# Q-Controls™ Plus

*Includes instructions for using the Q-Controls Plus.*

*ACN# 088 609 661*

# QUANTUM®
## REHAB
### INNOVATIVE REHAB SOLUTIONS

A Division of Pride Mobility Products® Corp.

# I. SAFETY INSTRUCTIONS

The symbols below are used throughout this manual and on the product to identify warnings. It is very important for you to read and understand the information that follows these symbols completely:

**WARNING! Failure to follow designated procedures can cause personal injury or component damage or malfunction.**

**PROHIBITED! These actions should be prohibited. These actions should not be performed at any time or in any circumstances. Performing a prohibited action can cause injury to personnel and/or damage to equipment.**

## ELECTROMAGNETIC AND RADIO FREQUENCY INTERFERENCE (EMI/RFI)

**WARNING! Laboratory tests have shown that electromagnetic and radio frequency waves can have an adverse affect on the performance of electrically-powered mobility vehicles.**

Electromagnetic and Radio Frequency Interference can come from sources such as cellular phones, mobile two-way radios (such as walkie-talkies), radio stations, TV stations, amateur radio (HAM) transmitters, wireless computer links, microwave signals, paging transmitters, and medium-range mobile transceivers used by emergency vehicles. In some cases, these waves can cause unintended movement or damage to the control system. Every electrically-powered mobility vehicle has an immunity (or resistance) to EMI. The higher the immunity level, the greater the protection against EMI.

**PROHIBITED! To prevent unintended movement, turn off the power to the electrically-powered mobility vehicle before using a cell phone, two-way radio, lap-top, or any other type of radio transmitter. Avoid coming into close proximity of radio or TV stations.**

**WARNING! The addition of accessories or components to the electrically-powered mobility vehicle can increase the susceptibility of the vehicle to EMI. Do not modify your mobility vehicle in any way not authorized by Pride.**

**WARNING! The electrically-powered mobility vehicle itself can disturb the performance of other electrical devices located nearby, such as alarm systems.**

*NOTE: For further information on EMI/RFI, go to the Resource Center on www.pridemobility.com. If unintended motion or brake release occurs, turn your mobility vehicle off as soon as it is safe to do so. Call Pride at 800-424-8205 to report the incident.*

## WARRANTY

For two (2) years from the date of purchase, Pride will repair or replace at our option to the original purchaser, free of charge, any Q-Controls Plus components found upon examination by an authorized representative of Pride to be defective in material and/or workmanship. This warranty does not apply to products abused or misused by the user and deemed such by Pride Mobility Products Corp. Claims and repairs should be processed through the nearest Quantum Rehab Specialist.

## EXPRESSED AGREEMENT OF INDEMNIFICATION

In accepting delivery of this product, the purchaser specifically promises that s/he will not change, alter, or modify this product or remove or render inoperable or unsafe any guards, shields, or other safety features of the product; or remove, obliterate, or obstruct any safety and instruction signs; or fail, refuse, or neglect to install any retrofit kits from time to time provided by Pride to enhance user safety. Purchaser also specifically agrees that if s/he breaches any such promises, or if s/he is remiss, neglect, or deficient in the safe operation or maintenance of this product, the Purchaser will indemnify and hold harmless Pride from any and all types of actions, suits, claims, or demands, including products liability claims by Purchaser, for injuries or loss arising out of the operation, maintenance, repair, or other use of this product. Purchaser specifically agrees that this Expressed Agreement of Indemnification is a condition of sale supported by adequate consideration and was read and understood by the Purchaser before purchase and delivery of the product.

# TABLE OF CONTENTS

*NOTE: We have compiled this manual from the latest specifications and product information available at the time of publication. We reserve the right to make changes, as they become necessary. Any changes to our products may cause slight variations between the illustrations and explanations in this manual and the product you have purchased.*

# II. INTRODUCTION

## THE Q-CONTROLS PLUS

This manual describes the installation, setup, and operation of the Q-Controls Plus. The Q-Controls Plus has been developed specifically for those with severe disabilities, which restrict or prevent the use of conventional domestic controls. Its function is to give the user a safe control system, allowing simple and easy control of:

- Most static domestic appliances (e.g., TV).
- Heating and lighting
- Door opening/speech intercom systems

This wide range of applications gives a high degree of independence to the user.

Through a personal pre-assessment service, a trained technician tailors every Q-Controls Plus to each individual user, taking into account the degree of movement and mobility available. The system can be operated by joystick, switch, button, or key, and where applicable, can be connected to a power chair controller. The Q-Controls Plus uses a simple, picture-based menu system to provide access to over 2,500 controlling functions and up to 160 phone numbers (for mobile and/or land use). It has an integral speaker and confirms each action with a speech announcement. It can be supplied with a quick-release adapter plate allowing easy mounting in various situations.

Additional features can be incorporated to provide a tilt alarm, which will automatically call caregivers or emergency services in the event of a chair overturning, or place other emergency calls via the intercom, external telephone number or pager.

## CONDITIONS OF USE

This device complies with the Medical Devices Directive 93/42/EEC as a class 1 Medical device for use within the limitations contained in this document.

The Q-Controls Plus (CN00601) is designed to remotely operate other devices in the Q-Controls range of environmental control products, as well as other approved devices. It is a battery-operated device. It must only be serviced by a qualified Quantum Rehab Specialist. There are no user serviceable parts inside the unit.

The Q-Controls Plus complies with European Electromagnetic Compatibility requirements. However, it may emit electromagnetic radiation (EMI/RFI), which may interfere with other equipment in the vicinity. Similarly, other equipment may interfere with the Q-Controls Plus. To minimize these effects should they occur, Pride recommends that other equipment be moved farther away from the point of use and cable length be shortened. See I. "Safety Instructions."

## LIMITATIONS OF USE

The Q-Controls Plus is designed for use indoors with the Q-Controls range of products ONLY.

Only approved Q-Controls parts may be connected to the Q-Controls Plus (including power supply, battery pack, joystick, and switches). No other device may be connected to any of the sockets without prior written permission from the manufacturer. Non-compliance with these instructions may damage the equipment, void any warranty, and be dangerous.

## STORAGE AND TRANSPORTATION
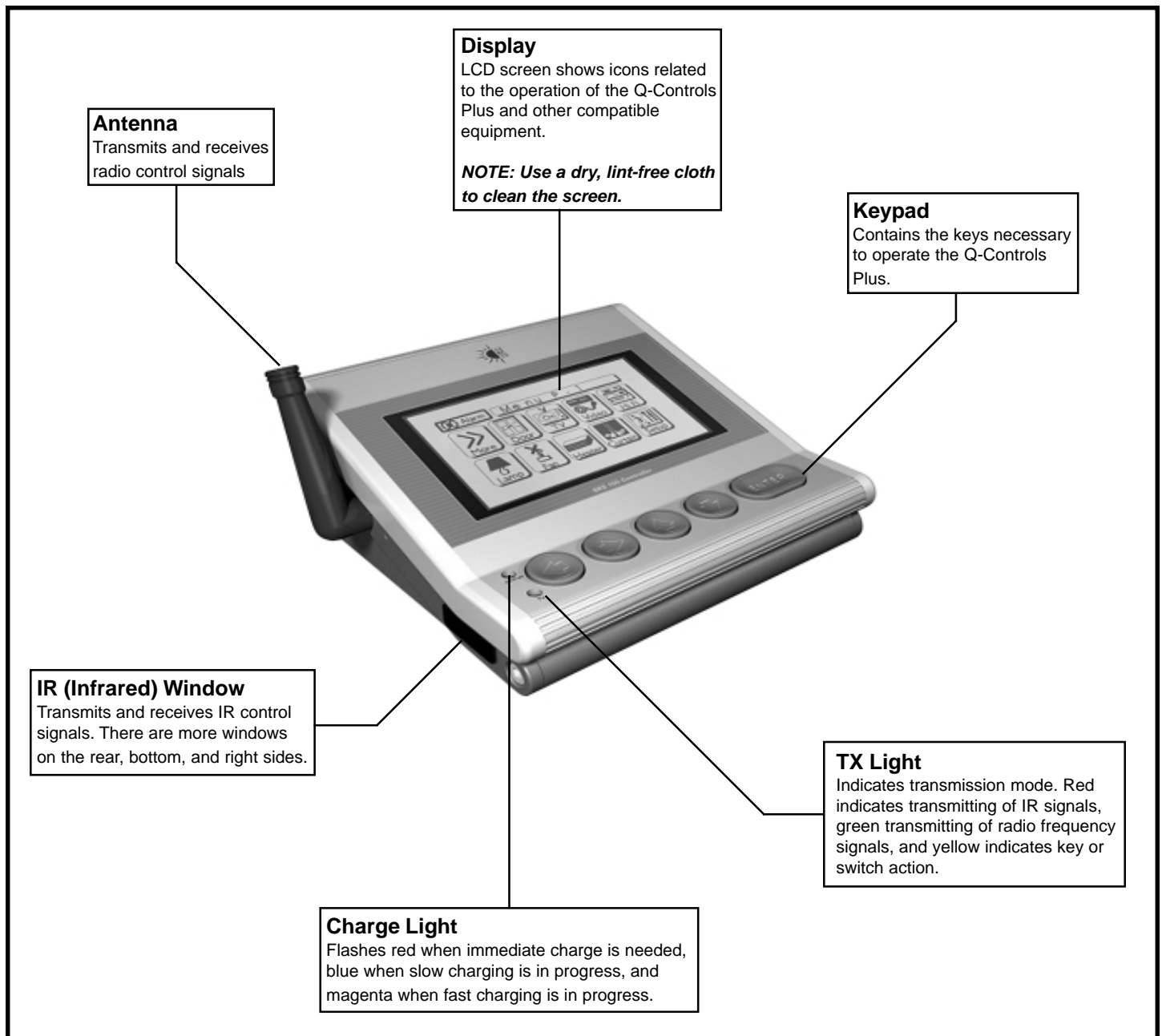
Temperature: -4° F (-20°C) to 158° F (70°C)

Humidity: 20%-80% without condensation

## BATTERIES

The Q-Controls Plus contains a NiMh battery pack that can only be changed by trained personnel. The battery pack will normally be changed every 2 years by your service technician. The battery pack must only be replaced by genuine manufacturer's parts.
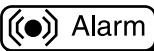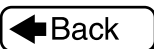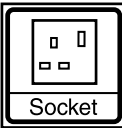
## FEATURES

This diagram shows the main features of the Q-Controls Plus:

**Display**
LCD screen shows icons related to the operation of the Q-Controls Plus and other compatible equipment.

*NOTE: Use a dry, lint-free cloth to clean the screen.*

**Antenna**
Transmits and receives radio control signals

**Keypad**
Contains the keys necessary to operate the Q-Controls Plus.

**IR (Infrared) Window**
Transmits and receives IR control signals. There are more windows on the rear, bottom, and right sides.

**TX Light**
Indicates transmission mode. Red indicates transmitting of IR signals, green transmitting of radio frequency signals, and yellow indicates key or switch action.

**Charge Light**
Flashes red when immediate charge is needed, blue when slow charging is in progress, and magenta when fast charging is in progress.

**Figure 1. Main Features of the Q-Controls Plus**

## ICON DESCRIPTIONS

| Icon(s) | Description and Use |
|---------|---------------------|
| ((●)) Alarm | Alarm–activates the 10-second countdown for sounding the INTELLEC's internal siren. |
| CANCEL | Cancel Alarm–stops the Alarm countdown and returns you to the Home Screen. |
| Back | Back–takes you back to a higher-level menu screen. |
| More | More–accesses another menu screen with additional icons related to your current activity. |
| Socket | Socket–instructs IntelliSocket to turn power on to device (indicated by menu screen heading). |
| Av Video | AV–selects the TV AV channel. |
| R G B Y | R, G, B, and Y–correspond to the Red, Green, Blue, and Yellow fast teletex buttons. |
| MISC ONE MISC TWO MISC THREE MISC FOUR | Misc One, Two, Three, and Four–provide customized functions. On TV/Text menu screens, One may correspond to Hold and Two to Magnify. |
| CUSTOM 1 | Custom 1-9–provide any customized function. Contact your Quantum Rehab Specialist for details. |
| -/-- | Allows you to select TV Channels with numbers greater than 9. |
| MENU | Menu–opens the video screen. |
| select | Select–gives a multi-disk selection on HiFi, CD, or DVD players. |
| shuffle | Shuffle–plays CD disks in a random selection. |

# III. INSTALLATION

## BATTERY CONNECTION, CHARGING, AND CHANGING

Your Q-Controls Plus has an internal rechargeable battery pack. A fully charged battery should power the device for about 1 to 2 weeks under normal use. The battery has an expected service life of 2 years.

*NOTE: The battery pack is supplied with the power switched off. The power switch is located on the underside of the Q-Controls Plus. See figure 2.*



**Right Side Panel Retaining Screws**
Loosen these screws to remove the top panel.

**Power Switch**
Slide the switch toward the rear of the unit to power the system ON.

**Charge Point**
Socket for approved power supply (Part No. PS00201)

**Finger Guard Retaining Screws**

**Optional Mounting Bracket Attachment Location**
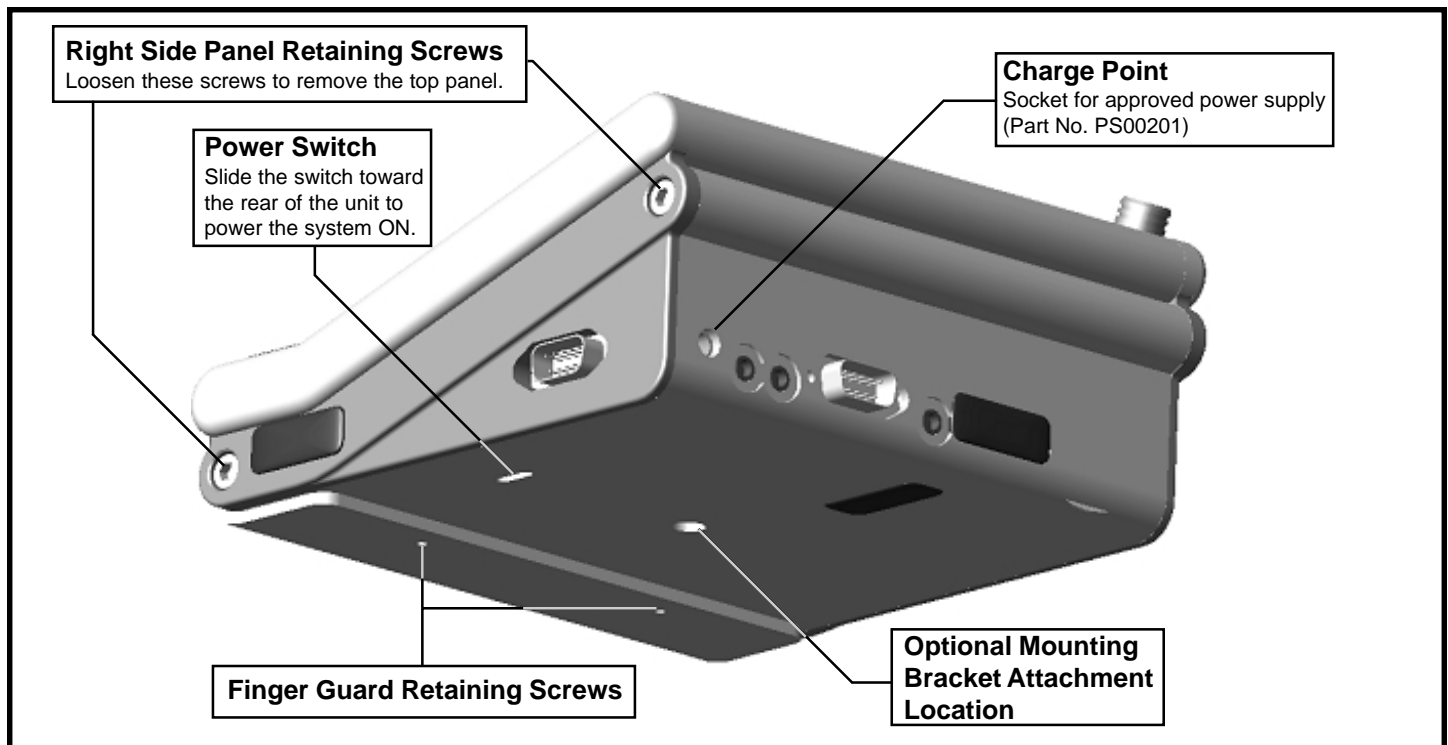
**Figure 2. Q-Controls Plus Rear and Underside View**

## Battery Charging

The status box on the menu screen displays information about the battery when it requires charging:

■ **LOW BATTERY** The battery has sufficient charge for a few more hours of operation, but the unit should be charged at the next convenient time.

■ **CHARGE NOW** The battery is discharged and should be put on charge immediately. In this condition, the charge light on the front of the Q-Controls Plus will flash red.

**To charge the batteries:**
1. Plug the Q-Controls Plus power supply (Product Code PS00201) into the charge point (see figure 2) on the Q-Controls Plus and into a standard outlet.
2. Charge the Q-Controls Plus for at least four hours straight or, preferably, overnight.

For the first four hours (approximately), the unit uses a fast charging method. After this, it switches to a trickle charge mode. The charge light indicates the current charging method:

■ MAGENTA—fast charge
■ BLUE—trickle charge.

*NOTE: The unit may be unplugged from the charger at any time, but we recommend that the charging is carried out overnight or for a full four-hour period. The unit can be used while it is charging.*

⚠️ **WARNING! Do not charge the unit unless the LOW BATTERY status message has been displayed. Do not leave the unit on charge for long periods as this may shorten the battery life.**

## Changing the Battery

The battery has an expected service life of 2 years. When you find that the battery needs charging more frequently, it is time to replace it.

**To change the battery:**

1. If your unit is fitted with a finger guard, remove it by unfastening the retaining screws located on the underside of the Q-Controls Plus. See figure 2.
2. Loosen the right side panel retaining screws using a 5mm hex key so that the right side panel can be displaced by about 5mm. See figure 2.
3. Ease the top assembly away from the left side panel; carefully remove the Perspex screen. Tilt the top assembly upwards and turn it over, taking care not to over tension the ribbon cables. Rest it on the rear panel.
4. Locate the battery and its lead. The lead is plugged into a socket marked "MXBATT" located towards the back of the circuit board in the base of the Q-Controls Plus. See figure 3.
5. Unplug the lead. The battery is held in its bay by a reusable strap. Pull the battery out of the bay and remove the reusable strap.
6. Fit the reusable strap to the new battery and push it firmly into the battery bay. Plug the battery lead into the MXBATT socket.
7. Replace the top assembly and tighten the right side panel retaining screws.
8. Replace the finger guard and screws.

*NOTE: Pride recommends that you charge the unit for 12 hours before initial use. This ensures the maximum operating period for the Q-Controls Plus.*
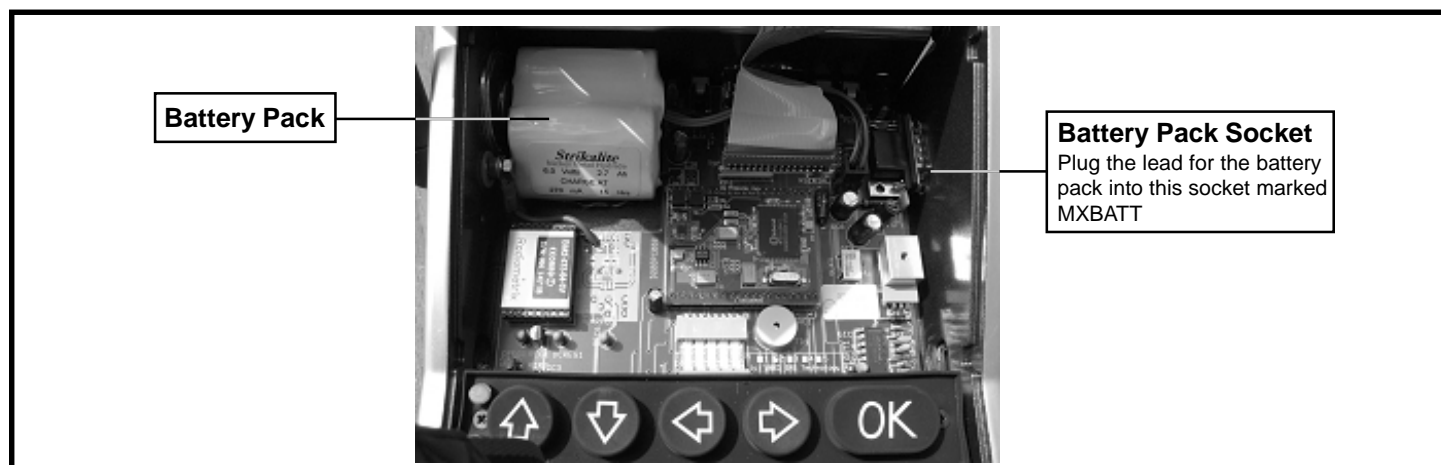


**Figure 3. Battery Pack**

## DEVICE CONNECTIONS

The following diagram shows the device connections on the rear and right side panel of the Q-Controls Plus.



**I/O Port**
9-pin DIN socket for programming Q-Controls Plus from Management Software

**Switches 1 & 2**
Ports for external switch operation

**Joystick Port**
Standard 9-pin DIN connector for joystick

**Alarm**
Switch connected here activates Q-Controls Plus's alarm function
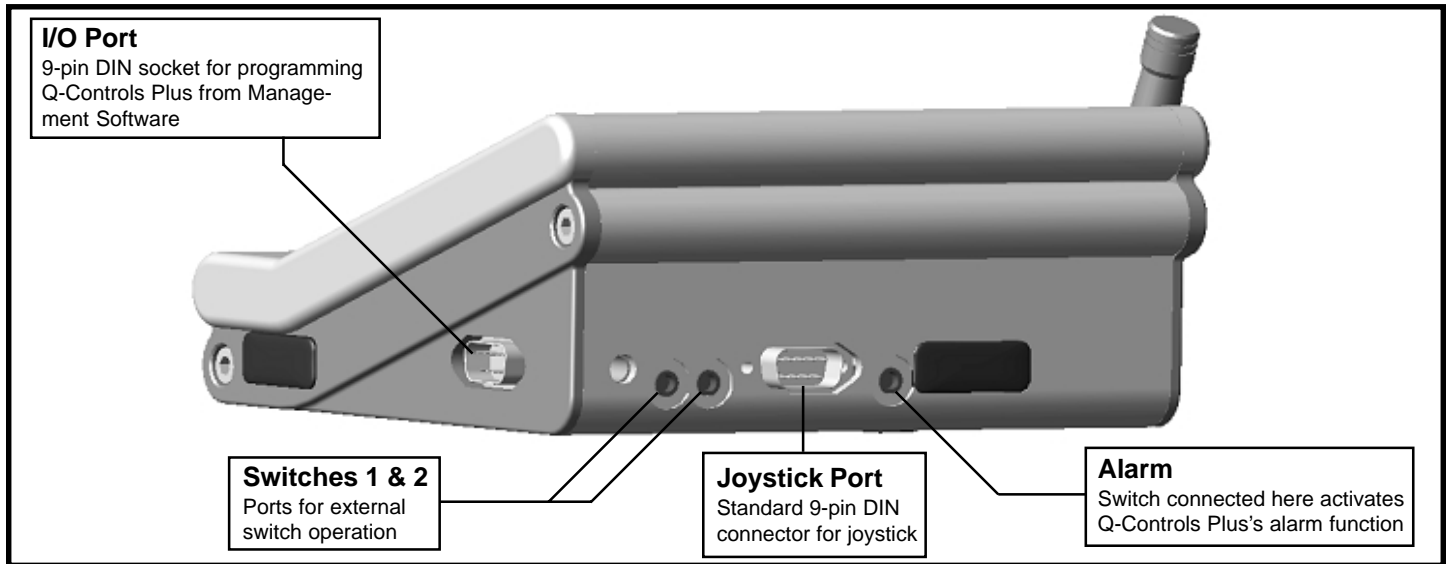
**Figure 4. Q-Controls Plus Device Connections**

## Input Device Options

You can operate the Q-Controls Plus using:

- The integral keypad
- A single switch
- Two switches
- 2-way, 3-way, or 4-way joysticks

The exact design of the switches or joystick is not relevant to the operation of the Q-Controls Plus. The following table lists the hardware configurations required to set up each configuration.

## Input Device Configurations

| Input device(s) | Switch Connections and Function |
|---|---|
| Keypad | No connections required. |
| Single switch | Connect compatible switch to Switch Port 1. Switch provides all navigation functions: first press of the switch starts scanning; second press selects highlighted icon. |
| Two switches | Connect compatible switches to Switch Ports 1 and 2. Press switch 2 to scan menu screen; press switch 1 to select highlighted icon. |
| Joystick | Connect compatible joystick to Joystick port. |
| Joystick + two switches | Connect compatible joystick to Joystick port. Connect compatible switches to Switch Ports 1 and 2. Press switch 1 to select highlighted icon and switch 2 to exit mouse mode. |

# IV. OPERATION

To "wake" the Q-Controls Plus from its standby mode, press any key or switch or move the optional joystick. The Q-Controls Plus will display a menu screen. Each menu screen consists of icons. These are small pictures representing:

- A command to operate external equipment (such as a TV)
- An instruction to display another menu screen
- A change in the function of the Q-Controls Plus

To carry out a task using the Q-Controls Plus, you must use your input device to:
1. Navigate to the required icon's menu screen.
2. Highlight the icon.
3. Select the highlighted icon.

*NOTE: After approximately 2 minutes of inactivity, a preset timer automatically returns the unit to its standby mode.*

## NAVIGATING, HIGHLIGHTING, AND SELECTING

The exact navigation, highlighting, and selection procedure depends on your choice of input device:

- Single switch
- 2 switch
- 2-way joystick
- 3-way joystick
- 4-way joystick
- Keypad

### Single Switch

A single switch implementation uses the Q-Controls Plus's automatic scanning feature. To use this setup:
1. Press the switch to activate the Q-Controls Plus.
2. Press the switch again to commence a scan of the displayed menu. The Q-Controls Plus will automatically highlight each icon in turn, starting with the top left icon, and then moving left-to-right across each subsequent row of icons.

*NOTE: The speed of the scan is preset in the system setup. The scan pauses for longer on the first icon (Alarm or Back) to allow easy access to these functions.*

3. When the desired icon is highlighted, press the switch again. The Q-Controls Plus will carry out the function associated with the selected icon.

### Two Switch

A two-switch implementation allows you to navigate manually. To use this setup:
1. Press any switch to activate the Q-Controls Plus. The icon in the top left corner of the current menu screen will be highlighted.
2. Press and hold down the "Navigation" switch (connected to the No. 2 switch input). The Q-Controls Plus will scan to the right, highlighting each icon in turn (at the rate preset by the Scan Speed setting). If it has reached the last icon on a row, the first icon on the next row down will be highlighted.
3. When the desired icon is highlighted, release the "Navigation" switch.
4. Press the "Select" switch (connected to the No. 1 switch input). The Q-Controls Plus will carry out the function associated with the selected icon.

### 2-way Joystick

To use a 2-way joystick implementation:
1. Move the joystick in any direction to activate the Q-Controls Plus. The icon in the top left corner of the current menu screen will be highlighted.
2. Press and hold the joystick to the right. The Q-Controls Plus will scan to the right, highlighting each icon in turn. If it has reached the last icon on a row, the first icon on the next row down will be highlighted.

*NOTE: If it is more convenient, press and hold the joystick to the left. The Q-Controls Plus will scan to the left, highlighting each icon in turn. If it has reached the first icon in a row, the last icon on the next row up will be highlighted.*

3. When the desired icon is highlighted, release the joystick.
4. To select the highlighted icon, move the joystick to the down position. The Q-Controls Plus will carry out the function associated with the selected icon.

### 3-way Joystick

To use a 3-way joystick implementation:
1. Move the joystick in any direction to activate the Q-Controls Plus. The icon in the top left corner of the current menu screen will be highlighted.
2. Press and hold the joystick to the right. The Q-Controls Plus will scan to the right, highlighting each icon in turn. If it has reached the last icon on a row, the first icon on the next row down will be highlighted.

*NOTE: If it is more convenient, press and hold the joystick to the left. The Q-Controls Plus will scan to the left, highlighting each icon in turn. If it has reached the first icon in a row, the last icon on the next row up will be highlighted.*

*NOTE: You can also press and hold the joystick in the up position. The Q-Controls Plus will scan upwards across rows, highlighting each icon in turn. If it has reached the top row, the corresponding icon in the last row will be highlighted.*

3. When the desired icon is highlighted, release the joystick.
4. To select the highlighted icon, move the joystick to the down position. The Q-Controls Plus will carry out the function associated with the selected icon.

### 4-way Joystick and Select Button

To use the 4-way joystick:
1. Move the joystick in any direction to activate the Q-Controls Plus. The icon in the top left corner of the current menu screen will highlighted.
2. Press and hold the joystick to the right. The Q-Controls Plus will scan to the right, highlighting each icon in turn. If it has reached the last icon on a row, the first icon on the next row down will be highlighted.

*NOTE: If it is more convenient, press and hold the joystick to the left, up, or down. The Q-Controls Plus will scan accordingly.*

3. When the desired icon is highlighted, release the joystick.
4. Press the Select button (this may be part of the joystick or a separate switch connected to the No. 1 switch input). The Q-Controls Plus will carry out the function associated with the selected icon.

## Keypad

To use the Q-Controls Plus's own keypad:

1. Press any key to activate the Q-Controls Plus. The icon in the top left corner of the current menu screen will be highlighted.
2. Press and hold any of the arrow keys. The Q-Controls Plus will scan in the appropriate direction, highlighting each icon in turn.
3. When the desired icon is highlighted, release the key.
4. Press the OK button. The Q-Controls Plus will carry out the function associated with the selected icon.

# MENU STRUCTURE

## Home Screen

The first screen in the Q-Controls Plus configuration is called the Home Screen. This is the gateway to all the Q-Controls Plus's functions. If you want to change from controlling the TV to operating a lamp for example, in most cases you must navigate back to the Home Screen first.



**First Icon**
Activates the alarm countdown

**Status Box**
Displays the menu screen's name and status information

**Lamp Icon**
Controls and shows status of lamp connected to RF-controlled IntelliSocket

**Phone Icons**
Accesses Q-Controls Plus's land-line and mobile phone functions

**Appliance Icons**
Access to first level menus controlling TV, Video, HiFi, DVD, etc.

**Setup Icon**
Displays Setup menus for modifying Q-Controls Plus performance

**Speech Icons**
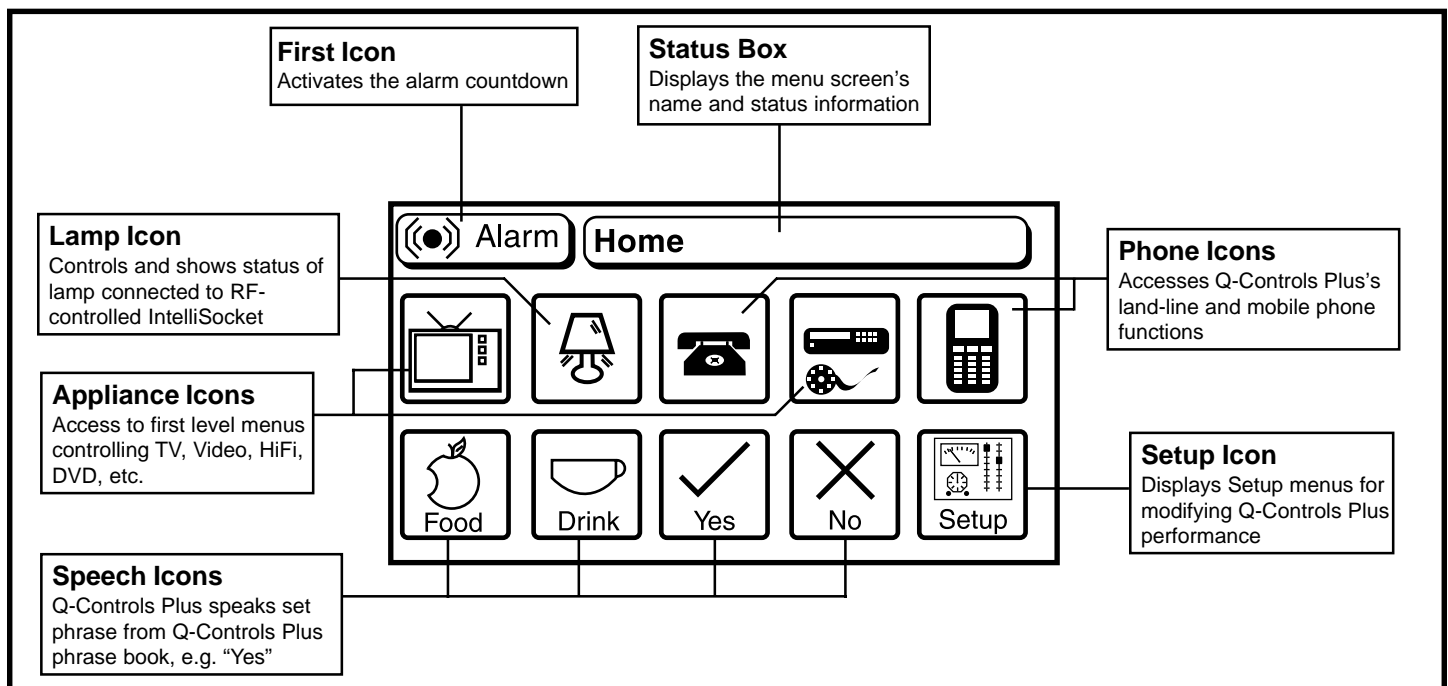Q-Controls Plus speaks set phrase from Q-Controls Plus phrase book, e.g. "Yes"

**Figure 5. Features of a Typical Home Screen:**

On the Home Screen, the first icon allows you to activate the Q-Controls Plus's internal alarm. See figure 5. Many of the other icons on the Home Screen allow you to access further first-level menu screens. These menus display icons for the major functions required to control the appliance. Select the first icon on the first-level menu screen to return to the Home Screen.

*NOTE: For complex devices with many controls, select the More icon to display a further menu screen with additional commands.*

*NOTE: First-level menu screens are generally in the same 11-icon format as the Home Screen.*
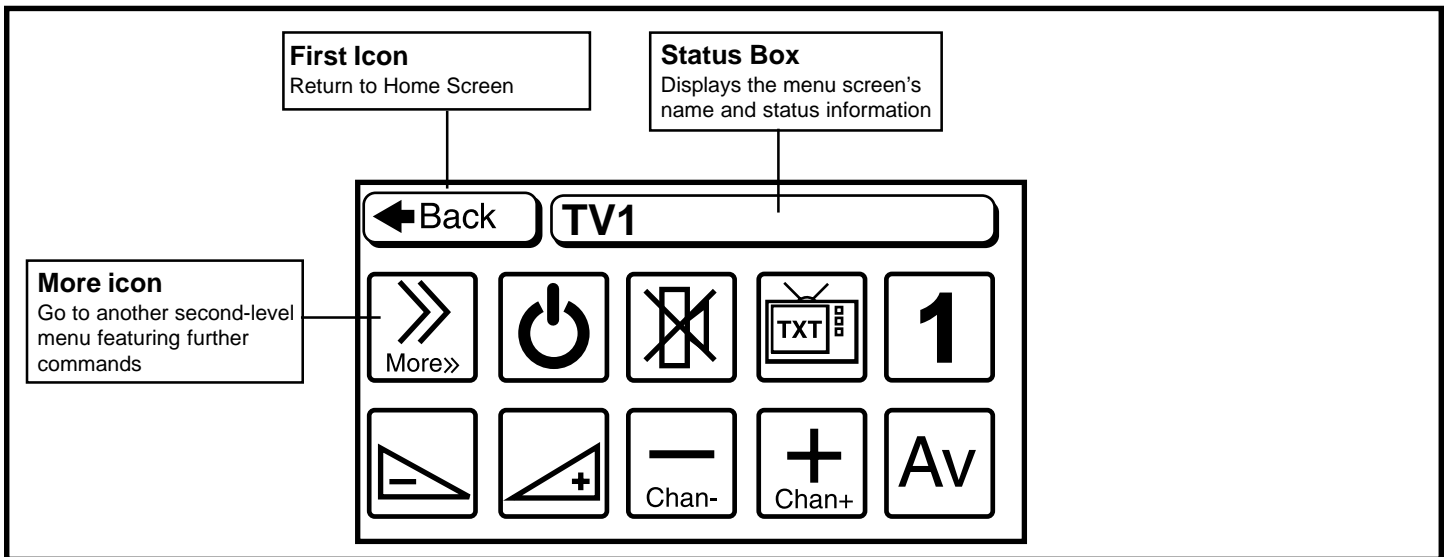


**Figure 6. Features of a Typical First level Menu Screen**

For complex devices, such as TVs, videos, and HiFis, second and third level menu screens are available to support the extra functionality. These menu screens are generally displayed in a condensed 19-icon format.
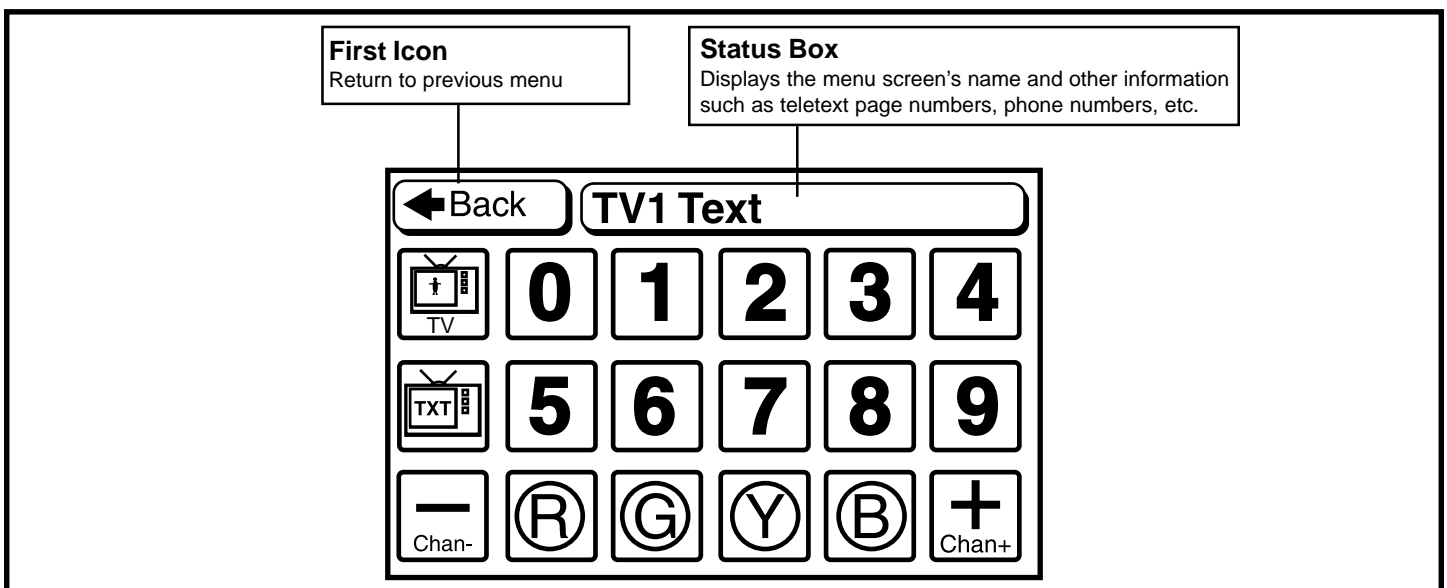


**Figure 7. Features of a Typical Second Level Menu Screen**

Irrespective of the make of your TV, video, or HiFi, the Q-Controls Plus displays the same standard menu screens for each device type. A function present on your device may not therefore be represented on your Q-Controls Plus. In the same way, an icon present on a standard menu screen may have no comparable function on your device. In these circumstances, your Q-Controls representative can customize your menu screen layouts with additional icons to support unusual device functions, or remove or reprogram inappropriate icons.

*NOTE: Each Q-Controls Plus is set up individually to suit your own abilities and requirements. The exact arrangement and function of the icons may therefore vary from that described or illustrated in this manual.*

# OPERATIONS WORKING EXAMPLE

To illustrate the operational principles of your Q-Controls Plus, this section provides a walk-through or tutorial for some specific tasks. It describes how you can use your Q-Controls Plus to:

- Switch your TV on and select a channel
- Change the volume
- Switch the television off

You can use the principles learned in these examples to operate other appliances.

### Switching on the TV and Selecting a Channel

1. Activate your Q-Controls Plus using your input device (any key/button press or joystick movement). If this is the first time you have used the Q-Controls Plus, the Home Screen is displayed. See figure 5.

*NOTE: If you have already used your Q-Controls Plus, the menu screen displayed on wake-up will be the same screen that was on display when it entered its sleep mode. Upon wake-up, the Q-Controls Plus always highlights the icon in the top left corner of the menu screen. This is Alarm on the Home Screen and Back on all other menu screens.*

2. Navigate from the highlighted Alarm or Back icon to the TV icon. See figure 8. In most cases, the TV icon will be on your Home Screen. However, if your supplier has customized your menu screens into rooms, the TV icon may be situated within one of these first level menus (for example, living room).
3. Select the TV icon. The first level TV menu screen is displayed. See figure 6.
4. Switch the TV on using the 1 icon.
5. To increase the TV channel number, highlight the Chan+ icon and select it repeatedly until you reach the required channel.
6. To decrease the TV channel number, highlight the Chan- icon and select it repeatedly until you reach the required channel.

### Changing the Volume

1. Unless it is already displayed, navigate back to the first level TV menu screen.
2. To increase or decrease the volume, highlight the Volume Increase or Volume Decrease icons. Select either icon, holding down the key, button, or joystick until the required volume is reached. See figure 8.
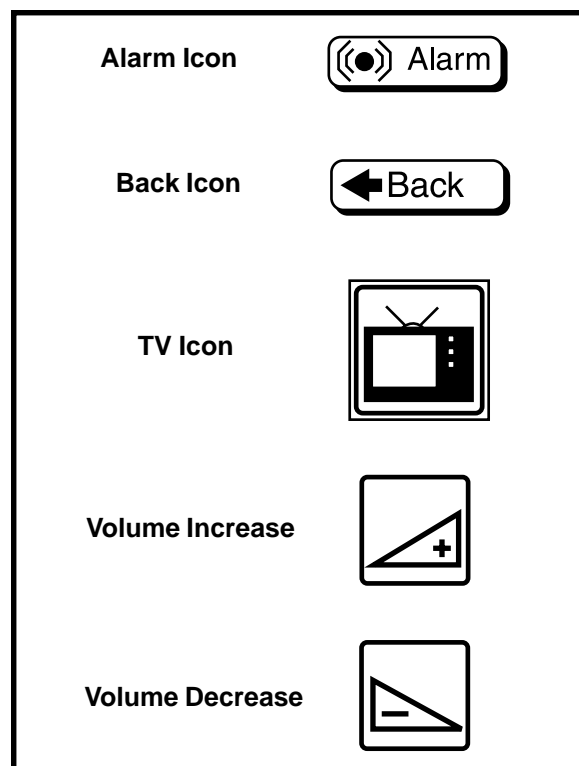


**Figure 8. Menu Screen Icons**

### Switching the TV Off

1. Navigate to the first level TV menu by clicking on the Back or More icons as required.
2. Highlight and select the Standby icon. The TV is put into standby mode.

### Alarm Function

The Alarm Function on your Q-Controls Plus is designed to alert your caregiver or others in the immediate vicinity in case of emergency, by means of a siren built into the Q-Controls Plus itself.

There are two ways to activate the alarm:

1. Highlight and select the Alarm icon available on the Home Screen.
2. Operate the switch attached to the Alarm socket. This function can be linked to tilt or fall sensors. When activated, the Alarm Screen appears.

A message on the menu screen displays a countdown of 10 seconds before the alarm is sounded. You can cancel the alarm signal at any time by selecting either the CANCEL or the <<Menu icons. When the countdown reaches zero, the alarm will sound until it is cancelled or for 2 minutes.

*NOTE: The loudness of the alarm is set on the Speaker Screen. Refer to VI. "Setup."*
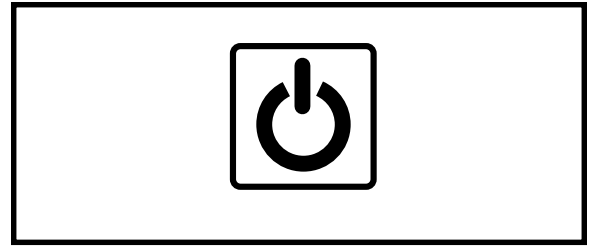
**Figure 9. Standby Icon**

**Figure 10. Alarm Screen**

# V. SPEECH SETUP

## INTRODUCTION
The Q-Controls Plus uses two types of phrases:

1. **Icon Announcement Phrases**
   Each of the 850 icons in the Q-Controls Plus database has a fixed phrase associated with it. The Q-Controls Plus can announce these when an icon is highlighted. You can customize these announcements in a number of ways:
   - Use a full icon description including the room name or screen name.
   - Delay the announcement for a short time after the icon has been highlighted (post announcement). This allows the user to rapidly navigate the screen, only receiving an announcement when paused over an icon.
   - Override an announcement with a user-defined phrase.

2. **User-definable Phrases**
   These are primarily intended for speech to be announced by the Q-Controls Plus when an icon is selected rather than when it is highlighted. The first 16 defined phrases may also be used to override standard icon announcement phrases.

   The Q-Controls Plus can access up to 256 user-defined phrases, each with a maximum character length of 127. Phrases are defined during installation using the Q-Controls Plus Management Software. Different phrase sets can be defined for each client.

## SPEECH MODES
There are five speech modes, offering various levels of speech implementation. By using escape sequences within a phrase, you can:
- Control pronunciation
- Add pauses
- Change loudness and speed
- Ensure that abbreviations are spelled out

*NOTE: To use Speech Modes 1-4, ensure that the Q-Controls Plus's speaker is on. There are four volume levels to choose from, but the default setting is OFF.*

| Speech Mode | Description |
|---|---|
| Off | **Default Mode:** Speech output off |
| 1 | **Communication aid mode 1:** Speech on speech icons when selected (if associated with phrase) |
| 2 | **Communication aid mode 2:** Voice on speech icons when selected (if associated with phrase) <br> Talking clock: time announced on Clock screen every 5 minutes |
| 3 | **Communication aid mode 3:** Voice on speech icons when selected (if associated with phrase) <br> Talking clock: time announced on Clock screen every 5 minutes <br> Screen titles announced when first displayed |
| 4 | **Full Speech Mode:** Announcements on all highlighted icons <br> Voice on speech icons when selected (if associated with phrase) <br> Talking clock: time announced on Clock screen every 5 minutes <br> Screen titles announced when first displayed |

## Choosing a Speech Mode

1. Select the Setup icon. This is usually on the Home Screen. The Setup Screen is then displayed. See figure 11.
2. Select the Mode Speech icon. The Speech Mode Screen is displayed. See figure 12.
3. Choose one of the following Speech Modes:
   - **Off** The Q-Controls Plus's speech feature is off.
   - **1** Select speech mode 1.
   - **2** Select speech mode 2.
   - **3** Select speech mode 3.
   - **4** Select speech mode 4.

4. Choose one of the following Speech Speed settings:
   - **Slow Speech** The Q-Controls Plus speaks phrases slowly.
   - **Fast Speech** (Default) The Q-Controls Plus speaks phrases at normal speed.

5. Choose one of the following Delay settings:
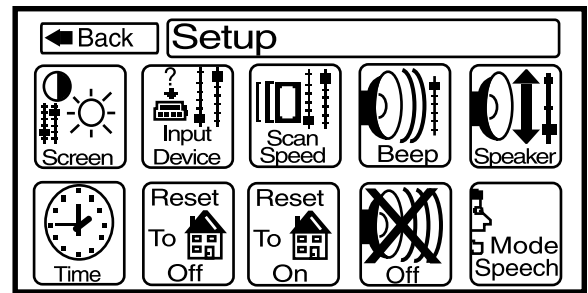


**Figure 11. Setup Screen**
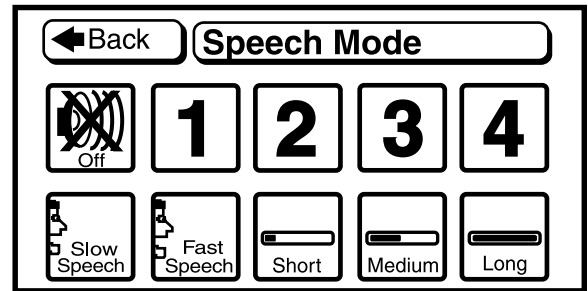


**Figure 12. Speech Mode Screen**

*NOTE: If you have selected Speech Mode 4 and are not using the scanning mode with a single switch, you can set a delay time before the Q-Controls Plus announces a highlighted icon. Icons highlighted for less than the selected delay period are not announced.*

   - **Short** The Q-Controls Plus announces icons highlighted for 1.5 seconds.
   - **Medium** The Q-Controls Plus announces icons highlighted for 3 seconds.
   - **Long** The Q-Controls Plus announces icons highlighted for 4 seconds.

*NOTE: In Scanning Mode, the Q-Controls Plus announces each icon as it is highlighted.*

6. Select the Back icon to return to the Setup Screen.
7. Select the Back icon again to return to the Home Screen.

## Changing Icon Announcement Options

Announcements (Speech Mode 4 only) can be implemented in three ways.

1. **Normal**
   The default icon announcements. You do not need to change anything in the configuration before uploading it to the client's Q-Controls Plus.

2. **Full Announcement**
   Expand the announcement to help differentiate between similar appliances with the same names:
   - Radio icons announce the room of the device as well as the default icon name (e.g., Lounge Lamp or Hall Lamp).
   - Link icons announce the given name of the destination screen (e.g., a TV with the text on the screen changed to Portable TV will announce Portable TV instead of just TV).

3. **Override**
   Replace the default announcement with a phrase chosen from the top 16 defined phrases.

## Using Full Announcement
**To set up full announcement for an icon:**
1. Load the client's configuration files into Q-Controls Plus Management Software using the Customer Data page. Refer to the Management Software Manual for more details.
2. Display the ICON Management page and select Simulate Mode.
3. Locate the screen with the icon you want to edit.
4. Choose Edit Screens Mode.
5. Select the icon to be edited. Its properties are displayed.

*NOTE: You need Advanced User status to edit icon properties. Contact your Quantum Rehab Specialist for more information.*

6. Select Full Announce from the Sound Action list box. See figure 13.

Repeat the procedure if you want to use Full Announcement with any other icons in the configuration. To restore the normal announcement to the icon, change the Sound Action back to its previous value (normally 1BH: Blip)
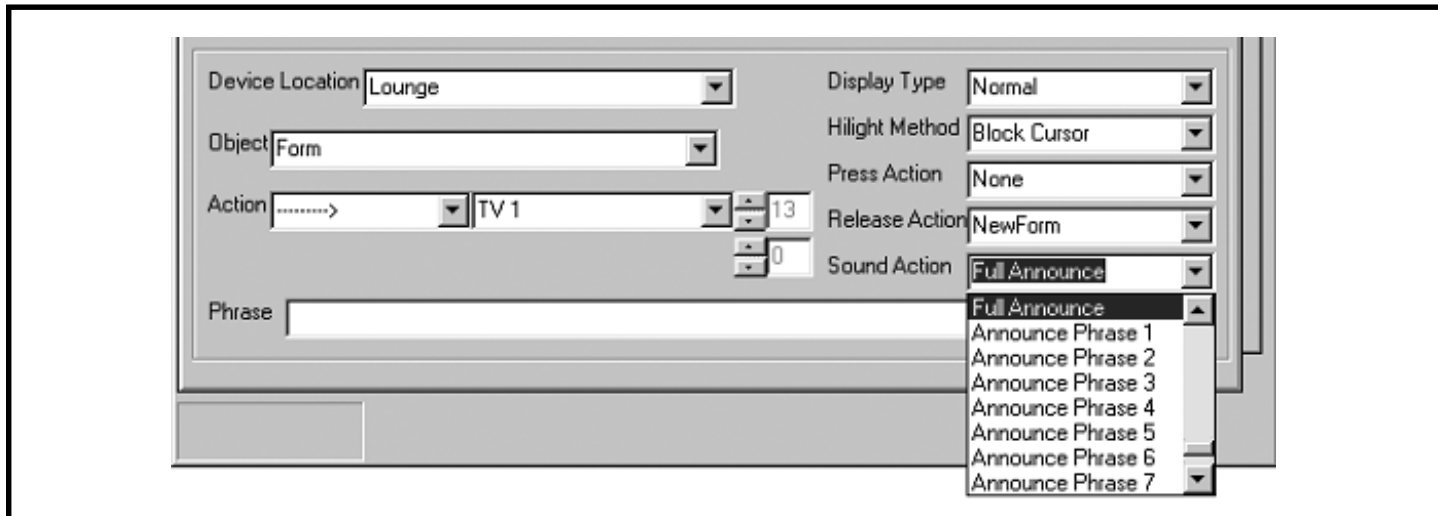


**Figure 13. Setting up Full Announcement for TV icon**

## Overriding an Announcement
**To override an announcement with one of the top 16 defined phrases:**
1. Load the client's configuration files into Q-Controls Plus Management Software using the Customer Data page. Refer to the Management Software Manual for more details.
2. Display the ICON Management page and select Simulate Mode.
3. Locate the screen with the icon you want to edit.
4. Choose Edit Screens Mode.
5. Select the icon to be edited. Its properties are displayed.

*NOTE: You need Advanced User status to edit icon properties*

6. Select Announce from the Action list box. See figure 14.
7. Select the required phrase from the displayed list (it must be one of the top 16 phrases).

Repeat the procedure as required. To restore the normal announcement to the icon, change the Sound Action back to its previous value (normally 1BH: Blip)
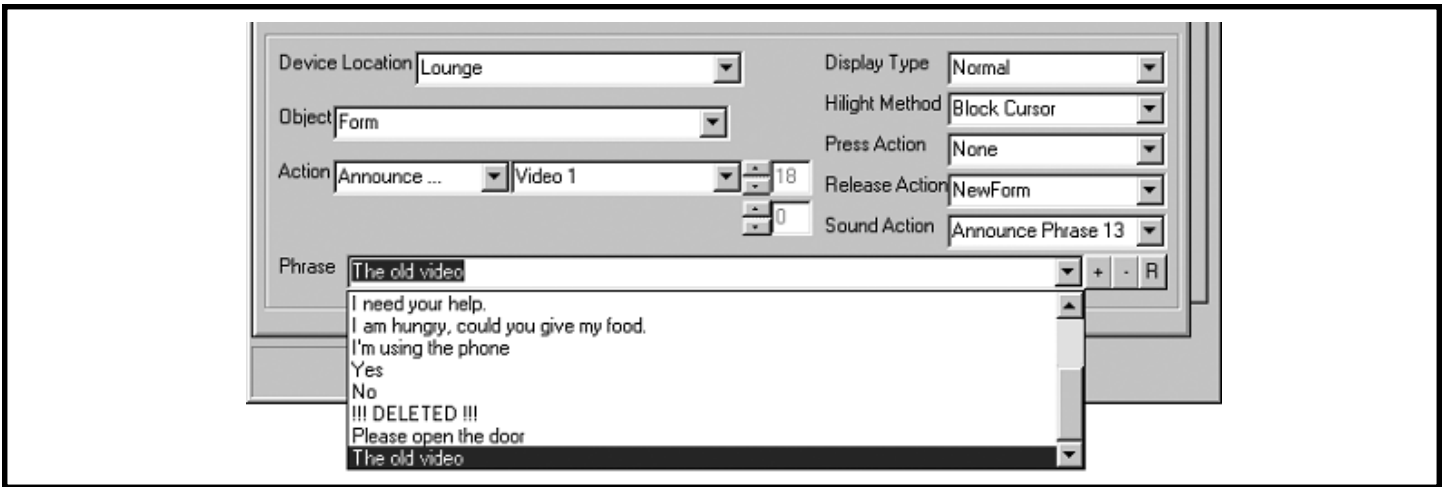
**Figure 14. Setting Up Full Override of an Icon Announcement**

## SPEAKING ICONS

The Q-Controls Plus can speak a user-defined phrase when the user selects an associated icon. There are a number of icons designed for speech in the View>Link to Icons>Q-Controls Plus Speech folder. You can also use any other icon from the library.

**To set up a speaking icon:**
1. Load the client's configuration files into Q-Controls Plus Management Software using the Customer Data page. Refer to the Management Software Manual for more details.
2. Display the ICON Management page and select Simulate Mode.
3. Locate the screen with the icon you want to edit.
4. Choose Edit Screens Mode.
5. Select the icon to be edited. Its properties are displayed.

*NOTE: You need Advanced User status to edit icon properties*

6. Select Say from the Action list box. See figure 15.
7. Select the required phrase from the displayed list

Repeat the procedure as required. You can test the function of the button in Simulate Mode.
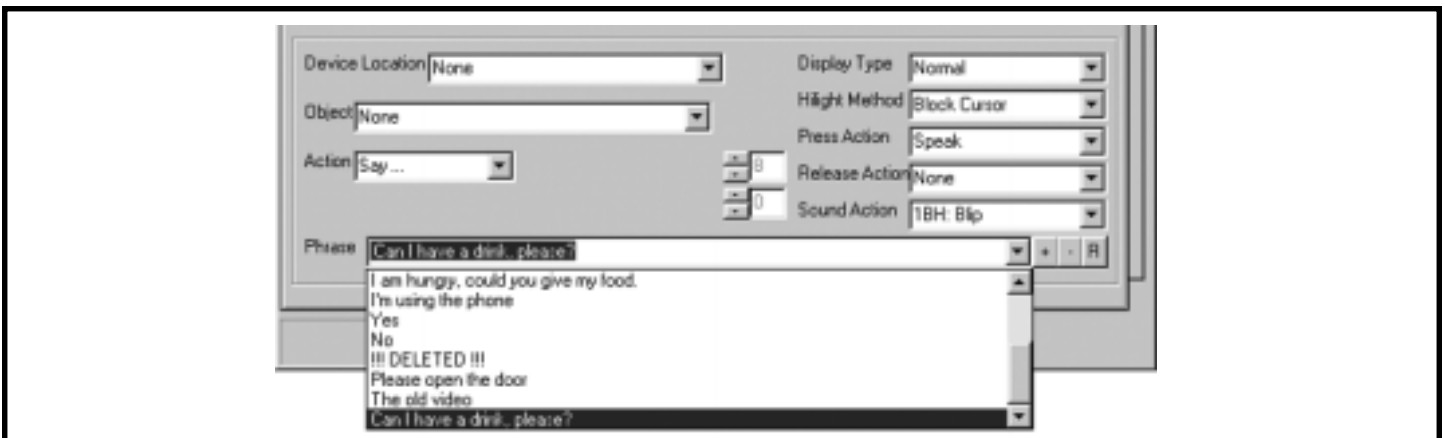


**Figure 15. Associating an Icon with a User-Defined Phrase**

## WORKING WITH PHRASES

Whenever you are in the Edit Screens Mode on the Icon Management page, you can create, replace, or delete phrases in the client's configuration file using the Phrase list box and its associated buttons. See figure 16.
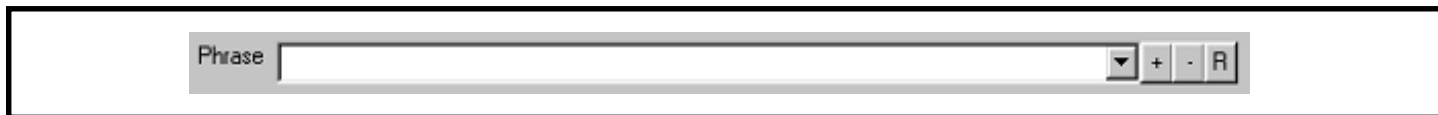


**Figure 16. Phrase Box**

**To create a phrase:**
1. Type the phrase into the Phrase list box. If there is already text in the Phrase box, highlight it (or right click in the box and choose Select All from the menu) and then type over the words.
2. Click on the **+** button.

The phrase is added to the phrase database.

**To replace an existing phrase:**
1. Select the phrase from the Phrase list box.
2. Click on the **R** button. See figure 16.
3. Enter the new text into the Phrase dialog box. Click on the OK button when you are finished.

**To delete an existing phrase:**
1. Select the phrase from the Phrase list box.
2. Click on the **–** button. See figure 16.
3. The phrase is replaced in the listing by the message: !!! DELETED !!!

Phrases cannot be completely deleted because the Q-Controls Plus references them according to their numerical order in the phrase database.

# USING PHONEME AND CONTROL CHARACTERS

The Q-Controls Plus can accept a combination of standard words and letters and control characters from its phonetic alphabet. You can also embed control characters in the text of a phrase to better emphasize a word or alter the meaning. Control characters can alter the phonetic alphabet playback, speed, volume, and case sensitivity behavior.

## THE PHONETIC ALPHABET

The following table lists the phoneme symbols accepted by the Q-Controls Plus (English version). A single character represents each phoneme.

| Vowels | | | Consonants | | |
|---|---|---|---|---|---|
| Phoneme | Hex Value | Example | Phoneme | Hex Value | Example |
| i | 0x69 | b**ea**t | p | 0x70 | **p**et |
| I | 0x49 | b**i**t | t | 0x74 | **t**en |
| e | 0x65 | b**ai**t | k | 0x6b | **k**it |
| E | 0x45 | b**e**t | b | 0x62 | **b**et |
| @ | 0x40 | b**a**t | d | 0x64 | **d**ebt |
| u | 0x75 | b**oo**t | g | 0x67 | **g**et |
| U | 0x55 | b**oo**k | h | 0x68 | **h**at |
| o | 0x6f | b**oa**t | f | 0x66 | **f**at |
| c | 0x63 | b**ou**ght | T | 0x54 | **th**ing |
| a | 0x61 | B**o**b | D | 0x44 | **th**at |
| A | 0x41 | b**u**t | s | 0x73 | **s**at |
| R | 0x52 | b**urr** | S | 0x53 | **sh**ut |
| O | 0x4f | b**oy** | v | 0x76 | **v**at |
| Y | 0x59 | b**uy** | z | 0x7a | **z**oo |
| W | 0x57 | d**ow**n | Z | 0x5a | a**z**ure |
| x | 0x78 | **a**bout | y | 0x79 | **y**ou |
| X | 0x58 | ros**e**s | w | 0x77 | **w**it |
| | | | r | 0x72 | **r**ent |
| | | | l | 0x6c | **l**et |
| | | | m | 0x6d | **m**et |
| | | | n | 0x6e | **n**et |
| | | | G | 0x47 | si**ng** |
| | | | C | 0x43 | **ch**ur**ch** |
| | | | J | 0x4a | Ju**dge** |
| | | | P | 0x50 | Bu**tt**er |
| | | | Q | 0x51 | Wri**tt**en |

## Stress Characters

Each vowel must be preceded by a stress symbol. The Q-Controls Plus uses the numbers 1 and 0 to represent the stress within a word. The number 1 should precede the main stress of the word; all other syllables have 0 stress.

## Phoneme Examples

To embed a phoneme string in a phrase, precede it by a back slash \ (ASCII 92) character and terminate it with a space character.

| Phrase | Phoneme String |
|--------|----------------|
| Hi | \h1Y<br><br>(phoneme h, with a 1-stress vowel phoneme Y) |
| Test | \t1Est |
| Testing | \t1Est0IG |
| The quick brown fox | The quick \br1Wn fox |

## Control Characters

There are a number of control characters you can insert into standard ASCII text to modify the interpretation and expression of the phrase. A space character is required after the control characters and before the input text string.

| Character | Use | Notes |
|-----------|-----|-------|
| ASCII 92<br>\ (back slash) | Phoneme marker | Indicates a phoneme string follows immediately. |
| ASCII 95<br>_ (underscore) | Pause speech | Pauses the speech with variant length added within a sentence by using the '_X' flag. 'X' is an integer that indicates the pause duration ('X" is 0.1 sec per unit). For instance, '_10' will add in a 1-second pause. |
| ASCII 96<br>'<br><br>(Normally found next to 1 Key) | Speed Change | '+: Increase speed by 1 (e.g. '+ Hello world ).<br>'-: Decrease speed by 1.<br>'X: Set the speed to X.<br>X starts from 0 to 4 (e.g. '1 Hello world ). any number that is greater than 4 will be set to 4. |
| ASCII 94<br>^ (Caret) | All-Uppercase Word (all CAPs) Control | This flag controls interpretation of strings with all uppercase letters.<br><br>^0: This is the default setting. Some all-uppercase words (all CAPs) are spelled out, but others are treated as ordinary words, abbreviations, Roman numerals, etc. (e.g. '^0 IBM equals 'I b m')<br><br>^1: Avoid spelling out all-uppercase words. Any all-uppercase word in the input string will NOT be spelled out unless the system determines that the word is not pronounceable. In this mode, there is no abbreviation support (e.g. '^1 NOKIA' equals 'nokia').<br><br>^2: Spell out all words, regardless of case. All words in the input string are spelled out in this mode. There is no abbreviation support in this mode (e.g. '^2 NOKIA' equals 'n o k I a').<br><br>^3: Force the all-capital words/strings to be spelled out regardless of string length. For instance, '^3 HELLO' will be pronounced as 'H', 'E', 'L', 'L', 'O'. |

# IMPORTANT NOTES

It is important to remember:

1.  A space character is required after the control characters and before the input text string.
2.  All the text following control characters will be subjected to the same interpretation until another control character is encountered. If a ~+ command precedes a word, all following words will be spoken louder. If a single word is to be emphasized then the ~+ must be ahead of the word and a ~- must follow:

    **~+ Hello ~- how are you?**

Similarly, if you have forced the spelling out of a word, you must use the default mode control character to restore normal phrase interpretation:

**Please put ^3 BBC ^0 on my television**

# VI. SETUP

## SETTING UP AND CUSTOMIZATION

Your Q-Controls Plus is programmed and set at our factory by the installation technician to meet your individual requirements. However, after a period of use and practice, you may want to alter these settings.

This section shows you:

■ The contrast of the screen and the brightness of the screen and keypad backlights.
■ The input device: keypad, switches or joystick.
■ The scan speed (the rate at which the Q-Controls Plus scans across a menu screen highlighting each icon in turn).
■ The sound level of the "beep" warning.
■ The level of speech output.
■ The clock settings.

To make any of these changes, select the Setup icon. This is usually on the Home Screen. See figure 5. The Setup Screen is then displayed. See figure 11.

The icons have the following uses:
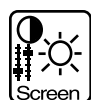
Display the Screen Menu
Change the brightness of the display screen's backlight and the contrast between light and dark parts of the display.

Display the Input Menu.
Select the input device used to control the Q-Controls Plus.

Display the Scan Speed Menu.
Change the rate at which the controller scans across a menu screen highlighting each icon in turn.

Display the Beep Screen.
Set the volume of the Q-Controls Plus's "beep" (the audible indication that a new icon has been highlighted).

Display the Voice Screen.
Choose the volume level for the Q-Controls Plus's speech and its internal alarm.

Display the Clock Screen.
Display the time or adjust the clock.

Restore the default option for the screen displayed when the Q-Controls Plus "wakes" from its Standby Mode: the last viewed screen before the Q-Controls Plus went into Sleep Mode.

Instruct the Q-Controls Plus to display the Home Screen whenever it "wakes" from Standby Mode.

Switch off the Q-Controls Plus's Speech Mode.

 Displays the Speech Mode Screen.



**Figure 17. Screen Menu**

## Changing the Screen Brightness and Contrast

You can change the brightness of the display screen's backlight and the contrast between light and dark parts of the display.

1. From the Setup Menu, select the Screen icon. The Screen Menu is displayed. See figure 17.
2. Select one of the following options:
   - **On**          The backlight is always on when the Q-Controls Plus is active.
   - **Dim**          The backlight is always off.
   - **Auto**         The Q-Controls Plus assesses the light level and uses the backlight when required.
   - **Darker**      Invert screen colors.
   - **Lighter**     Restore normal icon appearance.



**Figure 18. Input Screen**

*NOTE: Repeat this step until you achieve the required screen settings. The incremental changes for the contrast settings (Darker and Lighter) are small and you may need to repeat the procedure many times to change the screen display noticeably.*

3. Select the Back icon to return to the Setup Screen.

## Changing the Input Device

Your Q-Controls Plus will have been set up for use with the keypad or your chosen input device(s) at the factory. Use the following procedure if you want to change the input device:

1. From the Setup Screen, select the Input Device icon. The Input Screen is displayed. See figure 18.
2. Select an input option to enable the new input device:
   - **Single Switch**

   This option also allows keypad operation using the OK key ONLY.

   - **Two Switch**

    **WARNING! This option is not emulated by the keypad. Do not select this option unless you have two switches connected to your Q-Controls Plus.**
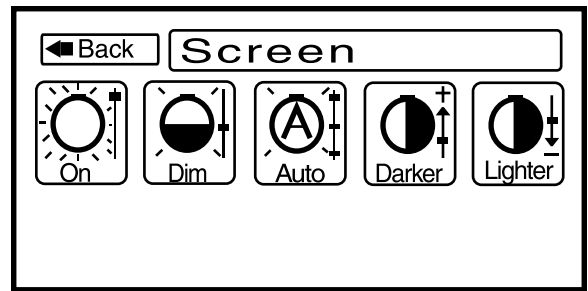
   - **4-way Joystick**

   Choose this option for 4-way joystick or full keypad operation.
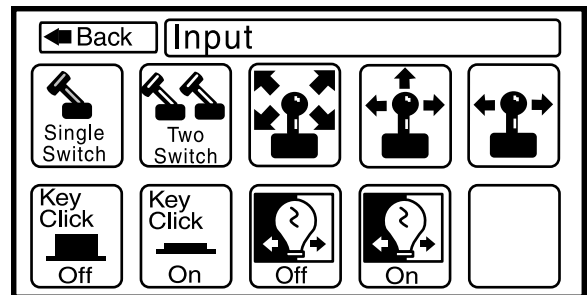
   - **3-way Joystick**

   This option also provides keypad navigation using the Left, Right, and Up keys. You can select icons by pressing the Down or OK keys.

   - **2-way Joystick**

   This option also provides keypad navigation using the Left and Right keys. You can select icons by pressing the Down or OK keys.

3. Choose to switch on or off the Q-Controls Plus's "key click" feature:
   - **Key click off**  The Q-Controls Plus doesn't make a "click" sound when you press a key or switch.
   - **Key click on**  The Q-Controls Plus provides audible feedback whenever one of the Q-Controls Plus's keys or an external switch is pressed.

4. Choose to switch the keypad backlight on or off:
   - **Keypad backlight off (default)**  The keypad backlight is off. This setting maximizes battery life.
   - **Keypad backlight on**  The backlight allows you to see the Q-Controls Plus's keypad more easily.

5. Select the Back icon with the new input device to return to the Setup Screen.

## Changing the Scan Speed

Your Q-Controls Plus has five basic scan speeds. These effect the rate at which the Q-Controls Plus scans across a menu screen highlighting each icon in turn. Use the following procedure if you want to change to another scan speed.



**Figure 19. Scan Speed Screen**

1. From the Setup Screen, select the Scan Speed icon. The Scan Speed Screen is displayed. See figure 19.
2. Select one of five scan speed options to enable the scan speed:
   - **Slowest**  Highlights each icon for 1.2 seconds.
   - **Slow**  Highlights each icon for 1.0 seconds.
   - **Medium**  Highlights each icon for 0.8 seconds.
   - **Fast**  Highlights each icon for 0.6 seconds.
   - **Fastest**  Highlights each icon for 0.4 seconds.

3. Select the Back icon to return to the Setup Screen.

*NOTE: As your proficiency using the Q-Controls Plus improves or your condition changes, you may find that the preset scan speeds no longer cover your range of abilities. In these circumstances, have your service technician adjust the values of the five scan speeds to provide a more suitable range.*



**Figure 20. Beep Screen**

## Changing the Beep Volume

Your Q-Controls Plus can be set up to "beep" each time it highlights an icon during a scan and when you select an icon. You can change the volume of the "beep" or turn it off. Use the following procedure if you want to change the beep volume.

1. From the Setup menu screen, select the Beep icon. The Beep Screen is displayed. See figure 20.
2. Select one of the following five beep volume options:
   - **Off**
   - **Quiet**
   - **Medium**
   - **Loud**
   - **Max**

*NOTE: When you select an option, the Q-Controls Plus responds with the selected "beep" volume. The Off option turns the "beep" feature off.*
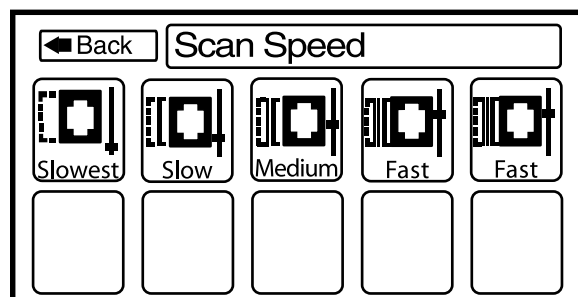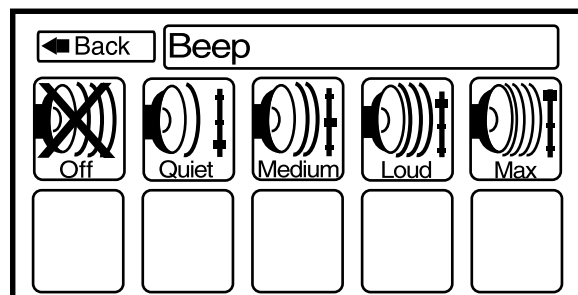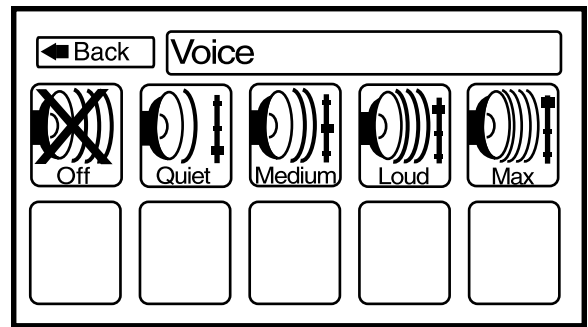
3.  Select the Back icon to return to the Setup Screen.

### Changing the Speaker Volume

Your Q-Controls Plus has five volume levels. Use the following procedure if you want to raise or lower the volume.

1.  From the Setup Screen, select the Speaker icon. The Voice Screen is displayed. See figure 21.
2.  Select one of five speaker volume options to enable that speaker volume:
    *   **Off** (This setting turns off the Q-Controls Plus's speech features.)
    *   **Quiet**
    *   **Medium**
    *   **Loud**
    *   **Max**

3.  Select the Back icon to return to the Setup Screen.



**Figure 21. Voice Screen**

### Changing the Clock Settings

Your Q-Controls Plus has a clock function. If you select the Clock icon, which is usually on the Setup Screen, the Q-Controls Plus displays the time in the Status Box. Use the following procedure if you need to correct the clock.

1.  From the Setup Screen, select the Time icon. The Clock Screen is displayed. See figure 22.
2.  To display the time in the menu's Status Box, select the Time icon.
3.  To correct the time, select one or more of the following options:
    *   **+1Hr**      Advances the time by one hour.
    *   **-1Hr**      Reduces the time by one hour.
    *   **+1Min**     Advances the time by one minute.
    *   **-1Min**     Reduces the time by one minute.
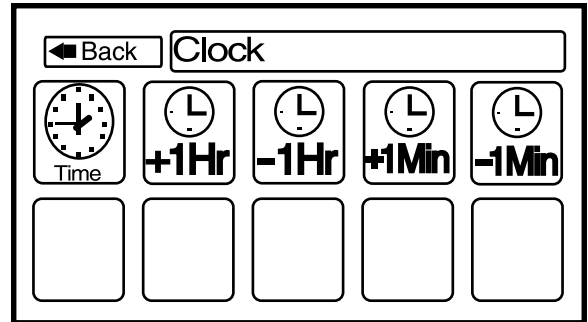
    Repeat this step until the time is correct.

4.  Select the Back icon to return to the Setup Screen.



**Figure 22. Clock Screen**

# VII. REFERENCE

## FREQUENTLY ASKED QUESTIONS

**What does the cross mean through my lamp/fan/socket symbol?**
For reliability, your Q-Controls Plus system has bi-directional communication and requires an acknowledgment from an IntelliSocket to say it has performed its command.

If the acknowledgment is lost or the IntelliSocket can't hear the command (because it is not plugged in or is out of range, for example) then the command is automatically reset. After about one second, the Q-Controls Plus will stop trying and a cross will be put through the icon to show that the IntelliSocket is temporarily out of communication. If the fault is not permanent then pressing the icon again will restore communication and clear the cross.

**How do I change the volume on the TV quickly without constantly going back to the volume change icon?**
Hold the OK key (or equivalent) down as long as you want the volume to increase.

**The highlighter is moving too fast/slow. How do I change the speed?**
Change the Scan Speed setting under the Setup menu.

**How can I see the Q-Controls Plus screen in the dark?**
There is a backlight to light up the screen. The controller must have the BACKLIGHT setting under the SCREEN menu set to ON for this to happen.

**Can I use the Q-Controls Plus when it is charging?**
The Q-Controls Plus can be used while it is charging. However, as you can also use it while the Battery Low message is displayed, we suggest you charge it the first time you see this message.

**Why are there blank icons on the TV/Video/CD/DVD menu screen?**
Blank icons indicate that your appliance does not have some of the functions that are on the standard menu screen. The blank icons can be removed or swapped for other functions by your supplier. Ask them to do this when they configure the system for you.

**How many appliances can the Q-Controls Plus control?**
The Q-Controls Plus has room for over 2500 functions in its memory. Remember that some individual appliances such as TVs can have 30 functions or more.

**Can the screen layout on the Q-Controls Plus be customized?**
The screens are programmed and arranged using the Q-Controls Plus Management Software, provided to trained service providers such as NHS engineers or approved dealers. You should contact your supplier if you want the screen layout to be changed.

**What is a macro and why would I use them on the Q-Controls Plus?**
A macro is a single icon that performs a number of functions. The Q-Controls Plus allows an unlimited number of functions to be performed from one icon. For example, you could use a macro to turn all the lights off at night, check that the front door is locked, and that all curtains are closed.

**Can the Q-Controls Plus learn infrared (IR) codes?**

No, the Q-Controls Plus is not designed to capture IR codes. It uses IR codes programmed within the Q-Controls Plus Management Software. These codes enable the Q-Controls Plus to replicate a greater number of IR codes than a learning system would allow. Moreover, once the codes are on the Q-Controls Plus Management Software database, they can be used repeatedly, without the need to spend time "relearning" the codes.

**What is the range of the infrared signals?**

The Q-Controls Plus and the target appliance need to be in line of sight of each other.

**What is the range of the radio signals?**

Typically, up to 100 meters in open space and 30 meters indoors.

**What happens if an appliance is out of range?**

If you are trying to operate an infrared appliance and it is out of range, nothing will happen. If you are trying to operate a radio-controlled appliance that is out of range, the Q-Controls Plus will try a number of routes to get the signal to the appliance. If all these fail, it will put a cross through the icon to let you know it hasn't been able to reach the appliance.

**Can I extend the radio range somehow?**

Yes, the radio signals can be relayed between some Q-Controls radio devices such as the Link Modules and Intellisockets. The Intellisocket would pass the signal on to the next device and so on until the required appliance was found.

**Does my Q-Controls Plus operate only my appliances?**

For infrared controlled appliances such as TVs and videos, no. For radio-controlled appliances, yes. Radio signals can be coded to ensure only you operate your appliances.

## NOTES

## NOTES

# Pride

**Pride Mobility Products Corporation**
182 Susquehanna Avenue
Exeter, PA  18643
USA

**Pride Mobility Products Company**
380 Vansickle Road Unit 350
St. Catharines, Ontario  L2R 6P7
Canada

**Pride Mobility Products Ltd.**
Unit 106, Heyford Park Camp Road
Upper Heyford, Oxfordshire OX25 5HA

**Pride Mobility Products Australia Pty. Ltd.**
21 Healey Road
Dandenong, 3175
Victoria, Australia

**Pride Mobility Products Italia S.r.l.**
Via del Progresso - ang. Via del Lavoro
Loc. Prato della Corte
00065 - Fiano Romano (RM)

**Pride Mobility Products Europe B.V.**
Tijnmuiden 28
1046 AL Amsterdam
The Netherlands

# QUANTUM®
## REHAB
### INNOVATIVE REHAB SOLUTIONS

A Division of Pride Mobility Products® Corp.