reply® mini+ (2nd Generation)

Technical Specifications
for
Wireless Keypad Model WRS7100

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. (7.6 cm x 3.8 cm x 1cm)
- 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 has an RF device identity ("address") between 1-500 and a channel identity between either 1-31. Supports static and dynamic addressing.
- 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's response.
- Change channel and address ID via base station using polling software.

User Input

- 14 elastomeric buttons for entering multiple choice or multi-digit string reponses.
- "Send", "Raised Hand", and "Link" buttons provide additional function.
- 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 successful keypad transmissions. *This message acknowledgment method is just one of the many patented features of Reply® systems.*
- Employs manufacturers-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 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.
- 31 RF Base Station identifiers are available to provide installation flexibility and system expansibility.
- Internal antenna is protected by the keypad enclosure.

Range

- Reply® Mini+ is designed to operate in an indoor area 300 x 300 feet.
- A room's geometry, radio propagation characteristics, and proximity to RF interferers will influence actual range experienced.
- Elevating the base station often results in a performance advantage.

Capacity

- 500 keypads per Base Station channel identity.
  - ➢ Stock configuration: Default settings. 31 identities available for 15,500 keypads per room/site.
  - ➢ Arena configuration: Non-stock. *Special terms and pricing apply.* Up to 72 identities for 18,000 users per venue.

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.
- Battery life is ~25,000 responses or battery shelf life, whichever comes first.
- Low battery indicated on display. Also, keypad can transmit 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 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.
- RoHS and WEEE compliant.
- U.S. Patent Nos. 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 compact and programmable interface to your PC.
  ➢ Operated by value-added software** (priced separately).
- Dimensions: 6.5" W x 2.25" H x 5" D. (16.5cm x 5,7cm x 12,7 cm)
- Capacity: 500 keypads per channel identity.
  ➢ Stock version: 31 RF Base Station identitiers allows 15,500 pads per room.
- Display: LCD for viewing RF identity and diagnostics.
- Speed: Default setting is 200 keypads per second. Polling rates as fast as one-half second are possible with smaller group (ex. 100 or less).
- Connections: Attaches to operator's PC by USB or Ethernet connection. (USB cable included).
- Power Source: USB. Current draw 70 - 130 mA.
- Alernate Power Source: POE("Power Over Ehternet") using midspan and power injector. Call for details.

Reply® Plus Base Station Model WRS971

- USB Stick version of WRS970
- Dimensions: 3.1"L x .9"W x .57"H (7.8cm x 2.3cm x 1.4cm).
- Same performance characteristics as WRS970. [Base stations do not include accessories such as software** and carrycases. These additional items are priced separately.]

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

- ** WRS970/971 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 reseller for specifications and pricing of this value added software.

System Configuration

A basic Reply® Mini+ (2nd generation) system consists of...

- One Reply® Mini+ (2nd generation) Wireless Keypad per participant
- One Reply® Base Station per 500 keypads of the same radio channel 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

For pricing contact your local Reply® reseller or E-Mail us at enquiries@replysystems.com for a referral.

The Reply® Mini+ Audience Response Systems are designed and assembled in the USA by our quality certified American Manufacturer.

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