

Configuring the LM860 Headend Monitor in TNCS Application Note

Overview

Purpose

The purpose of this document is to provide instructions for configuring the LM860 Headend Monitor in Transmission Network Control System (TNCS) and ROSA Element Manager (EM). This document is a supplement to the *TNCS Administrator Software User Guide*, part number 4013494.

Who Should Use This Document

This document is intended for authorized personnel who have experience working with similar equipment. The personnel should have appropriate background and knowledge to complete the procedures described in this document. Scientific-Atlanta service engineers who help system operators manage their systems will also find the contents of this document useful.

Qualified Personnel

Only appropriately qualified and skilled personnel should attempt to install, operate, maintain, and service this product.



WARNING:

Allow only qualified and skilled personnel to install, operate, maintain, and service this product. Otherwise, personal injury or equipment damage may occur.

Related Publication

You may find the following publications useful as you implement the procedures in this document.

- *TNCS Administrator Software User Guide*, part number 4013494
- *TNCS Cabling Guide*, part number 736790

In This Document

■ Initial System Configuration.....	3
■ Configure the Headend Monitor.....	7
■ Change the Configuration.....	11
■ For Information.....	14

Initial System Configuration

The LM860 Headend Monitor measures the video, audio, and second audio carrier levels for several devices. It also detects the presence of modulation for the video carrier and both audio carriers.

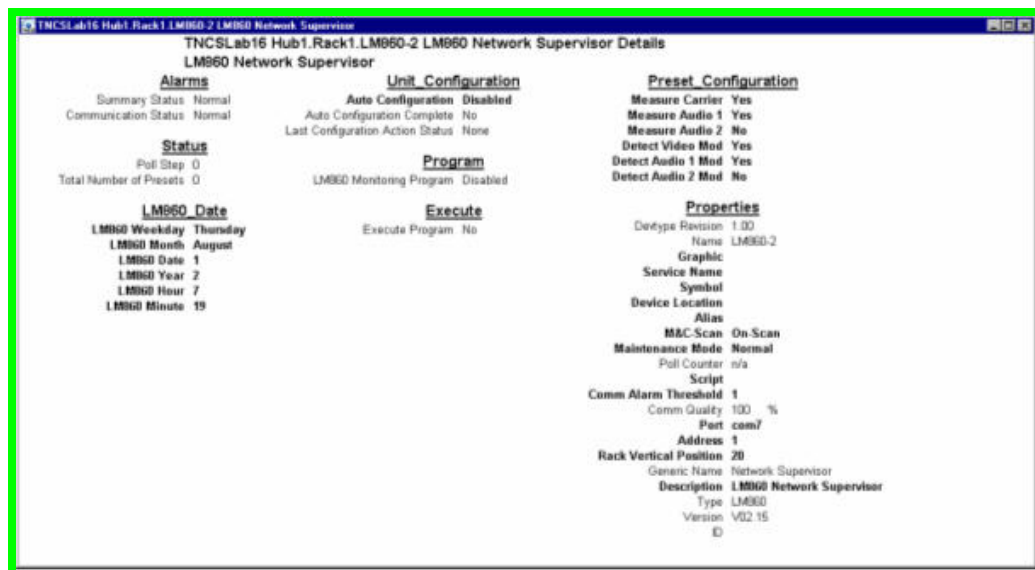
This product supports multiple devices on the same server.

The following devices are supported:

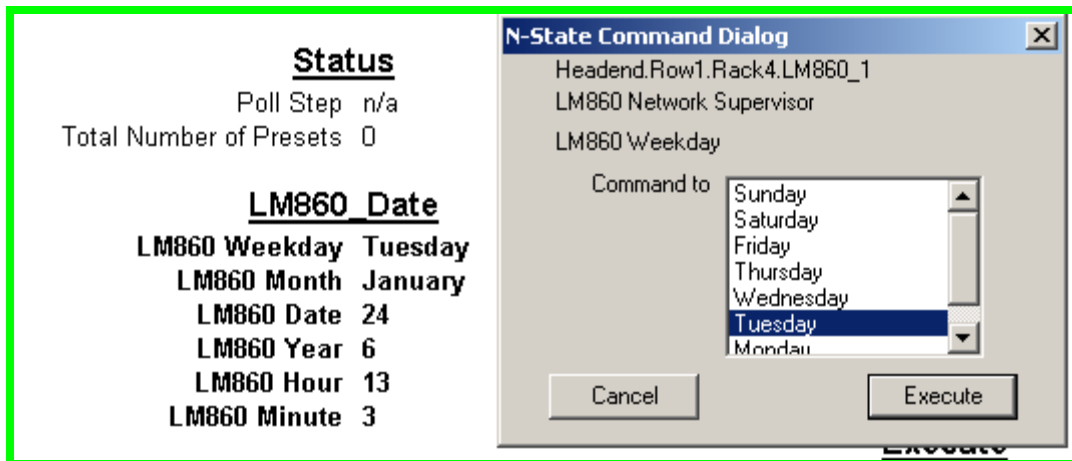
- 6150 Signal Processor
- 6350 TV Modulator
- Pulsar Modulator (Only the MNM (NTSC) format is supported)
- 9820 Agile Modulator
- 9821 Agile Modulator
- 9860 Agile Upconverter
- 9861 Agile Upconverter
- UC-4 Universal Upconverter
- 9825S & 9825M Modulators

Initially Configuring the System

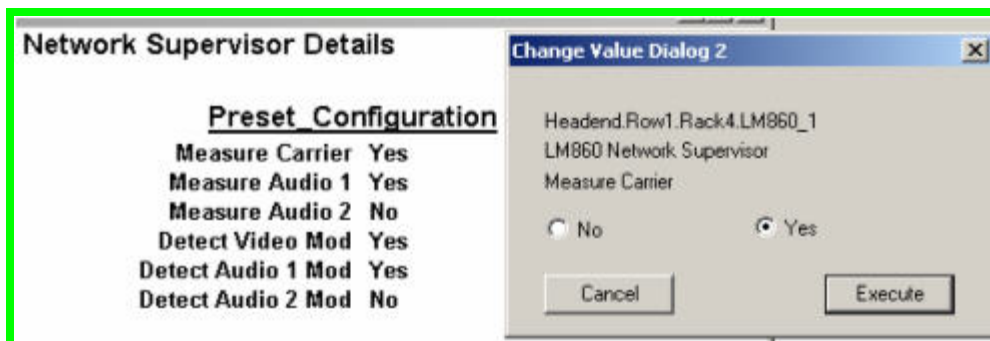
Refer to the following illustration when configuring the system.



- 3 In the LM860_Date section of the LM860 Network Supervisor Device Details window, set the LM860 Weekday, Month, Date, Year, Hour, and Minute. Double-click on each of these parameters to open the Command Dialog window. Select the appropriate data and then click **Execute** to enter the data.

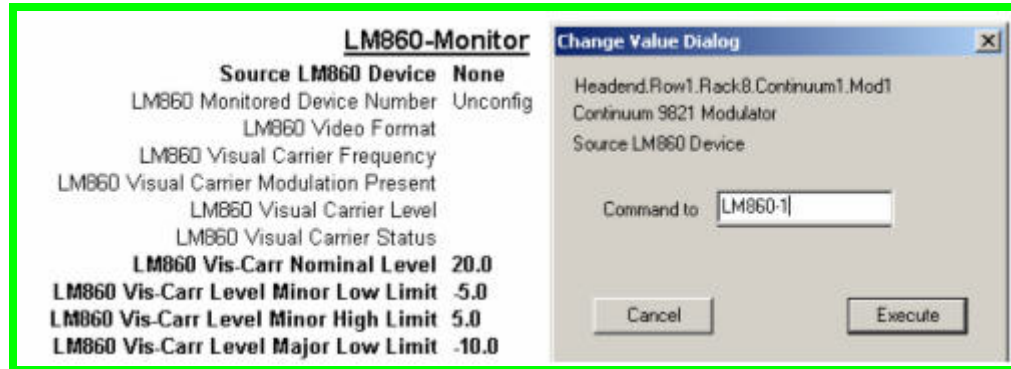


- 4 In Preset Configuration section of the LM860 Details window, enable or disable each parameter that is appropriate for the system. To enable or disable a parameter, double-click on the parameter to open the Command Dialog window. Select the desired setting and then click **Execute** to enter the data.



Initial System Configuration

- Each Processor, Modulator, or Upconverter that will be monitored by the LM860 must be configured to use the proper LM860. To configure these devices, open the Device Detail screen of each device and double-click on the parameter “Source LM860 Device” to open the Command Dialog window. This is found under the LM860-Monitor column. Type the unique source device name in the field and then click **Execute** to enter the data.



Configure the Headend Monitor

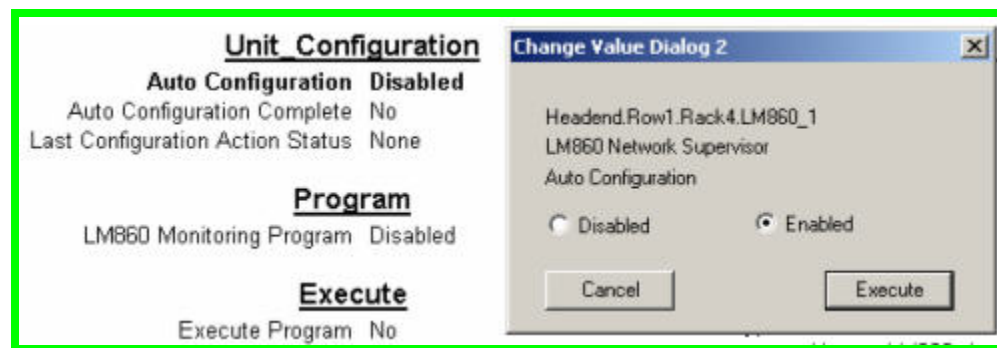
The following instructions:

- Explain how to configure the headend monitor.
- Describe Status fields.

Configuring the LM860 Headend Monitor

Follow these steps to configure the headend monitor.

- 1 Navigate to the LM860 Network Supervisor Device Details window.
- 2 In the Unit_Configuration section, double-click on the Auto Configuration parameter to open the Command Dialog window. Select **Enabled** and then click **Execute** to store the information.



Results:

- TNCS auto-configures the headend monitor for each device that is configured with the name of the headend monitor that is currently displayed.
- The Auto Configuration Complete field is set to Yes.
- The Last Configuration Action Status field reflects the status of the auto-configuration operation. Possible results for this operation are:
 - Config_OK: All of the devices TNCS found for the headend monitor were properly configured.
 - Config_Errors: TNCS could not configure one or more devices it found for the headend monitor. Messages are placed in the System log to assist in troubleshooting if this message is redisplayed.

Configure the Headend Monitor

Unit Configuration

Auto Configuration Enabled
Auto Configuration Complete Yes
Last Configuration Action Status Config_OK

Program

LM860 Monitoring Program Disabled

Execute

Execute Program No

- 3 After the auto-configuration procedure successfully completes, double-click on the LM860 Monitoring Program parameter in the Program column to open the Command Dialog window. Select **Enabled** and then click **Execute** to store the information.

Unit Configuration

Auto Configuration Enabled
Auto Configuration Complete Yes
Last Configuration Action Status Config_OK

Program

LM860 Monitoring Program Disabled

Execute

Execute Program No

N-State Command Dialog

Headend.Row1.Rack4.LM860_1
LM860 Network Supervisor
LM860 Monitoring Program

Command to **Enabled**
Disabled

Note: This field is available for selection only if the Auto Configuration Complete field displays Yes. When the LM860 Monitoring Program is enabled, additional data will be shown in the Program section.

- 4 In the Execute section, double-click on the parameter Execute Program to open the Command Dialog window. Select **Yes** and then click **Execute** to store the information.

Program

LM860 Monitoring Program Enabled
Program Type Periodic
Data Output No-Data
Day to Run Daily
Program From Hour 0
Program From Minute 0
Program To Hour 0
Program To Minute 0

Execute

Execute Program No

Detect Audio 1 Mod Yes
Detect Audio 2 Mod No

Change Value Dialog 2

Headend.Row1.Rack4.LM860_1
LM860 Network Supervisor
Execute Program

No Yes

Note: This field is available for selection only if the Auto Configuration Complete field displays Yes.

Result: Additional information is displayed in the Program and Execute sections. This information is automatically configured by TNCS during the auto-configuration procedure. It is included to assist in troubleshooting and cannot be changed.

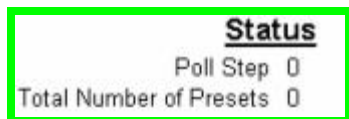


Status Field Descriptions

Two fields in the LM860 Network Supervisor Device Details window are helpful after auto-configuration and during polling.

These fields are located in the Status section, and are:

- Poll Step
- Total Number of Presets



Poll Steps

The Poll Step field indicates the preset (device) TNCS is processing information for.

Example: If the Poll Step field has a value of 3, this means the device with an LM860 Monitored Device Number field set to 3 is the device to which the information currently being processed is posted.

Configure the Headend Monitor

The Poll Step field cycles from zero to the value specified in the Total Number of Presets field, then resets to zero. This means that only one device is updated per successful poll of the Headend Monitor.

When the headend monitor is first configured, it requires time to perform all the new measurement tasks it has been assigned. It is not uncommon for the Poll Step field to reset to zero before reaching the value of the Total Number of Presets field. After an appropriate period of time, the cycle should only be interrupted by the normal execution of a Poll All command by TNCS.

Total Number of Presets

The Total Number of Presets field displays the number of devices found and configured for the headend monitor. This indicates if the auto-config procedure found and configured all of the devices properly.

If this parameter does not equal the number of devices you configured the Source LM860 Device for this LM860, the Last Configuration Action Status should be Config_Errors and you should find messages in the System Log to assist in troubleshooting. If Total Number of Presets does not equal the number of devices you configured and Last Configuration Action Status displays Config_OK, then look for typing errors on the devices you configured Source LM860 for this LM860.

Change the Configuration

After the auto-config procedure has run, you can:

- Disable the monitoring process.
- Add devices to the monitoring process.
- Remove devices from the monitoring process.

Disabling the Monitoring Process

Follow these steps to disable the monitoring process.

- 1 Navigate to the LM680 Network Supervisor Device Details window for the headend monitor you want to disable monitoring for.
- 2 In the Unit_Configuration section, double-click on the Auto Configuration field to open the Command Dialog window. Select **Disabled** and then click **Execute** to change the setting.

Results:

- TNCS unconfigures each device that is configured for the headend monitor.
- TNCS clears any alarms on monitored devices that are present due to monitoring (TNCS does not clear device alarms).
- The Auto Configuration Complete field is set to No.
- The Last Configuration Action Status field reflects the status of the last operation. Possible results for this operation are:
 - Reset_OK: All of the devices TNCS found for this headend monitor were properly reset to a neutral state.
 - Reset_Errors: TNCS could not reset one or more devices it had previously found for the headend monitor. Messages are placed in the System log to assist in troubleshooting.

Adding Devices to the Monitoring Process

You can add devices to the monitoring process in one of the following ways:

- Method 1: Configure the device and wait for TNCS to poll it.
- Method 2: Disable the process, configure the device, and re-enable the process.

Method 1

When the Auto Configuration field is Enabled, TNCS searches for newly configured devices every Poll All cycle. If the scan detects new devices, TNCS adds them to the headend monitor's configuration.

Change the Configuration

Note: Using this method to add devices can take a long time, depending upon the poll count of the headend monitor and the Poll All setting for TNCS. Method 2, described later in this section, is a faster way to add new devices.

Follow these steps to add a new device using the first method.

- 1 In the LM680 Source Device field in the Details window for each device to be added, double-click on the field to open the Command Dialog window. Type the unique name (not hierarchical name) of the headend monitor that will monitor the device and then click **Execute** to change the setting.



- 2 Wait for a Poll All cycle to occur for the headend monitor.

Method 2

Follow these steps to add a device using the second method.

- 1 Navigate to the LM680 Network Supervisor Device Details window for the headend monitor that will monitor the device(s) you are adding.
- 2 In the Unit_Configuration section, double-click the Auto Configuration field to open the Command Dialog window. Select **Disabled** and then click **Execute** to change the setting.
- 3 Wait for the Auto Configuration Complete field to change to No, and the Last Configuration Action Status field to display Reset_OK.
- 4 Does the Last Configuration Action Status field display Reset_OK?
 - If yes, in the Source LM680 Device field in the Details window for each device to be added, double-click on the field to open the Command Dialog window. Type the unique name (not hierarchical name) of the headend monitor that will monitor the device and then click **Execute** to change the setting.
 - If no, wait for the field to display Reset_OK.

Important: Do not set the Source LM680 Device field until the Last Configuration Action Status field displays Reset_OK. Failing to wait will cause the field to display Reset_Errors. This is because, with the addition of the new device, more devices will be reset than TNCS configured for the headend monitor.

- 5 In the Unit_Configuration section, double-click on the Auto Configuration field to open the Command Dialog window. Select **Enabled** and then click **Execute** to change the setting.

Removing Devices from the Monitoring Process

Follow these steps to remove a device from the monitoring process.

- 1 Navigate to the LM680 Network Supervisor Device Details window for the headend monitor that is currently responsible for monitoring the device(s) you are removing.
- 2 In the Unit_Configuration section, double-click on the field to open the Command Dialog window. Select **Disabled** and then click **Execute** to change the setting.
- 3 Wait for the Auto Configuration Complete field to change to No, and the Last Configuration Action Status field to display Reset_OK. Does the Last Configuration Action Status field display Reset_OK?
 - If no, wait for the field to display Reset_OK.
 - If yes:
 - Make the configuration changes to each device you want to remove by removing the LM860 Device name from the “Source LM860 Device” field of each device you want to remove. This is done by double clicking on the Source LM860 Device field to open the Command Dialog window. Removing the unique name of the headend monitor that will monitor the device and then click **Execute** to change the setting.
 - Set the Auto Configuration field to Enabled to allow TNCS to reconfigure the headend monitor. This is done by double clicking on the field to open the Command Dialog window. Select Enabled and then click **Execute** to change the setting.

Note: Disabling the LM680 Monitoring Program and Execute Program fields is not necessary.

For Information

Support Telephone Numbers

Use the following table to find the Technical Support and Customer Service telephone numbers for your area.

Region	Centers	Telephone and Fax Numbers
North America	SciCare™ Broadband Services	For <i>Technical Support</i> , call: <ul style="list-style-type: none"> ■ Toll-free: 1-800-722-2009 ■ Local: 770-236-6900 (Press 2 at the prompt)
	Atlanta, Georgia United States	For <i>Customer Service</i> or to request an RMA number, call: <ul style="list-style-type: none"> ■ Toll-free: 1-800-722-2009 ■ Local: 770-236-6900 (Press 3 at the prompt) ■ Fax: 770-236-5477
Europe	Belgium	For <i>Technical Support</i> , call: <ul style="list-style-type: none"> ■ Telephone: 32-56-445-197 or 32-56-445-155 ■ Fax: 32-56-445-053 For <i>Customer Service</i> or to request an RMA number, call: <ul style="list-style-type: none"> ■ Telephone: 32-56-445-118 ■ Fax: 32-56-445-051
Asia-Pacific Australia	Hong Kong	Telephone: 852-2522-5059 Fax: 852-2522-5624
Brazil	Brazil	For <i>Technical Support</i> , call: <ul style="list-style-type: none"> ■ Telephone: 55-11-3845-9154 ext 230 ■ Fax: 55-11-3845-2514 For <i>Customer Service</i> or to request an RMA number, call: <ul style="list-style-type: none"> ■ Telephone: 770-236-5662 ■ Fax: 770-236-5888
South America, other than Brazil	Argentina	For <i>Technical Support</i> , call: <ul style="list-style-type: none"> ■ Telephone: 54-23-20-403340 ext 109 ■ Fax: 54-23-20-403340 ext 103 For <i>Customer Service</i> or to request an RMA number, call: <ul style="list-style-type: none"> ■ Telephone: 770-236-5662 ■ Fax: 770-236-5888
Mexico, Central America	Mexico	For <i>Technical Support</i> , call: <ul style="list-style-type: none"> ■ Telephone: 52-3515152599 ■ Fax: 52-3515152599 For <i>Customer Service</i> or to request an RMA number, call: <ul style="list-style-type: none"> ■ Telephone: 5255-50818425 ■ Fax: 5255-52610893



Scientific-Atlanta, Inc.
770.236.5000

5030 Sugarloaf Parkway,
P. O. Box 465447

Lawrenceville, GA 30042
www.scientificatlanta.com

Scientific-Atlanta and the Scientific-Atlanta logo are registered trademarks of Scientific-Atlanta, Inc.

SciCare is a trademark of Scientific-Atlanta, Inc.

All other trademarks shown are trademarks of their respective owners.

Product and service availability subject to change without notice.

© 2006 Scientific-Atlanta, Inc. All rights reserved.

February 2006

Printed in United States of America

Part Number 4013552 Rev A