Reply® Worldwide

Technical Specifications
for
Wireless Keypad Model CRS5200

Advanced radio frequency (RF) technology

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

Works with existing Standard Reply® software

Enclosure

- Compact case. Rugged ABS plastic construction accommodates 2 keyboard designs:
  - ➢ Elastomeric (rubber), similar to phone. (Order CRS5200-E)
  - ➢ Tactile (membrane), similar to Standard Reply®. (Order CRS5200-M)
- Dimensions: 6"L x 2.5"W x 1"H.
- Weight: 5 ounces (with batteries installed).
- Color: Translucent Charcoal. (Other colors available. Cost premium, minimum order quantity, and special terms apply.)

User Input

- 15 keys. Ten numeric keys for entering multiple-choice responses. Three 'soft' keys available for special use input. "Asterisk" and "Clear" keys provide extra functions.
- Input 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:
  - ➢ (Elastomeric keyboard) Low/medium/high values are indicated in the display.
  - ➢ (Tactile keyboard) Supports custom litho and display solutions (i.e., yes/no/abstain).

Display

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

RF Technology

- Two-way RF keypad uses eligible *license-free/license-exempt* frequencies for communicating key presses to the Base Station and receiving from the Base Station control information and keypad input acknowledgments.
- Employs Fleetwood-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.

User Identification

- Each keypad has a RF device identity ("address") between 1-250 plus a channel identity between either 1-15 (standard version; stock item) or 1-72 (arena version; special order).
  - ➢ 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.

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. Elevating the base station often results in a performance advantage.

Capacity

- 250 keypads per Base Station channel identity.
  - ➢ Stock configuration: Default. 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 keypad input sequence in group's order of response.

Power and Power Management

- Powered by two standard AAbatteries (not included).
- Keypad powers down after each response to conserve battery life.
- Battery life is ~10,000 responses or battery shelf life, whichever comes first.
- Low battery indicated on display. Also, keypad can transmit a 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.

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.

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. Controlled by value-added software* (purchased separately).
  - ➢ *Also operates with current Reply®-compliant polling software**.
- Dimensions: 6.5" W x 2.25" H x 5" D.
- Unit Weight: 8 ounces. (Add 5 oz. for cable.)
- 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 every 2.5 seconds.
- Connections: Attaches to the operator's PC by USB connection. (USB cable included.)
- Power Source: USB. Current draw 50 mA.
- Does not include accessories such as software* and carrycases. These additional items are priced separately.

Modular Carrycase Model CRS899M

- Ruggedized shipping case with perimeter clasps. Styled as a checked lugage item.
- Dimensions: 24.25" W x 19.5" H x 8.75" D.
- Weight, empty: ~13 lbs (case and foam only). Weight, loaded: ~33 lbs.
- Configurations: Holds up to 6 lightweight foam inserts, each custom cut to store 10 keypads or 2 base stations.
  - ➢ CRS899MB: Stores up to 2 Base Stations with USB cable in 1 insert, plus up to 50 keypads in 5 inserts. (Base Station and Keypads purchased separately.)
  - ➢ CRS899MK: Stores up to 60 keypads in 6 inserts. (Keypads purchased separately.)

Application Software

- * Base Station requires application software to manage keypad data collection.
- 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

Suggested resale prices are available at www.replysystems.com. Quantity and industry partner discounts are available through our preferred resellers.

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Founded on, and dedicated to, Christ and Christian business principles.

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

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