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CISCO ™

Prisma II 1310 nm AGC Transmitters Display White Lines Technical Bulletin

Overview

Audience

This technical bulletin applies to all cable system operators and technicians who use Prisma II™ 1310 nm Transmitters with manufacturing date codes between February 2003 (B03) and September 2003 (J03).

Introduction

We has received customer feedback regarding picture quality issues described as "lines in the picture", "humbars", or "poor picture quality". An analysis conducted by us indicated that these symptoms appear to be associated with the functioning of the AGC software.

Condition Description

The occurrence of these symptoms is associated with the range of AGC operation. Picture quality is adversely affected when the input level of the transmitter operates at the ±1.5 dB limit of the AGC range. Specifically, when the input level goes outside of the ±1.5 db range, the picture quality is initially normal. However, once outside the range, as the input level comes back within the ±1.5 dB range, the attenuator voltage toggles as the unit re-acquires the AGC function. This movement of the attenuator voltage causes these picture quality symptoms.

Units in the field with the composite input power set up close to the ±1.5 dB limit exhibit the symptoms as the input level randomly moves back and forth across this range. The symptoms are especially evident for a single video carrier, which means that those set-ups with fewer video channels are more likely to experience these symptoms if the AGC is turned on. All units with date code C03, and some units with date code B03, are affected whether or not AGC is enabled.

Condition Correction

The following options are available to deal with these symptoms:

- If you want to use the AGC function, the RF drive level of the transmitter must be adjusted to be nominal. The visible white lines indicate that the transmitter may be operating close to the upper or lower limit of ±1.5 dB. The "RF Drive Level" setting can be manually adjusted over the ±1.5 dB range in 0.5 dB steps to change the drive level into the laser diode.

- If you don't need the AGC function, you can turn AGC off through LCI or ICIM. (This is not an option for units with date codes B03 and C03 unless you perform the software upgrade described in this bulletin first.)

- You can download and install a software update to correct the affected units.

Software Update

To make the transmitters more tolerant of operating at their AGC limits, a software update is available for those units that exhibit these symptoms.

The software update is downloadable and can be obtained from Cisco Services. See the **For Information** section in this document for phone numbers and contact information.

See the next section, **Software Update Procedure**, for complete instructions on performing the update.

Software Update Procedure

Introduction

The transmitter software update utility is designed to be "Plug and Play' software. The utility is distributed in two files, PRISMA2UTIL.EXE and SCRIPT_26C.IMG. These files can be obtained from Cisco Services.

The following equipment is required to run the update utility:

- A personal computer running Windows 98 or newer
- An available RS-232 serial communications (COM) port
- An RS-232, straight-through, serial cable

Important: This update will cause a short interruption of service on units with date codes B03 and C03. However, we recommend performing the update during a service window for all affected units regardless of date code.

Performing the Software Update

Follow these steps to install the update software.

1. Download and install the utility files **prisma2util.exe** and **script_26c.img** to a directory on your computer.

    Note: The utility should not be run from a floppy.

2. Determine an available COM port on your computer. Be sure all other programs that may be using the COM port are shut down.

    Note: The update utility defaults to COM1. For information on using a different COM port, refer to **Checking or Changing the Update Utility COM Port** later in this document.
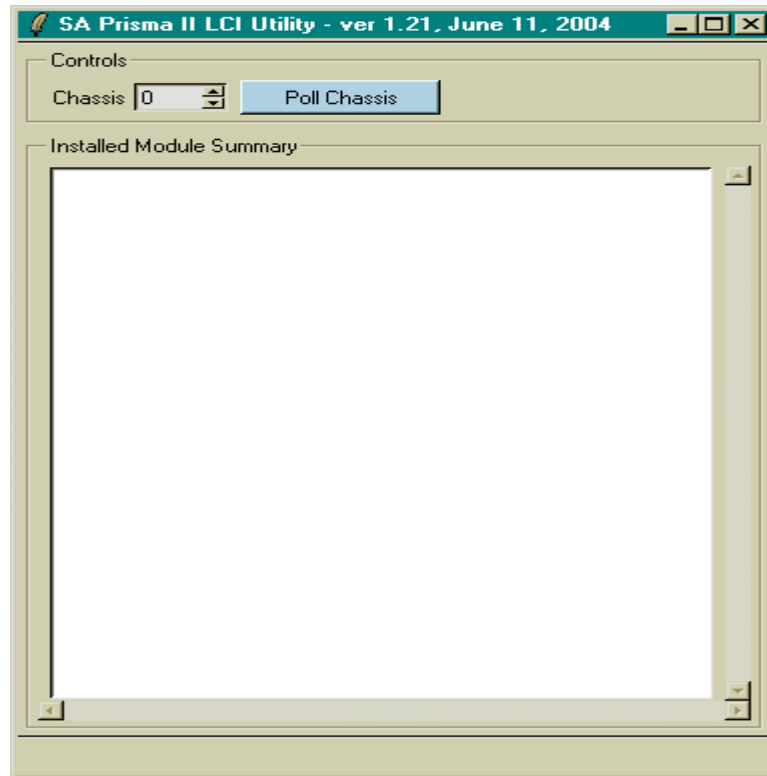
3. Connect the RS-232 serial cable to the selected COM port on your computer.

4. Connect the other end of the RS-232 serial cable to the RS-232 port on the front panel of the Prisma II chassis that contains the transmitter(s) that you want to update.

5. Double-click the **prisma2util.exe** file to run the utility.

   Result: The update utility main screen displays.

   Important: If you receive an error message similar to the following…

   ERROR opening com1

   go to **Checking or Changing the Update Utility COM Port** in this document.

6. In the **Chassis** field, set the rack Chassis ID number to the number of the chassis that contains the transmitter(s) that you want to update.

   Note: Click the up or down arrow to change the number. (To increase the Chassis ID number by an increment of 10, right-click the current number in the field. To decrease the Chassis ID number by an increment of 10, hold down the Shift key and right-click the current number in the field.)

7. Click the **Poll Chassis** button to poll the chassis you set in step 6.

    Result: If connected and the Chassis ID is set correctly, an Installed Module Summary displays similar to the following:
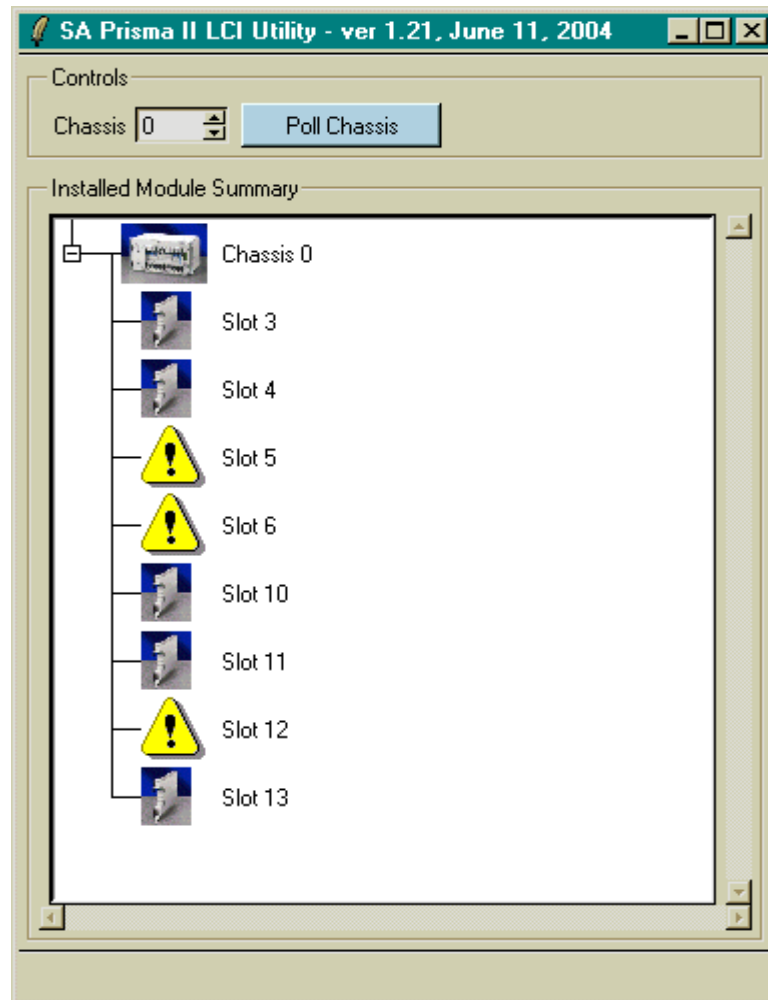
The module summary uses the following icons:

The transmitter icon indicates units that do NOT require any type of update.

The warning icon indicates a unit that requires an update.

In the example above, slots 5, 6, and 12 contain transmitters that require an update. Slots 4, 10, 11, and 13 contain units that do not need an update.

Note: Slot 3 is the fan tray of the chassis, not a transmitter.

8. | **IF the installed module summary shows...** | **Then...** |
 | --- | --- |
   | one or more warning icons | go to step 9. |
   | no warning icons | go to step 14. |

9. Click one of the warning icons.

   Result: A message similar to one of the following displays.
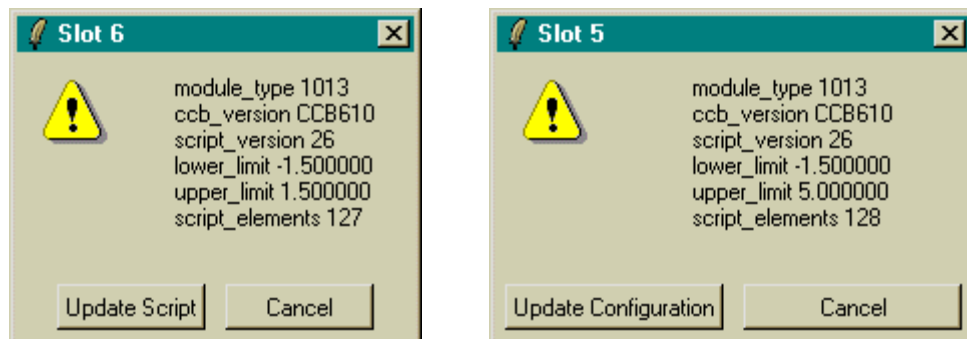
   Note: The specific message you receive indicates whether the transmitter in that slot needs a "configuration" update or a "full script" update.

10. Click the **Update Script** button or the **Update Configuration** button to start the update.

    Result: A message similar to the following displays depending on update type.
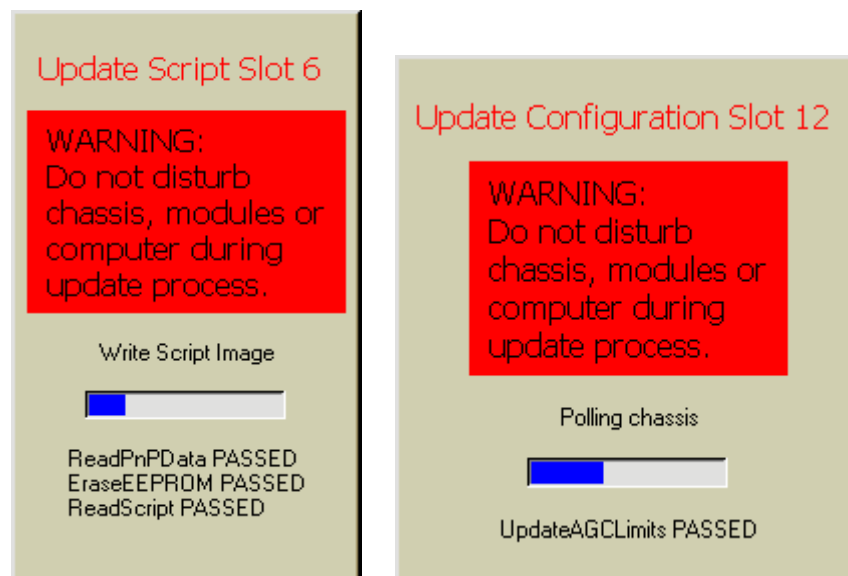
Note: A configuration update happens almost instantly. A full script update takes about four to five minutes per unit.
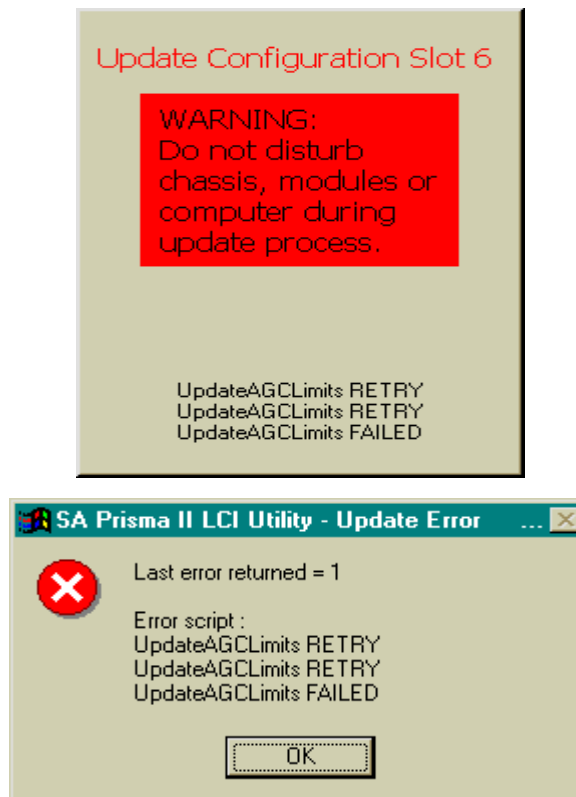
⚠ **WARNING:**

You must abide by the warning to not disturb the chassis, modules, or computer during the entire update process. Failure to do so WILL result in a corrupted and inoperable transmitter! If corrupted, field update or repair of the transmitter is not possible.

Note: If a power interruption occurs while the update process is running only the unit being updated at the time will be affected. Depending on the exact timing of the interruption you may or may not be able to retry the update. If you cannot rerun the update procedure, the transmitter will require factory service. Contact Cisco Services.

11. If you try to start the update and there is a communications failure, a message similar to the following displays.

Update Configuration Slot 6

WARNING:
Do not disturb
chassis, modules or
computer during
update process.

UpdateAGCLimits RETRY
UpdateAGCLimits RETRY
UpdateAGCLimits FAILED

SA Prisma II LCI Utility - Update Error

Last error returned = 1

Error script :
UpdateAGCLimits RETRY
UpdateAGCLimits RETRY
UpdateAGCLimits FAILED

OK

If you receive a similar message, check the following:

- Is the transmitter you are trying to update still secure in the chassis?
- Is the RS-232 serial cable still connected properly?

After checking these items, click **OK** in the update error message box and then retry the update starting at step 9.

12. After the transmitter update is completed, the update utility re-polls the entire chassis and updates the Installed Module Summary to show any remaining units in the chassis that still need to be updated.

    Repeat steps 9 and 10 for each transmitter that requires an update.

13. After all transmitters have been updated, the final poll results should look similar to the following and show no remaining warning icons.
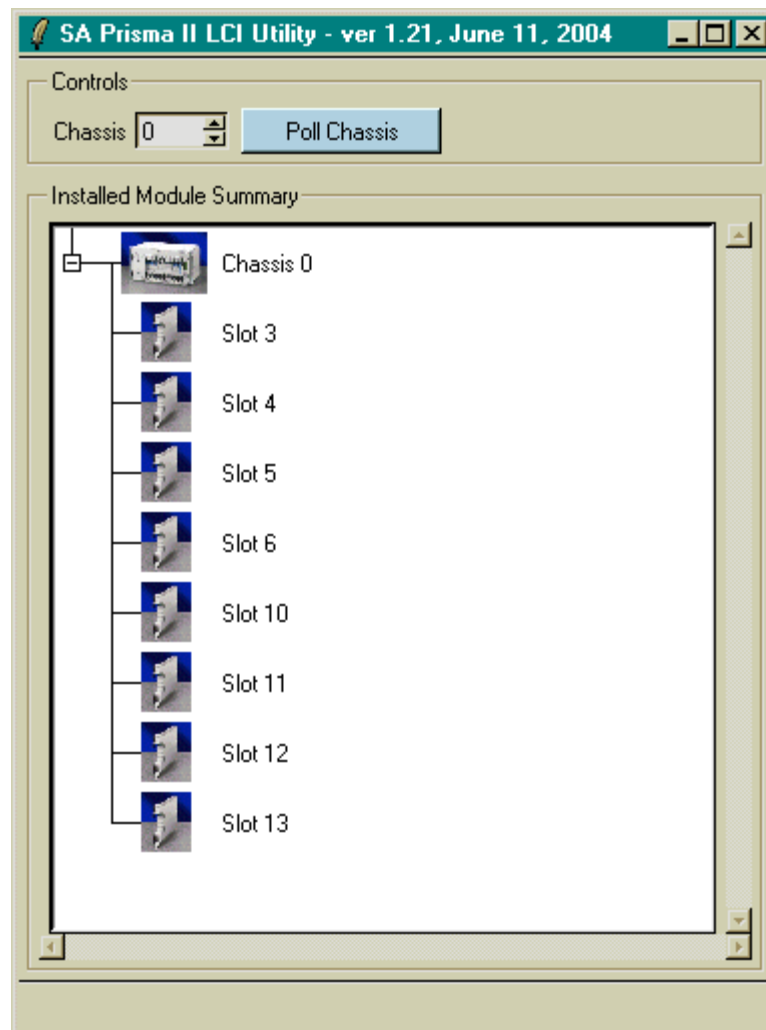
14. Move to the next chassis that contains transmitters which may require an update.

    Disconnect the RS-232 serial cable from the chassis under test and connect it to the next chassis to be tested. Repeat this update procedure for any transmitters in that chassis that display the warning icon. Continue to test chassis in other racks as well.

Checking or Changing the Update Utility COM Port

If you receive an error message similar to the following when starting the utility, you probably have a conflict with the selected COM port.
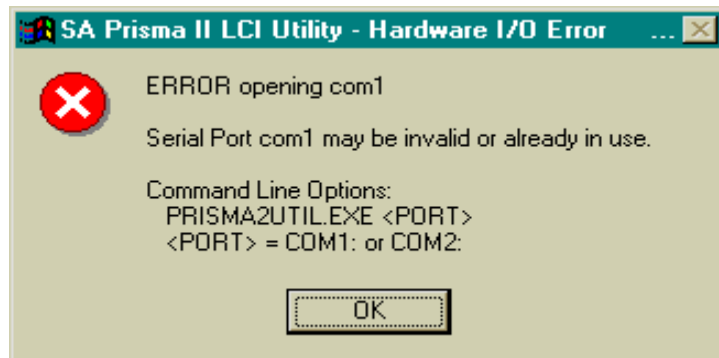
First make sure that you have connected the RS-232 serial cable to the correct COM port on your computer, and make sure all other programs that may be using that COM port are shut down. Then click the OK button and try to start the update utility again.

The update utility defaults to using COM1. If you need to change to a different COM port follow these steps.

1. Right-click on the **prisma2util.exe** file or icon.

   Result: The prisma2util General properties dialog box displays.

2. Click the **Shortcut** tab.

   Result: The properties dialog box Shortcut tab fields display.

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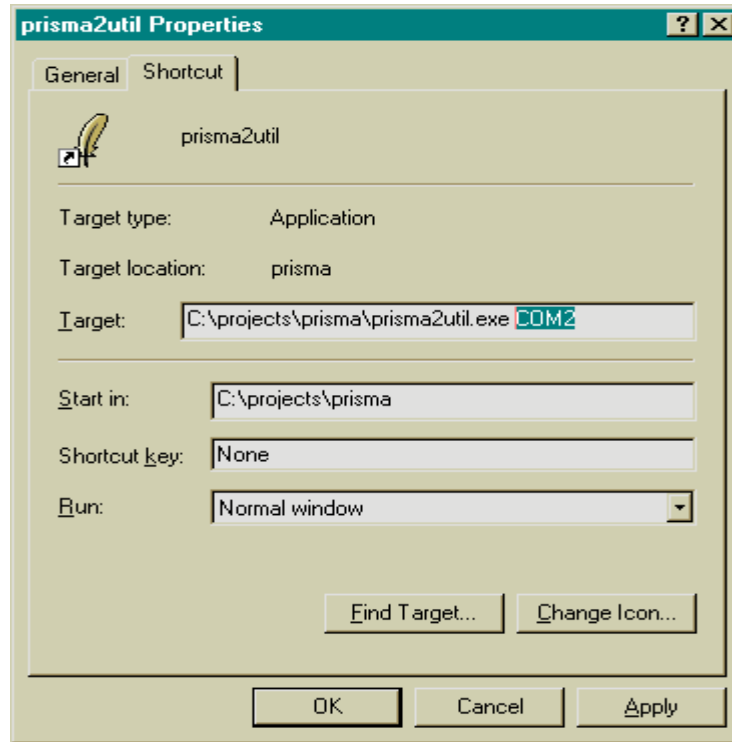
3. In the Target field, type a space and then the COM port that you want to use after the filename prisma2util.exe, for example:

    Prisma2util.exe COM2

4. Click **Apply** and then click **OK**.

    Result: The update utility is set to use the specified COM port.

5. Re-start and run the update utility to update the software in your transmitter(s).

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.