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Introduction: Working with PulseWorx-EZ

PulseWorx-EZ (EZ) is a Windows software application designed to configure UPB devices in general and UPB devices sold under the PulseWorx brand in particular.

This User Guide covers the basics of EZ and its command and operation. Installation of PulseWorx-EZ is the same as other Windows programs you have installed.

Connection of the power line interface to the computer or network depends upon its model and is explained in instructions that came with the interface. If the interface connects to the computer using a USB cable it will create a virtual serial port that the software uses to communicate with it. Later in this user guide will be instructions for determining that serial port.

After installation start the program.

EZ contains many of the features you may already be familiar with when working with Windows programs:

- In the upper left of the Window, a click on the application “bubble” opens the application menu.
- The “About” box displaying version information can be opened by clicking on the icon at the far right of the ribbon – the “?” icon.
- You can add commonly used actions to the Quick Access Toolbar – at the top of the window to the right of the application bubble - by clicking on the down arrow to the
right of the current set of buttons. The Quick Access Toolbar comes preconfigured with buttons for open and save.

- You can change the color scheme from the “style” dropdown at the right end of the ribbon.

The EZ ribbon is organized into 4 categories:

- Network – operations that effect the whole UPB installation
- Devices – operations for working with UPB devices
- Scenes – operations to view, create, and modify scenes
- PulseWorx Gateway – operations for configuring the PulseWorx Gateway -a stand-alone UPB controller with remote access and schedule facilities

The application menu contains choices to load and save files, create a new file by reading all devices in a UPB installation, exporting the network to a file format that can be used by control software, and generating a worksheet used to purchase engraved keypad buttons.

Also on the application menu are tools for configuring the powerline interface that EZ uses to communicate with UPB devices, and a way to create a printout that describes the devices and options in the network.

EZ can open and save files with file type UPB. This is the same file type used by the other UPB configuration program called UPStart. Files created or saved by UPStart can be used by EZ and visa-versa.

Once a file is loaded a grid of icons appears, one for each device in the installation. A gray-scale theme is used for the icons when the device is off. If the device is on, then its icon appears in color.
When a device is added to an EZ file, an icon choice is guessed at based upon the device type and name but can be changed in the device properties. Below the icon is the room name and device name of the device. These names are read from and stored into the device memory of the device.

The display can be sorted in two different ways: By name or by type. The “By type” sort can be handy to see all your keypads grouped together, switches grouped together, etc.

Ultimately what EZ does is to let you define the settings for a device and program those settings into the device. The UPB file also contains those settings so there is a possibility that what is in the file and what is in the device are different. As you make changes using EZ, what is in the file will differ from what is in the device. When you program the device then the two become back in sync again. EZ contains many tools to assist in checking to make sure that the file and the devices match so the network responds as you have configured it.

The text below the icon shows in different colors depending upon the match between the device and the file as managed by EZ. Possibilities are:

- **Black**: EZ isn’t sure of what is in the device memory is the same as in the loaded file
- **Blue**: EZ is sure that what is in the device memory is the same as in the loaded file
- **Red**: EZ is sure that what is in the device memory doesn’t match what is in the file
- **Crossed out**: Last time EZ looked it couldn’t find that device in your network. It could have been removed, powered off, or isn’t communicating for some reason

If you would prefer to see the devices in a list rather than as icons, that can be done by pressing the “List” button at the ribbon top left.
Each column can be resized and sorted. The column that is sorted shows an upward or downward pointing triangle in the column header to show the sort direction.

If you have many devices the number seen in one list may become difficult to use. In that case the “Rooms by tab” button can be pressed. When in that mode a number of tabs appear at the bottom of the display – a tab for each room and on that tab only those devices in that room are shown.
Connecting a power line interface

Before EZ can send and receive commands to read and write device configuration memory or control devices, a power line interface (PIM) must be connected to the computer and identified to EZ. Supported interface types are:

- Serial PIM - connects to a real serial port
- USB PIM – with a device driver creates a virtual serial port
- PIM-IP - an IP based interface
- PulseWorx Gateway – and IP based interface with additional capabilities

Select from the application menu *Power line Interface – Configure* or press the *Configure* button in the ribbon *Network* category, *Powerline Interface* panel.

Select the type of interface and its connection information. Once the type is selected the dialog shows the appropriate connection settings. For a serial PIM or a USB PIM that creates a virtual serial port, the “Find the Serial Interface port” button will try all the serial ports on your
computer in an attempt to locate the powerline interface. Similar tools exist for the IP interfaces.

Press the “Test Connection” button after you have made your selections and EZ attempts the connection.

If the PIM model you are using has settings you can adjust, press the “Settings” button at the top of the dialog to open a dialog to do that. Not all interface models have adjustable settings.

When the PIM is connected, close the dialog and you are ready to work with an existing network or create a new one.
Creating a UPB network

Select from the application menu New. A dialog for creating a new network opens.

Each device in a network contains the same network name, id, and password. In this dialog you specify what those are. It is probably best to let EZ pick a network id and password for you as there really isn’t any advantage in choosing specific values, but you can do that if you really want to. You should enter a network name that identifies the network as yours. Network names can be up to 12 characters.

Couplers and repeaters improve signal transmission to, and reception from, the devices in your installation. You should try and determine if you have one already installed by looking in your power panel or getting help from a qualified installer. If you do have one installed, make that selection. If you have specified a repeater, after you close this dialog EZ directs you to add it first to your network and in that way it will improve communications when other devices are added.

Once you have let EZ pick network parameters or you have entered your selections, the OK button becomes available and you can close the dialog. Once a network is created, EZ is ready to begin adding devices.
New file from network

There is an alternative way to create a new file and that is by locating all the existing devices in your network and reading their configuration menu to determine their type, room and device names, and settings. You should use this method if you have an existing UPB installation but don’t have the UPB file that was used during the install.

To begin, select from the application menu *New File from Network*. This dialog opens:

![New File From Network dialog](image)

As it says in the dialog text, put one device into setup mode – look at the documentation for the device to see how to do that – and press the *Start* button. If you have a repeater you should use that as the one device to put into setup mode.

Once started the operation completes without additional interaction. If you have many devices it can take a while.
Devices

Adding devices is the first step to building a UPB network. Each device has to be identified, given a room and device name, and its network parameters (name, id, password) written to it. Select Add from the Device ribbon category. The Add dialog opens.

As described above each device contains a room and device name. You can either select one of the room names provided in the dropdown or type in your own name. New devices that come from the factory have some settings pre-defined that are not much use beyond testing by the person installing the device. These default settings should be removed and that is done by enabling the “Erase configuration” option. If this is an existing device that is working in your home, then you may not want to erase its settings unless you plan to make changes to it.

After the device names are selected, place the device into setup mode – see the UPB device documentation on how to do that – and press the Add button.

EZ locates the device, checks that its type is one that EZ works with, reads the device memory, and then rewrites the device memory with new settings.
Offline adding

EZ supports a second method of working with devices called offline adding. In this method devices aren’t added using the above procedure but rather a placeholder for the device is added to the file that is connected to the actual device later. The reason to use this is to generate a file with all the devices added and scenes defined. This can be done anywhere and then later, at the actual job site, connect each device placeholder to the actual installed device and program it at that time.

To add a device offline you can’t be connected to a powerline interface. If you are already connected to an interface press the Disconnect button in the ribbon. It shows Connect when you aren’t connected and Disconnect when you are connected.

When not connected to an interface, pressing the Add button opens a different dialog.

In this dialog you still select or enter a room name and device name but now you have to select the type of device being added. All the PulseWorx device types that EZ can configure are shown.
After the names are entered and the device type is selected, close the dialog with OK and the device template is added. In the programming section below the instructions are given for how to connect the template to the actual device. If you want to add additional device you can add then one at a time using the offline add dialog.

Device properties

Each UPB device has many different parameters that you can configure. Each device type has a different set of these parameters and how they are set depend upon your application. EZ lets you configure only a selected set of the device parameters. To access the full set of them you must use the UPStart application as it configures all parameters of all UPB devices types from all UPB manufacturers.

To open a device’s properties for viewing or modification, select the device icon and then press the Properties button in the Device ribbon category. The properties dialog opens.

Tip: You can also right-click on the device icon and select Edit from the popup menu. Many of the same operations that are started by ribbon buttons are also available on the right-click popup menu.
In this example, the device is a switch and the properties dialog has tabs for options related to the switch rocker, to enable or disable dimming on the Load tab, options for how the built-in LED operates on the options tab, and what icon to use for it on the icon tab. Other device types may have different tabs for different options.

The Icon Tab

The Icon tab serves several purposes. It’s primary use for EZ is to let you select the icon it uses to represent the device. But it is also used to select the icon used by other applications that work with UPB devices.

This example is from a device that has two channels – an Input Module that has two inputs. Some applications show two icons for this device – in this example, one for the driveway sensor and one for the door sensor. In this tab of the properties dialog you select if one or both of the inputs are shown, what icon is used for each input and what text is used to label those icons. For use by EZ, the icon chosen for the first channel of a multi-channel device is used.

You can also change the icon using the Change Icon button on the “ID” tab or select the device icon and press the Change Icon button in the ribbon.

Tip: Many of the actions that EZ can perform can apply to either a single selected device or to a set of devices that are selected. For example, if you select more than one device and then use
the *Change Icon* operation, the icon chosen is then used for all selected devices. Some operations - like properties or rename – apply to only a single device so their ribbon buttons aren’t enabled if you have more than one device selected.

**Changing a device name**

To change the device or room name you can do that by opening the properties of the device and making the change on the “Id” tab. You can also, as you do in Windows Explorer when viewing files, click on the device name to select it and then click again to start name editing.

In this example, name editing has started and you can tell that by the box around the name. You can change the room name, device name, or both. Don’t mess with the dash between the two names as that makes sure that EZ can tell the device and room names apart.

**Working with devices on, off, dim, get status**

Once devices are in the file – either you added them or you opened an existing file – the devices can be sent commands to turn them on, off, set them to a level if dimmable, and to query their status.

All of these operations can be started by clicking on the ribbon buttons in the *Test* panel in the Devices category or from a right-click menu on a device. Buttons (or menu choices) are available for On, Off, Dim, and Get-Status. All of these operations can be performed on a single device or on a set of devices. Setting a device to a given level is done using a popup with a slider:

If more than one device is selected, at the right end of the ribbon a progress bar shows to track the sending of commands.
If you have selected many devices and the operation is taking a while and want to abort the operation, press the *Stop* button.

**Scenes: What are they?**

A UPB network is tied together with *scenes* - you might also see them called *links*. A scene is simply a number in the range from 1 to 250. A transmitter sends the scene number and a command to cause things to happen. Every device in the network receives that transmission and looks in their *scene table* – stored in their configuration memory - to see if the scene number is in the table. If it is not found, then the device ignores the command. If it is found, then the device responds as defined by the command and the contents of the table for that scene number.

Let’s take an example. Assume a keypad has an ON button configured to Activate Scene 50. Assume that there are three devices in this installation and they contain this setup:

- **Kitchen lights**
  - Scene 50 80%
  - Scene 7 60%

- **Outside Lights**
  - Scene 50 80%
  - Scene 10 100%

- **Hall Lights**
  - Scene 50 0%
  - Scene 7 100%
When you press the keypad button it sends onto the power line “activate scene 50”. The Kitchen lights respond by going to 80%, Outside Lights respond by going to 80%, and Hall Lights responds by going off (0%).

Now suppose another keypad button is set to transmit an Activate of scene 7. In this case Kitchen lights responds by going to 60%, Outside Lights doesn’t respond at all since scene 7 is not in its table, and Hall lights goes to 100%.

There is also a Deactivate command. The Deactivate command causes all devices with that scene number in their table to go off.

**Note:** You can turn a device off by deactivating a scene listed in its scene table or by activating a scene in its scene table whose entry has a level of 0%.

And while there are some fine points to scenes, this really is all you need to know. EZ has tools that make even this level of knowledge not really needed. Those tools are covered in the next section.

**Controller Edit**

In EZ, devices that transmit are called *controllers*. Some devices only send commands – keypads and input modules – others both send and receive – keypad dimmers for example – and others only receive. All switches receive but they can also transmit if their rocker is configured to do that. That is, when the rocker top or rocker bottom is tapped they can transmit a scene as well as control the load the switch is wired to.

Most of what you will do in EZ, after devices are added to a network, is to configure the scenes that tie them all together. To create, view, and modify the scenes that controllers transmit, select a device that does transmit – keypad, switch, input module, and click the *Controller Edit* button in the ribbon.

**Tip:** For controllers you can also double-click on the icon to open the scene editor for that device. For non-controller devices a double-click opens the device properties.
The first point to notice is that the contents of ribbon changed radically. The usual categories have been replaced by a single “Edit Scene” category.

The second point to notice is a representation of the type of device in the upper left. In this example a 6-button keypad is being configured.

The main part of the dialog shows all devices that are part of the scene – their scene table contains the scene that the controller transmits. For keypads, when you select a button on the keypad - click on a key in the keypad image – those devices that respond to the scene transmitted by that button are shown in the display. There are three main operations that you can do:

- **Add another device to the scene.** Press *Add Devices to Button* and a popup dialog shows you the devices you can add.
- **Select one or more devices and then press *Remove Devices from Button*** and the devices selected will no longer respond to the scene.
- **Change the action of a scene on a device.** To do this click on the device and a popup shows the level.
In this example, a single click was made on the outside light icon. A popup appeared that shows that when the scene is activated this device goes to 80% in the default time configured for this device.

If you want to change the level or ramp rate – the time it takes the device to go from the current level to the new level – that can be selected in the dropdown.

Close the popup by clicking elsewhere in the display or click on the green check icon.

In the ribbon are other actions to test the controller if it is a keypad, and to test the communications between all the devices in the scene. These are explained later. Since configuring the controller and responders involves updating their configuration memory, the devices don’t act as you have configured them until they have those settings written to their memory. The *Program* operation does that.

To complete the edit, press the *Close* ribbon button. To exit the edit and abandon any changes you made, press the *Cancel* button.

**Keypads: Scene Controller or Device Controller?**

UPB keypads are the most configurable automation devices on the planet and because of that they are also the hardest to configure. The facilities in UPStart, while comprehensive can be quite difficult to use. EZ takes a different approach by configuring keypads in one of two ways: as a *Device controller* or *Scene controller*.

**Note:** A device controller and a scene controller have nothing to do with the keypad hardware. It is just how EZ configures them. You can have two identical keypad models and use one as scene controller and the other as a device controller.

When used as a scene controller, the keypad is configured so that all the buttons on the keypad work *together*. Each button activates a scene that one or more devices respond to. When a button is pressed the LED for that button illuminates – the PulseWorx keypads all have LEDS behind the buttons – to show what scene is the current scene. The key idea is that there is always a single button on the keypad illuminated that shows the current scene. If you press a button that is currently dark, that button illuminates and the button that was previously illuminated goes dark.
When used as a device controller, the keypad is configured so that each button operates independently from the other buttons. Each button controls one or more devices by activating or deactivating a scene. When the button is dark then pressing it activates the scene. When the button is illuminated pressing it deactivates the scene. In other words, the button toggles. The key idea is that each button controls a different scene and more than one button on the keypad can be illuminated at one time.

Which configuration type do you want to use? It, of course, depends upon your application. For example, a keypad in a bedroom may be used to “set the scene” for different activities. Perhaps a “reading” scene, a “wake up” scene, a “TV scene” etc. A good use of a device controller is a keypad near an entryway. It could have buttons that control entry lighting, outside lighting, all devices, etc.

When EZ encounters a keypad it has not seen before it asks how you will be using it.

![Configuration Options](image)

The dialog shows the main features of the scene and device controllers to help you pick.

**Tip:** As the dialog says, if you are working with a keypad that was already configured it may have settings that don’t match either keypad model so be careful as you don’t want to break an existing setup that is working well for you.
Adding device to a scene

As briefly described above, the Add Devices to Scene button opens a popup where devices are selected to add to the scene.

Select one or more devices to be added to the scene. They are all added at the level and ramp rate selected at the top of the dialog but those choices can be changed later by the “click method” described above. If you would prefer to view the devices in a list or by icons, there are buttons at the lower left for that.

Capturing a scene

Knowing what levels to use with all the devices in a scene can be difficult. What is too dim or too bright? The best way is to try it out and see. The EZ scene editor has a way you can do that. After you create a scene and add devices to it you can right-click on a device and select On, Off, or Dim from the popup menu.
Each menu choice controls the selected device. If you choose “Dim” a slider appears that you can adjust. After you set the levels in the devices as you think they should be then go see how it looks. You can make additional adjustments at the devices themselves – tap and hold a switch paddle to ramp up or down. When it all looks right come back to EZ and select from the Scene Editor ribbon the Capture button.

Tip: When you right-click on a scene responder and select on, off, or dim from the popup menu you are controlling the actual device to help see what the scene looks like. When you click on a scene responder and the popup appears where you adjust the level and rate, you are setting the response of the device when the scene is activated. Two different actions for two different uses.

Are we controlling Devices or Scenes?

You may be at this point a bit confused as to how scenes and devices interact since we discussed that keypad buttons activate and deactivate scenes, and devices receive those scene commands and respond.
But when configuring what a scene does we add devices and we aren’t really discussing scenes. The controller edit in EZ has you select a button – or rocker or input module input – and then add to it one or more devices. No scene is mentioned. So what’s up with that?

EZ does the scene creation for you. It creates a scene - giving it a name and number - so you don’t have to worry about it. When a button on a keypad is configured – or a switch rocker or input module input – EZ makes that button transmit that scene. When receivers of the scene are added, EZ adds the scene to their scene table. But if you really want to see what scene a controller is using, look to the right of the Remove from scene button and the scene name displays.

In a later section of this user guide the methods to work directly with scenes is detailed.

Keypad Button names

Another use of the scene editor when working with keypads is to define names for the buttons. This helps in many different ways. First, you can use the names you enter along with the font information to order custom engraved buttons – select from the application menu KPC Worksheet for more details. Also the keypad button names may be used by controller software. Finally, even if you don’t want engraved keypad buttons, giving buttons meaningful names will help in setup and testing.

Programming

Up until this point all the tools used have been to define the properties of a device. On the properties dialog various options are configured. The Scene editor configured both the transmitter of a scene and receivers of that scene. But all those changes were recorded only in the file loaded into EZ. Until all that information is written to the devices nothing happens.

To program one or more devices, select the devices and then press the “Program” button in the ribbon. The programming dialog opens.
There are three columns in the table:

- The status of the programming for that device. Possibilities are Unknown (before programming has begun), OK and Failed
- The name of the device
- If programming failed, any information about why the programming failed

If you would like to program the entire network, you can use the Program button in the Network ribbon category.

**Tip**: You can know if a device needs to be programmed by looking at the color of the text below the icon. If the text is red, then the device must be programmed because you have made a change to its configuration. If the text is blue, then EZ thinks that the device and file are in sync. These colors update when editing the properties of a device, programming, or using the verify operation explained below.

**Handling offline added devices**

If a device was added offline then any operation that would communicate with it – program, verify, control on, control off, etc. - has first to connect the device placeholder to the actual device. All of these operations first check to see if you have selected any devices that were added offline and have never been connected to the actual device. If there are any then a popup appears before the operation starts.
As the dialog text says, for each device listed, one at a time place the device into setup mode and then return to EZ and press the Locate button for that device. EZ then adds it to your network. If you haven’t located all the devices when you close the dialog, then any action you are trying to do will still take place but any non-located devices will not be part of it.

**Verify**

Verify is the opposite of programming. What verify does is to check that all the configuration settings in the actual device match the configuration settings in the file and lets you handle what happens if they don’t agree.

To begin a verify select one or more devices and press the *Verify* button in the ribbon.

In this example all devices verified.
But in this example they didn’t verify and you are called upon to resolve what to do. The options are:

Program from file

If you select this then the device is programmed with all the settings stored in the file. Simply the same as the regular program operation.

Read from device

If you select this then the contents of the device are read and the settings of all configuration options in the actual device are transferred to the file. This will wipe out any changes you have made in the configuration in the file before you did the Read from device.

How do the file and devices get out of sync?

A good question! You could make changes, program devices and then forget to save the file. Or someone else – an installer – could make changes to your devices using a different file than you have. There are many different reasons

Tip: When you start a session with EZ it might be a good idea to start a network verify to ensure that all your devices are present, communicating, and that they have the configuration in them you expect.
Keypad Test

EZ contains a method to test the action of keypads once they have been programmed. Select the keypad device and press the Keypad Test ribbon button. A popup shows the keypad with the buttons labeled with the names you entered.

Pressing a button sends the same command that the actual keypad sends. The buttons illuminate in the same way as the button LEDs do on the actual keypad.

Tip: You can drag the popup keypad to another place on the screen so it isn’t in your way. Next time you use the Keypad Test operation the keypad popup appears in the same location.

Communication Tests

UPB is very good at getting signals from transmitters to receivers. This works even better if there are repeaters installed. But in larger installations the distance between two points can be long. The communications test is designed to check the signal strength and noise level for the transmission from a transmitter to a receiver. But more than that, if a keypad is being testing it will test the transmission between the keypad and all receivers of all of the scenes on all of the buttons. This could be quite a few devices. The test is also made between the PIM and the device so you can determine how good the communication is for actions like programming or verify.

To begin, select one or more devices and press the Communication Test ribbon button.
This table has these columns:

- **From**: The transmitter of the command.
- **To**: The receiver of the command. For a keypad this shows the button. For a switch it shows the rocker, and for an input module the input.
- **Communications quality**: The number is a dimensionless number that could be helpful for technical support. The key is the what the text says: Excellent, Good, Low, Very Low, No-Signal. If you have a communications quality of “Low” or worse you may want to consider installing a repeater.
- **Noise level at the device**: UPB messages are fairly noise immune but there are certain powerline noise sources that can cause problems. Noise is rated at None, Low, Medium, Severe. A qualified installer can help you locate noise sources.

Because the list can get quite large, instead of testing all the connections you can choose just certain ones and test just those. Use the **Test All or Test Selected** buttons at the lower left of the dialog for this.

### Working with Scenes

In the section above on using the Controller Edit feature, while you appeared to be just assigning what devices are controlled by what keypad button, switch rocker, or input module input, you were also indirectly creating scenes.

EZ can also work directly with scenes and while you may not need to do anything more than use the Controller Edit method, the Scene tools in EZ may have their use if you are working with automation controllers that can transmit scene commands or when setting up a schedule for the PulseWorx Gateway. In those cases, you may need to create scenes that are not transmitted by any keypad, switch, or input module in your installation.
Select the *Scenes* category from the ribbon. The default display shows an icon for each scene.

There are many ways to show what the scenes are in a network. This is the broadest view. One icon is shown for each scene. You can perform several different actions on the scene:

- Activate the scene: Each device in the scene responds to their scene level.
- Deactivate the scene: Each device in the scene turns off.
- Rename: Give the scene a different name. The underlying scene number remains the same.
- Remove: Remove the scene. This will remove it from all transmitters and receivers.
- Edit: Open an editor for the scene. This will be very familiar as the scene editor is really just the controller edit except that you are working only with scene receivers.
- Communication test: Test the communication between the transmitter of a scene and the receivers of it.

In addition to this view of the scenes in your network, you can also view it as a list. In this case additional info is shown. Press the *List* button in the ribbon upper left.
When viewed as a list, up to 10 receivers of the scene are shown. There may be more receivers but there are only columns enough for ten.

As an alternative view, instead of showing an icon for each scene you can show only devices that are controllers. To do this press the View Controllers button in the ribbon View panel and icons for only devices that can be controllers are shown.

The controllers view also has a list option which shows additional information.
When showing controllers in list view, the columns show what scene the device transmits. For switches only the first column has data, for keypads each column corresponds to one button. For input modules the first column is for input 1 and the second column for input 2.

Scene Rename

One of the most important things you can do when configuring a UPB network besides giving each device a descriptive room and device name, is to use good scene names. Unfortunately, many installations used scene names of the form Scene001, Scene002. Having more descriptive names will help in the long run in maintenance of your network. You can rename a scene in the same way you rename a device – by selecting it and pressing the Rename ribbon button or by clicking on it to select and click again to start a rename editor.

Tip: The Controller editor when creating scenes assigns as the scene name the name of the device and the transmit component. For example: Courtyard-Keypad-E.

Network operations

There are a number of network operations that can help in configuring, programming, and testing the whole network. The same operations described in the Devices section can be used on the whole network. Instead of programming, verifying, or communications testing a single device or a selected set of devices, you can perform those same operations on the whole network – all the devices.

Tip: You could do the same thing in the devices category by selecting all the devices and performing the program, verify, or communication test operations but the network operations are just simpler to use.

In addition to the programming, verify, and communication test operations, the Network ribbon has some additional operations.

Network Properties

The network properties dialog shows you the network name, id, and password, and provides places where installer and site information can be entered / viewed. It also contains a count of the type and kind of the devices you have.
Repeaters

For larger installations where repeaters are needed, the Repeaters dialog shows you the repeaters in your network and their current status.

These Repeaters are in the current network:

<table>
<thead>
<tr>
<th>Id</th>
<th>Room</th>
<th>Name</th>
<th>Working?</th>
</tr>
</thead>
<tbody>
<tr>
<td>44</td>
<td>House</td>
<td>Split-Phase Rptr</td>
<td>YES</td>
</tr>
</tbody>
</table>

There is 1 working repeater. Transmissions are sent in 2 time packets.

Except transmissions to repeaters. These are sent in 1 time packets.
Export

Export is the mechanism used to extract the details of all the UPB devices into a format that other controllers - both hardware and software - can use to control the UPB installation. The exact requirements of this are beyond the scope of this user guide but, in general there are two ways to use the export mechanism.

For software controllers, a file is needed that is consumed by that application. Select from the application menu *Export* and *Export to File*. A File-Save-As dialog opens and you can select the location and filename used to save the export file. UPB Export files have file type UPE. What you do after you have the export file is up to the application you are working with. Refer to that application’s documentation.

The PulseWorx Gateway and PIM-IP have facilities for operation that require an export directly into them. If you have one of those interfaces, select from the application menu *Export* then *Export to Interface*.

Before performing any export, you should make sure that you have:

- Open the properties of each device and on the Icon tab selected a good icon for the device and a good label for it. For a multi-channel device make sure you select only those channels that you are actually using and that each channel has an identifying name.
- Some applications show icons for your rooms along with icons for the devices in that room. In the *Network* ribbon category there is a *Room Icons* button that lets you specify what icons are used for the rooms in your design.

PulseWorx Gateway

The EZ Ribbon also has a PulseWorx Gateway category that contains a number of operations that are specific to that interface. What these are and how they operate is documented in the PulseWorx Gateway User Guide and will not be repeated here.

###end###