

AC-4 / AC-8

Remote Outlet Controller

USER MANUAL

BURK
TECHNOLOGY

AC-4 & AC-8 User Manual
REV A (December 2005)

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Introduction

The AC-4 and AC-8 Remote Outlet Controllers are a convenient interface for powering and controlling 120VAC electrical devices. More than just a power-strip with surge protection, the AC-4 and AC-8 also give you the ability to remotely control connected devices using the GSC3000. This is especially useful in avoiding trips to a remote site when you need to cycle the power on equipment.

FEATURES & BENEFITS

- Surge protected 120VAC outlets with circuit breaker overload protection
- Total integration with the GSC3000 system with options for telephone and web accessibility
- Individually switch outlets on and off from remote locations
- Front panel switches with ON/OFF indicators for local control (AC-8 only)
- LED indicators for transient protection status, Remote/Local state, and Power

PRECAUTIONS

Before installing and operating this product, please be sure to read and understand the following safety precautions:

- This product is designed for indoor use only. Do not install in a location where excessive moisture or heat is present.
- Do not install this product during a lightning or electrical storm.
- Plug the AC-4 or AC-8 into a three-wire grounded outlet only. A grounded AC source is needed to provide complete protection.
- Do not plug this product into an extension cord or other power strips.
- This product is for 120VAC operation only.

REQUIREMENTS

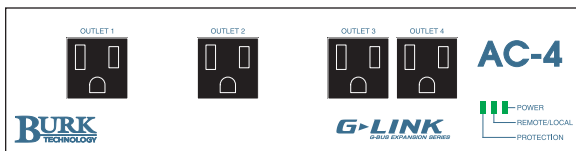
To utilize the remote monitoring and control functions of this product, you will need the following:

- GSC3000 system running 5 series firmware.
- Lynx 5.1 or higher software

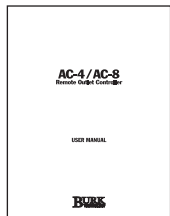
UNPACKING

For each item you ordered, please make sure that you have received all listed parts. If anything is missing, contact Customer Support at the phone number or email address listed on page 2. In case of shipping damage, file a claim directly with the freight carrier.

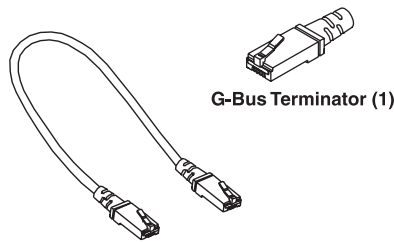
AC-4



AC-4 (1)



AC-4/AC-8 User Manual (1)



G-Bus Cable (1)

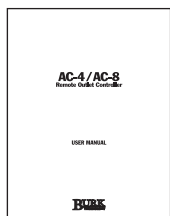
G-Bus Terminator (1)

Note: A one foot G-Bus cable is provided with the AC-4. If a longer cable is needed, you can use a standard CAT5 cable. The maximum distance end-to-end for the G-Bus Network is 1000 feet.

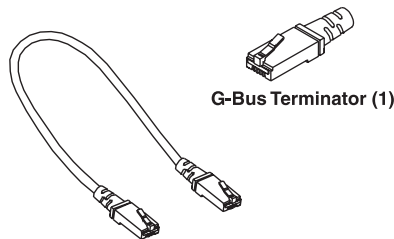
AC-8



AC-8 (1)



AC-4/AC-8 User Manual (1)



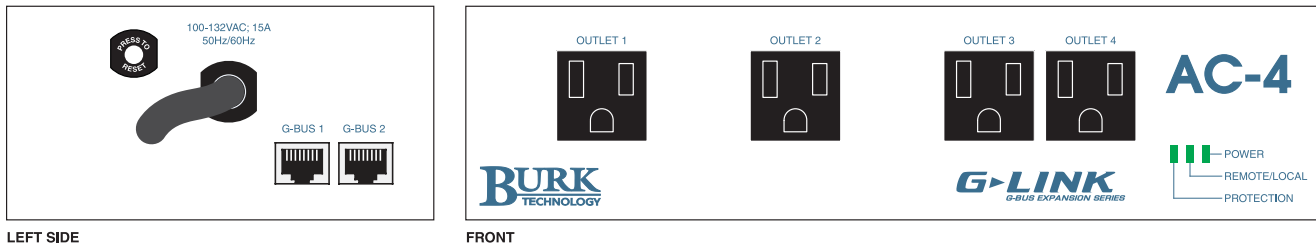
G-Bus Cable (1)

G-Bus Terminator (1)

FRONT & REAR PANEL OVERVIEW

Before you begin setup and configuration, take a moment to familiarize yourself with the indicators and connectors on the AC-4 and AC-8.

AC-4



Circuit Breaker

Trips when a current overload is detected. If the circuit breaker has tripped, remove the overload and press the button to reset.

Power Cable

AC power connection for the AC-4. Plug into standard, grounded electrical outlets only. Requires 100-132VAC, 50/60Hz, 15A.

G-Bus 1, G-Bus 2

Connection to G-Bus network. Used to connect to the GSC3000 system and other G-Link units.

Outlets 1-4

Receptacle outlets for your equipment. Connected equipment should not exceed 15A total current draw for all connected equipment.

Note: Each outlet state is remembered in the event of a power loss.

Protection LED

Indicates internal transient suppression.

Remote/Local LED

Indicates whether the GSC3000 system is in Remote or Local mode. A solid green LED indicates that all units in the system are in Remote mode, and remote commands are enabled. A flashing red LED indicates that all units in the system are in Local mode, and remote commands are disabled until the operator restores Remote mode from the front panel of the GSC3000 I/O unit. All outlets retain their on/off state when the G-Bus is in Local mode.

Power LED

A solid green LED Indicates when the unit is currently powered. A solid amber LED indicates this unit has no firmware. For help loading firmware see page 17.

AC-8



Outlet 1-8 LED

Indicates which outlets are powered.

Outlet 1-8 Switch

Turn the corresponding outlets on or off.

Note: The switches on the front correspond to the numbered outlet on the rear, not the outlet directly behind the number. Both the outlets and switches are numbered 1-8 from Left to Right.

Protection LED

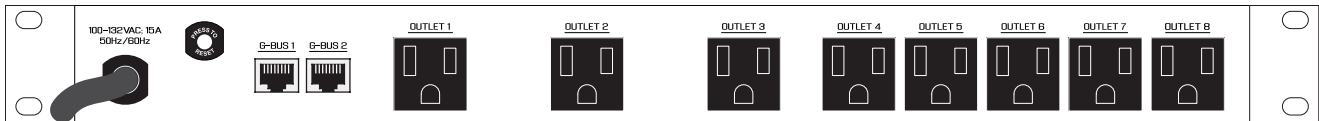
Indicates internal transient suppression.

Remote/Local LED

Indicates whether the GSC3000 system is in Remote or Local mode. A solid green LED indicates that all units in the system are in Remote mode, and remote commands are enabled. A flashing red LED indicates that all units in the system are in Local mode, and remote commands are disabled until the operator restores Remote mode from the front panel of the GSC3000 I/O unit. All outlets retain their on/off state when the G-Bus is in Local mode.

Power LED

A solid green LED Indicates when the unit is currently powered. A solid amber LED indicates this unit has no firmware. For help loading firmware see page 17.



Power Cable

AC power connection for the AC-8. Plug into standard, grounded electrical outlets only. Requires 100-132VAC, 50/60Hz, 15A.

Circuit Breaker

Trips when a current overload is detected. If the circuit breaker has tripped, remove the overload and press the button to reset.

G-Bus 1, G-Bus 2

Connection to G-Bus network. Used to connect to the GSC3000 system and other G-Link units.

Outlets 1-8

Receptacle outlets for your equipment. Connected equipment should not exceed 15A total current draw for all connected equipment.

Note: Each outlet state is remembered in the event of a power loss.

CONTACTING BURK TECHNOLOGY

Customer Support

Visit the Support section of our website at www.burk.com for troubleshooting tips, documentation and downloads. If you still need help, please contact Customer Support:

Phone: 978-486-3711
Fax: 978-486-0081
Email: support@burk.com

Sales

For information on our full line of transmitter remote control systems and accessories, please visit us online at www.burk.com, or contact a sales representative:

Phone: 800-255-8090 (Main Sales Office)
800-736-9165 (Radio Sales)
866-273-5276 (TV Sales)
Email: sales@burk.com

Installation

ELECTRICAL CONNECTION

Plug your AC-4/AC-8 into a standard, three-wire grounded electrical outlet. Do not plug this product into a two-wire adapter, extension cord, or another power strip.

EQUIPMENT CONNECTION

Plug your equipment into one of the AC receptacle outlets. For oversized or wall-mount power connectors, use the outlets which are spaced apart.

Note: Do not plug in equipment that exceeds the stated power specifications.

MOUNTING

Mounting your Remote Outlet Controller will help protect it and keep your equipment securely plugged in. The AC-8 is a 1 RU unit designed for mounting horizontally in your equipment rack and does not have any special mounting requirements. The AC-4 can be mounted horizontally or vertically on a variety of surfaces.

Mounting the AC-4

Important! Before attempting to mount the AC-4, unplug it from the wall outlet and unplug any equipment that may be plugged into one of the outlets.

The AC-4 should be mounted from inside the chassis. Four mounting holes are provided on the bottom of the chassis to accept #10, 3/4" or longer flathead screws. A mounting template can be found at the end of this manual.

CONNECTING THE AC-4/AC-8 TO THE GSC3000

The AC-4 and AC-8 connect to your GSC3000 system through the G-Bus network.

To add your Remote Outlet Controller to the G-Bus:

1. Using the supplied G-Bus cable, or a straight-through CAT5 cable with RJ-45 connectors, connect an available G-Bus port on the AC-4 or AC-8 to a free G-Bus port on an I/O, Voice, or G-Link unit. It makes no difference whether you connect to G-Bus port 1 or 2 on either unit.

The Remote Outlet Controller does not need to be placed nearby or in the same equipment rack as the GSC3000 units. The G-Bus network supports equipment connected together over a maximum length of 1000 feet end to end.

2. After linking each unit, connect a G-Bus terminator to the unused G-Bus port on the first unit and to the unused G-Bus port on the last unit.

Once your AC-4/AC-8 has been added to the G-Bus network, it will function as an additional unit in your site.

ASSIGNING UNIT NUMBERS

Like an I/O unit, each G-Link unit on the G-Bus network must be assigned a unique unit number. The G-Bus network allows up to sixteen monitoring and control units numbered 0-15, which includes I/O 16, I/O 8, and G-Link units. The default unit number for both the AC-4 and AC-8 is 15. The G-Bus network additionally supports one Voice Interface, which is always assigned unit number 16.

Note: The Remote Outlet Controller will function in the system as unit 15 if you wish to leave it at the default number. However, it is recommended that you change the unit number as other G-Link products you may add to the system will default to unit 15.

Important! Each GSC3000 system must have one I/O unit defined as unit 0. Do not assign unit number 0 to a G-Link unit or to more than one I/O unit.

Note: If you are unsure of the unit number for an existing unit in your site, right-click the unit in Site List and choose Unit Properties. The unit number, as well as firmware version and other important information will be displayed.

If a unit 15 already exists in your site, you must disconnect it from the G-Bus before connecting your Remote Outlet Controller. Then connect the AC-4 or AC-8 to the G-Bus and change the unit number. If you are installing more than one remote outlet controller, you must connect them one at a time to assign the unit number. Once all unit numbers are set, you can reconnect your existing unit 15.

Note: If you already have sixteen I/O units networked together, please contact Burk Technology Customer Support for installation options.

To assign the unit number:

1. Connect your G-Link unit to the G-Bus network. If you are already connected to the site in Lynx, the new unit will appear automatically. If not connected, select the site from the Site List and the connect icon.
2. Select the remote outlet controller from the site list. It may initially appear as "Unit 15" until the site list refreshes to show the default name of "AC-4" or "AC-8", depending on which unit you have.
3. Right-click the selected unit and choose Set Unit Number.
4. Select the new unit number from the Set Unit Number dialog and hit Set. A dialog will appear indicating the progress of the unit number change. The site will disconnect and reconnect automatically as part of the unit number change process.

Note: While the unit number is being set, a link loss message may appear for one or more units indicating that it is no longer present on the G-Bus. This dialog is normal during a unit number change.

When the site reconnects each unit will re-appear in the site list with its new unit number.

Operation

Using G-Link products with Lynx, the Voice Interface, or the Web Interface is almost identical to using a standard I/O unit, so very little operator training is needed. Configuration, commands, and general monitoring functions are just like the I/O units that you are used to, even though specific features may vary.

CONTROLLING THE AC-4/AC-8

The Remote Outlet Controller functions like an I/O unit and is accessible through Lynx, the Voice Interface, and Web Interface.

Accessing the AC-4/AC-8 using Lynx

The AC-4/AC-8 will appear in the Site List alongside any I/O and Voice Interface units in this site. By default, the unit name will be either AC-4 or AC-8, depending on which Remote Outlet Controller is connected.

When selected from the Site List, both the AC-4 and AC-8 have on-screen control buttons allowing you to turn the outlet ON and OFF.

Accessing the AC-4/AC-8 using the Voice Interface

While in a voice session, you can access one unit at a time - all commands and reporting are for the selected unit only.

Like an I/O unit, the AC-4/AC-8 has a unit number associated with it. To switch between units, enter 9, followed by the two-digit unit number of the unit you would like to connect to. For example 901 would select unit #1, and 915 would select unit #15. Valid entries are 900-915. If you enter an invalid unit number, the Voice Interface will report that the unit does not exist. For additional help using the Voice Interface please refer to the GSC3000 Installation and Operation Manual.

Note: If you are unsure of the unit number for your Remote Outlet Controller, you can find this out in Lynx by right-clicking the unit in the site list and choosing Unit Properties.

Accessing the AC-4/AC-8 using the Web Interface

The Web Interface displays one unit on-screen at a time and always loads looking at unit 0. To switch to a different unit, use the "Select Unit" drop-down box. After you make your selection, the page will update to display the selected unit. For additional help using the Web Interface please refer to the GSC/VRC Web Interface User Manual.

USING TIMED EVENTS & MACROS

The AC-4/AC-8 has on-board Timed Events that allows you to schedule certain activities to occur automatically at your site. For example, you can set up a daily routine to cycle power on a piece of equipment connected to one of the outlets.

Timed Events can issue commands and run macros on any unit in the G-Bus network, including G-Link units. Setting up a Timed Event on the AC-4/AC-8 is the same as on an I/O unit. To access configuration for any unit, right-click on the unit in the Site List and choose Unit Configuration.

Equipment connected to the AC-4/AC-8 can also be addressed using Macros. Macros are stored on I/O units (not directly on the AC-4/AC-8 unit), so be sure to save the macro to an I/O unit after creating it in the Lynx macro editor. By running Macros on the I/O unit, you have access to the full Macro syntax allowing simple or complex routines. Macros, regardless of which I/O unit they reside on, can control any unit on the G-Bus.

OUTLET STATE

Each outlet can be configured for latching or momentary output. By default, outlets are set for latching. To change the output state, select the AC-4 or AC-8 unit and enter Unit Configuration. From the Unit Configuration window, select the Commands tab. Under Mode, change your selection to momentary or latching. The mode setting affects both the A and B state for this outlet.

Note: In Lynx 5.1 you can choose to have the latched state displayed on the default view in bold text. To select this option go to Tools > Options and choose "Show latched commands in bold in the Default View."

Unique to the AC-4 and AC-8, two momentary output states are available: Momentary (On) and Momentary (Off). When set to ON, the outlet will turn on for the specified duration and then turn back off. When set to OFF, the reverse will occur - the outlet will turn off for the specified duration and then turn back on.

When switching between momentary and latching states, the change will not take effect until a new command is issued on that channel. Note that the configuration itself will indicate the new setting right away. The AC-4/AC-8 stores in memory the on or off state for each outlet. After a power loss outlets will be restored to their prior states, provided the outlet was in the same state for at least five seconds before the power loss.

Specifications & Warranty

AC-4

Dimensions:

10" (25.4 cm) W x 5" (12.7 cm) D x 2.5" (6.35 cm) H

Weight:

4 lbs. (1.81 kg)

Operating Temperature:

0 to 50° C

Power Requirements:

100-132 VAC, 50/60Hz

Power Cable:

8' attached, 14/3 grounded power cord

Output:

15A per outlet, 15A total power for all outlets combined (at input voltage and frequency)

Controls, Connectors, Indicators:

Outlets: Four 15 amp straight blade AC outlets (2 outlets are spaced to accommodate wall-mounted power supplies), individually controlled and switched

Circuit Breaker: 15 amp circuit breaker with reset button.

G-Bus 1, G-Bus 2: RS-485; 115.2kbps; 110ohm impedance, CAT5 twisted-pair cable; 1,000-foot limit for all units networked combined.

LEDs: Indications for Power, Remote/Local state, Transient protection status

System Type:

Embedded micro controller

AC-8

Dimensions:

19" (48.26 cm) W x 10" (25.4 cm) D x 1.75" (4.45 cm) H

Weight:

7.5 lbs. (3.4 kg)

Operating Temperature:

0 to 50° C

Power Requirements:

100-132 VAC, 50/60Hz.

Power Cable:

8' attached, 14/3 grounded power cord

Output:

15A per outlet, 15A total power for all outlets combined (at input voltage and frequency)

Controls, Connectors, Indicators:

Outlets: Eight 15 amp straight blade AC outlets (3 outlets are spaced to accommodate wall-mounted power supplies), individually controlled and switched

Outlet Switch 1-8: Momentary switch for each outlet providing local control of each outlet with an LED indicating a powered outlet (front panel buttons may be disabled via an internal jumper)

Circuit Breaker: 15 amp circuit breaker with reset button.

G-Bus 1, G-Bus 2: RS-485; 115.2kbps; 110ohm impedance, CAT5 twisted-pair cable; 1,000-foot limit for all units networked combined.

LEDs: Indications for Power, Remote/Local state, Transient protection status, Outlet powered state

System Type:

Embedded micro controller

All specifications subject to change without notice.

WARRANTY

Burk Technology, Inc. warrants the AC-4 and AC-8 to be free of defects in materials and workmanship for a period of 24 months from the date of purchase. Equipment will be repaired or replaced at the option of Burk Technology and returned freight prepaid to the customer. Damage due to abuse or improper operation or installation of the equipment or caused by fire or flood or harsh environment is not to be covered by this warranty. Damage in shipping is not the responsibility of Burk Technology. A return authorization must be obtained before returning any equipment. Materials returned under this warranty must be shipped freight prepaid and insured in the original shipping carton or suitable substitute to Burk Technology, 7 Beaver Brook Road, Littleton, MA 01460. Repairs not covered under this warranty will be made at prevailing shop rates established by Burk Technology, Inc.

THE WARRANTY SET FORTH ABOVE IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. BURK TECHNOLOGY, INC. SHALL NOT BE LIABLE TO ANY PARTY FOR ANY INCIDENTAL, SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES ARISING FROM THE USE OF THIS EQUIPMENT.

Disabling AC-8 Local Control

Local control using the front panel control switches can be disabled using the internal jumper at JP8. To disable local control:

1. Disconnect the AC-8 power cable from the AC outlet.
2. Remove the cover.
3. Disengage jumper JP8 so that the jumper is on one pin.
4. Secure the cover.
5. Apply power.

Loading Firmware

The AC-4 and AC-8 ship from the factory with the latest firmware already installed. There is no need to upload firmware prior to using a new unit. With the exception of upgrading to a newer version, there should not be a need to load firmware to the AC-4 or AC-8 under normal circumstances.

In order to upgrade or reload firmware, the G-Link product you are loading firmware to must be already connected over the G-Bus Network to an existing GSC3000 system. You will use the Lynx software to load the firmware to the unit.

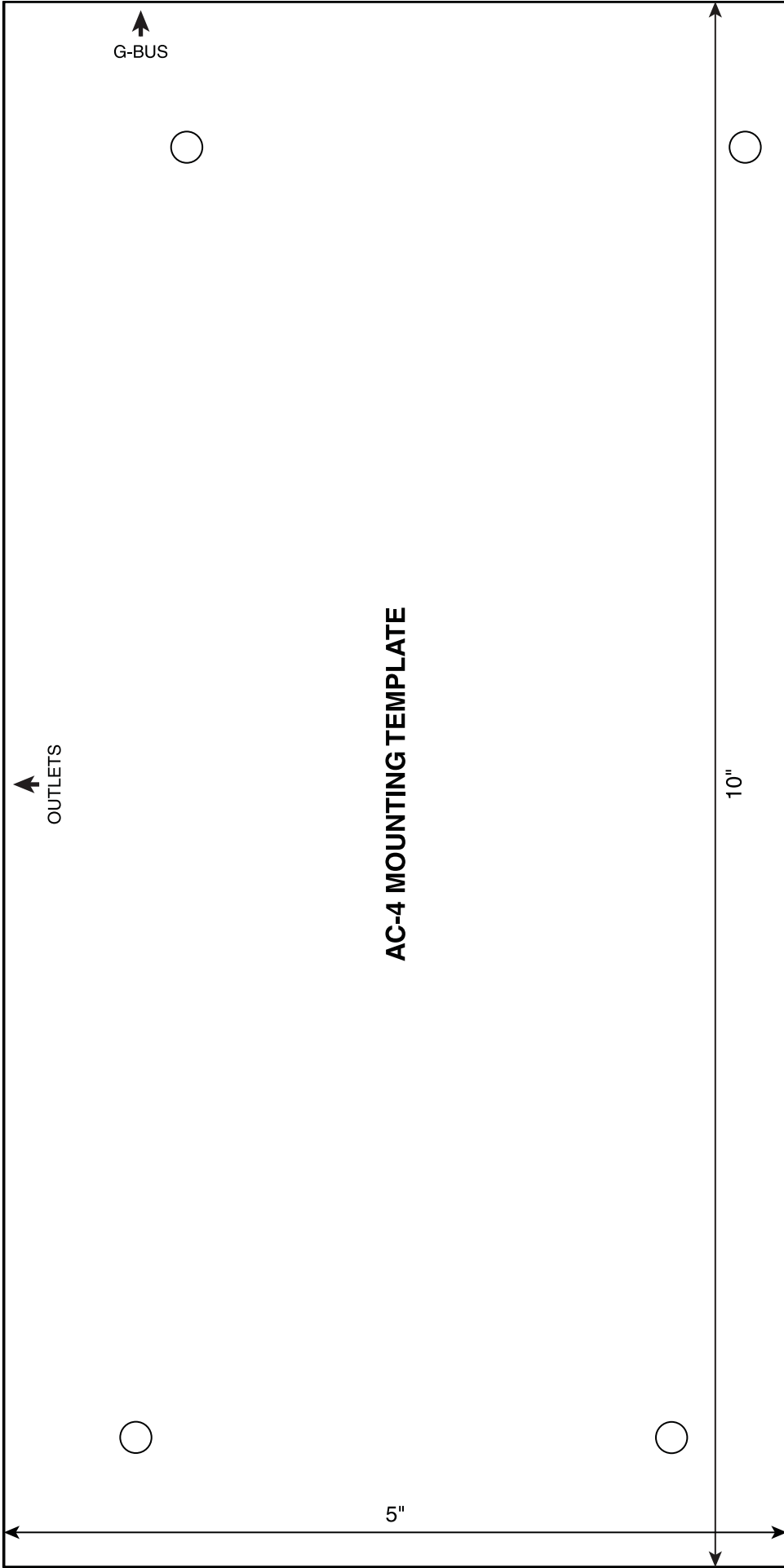
To load firmware to an AC-4/AC-8:

1. In Lynx, connect to your GSC3000 site (if not already connected).
2. Go to the Tools menu and click Upload Firmware to start the Firmware Wizard. Click Next to begin the wizard.
3. For Unit Type choose G-Link. Click Next.
4. Choose the firmware file to upload. To select a firmware file, enter the File Name or click the [...] button to browse. Click Next.
5. Select the site and G-Link unit you want to load firmware to. Click Next.
6. Follow on-screen instructions to complete the firmware upload.

AC-4 Mounting Template

Use the template on the following page as a guide for mounting the AC-4. The AC-4 can be mounted horizontally or vertically on a variety of surfaces. We recommend using #10, 3/4" or longer flathead screws.

Note: If printing the template from an electronic version of this manual, please unselect any options for resizing the page to fit the paper. If left checked, the output may not be 1:1 providing an inaccurate template.



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