reply® worldwide

Advanced radio frequency (RF) technology

Frequency Hopping Spread Spectrum for superior range, security, and speed

Works with Standard Reply® software applications and PowerPoint add-ins*

A workhorse product that is quick to set up, simple to use, and affordable

Technical Specifications
for
Wireless Keypad Model CRS5200

Enclosure

- Compact case. Rugged ABS plastic construction accommodates 2 keyboard designs:
  - ➢ Elastomeric (rubber buttons), Stocked Item, Order CRS5200-E.
  - ➢ Tactile (membrane keys), Special Order item, Order CRS5200-M.
- Dimensions: 6”L x 2.5”W x 1”H.
- Weight: Approx. 3.2 oz (91 grams) without batteries installed. Add 1.6 oz (45 grams) for 2 alkaline AA cells.
- Color: Black. (Other colors available. Cost premium, minimum order quantity, and special terms apply.)

User Identification

- Each keypad has a RF device identity (“address”) between 1-250 plus a channel identity between either 1-15 (standard version; stocked item) or 1-72 (custom arena version; special order; special terms and pricing apply).
  - ➢ Addresses are user programmable.
- Each keypad also has a unique device serial number.
  - ➢ Serial numbers are permanent and set during manufacturing.
- Both the address and serial number may be transmitted with each keypad’s response.

User Input

- 15 keys. Ten numeric keys for entering multiple choice responses. Three ‘soft’ keys available for special use. “Asterisk” and “Clear” keys provide extra functions.
- Entries can be “speed scored” to 0.05 second (50 millisecond) resolution to identify group response sequence (‘fastest finger’) during competitive events.
- Soft key functions vary according to keypad design:
  - ➢ CRS5200-E: Low/medium/high values are indicated in the display.
  - ➢ CRS5200-M: Same as CRS5200-E but can also support custom key designs (i.e., yes/no/abs).

Display

- Seven segment LED is easy to read in all lighting conditions.
- Display shows numbers (1-9, 0) and soft key symbols (1-3 bars in stock configuration).
- Display shows user keypress plus confirms when the Base Station accepts the keypad’s input.

RF Technology

- Two-way RF keypad uses eligible *license-free/license-exempt* frequencies to communicate key presses to the Base Station and receive from the Base Station control information and acknowledgments of successful entries.
- Employs manufacturers-engineered 2.4 GHz *frequency hopping* spread spectrum (FHSS) transceivers.
  - ➢ FHSS offers excellent range, immunity to interference, and security.
- *Patented* and *proprietary* radio protocol.
  - ➢ Creates a secure communications network between keypads and their associated Base Station.
  - ➢ User entries are acknowledged when received by the Base Station. *This message acknowledgment is just one of the many patented features of Reply® systems.*
  - ➢ 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.
- Depending on version, 15-72 channel identities are available to provide installation flexibility and support up to 3,750-18,000 keypads per room.
- Internal antenna is protected by the keypad enclosure.

Range

- Spread spectrum technology is designed to operate in an indoor area 450 x 450 feet (150 x 150 meters).
- 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.

*PowerPoint is a registered trademark of Microsoft Corporation, Redmond, WA.

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Capacity

- 250 keypads per Base Station channel identity.
  - ➢ Standard configuration: Stock. 15 identities available for 3,750 keypads per room/site.
  - ➢ Arena configuration: Non-stock, special terms and pricing apply. Up to 72 identities for 18,000 users per venue.

Speed

- Adjusted by Base Station.
  - ➢ Default setting is 100 keypads per second. Polling rates are adjustable and can achieve ½ second speed in smaller groups (<50).
  - ➢ Time stamping identifies each keypad's input sequence in group's response.

Power and Power Management

- Powered by two standard AA batteries (not included).
- Keypad powers down after each response to conserve battery life.
- Battery life is ~100,000 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 easy 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. 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.

System Configuration

A basic Reply® (Worldwide) system consists of...

- One Reply® (Worldwide) Wireless Keypad per participant
- One Reply® (Worldwide) Base Station per 250 keypads of the same radio channel in a room, and
- One copy of value-added application software.

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

Additional System Components and Accessories

Base Station Model CRS940

- 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.
- Capacity: 250 keypads per channel identity.
  - ➢ Stock version: 15 identities allows 3,750 pads per room.
  - ➢ Arena version: *Special terms and pricing apply.* Up to 72 identities allows up to 18,000 pads per room.
- Speed: Base Station polling cycles are adjustable to optimize speed to group size. For example, a group of 50 keypads can be polled every one-half second, whereas a group of 3,750 can be polled in parallel every 2.5 seconds.
- Connections: Attaches to operator's PC by USB connection. (cable included). Creates a virtual com port on the PC.
- Power Source: USB. Current draw 50 mA.

Reply (Worldwide) Base Station Model CRS941

- USB Stick version of CRS940.
- Dimensions: 3.1"L x .9"W x .57"H.
- Same performance characteristics as CRS940.

Handheld Base Station Model WRS960X

- A completely portable base station that communicates with CRS5200 keypads *without* a PC or software.
  - ➢ Poll *anywhere* power, PCs, or displays are not available.
- Dimensions: 6"L x 2.5"W x 1"D.
- Capacity: 50 keypads per channel identity.
- Speed: 0.5 second collection time for a group of 50 keypads.
- Connections: USB for flash drives that load questionnaires and store polling session results.
- Power Source: 3 x AAA cell alkaline batteries (not included).
- *See Reply® Solo specifications for more details.*

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

- ** CRS940/941 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.

Pricing

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

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

reply® Wireless Interactive Technology

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