TripSaver® II Communications via Gateway Pairing Quickstart Guide

## **Pairing Guide**

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## **Qualified Persons**

Only qualified persons who are knowledgeable in the installation, operation, and maintenance of overhead and underground electric distribution equipment, along with all associated hazards, may install, operate, and maintain the equipment covered by this publication. A qualified person is someone who is trained and competent in:

**WARNING** 

- The skills and techniques necessary to distinguish exposed live parts from nonlive parts of electrical equipment
- The skills and techniques necessary to determine the proper approach distances corresponding to the voltages to which the qualified person will be exposed
- The proper use of special precautionary techniques, personal protective equipment, insulated and shielding materials, and insulated tools for working on or near exposed energized parts of electrical equipment

These instructions are intended ONLY for such qualified persons. They are not intended to be a substitute for adequate training and experience in safety procedures for this type of equipment.

## NOTICE

Thoroughly and carefully read this instruction sheet and all materials included in the product's instruction handbook, including S&C Instruction Sheet 461-504 and S&C Instruction Sheet 461-509, before pairing your TripSaver II Cutout-Mounted Recloser and TripSaver® II Communications Gateway. Familiarize yourself with the Safety Information and Safety Precautions on pages 3 through 5. The latest version of this publication is available online in PDF format at **sandc.com/en/support/product-literature/**.

This instruction sheet is a permanent part of the TripSaver II Communications Gateway. Designate a location where you can easily retrieve and refer to this publication.

## **WARNING**

The equipment in this publication is only intended for a specific application. The application must be within the ratings furnished for the equipment. Ratings for the TripSaver II Cutout-Mounted Recloser are listed in the ratings table in Specification Bulletin 461-33. The ratings are also laser etched on the product.

Instruction Sheet

**Read this** 

Retain this Instruction Sheet

**Proper Application** 

#### Warranty

The warranty and/or obligations described in S&C's Price Sheet 150, "Standard Conditions of Sale-Immediate Purchasers in the United States," (or Price Sheet 153, "Standard Conditions of Sale-Immediate Purchasers Outside the United States"), plus any special warranty provisions, as set forth in the applicable product-line specification bulletin, are exclusive. The remedies provided in the former for breach of these warranties shall constitute the immediate purchaser's or end user's exclusive remedy and a fulfillment of the seller's entire liability. In no event shall the seller's liability to the immediate purchaser or end user exceed the price of the specific product that gives rise to the immediate purchaser's or end user's claim. All other warranties, whether express or implied or arising by operation of law, course of dealing, usage of trade or otherwise, are excluded. The only warranties are those stated in Price Sheet 150 (or Price Sheet 153), and THERE ARE NO EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ANY EXPRESS WARRANTY OR OTHER OBLIGATION PROVIDED IN PRICE SHEET 150 (OR PRICE SHEET 153) IS GRANTED ONLY TO THE IMMEDIATE PURCHASER AND END USER, AS DEFINED THEREIN. OTHER THAN AN END USER, NO REMOTE PURCHASER MAY RELY ON ANY AFFIRMATION OF FACT OR PROMISE THAT RELATES TO THE GOODS DESCRIBED HEREIN, ANY DESCRIPTION THAT RELATES TO THE GOODS, OR ANY REMEDIAL PROMISE INCLUDED IN PRICE SHEET 150 (or PRICE SHEET 153).

## Understanding Safety-Alert Messages

Several types of safety-alert messages may appear throughout this instruction sheet and on labels and tags attached to the TripSaver II Cutout-Mounted Recloser and TripSaver II Communications Gateway. Familiarize yourself with these types of messages and the importance of these various signal words:

## 🛦 DANGER

"DANGER" identifies the most serious and immediate hazards that will likely result in serious personal injury or death if instructions, including recommended precautions, are not followed.

## **WARNING**

"WARNING" identifies hazards or unsafe practices that can result in serious personal injury or death if instructions, including recommended precautions, are not followed.

## 

"CAUTION" identifies hazards or unsafe practices that can result in minor personal injury if instructions, including recommended precautions, are not followed.

## NOTICE

"NOTICE" identifies important procedures or requirements that can result in product or property damage if instructions are not followed.

If you do not understand any portion of this instruction sheet and need assistance, contact your nearest S&C Sales Office or S&C Authorized Distributor. Their telephone numbers are listed on S&C's website **sandc.com**, or call the S&C Global Support and Monitoring Center at 1-888-762-1100.

NOTICE	
Read this instruction sheet thoroughly and carefully before pairing the TripSaver II Cutout-Mounted Recloser with the TripSaver II Communications Gateway.	Carles

Replacement Instructions and Labels If additional copies of this instruction sheet are needed, contact your nearest S&C Sales Office, S&C Authorized Distributor, S&C Headquarters, or S&C Electric Canada Ltd.

It is important that any missing, damaged, or faded labels on the equipment be replaced immediately. Replacement labels are available by contacting your nearest S&C Sales Office, S&C Authorized Distributor, S&C Headquarters, or S&C Electric Canada Ltd.

## Following Safety Instructions

4 S&C Instruction Sheet 461-521

## **Location of Safety Labels**



## **Reorder Information for Safety Labels**

Location	on Safety Alert Message Description		Part Number
Α		TripSaver® II may be energized from either side and in any position	G-9473-E
В		This control is connected to electrical distribution equipment	180-000070-00 Rev A
С		Risk of electric shock	180-002533-01
D		Earth Ground	180-002577-01
E		Enclosure must be grounded	180-000710-01

## A DANGER



The TripSaver II Cutout-Mounted Recloser operates at high voltage. Failure to observe these precautions will result in serious personal injury or death.

Some of these precautions may differ from your company's operating procedures and rules. Where a discrepancy exists, follow your company's operating procedures and rules.

- 1. **QUALIFIED PERSONS.** Access to TripSaver II Cutout-Mounted Reclosers must be restricted only to qualified persons. See the "Qualified Persons" Section on page 2.
- 2. **SAFETY PROCEDURES.** Always follow safe operating procedures and rules.
- 3. **PERSONAL PROTECTIVE EQUIPMENT.** Always use suitable protective equipment, such as rubber gloves, rubber mats, hard hats, safety glasses, and flash clothing, in accordance with safe operating procedures and rules.
- SAFETY LABELS AND TAGS. Do not remove or obscure any of the "DANGER," "WARNING," "CAUTION," or "NOTICE" labels and tags. Remove tags ONLY if instructed to do so.

- 5. **ENERGIZED COMPONENTS.** Always consider all parts live until de-energized, tested, and grounded.
- 6. OPERATING TOOLS. To close a TripSaver II Cutout-Mounted Recloser, use a conventional insulated hotstick or S&C Universal Pole and Pole Extension fitted with an S&C Talon<sup>™</sup> Handling Tool or distribution prong. An extendo stick also can be used after proper training and practice. The TripSaver II Cutout-Mounted Recloser can be opened using Loadbuster®—The S&C Loadbreak Tool attached to a conventional insulated hotstick or S&C Universal Pole.
- 7. **MAINTAINING PROPER CLEARANCE.** Always maintain the proper clearance from energized components.

## **WARNING**

DO NOT disassemble a TripSaver II recloser. The control module inside the TripSaver II recloser housing is only intended for use inside the TripSaver II recloser and has not been approved for any other use. There are no customerserviceable parts inside the recloser, and disassembling the recloser voids the warranty. If you do disassemble a TripSaver II recloser, NEVER power it with the power module included with the Service Center Configuration Kit when the inside of the recloser is exposed. Unsafe high voltage can be present on the connectors on the outside of the internal control box assembly, resulting in serious injury or death.

## **WARNING**

The TripSaver II Cutout-Mounted Recloser MUST be de-energized and removed from the utility pole before attaching the "corded" power module (power module with ac adapter and extension cord) to the base of the TripSaver II recloser. The corded power module is ONLY intended to be used for set-up and data collection when the TripSaver II recloser is de-energized and removed from the utility pole. (To provide power to a TripSaver II recloser while it is mounted to the pole, use the cordless power module, S&C catalog number 5954.) Failure to remove the TripSaver II recloser from the utility pole before connecting the corded power module may cause arcing, burns, electric shock, and death.

## Packing

A complete TripSaver II Cutout-Mounted Recloser for a new installation consists of two shipping containers. They include the following:

- A single-pole TripSaver II Cutout-Mounted Recloser
- A mounting and miscellaneous mounting hardware for securing the TripSaver II recloser to the pole

A complete TripSaver II Communications via Gateway system for a new installation consists of two shipping containers. They include the following:

- The communications gateway (including radio, if specified "factory-furnished" at time of order), an optional battery if specified, and mounting hardware for securing the box to the pole
- An ac power cable

### Inspection

Examine the shipment for external evidence of damage as soon after receipt as possible, preferably before removal from the carrier's conveyance. Check the bill of lading to make sure the listed shipping containers are present:

#### If there is visible loss and/or damage:

- 1. Notify the delivering carrier immediately.
- 2. Ask for a carrier inspection.
- 3. Note the condition of shipment on all copies of the delivery receipt.
- 4. File a claim with the carrier.

#### If concealed damage is discovered:

- 1. Notify the delivering carrier within 15 days of receipt of shipment.
- 2. Ask for a carrier inspection.
- 3. File a claim with the carrier.

Also, notify S&C Electric Company in all instances of loss and/or damage.

## Handling

#### NOTICE

DO NOT drop a TripSaver II recloser or subject any of its parts to undue stress during installation. Only remove a TripSaver II recloser from the carton when you are ready for installation.

## Storage

TripSaver II Cutout-Mounted Reclosers and TripSaver II Communications Gateways are shipped on pallets banded with plastic wrap. This packaging is designed to protect the TripSaver II reclosers and Communications Gateways from freight damage. This packaging is not suitable for outdoor storage as it can trap water and moisture that may damage the equipment. After receipt, TripSaver II reclosers and TripSaver II Communications Gateways should be stored indoors in their shipping packaging. Storing TripSaver II reclosers or Communications Gateways outdoors in the shipping packaging will void the warranty.

### Returning

If for any reason a TripSaver II recloser or TripSaver II Communications Gateway is to be returned, place it in the original shipping carton to prevent damage during shipping. If you need additional shipping cartons, contact your nearest S&C Sales Office, S&C Authorized Distributer, or S&C Headquarters.

### **Equipment Required**

To perform the procedures detailed in this instruction sheet, you will need:

- A TripSaver II Cutout-Mounted Recloser with the **Extended Open Interval** ("-O") option
- A TripSaver II Communications Gateway with battery backup
- The TripSaver II Service Center Configuration Software installed on a PC
- The TripSaver II Service Center Configuration Kit including the power module, ac cord, and USB transceiver
- The S&C Magnet Tool (or equivalent strong magnet)
- An Ethernet cable

Overview	The TripSaver II Cutout-Mounted Recloser provides superior protection for overhead lateral circuit protection. Pairing a TripSaver II recloser with the TripSaver II® Communications Gateway allows remote access to that recloser via DNP3 protocol messaging delivered by the customer's communications network. The data provided by the communications gateway enables faster and more efficient responses to power system outages and can help optimize maintenance scheduling and momentary outage and permanent outage management. One communications gateway can be paired with up to four TripSaver II reclosers using encrypted IEEE 802.15.4 wireless communications. The communications gateway should be mounted ideally no more than 30 feet (9.1 m) below the TripSaver II reclosers to which it will be paired. There should be an unobstructed line of sight between the
	gateway antenna and the LCD screen of each TripSaver II recloser. S&C recommends mounting the communications gateway directly beneath and on the same side of the pole as the reclosers to which it will be paired. Do not mount the gateway perpendicular to the TripSaver II reclosers or on the opposite side of the pole. The reclosers must also be furnished with the <b>Extended Open Interval</b> option, which allows up to a 30-second open interval between <b>Reclose</b> operations and have <b>Gateway</b> mode enabled using the service center configuration software.
Placing a TripSaver II Recloser in Gateway Mode	Before pairing a TripSaver II Cutout-Mounted Recloser with a TripSaver II Communications Gateway, it must be placed in <b>Gateway</b> mode at the service center. To enable <b>Gateway</b> mode:
Wode	<b>STEP 1.</b> Connect to the TripSaver II recloser using the service center configuration software and the service center configuration kit. (USB transceiver, corded power module, and ac adapter.) Detailed instructions for connecting a TripSaver II recloser using the service center configuration software can be found in S&C Instruction Sheet 461-504.
	<b>STEP 2.</b> Navigate to the <b>Communication Settings</b> menu and click on the Communication Mode dropdown box. Change the <b>Communication</b> mode to "Gateway Mode."
	<b>STEP 3.</b> Click on the <b>Apply Communication Mode</b> button. <b>Note:</b> The <b>Apply Communication Mode</b> button will not apply any changes made on any other menu screens. If changes have been made to another menu screen, such as the <i>TCC Curve Settings</i> screen, click on the <b>Apply</b> button, see Figure 1.
	File Connection Data Tools Help

Figure 1. Enabling Gateway Mode in the TripSaver II recloser.

Communication Settings

**STEP 4.** The TripSaver II recloser is now in **Gateway** mode and can be paired with a TripSaver II Communications Gateway. Disconnect the TripSaver II recloser from the TripSaver II Service Center Configuration Software by clicking on the **Disconnect** button and unplugging the USB transceiver.

Connecting to a TripSaver II Communications Gateway with a PC After a gateway is powered, either on the utility pole or in the service center, it can be connected to and programmed using a PC. To connect to the communications gateway with a PC:

**STEP 1.** Connect a CAT5 Ethernet cable to the Ethernet port on the PC. Connect the other end of the Ethernet cable to Ethernet Port 1 on the green gateway controller module inside the communications gateway cabinet, see Figure 2.



Figure 2. Connect an Ethernet cable to the gateway controller module.

**STEP 2.** The communications gateway is accessed using a web browser interface. The default configuration of the communications gateway's IP gateway is 192.168.1.1 with DHCP set to **On**. To join the communications gateway network, set the PC's network address to "Obtain an IP Address Automatically" and "Obtain DNS Server Address Automatically" under the PC's LAN address settings to enable a network connection to the communications gateway. Alternately, a static IP address within the 192.168.1.x network may be used. See Figure 3.



Figure 3. Setting a static IP address on a PC to connect to the communications gateway.

**STEP 3.** After allowing approximately 3 minutes for the communications gateway to boot, a confirmation the PC has successfully joined the communications gateway network may be observed by launching an MSDOS command window and running 'ipconfig/all' at the command prompt. An output showing all the IP interfaces for the host system will be displayed. Identify the Ethernet interface that has the cabled connection to communications gateway Ethernet Port 1 and examine the output for that interface. Screen information for the interface supporting a successful connection when using DHCP will resemble Figure 4.

**Note:** If the interface indicates "media disconnected," this is an indication the Ethernet connection between the host PC and the communications gateway is not functional, and it should be investigated.

#### NOTICE

Because the end user can change the IP address range, or even disable DHCP completely and change the communications gateway to a static IP, it is important to make a note of any IP settings changes. When relocating or setting up a communications gateway that has had its IP settings changed, look for the IP setting configured by your service or IT department when running ipconfig/all from the MSDOS command line.

Command Prompt	_	×
DNS Servers		
10.20.16.232		
NetBIOS over Tcpip : Enabled		
Ethernet adapter Ethernet 3:		
Connection-specific DNS Suffix . :		
Description Realtek USB GbE Family Controller #2		
Physical Address 54-BF-64-1A-D1-E2		
DHCP Enabled Yes		
Autoconfiguration Enabled : Yes		
IPv4 Address		
Subnet Mask		
Lease Obtained Thursday, March 12, 2020 9:04:25 AM		
Lease Expires Thursday, March 12, 2020 11:34:24 AM		
Default Gateway		
DHCP Server		
DNS Servers		
NetBIOS over Tcpip : Enabled		

Figure 4. A sucessful ipconfig/all reply from the command prompt.

**STEP 4.** With the CAT5 cable attached to communications gateway Ethernet Port 1, launch a Web browser on the PC. Within the URL address line, type in the communications gateway default IP address of 192.168.1.1 and press the <Return> key. (Browser versions supported include Google Chrome and Internet Explorer.) The *Login* screen will open with a username and password challenge. See Figure 5. When logging in for the first time, users will be sent to the *Profile* screen and be prompted to change the default password.

**Note:** The default username and password can be requested from S&C by calling the Global Support and Monitoring Center at 888-762-1100 or by contacting S&C through the S&C Customer Portal at **sandc.com/en/contact-us/sc-customer-portal/**.

S <sub>8</sub> C Tr	ipSaver® II mmunication Gateway	0
Username Password	Enter username xxxxxxxxxxxxxxxxxxxxxxxxXXXXXXXXXXXXX	
2		

Figure 5. The Communications Gateway Login screen.

NOTICE

With firmware version 3.1 and later, the default password for the Admin user must be changed before proceeding. See Figure 6. The new non-default password must be at least 8 characters with at least one uppercase and one lowercase character. Numbers and special characters are also allowed but not required. <Space>, <Tab>, <&> characters are not allowed.

Profile		
	ne default password. You must change the password to a non-default value ss the device. Please change it now to proceed.	
User:	admin	_
Current Password:	x000000000 💿	
New Password:	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	
Confirm New Password:	xxxxxxxxxxx	

Figure 6. The Profile screen for changing the password.

Pairing a TripSaver II Recloser with a Communications Gateway **STEP 5.** After a successful login, the browser will open to the communications gateway *General Status* screen with an application navigation menu on the left side of the screen. The navigation menu will remain visible for all subordinate menu interface screens.

There are two methods of pairing a TripSaver II recloser to work with a communications gateway that depend on the firmware version of the TripSaver II recloser. The first is service center programming at the customer's facility before taking the TripSaver II reclosers to the installation site. The second is on-site programming, accomplished after the TripSaver II reclosers and communications gateway have been installed in the field.

In both cases, S&C recommends pairing TripSaver II reclosers one at a time. This will ensure each device is fully and securely connected before pairing the next device. When paired, the TripSaver II recloser will only communicate with its paired gateway using a secure, encrypted protocol. The security keys used to encrypt the communications are unique to the pair and cannot be transferred between TripSaver II reclosers or gateways.

# Field Pairing with the TripSaver II Recloser with Firmware Version 1.6, 1.7, 1.8, or 1.9 Installed on the Utility Pole and Powered by Line Current

For TripSaver II reclosers furnished with firmware version 1.6 or 1.7, pairing can *only* be performed with the TripSaver II recloser powered by line current or an external power source not supplied by S&C. For details on the specifications for an external power source, contact your local S&C Sales Office. Use this procedure for pairing a TripSaver II recloser installed on a utility pole and powered by line current:

- **STEP 1.** Place the TripSaver II recloser in **Gateway** mode, as described on page 7. Install the TripSaver II recloser on the utility pole, as described in S&C Instruction Sheet 461-502, and power the TripSaver II recloser via line current. Power the communications gateway by connecting it to ac power. Make sure any nearby USB transceiver is unplugged.
- **STEP 2.** With the communications gateway installed no more than 100 feet (30.5 meters) from the TripSaver II recloser to be paired, connect to the communications gateway with a PC, as described on page 8. (A 25 to 30 foot (7.6 to 9 meter) distance is more common depending on pole height and local construction practices.)
- **STEP 3.** Navigate to the *Device Management* screen. See Figure 7.

TrioSavor® II	Device Menore	ment					
TripSaver® II Communication Gateway	Device Manage	Device Management		founted Recloser	×		
General Status			Transceiver ID	0019C900.00020000.		Add Tr	pSaver® II Cutout-Mounted Recloser
Gateway Settings			TripSaver II Device Name			RSSI (dBm)	
Device Management	Serial # TCMR-97406	TripSaver II Device Name Building 14A TripSaver II Reck		Enter TripSaver II device name	a ected	min avg max -39 -37 -35	
TripSaver® II Service Center Configuration Software					Canoel OK		
Remote Drop Open						Identify Remove E	(d)t
Gang/Local Operation							
DNP3 Master Settings							
DNP3 Outstation Settings							
User Roles							
Security Settings							
Profile							
Diagnostics							
Logost							

Figure 7. The Device Management screen.

- **STEP 4.** Click on the **Add TripSaver II Cutout-Mounted Recloser** button. A pop-up menu will open.
- STEP 5. Enter the TripSaver II recloser's transceiver ID and device name.

**Note:** The device name can be anything but is usually a description of where the TripSaver II recloser is installed.

**STEP 6.** Click on the **OK** button. The communications gateway will connect to the TripSaver II recloser and it will appear as "connected" in the *Device Management* screen. See Figure 8.

⊕ II Cutout-Mounted Recloser

Figure 8. The Device Management screen after pairing a TripSaver II recloser.

**Note:** The pairing process should take approximately 5 minutes. It could take up to 15 minutes. Refresh the browser after 5 minutes to make the paired TripSaver II recloser in the *Device Management* screen show its "connected" status. If the TripSaver II recloser does not show "connected" after waiting 15 minutes, follow the "Pairing Process Takes Longer Than Expected" instructions in the Troubleshooting section on page 16.

# Service Center Pairing of the TripSaver II Recloser Furnished with Firmware Version 1.8 or 1.9

With the introduction of TripSaver II recloser firmware version 1.8, the recloser and communications gateway can now be easily paired in the service center without the requirement of line current or an external power source using the corded power module and ac adapter from the service center configuration kit:

- **STEP 1.** Place the TripSaver II recloser in **Gateway** mode, as described on page 7. Power the communications gateway by connecting it to an ac power source. Connect to the communications gateway with a PC, as described on page 8. Make sure any nearby USB transceiver is unplugged.
- **STEP 2.** Power the TripSaver II recloser to be paired with the corded power module. Instructions for using the power module can be found in S&C Instruction Sheet 461-504.

**STEP 3.** Attach the S&C Magnet Tool (or other strong magnet) to the side of the TripSaver II recloser with the green S&C logo. See Figure 9. This will turn on communications inside the TripSaver II recloser allowing it to be paired with the communications gateway.



Figure 9. Attach the magnet tool to the green logo.

- **STEP 4.** Navigate to the *Device Management* screen. See Figure 10.
- **STEP 5.** Click on the **Add TripSaver II Cutout-Mounted Recloser** button. A pop-up menu will open.

TripSaver® II Communication Gateway	Device Management				
Communication Gateway	Device Management	Add TripSaver® II Cutout-M	Mounted Recloser	×	
General Status		Transceiver ID	00190900.00020000.		Add TripSaver® II Outout-Mounted Recioner
Gateway Settings		TripSaver II Device Name			RSSI (dBm)
Device Management	Serial # TripSaver II Device Name TCMR-97406 Building 14A TripSaver II Rect		Enter TripSaver II device name	a ected	min avg max -39 -37 -35
TripSaver® II Service Center Configuration Software				Canoel OK	
Remote Drop Open					Identify Remove Edit
Gang/Local Operation					
DNP3 Master Settings					
DNP3 Outstation Settings User Roles					
User Roles Security Settings					
Profile					
Diagnostics					
Logost					
	© S&C Electric Company 2020				

Figure 10. The Device Management screen.

STEP 6. Enter the TripSaver II recloser's transceiver ID and device name.

**Note:** The device name can be anything but is usually a description of where the TripSaver II recloser is installed.

**STEP 7.** Click on the **OK** button. It will take between one and 5 minutes for the communications gateway to connect to the TripSaver II recloser. The recloser will appear in the *Device Management* screen after the screen is refreshed using the browser's **Refresh** button. See Figure 11.



Figure 11. The Device Management screen after pairing a TripSaver II recloser.

**Note:** This method can be used at the installation site on TripSaver II reclosers furnished with firmware version 1.8 or 1.9 installed on the utility pole and NOT powered by line current by using the cordless power module to supply power to the recloser and then applying the magnet tool. In no case should the corded power module be used at the installation site with the TripSaver II recloser installed on the utility pole.

**Note:** The pairing process should take approximately 5 minutes. It could take up to 15 minutes. Refresh the browser after 5 minutes to make the paired TripSaver II recloser in the *Device Management* screen show its "connected" status. If the TripSaver II recloser does not show "connected" after waiting 15 minutes, follow the "Pairing Process Takes Longer Than Expected" instructions in the Troubleshooting section on page 16.

Signal Interference	caused b more that unobstrue and the ' ideally of Wi-Fi can If radii gateway For op (9.1 m) av side of th	ies in pairing a TripSaver II recloser with a communications gateway are usually by signal interference. Remember, the communications gateway should be no an 100 feet (30.5 m) away from the TripSaver II recloser and should have an acted view of the recloser. The communications gateway antenna is directional, TripSaver II reclosers must be installed above the communications gateway, n the same pole. Also, the heavy use of Bluetooth devices, cellular devices, or n cause radio interference. To traffic is heavy, S&C recommends moving the recloser and communications closer to each other. ptimal performance, install the TripSaver II recloser no more than 30 feet way from the communications gateway and in direct line of sight and on the same he pole. Do not mount the gateway perpendicular to the TripSaver II reclosers e opposite side of the pole.
Pairing a Previously Paired TripSaver II Recloser with a New Communications	and the reshould ha	TripSaver II recloser creates a link between both the communications gateway, ecloser. Before pairing a TripSaver II recloser with a new gateway, the recloser ave <b>Gateway</b> mode disabled, and then re-enabled. recloser with a new communications gateway:
Gateway	STEP 1.	Connect to the communications gateway, as described on page 8. Delete the TripSaver II recloser's entry on the <i>Device Management</i> screen.
	STEP 2.	With the recloser removed from the utility pole, connect to the TripSaver II recloser using the service center configuration software and the service center configuration kit (USB transceiver, corded power module, and ac adapter). Detailed instructions for connecting a TripSaver II recloser using the service center configuration software can be found in S&C Instruction Sheet 461-504.
	STEP 3.	Navigate to the <b>Communication Settings</b> menu and click on the Communication Mode dropdown box. Change the <b>Communication</b> mode to "Non-Gateway Mode."
	STEP 4.	Click on the <b>Apply Communication Mode</b> button. <b>Note</b> : The <b>Apply Communication Mode</b> button will not apply any changes that have been made on any other menu screens. If changes have been made to another menu screen, such as the <i>TCC Curve Settings</i> screen, click on the <b>Apply</b> button. See Figure 1 on page 7.
	STEP 5.	The TripSaver II recloser is now in <b>Non-Gateway</b> mode. Then, while still connected to the recloser, set it to <b>Gateway</b> mode. Click on the <b>Apply Communication Mode</b> button. Disconnect the TripSaver II recloser from the Service Center Configuration Software by clicking on the <b>Disconnect</b> button.
	STEP 6.	Pair the TripSaver II recloser with the new communications gateway using the instructions in the "Pairing a TripSaver II Recloser with a Communications Gateway" section on page 11.

### Pairing Process Takes Longer Than Expected

Pairing a TripSaver II recloser should take approximately 5 minutes. In some cases, it may take up to 15 minutes. If after waiting for 15 minutes the gateway (after refreshing the browser) does not register as paired, complete the following procedure:

- **STEP 1.** Mitigate any signal interference using the techniques in the "Signal Interference" section on page 15.
- **STEP 2.** Connect to the communications gateway as described on page 8. Delete the TripSaver II recloser's entry on the *Device Management* screen.
- **STEP 3.** With the recloser removed from the utility pole, connect to the TripSaver II recloser using the service center configuration software and the service center configuration kit (USB transceiver, corded power module, and ac adapter). Detailed instructions for connecting to a TripSaver II recloser using the service center configuration software can be found in S&C Instruction Sheet 461-504.
- **STEP 4.** Navigate to the **Communication Settings** menu and click on the Communication Mode dropdown box. Change the **Communication** mode to "Non-Gateway Mode."
- STEP 5. Click on the Apply Communication Mode button. Note: the Apply Communication Mode button will not apply any changes made on any other menu screens. If changes have been made to another menu screen, such as the *TCC Curve Settings* screen, click on the Apply button.
- **STEP 6.** The TripSaver II recloser is now in **Non-Gateway** mode. Then, select **Gateway** mode from the dropdown menu. Click on the **Apply Communication Mode** button to place the recloser back in **Gateway** mode. Disconnect the TripSaver II recloser from the service center configuration software by clicking on the **Disconnect** button.
- **STEP 7.** Pair the TripSaver II recloser with the new communications gateway using the instructions in the "Pairing a TripSaver II Recloser with a Communications Gateway" section starting on page 11.