Conext™ ComBox for Freedom SW Series of Products
809-0918
www.xantrex.com

Quick Start Guide

Communication and Monitoring Device

A Introduction

The Conext ComBox Freedom SW (809-0918) is an accessory compatible with the Xantrex Freedom SW family of products. It provides an overall view of system performance for mobile power monitoring systems such as recreational vehicles, marine vessels, construction and other heavy duty applications. The Context ComBox lets you configure the system and devices, monitor performance, and access data logs through a web-based application on a laptop or tablet.

⚠ DANGER

HAZARD OF ELECTRIC SHOCK AND FIRE
- Connect only to Safety Extra Low Voltage (SELV) circuits and power sources.
- All wiring must be done by qualified personnel to ensure compliance with all applicable installation codes and regulations.
- Do not expose the Conext ComBox Freedom SW to rain, snow, spray, or bilge water.
- Do not disassemble. No user serviceable parts inside.
- Do not install and/or operate in compartments containing flammable materials or in locations that require ignition-protected equipment.

Failure to follow these instructions will result in death or serious injury.

Exclusion for Documentation

UNLESS SPECIFICALLY AGREED TO IN WRITING, SELLER

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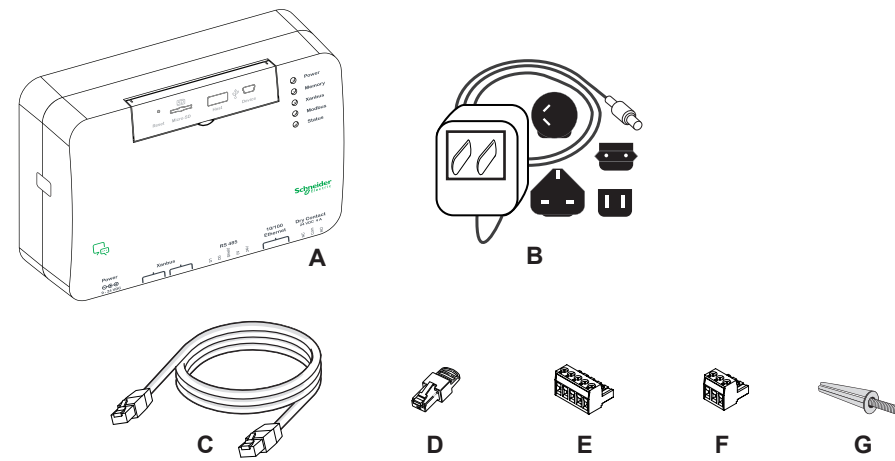
Conventions Used

A Section   **1** Step   ⚠ Safety   ✎ Direction   Expand   **A** Label

Contact Information

www.xantrex.com
Please contact Xantrex at 1-800-670-0707, customerservice@xantrex.com, or visit the Xantrex website at: http://www.xantrex.com.
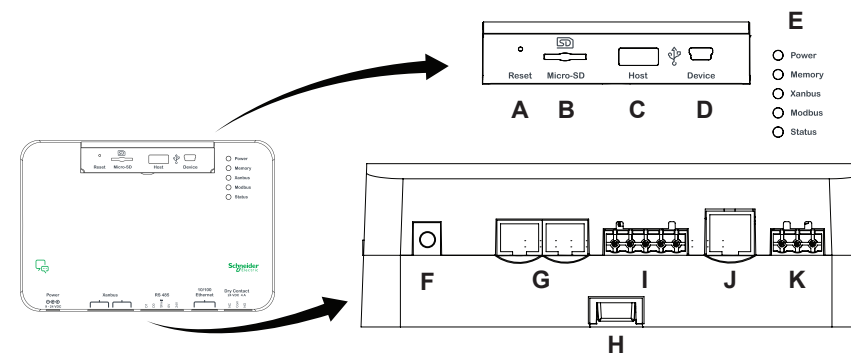
B Material list

A   Conext ComBox unit
B   AC/DC adapter* with changeable plugs
D   Ethernet cable
E   Xanbus network terminator
F   RS 485 Modbus connector (or RS 485 connector)
G   Dry contact connector
H   Woodscrew #6 with anchor (2)

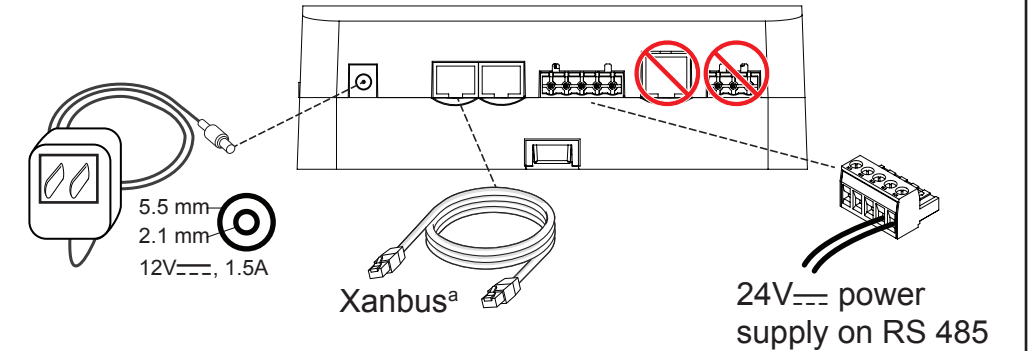* When ordering a replacement, reference PN: 0J-921-0023-Z.

C Identification

A   Reset pinhole
B   Micro-SD port
C   USB Host port (used for USB thumb drives)
D   USB Device port
E   LED indicator lights
F   Power port
G   Xanbus ports
H   DIN rail sliding catch
I   RS 485 port
J   10/100 Ethernet port
K   Dry contact port

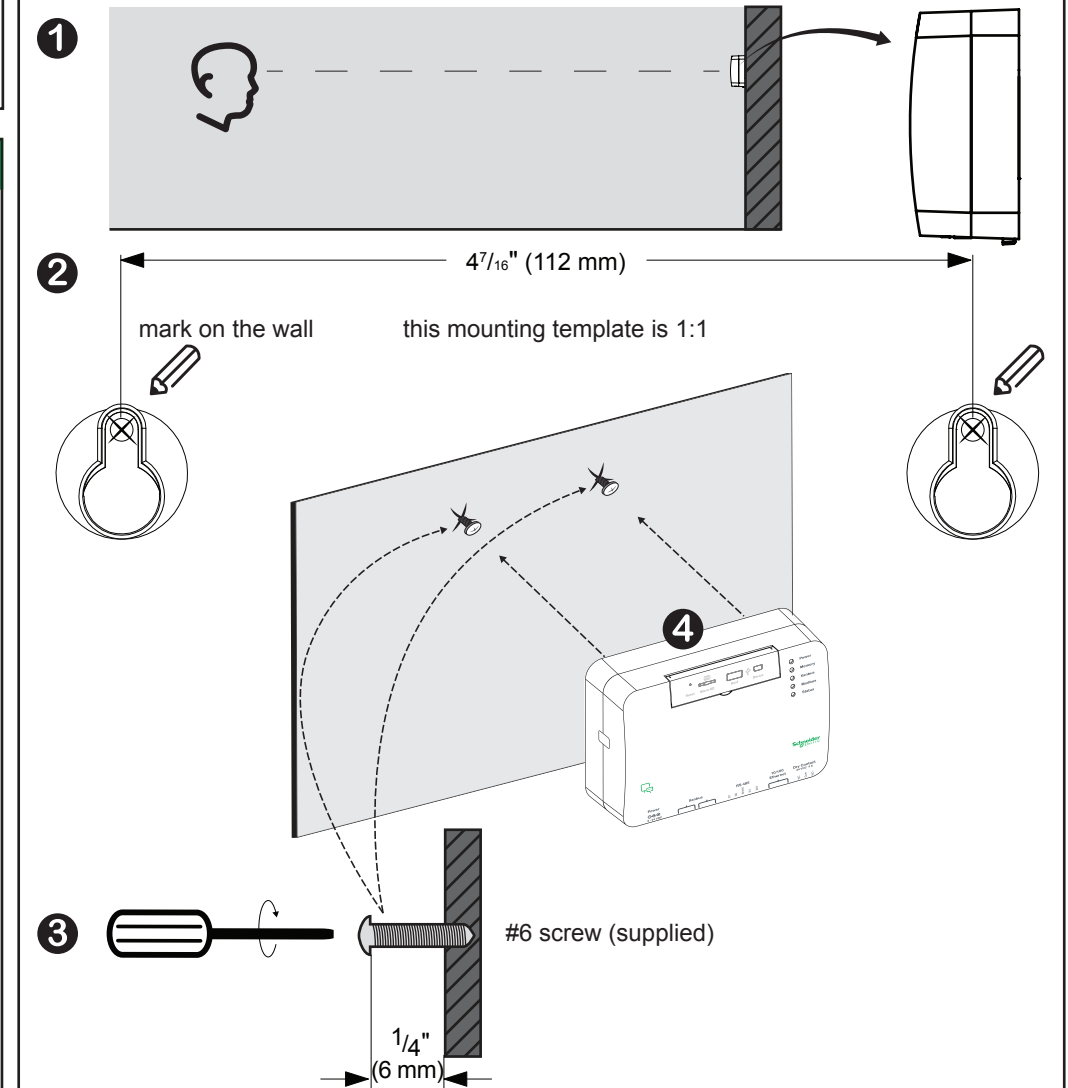## D Overview of available power sources

NOTE:
- The Conext ComBox can be powered by all three sources simultaneously. Typically, the AC/DC adapter is used as a primary power source. Xanbus or 24V⎓ input power through the RS 485 are secondary power sources.
- Do not turn on the Conext ComBox by connecting to either of these power sources until section **G Turning On the ComBox.**

5.5 mm
2.1 mm
12V⎓, 1.5A

Xanbus[a]

24V⎓ power supply on RS 485

a. For a complete list of Xanbus-enabled devices including devices that can provide power to the Conext ComBox, see the Owner's Guide.

E Mounting to a wall

1
2   4$^{7}/_{16}$" (112 mm)

mark on the wall   this mounting template is 1:1

4

3   #6 screw (supplied)

$^{1}/_{4}$" (6 mm)

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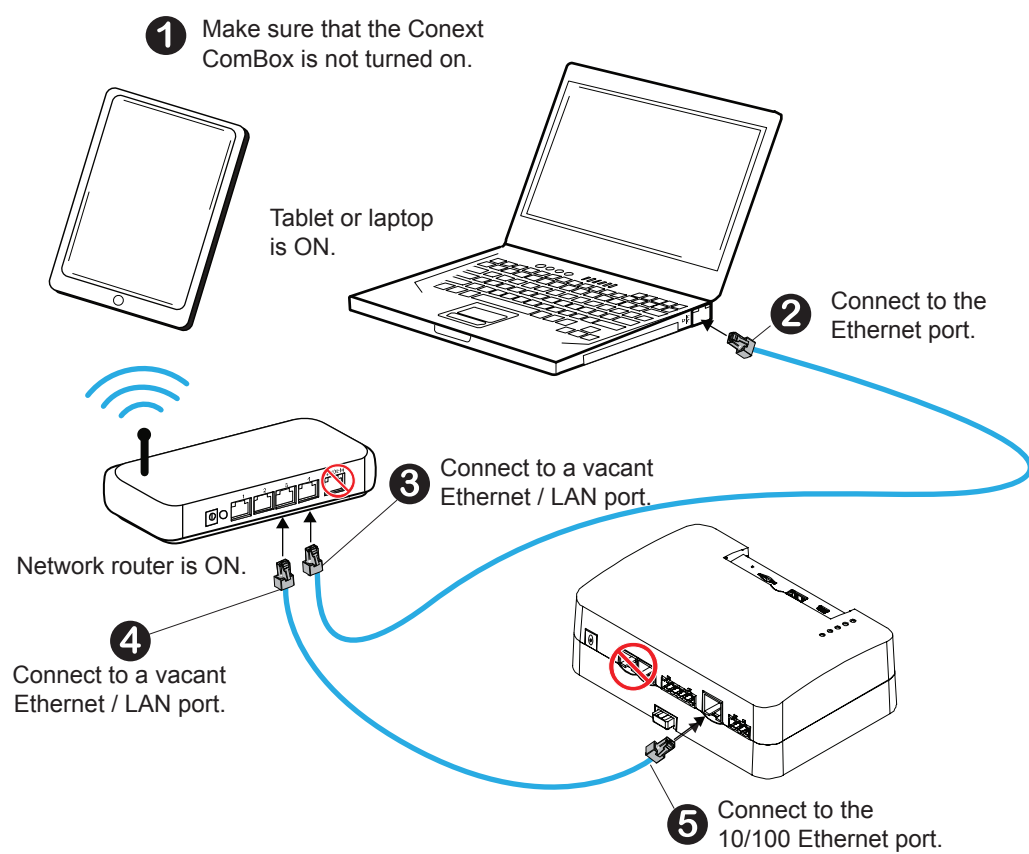## F Connecting to an Ethernet network

NOTICE

EQUIPMENT DAMAGE
- Do not connect an Ethernet cable plug to the MODEM / WAN port of the network router.
- Do not connect an Ethernet cable plug to a Xanbus port of the Conext ComBox.

Failure to follow these instructions can damage equipment.
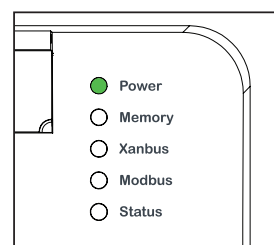
NOTE:
- The computer and network router MUST be powered up and the router must have assigned an IP address to the laptop before plugging in the ComBox network cable.
- Once the ComBox network cable is plugged in you MUST wait long enough so that the router successfully assigns an IP address to the ComBox.
- Failure to wait for the IP address means that the device discovery tool in the next step will not be able to find the ComBox.
- Follow the connection sequence below. Skip steps ❷ and ❸ if the computer is connected by Wi-Fi to the Ethernet / LAN.

❶ Make sure that the Conext ComBox is not turned on.

Tablet or laptop is ON.

❷ Connect to the Ethernet port.

❸ Connect to a vacant Ethernet / LAN port.

Network router is ON.

❹ Connect to a vacant Ethernet / LAN port.

❺ Connect to the 10/100 Ethernet port.

G Turning on the ComBox
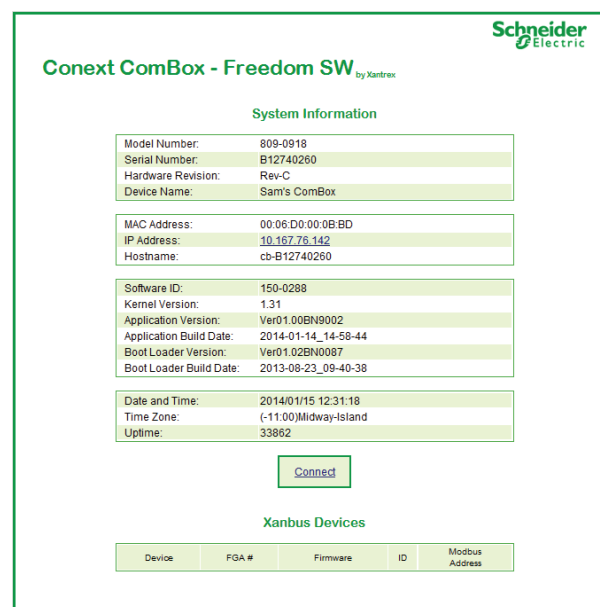
Connect the AC/DC adapter (supplied).

When power is applied to the Conext ComBox, all the LED lights will flash once and then the Power LED will flash intermittently for approximately two minutes. When the Conext ComBox is fully powered on, the Power LED is solid green.

- Power
- Memory
- Xanbus
- Modbus
- Status

H Discovering the Conext ComBox on the network

PREREQUISITES
OS ■ Windows 7 ■ XP (SP2, SP3) ■ Vista ■ Mac OS X 10.4.8.
Web browsers ■ Windows Internet Explorer 8.x or later ■ Firefox 12.x or later ■ Google Chrome 18.x or later ■ Safari 5.x or later ■ Android 4.0 or later (Ice Cream Sandwich)
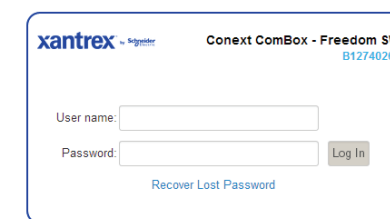**Other hardware** ■ USB thumb drive

❶ Plug a USB thumb drive into the ComBox USB Host data port while the ComBox is turned on (the Power LED is steadily on and not flashing).

❷ Watch the Memory LED and wait for it to flash quickly five times.

❸ Remove the USB thumb drive from the USB Host data port.

❹ Plug the USB thumb drive into your computer's USB port.

❺ Navigate to the root directory of the thumb drive using the file system browser on your computer.

❻ Look for a file named *serial number.html*, where *serial number* **is the serial number of the ComBox.**

❼ Double-click on the *serial number.html* file. Your default web browser will launch and display the System Information screen.

Conext ComBox - Freedom SW by Xantrex

System Information

Model Number:	809-0918
Serial Number:	B12740260
Hardware Revision:	Rev-C
Device Name:	Sam's ComBox
MAC Address:	00:06:D0:00:0B:BD
IP Address:	10.167.76.142
Hostname:	cb-B12740260
Software ID:	150-0288
Kernel Version:	1.31
Application Version:	Ver01.00BN9002
Application Build Date:	2014-01-14_14-58-44
Boot Loader Version:	Ver01.02BN0087
Boot Loader Build Date:	2013-08-23_09-40-38
Date and Time:	2014/01/15 12:31:18
Time Zone:	(-11:00)Midway-Island
Uptime:	33862

Connect

Xanbus Devices

Device	FGA #	Firmware	ID	Modbus Address

❽ Click the Connect button to open the ComBox user interface Login window.

NOTE:
Make sure that your computer is on the same Local Area Network as the ComBox.

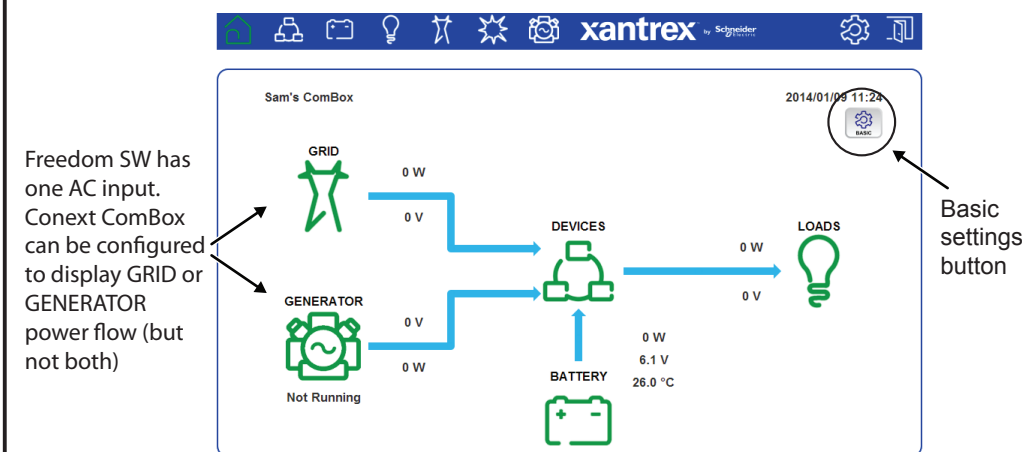## I Configuring device settings and connecting to Xanbus
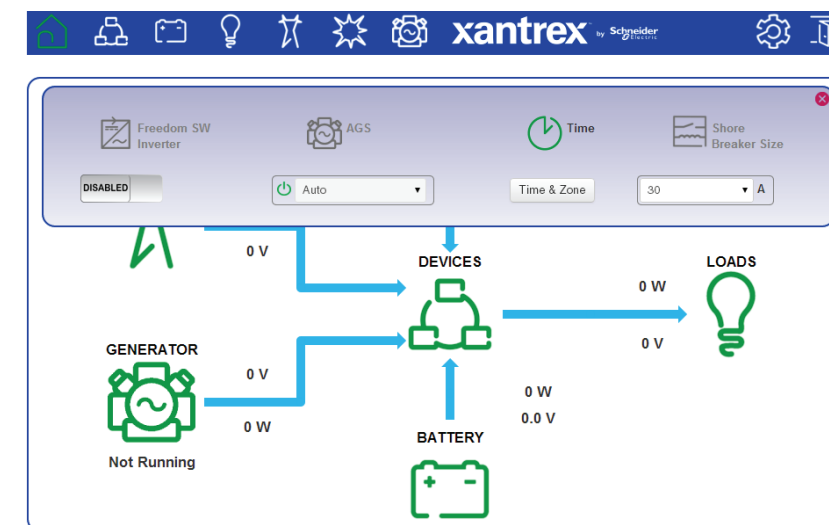
❶ Enter the User name and Password and click Log In.

Conext ComBox - Freedom SW
B12740260

User name:
Password: Log In

Recover Lost Password

Admin Account
User name: *admin*
Password: *password*

User Account
User name: *user*
Password: *user*

The Conext ComBox Home screen appears.

Sam's ComBox   2014/01/09 11:2x

Freedom SW has one AC input. Conext ComBox can be configured to display GRID or GENERATOR power flow (but not both)

GRID
0 W
0 V

GENERATOR
Not Running
0 V
0 W

DEVICES

LOADS
0 W
0 V

BATTERY
0 W
6.1 V
26.0 °C

Basic settings button

❷ Click the Basic settings button [BASIC] to display the control panel.

Freedom SW Inverter   AGS   Time   Shore Breaker Size

DISABLED   Auto   Time & Zone   30   A

0 V

GENERATOR
Not Running
0 V
0 W

DEVICES

LOADS
0 W
0 V

BATTERY
0 W
0.0 V

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3 **In the control panel, change the Time and Zone setting before connecting the ComBox to the Xanbus network.**

⚠WARNING
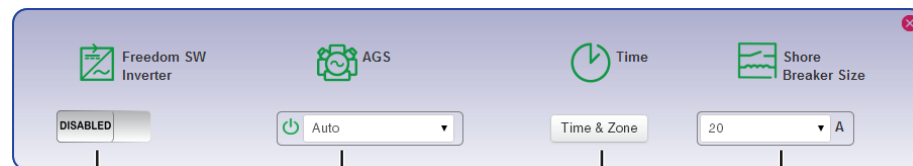
PHYSICAL INJURY HAZARD

Be careful when changing the ComBox time setting. It will override any time settings on individual Xanbus-enabled devices in the network. The time represents the entire system. Any appliance or equipment that is time-controlled by a Xanbus device, such as a generator connected to an AGS, can inadvertently turn on at the wrong time.

Failure to follow these instructions can result in death or serious injury.

Click **Time and Zone**. Select the time, date, and time zone, and then click **Submit**.

4 **In the control panel, adjust the other basic settings as needed and click the close button when done.**

Turns the inverter on and off. When enabled, the AC loads connected to the inverter receive power. When disabled, the loads receive AC power only when the system is connected to shore power. If there are two inverter/chargers, this setting applies to both devices.

Sets the appropriate time and time zone for synchronizing the ComBox and SCP internal clocks.

Starts or stops the generator.
• **Auto**: automatic start/stop based on triggers selected in the Freedom SW AGS
• **Manual On**: overrides Auto start
• **Manual Off**: overrides Auto stop

Sets the amperage limit for the AC shore breaker. If the system has both a Freedom Sequence and a Freedom SW inverter/charger installed, this setting applies to both devices. If the system does not have a Freedom Sequence, then only the Freedom SW shore breaker size is set.

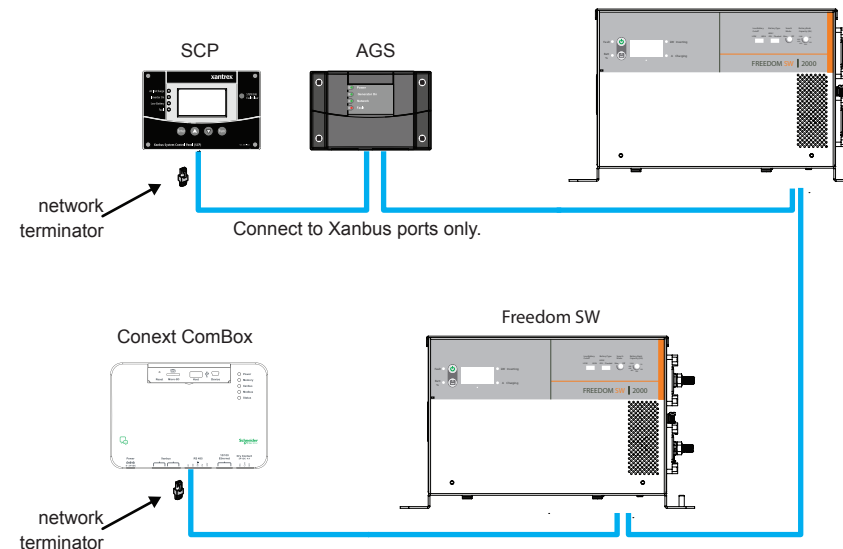**6** **Connect the ComBox to the Xanbus network.**

NOTICE

EQUIPMENT DAMAGE

Do not connect a Xanbus cable plug to the 10/100 Ethernet port of the Conext ComBox.

Failure to follow these instructions can damage equipment or affect network performance.

NOTE:
- Xanbus components can be arranged in any order.
- Total length of all cables combined must not exceed 131 ft (40 m).
- Use a network terminator at both ends of the network. See illustration below.

Illustration only. Components vary.

network terminator

Connect to Xanbus ports only.

Conext ComBox

Freedom SW

network terminator

7 **Change advanced settings as needed. To change advanced settings, you must be logged on as Admin.**

For more information, refer to the *Conext ComBox Freedom SW Owner's Guide* available on **http://xantrex.com/power-products/default/conext-combox-freedomsw**

J Specifications

ELECTRICAL SPECIFICATIONS

COMMUNICATION INTERFACES

Xanbus	Connector: 2 x RJ-45
	Products Supported: Xantrex Freedom SW inverter/charger, Xanbus SCP, and Xanbus AGS
Ethernet	Connector: 1 x RJ-45, 10/100 MBPS
	Server: FTP, Web, Modbus TCP/IP
	Client: SMTP, SNTP; Auto discovery: DPWS
RS 485	Modbus (1 x Connector: Screw 5-terminal, 16-24AWG, 2-wire serial, 19200 bps)

DATA INTERFACES

USB 2.0-Host	USB-A, MSD protocol for firmware and device upgrades
USB 2.0-Device	USB-mini B, MSD protocol for exporting data logs to a PC

POWER SUPPLY (SELV ON ALL SOURCES)

Power Consumption	2 W average / 10 W peak
AC/DC adapter*	Input: 100-240V∼, 50-60Hz, 0.6A, Output: 12V⎓, 1.5A, 5.5mm outer, 2.1mm center-positive jack
Xanbus	When connected to Freedom SW providing 15V⎓, 200mA min or more than one Conext TX
24V on RS 485 connector	24V⎓, 1A max input only through pins 4 and 5

* When ordering a replacement, reference PN: 0J-921-0023-Z.

MEMORY

Internal	96 MB flash
External Micro-SD Card	2GB or more, class 2 or better recommended

GENERAL SPECIFICATIONS

Weight	250 g (0.6 lb)
Housing / Mounting System	ABS Plastic / DIN-rail: 35 mm, Wall-mount: 2-screw
IP rating / Mounting Location	IP 20, NEMA Type 1, Indoor only
Status Display	5 x LEDS
Temperature	Operating: -4 to 122°F (-20 to 50°C)
	Storage: -40 to 185°F (-40 to 85°C)
Humidity	Operating: < 95%, non-condensing
	Storage: < 95%

FEATURES

Programmable dry contact relay	Screw 3-terminal, 16-24 AWG, NC-Com-NO, Class 2, 24V⎓, 4A max SELV input only
Graphical user interface	Integrated Web Server for ComBox settings only (Internet Browser), Android tablet
Remote firmware upgrades	Yes
Max. number of Xanbus devices	Up to 20 (depending on device type)

REGULATORY

EMC immunity	EN61000-6-1
EMC emission	EN61000-6-3, FCC Part 15 Class B, Ind. Canada ICES-003 Class B
Substances / environmental	RoHS

ℹ️ CE ⬧ For indoor use only.

DIMENSIONS

6.7 in. (169 mm)

2.1 in. (54 mm)

4.5 in. (114 mm)

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