

# Streaming Media Monitoring Tools

## Overview

Our unique Streaming Media Monitor software was developed as a key operations tool for satellite broadcasters and webcasters. The goal was "automated eyes and ears" monitoring of IP multicast streaming media. The tool provides a single screen monitoring point for up to 36 multimedia streams, with visual cues, alarm dialog boxes, bandwidth monitoring, paging, and email alerting if a problem develops with any of the monitored data, audio, or multimedia products. Continuous human monitoring of multiple streaming products would be tedious, if not impossible, and thereby subtle problems may go unnoticed.

**Try before you buy** - Download our fully functional version of Streaming Media Monitor and try it for 30 days.

## Monitor Features

- Monitor any multicast stream such as Windows Media, Real Audio, Quick Time Video, MPEG Multimedia, Stock Ticker, Internet Radio, and virtually any other multicast stream.
- Provide continuous reliable monitoring of high value streams.
- Maintain multicast Group stream continuity.
- Edge monitoring capability. Remote instances may be duplicated on a central monitoring location.
- GUI display indicates problems at a glance.

## Detection Features

- Detect black, frozen, or static MPEG video.
- Detect keep-alive frames.
- Detect dead-air (audio loss).
- Detect missing streams.
- Detect packet loss or fragment truncation.
- Detect bandwidth changes.

## Alarm Features

- Alert operators visually as well as by e-mail and pager
- Bandwidth monitoring and alarming
- Alarm condition will send an email alert.
- Alarm condition will dial a pager
- Uncorrected alarm conditions will generate another alarm, email, and page to be repeated every 15

minutes (configurable).

## **Mature Software**

Mature, cost effective, multicast stream monitoring software in continuously in use by satellite broadcasters and streaming media content providers since 1998.

## **Troubleshoot IP Multicast Enabled Networks**

Test IP multicast configurations on routers and switches. By using bandwidth monitoring functions at various locations along a route, dropped packets, dropped fragmented packets, packet errors, etc. can easily be detected and monitored. Streaming Media Monitor will keep multicast routes open through routers and switches even when there are no active users. Edge monitoring may be setup using the remote status reporting capability and may be displayed on a central NOC location.

## **Remote Monitoring**

Remote monitoring from a central location may be accomplished by placing Streaming Media Monitors at various strategic locations along the multicast route. Multicast enabled routing and switching problems are readily detectable and if properly configured, will generate alarms.

Capability of monitoring up to 36 IP Multicast streams per system assuming sufficient bandwidth and memory.

## **Hardware Requirements**

Requires Pentium PC with Microsoft Windows operating system, single or multiple ethernet network cards, access route to SMTP server, dial modem (if the Dialup-Paging option is used).

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# **USER GUIDE - Streaming Media Monitor**

## Create Desktop Shortcuts

After completing software installation, the user should create a suitable number of desktop shortcuts to Streaming Media Monitor. Each shortcut will start an individually customized instance for monitoring up to six multicast streams.

Preparing the shortcut to identify multiple instances of Streaming Media Monitor.

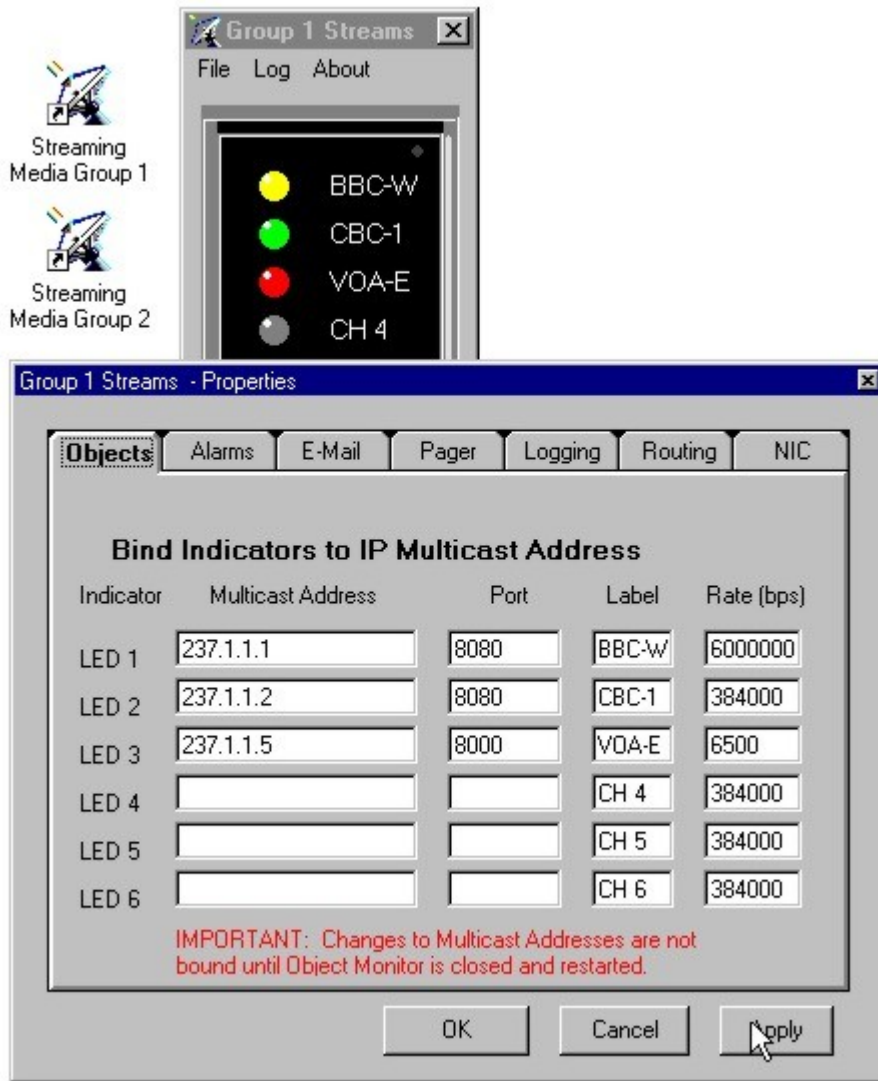


By editing the shortcut properties, Target command line option -n [instance Name], a unique name can identify each individual instance of the Streaming Media Monitor. In this case, the user identified the second shortcut as 'Group 2'.

## Configuration Tabs - (File/Properties)

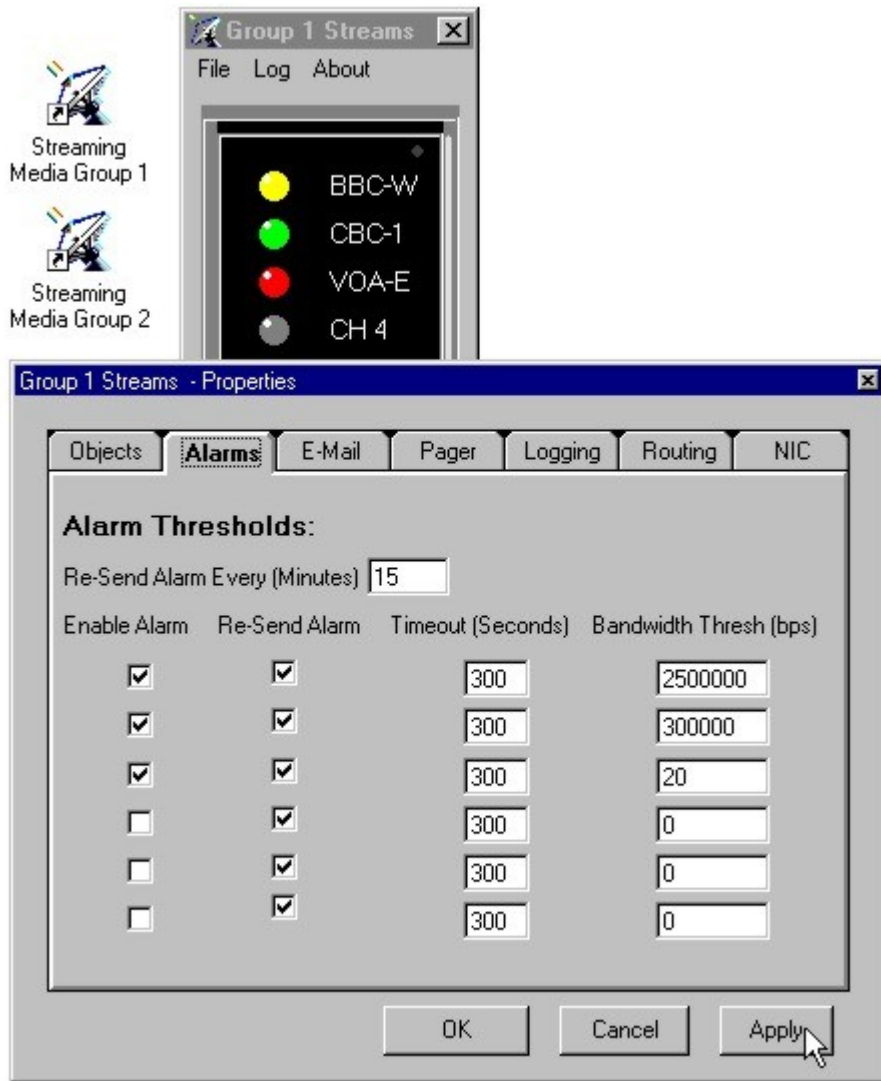
Each instance may be individually configured using the File/Properties menu.

## Objects Tab



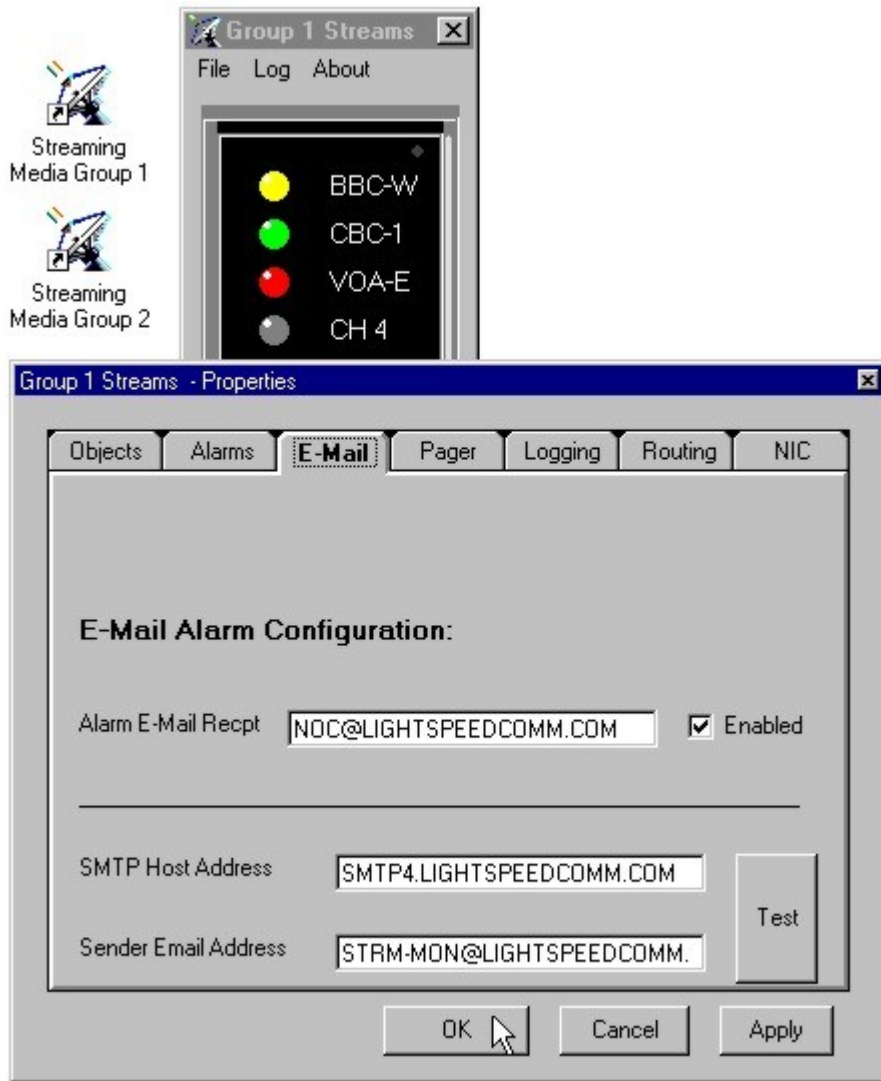
Configure the dotted IP address, port, 5 character label, and nominal data rate for each stream to be monitored. IP address changes do not take effect until the Streaming Media Monitor is restarted, however changes to bandwidth and labels are changed when Apply is clicked.

## Alarms Tab



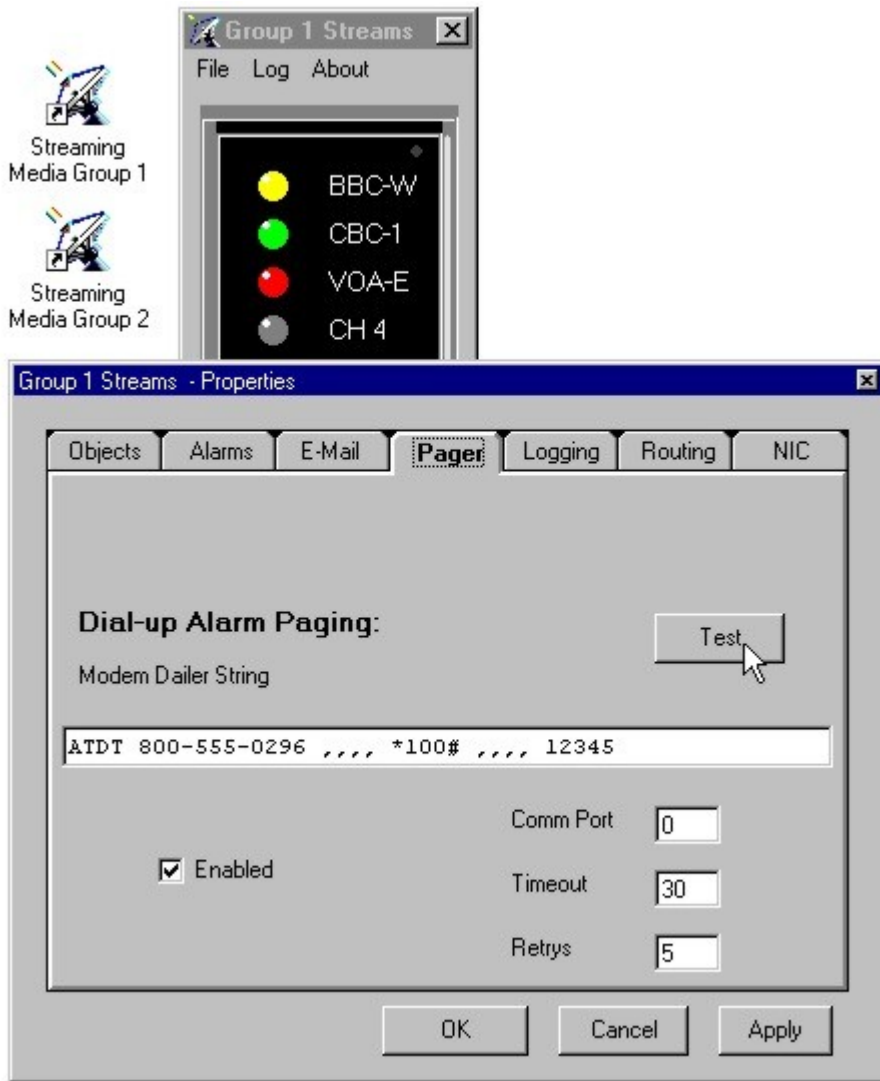
Alarms may be enabled, configured to Re-Send the alarm every N minutes if the condition is not corrected, configured time-out before alarm is activated, and configured for a threshold bandwidth. In the example below, the first multicast will alarm if the bandwidth drops below 2.5 mbs for 300 seconds (5 Minutes).

## E-Mail Tab



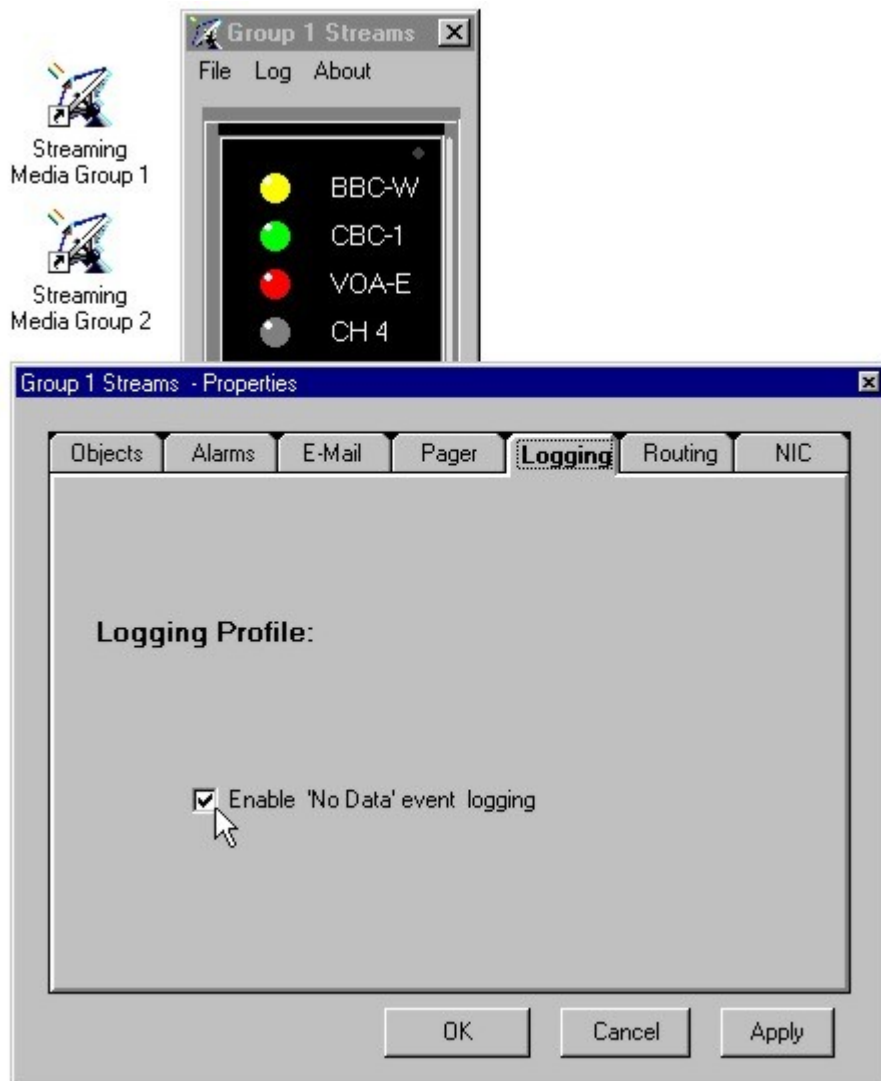
When an alarm condition occurs, an email may be sent to operating personnel, a text pager, SNMP manager, or group. The Email tab sets the target email address, SMTP server host name, and the senders name. A test button will send a sample alarm email if the 'enable' box is checked and applied.

## Pager Tab



When an alarm condition occurs, an internal or external modem may be used to send a numeric page. Configure the Modem dialer string, serial port, time-out, retries, and enable checkbox. A test button may be clicked to verify configuration.

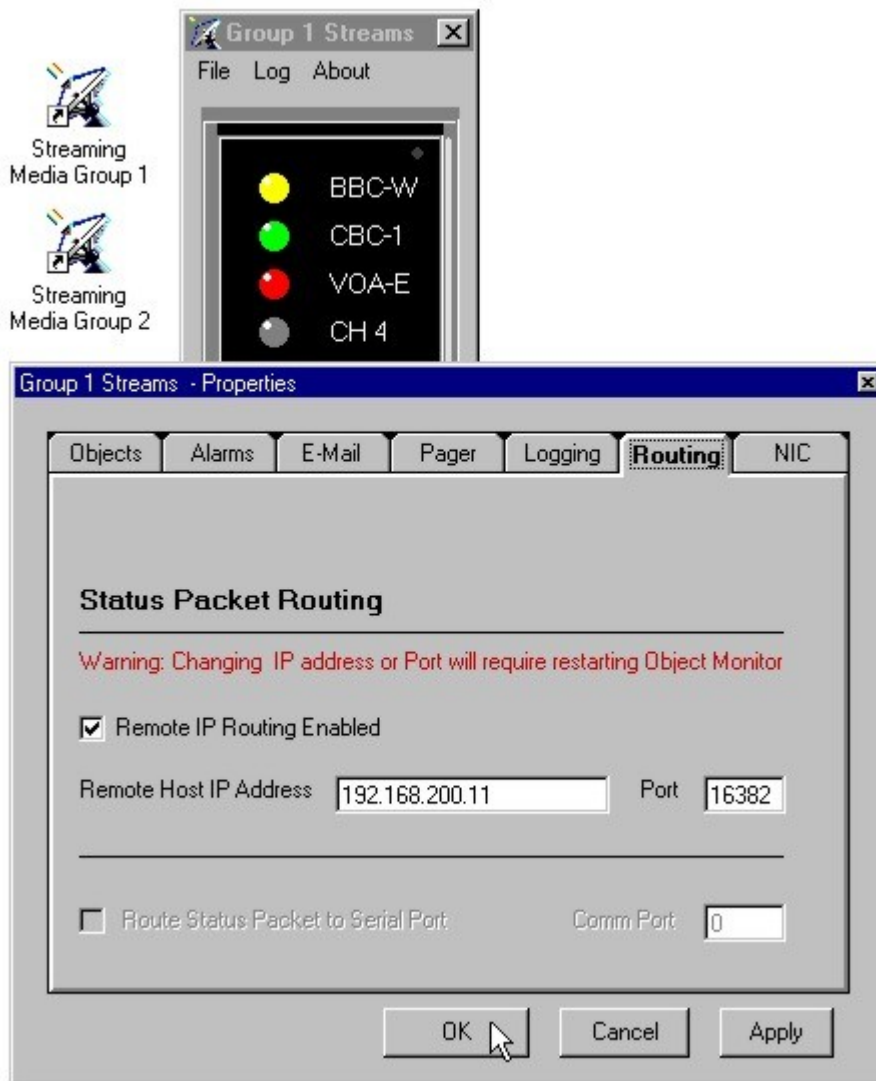
## Logging Tab



Logging may be enabled. Logs are written to the default drive in the DownLink Logs directory.

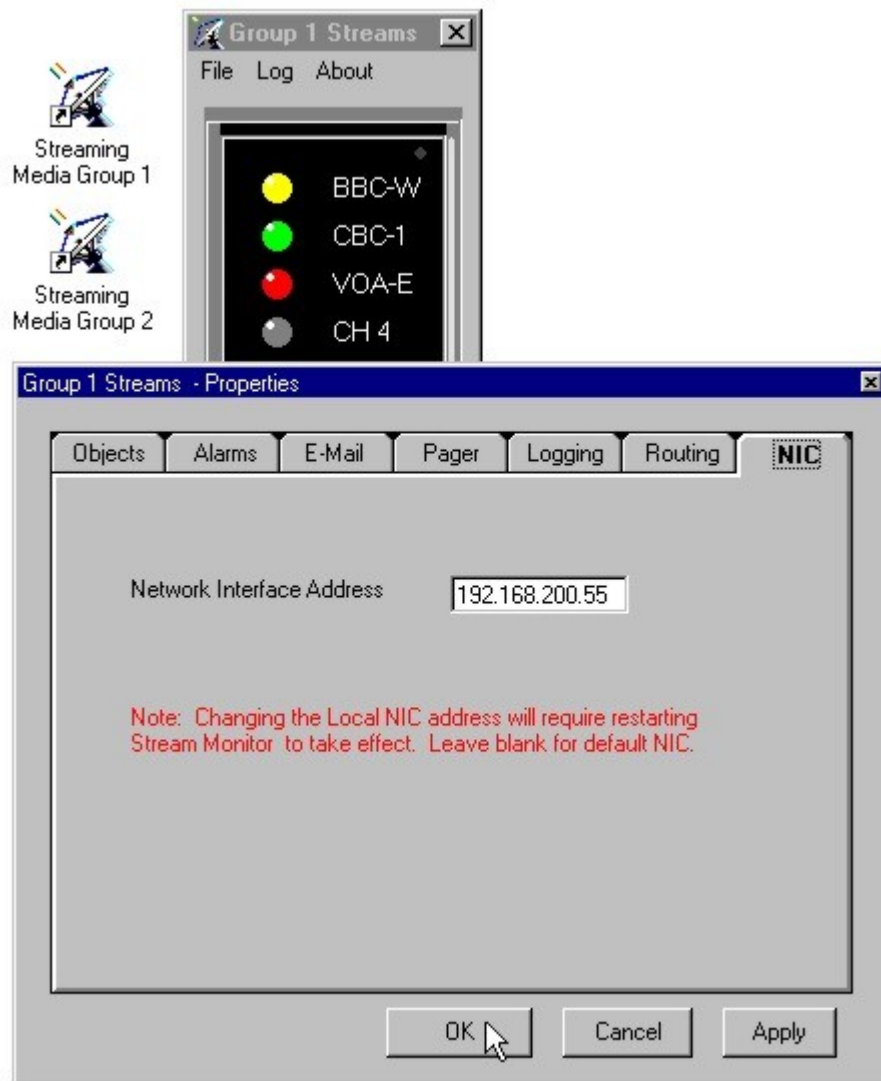


## Remote Routing Tab



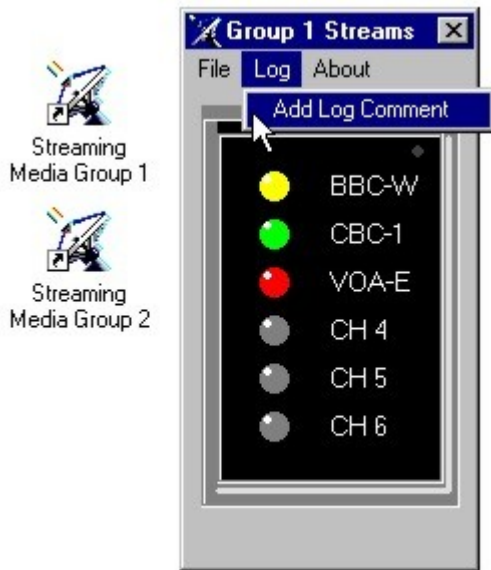
A UDP status packet may be routed to remote monitoring point. The IP address and port of the remote machine must be configured. The status packet is outbound only. Changes to this tab require restarting this instance of Streaming Media Monitor.

## NIC (Network Interface Card) Tab



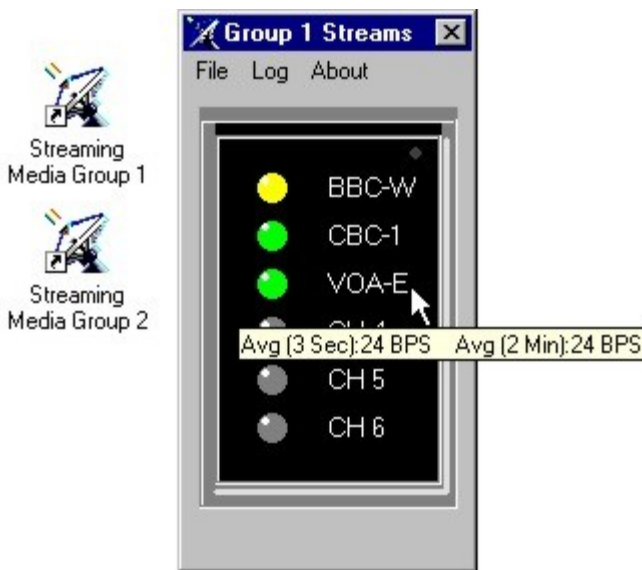
If the host has more than one Network Interface adapter, the local IP address of the desired adapter must be configured.

## Adding a Comment to the Log



A comment noting changes to configuration etc. may be logged by using the Log menu.

## Using the Bandwidth Cursor Display



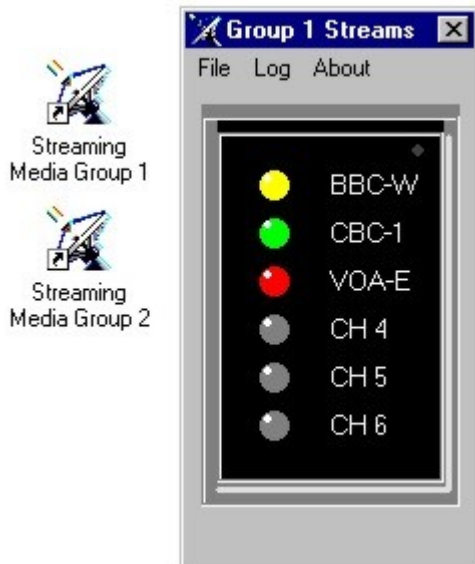
By positioning the cursor over the service ID label, the 3 second and 2 minute bandwidth averages are displayed.

## Alarm Display Message Box



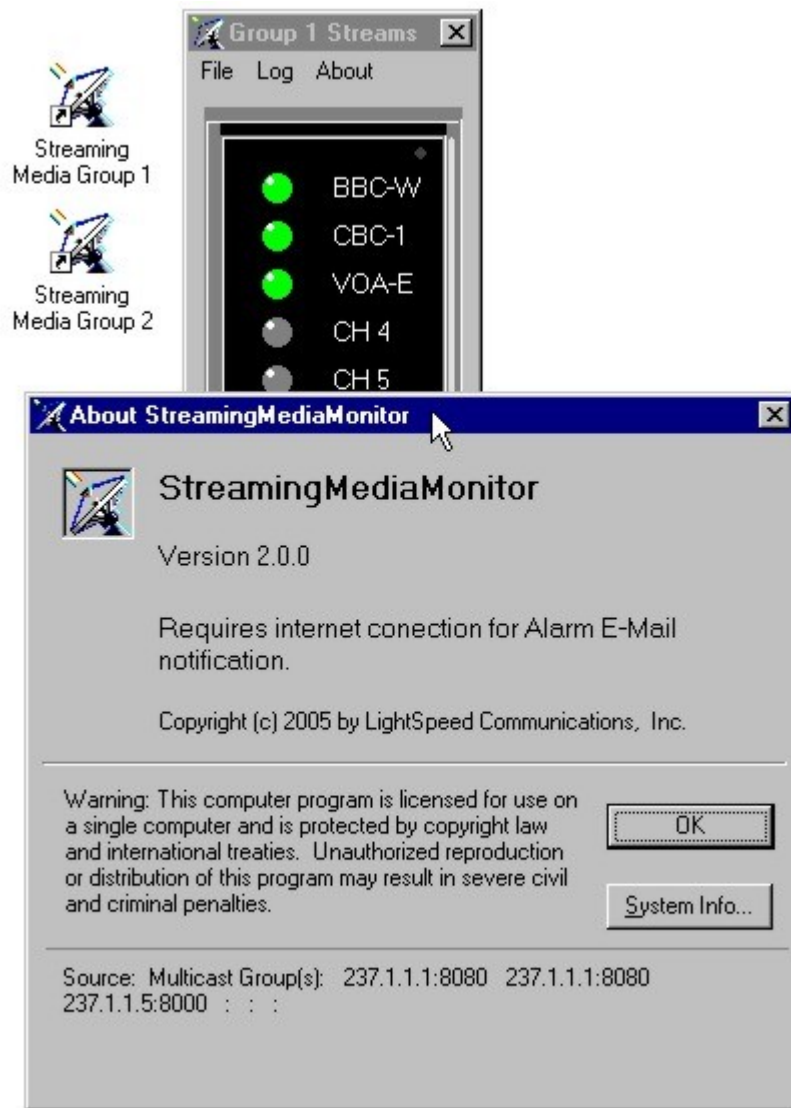
A large red message box is displayed if bandwidth drops below the configured threshold for more than the prescribed time. If Re-Send Alarm is enabled the message box will pop up again each configured period if the condition is not corrected.

## Indicator LED Colors

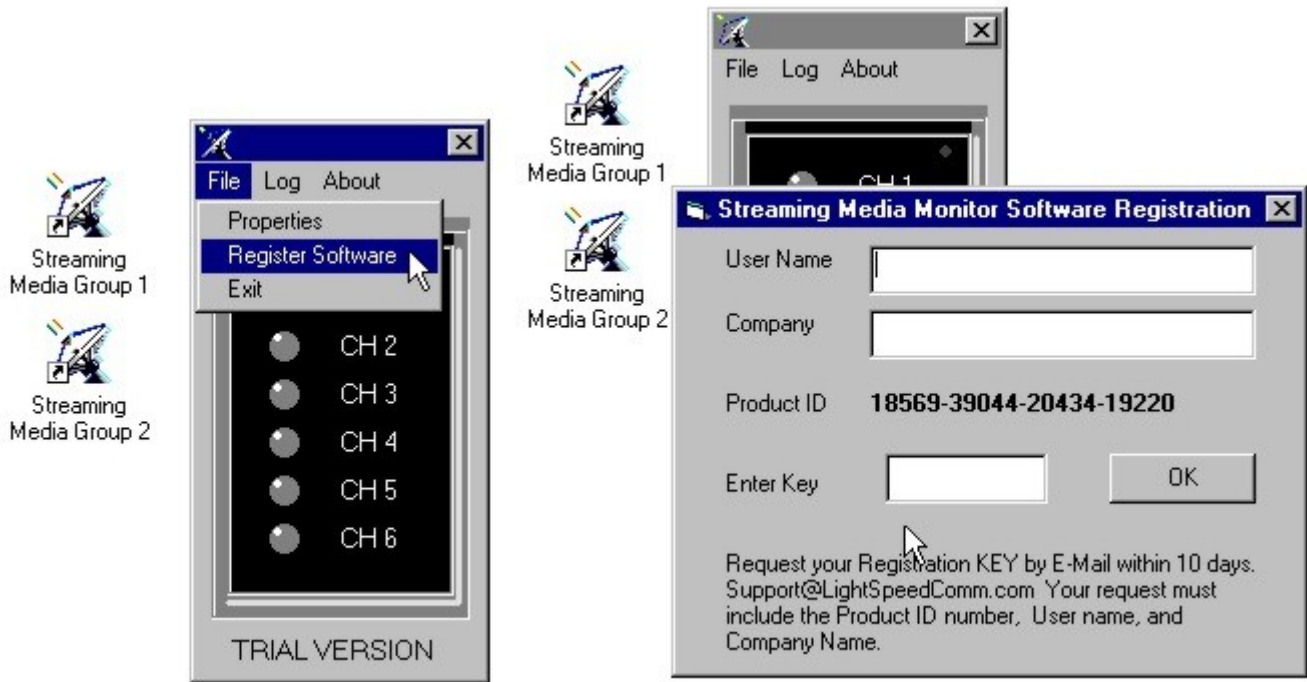


The indicator lamp will show RED if the stream is in keep alive mode (about 2% bandwidth), YELLOW if the bandwidth has dropped below 80% of normal (indicates frozen or static image in streaming video), GREEN if the bandwidth is normal, and DARK if no bandwidth is present.

# About Streaming Media Monitor



# Software Registration



Prior to completion of the 30 day trial period, contact support by email or by telephone at +01-410-573-4700 for a registration key. License fees must be received prior to key issuance.