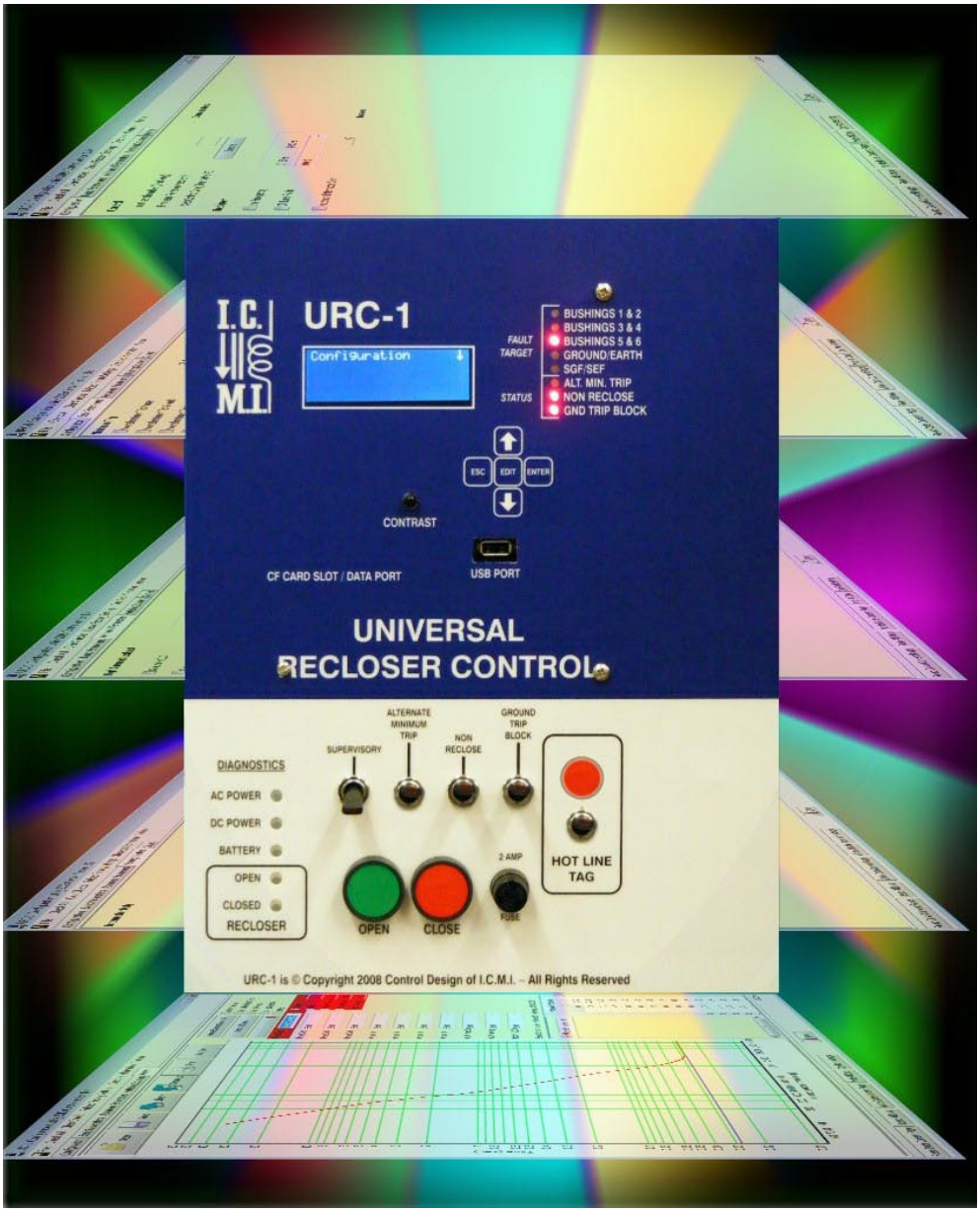
URC-1 CONFIGURATION UTILITY INSTALLATION AND OPERATING GUIDE
09-30-2009



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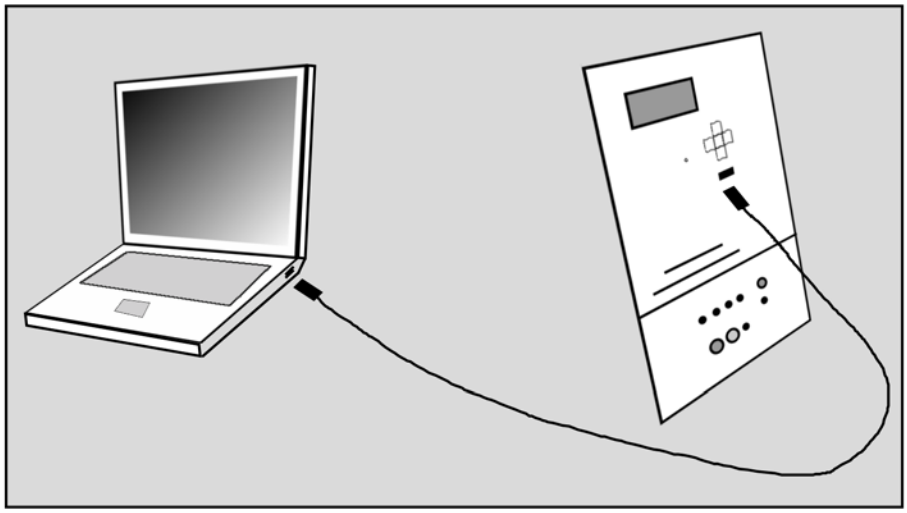
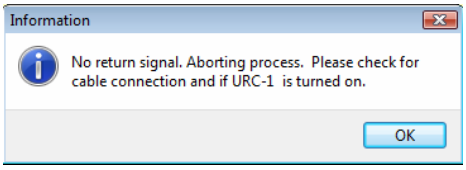
INSTALL, RUN, & CONFIGURE UTILITY (First Use)

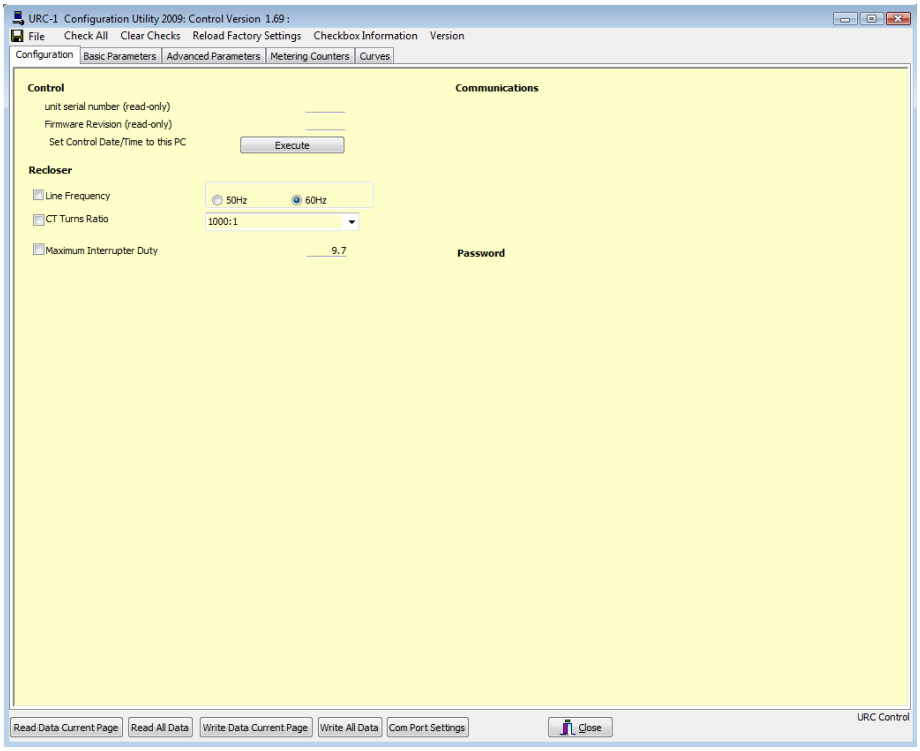
COMMUNICATING WITH A URC-1 THROUGH THE USB PORT

CONNECT USB CABLE FROM COMPUTER TO THE URC-1





OVERVIEW



Start URC-1 Configuration Utility

If The URC-1 configuration utility is not already running on your computer start it now. Select the correct URC-1 version number and click "OK". With the URC-1 Configuration running you should see a window similar to the one pictured above. In the upper left portion of the window 'URC-1 Configuration Utility', the utility version (Year), and the URC-1 version (selected when configuration was started). The lower right portion will display 'URC Control'.

Structure

The URC-1 window structure is divided into three main categories. In this manual these categories are referred to as 'MENU', 'BUTTON' and 'TAB'.

Menu

The Menu is located at the top of the window and consists of the following categories. File, Check All, Reload Factory Settings, Checkbox Information, & Version. See the section titled "MENU" for further details.

Buttons

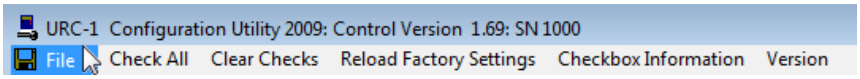
The Buttons are located at the bottom of the window and consist of the following. Read Data Current Page, Read All Data, Write Data Current Page, Write All Data, Com Port Settings, & Close. See the section titled "BUTTONS" for further details.

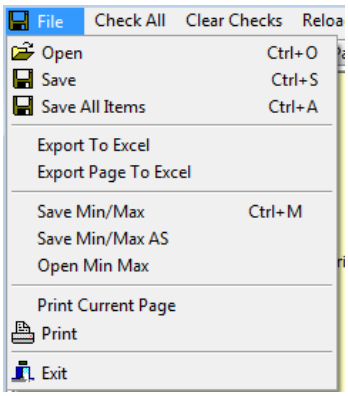
Tabs

The Tabs Are located Beneath the Menu. By pressing on a tab, the page that is associated with that tab will be displayed. These Tabs (or pages) consist of data and settings of the URC-1. The following is a list of the Tabs. Configuration, Basic Parameters, Advanced Parameters, Metering/Counters, & Curves. See the section titled “TABS” for further details.

COMMUNICATING WITH A URC-1 THROUGH THE USB PORT

MENU



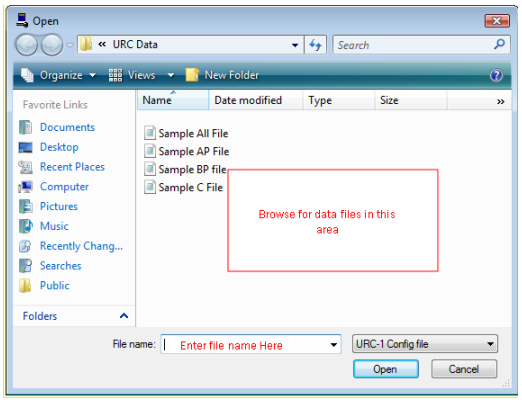


File

The first Heading in the menu is **File**. When selected it opens the File Menu. The File Menu is used to perform a verity of functions such as opening, saving, exporting, and printing various URC-1 related files. This section details how to use each function in the File Menu. See sample screen at right for a listing of the file menu functions.

Open

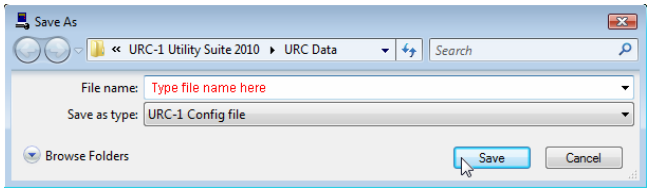
The first item under the File menu is **Open**. **Open** is used to open a previously saved URC-1 configuration file. Once opened the file can be viewed, edited, then re-saved (see **SAVE** or **Save As**), or written to the URC-1 (See **Write Data Current Page** or **Write all Data** in the **BUTTONS** section). To open a file click on **Open** (under the file menu) then type in the file name that you wish to open then click the open button. You can also browse for the file and click to select then click the open button or just double click the file to open. See screen image at right.



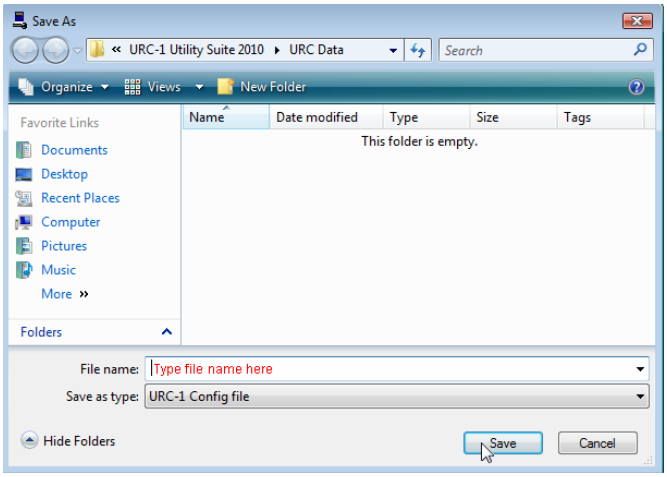
Note: Before opening a file clear any check boxes for items that you wish to "read" from the file or click on clear all checks on the menu bar (see Clear Checks Pg.__ in this section).

Save

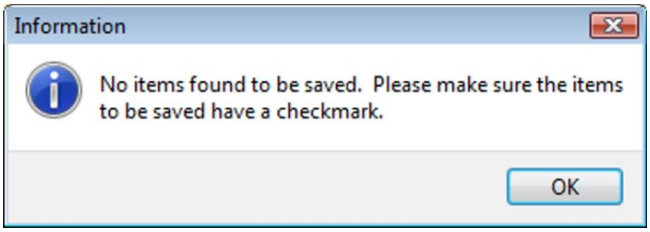
The second item under the File Menu is **Save**. **Save** is used to save a recently created or modified configuration file. The source of a modified file can either be opened from a file or downloaded from a control.



To save a file open the File Menu, click on **Save** type the file name then press the save button. You can also browse the folders for a save location by clicking on "Browse Folders". See screen images at right.



Note: check any items that you wish to write to the saved file or click on "check all" before saving the file. If no items are checked the dialog shown at right will appear.

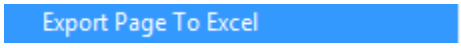


Save All Items

Save All Items acts the same as **Save** except that all item checkboxes are automatically checked when this option is selected.

Export to Excel

Export to Excel when selected will open Excel and export all data to an Excel spreadsheet.



Export Page To Excel

Export Page To Excel when selected will open Excel and export the active tab (or page) to an Excel spreadsheet.

Save Min/Max Ctrl+M

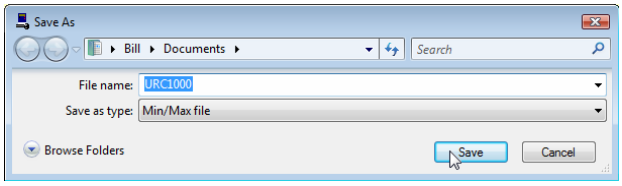
Save Min/Max

Save Min/Max when selected will automatically create/append a Min/Max file called URC followed by the serial number of the control that is connected to the computer. For example: If the serial number of the URC-1 is "1234" the file would be named **URC1234**. This file can then be opened and reviewed at a later time (See **Open Min/Max**).

Save Min/Max AS

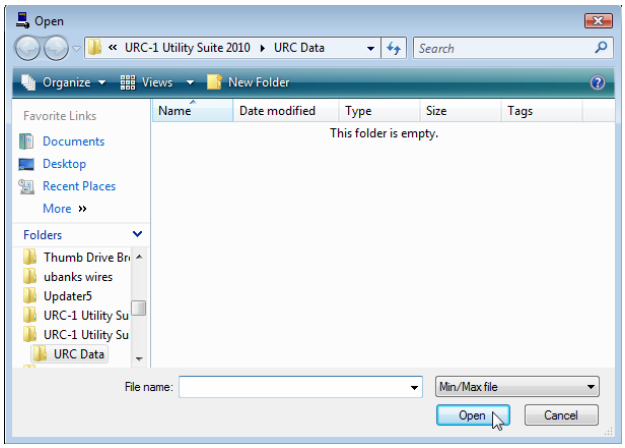
Save Min/Max As

Save Min/Max As is similar to **Save Min/Max** except instead of automatically naming the file it will create/append a Min/Max file that is named by the user. For example: If you had already saved a file called "URC1234" in the data directory and did not want to append it you could give the file a new name or you could save it in another directory. This file could also be opened and reviewed at a later time (See **Open Min/Max**).



Open Min/Max

Open Min/Max when selected is used to open a Min/Max file for review. To open a Min/Max file press **Open Min/Max** type in file name or browse for file. Then click the open button.

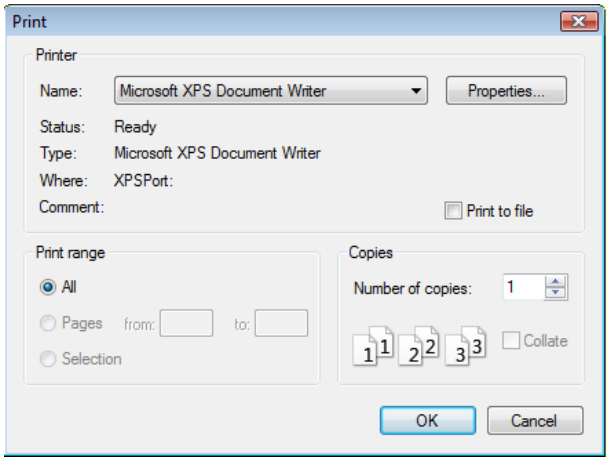


Print Current Page

Print Current Page

Print Current Page when selected is used to print a report consisting of the data located in the active tab (or page) to hard copy for archival purposes or distribution.

To print the active tab press Print Current Page. Select the printer that you want to print to (if not already selected) type in number of copies to print (if more than one copy is desired) then press OK.



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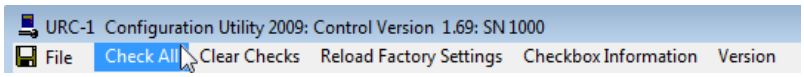
Print

Print when selected is used to print a report consisting of the data located in every tab (or page) to hard copy for archival purposes or distribution.

To print the all tabs press Print. Select the printer that you want to print to (if not already selected) type in number of copies to print (if more than one copy is desired) then press OK.

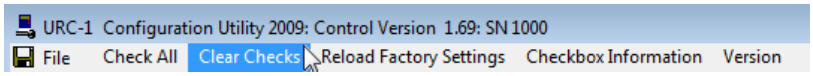
Exit

Exit when selected will exit the URC-1 Configuration Utility.



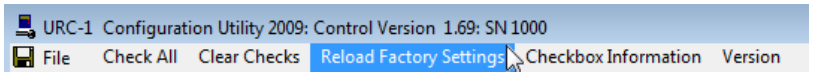
Check All

By Clicking on **Check All**, all writeable item check boxes will be checked, indicating that all items will be written to when either saving to a file or writing to a control. Conversely when reading from a file or downloading from a control the checked items will be ignored and not overwritten by any data from the file or from the control.



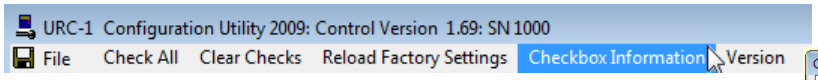
Clear Checks

By clicking on Clear Checks all writable item check boxes will be cleared of check marks, overwritten with data from the file or data from the control. Conversely when writing to a file or to the control all settings will be ignored and not written.



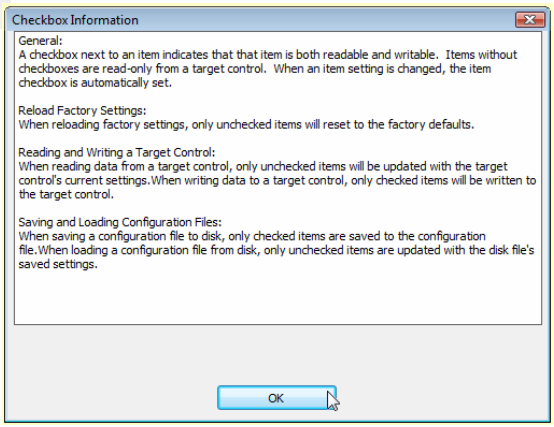
Reload Factory Settings

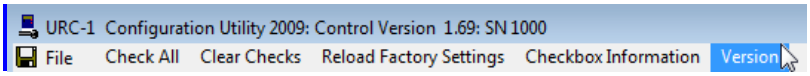
By clicking on Reload Factory Settings all unchecked data item will be overwritten by the factory default data. Any checked items will not be overwritten.



Checkbox Information

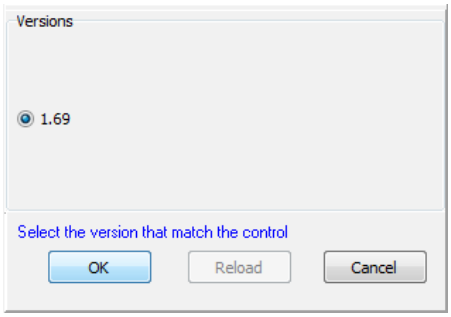
Clicking on Checkbox Information will open the checkbox information dialog box. See screen shot shown at right.





Version

Clicking on Version will open the version selection box. The version selection box allows you to switch the URC-1 version this can be useful when working with multiple controls which have different versions of firmware installed.



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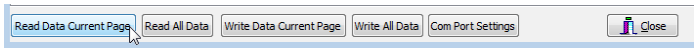
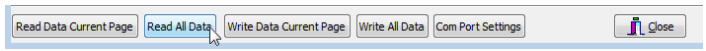
BUTTONS



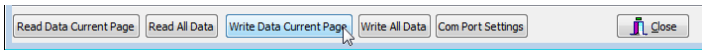
Read Data Current Page

Pressing the **Read Data Current Page** button will read all control settings on the active Tab (or page) that does not have a check in its checkbox.



Read All Data

Pressing the **Read All Data** button will read all control settings (all pages) that does not have a check in its checkbox.

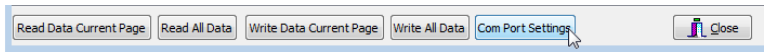


Write Data Current Page

Pressing the **Write Data Current Page** button will write all settings on the active Tab (or page) to the control that has a check in its checkbox.

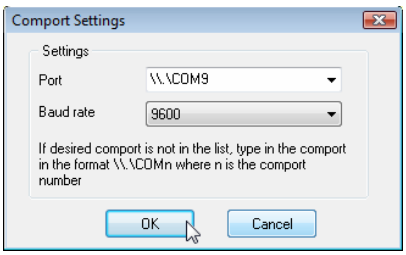
Write All Data

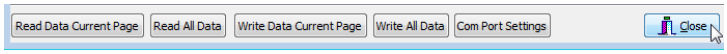
Pressing the **Write All Data** button will write all control settings (all pages) to the control that has a check in its checkbox.



Com Port

Pressing the **Com Port** Settings button will open the Comport settings box. The Comport settings box is used to select the com port that you will be using to communicate to the control. It is also used to set the Baud rate of the selected port.





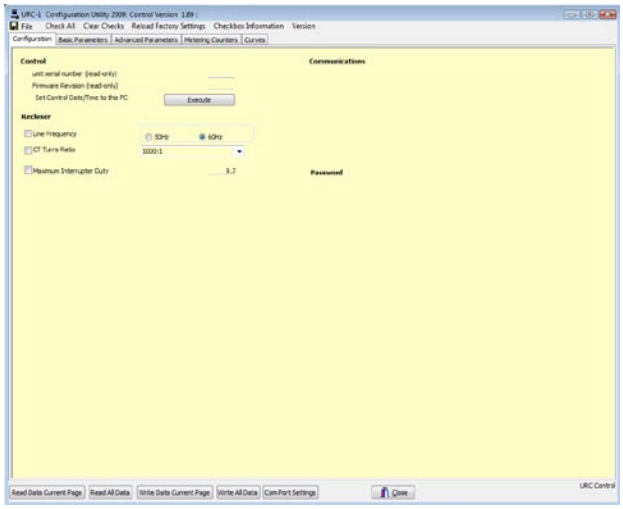
Close

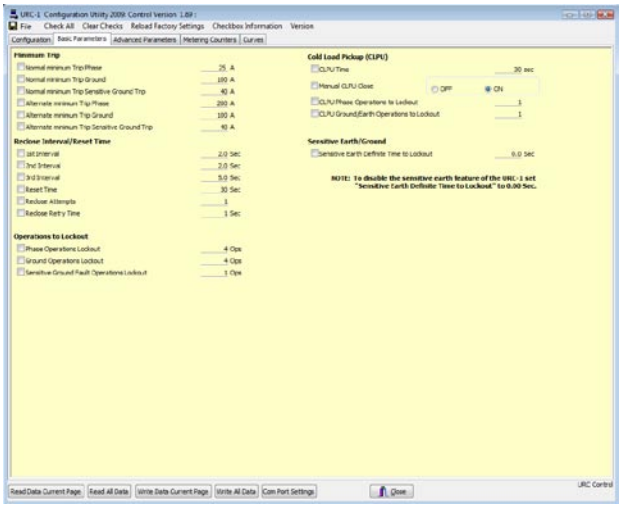
Pressing the close button will exit the URC-1 Configuration Utility.

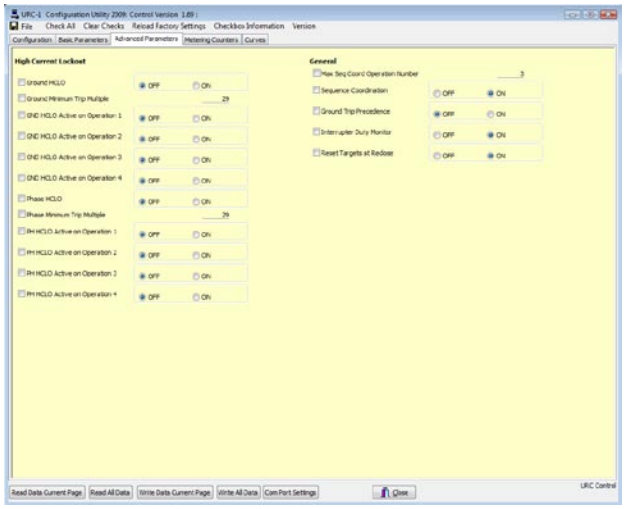
TABS

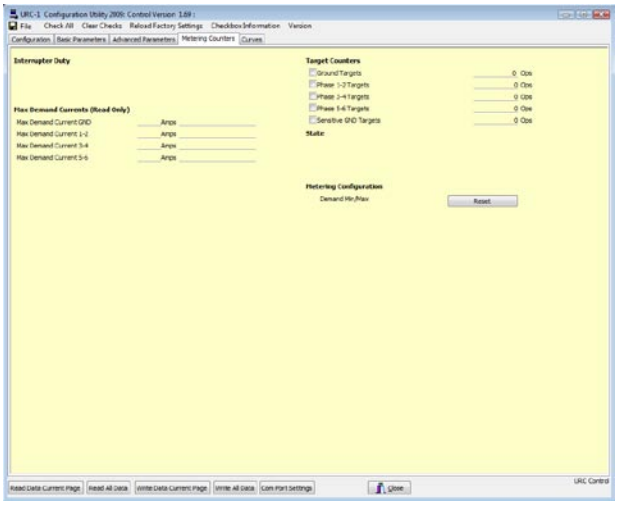
Overview

The structure of the URC-1 configuration utility was designed to preserve the menu of the URC-1 as closely as possible. This structure consists of three levels (except the Curves tab; *See Curves tab for details*) Tabs, headings, and Data Items. The tabs on the URC-1 configuration utility closely resemble the menu (and are in the same order as) the headings of the URC-1 control menu (except the Curves tab; S*ee Curves tab for details*). The headings under each tab closely resemble (and are in the same order as) the USC-1 sub-menu headings (except headings under the curve tab; S*ee Curves tab for details*). The items under each heading of the configuration utility closely resemble (and are in the same order as) the individual data items of the USC-1. See below for a screenshot example of each tab. A detailed instruction for the Curves Tab will follow on the next page.







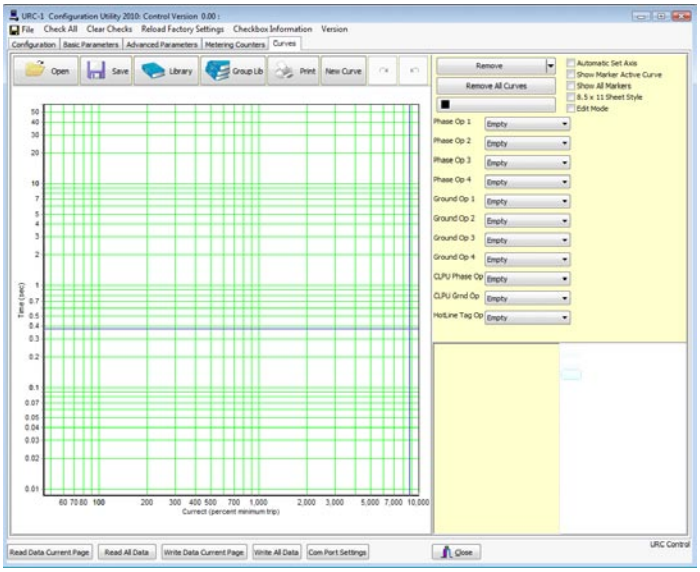


CURVES TAB

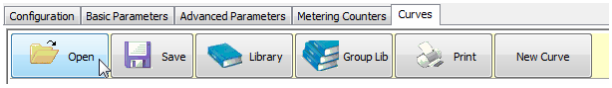
(CURVE EDITOR)

Introduction

Because of the functionality needed for editing, saving, and recalling recloser curves the Curves Tab is distinctly different than the other tabs of the URC-1 in that it acts as a utility within a utility (complete with its own open, save, and editing features). Because of its independence from the rest of the URC-1 Configuration utility it will be referred to, from this point on, as the curve editor. With the curve editor you can open existing curves, create custom curves, customize existing curves to suite particular needs, and more. This section is intended to familiarize you with the URC-1 Curve Editor tools. The screenshot at right is an example of how the curve editor appears in the utility when it is first opened.

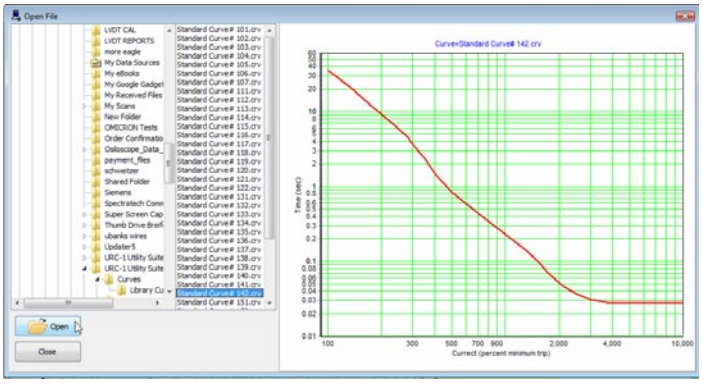


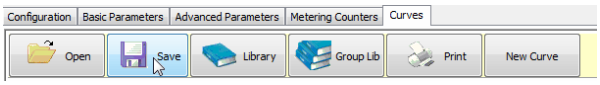
Button Bar

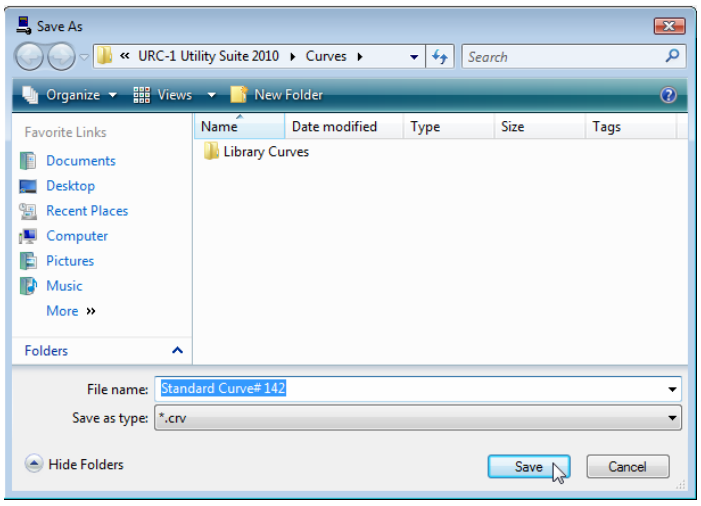


Open

Press the Open Button to open previously saved (see Save) Custom Curves.

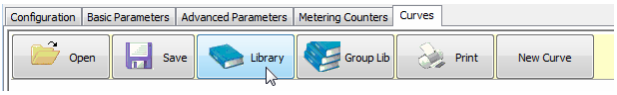


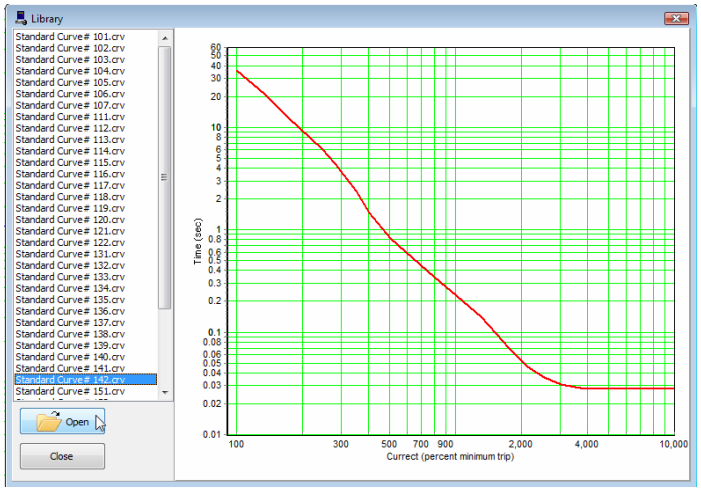




Save

Press the save button to save newly created custom curves. *Note: Use a file name that will be easy to remember.*

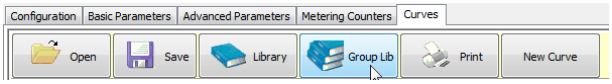


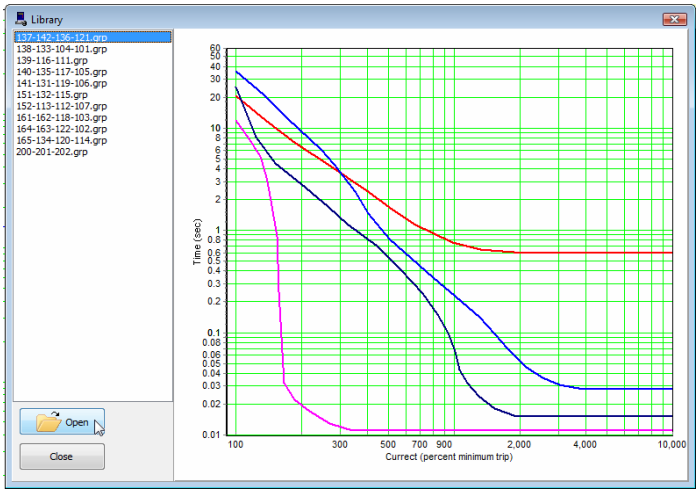


Library

Press the Library button to open the Standard curves library. When the library is opened select the desired curve, verify on the curve the graph then press the open button.

After the Curve is opened it will appear on the Curve Editor graph along with any other curve(s) that might already be on the graph.





Group Library

Press the Group Library button to open the curves group library. When the group library is opened select the desired curve group, verify the group on the graph then press the open button.

After the Curves are opened they will appear on the Curve Editor graph along with any other curve(s) that might already be on the graph.

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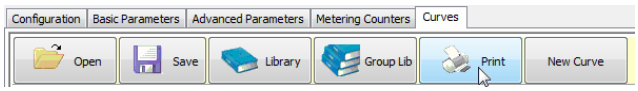
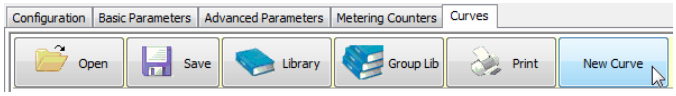


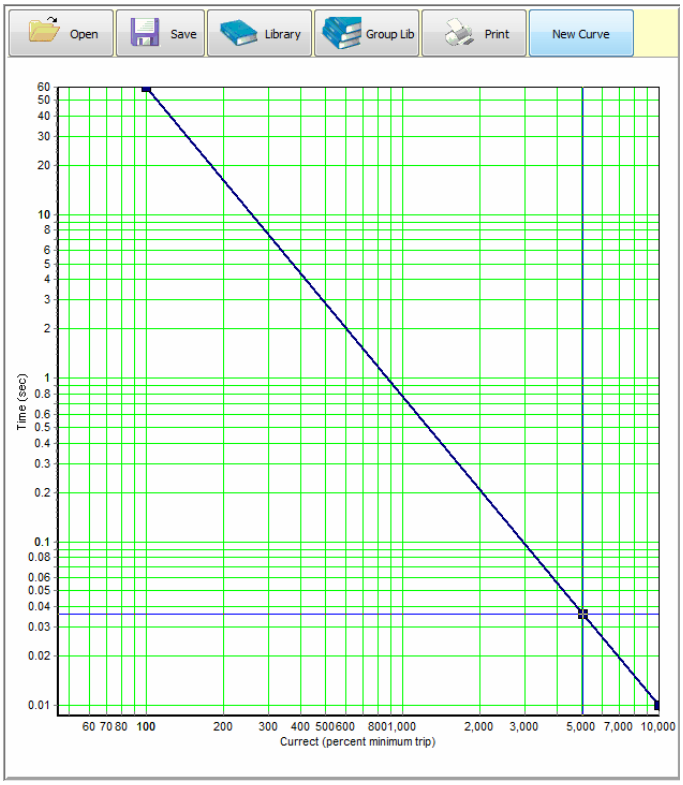
Print

Press the Print Button to print a copy of the graph with curve (or curves) for archival purposes.



New Curve

Press the New Curve Button to open a new curve for editing into a custom curve.



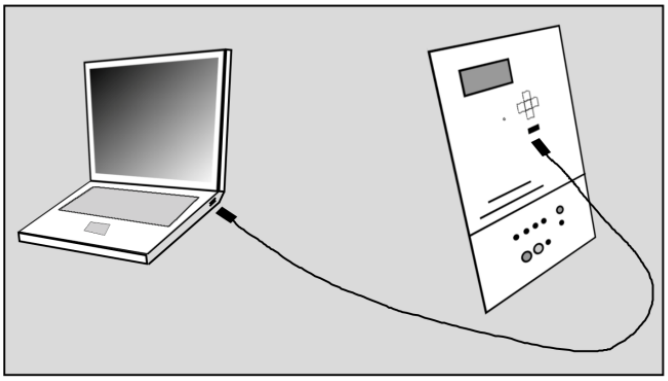
EXAMPLE CONFIGURATION

Introduction

In the previous sections of this manual we discussed the URC1 Configuration Utility from the perspective of the user interface. In this section (and the following section) we will discuss the Configuration Utility from the perspective of the user. The following exercise is intended to familiarize the user with the URC-1 Configuration Utility for the purpose of "loading" control settings into the URC-1. These settings are not based on a real case scenario and therefore should not be used in a "real world" application; they exist only as an exercise to familiarize the user with the procedure for making a settings file and writing it to a URC-1.
The first part of this section consists of a sample settings worksheet (a blank copy of this worksheet is available for download from ICMI or in the URC-1 Operator's Guide). This sample worksheet is designed to coincide with the settings values that will be entered by the user while following this exercise. If the user desires, the user can substitute other (real world) settings into this exercise. In the name of simplicity it is recommend that the user follow the sample on their first "go 'round" with the URC-1 Configuration Utility.

Getting Started

Connect your computer to the URC-1 recloser control with the proveded USB cable. Start the URC-1 Configuration Utility. Check the USB connection by "reading" data from the control. Once communication has been verified clear all checks and reload the factory default settings.



The following pages contain configuration information and sample screenshots with the configuration transcribed onto them. The screen shots are presented in the order of the setpoints. Next to each screenshot there will be a breif description of each item in the screenshot (including non editable points).

URC-1 Configuration Settings Worksheet (Page 1)

Unit Serial Number _____999_____ Firmware Rev._____1.69_____ Other_____Outer Sub_____

CONFIGURATION

Recloser

Line Frequency _____60_____ **Hz**

Ct Turns Ratio _____1000_____ **:1**

Max Interrupter Duty _____100_____

Communications

No Comm Settings at this time

Password

No password setting at this time

BASIC PARAMETERS

Minimum Trip

Normal Min Trip Phase _____400_____ **A**

Normal Min Trip GND _____250_____ **A**

Nor Min Trip Sensitive GND _____40_____ **A**

Alt. Min Trip Phase _____200_____ **A**

Alt. Min Trip GND _____125_____ **A**

Alt. Min Trip Sensitive GND _____20_____ **A**

Reclose Intreval/Reset Time

1'st Interval _____5_____ **Sec**

2'nd Interval _____5_____ **Sec**

3'rd Interval _____10_____ **Sec**

Reset Time _____60_____ **Sec**

Reclose Attempts _____10_____

Reclose Retry Time _____5_____ **Sec**

Operations To Lockout

Phase Ops to Lockout _____4_____ **Ops**

GND Ops to Lockout _____3_____ **Ops**

Sensitive Gnd Ops to Lockout _____2_____ **Ops**

COLD LOAD PICKUP

CLPU Time _____30_____ **Sec**

Manual CLPU Close ☐ **Off** ☑ **On**

CLPU Phase Ops to Lockout _____3_____ **Ops**

CLPU GND/Earth Ops to L.O. _____2_____ **Ops**

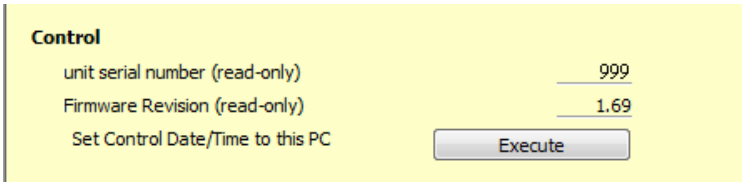
SENSITIVE EARTH/GND

Sensitive Earth Definite Time to Lockout _____90_____ **Sec**

CONFIGURATION TAB

Control

Unit serial number;
Shows the serial number of the URC-1 control.

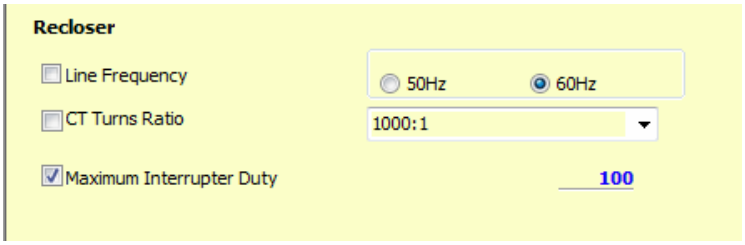


Firmware Revision;
Shows the firmware that resides in the control.

Set Control Date/Time to this PC
Used to sync the control time and date with the computer click on the Execute button.

Recloser

Line Frequency;
Used to set the Line frequency. Because **60** Hz is the default setting you will not need to edit this Item.



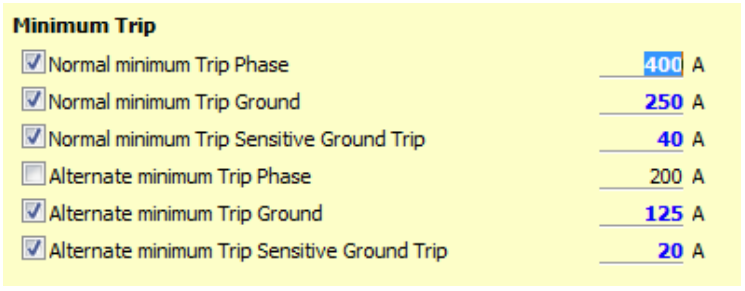
CT Turns Ratio;
Used to set the current ratio. Because **1000**:1 is the default setting you will not need to edit this Item.

Maximum Interrupter Duty:
Enter **100** into this set point. Notice that the checkbox is automatically checked when the value is edited. This automatic feature is included to insure that an edited item will be sent to the control when the upload command is sent.

BASIC PARAMETERS TAB

Minimum Trip

Normal minimum Trip Phase;
Enter **400** into this set point.



Normal minimum Trip Ground;
Enter **250** into this set point.

Normal minimum Trip Sensitive Ground;
Enter **40** into this set point.

Alternate minimum Trip Phase;
Because **200** amps is the default you do not need to edit this item.

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Alternate minimum Trip Ground;
Enter **125** into this set point.

Alternate minimum Trip Sensitive Ground;
Enter **20** into this set point.

Reclose Interval/Reset Time

1st Interval;
Enter **5** sec into this set point.

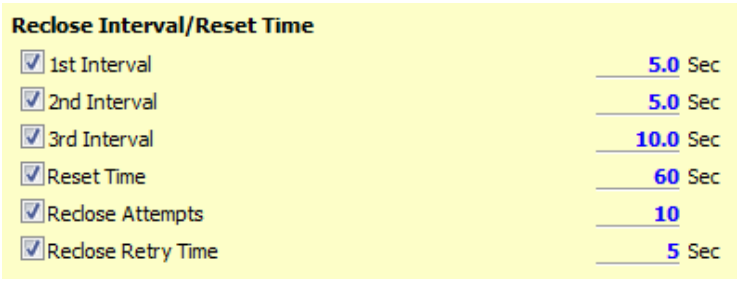
2nd Interval;
Enter **5** sec into this set point.

3rd Interval;
Enter **10** sec into this set point.

Reset Time;
Enter **60** sec into this set point.

Reclose Attempts;
nter **10** into this set point.

Reclose Retry Time;
Enter **5** sec into this set point.

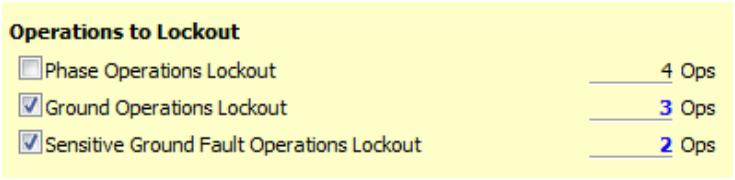


Operations to Lockout

Phase Operations to Lockout;
Used to set phase ops to lockout. Because **4** operations is the default you do not need to edit this item.

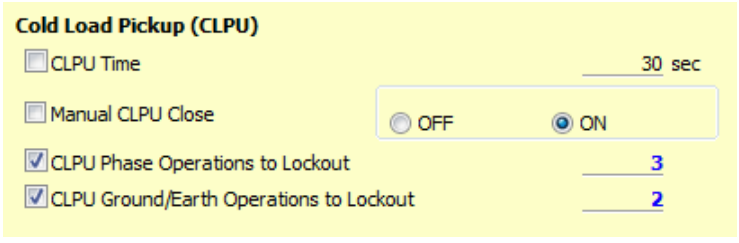
Ground Operations to Lockout;
Enter **3** operations into this set point.

Sensitive Ground Operations to Lockout;
Enter **2** operations into this set point.



Cold Load Pickup

CLPU Time;
Because **30** sec. is the default you do not need to edit this item.



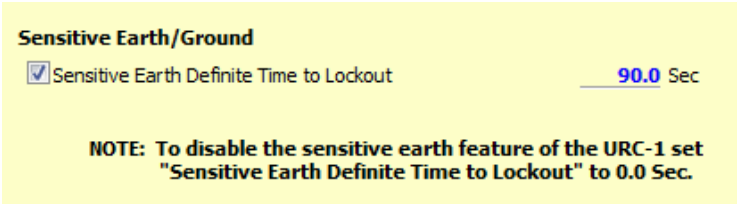
Manual CLPU Close;
Used to activate Manual CLPU Close. Because **ON** is the default you do not need to edit this item.

CLPU Phase Operations to Lockout;
Enter **3** operations into this set point.

CLPU Ground/Earth Operations to Lockout;
Enter **3** operations into this set point.

Sensitive Earth/Ground

Sensitive Earth definite Time to Lockout;
Enter 90 sec into this set point.



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URC-1 Configuration Settings Worksheet (Page 2)

Unit Serial Number ____*999*____ Firmware Rev.____*1.69*____ Other_*Outer Sub*____

ADVANCED PARAMETERS

HIGH CURRENT LOCKOUT

GND HCLO	☐ Off	☑ On	Phase HCLO Active on Op1	☐ Off	☑ On
GND Minimum Trip Multiple	*30* A		Phase HCLO Active on Op2	☑ Off	☐ On
GND HCLO Active on Op1	☐ Off	☑ On	Phase HCLO Active on Op3	☐ Off	☑ On
GND HCLO Active on Op2	☑ Off	☐ On	Phase HCLO Active on Op4	☑ Off	☐ On
GND HCLO Active on Op3	☐ Off	☑ On	**General**		
GND HCLO Active on Op4	☑ Off	☐ On	Max Seq. Coord. Op. Number	*3*	
Phase HCLO	☐ Off	☑ On	GND Trip Precedence	☑ Off	☐ On
Phase Minimum Trip Multiple	*30* A		Interrupter Duty Monitor	☐ Off	☑ On
			Reset Targets at Reclose	☑ Off	☐ On

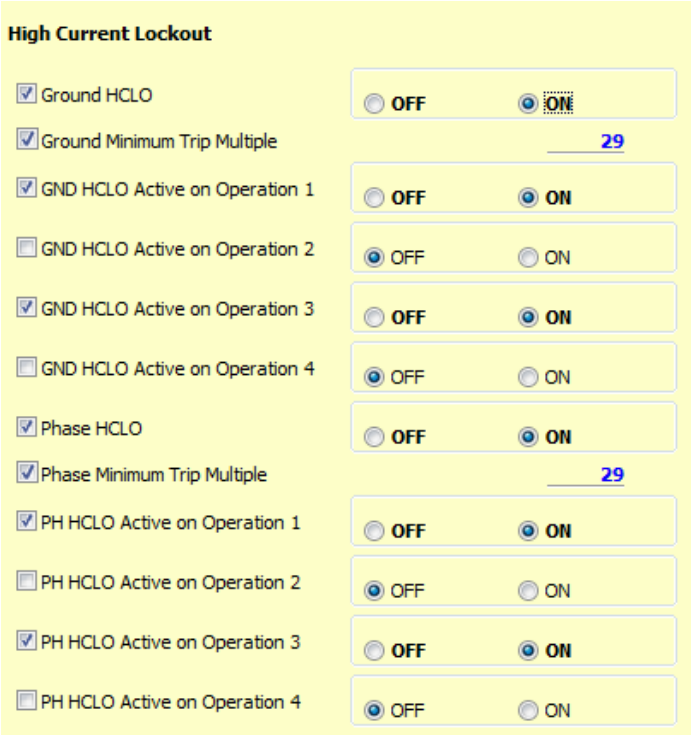
METERING COUNTERS

Target Counters

GND Targets	*0* OPS
Phase 1-2 Targets	*1* OPS
Phase 3-4 Targets	*2* OPS
Phase 5-6 Targets	*3* OPS
Sensitive GND Targets	*4* OPS

ADVANCED PARAMETERS TAB

High Current Lockout



Ground HCLO; Select **ON** for this set point.

Ground Minimum Trip Multiple; Enter **29** into this set point.

GND HCLO Active on Operation 1; Select **ON** for this set point.

GND HCLO Active on Operation 2; Because **OFF** is the default you do not need to edit this item.

GND HCLO Active on Operation 3; Select **ON** for this set point.

GND HCLO Active on Operation 4; Because **OFF** is the default you do not need to edit this item.

Phase HCLO; Select **ON** for this set point.

Phase Minimum Trip Multiple; Enter **29** into this set point.

PH HCLO Active on Operation 1; Select **ON** for this set point.

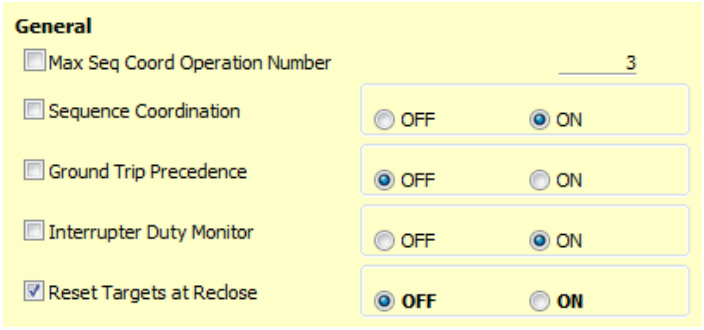
PH HCLO Active on Operation 2; Because **OFF** is the default you do not need to edit this item.

PH HCLO Active on Operation 3; Select **ON** for this set point.

PH HCLO Active on Operation 4; Because **OFF** is the default you do not need to edit this item.

General

Max Seq Coord Operation Number; Enter 3 operations into this set point.



Sequence Coordination; Because **ON** is the default you do not need to edit this item.

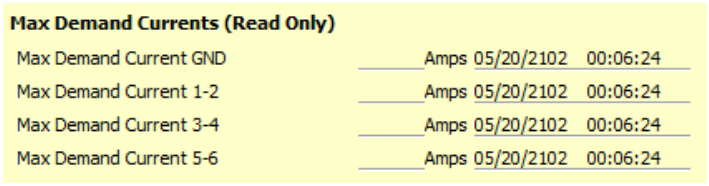
Ground Ttrip Precedence; Because **OFF** is the default you do not need to edit this item.

Interrupter Duty Monitor; Because **ON** is the default you do not need to edit this item.

Reset Targets at Reclose; Select **ON** for this set point.

METERING COUNTERS TAB

Max Demand Currents



URC-1 Configuration Settings Worksheet (Page 3)

Unit Serial Number ***999*** Firmware Rev. ***1.69*** Other ***Outer Sub***

CURVES

Slot	Curve		Modifier	Slot	Curve		Modifier
Phase Op 1	_____	☐Multiplier	_____	GND Op 1	_____	☐Multiplier	_____
		☑Adder	_____			☐Adder	_____
		☐ Min Res. Time	_____sec			☐ Min Res. Time	_____sec
		☐ HCT Ratio	_____			☐ HCT Ratio	_____
		HCT Time	_____sec			HCT Time	_____sec
Phase Op 2	_____	☐Multiplier	_____	GND Op 2	_____	☐Multiplier	_____
		☐Adder	_____			☐Adder	_____
		☐ Min Res. Time	_____sec			☐ Min Res. Time	_____sec
		☐ HCT Ratio	_____			☐ HCT Ratio	_____
		HCT Time	_____sec			HCT Time	_____sec
Phase Op 3	_____	☐Multiplier	_____	GND Op 3	_____	☐Multiplier	_____
		☐Adder	_____			☐Adder	_____
		☐ Min Res. Time	_____sec			☐ Min Res. Time	_____sec
		☐ HCT Ratio	_____			☐ HCT Ratio	_____
		HCT Time	_____sec			HCT Time	_____sec
Phase Op 4	_____	☐Multiplier	_____	GND Op 4	_____	☐Multiplier	_____
		☐Adder	_____			☐Adder	_____
		☐ Min Res. Time	_____sec			☐ Min Res. Time	_____sec
		☐ HCT Ratio	_____			☐ HCT Ratio	_____
		HCT Time	_____sec			HCT Time	_____sec

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URC-1 Configuration Settings Worksheet (Page 4)

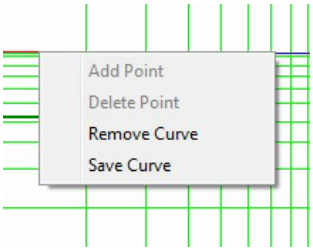
Unit Serial Number _____*999*_____ Firmware Rev._____*1.69*_____ Other_*Outer Sub*_____

CURVES Cont.

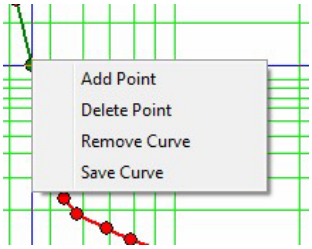
Slot	Curve	Modifier	Slot	Curve	Modifier
CLPU Phase Op_____	☐Multiplier	_____	CLPU GND Op _____	☐Multiplier	_____
	☐Adder	_____		☐Adder	_____
	☐ Min Res. Time	_____sec		☐ Min Res. Time	_____sec
	☐ HCT Ratio	_____		☐ HCT Ratio	_____
	HCT Time	_____sec		HCT Time	_____sec
Hot Line Tag Op_____	☐Multiplier	_____			
	☐Adder	_____			
	☐ Min Res. Time	_____sec			
	☐ HCT Ratio	_____			
	HCT Time	_____sec			

TIPS & TRICKS

In the Curve Editor Right click for the following menu. From this menu you can save the selected curve, remove the selected curve. Note: If the editor is not in the edit mode Add Point and Delete point will be grayed out indicating these functions are not available in read only mode.



While in the edit mode you can also add a point to the selected curve or remove a point from the selected curve.



In the configuration utility you can reset individual settings by pressing “Cntrl+D”.

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