H-LINK

PROGRAMMING

MANUAL

For Pocket PC

RX 14-HL

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MFSHL
12/04

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I. SOFTWARE INSTALLATION PROCEDURE

Recommended Pocket PC:	Dell Axim X5, version 4.20.1081 or higher or HP IPAQ H2200, version 4 or higher

Via CD:

NOTE: Individuals performing the following instructions must be familiar with their computer's Windows Operating System and be able to save, copy, or transfer files within Windows.

1. Connect your Pocket PC to your computer using either a sync cable or cradle. Refer to the Pocket PC User's Guide for instructions. Ensure the Pocket PC is connected or synchronized to your computer before continuing.

   NOTE: For device communication to be successful, the Pocket PC must be compatible with Microsoft Mobile 2002 (or higher) Operating System or Microsoft Pocket PC 2003 Premium (or higher) Operating System.

2. Insert CD with H-Link files into the CD-ROM drive.

3. The CD should automatically start. If it does not, go into Windows Explorer and open the D:\ drive (or assigned CDROM drive letter).

4. Copy the H-Link software from the CD into the Program Files folder in your Pocket PC.

   NOTE: If using Dell's Axim Pocket PC, copy software into Mobile Device – My Pocket PC – Program Files.

5. When finished, remove the CD and disconnect the Pocket PC from your computer. The H-Link software in your Pocket PC is now ready for setup. Refer to Setup of Device Communication in this Instructions Manual.

Via Email:

NOTE: Individuals performing the following instructions must be familiar with their computer's Windows Operating System and be able to save, copy, or transfer files within Windows.

1. Connect your Pocket PC to your computer using either a sync cable or cradle. Refer to the Pocket PC User's Guide for instructions. Ensure the Pocket PC is connected and synchronized to your computer before continuing.

   NOTE: For device communication to be successful, the Pocket PC must be compatible with Microsoft Mobile 2002 (or higher) Operating System or Microsoft Pocket PC 2003 Premium (or higher) Operating System.

2. Open the email from Hetronic containing the attached H-Link software file.

3. Copy or save the software attachment from the email into a folder in your hard drive. Then, copy or move it from your hard drive into the Program Files folder in your Pocket PC.

   NOTE: If using Dell's Axim Pocket PC, copy or move software into Mobile Device – My Pocket PC – Program Files.

4. When finished, disconnect the Pocket PC from your computer. The H-Link software in your Pocket PC is now ready for setup. Refer to Setup of Device Communication in this Instructions Manual.

II. H-LINK MODEM (CF CARD)

The H-Link Compact Flash card is used as the radio link between the Pocket PC and the transmitter or receiver.

LED Description

Yellow (flashing) = active (unit is operating)

Green = transmitting signal

Yellow and Green (flashing) – downloading, uploading, or calibrating

Pocket PC with
"H-Link" RF Modem

III. MFSHL-232 SERIAL PROGRAMMING INTERFACE

The MFSHL-232 Serial Programming Interface provides connection between a Pocket PC with H-Link Card and the RX 14-HL receiver.
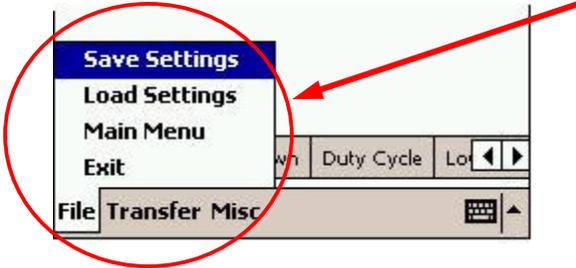
LED Description

Green (flashing) = Stand-by Mode

Red and Green (flashing) = transmitting signal or programming

RX 14-HL Receiver with
Serial Programming Interface

IV. MAIN MENU – File Handling
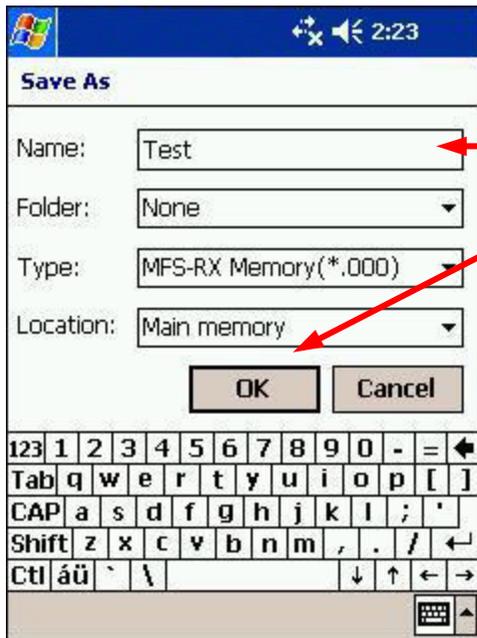

FILE MENU OPTIONS:

Save Settings - Saves all settings to a file.

Load Settings – Allows retrieval of previously saved files and loads them in the Pocket PC.

Main Menu – Returns to the main menu screen

Exit – Exits the program

File - Save Settings:

Using "Save Settings" option:
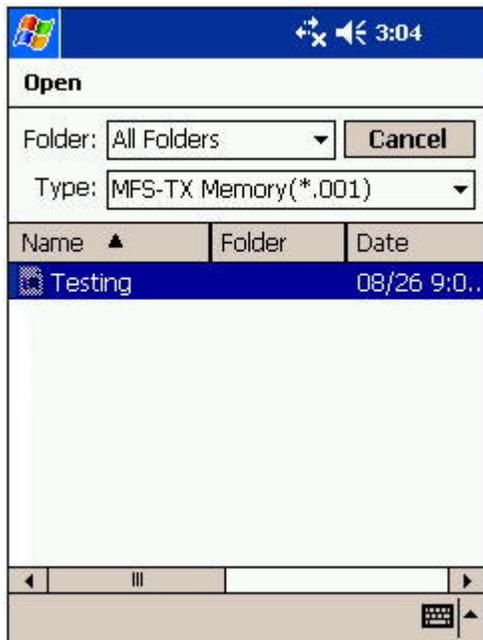
Enter the file name using the keyboard feature.

Click "**OK**" to store the file in a predetermined location. Otherwise, click "**Cancel**"

The Pocket PC will display a window indicating that the file was saved.
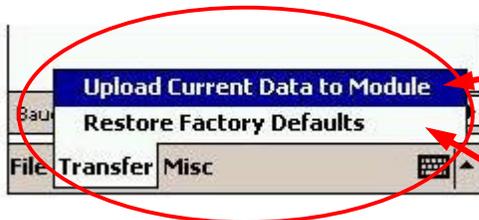
File - Load Settings:

Using "Load Settings" option:

This screen will display a list of files that are available for loading.

Select the desired file to load it into the program; otherwise click **Cancel**.

The Pocket PC will display a window indicating that the settings were loaded.
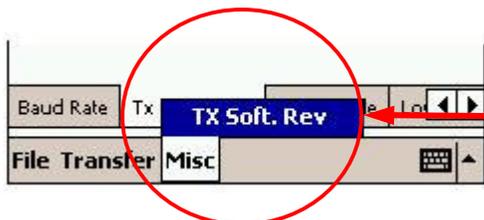
Transfer:

Using "Transfer" option:

Upload Current Data to Module – transfers or stores the current settings or adjustments from the Pocket PC to the transmitter or receiver. Select this option after making any adjustments.

Restore Factory Defaults – loads default settings for the system as determined by Hetronic.

Misc:

"Misc" option:

This displays the current software revision for the transmitter or receiver.

V. RX PROGRAMMING INSTRUCTIONS

 For Receiver type: RX 14-HL

## <u>Setup of Device Communication</u>

1. Turn the Pocket PC on and insert the H-Link Card with the LED window on the card facing you.

2. Attach the Serial Programming Interface (adapter) to the receiver as shown on page 5 of this document.

3. Apply power to the receiver.

4. From the Start Menu, select Programs, and then select the H-Link icon. →

   NOTE: For first-time use, extract or initialize the program by going to Start > Programs > File Explorer and selecting H-Link.

5. The screen will then show, "Searching for H-Link CF Card".

   NOTE: Without the CF card, the Pocket PC will go into Offline (Demo) mode and a main menu appears that lists the types of transmitters and receivers in the software program. Selecting "**Change Settings**" to enter the program will only allow viewing and selection of the menu options under each receiver or transmitter type, but it will not allow settings to be saved.

6. When the following screen appears, select an option depending on the distance between the transmitter and receiver. If selecting a specific device that is located between 1 to 20 meters (approx. 3 to 65ft) away, an address needs to be entered to download the program.
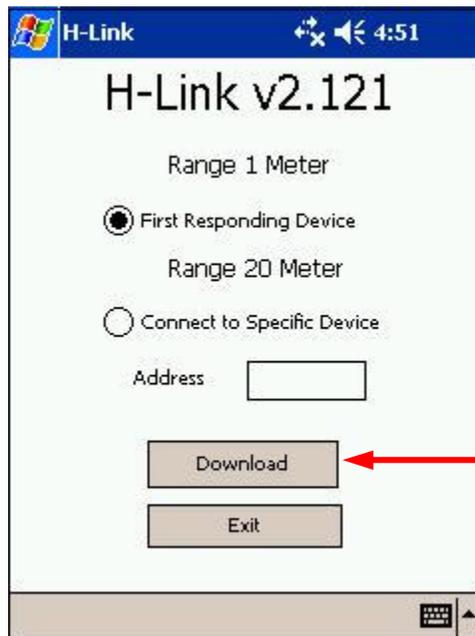
7. Select **Download** on the Pocket PC. A message box will appear indicating that the download was successful. Press "**ok**" to load the module data.
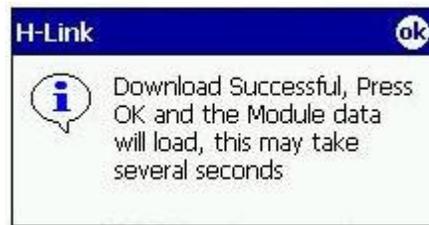
8. If the error message box below appears, click "**ok**", exit the program, and check for the following: The H-Link card is fully inserted in the Pocket PC, power is applied to the receiver, and E-stop is not activated on the transmitter. Then re-enter the H-Link program.

9. From the menu option on the bottom of the screen, select the receiver option to be adjusted as defined below.

Baud Rate – defines the transmission speed between the Pocket PC and the receiver

Communication Timeout – sets the communication time delay for situations when the signal between the transmitter and receiver is interrupted.

Main Contact Timeout - determines the time delay between the last active function and the automatic deactivation of the main contact

Frequency – sets the carrier frequency

Logic – applies logic to selected outputs and inputs

Output Assignment – defines what digital channel is routed to what output

Output Settings – sets each output to 'Normally Open', 'Normally Closed', or "Latched"; sets on and off time delays

Output Interlocking – defines interlocked outputs

Input – sets each input at Active High or Active Low and defines interlocked outputs

Address - system address so only a dedicated transmitter accesses the corresponding receiver

RF Module - selects the carrier frequency

X-Board – adjusts special settings for attachment board

Uploading Current Data to Module

NOTE: After making all necessary adjustments, select "Transfer" at the bottom of the screen and select "Upload Current Data to Module" to apply the changes to the program.
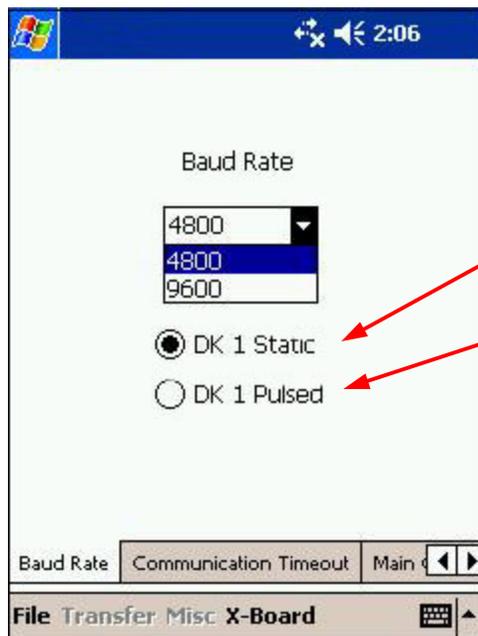
The Pocket PC will display a window indicating that the adjustments were uploaded.

After successful upload, the program will return to the main menu. Follow instructions in steps 6 – 7 to re-enter the program.

Baud Rate:

The **Baud Rate** indicates the transmission speed between the Pocket PC and the receiver.
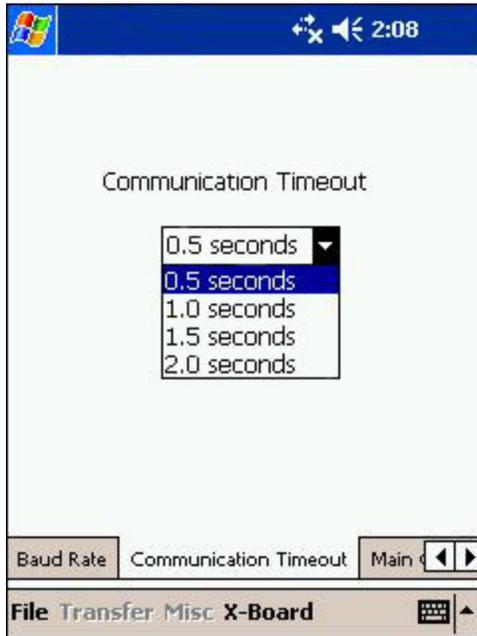
Static means the receiver will just detect DK1 ON to start operation.

Pulsed means the receiver must detect DK1 switched from OFF to ON to start operation.

NOTE:
The Baud Rate doesn't need to be adjusted for normal operation. It is pre-set by Hetronic and should only be adjusted by a certified Hetronic technician.

Communication Timeout:

The **Communication Timeout** sets the communication time delay for situations when the signal between the transmitter and receiver is interrupted.

When transmitter signal is no longer sensed by the receiver, the Timeout process begins. The Timeout period is set to 0.5 seconds (default) at the factory. If the receiver does not establish contact with the transmitter within the set time period, it goes into the Safe Mode. In Safe Mode, the receiver shuts off power to the output modules and activates the E-stop function.

From the drop-down list, select the time delay between 0.5 seconds to 2.0 seconds.

Caution: Be sure to select the timeout setting required by law.

- *If no more adjustments will be made, remember to upload the data. See Note on uploading current data to module on page 10.*

Main Contact Timeout:
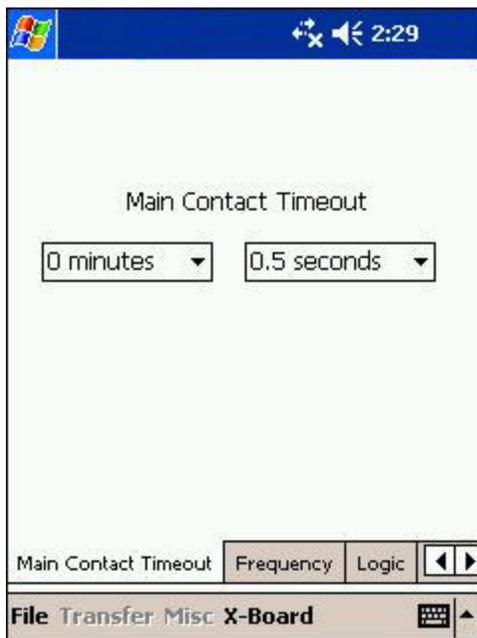
Main Contact Timeout is the time between the last activated function and the automatic deactivation of the main contact.

Using the two drop-down lists, select the timeout of the main contact to be between 0 seconds to a maximum of 30 minutes.

NOTE:
Some applications may require the main contact to be activated for a period of time after the last function was performed. However – Hetronic recommends keeping the timeout as short as possible. (Ideally not more than 2 seconds)

- *If no more adjustments will be made, remember to upload the data. See Note on uploading current data to module on page 10.*

Frequency:
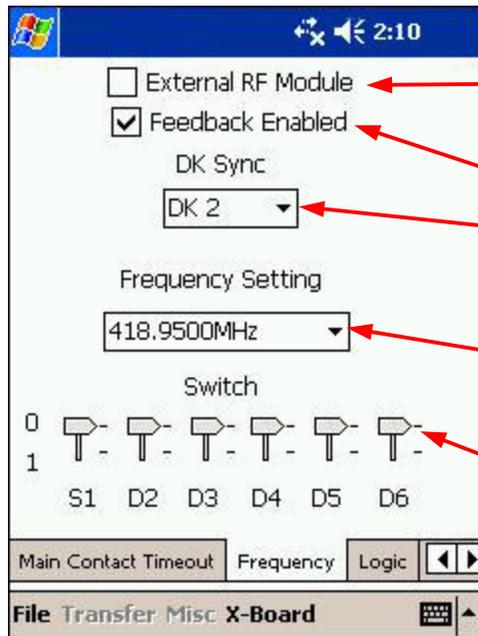
Select if using an external RF Module (i.e. CSxxxRXN, CSxxxTRR connected to X5/6)

When enabled, feedback can be synchronized with a certain DK signal from the drop-down list.

Select the appropriate frequency from the drop-down list. Make sure it matches the transmitter frequency.

This setting acts like the DIP switches on the RF modules -- slide control button down to turn on (1) or up to turn off (0).
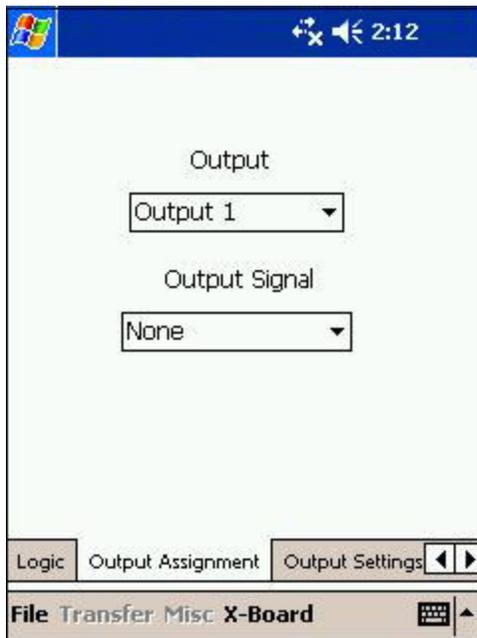
Logic:
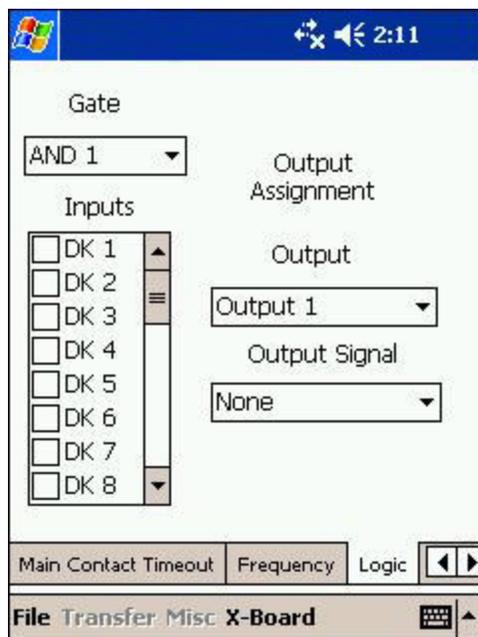
Every function of the system is assigned a digital channel (DK). This digital channel corresponds with an output function in the receiver.

Use this screen to select any digital channel (DK) and apply a logic function to it before it is processed to the corresponding output.

- *If no more adjustments will be made, remember to upload the data. See Note on uploading current data to module on page 10.*

Output Assignment:

Every function of the system is assigned a digital channel (DK). This digital channel corresponds with an output function in the receiver.

Use this screen to make changes in the output configuration (pin-out) of the receiver.

- *If no more adjustments will be made, remember to upload the data. See Note on uploading current data to module on page 10.*

Output Settings:
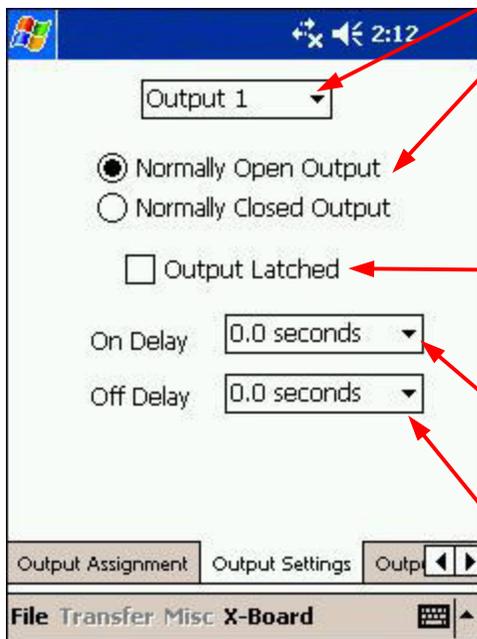
Choose the output from the drop-down list and set each digital output to be Normally Open or Normally Closed.

NOTE: Unless otherwise specified by custom drawing, the Output number corresponds with the "K" number on the yellow sticker on the receiver or the system drawing. For example: Output 1 = K1, Output 2 = K2, and so on.

Selecting this option allows the output to stay on until the switch is re-activated.

Caution: For safety reasons, do not latch a function that triggers a motion.

Use this drop-down list to define how many seconds the output is to be on-delayed. This is the amount of time it takes for a signal to come on after a function is activated. Select from 0 to 20 seconds.

Use this drop-down list to define how many seconds the output is to be off-delayed. This is the amount of time it takes for a signal to turn off after a function is de-activated. Select from 0 to 20 seconds.

- *If no more adjustments will be made, remember to upload the data. See Note on uploading current data to module on page 10.*
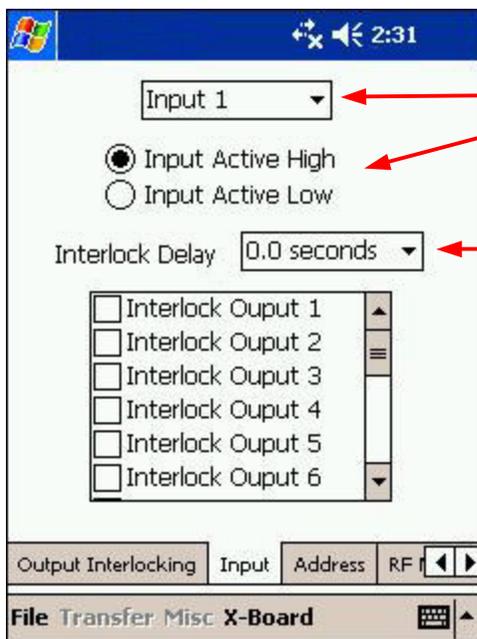
Output Interlocking:
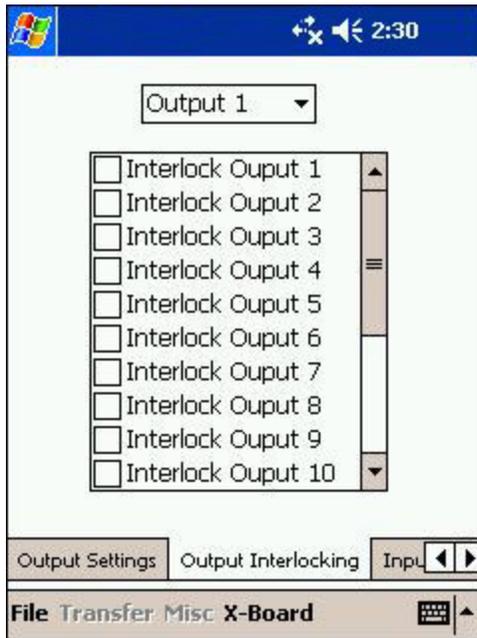
This option allows the digital output of the receiver to be interlocked to prevent contradictory operator commands from the transmitter. Certain functions can be enabled or disabled when another function is activated or inactive.

To set the interlock feature, select the desired output in the drop-down list and select one or more of the outputs to be interlocked. A check mark will appear in the box next to the corresponding Interlock Output.

To deselect the interlock, just choose the Interlock Output to remove the check mark from the box.

- *If no more adjustments will be made, remember to upload the data. See Note on uploading current data to module on page 10.*

Input:

Select input from the drop-down list and set to **Input Active High** or **Input Active Low**. Then select one or more outputs to interlock.

From the drop-down list, set the amount of time for the input to be in the active state before outputs are interlocked.

- *If no more adjustments will be made, remember to upload the data. See Note on uploading current data to module on page 10.*

Address:

(The Address is initially entered by a Hetronic technician but may be changed by the customer after a password is provided.)

NOTE: The address for both transmitter and receiver must match; otherwise, the system will not function.
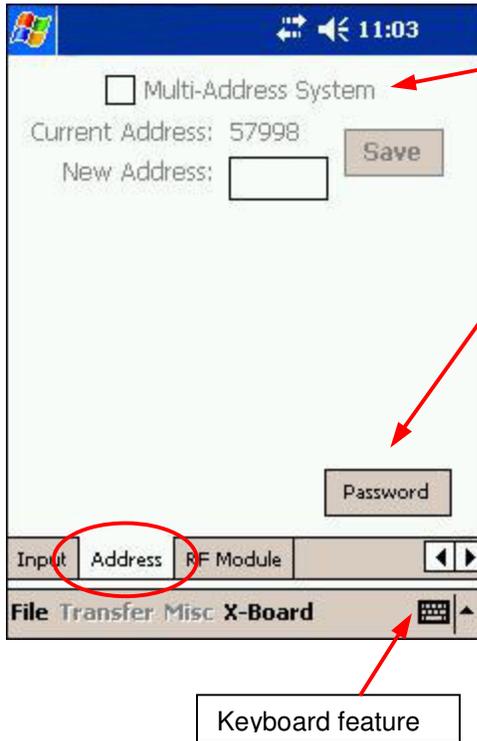
When enabled, up to four addresses may be used. See explanation for Multi-Address System on the following page.

Changing the Current Address:

A password is required to change the address. After pressing the "Password" box on the bottom of the screen, a message box appears for password input. Follow instructions below for entering or changing the address.
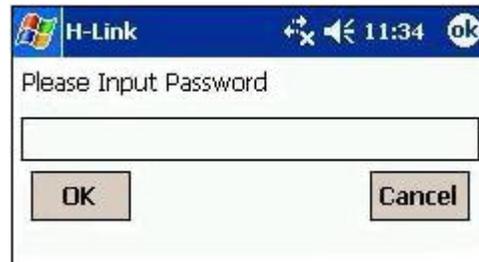
After entering the correct password, a message box appears, indicating that the settings are unlocked.

Keyboard feature

To enter or change the current address of the Receiver, do the following steps:

1. Make sure the Serial Programming Interface is attached to the receiver as shown on page 5.
2. Apply power to receiver.
3. Set up device communication between the Pocket PC and receiver (see page 8).
4. Select the **Address** menu option on the bottom of the screen.
5. Press the **Password** box on the bottom of the screen.
6. Place cursor inside **Input Password** box, enter password using the keyboard feature on the Pocket PC, and press **OK**.
7. Place cursor inside **New Address** box and enter the address using the keyboard feature.
8. Press **Save** to store the new address.

Multi-Address System:

Select Multi-Address System if multiple addresses will be used. Up to four addresses may be entered.

Static Login
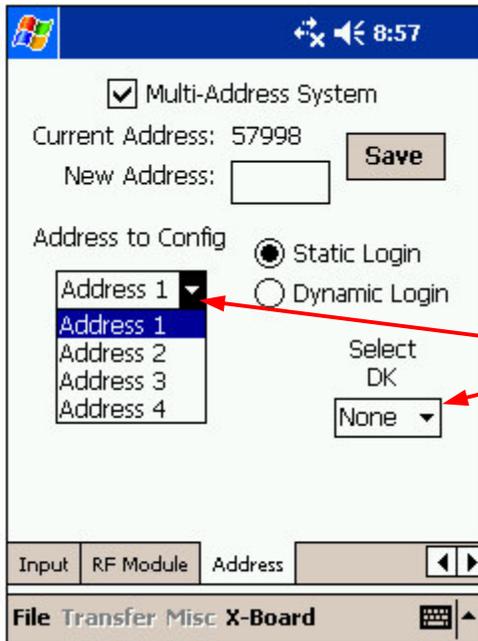
In this configuration, the login is static where the receiver will work only if the correct address is selected and the corresponding selector DK (switch) is activated.

Select an address and corresponding DK for each crane/equipment used. Up to four addresses may be used.

It is possible to use multiple receivers at the same time. The receiver will automatically log off once communication is broken (transmitter is turned off).

Press the Save button when done.

Dynamic Login
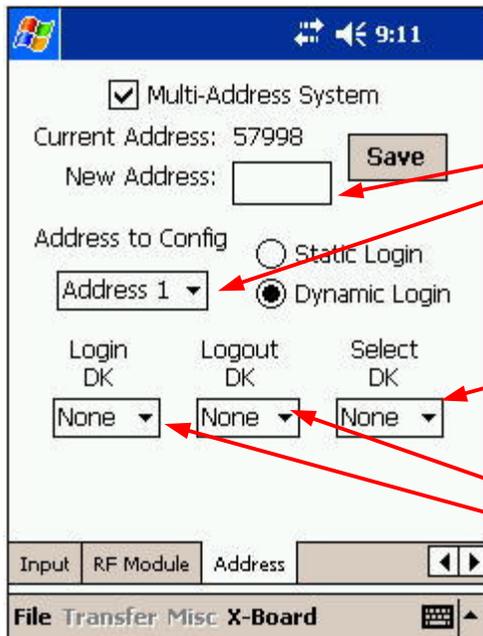
This mode is best used in multiple-transmitter and multiple-receiver situations.

Enter the New Address for each Address to Configure. Up to four addresses (crane/equipment) may be used for this configuration.

Select a corresponding DK for each address used.

For each address, select the Login (start) DK and Logout DK. A transmitter must logout before another transmitter can assume control of the same receiver.

Press the Save button when done.

RF Module:

(The Frequency is initially entered by a Hetronic technician but may be changed by the customer after a password is provided.)

NOTE: The frequency for both transmitter and receiver must match; otherwise, the system will not function.
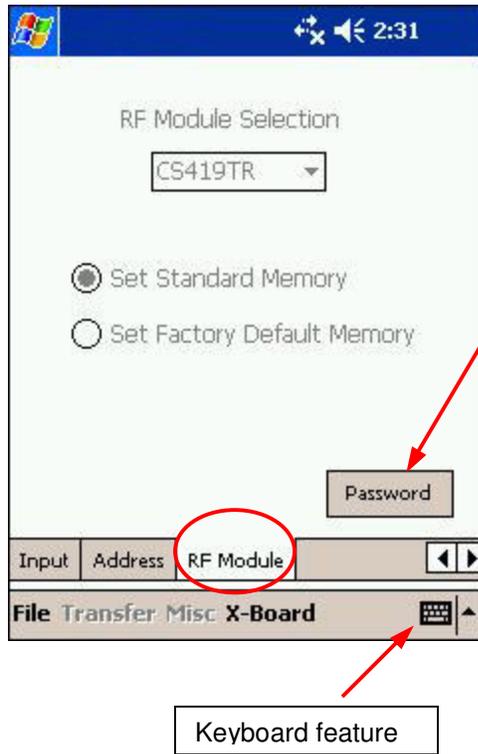
Changing the Frequency Selection:

A password is required to change the Frequency Selection. After pressing the "Password" box on the bottom of the screen, a message box appears for password input. Follow instructions below for selecting the RF Module.
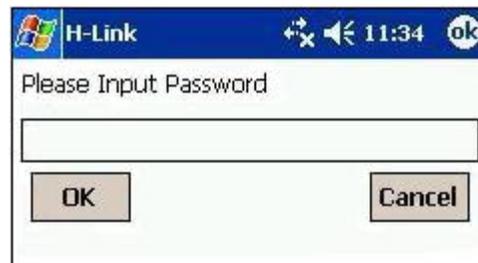
Keyboard feature

After entering the correct password, a message box appears, indicating that the settings are unlocked.

To enter or change the frequency setting of the Receiver, do the following steps:

1. Make sure the Serial Programming Interface is attached to the receiver as shown on page 5.

2. Apply power to receiver.

3. Set up device communication between the Pocket PC and the receiver (see page 8).

4. Select the **RF Module** menu option on the bottom of the screen.

5. Press the **Password** box on the bottom of the screen

6. Place cursor inside **Input Password** box, enter password using the keyboard feature on the Pocket PC, and press **OK**.

7. Select "**Set Standard Memory**" and choose the appropriate RF module from the drop-down list. Otherwise, selecting "**Set Factory Default Memory**" loads default frequency settings for the system as determined by Hetronic.

X-Board

This setting is highlighted if an expansion or attachment board is installed inside the receiver. Each attachment board is a serial data decoder, which decodes the serial data sent from the Main Controller to activate the outputs. Each attachment board will have its own special settings. The output settings will have the same options as the RX14 baseboard such as logic, interlocking, delays, latch, etc. Refer to the X-Board documentation for more details.
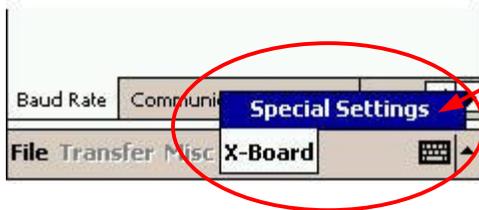
If an expansion board is installed, selecting "Special Settings" will display another screen that contains settings for the x-board installed. A message box will appear if the board does not have special settings.

END OF DOCUMENT