Reply® DL Response Keypad
Model CRS10000
Users Manual

Purpose of the Keypad

The Reply® DL Model CRS10000 Keypad is a wireless portable device that makes it possible for a number of people to participate interactively in a class situation or group meeting. The product accomplishes this by sending keypad switch closure information from the keypad to a base unit which employs a wireless transceiver to receive the keypad signal. These signals are processed by the base unit and delivered to a host computer which allows the responses to be stored, analyzed and if desired displayed on a video projector for feedback to the group showing the results of their participation. As such, the product is very similar to another Fleetwood product, the CRS1200. The Model CRS10000 adds to the Model CRS1200 by incorporating an 800 MHz wireless microphone circuit that allows a participant at a remote site to speak into the keypad and communicate with an instructor through a phone line connection. This adds the dimension of allowing verbal interaction from a remote site with an instructor.

Description of the Keypad

The Reply Model CRS10000 Keypad is housed in a plastic enclosure similar in appearance to a calculator. It is powered by an internal 9 volt alkaline battery with no external wires or electrical connections. The keypad uses a membrane switch panel for numeric entry and a 7 segment LED display for entry display to the user. The keypad uses a synthesized transceiver compliant with FCC Part 15 Subpart B and C. An integrated microphone and talk request button provide an audio function for use in multiple site applications. The wireless microphone portion of the device is compliant with and approved under Part 74.

Using the Keypad

To use a Reply® DL Keypad, a corresponding channel Reply® DL base unit must be active and under control of an application running on a local or remote host computer. This is usually the responsibility a local facilitator in cooperation with host site staff in a distance learning environment.

A program on a host site computer under control of the instructor or facilitator determines when responses from the keypads are to be received and when control of the wireless microphone in the keypads is required. Typically this program will deliver a number of informational screens via satellite or other video transmission method on a video projection system and then will present a question screen. The participants with keypads will then be instructed to respond using the numeric keys on the keypad. A user holding a keypad responds by pressing one of the keys and the corresponding number will indicate on the 7 segment LED
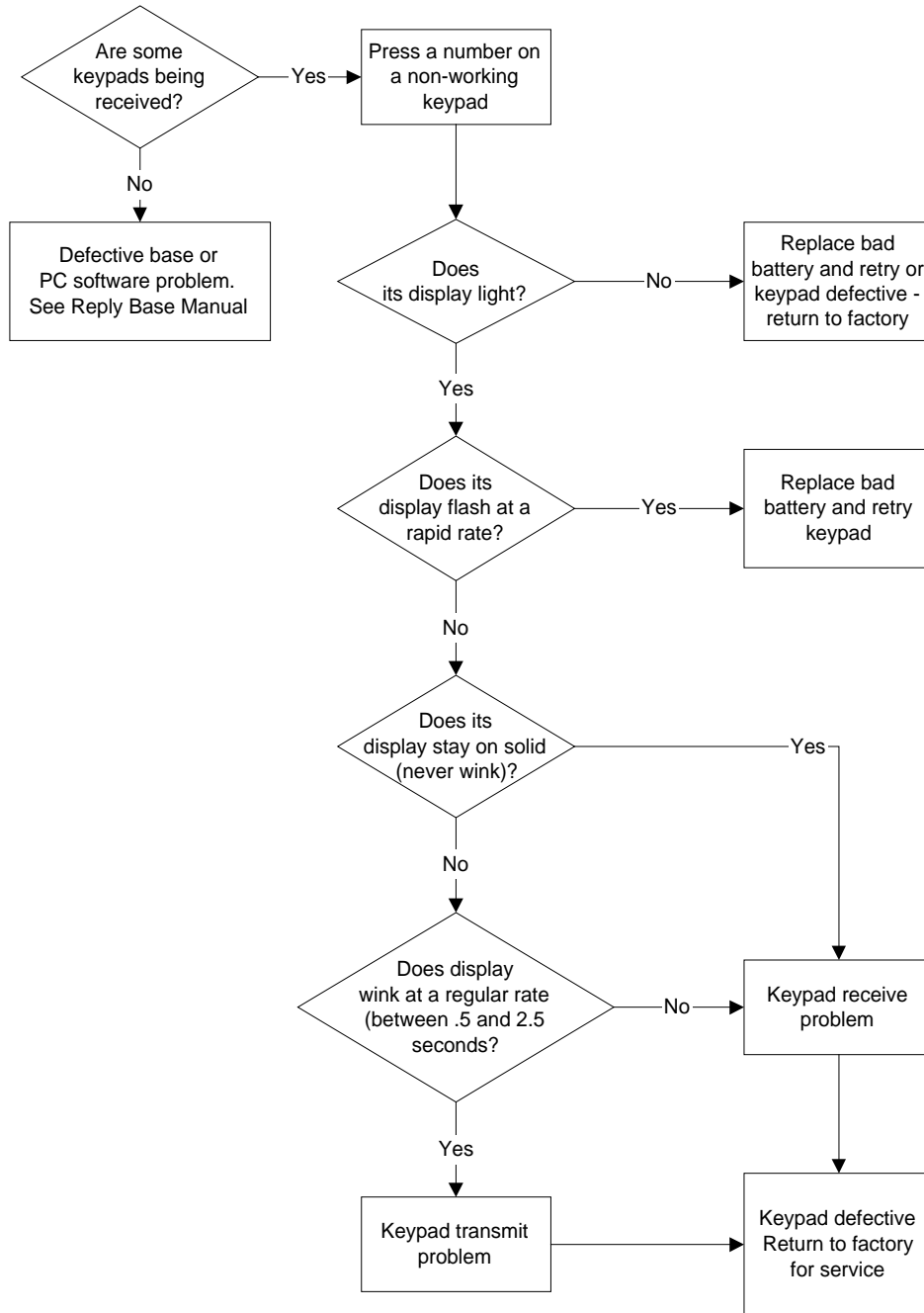
display. When interrogated by the base via the 216 MHz link, the keypad sends the key information to the base in a 10 millisecond duration signal from the 345 MHz transmitter. When the 216 MHz signal responds with an appropriate state of the acknowledge bit for the keypad, the keypad turns back off and awaits the next key press. This sequence takes on the average between one and two seconds. If the keypad LED winks and comes back on, the signal was not received by the base and the keypad will retry the next time it is interrogated (typically about 2.5 seconds). The keypad spends most of its time in a sleeping mode conserving the battery and allowing for thousands of transmissions.

If a user wishes to talk to the instructor the user presses the "Talking Face" key on the keypad. This transmits the microphone request to the base unit and via a data modem on the base to the host to notify the instructor. When the instructor is ready to take the request, an activation signal is sent out via the data modem to the remote site base unit which in turn commands the keypad to activate the microphone.

In Case of Difficulty

The Reply® Model CRS10000 Keypads are built using the latest technology and high reliability components. There are very few things the keypad user can do wrong to cause a failure, but in the unlikely event responses are not being received by the base and passed on to the personal computer, the next pages detail procedures that can help identify the source of the problem:

CHART 1
Keypad Communication Checkout

Are some keypads being received? —Yes→ Press a number on a non-working keypad

No↓

Defective base or PC software problem. See Reply Base Manual

Press a number on a non-working keypad ↓

Does its display light? —No→ Replace bad battery and retry or keypad defective - return to factory

Yes↓

Does its display flash at a rapid rate? —Yes→ Replace bad battery and retry keypad

No↓

Does its display stay on solid (never wink)? —Yes→ Keypad receive problem

No↓

Does display wink at a regular rate (between .5 and 2.5 seconds? —No→ Keypad receive problem

Yes↓

Keypad transmit problem → Keypad defective Return to factory for service

Keypad receive problem ↓ Keypad defective Return to factory for service

CHART 2
Keypad Audio Checkout

Does the audio work properly on some keypads

Did the "Wait" LED light when the "Talk" button was pressed?

— No →

Yes ↓

Did the "Wait" LED transition from blinking to solid?

— No →

Did other keypads transistion from blinking to solid?

Yes ↓

Keypad defective Return to factory for service

— No →

No ↓

Did the "Talk" LED come on after the solid "Wait"?

— No → Defective base or PC software problem. See Reply DL Manual

Yes ↓

Was acceptable keypad audio received at the DL host?

— No →

Yes ↓

Satisfactory