

# Reply® Mini+



## *Advanced radio frequency (RF) technology*

*Frequency Hopping Spread Spectrum  
for excellent range and security*

*Works with many Reply® Plus software  
applications and PowerPoint\* add-ins*

*Miniature design is easy to transport  
and comfortable to hold or wear*

## Technical Specifications for

### Wireless Keypad Model WRS7000

#### Enclosure

- Compact case. Rugged ABS plastic construction.
  - Styled to fit comfortably in hand.
  - Wearable with optional lanyard.
- Dimensions: 3 in. L x 1.5 in. W x 0.4 in. H.
- Weight: Less than 1 ounce (0.8 ounce / 23 grams) with battery installed.
- Color: Black. (Other colors available. Cost premium, minimum order quantity, and special terms apply.)

#### User Identification

- Each keypad is assigned an RF device identity (“address”) between 1-500 and a channel identity between 1-31.
- Supports static addressing.
  - Addresses may be changed by using an optional WRS960X-T portable programmer.
- Supports dynamic addressing.
  - Addresses may be automatically assigned via RF link.
- Each keypad also has a unique device serial number.
  - Serial numbers are permanent and set during manufacturing.
- Both address and serial number identification are transmitted with each keypad response.

#### User Input

- 14 elastomeric buttons for entering multiple choice responses or multi-digit string responses.
- Send, raised hand, and link buttons provide additional functions.
- Entries can be “speed scored” to 0.05 second (50 milli-second) resolution to identify group response sequence (‘fastest finger’) during competitive events.

#### Display

- Green and red LED lights to confirm user keypresses and indicate when the Base Station accepts the keypad’s inputs.

#### RF Technology

- Two-way RF keypad uses eligible *license-free/license-exempt* frequencies to:
  - Communicate key presses to the Base Station.
  - Receive control information from the Base Station.
  - Acknowledge keypad transmissions. [Note: Response acknowledgement is one of several advantageous features found in products using patented Reply® technology.]
- Employs Fleetwood-engineered 2.4 GHz *frequency hopping* spread spectrum (FHSS) transceivers.
  - FHSS offers excellent range, immunity to interference, and signal security.
  - Integrated Wi-Fi avoidance feature improves performance in high density wireless environments.
- *Patented* and *proprietary* radio protocol.
  - Creates a secure communications network between keypads and their associated Base Station.
  - Permits Reply® systems to operate reliably in the presence of other RF devices (WLANs, PDAs, phones, etc.).
  - Integrated error checking discriminates system signals from all other RF traffic to ensure data accuracy and enhance security.

#### Range

- Reply® Mini+ is designed to operate in an indoor area 300 x 300 feet. [Note: Other Reply® products offer greater range. See appropriate specification sheets or contact us.]
- Elevating the base station often results in a performance advantage.
- A room’s geometry, radio propagation characteristics, and proximity to RF interferers will influence actual range experienced.

## Capacity

- 500 keypads per Base Station channel identity.  
[Note: Other Reply® products offer higher capacity. See appropriate specification sheets or contact us.]
  - Stock configuration: Default setting. 31 identities available for 15,500 keypads per room/site.
  - Arena configuration: Special order terms and pricing apply. Up to 75 identities for 37,500 keypads per room/site.

## Speed

- Polling rate is 200 keypads per second.
  - Multiple base stations may poll simultaneously, permitting collection of up to 37,500 keypads in under 5 seconds.
- Time stamping can identify the speed and sequence of each keypad response.

## Power and Power Management

- Powered by one replaceable lithium coin cell battery.
- Keypad powers down after each response transmission to conserve battery life.
- In static address mode, battery life is ~20,000 responses or battery shelf life, whichever comes first. [Note: Dynamic addressing of keypads reduces battery life.]
- Low battery indicated on display. Also, keypad transmits a low battery warning to Base Station.

## 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 resides in high performance microprocessor chips that can be reprogrammed by the factory to facilitate upgrade during the life of the product.
- Adding keypads to an existing system requires them to be set to unused addresses. No change is required on the Base Station when adding keypads of the same channel identity.

## Compliance and Patents

- FCC, IC, CE certified. Call for details regarding these and other regulatory certifications.
- U.S. Patent Nos. Re. 35,449; 5,724,357; 6,021,119; 6,665,000. European Patent No. EP 0 697 773. Other U.S. and foreign patents and patents pending.

## Warranty

- 2 YEAR (limited warranty, factory parts and labor). Call for details.

## Additional System Components and Accessories

### Reply® Plus Base Station Model WRS970

- A programmable interface to your PC.
- Controlled by application software\* (purchased separately).
- Dimensions: 6.5" W x 2.25" H x 5" D (159mm x 57mm x 126mm.).
- Capacity: 500 keypads per channel identity. 31 available channel identities allows 15,500 pads per room.
- Display: LCD for viewing channel identity and diagnostics.
- Speed: Default setting is 200 keypads per second. Polling rates as fast as one-half second are possible with smaller

groups (ex. 100 or less). Multiple base stations may poll simultaneously to collect responses from up to 37,500 keypads in under 5 seconds.

- Connections: Attaches to operator's PC by USB or Ethernet connection (USB cable included).
- Power Source: USB. Current draw 70 - 130 mA.
- Alternate Power Source: POE ("Power Over Ethernet") using midspan and power injector. Call for details.

### Reply® Plus Base Station Model WRS971

- Base Station in compact USB Stick styling that communicates with Reply® Plus and Reply® Mini+ keypads.
- Dimensions: 3.1"L x .9"W x .57"H.

[Reminder: Base stations do not include accessories such as software\* and carrycases. These additional items are priced separately.]

### Reply® Mini/Mini+ Keypad Programmer Model WRS960X-T

- A portable device that quickly reassigns Reply® Mini and Mini+ keypad static addresses and channels *without* a PC or software. Also used to toggle Reply® Mini+ address modes.
- Dimensions: 6"L x 2.5"W x 1"D.

### Modular Carrycases

- Wide variety available, ranging from compact ballistic nylon bags to ruggedized shipping cases with perimeter clasps.
- Keypads and base stations purchased separately.
- *Refer to Accessories Price Sheet for additional details.*

### Application Software

- \* Base Station requires application software to manage keypad data collection and analyze responses.
- Multiple titles are available to conduct surveys, delegate voting, group decision making, market research, classroom learning, and other advanced applications.
- Contact your Reply® reseller for specifications and pricing of this value added software.

## System Configuration

*A basic Reply® Mini+ system consists of...*

- One Reply® Mini+ Wireless Keypad per participant
- One Reply® Plus Base Station per 500 keypads of the same channel identity in a room, and
- One copy of value-added application software.

Optional accessories (purchased separately) include base station and keypad carrycases, lanyards and more. Training, on-site technical support, and similar 'for fee' services are also extra.

## Pricing

Suggested resale prices are available at [www.replysystems.com](http://www.replysystems.com). Quantity and industry partner discounts are available through our preferred resellers.

*All specifications and suggested resale prices are subject to change without notice.*



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