## Manually Turning Equipment On and Off

### *At the Receiving Device*

For service purposes, the five circuits and / or the pool/spa actuators can be operated manually at the PE653 Receiving Device.

> Simply press any of the circuit buttons on the PE653 Receiving Device to toggle between ON and OFF.

Any manual OFF/ON circuit activation performed at the PE653 Receiving Device will be reflected on the screen of the Hand-Held Controller.

Section 6:
# Advanced Features

The PE953 controller is able to listen to Z-Wave commands while the controller is awake. (For example: requesting the controller to report Version or Manufacturer Specific information.)

To wake up the controller, press any key.

## Configuring Two or More Hand-Held Controllers

Many installations will find it convenient to use two Hand-Held Controllers. Once you have linked and programmed one Hand-Held to the Receiving Device, it's easy to add additional units.

> *NOTES: The first Hand-Held you link to the Receiving Device is considered the PRIMARY control and all other Hand-Held units are SECONDARY.*
>
> - *Only the PRIMARY Controller can be used to add or remove devices from a network in the Intermatic Multi-Wave system.*
> - *SECONDARY controllers cannot add or remove devices from the network in the Intermatic Multi-Wave system — they can only control devices on the network.*
>
> *You can tell the status of a Hand-Held from the VER (version) code at the top right corner of the display on the programming screens: the letter "P" = PRIMARY; the letter "S" = SECONDARY.*
>
> *The PRIMARY control must be used to "introduce" or include any additional (SECONDARY) Hand-Held units to the system.*
>
> *If the PRIMARY Hand-Held must be replaced (due to loss, damage, etc.,), you must reprogram from scratch to create a new PRIMARY unit, then reprogram any additional Hand-Helds as SECONDARY controls.*

1.  If necessary, press and release any button on the Hand-Held Controller to wake it from sleep. *If the screen is not displaying LEARN MODE, press and hold the **<P/S>** and **<ENTER>** buttons at the same time to put the device into programming mode. You are in programming mode when the LEARN MODE screen is displayed, as shown at the right.*

```
LEARN MODE    00-00P
1  RESET CONTROLLER
2  RESET DEVICE
3  INCLUDE DEVICE
4  ADD TO SCENE
5  REMOVE FROM SCENE

UP-PREVIOUS  DWN-MORE
```

2.  Press the **DOWN** arrow button to view the CNTRL OPTION screen as shown

```
CNTRL OPTION   00-00P
1  PRIMARY SCREEN SEL
2  CONTROLLER COPY
3  CONTROLLER SHIFT
4  UPGRADE FIRMWARE
5  SETUP ASSOCIATIONS

UP-PREVIOUS  DWN-MORE
```

3.  Press the **<2>** button to select CONTROLLER COPY.

**4.** On the Primary Hand-Held used to set up and configure the network, press and release the **<3>** button to select SEND NET AND CONFG.

```
CNTRL COPY     00-00P
1  SEND NETWORK ONLY
2  RECV NETWORK ONLY
3  SEND NET AND CONFG
4  RECV NET AND CONFG
5  SEND NODE INFO

UP-PREVIOUS  DWN-MORE
```

**5.** On the new Hand-Held you are adding to the network, follow Steps 1-3, then press and release the **<4>** button to select RECV NET AND CONFG.

The words INCLUDING DEVICE will appear at the bottom of the <u>primary controller's</u> screen. The screen will briefly display the words SENDING NET INFO, then SENDING SCENE INFO, then SENDING CFG INFO during the transfer of info to the secondary device. After a few seconds the controller will return to the CNTRL COPY screen.

The words WAITING FOR INCLUDE will appear at the bottom of the <u>secondary controller's</u> screen. Upon completion of the info transfer the word SUCCESSFUL will then appear. After a few seconds the controller will return to the Main screen.

**6.** On the new Hand-Held (secondary) controller, press and hold the **<P/S>** and then the **<ENTER>** buttons to return to the LEARN MODE screen. You will notice the screen display will have the following differences:

```
LEARN MODE     00-00S
1  RESET CONTROLLER


4  ADD TO SCENE
5  REMOVE FROM SCENE

UP-PREVIOUS  DWN-MORE
```

- The letter "S" will show at the top right corner of the screen following the version number, indicating that it is a secondary control.

- Selections 2 and 3 are now blank. These options are not available on a secondary controller.

**7.** Press the down arrow button to display the CNTRL OPTION screen. Notice that items 2, 3 and 5 have been changed to show the options that a secondary remote can perform.

```
CNTRL OPTION    00-00S
1  PRIMARY SCREEN SEL
2  RECV NET ONLY
3  RECV NET AND CFG
4  UPGRADE FIRMWARE
5  SEND NODE INFO

UP-PREVIOUS  DWN-MORE
```

**8.** Press the **<ENTER>** button on both controls as necessary to return to the Main screen.

**NOTE:** *Any time you add something new to the network, you must repeat this procedure to copy the new item to all secondary Hand-Held Controllers. Otherwise, the secondary units will not know about the new item(s).*

## Changing a Secondary Remote Control into a Primary Control

There are several situations where you might want to create a primary remote control out of a secondary control. For example, an installer might set up similar customer systems using a master Hand-Held Controller (already programmed), and then want to transfer primary status to the customer's remote. The procedure is known as "shifting."

"Controller Shift" swaps the roles of the two Hand Held units involved. The Primary Controller will become a Secondary Controller and the Secondary will become the Primary Controller.

> **NOTE:** *There can only be one Primary Controller in the network at a time.*

1. If necessary, press and release any button on both Hand-Held Controllers to wake them from sleep.
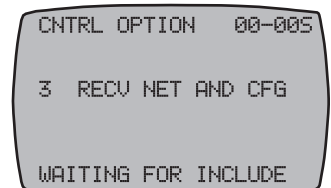
   *If the screens on both Hand-Held Controllers are not displaying LEARN MODE, press and hold the **<P/S>** and **<ENTER>** buttons at the same time on each to put the devices both into programming mode. You are in programming mode when the LEARN MODE screen is displayed.*

2. Press the **DOWN** arrow button on each Hand-Held Controller to view the CNTRL OPTION screen.

3. On the PRIMARY Hand-Held, press and release the **<3>** button to select CONTROLLER SHIFT. Once the button is pressed on the controller, it displays PRESS BUTTON ON DEVICE TO INCLUDE INCLUDING DEVICE.

```
CNTRL OPTION    00-00P


3  CONTROLLER SHIFT

PRESS BUTTON ON
DEVICE TO INCLUDE
INCLUDING DEVICE
```
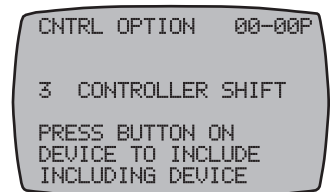
4. On the SECONDARY Hand-Held (the one you are shifting to PRIMARY status), press and release the **<3>** button to select RECEIVE NET AND CFG.

   Both Hand-Helds will restart, and when finished, the screen displays will have several differences:

```
CNTRL OPTION    00-00S


3  RECV NET AND CFG


WAITING FOR INCLUDE
```

   - The words INCLUDING DEVICE will appear at the bottom of the <u>primary controller's</u> screen. The screen will briefly display the words SENDING NET INFO, then SENDING SCENE INFO, then SENDING CFG INFO during the transfer of info to the secondary device. After a few seconds the controller will return to the CNTRL COPY screen.
   - The words WAITING FOR INCLUDE will appear at the bottom of the <u>secondary controller's</u> screen. Upon completion of the info transfer the word SUCCESSFUL will then appear. After a few seconds the controller will return to the Main screen.

   Various screens on the two remotes displays only the menu options capable of their primary or secondary status.

5. Press the **<ENTER>** button on both controls as necessary to return to the Main screen.

## Including the PE953 Controller into a non-Multi-Wave (other manufacturer's) network.

The PE953 is a Z-Wave compliant device that may be included into networks created by other manufacturer's Z-Wave compliant controllers.

To include the PE953 into another manufacturer's controller network:

**1.** Activate the 3rd party controller's Controller Replication function to transmit network information to the PE953 according to that controller manufacturer's instructions.

**2.** Press the down button on the PE953 to display the CNTRL OPTION screen. If the screen is not displaying LEARN MODE, press and hold the **<P/S>** and **<ENTER>** buttons at the same time to put the device into programming mode.

**3.** Press the **<2>** button on the PE953 to display the CNTRL COPY screen.

**4.** Press the **<2>** button to receive network information on the PE953. The PE953 will display the words WAITING FOR INCLUDE.

Upon completion, the PE953 will display SUCCESSFUL and will automatically reboot. The PE953 will now function as a secondary remote controller in the 3rd party's network.

To exclude the PE953 from another manufacturer's 3rd party network, follow the instructions *To Reset the PE953 Hand-Held Controller* found on page 42.

> **NOTE:** *Secondary remote controllers can be removed from any network without any negative effects to the existing network by performing a controller reset on the secondary remote controller.*

Section 7:

# Programming for Use with Z-Wave Home Control Devices

Models PE653 5-Circuit Digital Control and PE953 Remote Controller are compatible with Z-Wave enabled networks. Z-Wave enabled devices displaying the Z-Wave logo can be used with the PE653 and PE953 regardless of the manufacturer. Each Z-Wave enabled device is designed to act as a repeater, re-transmitting the RF signal around obstacles and radio dead spots when possible to ensure that messages are received by the intended destination device.

If you would like to add Z-Wave home control devices to your network, you need to include the devices into the network, and then assign them to Scenes for their day-to-day operation.

## Deleting Any Existing Programming

Perform this procedure with each Z-Wave device you plan to include into the network to make sure that any existing programming within these devices is deleted.

1.  If necessary, press and release any button on the Hand-Held Controller to wake it from sleep. *If the screen is not displaying LEARN MODE, press and hold the* **<P/S>** *and* **<ENTER>** *buttons at the same time to put the device into programming mode. You are in programming mode when the LEARN MODE screen is displayed, as shown at the right.*

```
LEARN MODE      00-00P
1   RESET CONTROLLER
2   RESET DEVICE
3   INCLUDE DEVICE
4   ADD TO SCENE
5   REMOVE FROM SCENE

UP-PREVIOUS   DWN-MORE
```

2.  Press and release the **<2>** function button to select **RESET DEVICE**. The screen refreshes with instructions to PRESS BUTTON ON DEVICE TO RESET, as shown.

```
LEARN MODE      00-00P

2   RESET DEVICE

PRESS BUTTON ON
DEVICE TO RESET
```

3.  Press the button on the Z-Wave home control device you want to remove from the network (refer to the manufacturer's instructions).

    If the action is successful, the screen displays the word SUCCESSFUL, as shown, then returns to the programming screen.

    **NOTE:** *If you are seeing the word* FAILURE *at the bottom of the screen, carefully repeat the procedure. If the problem persists, contact Intermatic Customer Service. For assistance with any non-Intermatic devices, you may need to contact that manufacturer's customer support department.*

```
LEARN MODE      00-00P

2   RESET DEVICE

PRESS BUTTON ON
DEVICE TO RESET
SUCCESSFUL
```

4.  Repeat this procedure for all other Z-Wave home control devices that are to be part of the network.

5.  Press the **<ENTER>** button if you wish to return to the Main screen.

## Including Z-Wave Devices into the Network

This procedure includes Z-Wave devices into a network controlled by the PE953 Hand-Held Controller. The PE953 is pre-configured to operate with the PE653 Receiving Device. The PE953 can also operate as a stand alone Z-Wave remote controller. Z-Wave devices from other manufacturers may be part of the same network as the PE953 and PE653, and depending on supported features, can act as repeaters.

**1.** If necessary, press and release any button on the Hand-Held Controller to wake it from sleep. *If the screen is not displaying LEARN MODE, press and hold the  <P/S> and <ENTER> buttons at the same time to put the device into programming mode. You are in programming mode when the LEARN MODE screen is displayed, as shown at the right.*

```
LEARN MODE     00-00P
1  RESET CONTROLLER
2  RESET DEVICE
3  INCLUDE DEVICE
4  ADD TO SCENE
5  REMOVE FROM SCENE

UP-PREVIOUS  DWN-MORE
```

**2.** Press and release the **<3>** function button to select **INCLUDE DEVICE**. The screen refreshes with instructions to PRESS BUTTON ON DEVICE TO INCLUDE, as shown.

```
LEARN MODE     00-00P

3  INCLUDE DEVICE

PRESS BUTTON ON
DEVICE TO INCLUDE
```

**3.** Press the button on the Z-Wave device for including the device in a network (refer to the manufacturer's instructions).

If the action is successful, the screen displays the word SUCCESSFUL, as shown, then returns to the programming screen.

```
LEARN MODE     00-00P

3  INCLUDE DEVICE

PRESS BUTTON ON
DEVICE TO INCLUDE
SUCCESSFUL
```

> **NOTE:** *If the two devices are not successfully linked and you are seeing the word* FAILURE *at the bottom of the screen, carefully repeat the procedure. If the problem persists, contact Intermatic Customer Service.*

**4.** Repeat this procedure for all other Z-Wave home control devices that are to be part of the network.

**5.** Press the **<ENTER>** button if you wish to return to the Main screen.

## Including the PE653 Receiver onto a non-Multi-Wave remote controller

The PE653 is a Z-Wave compliant device that may be included into networks created by other manufacturer's Z-Wave compliant controllers.

To include the PE653 into another manufacturer's controller:

**1.** 1. Activate the controller's INCLUDE function according to that manufacturer's instructions.

**2.** 2. Press and release the INCLUDE button on the PE653.

If the include was successful, the red flashing LED on the PE653 will change to steady ON. (The steady ON LED will flash rapidly whenever another device is communicating with it.)

To exclude the PE653 from another manufacturer's controller:

**1.** Activate the controller's EXCLUDE function according to that manufacturer's instructions.

**2.** Press and release the INCLUDE button on the PE653.

If the exclude was successful, the red flashing LED on the PE653 will change from steady ON to slowly flashing ON and OFF.

## Adding Z-Wave Devices to Scenes for Everyday Control

Z-Wave devices must be added to Scenes for the Hand-Held Controller to be able to control them. Scenes are groups of Z-Wave devices that all act together. For example, you may group all outdoor lighting or all upstairs lighting into a single scene, so that the push of one button will turn everything on or off. The Hand-Held Controller can control up to five scenes.

> **NOTE:** *If a Z-Wave controlled light is on a dimmer switch, you can preset the dimmer level when adding the light to a scene.*

Before you can add a device to a scene, it must first be included in the network.

1. If necessary, press and release any button on the Hand-Held Controller to wake it from sleep. *If the screen is not displaying LEARN MODE, press and hold the* **<P/S>** *and* **<ENTER>** *buttons at the same time to put the device into programming mode. You are in programming mode when the LEARN MODE screen is displayed, as shown at the right.*

```
LEARN MODE    00-00P
1  RESET CONTROLLER
2  RESET DEVICE
3  INCLUDE DEVICE
4  ADD TO SCENE
5  REMOVE FROM SCENE

UP-PREVIOUS  DWN-MORE
```

2. Press the **<4>** button to add a device (already included as part of the network) to the scene. The screen displays PRESS 1-5 TO CHOOSE A SCENE TO ADD THE DEVICE TO, as shown:

```
LEARN MODE    00-00P

4  ADD TO SCENE

PRESS 1-5 TO CHOOSE
A SCENE TO ADD THE
DEVICE TO
```

3. Press one of the buttons (**<1>** through **<5>)** for the scene you want the device added to. The screen displays PRESS BUTTON ON DEVICE TO INCLUDE, as shown (Scene 4 is used as an example).

```
LEARN MODE    00-00P

4  ADD TO SCENE

PRESS BUTTON ON
DEVICE TO INCLUDE
```

4. Press the button on the Z-Wave device for including the device in a scene (refer to the manufacturer's instructions). The screen displays instructions: SET DEVICE LEVEL THEN PRESS XX (the scene number you have selected) TO SAVE DEVICE TO SCENE.

```
LEARN MODE    00-00P

4  ADD TO SCENE

SET DEVICE LEVEL
THEN PRESS 4 TO
SAVE DEVICE TO SCENE
```

5. Set the device level for the item being controlled. There are circumstances where you may want to turn some lights off and others ON when the scene is activated, so set accordingly.

> **NOTE:** *If the device you want to control is a dimmer switch, preset the dimmer level to the desired brightness at this time.*

6. Press the scene control button (button **<4>**, for scene 4, in this example) as instructed. The screen displays SUCCESSFUL. The device is now included in the scene, as you have set it.

7. Repeat Steps 4 through 6 for other devices you want to add to the scene, or Steps 2 through 6 to create other scenes as necessary.

8. Press the **<ENTER>** button if you wish to return to the Main screen.

## Renaming a Scene

As supplied, the PE953 screen displays the names of the five scenes as SCENE 1, SCENE 2, etc. You can rename the scenes so they better describe their actual function, making the system easier to use.

1.  If necessary, press and release any button on the Hand-Held Controller to wake it from sleep. *If the screen is not displaying LEARN MODE, press and hold the  <P/S> and <ENTER> buttons at the same time to put the device into programming mode. You are in programming mode when the LEARN MODE screen is displayed, as shown at the right.*

```
LEARN MODE     00-00P
1   RESET CONTROLLER
2   RESET DEVICE
3   INCLUDE DEVICE
4   ADD TO SCENE
5   REMOVE FROM SCENE

UP-PREVIOUS  DWN-MORE
```

2.  Press the **<ENTER>** button as necessary to display the Z-Wave user screen, as shown at the right.

```
SCENE ACTIVATION
1   SCENE 1
2   SCENE 2
3   SCENE 3
4   SCENE 4
5   SCENE 5
```

3.  Press the **DOWN** button as necessary to reach the Z-Wave Options screen, as shown:

```
Z-WAVE OPTIONS 00-00P
1   SCENE 1
2   SCENE 2
3   SCENE 3
4   SCENE 4
5   SCENE 5

UP-PREVIOUS   DWN-MORE
```

4.  Press the number button for the scene you want to rename. The screen shifts to show just that scene name, and highlights the first letter of the name.

```
Z-WAVE OPTIONS 00-00P

2   ▌CENE 2
```

5.  Use the **UP** or **DOWN** arrow buttons to scroll through the list of available characters to use in the Scene name. The valid character set for names is: A-Z, 1-9, and SPACE.

6.  When you have selected the right letter or number, press the **<P/S>** button to move right to the next character.

7.  Repeat Steps 6 and 7 until you have completed the renaming.

8.  Press the **<ENTER>** button to save the name and return to the Z-Wave OPTIONS screen as shown above. Press the **<ENTER>** button as necessary to return to the Main screen.

## Removing Z-Wave Devices from Scenes

If a Z-Wave device is removed from a network for any reason whatsoever, you should go through this procedure to maximize prompt system response. Otherwise, system network configuration will be corrupted and communications between the system devices may be degraded and/or lost since the network will still retain information about the removed device(s).

> **NOTE:** *If you're reassigning the device to a different scene, first remove it from its existing scene, then include it into the new scene.*

1. If necessary, press and release any button on the Hand-Held Controller to wake it from sleep. *If the screen is not displaying LEARN MODE, press and hold the <P/S> and <ENTER> buttons at the same time to put the device into programming mode. You are in programming mode when the LEARN MODE screen is displayed, as shown at the right.*

```
LEARN MODE     00-00P
1   RESET CONTROLLER
2   RESET DEVICE
3   INCLUDE DEVICE
4   ADD TO SCENE
5   REMOVE FROM SCENE

UP-PREVIOUS  DWN-MORE
```

2. Press the **<5>** button to remove a device to the scene. The screen displays PRESS 1-5 TO CHOOSE THE SCENE TO DELETE THE DEVICE FROM, as shown:

   Press one of the buttons (**<1>** through **<5>)** for the scene you want the device removed from. The screen displays PRESS BUTTON ON DEVICE TO BE REMOVED, as shown:

```
LEARN MODE     00-00P

5   REMOVE FROM SCENE

PRESS 1-5 TO CHOOSE
THE SCENE TO DELETE
THE DEVICE FROM
```

3. Press the button on the Z-Wave device for removing the device from a scene (refer to the manufacturer's instructions). The screen displays WORKING followed by SUCCESSFUL. The device is now removed from the scene.

```
LEARN MODE     00-00P

5   REMOVE FROM SCENE

PRESS BUTTON ON
DEVICE TO BE REMOVED
```

4. Press the **<ENTER>** button if you wish to return to the Main screen.

## Removing Z-Wave Devices from a Network

If a Z-Wave device from one network is being added to another or is simply being removed from a network it is currently a part of ,it should be removed from the first network (by being "reset") before adding it to the second. Otherwise, system network configuration will be corrupted and communications between the system devices may be degraded and/or lost since the network will still retain information about the removed device(s).

1. If necessary, press and release any button on the Hand-Held Controller to wake it from sleep. The Hand-Held automatically displays the LEARN MODE screen, as shown. *If the screen is not displaying LEARN MODE, press and hold the <P/S> and <ENTER> buttons at the same time to put the device into programming mode. You are in programming mode when the LEARN MODE screen is displayed, as shown at the right.*

```
LEARN MODE     00-00P
1   RESET CONTROLLER
2   RESET DEVICE
3   INCLUDE DEVICE
4   ADD TO SCENE
5   REMOVE FROM SCENE

UP-PREVIOUS  DWN-MORE
```

2. Press the **<2>** button to reset the device. The screen displays PRESS BUTTON ON DEVICE TO RESET, as shown:

```
LEARN MODE     00-00P

2   RESET DEVICE

PRESS BUTTON ON
DEVICE TO RESET
```

3. Press the button on the Z-Wave device for resetting the device (refer to the manufacturer's instructions). The screen displays WORKING followed by SUCCESSFUL. The device is now removed from the network.

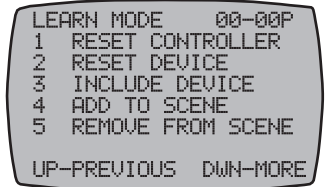4. Press the **<ENTER>** button if you wish to return to the Main screen.

## Setting Up Z-Wave Associations with Capable Devices

An "Association" is a feature supported by certain Z-Wave devices where Z-Wave device other than the PE953 controller can be used to control other Z-Wave devices in the network (e.g., a Z-Wave switch that controls other Z-Wave devices).
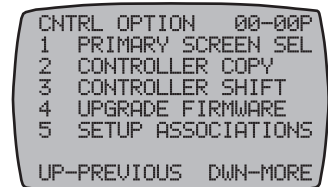
Within a PE653/953 network, setting up an association with one of these Z-Wave devices makes it possible to control Circuit 1 (the filter pump) of the PE653 in an ON/OFF basis along with lighting or other features being controlled by another Z-Wave device, independent of the Hand-Held Controller.

> **NOTE:** Before you can create an Association, the capable Z-Wave device must first be included in the network.

1. If necessary, press and release any button on the Hand-Held Controller to wake it from sleep. *If the screen is not displaying LEARN MODE, press and hold the  **<P/S>** and **<ENTER>** buttons at the same time to put the device into programming mode. You are in programming mode when the LEARN MODE screen is displayed, as shown at the right.*

```
LEARN MODE    00-00P
1  RESET CONTROLLER
2  RESET DEVICE
3  INCLUDE DEVICE
4  ADD TO SCENE
5  REMOVE FROM SCENE

UP-PREVIOUS  DWN-MORE
```

2. Press the **DOWN** button once to display the CNTRL OPTION screen, as shown:

```
CNTRL OPTION   00-00P
1  PRIMARY SCREEN SEL
2  CONTROLLER COPY
3  CONTROLLER SHIFT
4  UPGRADE FIRMWARE
5  SETUP ASSOCIATIONS

UP-PREVIOUS  DWN-MORE
```

3. Press button **<5>** to select SETUP ASSOCIATIONS. The screen displays two choices, as shown:

```
ASSOCIATION    00-00P
1  ADD DEVICE
2  REMOVE DEVICE




UP-PREVIOUS  DWN-MORE
```
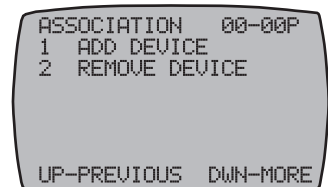
4. Press button **<1>** to select ADD DEVICE. The screen adds the words: PRESS BUTTON ON THE DEVICE CONTROLLING THE ASSOCIATION as shown. This is the association-capable Z-Wave device you want to use to control the other devices you plan to add to the association.
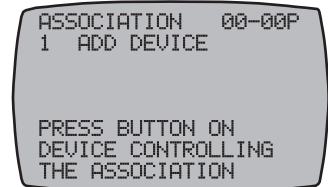
```
ASSOCIATION    00-00P
1  ADD DEVICE


PRESS BUTTON ON
DEVICE CONTROLLING
THE ASSOCIATION
```

5. Press the button on the device (the same button used for including the device into a network. Refer to the manufacturer's instructions.) that will control the association. The screen displays: PRESS THE BUTTON ON THE DEVICE TO ADD TO THE ASSOCIATION.

```
ASSOCIATION    00-00P
1  ADD DEVICE


SET DEVICE LEVEL
THEN PRESS 1 TO ADD
DEVICE TO ASSOCIATION
```
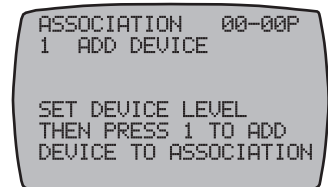
6. Now press the button on a device <u>that will be controlled</u> as part of the association. The screen displays SET DEVICE LEVEL THEN PRESS 1 TO ADD THE DEVICE TO THE ASSOCIATION.

```
ASSOCIATION    00-00P
1  ADD DEVICE


SET DEVICE LEVEL
THEN PRESS 1 TO ADD
DEVICE TO ASSOCIATION
```

7. Set the device to <u>what you want "ON" to be</u> for the item being controlled. There are circumstances where you may want to turn some lights off and others ON when the scene is activated, so set accordingly.
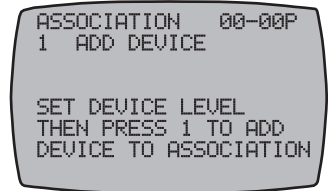
> *NOTE: If controlling a light on a dimmer switch, preset the dimmer level to the desired brightness at this time.*

8. Press button **<1>** as instructed. The screen adds the word SUCCESSFUL. The device is now included in the association. An association now exists between the association-capable device and devices in the association (including the PE653 if it is included in the association.)

> *NOTE: Only circuit 1 of the PE653 can be controlled via association. Repeat as necessary to add other devices to the association.*

9. Press the **<ENTER>** button if you wish to return to the Main screen.

10. You can now control all the devices in the association with the association-capable controller. You don't need the hand held.

## Removing Z-Wave Devices from an Association

**1.** If necessary, press and release any button on the Hand-Held Controller to wake it from sleep. *If the screen is not displaying LEARN MODE, press and hold the* **<P/S>** *and* **<ENTER>** *buttons at the same time to put the device into programming mode. You are in programming mode when the LEARN MODE screen is displayed, as shown at the right.*

```
LEARN MODE     00-00P
1   RESET CONTROLLER
2   RESET DEVICE
3   INCLUDE DEVICE
4   ADD TO SCENE
5   REMOVE FROM SCENE

UP-PREVIOUS  DWN-MORE
```

**2.** Press the **DOWN** button as needed to reach the CNTRL OPTION screen, as shown:

```
CNTRL OPTION    00-00P
1   PRIMARY SCREEN SEL
2   CONTROLLER COPY
3   CONTROLLER SHIFT
4   UPGRADE FIRMWARE
5   SETUP ASSOCIATIONS

UP-PREVIOUS  DWN-MORE
```

**3.** Press button **<5>** to select SETUP ASSOCIATIONS. The screen displays two choices, as shown:

```
ASSOCIATION    00-00P
1   ADD DEVICE
2   REMOVE DEVICE




UP-PREVIOUS  DWN-MORE
```

**4.** Press button **<2>** to select REMOVE DEVICE. the screen displays: PRESS THE BUTTON ON THE DEVICE CONTROLLING THE ASSOCIATION.

```
ASSOCIATION    00-00P

2   REMOVE DEVICE

PRESS BUTTON ON
DEVICE CONTROLLING
THE ASSOCIATION
```

**5.** Press the button on the device (the same button used for including the device into a network. Refer to the manufacturer's instructions.) The screen adds the words: PRESS THE BUTTON ON THE DEVICE TO BE REMOVED FROM THE ASSOCIATION.

**6.** Press the button on the Z-Wave device (the same button used for including the device into a network. Refer to the manufacturer's instructions) to be removed from the association. The screen adds the word SUCCESSFUL. The device is now removed from the association.

```
ASSOCIATION    00-00P

2   REMOVE DEVICE

PRESS BUTTON ON
DEVICE TO BE REMOVED
FROM THE ASSOCIATION
```

**7.** Repeat as necessary to remove other devices from the association.

**8.** Press the **<ENTER>** button if you wish to return to the Main screen.

Section 8:

# Using the PE953 with the PE650 Receiving Device

It's possible to control a PE650 network with the newer, more advanced PE953 Hand-Held Controller Control.

## Linking the PE953 Hand-Held Controller with the PE650 Receiving Device

This procedure creates a network between the Hand-Held Controller and the PE650 Receiving Device, making it possible to complete the rest of the setup procedure and operate the system.

> **NOTE:** *If the word* FAILURE *instead of* SUCCESSFUL *appears at the bottom of the screen during any of the following steps, repeat the programming procedure, then try replacing the batteries in the Hand-Held. If the problem persists, contact Intermatic Customer Service.*

1. If necessary, press and release any button on the Hand-Held Controller to wake it from sleep. *If the screen is not displaying LEARN MODE, press and hold the* **<P/S>** *and* **<ENTER>** *buttons at the same time to put the device into programming mode. You are in programming mode when the LEARN MODE screen is displayed, as shown at the right.*

```
LEARN MODE     00-00P
1  RESET CONTROLLER
2  RESET DEVICE
3  INCLUDE DEVICE
4  ADD TO SCENE
5  REMOVE FROM SCENE

UP-PREVIOUS  DWN-MORE
```

2. Press and release the **<3>** function button to select **INCLUDE DEVICE**. The screen refreshes with instructions to PRESS BUTTON ON DEVICE TO INCLUDE, as shown.

3. Press the black button on the base of the antenna of the PE650.

```
LEARN MODE     00-00P


3  INCLUDE DEVICE

PRESS BUTTON ON
DEVICE TO INCLUDE
```

   If the action is successful, the screen displays the word SUCCESSFUL, as shown, then returns to the LEARN MODE screen.

   > **NOTE:** *If the two devices are not successfully linked and you are seeing the word* FAILURE *at the bottom of the screen, carefully repeat the procedure. If the problem persists, contact Intermatic Customer Service.*

```
LEARN MODE     00-00P


3  INCLUDE DEVICE

PRESS BUTTON ON
DEVICE TO INCLUDE
SUCCESSFUL
```

4. Press the **<ENTER>** button if you wish to return to the Main screen.

The circuits wired in the PE650 network (up to five) can now be controlled ON/OFF with the five function buttons on the PE953 Hand-Held Controller.

Section 9:

# Checking Out and Verifying the System

After you have completed installation and programming, make sure the system is working OK by completing the procedures listed below. Later on, if problems develop in using the system, going over these same procedures will help you troubleshoot the problem.

This section will help you with procedures to:

- Verify that display on the PE953 Hand-Held Controller is operational and showing the correct time of day.
- Verify that the PE653 Device is operational and working.
- Verify that the PE953 Hand-Held Controller is communicating with the PE653 Device
- Verify that the PE953 Hand-Held Controller will communicate with the PE653 Device from everywhere on your property.
- Verify that the (POOL/SPA switch on the PE953 Hand-Held Controller activates the Motorized Valve Actuators (if installed)
- Verify that the Heater is responding to commands from the PE953 Hand-Held Controller.

| *What to do* | *If it doesn't work* | *Reference/Procedure* |
|---|---|---|
| Verify that display on the PE953 Hand-Held Controller is operational and showing the correct time of day. | Press and release any button on the Hand-Held Controller to wake it from sleep. | Refer to *Section 4: Programming the PE953 Hand-Held Controller* on page 41. |
| | Check the batteries | **1.** Use a small Phillips screwdriver to remove the three screws on the back of the unit, as indicated. (See page 56.) <br> **2.** Verify that the batteries are good or replace them with three new AA batteries. <br><br> **NOTE:** *Be sure to re-install the gasket correctly to maintain the watertight seal.* |
| | Set the correct time of day. | **1.** Press and hold the **P/S** button until the screen displays SET TIME under the time display. <br> **2.** Use the **Up/Down Arrow** buttons to set the correct time. <br> **3.** Press the **ENTER** Key to return to the main PE653 main screen. <br> Refer to page 46 for additional help. |
| | Contact Intermatic support services. | |

| *What to do* | *If it doesn't work* | *Reference/Procedure* |
|---|---|---|
| Verify that the PE653 Device is operational and working. | Verify that power is ON to the PE653 Device. | 1. Turn the main circuit breaker that feeds the panel to the ON position.<br>2. Use a voltmeter to verify that voltage is present at terminals 1 & 2. |
| | Verify the Voltage Selector Switch is in the proper position. | Voltage Selection Switch should be in the 120V or 240V position corresponding to the voltage reading observed in Step 2 above. |
| | Verify that the F1 Fuse is not blown. | 1. Turn OFF the power to the PE653 Device.<br>2. Remove the fuse and test with an ohmmeter or fuse tester.<br>3. Replace the fuse if good or install a new fuse.<br>4. Turn the power to the PE653 Device ON. |
| | Verify that each circuit is operational. | 1. Press the ON switch for Circuit #1.<br>2. Verify that the Load ON indicator for Circuit #1 is ON.<br>3. Press the ON switch for Circuit #2.<br>4. Verify that the Load ON indicator for Circuit #2 is ON.<br>5. Press the ON switch for Circuit #3.<br>6. Verify that the Load ON indicator for Circuit #3 is ON.<br>7. Press the ON switch for Circuit #4.<br>8. Verify that the Load ON indicator for Circuit #4 is ON.<br>9. Press the ON switch for Circuit #5<br>10. Verify that the Load ON indicator for Circuit #5 is ON.<br>11. Turn OFF all Circuits. |
| | Verify that the electrical wiring for each load is correct. | Refer to the appropriate wiring diagram in Section 3, starting on page 13. |

| *What to do* | *If it doesn't work* | *Reference/Procedure* |
|---|---|---|
| Verify that the PE953 Hand-Held Controller is communicating with the PE653 Device | Test communications between the PE953 and the PE653. | 1. Press and release any button on the Hand-Held Controller to wake it from sleep.<br>2. Press the number 1 switch on the PE953.<br>3. Verify that Circuit #1 turns ON.<br>4. Press the number 1 switch again to turn OFF.<br>5. Press the number 2 switch on the PE953.<br>6. Verify that Circuit #2 turns ON.<br>7. Press the number 2 switch again to turn OFF.<br>8. Repeat for all 5 circuits. |
| | Review Section 4: *Programming the PE953 Hand-Held Controller* starting on page 41. | Refer to page 43: *Linking the Hand-Held Controller to the PE653 Receiving Device.* |

| What to do | If it doesn't work | Reference/Procedure |
|---|---|---|
| Verify that the PE953 Hand-Held Controller will communicate with the PE653 Device from everywhere on your property. | Review the Section covering *"Testing Z-Wave Reception"* starting on page 50. | 1. Carry the PE953 Hand-Held Controller to several parts of the area from which commands might be sent to the PE653 Device.<br>2. Test the reception by turning connected equipment ON and OFF.<br>3. Note if the PE653 Device fails to respond immediately to any of the commands sent.<br>4. If commands are missed, follow the instructions for *"Moving the Antenna to a Better Location'* starting on page 50. |

| What to do | If it doesn't work | Reference/Procedure |
|---|---|---|
| Verify that the (POOL/SPA switch on the PE953 Hand-Held Controller activates the Motorized Valve Actuators (if installed) | Verify that the PE953 Hand-Held Controller is configured for BOTH (Pool and Spa) | 1. If necessary, press and release any button on the Hand-Held controller to wake it from sleep.<br>2. Look for the word POOL at the lower right part of the PE953 screen (refer to illustration on page 4).<br>3. If either POOL or SPA is observed, press and release the **P/S** button on the PE953.<br>4. Verify that the word POOL switches to SPA and back to POOL each time that the **P/S** button is pressed.<br>5. Verify that the water flows to the Pool when POOL is shown in the screen.<br>6. Verify that the water flows to the SPA when SPA is shown in the screen. |
| | Correct the Motorized Valve Actuator Synchronization if the water flow is incorrect. | Refer to Section 3: *Motorized Valve Actuator Connection and Synchronization* starting on page 36. |

| *What to do* | *If it doesn't work* | *Reference/Procedure* |
|---|---|---|
| Verify that the Heater is responding to commands from the PE953 Hand-Held Controller. | Test the heater response. | **1.** If necessary, press and release any button on the Hand-Held controller to wake it from sleep.<br>**2.** Make sure that the PE953 screen displays "POOL" or "SPA" in the lower right hand corner. Make sure that a temperature is displayed next to the words "POOL" or "SPA". Refer to the illustration on page 41.<br>**3.** Set either the POOL or SPA temperature to five degrees (5º) higher than the current reading. Refer to Setting Pool and Spa Temperatures starting on page 54 of this manual.<br>**4.** Turn the pump ON. |
| | Verify that the thermostat in the heater is set for "high" or "maximum." | Refer to the manufacturer's installation instructions. |
| | Verify that all wiring connections are correct and that all terminals and splices are secure. | **1.** Refer to the appropriate wiring diagram with heater connection information starting on page 16 of this manual.<br>**2.** Refer to *Fireman's Switch Connections* starting on page 37 in Section 3.<br>**3.** Find the Wiring Diagram that is the most like your installation.<br>**4.** Verify that the system is wired according to the diagram.<br>**5.** Refer to the manufacturer's installation instructions if your heater is not shown in this manual. |

Section 10:

# Troubleshooting

After you have completed installation and programming, make sure the system is working OK by completing the procedures listed below. Later on, if problems develop in using the system, going over these same procedures will help you troubleshoot the problem.

This section will help you troubleshoot the following problems:

- The system appears to work, the LED's turn ON and OFF but the power circuits and attached equipment will not turn ON.
- The 2-speed pump will not operate in 2-Speed mode.
- High speed and low speed circuits turn ON together when the pump is turned ON.
- The circuit breaker for the pump trips every time that the Pump turns ON.
- The heater will not turn ON.
- The heater turns OFF but gets very hot after the pump turns OFF.
- Water or moisture is visible inside the screen of the Hand-Held Controller.
- The Hand-Held Controller appears to be "LOCKED UP".
- The PE653 Device appears to be 'LOCKED UP".

| Problem | What to do | Reference/Procedure |
|---------|-----------|---------------------|
| The system appears to work, the LED's turn ON and OFF but the power circuits and attached equipment will not turn ON | Verify that the voltage is correct at the PE653 power terminals. | **1.** Check the voltage at terminals #1 and #2 on the PE653 using a meter.<br>**2.** Verify that the Voltage Selector is in the correct position: either 120 V or 240 V depending upon the voltage observed at terminals #1 and #2.<br><br>**CAUTION:** *If a 2-speed pump or other 240 VAC equipment is being used in the system, the voltage must be 240 VAC.*<br><br>**NOTE:** *The PE653 will appear to function correctly, LED's will turn ON and it will communicate with the PE953 Hand Held Controller but the power relays will turn on when 120 VAC is supplied to a 240 VAC system.* |

| Problem | What to do | Reference/Procedure |
|---|---|---|
| The 2-speed pump will not operate in 2-Speed mode | Verify that all wiring connections are correct and that all terminals and splices are secure. | 1. Refer to the Wiring Instructions in Section 3. <br> 2. Find the Wiring Diagram that is the most like the installation starting on page 16. <br> 3. Verify that the system is wired according to the diagram. |
|  | Verify that the correct voltage is present at terminals 1 and 2. | 1. Use a meter and verify voltage output from the breaker (should be 240 VAC). <br> 2. Use a meter to verify that the voltage at terminals 1 and 2 is 240 VAC. <br> 3. Turn ON circuit #1 on the PE653 using either the Hand-Held controller or the Circuit ON/OFF switch on the PE653. <br> 4. Use a meter and verify voltage at pump terminals. <br> **NOTE:** *L2 must return to the second pole on the breaker for 240 VAC to be present.* <br> 5. Verify that terminal 3 on the PE653 is connected to the 'HIGH' speed terminal at the pump. <br> 6. Verify that terminal 4 on the PE653 is connected to the 'LOW' speed terminal at the pump. <br> 7. Verify that the 'COMMON' terminal at the pump is connected to L2 at the breaker panel. |
|  | Verify that your system is configured for a 2-speed pump. | 8. Refer to *"Configuring for a 1-Speed or 2-Speed Pump"* starting on page 44. |
|  | Contact your pump service company for assistance with the pump. | |

| Problem | What to do | Reference/Procedure |
|---|---|---|
| High speed and low speed circuits 1 & 2) turn ON together when the pump is turned ON. | Confirm that the system is programmed for a 2-speed pump. | 1. Press any release any button on the PE953 Hand-held Controller to wake it up. <br> 2. Verify that the PPE953 displays "HI SPD  1" or "LO SPD  2" in the upper left hand corner of the screen. <br> 3. Refer to the illustration on page 41. |
|  | Reprogram for 2-speed pump operation. | Refer to *"Configuring for a 1-Speed or 2-Speed Pump"* starting on page 44. |

| Problem | What to do | Reference/Procedure |
|---------|-----------|---------------------|
| The circuit breaker for the pump trips every time that the Pump turns ON. | Confirm that the system is programmed for a 2-speed pump. | **1.** Press any release any button on the PE953 Hand-held Controller to wake it up. **2.** Verify that the PPE953 displays "HI SPD  1" or "LO SPD 2" in the upper left hand corner of the screen. **3.** Refer to the illustration on page 41 of this manual |
| | Check the wiring for a 2-speed pump. | **1.** Verify that the wire from circuit #1 (PE653 terminal #3) is connected to the High Speed connection of the pump. **2.** Verify that the wire from circuit #2 (PE653 terminal #4) is connected to the Low Speed connection of the pump. |
| | Confirm that the controls in the heater are turned ON | **1.** Verify that the Common connection of the pump is connected to L2 at the Panel circuit breaker. **2.** Verify that the 2-pole breaker feeding the PE653 and the Pump is sized correctly. |

| Problem | What to do | Reference/Procedure |
|---------|-----------|---------------------|
| The heater will not turn ON. | Go to the Checking Out and Verifying section above. | **1.** Press any release any button on the Hand-held Controller to wake it up. **2.** Note the POOL temperature. *NOTE: The temperature will be shown to the right of the word POOL in the bottom right of the PE953 screen.* **3.** Use the Temperature Set UP arrow to make the Target temperature setting at least five degrees (5°) higher than the current temperature. **4.** Turn ON the pump. **5.** Find and follow the instructions in *"Verify that the Heater is responding to commands from the PE953 Hand-Held Controller"* printed earlier in this section. |

| Problem | What to do | Reference/Procedure |
|---------|-----------|---------------------|
| The heater turns OFF but gets very hot after the pump turns OFF. | Verify that the heater has a proper "Time Interval" programmed for cool down. | The Fireman Switch Time Interval is defined as the additional time the pump will run after the heater circuit (circuit 5) is turned off to make sure the heater is cooled down before it shuts off. Refer to *"Configuring the Fireman's Switch Time Interval"* starting on page 46 in this manual. |

| Problem | What to do | Reference/Procedure |
|---|---|---|
| The heater turns OFF but gets very hot after the pump turns OFF. | Verify that the heater has a proper "Time Interval" programmed for cool down. | The Fireman Switch Time Interval is defined as the additional time the pump will run after the heater circuit (circuit 5) is turned off to make sure the heater is cooled down before it shuts off. <br><br> Refer to *"Configuring the Fireman's Switch Time Interval"* starting on page 46 in this manual. |

| Problem | What to do | Reference/Procedure |
|---|---|---|
| The System will not respond to commands from the Hand-Held Controller | Verify that the Antenna section is properly installed on the top portion | If the Antenna section has been removed for installation of any type of wiring connection, check the following. <br> **1.** Wires are properly wired and routed through the knockouts in the antenna cover. <br> **2.** Verify that all of the local antenna connector pins on the PE653 art straight and properly inserting into the plug on the Antenna section. <br> **3.** Verify that the Antenna Section is completely seated on the PE653 housing. <br> **4.** Refer to the *"Testing Z-Wave Reception"* section starting on page 50. |

| Problem | What to do | Reference/Procedure |
|---|---|---|
| Water or moisture is visible inside the screen of the Hand-Held Controller. | Dry out the Hand-Held Controller. | **1.** Remove the battery cover on the rear of the PE953 Hand Held Controller. Refer to page 57 for instructions. <br> **2.** Gently drain any water remaining in the Hand-Held Controller. <br> **3.** Place the Hand-Held Controller in a well ventilated area to dry. <br><br> **CAUTION:** *Do not place in direct sunlight.* <br><br> **4.** Insert new batteries when all traces of moisture are gone from the screen. <br><br> **NOTE:** *Be sure to re-install the gasket correctly to create a water-tight seal. Refer to page 57 for instructions.* <br><br> **5.** If required, follow programming instructions starting on page 41. |

| Problem | If it doesn't work | Reference/Procedure |
|---|---|---|
| The Hand-Held Controller appears to be "LOCKED UP". | Power down the Controller to reset. | **1.** Remove the batteries from the PE953 Hand-Held Controller. <br> **2.** Allow 15 seconds before replacing the batteries. Refer to page 57 for instructions. <br><br> **NOTE:** *Be sure to re-install the gasket correctly to create a water-tight seal.  Refer to page 57 in this manual for instructions.* <br><br> **3.** If required, follow programming instructions starting on page 41. |

| Problem | What to do | Reference/Procedure |
|---|---|---|
| The PE653 Device appears to be 'LOCKED UP". | Power down the PE653 device to reset. | 1. Turn OFF the AC power to the PE653 by turning OFF the breaker that feeds terminals 1 & 2 on the device.<br>2. Turn the AC power back ON.<br>3. Refer to the "Checking Out and Verifying the System" section on page 71. |

Section 11:

# Appendix

## Glossary of Z-Wave Terminology

**Device** — Any Z-Wave module, controller, or software that represents an item within a Z-Wave network.

**Exclusion** — The process of resetting, removing, or deleting a device from a Z-Wave network.

**Inclusion** — The process of adding a device to a Z-Wave network.

**Module** — Typically refers to any Intermatic HomeSettings product that is controlled with a remote controller.

**Network** — All Z-Wave devices controlled by the remote controllers operating in the same system. Each network has its own unique identification code to help ensure that no one else can accidentally control your system.

**Primary Controller** — The controller used to set up your devices or network. This can be a tabletop or handheld remote controller or it can be software.

> *NOTE: In the Intermatic Pool & Spa system, only the Primary Controller can be used to add or remove devices from a network.*

**Repeater** — A device through which a signal is routed in order to allow that signal to reach the intended target device.

**Replication** — The process of sending or receiving network information from one Z-Wave controller to another.

**Scene** — Scenes can include one or more devices in your network, allowing each of them to be turned on or off or set to a different level (i.e., degree of brightness) with the press of a button, or based on a schedule.

**Schedule** — A timer-based event in the software that will activate a scene or turn a zone ON/OFF at a specified time of day, or at sunrise or sunset.

**Secondary Controller** — A controller containing network information about other devices within the network, included into the network by the Primary Controller. In the Intermatic Pool & Spa system, secondary controllers cannot add or remove devices from the network.

# FCC Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

*NOTE:* This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

*NOTICE*
Changes or modifications not expressly approved by Intermatic Inc. could void the user's authority to operate the equipment.

The installer of this radio equipment must ensure that the antenna is located or pointed such that it does not emit RF field in excess of Health Canada limits for the general population; consult Safety Code 6, obtainable from Heath Canada's website www.hc-sc.gc.ca/rpb.

Section 12:

# Warranty

## ONE YEAR LIMITED WARRANTY

If, within one (1) year from the date of purchase, this product fails due to defect in material or workmanship, Intermatic Incorporated will repair or replace it, as its sole option, free of charge. This warranty is extended to the original household purchaser only and is not transferable. This warranty does not apply to: (a) damage to units caused by accident, dropping, or abuse in handling, acts of God, or any negligent use; (b) units which have been subject to unauthorized repair, opened, taken apart, or otherwise modified; (c) units not used in accordance with instructions; (d) damages exceeding the cost of the product; (e) sealed lamps and/or lamp bulbs, LEDs, and batteries; (f) the finish on any portion of the product, such as surface and/or weathering, as this is considered normal wear and tear; (g) transit damage, initial installation costs, removal costs, or reinstallation costs.

INTERMATIC INCORPORATED WILL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU. THIS WARRANTY IS IN LIEU OF ALL OTHER EXPRESS OR IMPLIED WARRANTIES. ALL IMPLIED WARRANTIES, INCLUDING THE WARRANTY OF MERCHANTABILITY AND THE WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY MODIFIED TO EXIST ONLY AS CONTAINED IN THIS LIMITED WARRANTY, AND SHALL BE OF THE SAME DURATION AS THE WARRANTY PERIOD STATE ABOVE. SOME STATES DO NOT ALLOW LIMITATIONS ON THE DURATION OF AN IMPLIED WARRANTY, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

This warranty service is available by either (a) returning the product to the dealer from whom the unit was purchased, or (b) mailing the product, along with proof of purchase, postage prepaid, to the authorized service center listed below. This warranty is made by: Intermatic Incorporated/ After Sales Service/7777 Winn Rd., Spring Grove, IL 60081-7000 <http://intermatic.com>. Please be sure to wrap the product securely to avoid shipping damage.

*Because of our commitment to continuing research and improvements, Intermatic Incorporated reserves the right to make changes, without notice, in the specifications and material contained herein, and shall not be responsible for any damages, direct or consequential, caused by reliance on the material presented.*

## WARRANTY REGISTRATION

**Owner's Name**_____    **Signature**_____

**Street Address**_____    **Date of Purchase** _____

**City**_____    **State**_____    **Zip** _____    **Phone** _____

**Authorized Dealer** _____    **Sales Rep** _____

**City**_____    **State**_____    **Zip** _____    **Phone** _____

**How did you hear about our product? (Please check all that apply.)**

___**Pool Store Employee**    ___**Pool Builder**    ___**Pool Service**    ___**Direct Mail Ad**    ___**In-Store Display**

___**Friend/Relative**    ___**Magazine**    ___**Newspaper**    ___**Radio**    ___**TV**    ___**Catalog**    ___**Other:** _____

**To activate your warranty, please return this portion to:**



**Intermatic, Inc.**
**7777 Winn Road**
**Spring Grove, IL 60081**
**or by FAX: 815-675-7055**

# Installation Notes

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