

Configuring the HE1000 Headend Monitor in TNCS Application Note

Overview

Purpose

The purpose of this document is to provide instructions for configuring the Cheetah Technologies HE1000 Headend Monitor in Transmission Networks Control System (TNCS). This document is a supplement to the *TNCS Administrator Software User Guide*, part number 4013494. A headend monitor is a spectrum analyzer for modulators and upconverters. TNCS works with the HE1000 Headend Monitor to gather the status information it collects.

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. 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

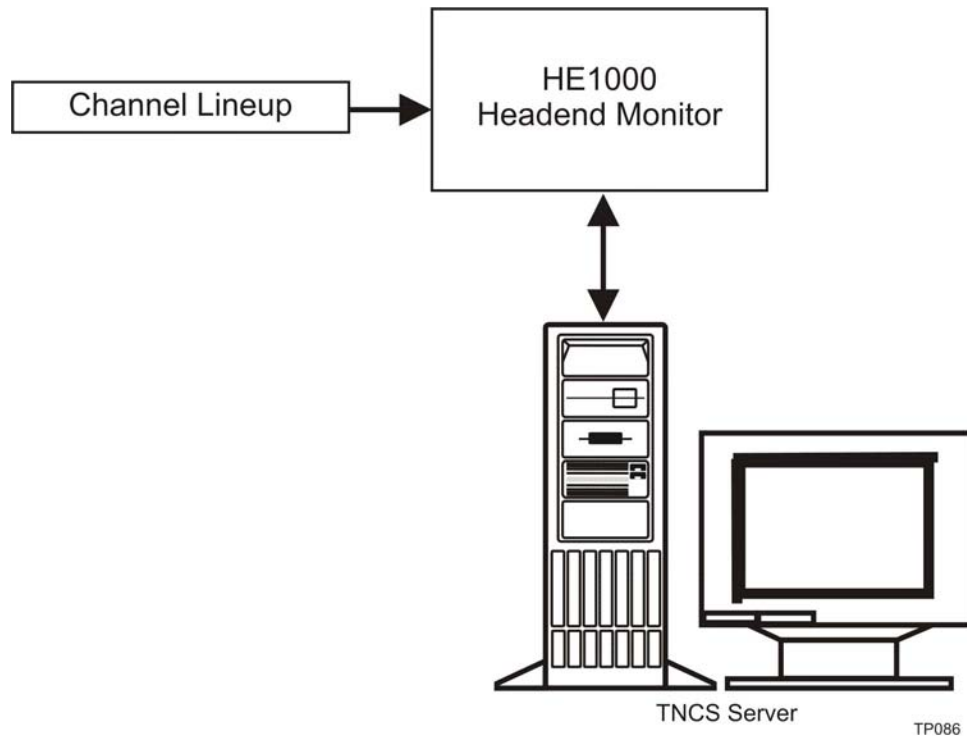
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Configuring the HE1000

Single Channel Lineup

The HE1000 collects status information about the channel spectrum.



When connected to a TNC computer, TNC receives the data and then does the following.

- Places it in the headend monitor report.
- Parses the information by channel and displays the appropriate information in the correct Device Details window. For example, data for channel 2 is placed in the Channel 2 Modulator Device Details window, data for channel 3 is placed in the Channel 3 Modulator Device Details window, etc.

Configuring the HE1000

This headend monitor report shows information about all channels in a spectrum.

Video Modulator	Channel	Visual Carrier		Aural Carrier		Aural FM Deviation	Depth of Modulation (%)
		Freq(MHz)	Level(dBmV)	Freq(MHz)	Level(dBmV)		
HE.R2.Chassis1.BUM1	2	77.2498	36.90	81.7498	25.03	21.5	46.39
HE.R2.Chassis1.Mod001	2	55.2499	36.40	59.7499	19.92	16.0	70.33
HE.R2.Chassis2.BUM	3	205.2521	39.28	209.7522	24.15	8.9	69.58
HE.R2.Chassis1.Mod002	3	61.2499	39.76	65.7499	26.42	8.1	87.06
HE.R2.Chassis1.Mod003	4	67.2499	40.36	71.7498	26.12	21.7	93.93
HE.R2.Chassis2.Mod002	10	193.2520	39.71	197.7520	24.80	3.8	68.18
HE.R2.Chassis2.Mod003	11	199.2521	41.27	203.7521	25.58	2.6	65.95
HE.R3.Chassis1.Mod001	22	169.2502	40.67	173.7502	26.89	6.8	63.44
HE.R3.Chassis1.Mod002	23	217.2503	40.32	221.7503	25.34	1.9	76.54
HE.R3.Chassis1.Mod003	24	223.2503	39.44	227.7503	25.44	1.4	69.20
HE.R3.Chassis1.Mod004	25	229.2528	40.42	233.7528	25.78	1.6	68.63
HE.R3.Chassis3.Bum3	26	235.2628	40.00	239.7629	24.51	1.4	69.84
HE.R3.Chassis1.Mod005	26	235.2628	40.04	239.7629	24.37	1.1	66.41
HE.R3.Chassis1.Mod006	27	241.2629	39.61	245.7629	24.51	1.2	72.80
HE.R3.Chassis1.Mod007	28	247.2629	38.43	251.7629	24.35	1.7	72.94
HE.R3.Chassis1.Mod008	29	253.2629	38.02	257.7629	23.39	1.9	70.79
HE.R3.Chassis2.Mod001	32	271.2623	38.19	275.7623	22.90	1.7	70.13
HE.R3.Chassis2.Mod002	33	277.2623	37.76	281.7623	22.76	3.5	69.37

This Device Details window displays information for the device that modulates channel 2.

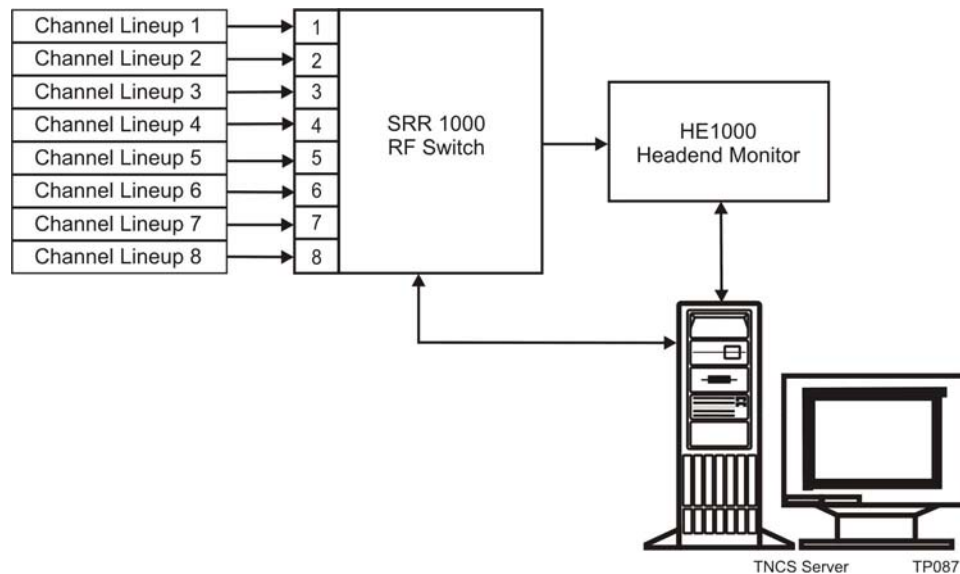
HE-Monitor

Visual Carrier Frequency		MHz
Visual Carrier Level		dBmV
Aural Carrier Frequency		MHz
Aural Carrier Level		dBmV
FM (Audio) Deviation		kHz
Depth of Modulation		%
Monitor Input Port	None	
Frequency Override		M
Vis-Carr Freq Minor Low Limit	-15.0	kHz
Vis-Carr Freq Minor High Limit	15.0	kHz
Vis-Carr Freq Major Low Limit	-25.0	kHz
Vis-Carr Freq Major High Limit	25.0	kHz
Vis-Carr Nominal Level	5.0	dBmV
Vis-Carr Level Minor Low Limit	-5.0	dBmV
Vis-Carr Level Minor High Limit	5.0	dBmV
Vis-Carr Level Major Low Limit	-10.0	dBmV
Vis-Carr Level Major High Limit	10.0	dBmV
Aural-Carr Freq Minor Low Limit	-15.0	kHz
Aural-Carr Freq Minor High Limit	15.0	kHz
Aural-Carr Freq Major Low Limit	-25.0	kHz
Aural-Carr Freq Major High Limit	25.0	kHz
Aural-Carr Level Minor Low Limit	-5.0	dBmV
Aural-Carr Level Minor High Limit	5.0	dBmV
Aural-Carr Level Major Low Limit	-10.0	dBmV
Aur-Carr Level Major High Limit	10.0	dBmV
Aud-Dev Minor Low Timer	2	secs
Aud-Dev Minor Low Limit	5.0	kHz
Aud-Dev Minor High Limit	50.0	kHz
Aud-Dev Major Low Timer	2	secs
Aud-Dev Major Low Limit	2.0	kHz
Aud-Dev Major High Limit	60.0	kHz
Audio Dev Minor Timer		secs
Audio Dev Major Timer		secs
DOM Minor Low Limit	10.0	%
DOM Minor High Limit	95.0	%
DOM Major Low Limit	2.5	%
DOM Major High Limit	97.5	%

Multiple Channel Lineup

If you have multiple channel lineups from a single headend, adding an RF switch to the hardware configuration enables the HE1000 to collect status information for up to eight channel lineups.

Each channel lineup is routed through one of eight input ports on the switch. TNCS communicates with the headend monitor and the switch to gather and report on the status information for each monitored modulator and upconverter.



The switch's ability to handle multiple lineups is especially useful in the case of channel "narrowcasting." Narrowcasting (as opposed to broadcasting) is when two or more channel lineups transmit the same channel to different geographical areas, but each channel contains different programming.

Example: Suppose channel lineup 1 and channel lineup 2 both contain channel 51. Channel lineup 1 transmits to a coastal area, so channel 51 might carry an advertisement for a flood insurance company located in that area. Assuming channel lineup 2 transmits to a college town, channel 51 might carry an advertisement for a local store that stocks used textbooks.

Configuring TNCS for Headend Monitoring

The following procedures must be followed before TNCS can collect status information from the HE1000 headend monitor:

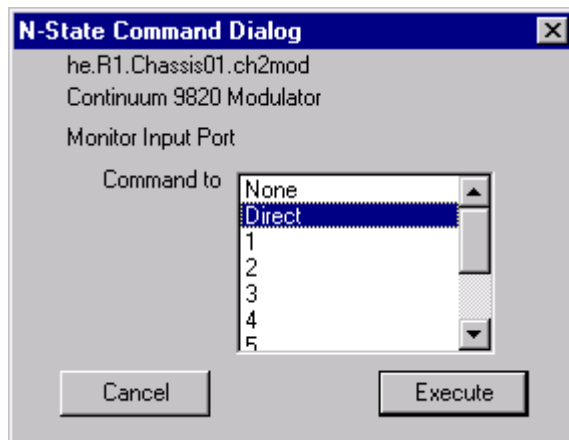
- Enable the headend monitoring option in the Options file.
- Specify the RF switch port used by each monitored modulator and upconverter

Use the Monitor Input Port field in the HE-Monitor section of the Device Details window to specify the RF switch port used by each device.

HE-Monitor	
Visual Carrier Frequency	MHz
Visual Carrier Level	dBmV
Aural Carrier Frequency	MHz
Aural Carrier Level	dBmV
FM (Audio) Deviation	kHz
Depth of Modulation	%
Monitor Input Port	Direct
Frequency Override	M1

Monitor Input Port

The option you select in the Command to box depends on your system configuration.



Option	Description
None	The device is not currently being monitored by the headend monitor.
Direct	The device is monitored by the headend monitor, but an RF switch is not being used. Note: If you've upgraded from a previous release of TNCS in which you selected the value A , the value will be automatically changed to Direct so the current software release can communicate with the headend monitor.
Ports 1 – 8	Determine which channel lineup the device belongs to. Then, select the RF switch port the lineup is routed through. Example: The currently-selected Continuum Model 9820 Modulator modulates channel 2 on channel lineup 5. You know this lineup is routed through port 5 on the switch, so you select 5 in the Command to box.

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



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