

# Upgrading a GainMaker Line Extender from a Line-Powered Source to a 120 V AC-Powered Source Installation Instructions

#### Overview

#### **Audience**

These installation instructions are intended for all cable system operators or installers who want to upgrade their existing GainMaker® Line Extender from a line-powered line extender to a 120 V AC-powered line extender.

#### Introduction

A GainMaker line extender (LE) can be upgraded from a line-powered LE to a 120 V AC-powered LE by installing a GainMaker Line Extender Power Pack upgrade kit, part number 748997.

## **Power Pack Upgrade Kit Contents**

Description	Part Number	Quantity Per Kit
Line Extender Wall Mount Bracket	748993	1
External Power Supply	591566	1
External Power Supply Bracket	591567	1
Power Cable Harness Assembly (includes mounting plate and cable guide)	751380	1
Power Cord	562389	1
Strain Relief Bracket	751016	1
Cable Tie	73045	2
#8 Lock Washer	76555	2
#8 Machine Screw	83447	2

#### **Tools Required**

Before you start, make sure you have the following tools.

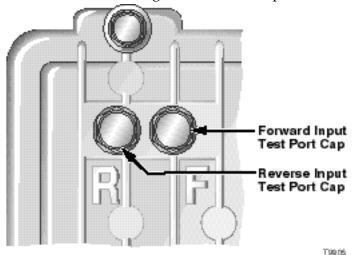
- Torque wrench with 1/2-inch socket
- Phillips-head torque screwdriver

# Installing the Upgrade Kit

#### Preparing for Installation

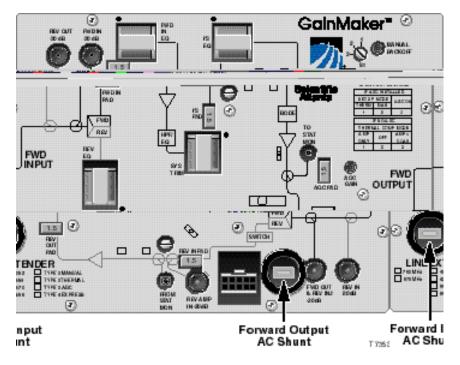
Follow these steps to prepare the GainMaker Line Extender for 120 V AC powering.

1. Start with the line extender housing closed. Using a ½-inch torque wrench, remove the port cap from the forward and reverse input test ports located on the back of the line extender housing. Set one of the caps aside for later use.



- 2. Using a ½-inch torque wrench, loosen the four housing closure bolts and open the line extender housing.
- 3. Pull straight up on each of the AC shunt power directors to remove them.

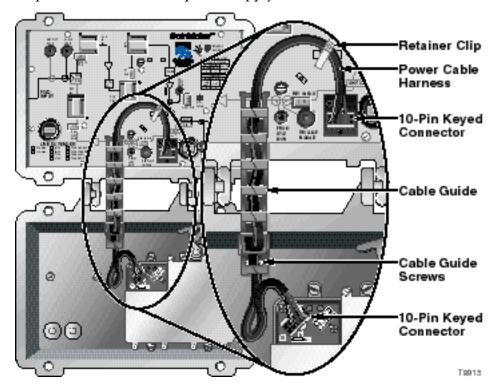
**Important:** The AC shunt power directors must be removed.



### Removing the Power Cable Harness

Follow these steps to remove the existing power cable harness assembly from the line extender housing.

1. Unplug the 10-pin keyed connectors of the power cable harness from the amplifier module and the power supply module.



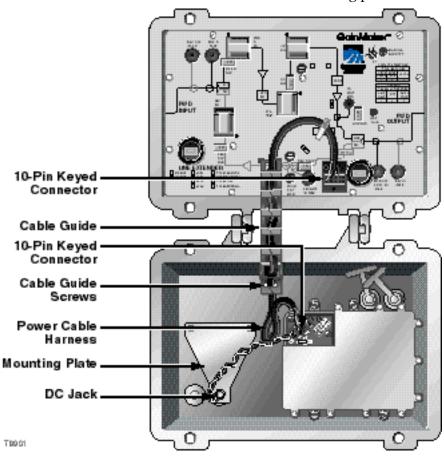
- 2. Remove the power cable harness from the white plastic retainer clip.
- 3. Unsnap the cable guide from the holes in the amplifier module cover.
- 4. Using a Phillips-head torque screwdriver, remove the cable guide screws from the line extender housing lid and set the screws aside for later use.
- 5. Discard the old power cable harness and cable guide.

#### Installing the New Power Cable Harness Assembly

Follow these steps to install the new power cable harness assembly to the line extender housing.

1. Plug the 10-pin keyed connectors of the new power cable harness into the power supply module and the amplifier module.

**Note:** The new power cable harness has a protective mounting plate attached. See illustration below for location of the mounting plate.

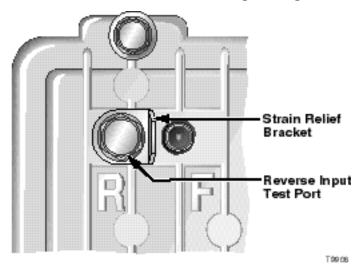


- 2. Route the power cable harness through the white plastic retainer clip.
- 3. Snap the new cable guide into place on the amplifier module cover.
- 4. Replace the cable guide screws removed earlier and torque from 4 in-lb to 6 in-lb (0.5 Nm to 0.7 Nm).
- 5. Using a Phillips-head screwdriver, attach the mounting plate to the housing lid (at the DC jack location) using the #8 machine screws and #8 lock washers provided with the kit.
- 6. Torque the machine screws from 18 in-lb to 20 in-lb (2.0 Nm to 2.3 Nm).
- 7. Close the housing and finger-tighten all housing closure bolts.

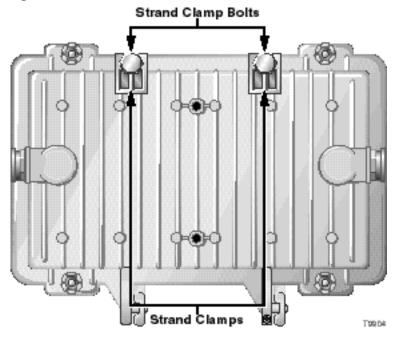
## Installing the Strain Relief Bracket and Wall Mount Bracket

Follow these steps to install the strain relief bracket and wall mount bracket to the line extender housing.

1. Install the strain relief bracket onto the reverse input test port.

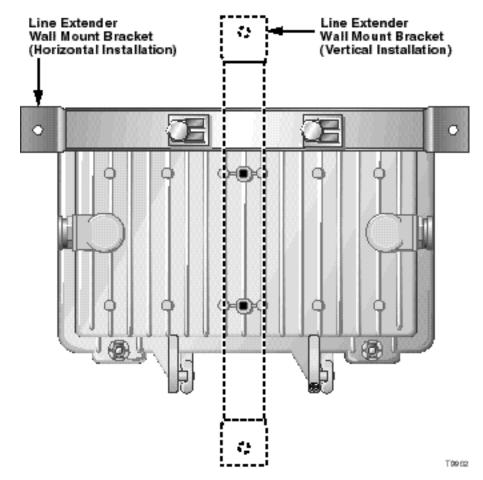


- 2. Secure the strain relief bracket to the port by replacing the port cap back onto the reverse port and torque from 2 ft-lb to 4 ft-lb. (2.7 Nm to 5.4 Nm).
- 3. Remove the strand clamp bolts from the strand clamps and set the bolts and strand clamps aside.



4. Attach the line extender wall mount bracket to the back of the housing.

**Note:** The bracket can be mounted either horizontally or vertically. See illustration below.

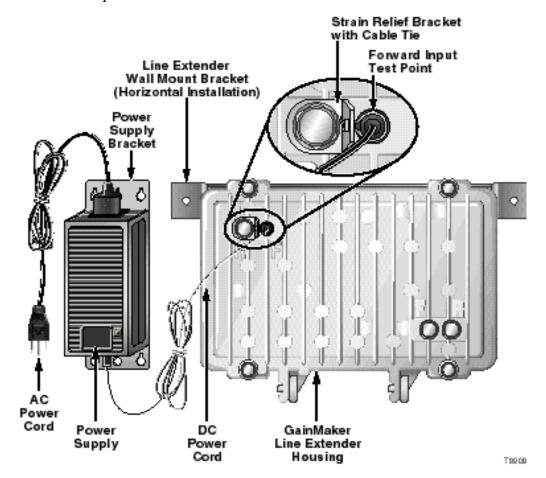


5. Secure the bracket to the housing by using the bolts removed in step 3. Use the strand clamps as spacers. Torque the bolts from 5-ft-lb to 8-ft lb (6.8 Nm to 10.8 Nm). See illustration above.

## **Preparing the Line Extender for Mounting**

Follow these steps to mount the line extender housing to the wall.

- 1. Mount the power supply bracket to the wall.
- 2. Insert the external power supply into the power supply bracket.
- 3. Plug the DC power cord from the external power supply directly into the forward test port.



- 4. Insert the cable tie (provided with the kit) through the holes of the strain relief bracket to hold the DC power cord in place.
- 5. Plug one end of the AC power cord into the power supply and the other into the wall socket.

**Result:** The line extender has now been upgraded to a 120 V AC-powered line extender.

## For Information

#### If You have Questions

If you have technical questions, call Cisco Services for assistance. Follow the menu options to speak with a service engineer.



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