships with default permanent capacity of 300 keypads that can be expanded (for a fee, before or after purchase) in groups of 300 up to the design capacity.

**Polling Rate:** Within 1-2 seconds, a synthesized receiver processes and acknowledges responses from up to 200 keypads transmitting on a single radio channel.

When a single base station is servicing a full complement of 1500 keypads, the polling cycle is approximately 9 seconds.

When multiple base stations are operating on different channels, they can communicate with associated keypads concurrently. (For example, this allows US spread spectrum systems to poll up to 22,500 keypads in a stadium application in under 10 seconds.)

**RF:** A special (and patent pending) dual diversity transceiver design delivers superior coverage while providing redundancy in the event one transceiver becomes inoperative. Antennas provided. Connections: Attaches to the operator's personal computer by Ethernet (RJ45) or serial cable (DB9). IP-addressable controller and cables provided.

**Power:** Universal rated low voltage power supply. Input: 110-220 VAC. Output: 12 VDC. Current draw is less than 0.5 A.



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