

# OptionFinder IQ



## The OptionFinder IQ System

OptionFinder IQ is the next generation multi digit response system.

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. Additional capacity (up to 1500 keypads) can be purchased for an additional fee

## Technical Specification for Wireless Keypad Model: OptionFinder IQ

### Enclosure

- Sleek, shapely, compact, and rugged moulded plastic case.
- Dimensions: 5.7" L x 2.8" W x 0.9" H.
- Weight: 5.3 ounces.
- Colour: OptionFinder Blue

### 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 coloured differently than the other input keys.

### Display

Large back lighted graphics LCD. Size: 128 x 64.

Up to 5 lines of 20 characters message length per line can be viewed

### RF Technology

Proprietary radio design provides reliable, barrier-free operation between keypads and their associated Base Station.

Integrated error checking ensures data accuracy.

Wireless Keypad uses license-free/license-exempt frequencies for communicating key presses to the Base Station and receiving Base Station control and message information.

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.

Proprietary RF protocol optimizes polling speed and range to expand user capacity without performance degradation.

## User Identification

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

Keypad addresses are programmable.

Using the numeric keyboard, and with the assistance of text instructions/feedback displayed on the keypad's LCD, users can swiftly 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.

Software controls the registration/login process by monitoring group response keypad activity, interrogating user entries, and positively acknowledging those entries with appropriate acceptance/rejection/assistance messages to the keypad LCD.

## Range

Spread spectrum technology is designed to operate in an indoor area 450 x 450 feet (150 x 150 meters). A room's geometry and RF propagation characteristics will influence actual range experienced.

## Power and Power Management

Powered by 3 x AAA replaceable cells. Power management and "sleep" functions under software control extend battery life.

## Communications Security

A proprietary response verification protocol integral to the radio design provides a high degree of signal security. Frequency hopping and proprietary data communications are additional deterrents to clandestine interception.

## Scalability

Firmware is resident in flash-structured microprocessor chips, which can be reprogrammed to facilitate easy upgrade during the life of the product.

Adding keypads to an existing Base Station requires them to be set to unused addresses. Up to its purchased permanent capacity (see OptionFinder IQ 500B Design Capacity spec), no change is required on the Base Station when keypads of the same radio channel are added.

## Patents

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

## Warranty

1 YEAR limited warranty, factory parts and labour.



## Base Station: OptionFinder IQ - Model 1000B

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

**Unit Weight:** 2 pounds (3.5 pounds with cables and power supply). ounces (227 gram)

**Capacity:** 1500 keypads per channel identity. 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.

**Speed:** 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.

**Connections:** Attaches to the operator's personal computer by Ethernet (RJ45) or serial cable (DB9). IP-addressable controller and cables provided.

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