**RX MONITORING SERVICES, INC.** 

# **Cx Plus Monitor<sup>™</sup> Comprehensive Instructions**



INSTALLATION INSTRUCTIONS OF THE POWER ANALYZER



# WARNING-WARNING-WARNING

Read and understand this manual before connecting device.

Death, fire or serious injury can occur from using equipment outside of safety ratings or improper use.

Installation must be performed from qualified personnel only. Follow applicable safety work practices, including using the proper personal protective equipment during install.

# Always Power Down All Electrical Circuits Before Installation

System must be powered from grounded receptacle. These steps require system-trained or local qualified personnel only!

ADANGER

THIS INFORMATION IS PROPERTY OF RX MONITORING SERVICE, INC • 1 SUNDIAL AVE STE 117N MANCHESTER, NH 03103 TELEPHONE: (603) 666-6606 • EMAIL: SUPPORT@RXMS.COM • WEB: WWW.RxMS.COM



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## INSTALLATION MANUAL

# **Definitions**

# • WARNING

This statement is to reinforce the practice of certain conditions may cause physical bodily harm or loss of life.

# CAUTION

This statement is to reinforce the practice of certain conditions may cause physical damage to the Cx Plus Monitor<sup>™</sup>, accessories, equipment or property.

# <u>Abbreviations</u>

CT's :Current TransducersRope Probes :Rogowski coil current transducersCx Plus:Power MonitorMonitor :Power Monitor (Cx)

Wireless Probes: EWE: Site: Wireless add-on's for power monitor External Wireless Extensions Cx Plus Monitor® data set.

# <u>Symbols</u>

The following are (IEC) symbols are used on this document or on the power monitor and their definitions.



This symbol indicates AC or DC volrage or current

This symbol indicates high voltage. It calls your attention to items or operations that could be dangerous to you and other persons operation this equipment. Read the message and follow the instructions carefully.



This symbol indicates safety ground conductor.

This symbol indicates that caution is necessary when operating the device or control close to where the symbol is placed, or to indicate that the current situation needs operator awareness or operator action in order to avoid undesirable consequences.



# WARNING, to avoid electric shock or fire:



- Before using the power monitor inspect wireless probes, voltage probes, current probes, leads and accessories for mechanical damage or broken plastic and call Rx Monitoring Services, Inc. for replacements.
- Wear proper Personal Protective Equipment, including safety glasses and insulated gloves when making connections to power circuits.
- Use only current probes, test leads, and adapters supplied with equipment.
- Remove unnecessary voltage leads or accessories that are not in use.
- Make sure the power monitor is properly connected through the power cord to protective earth ground.
- Do not insert foreign objects into connectors, only use approved accessories.
- Never open the equipment, there are no customer replaceable parts.
- Never use equipment outside or when condensing water is present.
- Use proper lockout procedures on circuits under test.
- Hands, boots and the working area must be dry when making connections to power system.
- Do not operate the equipment or probes around volatile gas or vapor.

# \*\*\*\*\*\*\* WARNING DO NOT EXCEED CAT RATINGS \*\*\*\*\*\*\*

# **Voltage Ratings:**

	<b>Power Monitor</b>	: CAT III - 600V	Pollution Degree 2
	Rope CT's	: CAT III - 1000V	Pollution Degree 2
4	Clamp CT's	: CAT III - 600V	Pollution Degree 2
×	Wireless DC	: CAT II - 600V	Pollution Degree 2
	Wireless DCx	: CAT II - 150V	Pollution Degree 2

**Quick Reference Guide for the Power Monitor:** Please refer to the Installation Instructions for full details on how to install the Power Monitor on the following pages and the User Manual for more explanation.



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# Follow these simple steps:

- . Unpack the Power Monitor
- 2. Power down the load and turn off the power at the main circuit breaker
- 3. Connect the Alligator or Strip Voltage Leads
- 4. Connect the Current Probes
- 5. Connect the wired Temp/Hum Probe, if supplied
- 6. Power up the Power Monitor
  - . Power up Load Circuit and System
  - . Turn on Wireless Peripherals, if supplied
- 9. Connect to Live-View<sup>TM</sup>
- 10. Download Data
  - 1. Fill out Site Info and Detailed Site Log
  - 2. For power quality testing, let the system run for approximately a week and then remove the Power Monitor.

# WARNING! HIGH VOLTAGE!

The above steps require system-trained personnel or local qualified personnel only. (i.e. a local electrician)

Site Information Plass call us (03) 686-665 s0 bdofe intaining the powr moving stress Site Registration # Site Registration #	receiled	eg services	Please call us at (623) 666-660 x0 before installing the power monitor and reference the following Site Registration # Site Registration #:
Please return all equipment by:	Site Nam		Your Name:
Installer Information	Equipme	nt ID/Serial #:	Your Email:
Name/Company:	Date	Time	Event - Equipment Power Up/Down, Environmental Conditions, Erro
Phone #: Email:			
Additional Emails:			
Customer Information			
lame/Company ()f Different):			
Phone #: Email:			
Your Equipment Information		_	
ust Code/Eq. Serial #: Type of Eq.:			
Date/Time of Monitor Installation: System Voltage:			
What Leads Were Plugged Into the Monitor?: [L1] L2 L3 [Neutral [Ground]			
Power Protection Brand/Model If Used:			
Reason for Monitoring (New Install / Outstanding Issues - Please Describe):			
	Commen	ts:	
Please use the Detailed Site Log to track any System Errors, Resets, Site Issues, etc.		Biogram (III) and	
Rx Monitoring Services, Inc. 1 Sundial Ave STE 117 Manchester, NH 03103	11	Rx Monits	t this log and return with monitor or fax to: 603-666-0509 oring Services, Inc - 1 Sundial Ave STE 117 - Manchester, NH 03103 ophone: (803) 866-6808 - Support: Ext. 0 - Web: www.rxms.com

# INSTALLATION MANUAL

# 1. Unpack the Power Monitor



- a. Check the packing list to make sure all of the requested equipment was received.
- b. Position equip,emt near the connection point to be tested - be sure the Power Monitor is positioned in an area where it will not be interfered with or dropped or sustain water damage.
- c. Be sure a 120V-240V receptacle is available for powering the device.

# 2. Power Down System and Turn Off Power at the Main Breaker



To ensure safe working conditions make sure to remove voltage from testing source. (Lockout if required)



# 3. Connect the Voltage Leads



a.

**Connect Voltage Leads** 



Connect Banana Leads

- a. Confirm that the system under testing is powered down and that power at the main circuit breaker is off.
- b. Connect the L1, L2, and L3 voltage leads (alligator clip or strip) to the main circuit breaker. Connect the N lead to the Neutral bar (if present), and the G lead to the main chassis or the Ground bar.
- c. Connect the right-angle banana plug end of the voltage leads into their corresponding color-coded ports on the front panel of the Power Monitor.

<u>Caution</u>: If running voltage leads out of the panel or system, wrap the "Safety Sleeves" provided in the safety kit around wires at pinch points.

#### **INSTALLATION MANUAL**

# 4. Connect the Current Probes

- a. Connecting the current probes is a crucial part of the data gathering process. Make sure you connect them to ensure that all supporting data is gathered.
- b. Connect the current probes around L1, L2, L3, N & G (or all applicable phases) and make sure that there is only one phase in each current probe.
- c. Make sure that each current probe is encompassing the correct phase and that the direction of the arrow on the probe is pointing toward the load.
- d. Plug the connector end of the current probes into their corresponding ports on the front of the Power Monitor (to the right of the color-coded voltage ports).



<u>Caution</u>: If running CT wires out of the panel or system, wrap the "Safety Sleeves" provided in the safety kit around wires at pinch points.



For Phases, N & Ground (Singles, Gen2 10,000A)



For Phases, N & Ground (Clamp 200A & 10A)



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# 5. Connect the Wired Temperature & Humidity Probe (If Supplied)



- a. Hang the Temp/Hum probe at a minimum height of 6 feet (if possible), and make sure it is not positioned near a door, window, or ventilation unit.
- b. Plug into the port under AUX 1 on the front of the Power Monitor.

# 6. Power up the Power Monitor



# Caution - Always use a grounded receptacle

- a. Plug power cord into grounded receptacle
- b. Plug the supplied IEC cord into the external DC power supply.
- c. Plug the male external DC power supply plug into the Power Monitor.



# 7. Power up load circuit and system

The LCD screen will illuminate when the Power Monitor is on. In about 30 seconds, the full color touch LCD screen will show real-time data, IP address, the date/time, and the percent of storage used.

Three different displays can be shown - Meter Mode, Phasor Diagram, and Waveform Snapshot. Hit "Next" to move from one screen to another.



To change the Power Monitor settings with the display:

- a. Go to the Settings screen
- b. Press the Logging State button to stop the Power Monitor and enable the Current Probe selection switches
- c. Press the type of CT to change Phase CTs (L1, L2, L3), Neutral CT, or Ground CT
- d. Select which AC or DC CT type to switch the meter and press Ok

ENET: 192.168.2.88	Logging	E	PA00235	ENET: 192.168.2.88	Halted		EPA0023
Settings Monitor must be haited for changes	Remote Access [Disabled]	Logging State		Settings	Remote Access [Enabled] Disconnected	Logging State Halted	
Current Probes		CX builty		Current Probes		Cx Battery	
Phase CTs: Neutral CT: 3000A Rope 3000A Rope	Ground CT: 200A Clamp-On		Next	Phase CTs: Neutral CT: 3000A Rope	Ground CT: 200A Clamp-On	Shutdown Now	Nex
Storage				Surage			
2.51 / 57.17 GB R.A.I.D. is Good				2.517 57.17 B R.A.I.D. is Goo			
1/12/2021 15:59:34	4.4%			01/12/2021 _0:20:48	4.4%		
	Halted	E	PA00223	01/12/2021 00:20:48	4.4%	Loggin State	EPA0022
Selecting CT for: N	Halted	A 2000 Gen-2		Settings			EPA0022
CI 200A Clamp-On 3000.	Halted Veutral A Rope		Rope	Settings	Halted	w?	3)
Selecting CT for: 1           200A Clamp-On         3000.	Hatted Neutral A Rope DC/ A Rope DC/	A 2000 Gen-2	Rope	Curre	Halted		EPA0022

To Shutdown using the display:

- a. Unplug and Shutdown prompt will appear
- b. Hit Yes to shutdown now and No for the monitor to continue on battery power until the programmed shut down time expires.
- c. Monitor will beep during shutdown to alert it is turning off.

In addition to the LCD screen, there is a light on the Power Monitor. The light will be blue upon start up and will blink red if the Power Monitor is on but not collecting data.





#### INSTALLATION MANUAL

# 8. Connect to the Power Monitor with Live-View

To use the Live-View<sup>™</sup> program, an Ethernet or Wi-Fi connection must be established to the device.

# There are 3 different connection types

- 1. Ethernet through DHCP network
- 2. Direct Ethernet connection with Cross-Over Cable
- 3. Wi-Fi Ad-hoc (Windows XP & 7 only)

# Ethernet Connection with Cross-Over Cable & Automatic Private IP



- 1. Unplug the Power Monitor wait for shutdown.
- 2. Plug Crossover Ethernet (generally red) cord into side panel.
- 3. Plug opposite end of Crossover Cable into computer running Live-View<sup>™</sup>.
- 4. Plug power DC Power Supply in to the Power Monitor.
- 5. System will power up within 10-15 seconds.
- 6. System will wait 30 seconds before setting automatic IP address. Ex: 169.254.157.253
- 7. Computer running Live-View<sup>™</sup> will need to time-out of its old network (if configured for DHCP) which can take up to 2 minutes.
- 8. Computer should obtain an IP address in the range 169.254.xxx.xxx (Automatic IP Range if set to DHCP).
- Static IP's can also be set in Live-View<sup>™</sup> in the range of: IP: 169.254.0.2 – 169.254.255.250

### Subnet: 255.255.0.0

- (As long as the Static IP is not the same IP as the Power Monitor)
- 10. Computer should now be able to talk using IP address on the display of the Power Monitor.
- 11. Connect using this IP address in Live-View<sup>™</sup>.



# **Ethernet through DHCP network**



- 1. Unplug the Power Monitor wait for shutdown.
- 2. Plug Ethernet cord into side panel.
- 3. Plug DC power supply connector in to the Power Monitor.
- 4. System will get IP address from DHCP server upon startup (10-15 seconds).
- 5. Monitor will display valid IP address on the first line of screen display.
- 6. Computer should now be able to talk using the IP address on the display of the Power Monitor. Connect using this IP address in Live-View<sup>™</sup>.

	ENET: 192.168.2.88	Logging		EPA00235
	Settings	Remote Access [Disabled]	Logging State	
	Current Probes		Cx Battery	
IP address of the Power Monitor used to connect with Live-View <sup>™</sup> .	Phase CTs: Neutral CT: 3000A Rope 3000A Rope	Ground CT: 200A Clamp-On	Shutdown Now	Next
	Storage 2.51 / 57.17 GB R.A.I.D. is Good			
	01/12/2021 15:59:34	4.4%		
	• •	•	•	

# Wireless Access with Mesh Adapter

Rx Monitoring Services, Inc. supplies all adapters for wireless connectivity.

· M	lesh Adapter
Lan1	
	est ·
Lan2	
- i	With -
USB	at D
Power	1 pe

The Mesh adapter (Green) is a Access point with a mesh backend that can link multiple Green Mesh adapters together. They provide ethernet ports and a wireless AP to all reachable Green Mesh adapters.

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# Mesh adapters (Green): Repeat for each Power Monitor



- 1. Plug the Ethernet and USB into the Mesh adapter. (GREEN)
- 2. Plug Ethernet and USB into the Power Monitor.
- 3. Power up the Power Monitor.
- 4. Once powered up, wait 30-40 seconds for Wi-Fi to attach to the Access point, when the adapter attaches the display will show ENET: 172.16.xx.xxx.
- 5. Using a computer or device with 802.11N connectivity attach to the Wireless Network

### For Red Boxes =" RxClientWireless"

For Green Boxes ="WiFi00xxx" (Serial number on bar code)



6. Computer should now be able to talk using IP address on the display of the Power Monitor. Connect using this IP address in Live-View<sup>™</sup>.

	Settings	Logging Remote Access	Logging State	EPA00235
	Monitor must be halted for changes	[Disabled]	Logging	
	Current Probes		Cx Battery	
Power Monitor used ✓ ct with Live-View™.	Phase CTs: Neutral CT: 3000A Rope 3000A Rope	Ground CT: 200A Clamp-On	Shutdown Now	Next
	Storage			
	2.51 / 57.17 GB R.A.I.D. is Good			
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# ł

# Every Cx Plus Monitor<sup>™</sup> will be shipped with the Remote Access feature <u>disabled</u>.

This feature has two modes:

- Remote Assistance: (No User entered) Once enabled, RxMS can access the Cx Plus Monitor<sup>™</sup> remotely.
- Remote Access: Customer and RxMS can access remotely in this mode with a User Name and Password.

# Enable Remote Assistance (RxMS can Access Remotely):

- 1. On the Cx Plus Monitor<sup>™</sup> touch-screen, go to the Settings display.
- 2. Click Logging to stop Logging State.
- 3. Press the Remote Access button, which will show the prompt to change the Remote Access state.
- 4. Touch Yes.
- 5. Settings will show "[Enabled] No User"
- 6. Now that Cx Plus Monitor can be accessed by RxMS. Call RxMS to enable that Cx Plus Monitor<sup>™</sup> as part of your user name or for troubleshooting.

# Enable Remote Access with Live-View<sup>™</sup> (User can Access Remotely):

- 1. Contact RxMS for Remote Access User and Password.
- 2. Open Live-View<sup>™</sup> and connect to Cx Plus Monitor<sup>™</sup> by using the Local tab and inputting the IP Address from the screen then press Connect.
- 3. Click the Stop then Setup.

Site Management Lo		stern Peripherals Network Alarms - 1 Alarms - 2	
Ethernet: Automatic Static:		Remote Access	
IP Address:		User:	
Net Mask:		Test	
Gateway:		Remote Access - Enable	-
Network Time Pro	tocol (NTP):	Allows you to access this monitor remotely if it connected to the internet.	s
Enable Server: 192.168.2.13		For security, the monitor will establish a secure connection to an Rx Monitoring server. You will	ther
Timeout: 15	secs	connect to this server with an Rx provided User/	
Sync	Offset	Call or Email Rx for more details.	

- 4. On the Network tab, click the c Enable under the Remote Acce and input the provided User Name.
- 5. Click Test 2-3 times until it says Connected.
- 6. The Cx Plus Monitor<sup>™</sup> touch-screen should should show "[Enabled] Connected".
- 7. Repeat these steps until all Cx Plus Monitors<sup>™</sup> are connected.

Renate

### To Access Remotely:

- Open Live-View and click Connect.
- Click on the Remote tab.
- Type in the User and Password supplied by RxMS and click to Connect to the right.
- All enabled monitors will show up in the list with the Site ID and Status.
- Each Cx Plus Monitor<sup>™</sup> will be accessible by highlighting it and pressing the bottom right Connect.

ENET: 192.168.2.88	Logging		EPA00235
Settings	Remote Access	Logging State	
Monitor must be halled for changes	[Disabled]	Logging	<b>'</b>
Current Probes		Cx Battery	
Phase CTs: Neutral CT: 3000A Rope 3000A Rope	Ground CT: 200A Clamp-On		Next
Storage			
2.51 / 57.17 GB R.A.I.D. is Good			

Connect.

Local Remote Local Conne

> ENET/WI Enter the Et display on th

Monito

Refresh



e ct		_		P Address	
· · · · · ·	100 100 0 0				1
1:	192.168.2.8	1			
e mo	t IP address that appears a nitor above				-
of th	ne monitors found on your n	etwork below.			-
∠	IP Addr	Site ID	Status	~	-
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1	1 1				
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	s section	ENET: 192.		Loggina	



Monitor         Last Conn         Site ID         Status           EPA00243         3/3/2021 9:02:40 AM         Boiler-usa         Sampling           EPA00281         3/3/2021 9:00:43 AM         Site33975         Sampling           EPA00288         3/3/2021 9:05:45 AM         DaveHous         Sampling	Remote Connec User: UserN Pass:	ame	(	Connect
EPA00281 3/3/2021 9:00:43 AM Site33975 Sampling				
	EPA00281	3/3/2021 9:00:43 AM	Site33975	Sampling

Remo	te A	Access	5
			,



# 9. Power Up and Connect External Wireless Extensions

If your order does not include wireless extensions, please skip section and go to step #10.



**These steps must be followed in the order presented or problems with the wireless communication could occur.** 

# i. Plug Wireless Host into Aux Port 1 of the Power Monitor



Equipment will come pre-programmed from Rx Monitoring Services, Inc. but for any changes in rate of data captured or if additional equipment is added, the instructions to setup peripherals are below (steps ii. and iii.).

# ii. Set Log Rate with Live-View<sup>™</sup> (See User Manual)



# iii. Add Peripherals Serial Numbers and Notes

Use the Peripherals tab in Live-View<sup>™</sup> to configure the Power Monitor's external peripherals.

### Click "Enable Wireless" to configure wireless mode.

- To add new peripherals, enter the serial number in the text box and click "Add".
- Remove peripherals by highlighting the serial number and clicking "Remove".
- User the "Clear" button to remove all of the currently entered serial numbers.
- "Front Display" selects which peripherals readings are to be displayed on the from panel of the Power Monitor.



	ogs Triggers			Alarms - 1	Alarms - 2		
Read Temp/Hum		Front Displa	iy:				
<u> </u>		400/4					
Wireless Enable Wireless	Serial #	No	te	Туре	Reading		
	40574	Isle 1		T/H	77.3/40.4		
Read	40579	Isle 2		T/H	76.9/40.9		
Serial #	40841			DCV	1.106		
	50013-01	bat 1-1	L1-1 DCX 9.6		9.601		
	50013-02	bat 1-2		DCX	-4.786	=	
	50013-03			DCX	0.010	-	
	50013-04			DCX	0.007		
	50013-05			DCX	0.010		
	50013-06			DCX	0.009		
Remove	50013-07			DCX	0.009		
	50013-08			DCX	0.010		
Clear	50013-09			DCX	0.013	-	
	<i>1</i> 17						
	Lo	ad Save	As			ок	
					6		

### Peripheral Serial Number

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# INSTALLATION MANUAL

# iv. Power Up Units & Confirm Communication

- a. For the temperature & humidity and DC-1 probes, turn on by pressing the button at the top. For the DCx<sup>™</sup>, switch is on the front. The DCw and DC Current probes are wall powered and have no on/off switch.
- b. An LED will blink red a number of times and then blink green when it has established communications with the Power Monitor.



c. Click "Read" in Live-View<sup>TM</sup>.

If it does not blink red or green or flickers red, check your batteries or outlet power. If it does not blink green, make sure you entered the serial number correctly and the Wireless Host is blinks.

- d. Current reading should appear as well as type for each of the peripherals. (This can take up to the log interval to appear.)
- e. Any peripherals that show a blank reading have not established or have lost communication with the Power Monitor. Turn those peripherals off, wait 5 seconds, then turn on to have it re-register with the host

Read	Logs Triggers	Front Display:	Network Alarms - 1	Alarms - 2	
Temp/Hum		40574		-	_
Enable Wireles	ss Serial # 40574	Note	Туре	Reading 77 3/40 4	^
Read	40579	Isle 2	7/H	76.9/40.9	
Read	405/5	Isle Z	DCV	1 106	
	50013-01	bat 1-1	DCX	9.601	
Serial #	50013-01	bat 1-2	DCX	-4.786	
	50013-02	Dat 1-2	DCX	0.010	ш
Add	0013-04		DCX	0.010	
	5 013-05	[		0.010	
	50,13-06	L	DCX	0.009	
Remove	500 8-07		DCX	0.009	
	50013 08		DCX	0.010	
Clear	50013-00		DCX	0.013	÷
	Los	ad. Saya As	]	0	ж

Readings and type appear after "Read" button is pressed.

The wireless peripherals will auto-shutoff if they are unable to communicate with the Wireless Host for more than ten minutes. <u>Be careful not to power the system off while monitoring!</u>

Battery life is directly linked to peripheral log rates, at the minimum log rate (4 seconds) the probes should last 8 weeks before batteries need to be changed. (DCx<sup>™</sup> - 2 Weeks) At max log rate (30 Minutes) batteries can last up to a year. (DCx<sup>™</sup> - 3 Months)



### INSTALLATION MANUAL

# DCw Wireless Usage



This mode will use the wireless function of the DCw, attempting to communicate through the wireless host on the Power Monitor.

Ensure the Power Monitor is powered on and the Wireless Host is plugged into Aux Port 1.

Attach 5 pin plug to DC current probe.





Attach the voltage leads.

The DCw inlcudes a DC Current probe that is calibrated to either 2000A or 4000A, they are NOT interchangeable.

The zeroing procedure for Hall effect current transducer:

- a. Leave the probe unconnected, but powered on.
- b. Turn the ZERO knob until the probe reads +/- Amp.
- c. Use Live-View<sup>™</sup> to see value or add DC current probe to Front Display.



Power up unit using the 24Vdc supply provided: At this point the DCw will attempt to communicate with the Power Monitor that was assigned to it.

The Host LED has two modes: Blinking = Searching for Host Solid = Host found and communicating After DC probe is connected to the DCw, connect probe to point to be monitored.

Use the hanging kit to place in a convenient location.



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# Air Pressure Wireless Usage



This mode will use the wireless function of the Air Pressure probe. Attempting to communicate through the Wireless Host on the Cx Plus Monitor<sup>™</sup>.

Ensure the Cx Plus Monitor<sup>™</sup> is powered on and the Wireless Host is plugged into port 1.



### Attach the Air Pressure probe:

Use only the provided air pressure kit.



DCw

# DCw/Air Pressure Wired Usage

This mode will use the wired (Ethernet) function of the DCw, attempting to communicate though the Ethernet jack on the side of the DCw.

When DCw is attached to the Power Monitor through Ethernet it will not attempt wireless communication.

## Equipment needed for this communication type:

1.) DCw

- 2.) Cx Plus Monitor™
- 3.) 2x Ethernet cords (CAT 5E or above)
- 4.) Ethernet router (DCw uses DHCP for IP address)





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# Advanced layout

### Equipment needed for this communication type:

- 1.) DCw, up to 6 with a 8 port switch
- 2.) Cx Plus Monitor<sup>™</sup>
- 3.) Ethernet cords (CAT 5E or above)
- 4.) Ethernet router (DCw uses DHCP for IP address)
- 5.) Ethernet switch (TRENDnet TEG-S80G) or similar



# vi. Check Complete Setup in Meter Mode

The Meter Mode display shows measurement values in real time. The display is broken down into multiple sections: Volts, Current, Power, and if enabled, Wireless Peripherals.



# 10. Download Data

- 1. Direct Download
- Establish an IP address on the Power Monitor by using the Red or Green Wi-Fi box or an Ethernet cord.
- Open Windows Explorer on your computer, then type in

ftp://IP address shown on monitor/

Copy or drag the files to a folder to save.



EPA00223

Cu	ownloa ment Site ID: Test	iu ii
Source:		
Site:		View
Test		▼ Event Log
Browse C:\EPALogs\aef:	5	
Download	Download All Sites	UView

- 2. Download using Wi-Fi or Ethernet
  - Connect to the Power Monitor through an Ethernet cord or Wi-Fi box.

USB Zipping/Downloading: Site: Site32069 52%

File: SwellSnapshots.lgd 0%

- Open Live-View<sup>™</sup> and connect to the monitor by using the IP address displayed on the screen.
- Click Download from the left panel.

11-1

L1

8

07/02/2019 14:32:35

Select and folder to download the data.

ENET: 192.168.2.44

- 3. USB Download
- Power up monitor and insert USB memory stick.
- Monitor will automatically begin downloading data. The screen will show a pop-up displaying what is downloading
- When USB download is done, the screen will display:
  - ---Complete---

Please remove USB device

• Time of download is dependant on the amount of data captured

There are multiple modes that the Power Monitor can be operating in for file formats:

If the monitor is running in "Normal" mode, nothing is changed upon USB download.

If the monitor is running in "Weekly" mode, every Sunday at 12AM a new folder is created, the week number

appended to the with original site code. These are in a FIFO format for a certain amount of weeks (Normally 26).

If the monitor is running in "Reset on USB" mode, when the USB stick is inserted and data downloaded, a new folder is created with the date appended to the original site code.

Regardless of setup , data is never deleted when downloading using USB method. All data is stored on the power monitor.

4. Send the monitor back to Rx Monitoring Services, Inc. to download the data and write the report.

	2.00x 06-27-19 UI: Jul 2 2019			
NET: 192.1	168.2.44	Logging	EPA	00223
RMS Voltage		Zipping/Downloadi Complete e remove USB dev	·	ext
Tem; 8	14:32:35	2.0% used	2.00x 06-27-19 UI: Jul 2 2019	

# 11. Fill Out Site Info and Detailed Site Log



### **Site Information Sheet**

	rukes	Please call us at (603) 664-606 x0 before installing the power monitor and reference the following Site Registration # Site Registration #:
ito Name:		Your Name : Your Final
Date	Time	Your Email Event - Equipment Power Up Down, Environmental Conditions, Errora, Els
owneets:		

**Detailed Site Log** 

- a. Please make sure you fully complete the RxMS Site Information sheet with the detailed information of the site and equipment monitored.
- b. Make sure you leave the Detailed Site Log that was provided with the Power Monitor and your customer on site. Ask them to record any system events or errors that will help RxMS correlate gathered data to any issues you may be having with your system.
- c. Place the "Electrical Test In Progress" tag on the system under test (either on the main disconnect, panel or wires) so it is not disturbed during the monitoring period.
- d. Please contact RxMS at 603-666-6606 ext. 0 or email support@rxms.com once you have installed the Power Monitor.

# 12. Uninstall the Power Monitor and ship back to RxMS



- a. Power down the load and the main power.
- b. Unplug the power cord from the Power Monitor.
- c. Disconnect all probes from the Power Monitor.
- d. Pack all equipment in provided shipping case.
- e. Attach the enclosed return label and ship equipment back to RxMS.
- d. Please contact RxMS at 603-666-6606 ext. 0 or email support@rxms.com once you have dropped off or FedEx has picked up the Power Monitor.

### Statements, Notices and Liability Information

## FCC Part 15 Class B

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 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 affected equipment and the panel receiver to separate outlets, on different branch circuits.
- Consult the dealer or an experienced radio/TV technician for help.

### **STATEMENT OF FAULTLESSNESS:**

The information in this manual has been reviewed for accuracy at the time of writing. No responsibility can be assumed by Rx Monitoring Services Inc. for inaccuracy or changes that have taken place since production. The "Cx Plus Monitor User Manual" is for informational purposes only and is subject to change without notice.

### **LIABILITY:**

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