



Allégro-1 User Guide

version 2.80

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1

Introduction

Welcome to the Allégro-1 suite of products! This section introduces you to Allégro-1 and provides information about system requirements, the documentation set, and customer support.

Summary

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Overview

The Allégro-1 is a key component of the Miranda streaming solution for remote monitoring of video and audio signals. The Allégro-1 is a streaming encoder/server with one (1) channel composed of:

- An industrial PC chassis 1RU (ALLÉGRO-1)
- Encoding software component (ALS-E110)
- Server software component (ALS-S110)

- Analog, SDI, RGB input channel (ALC-A101, ALC-D101, and ALC-XXX)

The advanced functionalities of the encoder and streaming server allow the Allégro-1 unit to encode and transmit in real time with low latency the video and audio streams to multiple clients simultaneously via IP. The Allégro-1 provides a configuration interface to adjust various parameters such as input format (NTSC/PAL/SECAM for video capture), frame rate, image quality, and more. Profiles with different parameter settings can be saved and recalled easily as configuration presets. The Allégro-1 unit is conceived for an autonomous operation 24/7 without keyboard, mouse, nor monitor and it is entirely integrated in the iControl environment.

The Allégro-1 configuration can be done via the iControl Navigator or using a Web browser (Netscape 4.0 or Internet Explorer 4.0 or later).

The Allégro-1 software and hardware is designed and produced by Miranda Technologies Inc.

Compatibility with this Release

The Allégro-1 is compatible with the following software produced by Miranda Technologies Inc.:

- iControl application server version 2.80 or later
- Allégro-1 full feature set **only** operational with iControl version 3.0
- iControl Web version 3.0 (With iControl Web version 2.80 streaming video operates without many of the new features)
- Kaleido-K2 version 5.10 or later
- Allégro-1 can be integrated with iControl Web and Kaleido-K2. For example, streaming video and audio can be displayed on the iControl Web or Kaleido layout. Refer to the iControl Web and Kaleido-K2 user guides for further details.

Allégro-1 Network and Security

Allégro-1 is designed to work in a secure private network with a bandwidth that is proportional to the desired audio and video streaming quality as well as the number of simultaneous users.

Due to performance considerations, a maximum of 16 simultaneous users can be connected to the streaming source from an Allégro-1.

Configuration Guidelines

Allégro-1 allows video to be configured according to various parameters. Default settings are provided in the tables below.

Allégro -1 RGB Configuration Setup

Video Format	RGB888_to_YUV402P
Audio	disabled
Constant Bitrate	NO
Full Quality	no
Video Quality	5
Frame Rate	15
Other Settings	Use default settings

Bandwidth	Buffer	Resolution	Bitrate	FR received	GOP
200 kbps	2000, limit 4000	320x240	200	12 to 15	4
300 kbps	3000, limit 6000	352x288	300	11 to 14	4
400 kbps	4000, limit 8000	352x288	400	12 to 15	4
500 kbps	5000, limit 10000	640x384	500	11 to 13	4
600 kbps	6000, limit 12000	680x384	600	11 to 13	4
700 kbps	7000, limit 14000	680x384	700	11 to 13	4
800 kbps	8000, limit 16000	640x480	800	11 to 14	4

Bandwidth	Buffer	Resolution	Bitrate	FR received	GOP
900 kbps	9000, limit 18000	640x480	900	11 to 14	4
1000 kbps	10000, limit 20000	800x600	1000	10 to 13	4
1200 kbps	12000, limit 24000	800x600	1200	11 to 14	4
1400 kbps	14000, limit 28000	1024x768	1400	11 to 13	2
1600 kbps	16000, limit 32000	1280x768	1600	9 to 11	1
1800 kbps	18000, limit 36000	1360x768	1800	9 to 11	1
2000 kbps	20000, limit 40000	1280x1024	2000	6 to 8	1
2500 kbps	25000, limit 50000	1600x1200	2300	3 to 6	1

Allégro-1 Analog Configuration Setup

Video Format	not applicable
Audio	enabled
Constant Bitrate	NO
Full Quality	no
Video Quality	5
Frame Rate	15
Other Settings	Use default settings

Bandwidth	Buffer	Resolution	Bitrate	FR received	GOP
200 kbps	2000, limit 4000	320x240	200	12 to 15	4
300 kbps	3000, limit 6000	352x288	300	11 to 14	4
400 kbps	4000, limit 8000	352x288	400	12 to 15	4
500 kbps	5000, limit 10000	640x384	500	11 to 13	4
600 kbps	6000, limit 12000	680x384	600	11 to 13	4
700 kbps	7000, limit 14000	680x384	700	11 to 13	4
800 kbps	8000, limit 16000	640x480	800	11 to 14	4

Allégro-1 SDI Configuration Setup

Video Format	not available
Audio	enabled
Constant Bitrate	NO
Full Quality	no
Video Quality	5
Frame Rate	15
Other Settings	Use default settings

Bandwidth	Buffer	Resolution	Bitrate	FR received	GOP
200 kbps	2000, limit 4000	320x240	200	12 to 15	4
300 kbps	3000, limit 6000	352x288	300	11 to14	4
400 kbps	4000, limit 8000	352x288	400	12 to 15	4
500 kbps	5000, limit 10000	640x384	500	11 to13	4
600 kbps	6000, limit 12000	680x384	600	11 to13	4
700 kbps	7000, limit 14000	680x384	700	11 to13	4
800 kbps	8000, limit 16000	640x480	800	11 to14	4

Documentation Set

Key Learning and Reference Features of the Documentation Set

The Allégro-1 User Guide introduces a documentation structure designed to make both learning and using the products in the guide practical and efficient. This is in addition to standard documentation features (table of contents, index, cross-references, screenshots) that help you quickly locate the information you need.

You can familiarize yourself with the basic structure by examining the Table of Contents of the Allégro-1 User Guide, in particular the structure of an individual chapter. Each chapter contains two main sections: Key Concepts and Detailed Directions.

Separate Theory and Practice: Key Concepts and Detailed Directions

The documentation separates conceptual information from how-to information, and places each in its own distinct section. This makes it easier for you to know where to look for the information you need and eliminates the repetition of conceptual information in each task description (a simple cross-reference to the information suffices).

The **Key Concepts** section provides all the conceptual background you require to understand and effectively perform tasks described in the Detailed Directions section of the chapter. The **Detailed Directions** section provides complete information on all the specific tasks you can perform in the software. An individual task consists of one or more procedures.

Documentation Conventions

The Allégro-1 User Guide uses the following documentation conventions.

Notation:	Usage:	Example
Right-click	Click with the rightmost mouse button.	Right-click the group and choose Ungroup from the menu that appears.
SHIFT+click	Press the SHIFT key and simultaneously click with the leftmost mouse button.	Click on a file, then SHIFT+click another file to select a range of files.
CTRL+click	Press the CTRL key and simultaneously click with the leftmost mouse button.	Click on the first file and then CTRL+click each additional file you want to include in the selection.
<i>italic</i>	A folder or file path.	<code>\winnt\system32</code>
Bold	iControl commands within paragraphs of text.	Click OK . doform()
Courier	iControl script.	<pre>if (ge (&current.line, &current.lpp)) doform () clearpage () endif ()</pre>
Vertical bar	Separates menu commands.	Choose File Open .

Customer Support

Technical Support Services

For technical assistance, please contact the Miranda Technical Support centre nearest you:

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Telephone: +1-800-224-7882

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France (only)

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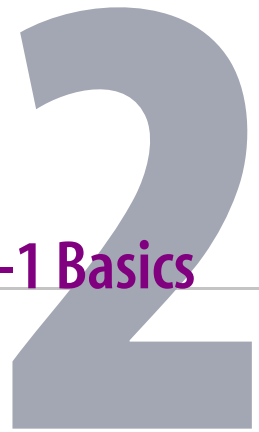
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Allégro-1 Basics



This section provides basic information about the Allégro-1 user interface and how to use

it.

Summary

<i>Overview</i>	11
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Overview

In this section, you learn to:

- “To connect to the Allégro-1 via iControl Navigator” on page 14
- “To connect to the Allégro-1 via Web-based access” on page 15

In addition, you will be able to answer the following questions:

- “Is there more than one type of Allégro-1?” on page 12
- “What are the characteristics specific to the Allégro-1 RGB?” on page 12

- “What are the characteristics specific to the Allégro-1 Analog?” on page 12
- “What are the characteristics specific to the Allégro-1 Digital?” on page 13

Key Concepts

Types of Miranda Allégro Equipment

Is there more than one type of Allégro-1?

There are three models of Allégro-1:

Allégro-1 RGB

Allégro-1 Analog

Allégro-1 Digital

Allégro-1 RGB

What are the characteristics specific to the Allégro-1 RGB?

The Allégro-1 RGB is a one channel streaming encoder server with selectable dual RGB inputs.

- supports RGB video format with any one of the two VGA connectors
- performs encoding of video: no audio input is currently available
- allows video encoding to resolutions that range between 160 x 120 and 1360 x 768 using the Miranda proprietary MVC-3 codec
- supports both 4:3 and 16:9 aspect ratio video encoding



Allégro-1 RGB hardware panel

Allégro-1 Analog

What are the characteristics specific to the Allégro-1 Analog?

The Allégro-1 Analog is a one-channel streaming encoder server with composite video input and analog stereo audio input.

- supports NTSC, PAL, PAL-M, PAL-N and and SECAM video formats via a BNC connector

- supports balanced stereo audio via two XLR-3F connectors
- performs encoding of both video and audio
- performs encoding and streaming of closed captioning (CC) and other VBI data
- allows video encoding to resolutions that range between 80 x 64 and 640 x 480 using the Miranda proprietary MVC-1, MVC-2 and MVC-3 video codecs
- supports 4 : 3 aspect ratio video encoding



Allegro-1 Analog hardware panel

Allegro-1 Digital

What are the characteristics specific to the Allégro-1 Digital?

The Allegro-1 Digital is a one channel streaming encoder server with a single SDI video input.

- supports SDI SMPTE 259M-C (270 Mbps) digital video signal with embedded SMPTE 272M digital audio via a BNC connector
- performs encoding and streaming of the video signal and of its embedded audio signals
- performs encoding and streaming of closed captioning (CC) and other VBI data
- allows video encoding to resolutions that range between 80 x 64 and 640 x 480 using the Miranda proprietary MVC-1, MVC-2 and MVC-3 codecs
- supports 4:3 aspect ratio video encoding



Allegro-1 Digital hardware panel

Detailed Directions

Access the Allégro-1

There are two ways of accessing the Allégro-1:

- with iControl Navigator
- with the Web (also known as back door access).

To connect to the Allégro-1 via iControl Navigator

iControl Navigator enables access to the Allégro-1 control panel.

1. Connect to the iControl application server through your Web browser by typing `http:// <iControl application server IP address or host name>` in the **Address** field.

The iControl Startup page appears.



iControl Startup page

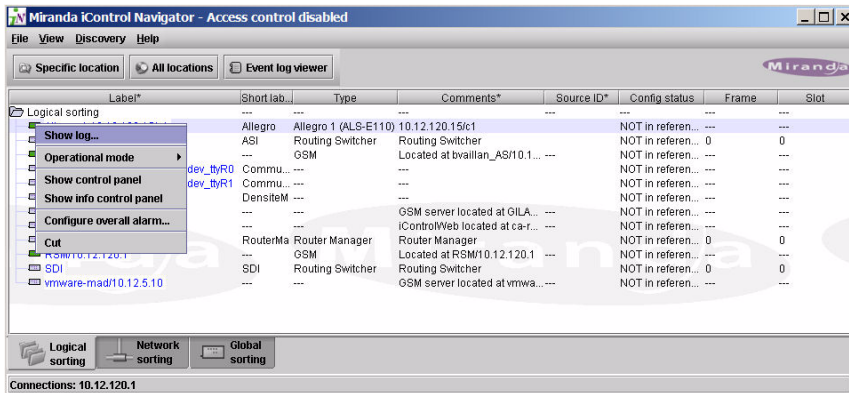
2. From the iControl Startup page, click **iControl Navigator**.

Note: If Java plug-in and Java Webstart are not installed on your PC, download with the **Useful Downloads** link found on the iControl Startup page or download directly from the `java.sun.com` Web site.

When you start up iControl Navigator, the client running on your PC registers with all the lookup services running on the same network and then "discovers" all recognized devices. These "discovered" devices list in the iControl navigation pane.

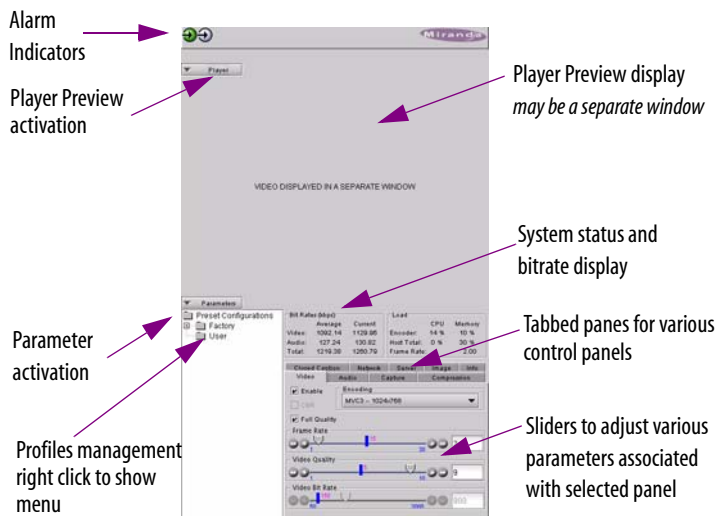
3. Locate Allégro-1 in the iControl Navigator tree.

4. Select the Allégro-1 with the right mouse button.
The right mouse button menu appears.



Right mouse button menu

5. Select Show Control Panel.
The Allégro-1 control panel appears.

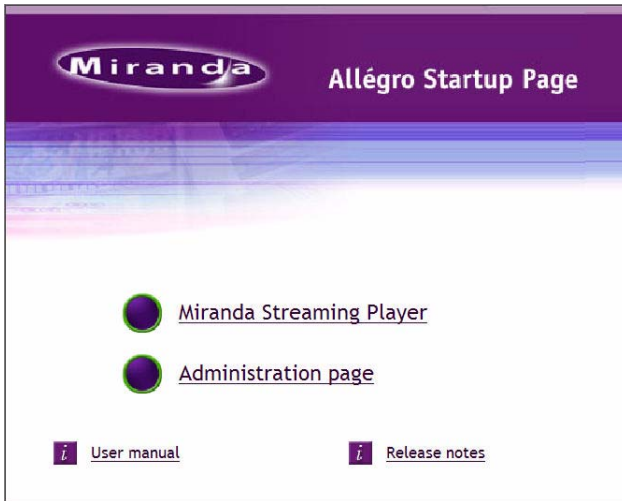


Allégro-1 control panel

To connect to the Allégro-1 via Web-based access

From Allégro-1 via Web-based access the audio and video streaming is accessible.

1. Launch a Web browser on the client PC.
2. Connect to the Allégro -1 unit with the URL `http://<ip_allegro>:8080`. (factory default: `http://10.0.3.7:8080`)



Allégro-1 Startup page

3. Select **Administration page**.
The **Enter Network Password** window appears.



Enter Network Password window

4. Enter the username (admin) and password (factory default: 16streams) for the Allégro-1 administration, and then click **OK**.

If the login is successful, the Allégro-1 System Status page appears. This page displays general system information.

Miranda

Allégro-1 System Status

System IP address 10.10.80.7
System MAC address 00-13-72-3C-48-5C
System time 2006/06/08 17:15:29 EDT
CPU load 0%
Memory load 25%
Streaming Encoder **Running**
Streaming Server **Running**

Monitor this stream

* This page will be automatically refreshed every 15 seconds.

Streaming Encoder

- [Status](#)
- [Configuration](#)
- [Log](#)

Streaming Server

- [Status](#)
- [Sources](#)
- [Active connections](#)
- [Configuration](#)
- [Access log](#)
- [Error log](#)

System

- [Status](#)
- [Configuration](#)
- [Release Notes](#)
- [User manuel \(PDF\)](#)

Allégro-1 System Status page

Setup and Configuration

3

This section describes the Allégro-1 setup and configuration.

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<i>Detailed Directions</i>	21

Overview

In this section, you learn to:

- “To physically set up the Allégro-1 unit:” on page 21
- “To connect the Allégro-1 unit and the configuration client PC:” on page 22
- “To set the initial Allégro-1 IP settings:” on page 22
- “To reboot the Allégro-1 unit” on page 24
- “To set the Allégro-1 recommended configuration settings:” on page 24

- “To verify the setup of the Allégro-1 unit:” on page 25
- “To troubleshoot the Allégro-1 unit:” on page 25
- “To configure the Allégro-1 unit for remote system administration:” on page 27

You will also be able to answer the following questions:

- “What is the main equipment used in the Allégro-1 iControl environment?” on page 20
- “What are the Allégro-1 default settings?” on page 20

Key Concepts

Allégro-1 Equipment

What is the main equipment used in the Allégro-1 iControl environment?

The equipment used with the Allégro-1 in an iControl environment is:

- One (1) iControl application server (default IP: 10.1.0.101)
- One (1) Allégro-1 unit (default IP: 10.1.0.21)
- One (1) client PC (default IP: 10.1.0.10)

Allégro-1 Default Settings

What are the Allégro-1 default settings?

The Allégro-1 unit comes with a factory default IP address of 10.0.3.7 and a subnet mask of 255.255.0.0. To access the Allégro-1 unit with the factory settings, the configuration client PC must be on the same 10.0.x.x network.

Recommendation: Complete the initial IP configuration of an Allégro-1 unit on an isolated network.

After changing the Allégro-1 unit IP settings be sure to make the necessary IP information changes for access with your network configuration.

Checklist

Allégro-1 Setup Checklist

1. Physically set up the Allégro-1. Refer to “To physically set up the Allégro-1 unit:” on page 21.

2. Connect the Allégro-1 unit and the configuration client PC. Refer to “To connect the Allégro-1 unit and the configuration client PC:” on page 22.
3. Set up the initial Allégro-1 unit IP settings. Refer to “To set the initial Allégro-1 IP settings:” on page 22.
4. Power down the Allégro-1 unit. Refer to “To reboot the Allégro-1 unit” on page 24.
5. Complete the Allégro-1 recommended configuration settings according to your system. Refer to “To set the Allégro-1 recommended configuration settings:” on page 24.
6. Verify that the Allégro-1 unit is set up properly. Refer to “To verify the setup of the Allégro-1 unit:” on page 25.
7. If there are problems with the Allégro-1 setup, refer to the troubleshooting table. Refer to “To troubleshoot the Allégro-1 unit:” on page 25.

Detailed Directions

Physically Set Up the Allégro-1 unit

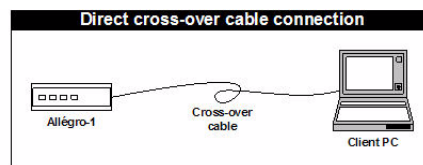
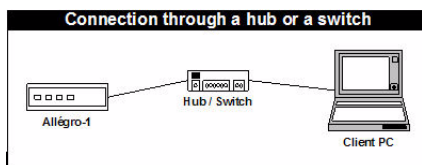
The Allégro-1 unit ships from Miranda Technologies Inc. with the software already installed on the unit.

To physically set up the Allégro-1 unit:

- Simply plug the provided power cable into the slot located on the rear of the unit and connect to an appropriate power source.

Connect the Allegro-1 and the Client PC

There are several options for connecting the two machines: through a hub, a switch or using a direct cross-over cable connection.



Three methods to connect the two machines

To connect the Allégro-1 unit and the configuration client PC:

- Connect the following cables to your Allégro-1:
 - AC power cable (100-240V)
 - RCA composite video input
 - RCA line level stereo audio input (-10 dBu nominal)
 - LAN network connection (use the connector marked as LAN1)

Set the Initial IP Configuration Settings

The initial IP configuration is explained with an example where configuration of an Allégro-1 unit is completed via Web-based access.

The example uses the following equipment:

- One (1) Allégro-1 with a factory default IP: 10.0.3.7
- One (1) client PC using IP: 10.0.3.10
- One (1) ethernet hub/switch

OR, one (1) ethernet cross-over cable

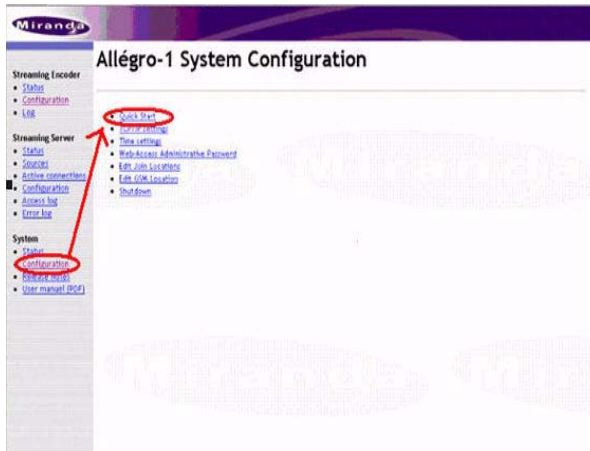
The following information is assumed:

- Production network uses IP 192.168.1.0
- Subnet mask uses IP 255.255.255.0
- Default gateway address uses IP 192.168.1.1
- Allégro-1 unit uses IP 192.168.1.20.

To set the initial Allégro-1 IP settings:

1. Connect the Allégro-1 unit and the configuration client PC.
2. Verify that you used the connector identified as LAN1 and that the client PC has the correct IP address. In this example, the client PC has the IP address 10.0.3.10 with the subnet mask of 255.255.0.0.
3. Power on both the Allégro-1 unit and the client PC.
4. From the client PC, connect to the Allégro-1 unit via the Web-based administration.
5. From the left pane of the client PC Web browser, select **Configuration**.

The Allégré-1 System Configuration page opens.



Allégré-1 System Configuration page

- From the right pane, select **Quick Start**.

The Allégré-1 Quick Start page appears.



Allégré-1 Quick Start page

7. Enter the assigned values for the IP address, network mask and default gateway in the corresponding fields. You can also select the basic encoder settings by choosing the input video format and the streaming profile.
In our example, the IP address for the first Allégro-1 unit is 192.168.1.20, the subnet mask is 255.255.255.0, and the default gateway is 192.168.1.1.
8. Click **Apply**.
A window appears stating that the unit will be rebooted.
9. Click **OK** to accept the reboot.
The **Shutting down** page appears in the Web browser and the Allégro-1 unit restarts.
10. Disconnect the Allégro-1 unit from the configuration client PC.
11. IF the Allégro-1 must be physically moved to connect to the production network, power down the Allégro-1 unit.
12. Connect the Allégro-1 unit to the production network on the IP address 192.168.1.20.
We recommend labelling the Allégro-1 unit with its IP address on the unit itself or in your network documents.
13. Power on the Allégro-1 unit.
If an iControl application server is present on the network, the Allégro-1 will appear within iControl Navigator for that particular application server.

Reboot the Allégro-1 unit

After completing configuration settings the Allégro-1 unit, a reboot is essential for all changes to be applied and saved to the unit.

To reboot the Allégro-1 unit

- Press the Power button located on the front panel of the Allégro-1 unit.

Configure the Allégro-1 unit for remote system administration

To set the Allégro-1 recommended configuration settings:

1. View the settings recommended by Miranda Technologies Inc., refer to “Configuration Guidelines” on page 3.

2. Open the Allégro-1 control panel. Refer to “To connect to the Allégro-1 via iControl Navigator” on page 14.
3. Select the Video tab and configure the video format, full quality, video quality, and frame rate. Changes are immediately applied to the Allégro-1 unit.
4. Select the Audio tab and configure the audio enable. Changes are immediately applied to the Allégro-1 unit.
5. Select the Compression tab and configure the GOP and B-Frames. Changes are immediately applied to the Allégro-1 unit.

Verify the Setup of the Allégro-1 unit

To verify the setup of the Allégro-1 unit:

1. Open the Allégro-1 control panel and view the player. Refer to “To connect to the Allégro-1 via iControl Navigator” on page 12.
2. Verify stream presence and acceptable image display.
3. Verify the selection of correct GUI input.
4. From the Statistics window, verify the acceptability of the performance bitrate.

Troubleshooting the Allégro-1 unit

There are some known circumstances that may arise with the Allégro-1.

To troubleshoot the Allégro-1 unit:

- Refer to the following table for immediate solutions.

If you see this . . .	Cause could be . . .	Possible solutions are . . .
No video or audio in player	<ol style="list-style-type: none"> 1. Network connection loss 2. Streaming encoder or server not running. 	<ol style="list-style-type: none"> 1. Try to ping the Allegro from the client or access the Allegro web page. Contact your IT team for network connectivity issues 2. Check Allegro Administration web page encoder and streaming server status. Restart streaming server if it is not running.
Stream is not fluid and blocky	<ol style="list-style-type: none"> 1. High CPU usage on client 2. Bit rate of stream exceeds network bandwidth and QoS, i.e., network saturation 3. High CPU usage on streaming server 	<ol style="list-style-type: none"> 1. Reduce streaming encoder frame rate or reduce resolution. Ensure player size matches encoding resolution to avoid re-scaling on the client. 2. Reduce bit rate by changing parameters. Either reduce resolution, frame rate or quality. Also, increasing GOP size depending of stream can be effective (reduced I-frames). To achieve maximum bit rate, avoid accessing the Allegro with the Web page or the service panel which can take substantial bandwidth (no throttling). When using the panel or web page, ensure bit rate is reduced substantially to avoid network collisions and buffering. This will cause packet loss, stream corruption and long delays. Web access to configure the Allegro should be preferably done locally or on separate network if possible to not interfere with stream. 3. Depending on the video content, it is possible that for large frames and high frame rates, the Allegro CPU will be maxed out and cause packet loss. Reduce frame size or rate accordingly until the stream is fluid. Keep in mind item two (2) where web access impacts the stream performance if on the same network.
Image quality is poor	<ol style="list-style-type: none"> 1. Encoding resolution does not match player resolution 	<ol style="list-style-type: none"> 1. Ensure player resolution matches encoder resolution to avoid client side re-scaling and loss of quality especially when up-scaling.

If you see this . . .	Cause could be . . .	Possible solutions are . . .
Streaming player will not start	1. Presence of old Java ghost processes	1. In Windows task manager processes tab, locate and kill old Java processes.
Java web start error messages	1. Wrong Java version installed 2. An old player is running preventing updates of software on client side 3. Java process cache corrupted	1. Install the Java version required for the version of Allégro-1 . 2. Kill all Java processes to avoid locks on files to updates 3. Start Java Web Start on client and clear the cache

Configure the Allégro-1 unit for remote system administration

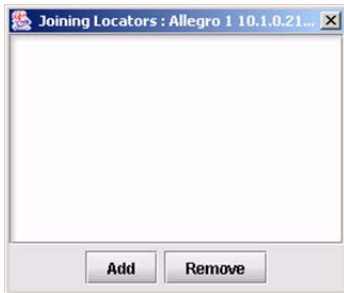
If the Allégro-1 unit is installed on a different subnet from the iControl application server, it is possible to configure the Allégro-1 unit so that it will register itself with the iControl application server.

To configure the Allégro-1 unit for remote system administration:



Remote System Administration, Allégro-1 control panel

1. From the Allégro-1 control panel, select the **Info** tab.
2. Select **Remote System Administration**.
The **Joining Locators** window appears.



Joining Locators window

3. Click **Add**.

The Input window appears.



Input window

4. In the Text field, enter the new locator's URL `jini://<ip_app_server>`, and then click **OK**.

For example, if the iControl application server has the IP address 10.10.30.10, then the locator's URL is:

`jini://10.10.30.10`

4

General Use

This section provides explanations of the Allégro-1 user interface.

Summary

<i>Overview</i>	<i>29</i>
<i>Key Concepts from Allégro-1 Control Panel</i>	<i>30</i>
<i>Key Concepts from Allégro-1 Web Pages</i>	<i>33</i>

Overview

You will also be able to answer the following questions:

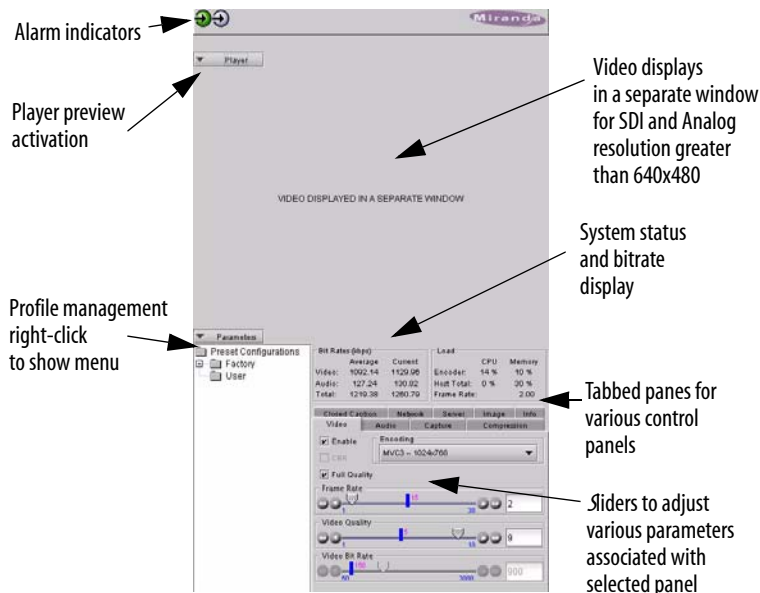
- “What are the main parts of the Allégro-1 Control Panel?” on page 30
- “How are the Allégro - 1 Web pages organized?” on page 33
- “What kind of information can be found in the Streaming Encoder section?” on page 33
- “What kind of information can be found in the Streaming Server section?” on page 37
- “What kind of information can be found in the System section?” on page 42

Key Concepts from Allégo-1 Control Panel

Allégo-1 Control Panel

What are the main parts of the Allégo-1 Control Panel?

The following figure illustrates the Allégo-1 control panel as displayed from iControl Navigator:



Allégo control panel with the player in a separate window

Player Preview zone

The Player Preview zone provides visualization of video streams originating from the selected Allégo-1 unit. The size can be increased or decreased with the Zoom controls. This control only changes the display on the client desktop and does not affect the source.

Preset Configurations tree

The Preset Configurations tree presents the set of user profiles stored on the Allégo - 1 unit. The profiles under **Factory** correspond to factory presets established according to the resultant bit rate.

- All user created profiles are found under the **User** node.
- Right-click on any profile and choose the **Apply** option to select the user profile parameters.

- Users can add, modify or delete user profiles.
- Right-click on the folder icon corresponding profile to apply, save or modify the profile.

Video tab

- **Enable:** to activate or disable the video stream. This parameter is not available when the audio streaming is deactivated (Enable parameter under the Audio tab).
- **CBR :** to enable or disable the CBR (Constant bit-rate) feature, if supported by the CODEC (MVC1 and MVC3).
- **Full Quality:** to enable or disable the Full Quality feature, if supported by the CODEC (MVC3 only).
- **Encoding:** to choose the video codec and the encoding format. The MVC1 codec provides low bit rate streams with average image quality whereas the MVC2 and MVC3 codec provide higher bit rate streams with higher quality.
- **Frame Rate:** to adjust the frame rate (frames per second) for the video stream. The parameter value is applied once the slider is released.
- **Video Quality:** to adjust the image quality of the video stream. The parameter value is applied once the slider is released.
- **Video Bit Rate:** to adjust the CBR bit rate if the CBR option is enabled.

Audio tab

- **Enable:** to activate or de-activate streaming audio. This parameter is not available when video streaming is de-activated. Enable video streaming within the Video tab.
- **Encoding:** to select the encoding format and the audio codec. Generally speaking, the MAC1 audio codec generates low-bitrate streams with a quality of type 'voice quality' whereas the MAC2 codec generates higher bit rate streams with 'superior quality'.

Capture tab

- **Video Format:** to select the input video format (for example: NTSC, PAL or SECAM)
- **Capture Input:** to select the applicable port for the capture input

Compression tab

- **GOP:** to specify the input video format (for example: NTSC, PAL or SECAM)

- **B-Frames:** to specify the frame bitrate
- **Bit Rate Tolerance:** to specify the bit rate tolerance
- **Deinterlaced:** select to specify the type of progressive scanning
- **Motion Estimation:** to specify frame extrapolation

Closed caption tab

The Closed caption tab is not available for the Allégro-1 RGB.

- **CC display:** to connect to the closed captioning stream
- **CC Source:** to select the closed captioning channel
- **Odd Field:** display depends on **CC Status Configuration** selections
- **Even Field:** display depends on **CC Status Configuration** selections
- **CC Status Configuration :** to define the level of error for each of the four alarms associated with the closed captioning Odd Field and Even Field. These alarms determine the alarm status for the closed captioning (the indicator on the top left of the Allégro-1 panel).
- **CC Status Configuration:Odd Field:Presence:** selection specifies either to ignore (grey), warn (yellow), or trigger an alarm (red) for the Odd field
- **CC Status Configuration :Odd Field: Error:** to specify the color to be displayed when the action specified in the Odd field: Presence is encountered
- **CC Status Configuration:Even Field:Presence:** selection specifies either to ignore (grey), warn (yellow), or trigger an alarm (red) for the Even field
- **CC Status Configuration :Even Field: Error:** to specify the color to be displayed when the action specified in the Even field is encountered
- **Mode:** to specify enabling of closed caption data

Network tab

- **Destination Host:** to set the IP destination address which is used by the encoder to send the stream. In a standard configuration, this parameter is set to 127.0.0.1 (loop back address).
- **Destination Port Base:** to define the destination UDP port. In a standard configuration, this parameter is set to 22010.

Server tab

The Server tab displays the parameters associated with the streaming server. In a standard Allégro-1 application, these parameters do not require modification.

- **Streaming Server RTP Timeout:** to adjust the server reaction delay to detect a loss of RTP client connection. The default value is 30 seconds.
- **Streaming Server RTSP Timeout:** to adjust the server reaction delay to detect the loss of a RTSP client connection. The default value is 60 seconds.
- **Streaming Server Source Timeout:** to adjust the server reaction delay to detect the loss of a streaming source. The default value is 30 seconds.

Info tab

The Info tab displays the general Allégro-1 product information and provides access to the Remote System Administration.

Key Concepts from Allégro-1 Web Pages

Allégro-1 Web Pages

How are the Allégro - 1 Web pages organized?

The Allégro-1 System Status page has three different sections: Streaming Encoder, Streaming Server and System.

- Streaming Encoder
- Streaming Server
- System

Streaming Encoder Section

What kind of information can be found in the Streaming Encoder section?

The Streaming Encoder section has three different pages:

- Status
- Configuration
- Log

Status page

The Status page provides encoder parameters and statuses.

Streaming Encoder Status

General information

Encoder state	Running	Encoder CPU load	9%
Video streaming enabled	Yes	Encoder memory load	10%
Audio streaming enabled	Yes	Expected video bitrate	159.9kbps
Destination host	127.0.0.1	Expected audio bitrate	128.3kbps
Destination port base	7110	Current video bitrate	241.7kbps
Local port base	20010	Current audio bitrate	127.7kbps
		Current total bitrate	369.4kbps

Audio Processing

Audio supported	Yes
Encoding	/MAC2 -- 44100 samp./sec, 16bit, stereo

Video processing

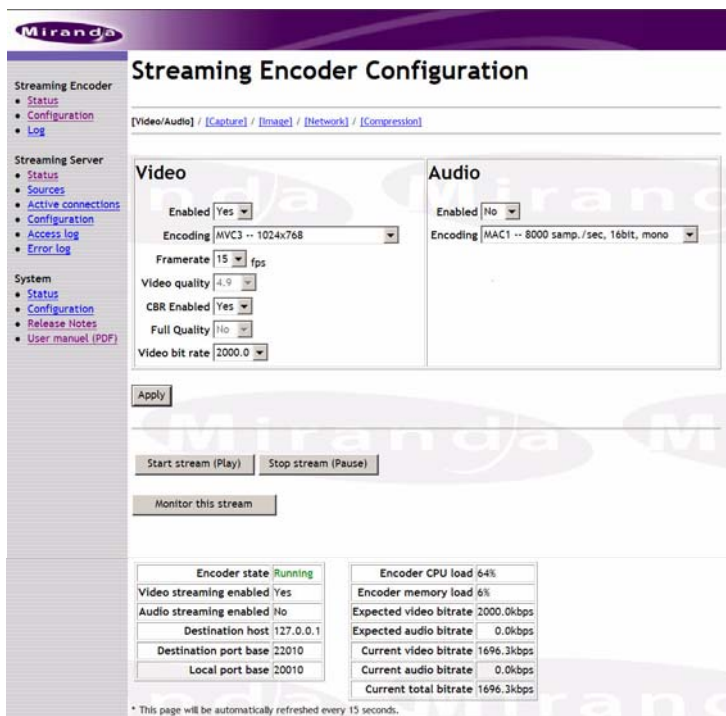
Input signal	Capture/adjustment	Encoding
Input video format	Brightness [min, max] = [-128, 127]	Encoding
Video present	Contrast [min, max] = [0, 511] 216	MVC3 -- 640x480
CC odd field present	Saturation [min, max] = [0, 511] 254	Frame Rate [min, max] = [1.0, 30.0] 5.0fps
CC odd field error	Hue [min, max] = [-128, 127] 5	Quality [min, max] = [1.0, 10.0] 10.0
CC even field present		
CC even field error		

Streaming Encoder Status page

Configuration page

The Configuration page provides access to the encoding parameters which are grouped into different categories similar to the control panel.

Note that after changing a parameter or a set of parameters in a page, you must click **Apply** for the changes to take effect on the encoder. You can start or stop the stream encoding with the **Start Stream** and **Stop Stream** buttons. You can also launch the Miranda Streaming Player with the **Monitor this stream** button.



Streaming Encoder Configuration

[Video/Audio] / [Capture] / [Image] / [Network] / [Compression]

Video

Enabled: Yes

Encoding: MVC3 -- 1024x768

Framerate: 15 fps

Video quality: 4.9

CBR Enabled: Yes

Full Quality: No

Video bit rate: 2000.0

Audio

Enabled: No

Encoding: AAC1 -- 8000 samp./sec, 16bit, mono

Apply

Start stream (Play) Stop stream (Pause)

Monitor this stream

Encoder state	Running
Video streaming enabled	Yes
Audio streaming enabled	No
Destination host	127.0.0.1
Destination port base	22010
Local port base	20010

Encoder CPU load	64%
Encoder memory load	6%
Expected video bitrate	2000.0kbps
Expected audio bitrate	0.0kbps
Current video bitrate	1696.3kbps
Current audio bitrate	0.0kbps
Current total bitrate	1696.3kbps

* This page will be automatically refreshed every 15 seconds.

Streaming Encoder Configuration page

Video/Audio link

Video area:

- **Enabled:** to activate or de-activate streaming video
- **Encoding:** to choose the video codec and the encoding format. The MVC1 codec generates low-bitrate streams with medium quality whereas the MVC2 codec generates streams with higher bit rates and quality. MVC3 provides the best quality per bit rate
- **Frame rate:** to adjust the number of images per second for the video stream
- **Video quality:** to adjust the image quality
- **CBR Enabled:** to enable or disable the CBR (Constant bit-rate) feature, if supported by the CODEC (MVC1 and MVC3).
- **Full Quality:** to enable or disable the Full Quality feature, if supported by the CODEC (MVC3 only). You should use this feature with caution (it can produce streams as high as 3 Mbps).

- **Video bit rate:** to adjust the CBR bit rate if the CBR option is enabled.

Audio area:

- **Enabled:** to activate or de-activate the audio stream.
- **Encoding:** to select the audio codec and encoding format. The MAC1 codec produces low-bit rate stream with quality of type voice quality whereas the MAC2 codec produces higher bit rate and quality stream.

Capture link

- **Video format:** There are three input formats: RGB to YUV 555, RGB to YUV 565, and RGB to YUV 888. By default, the RGB pixel format 888 is selected. We recommend the default setting for optimal performance.

Image link

- **Brightness level**
- **Contrast level**
- **Saturation level**
- **Hue**
- **Default button:** to reset above parameters to their default values

Network link

- **Destination host:** to define the IP address for the encoder to send the stream. In a normal configuration, this parameter is always 127.0.0.1
- **Destination port base:** to define the UDP port destination. In a normal configuration, this parameter is always 22010

Log page

The Log page displays the encoder log entries.

Streaming Encoder Log

2006-10-03 13:33:01.062 [main] ERROR com.miranda.icontrol.streaming.encoder.Encoder settings labeled 'MVC1 -- 128x96' in file "VBR.bin". - Found a 'VideoBitRates' object for

2006-10-03 13:33:01.062 [main] ERROR com.miranda.icontrol.streaming.encoder.Encoder settings labeled 'MVC1 -- 176x144' in file "VBR.bin". - Found a 'VideoBitRates' object for

2006-10-03 13:33:01.062 [main] ERROR com.miranda.icontrol.streaming.encoder.Encoder settings labeled 'MVC1 -- 352x288' in file "VBR.bin". - Found a 'VideoBitRates' object for

2006-10-03 13:33:01.062 [main] ERROR com.miranda.icontrol.streaming.encoder.Encoder settings labeled 'MVC2 -- 80x64' in file "VBR.bin". - Found a 'VideoBitRates' object for

2006-10-03 13:33:01.062 [main] ERROR com.miranda.icontrol.streaming.encoder.Encoder settings labeled 'MVC2 -- 128x96' in file "VBR.bin". - Found a 'VideoBitRates' object for

2006-10-03 13:33:01.062 [main] ERROR com.miranda.icontrol.streaming.encoder.Encoder settings labeled 'MVC2 -- 176x144' in file "VBR.bin". - Found a 'VideoBitRates' object for

2006-10-03 13:33:01.062 [main] ERROR com.miranda.icontrol.streaming.encoder.Encoder settings labeled 'MVC2 -- 240x176' in file "VBR.bin". - Found a 'VideoBitRates' object for

2006-10-03 13:33:01.062 [main] ERROR com.miranda.icontrol.streaming.encoder.Encoder settings labeled 'MVC2 -- 320x240' in file "VBR.bin". - Found a 'VideoBitRates' object for

2006-10-03 13:33:01.062 [main] ERROR com.miranda.icontrol.streaming.encoder.Encoder settings labeled 'MVC2 -- 352x288' in file "VBR.bin". - Found a 'VideoBitRates' object for

2006-10-03 13:33:01.062 [main] ERROR com.miranda.icontrol.streaming.encoder.Encoder settings labeled 'MVC3 -- 640x480' in file "VBR.bin". - Found a 'VideoBitRates' object for

2006-10-03 13:33:01.062 [main] ERROR com.miranda.icontrol.streaming.encoder.Encoder settings labeled 'MVC3 -- 80x64' in file "VBR.bin". - Found a 'VideoBitRates' object for

2006-10-03 13:33:01.062 [main] ERROR com.miranda.icontrol.streaming.encoder.Encoder settings labeled 'MVC3 -- 80x64' in file "VBR.bin". - Missing bit rate measures for video

2006-10-03 13:33:01.070 [main] ERROR com.miranda.icontrol.streaming.encoder.Encoder settings labeled 'MVC3 -- 640x384' in file "VBR.bin". - Missing bit rate measures for video

2006-10-03 13:33:01.078 [main] ERROR com.miranda.icontrol.streaming.encoder.Encoder settings labeled 'MVC3 -- 640x384' in file "VBR.bin". - Missing bit rate measures for video

2006-10-03 13:33:01.078 [main] ERROR com.miranda.icontrol.streaming.encoder.Encoder settings labeled 'MVC3 -- 800x600' in file "VBR.bin". - Missing bit rate measures for video

Streaming Encoder Log page

Streaming Server Section

What kind of information can be found in the Streaming Server section?

The Streaming Server section has six different pages:

- Status
- Sources
- Active Connections
- Configuration
- Access Log
- Error Log

Status page

The Status page displays the server status.

Streaming Server Status

Server state	Running
Server version	MTSS/1.0 [101]
Startup time	2006/06/07 17:14:06 EDT
Current server time	2006/06/08 17:17:42 EDT
IP address	10.10.80.7
Access log state	OFF
Error log state	ON
Server CPU load	1.518464%
Current bandwidth	1.634Mbps
Total bytes sent	19.099G
Current client connections	1
Total client connections	5

Streaming Server Status page

Sources page

The Sources page displays the available sources on the server. There is at least one available source named "c1".

Streaming Server Sources

Number	Channel Name	Channel SDP content
1	c1	v=0 c=IN IP4 10.10.80.7 o=StreamingServer 3236516948 1005684200000 IN IP4 10.10.80.7 s=c1.sdp m=video 22010 RTP/AVP 96 a=rtptime:96 MVC3/90000 a=control:trackID=6
2	c1_Line21	v=0 c=IN IP4 127.0.0.1 m=application 30472 RTP/AVP 58 a=control:trackID=1 a=rtptime:58 LINE21 a=appli-subtype:x-line21

Total 2 declared channels.

Streaming Server Sources page

Active Connections page

The Active Connections page displays all client connections and associated statistics.

Streaming Server Active Connections

Client IP	Channel	Current Bitrate (bps)	% Packet Loss	Total Bytes	Time Connected
127.0.0.1	/c1.sdp	97.236k	0.000000	8.452M	12 m 57 s
10.4.5.1	/c1	204.056k	0.000000	6.317M	8 m 22 s
10.4.5.1	/c1	0	0.000000	0	19 s

Total 3 active connections.

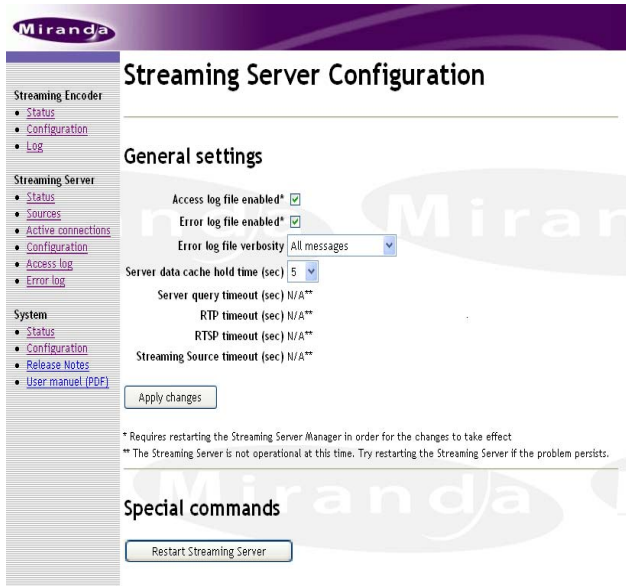
Streaming Server Active Connections page

Configuration page

The Configuration page enables modification of the server parameters.

- **Access log file enabled:** to activate the access to the log; useful for technical support
- **Error log file enabled:** to activate the error log
- **Error log file verbosity:** to configure the level of detail for the log; useful for technical support. If the error log appears empty the verbosity must be changed to 'Err&Warn'.
- **Server data cache hold time:** to adjust the refresh for the data statistics on the server; default value - 5 seconds
- **Server query timeout:** to adjust the timeout value for client queries to the server; default value - 5 seconds
- **RTP Timeout:** to adjust the timeout value for the server to detect a client RTP connection loss; default value - 30 seconds

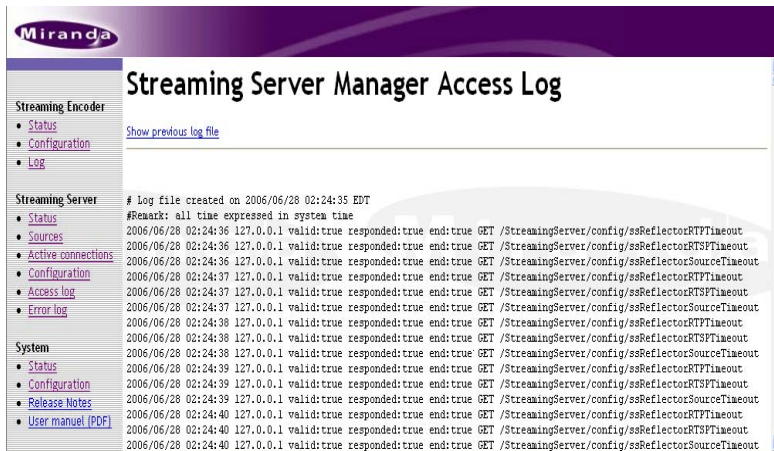
- **RTSP Timeout:** to adjust the timeout value for the server to detect a client RTSP connection loss; default value - 60 seconds
- **Streaming Source Timeout:** to adjust the timeout value for the server to detect a streaming source connection loss; default value - 30 seconds
- **Restart Streaming Server button:** to restart the streaming server (used for technical support)



Streaming Server Configuration page

Access Log page

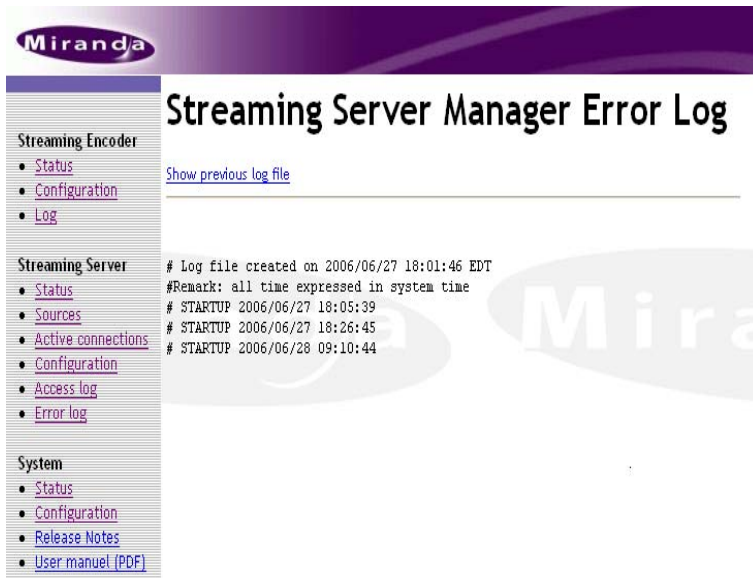
The Access Log page enables viewing of the access log on the server WHEN the log is active.



Streaming Server Access Log page

Error Log page

The Error Log page enables viewing of the error log on the server WHEN the log is active.



Streaming Server Error Log page

System Section

What kind of information can be found in the System section?

The System section has four different pages:

- Status
- Configuration
- Release Notes
- User manual

Status page

The Status page provides a status summary for the Allégro-1 unit. This is the home page for the Allégro-1 Web-based access.



Miranda

Allégro-1 System Status

System IP address 172.16.0.7
System MAC address 00-13-72-3C-48-5C
System time 2006/06/28 09:34:10 EDT
CPU load 0%
Memory load 23%

Streaming Encoder **Running**
Streaming Server **Running**

Monitor this stream

* This page will be automatically refreshed every 15 seconds.

Streaming Encoder

- [Status](#)
- [Configuration](#)
- [Log](#)

Streaming Server

- [Status](#)
- [Sources](#)
- [Active connections](#)
- [Configuration](#)
- [Access log](#)
- [Error log](#)

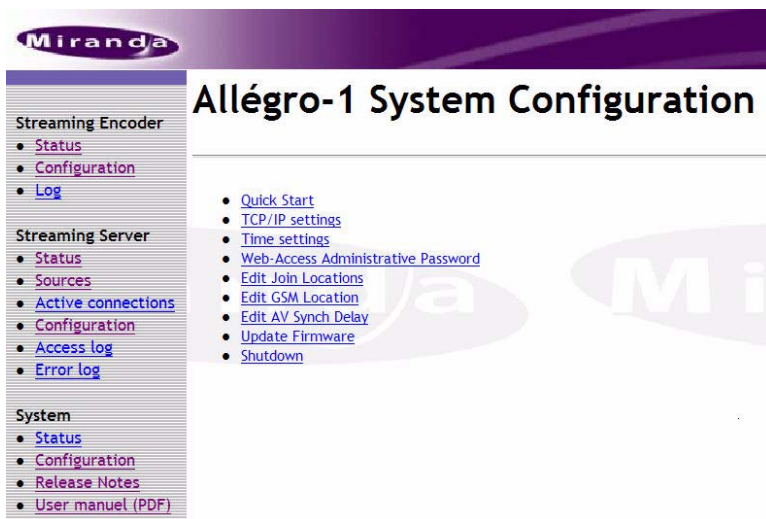
System

- [Status](#)
- [Configuration](#)
- [Release Notes](#)
- [User manual \(PDF\)](#)

System Status page

Configuration page

The Configuration page enables configuration of the Allégro-1 system parameters.



Allégro-1 System Configuration page

Quick Start: to configure on the same page, the IP address and the encoding profile; useful for the initial unit installation

TCP/IP settings: to configure the TCP/IP configuration for the unit

Time settings: to configure the system date and time for the unit in GMT format

Web-Access Administrative Password: to change the administrative password of the Allégro-1 unit

Edit Join Locations: to configure the Allégro-1 service to register itself with the iControl application server located on a different network

Edit GSM Location: to publish the Allégro-1 alarms to a GSM

Edit A/V Sync: to adjust delays between audio and video for synchronization

Update Firmware: to update the Allegro software

Shutdown: to shutdown or reboot the Allégro-1 unit; messages appear confirming successful completion of this operation; stops the streaming functionality to other remote clients

Release Notes page

The Release Notes page displays the Release Notes.

User Manual page

The User Manual page displays the User Manual in pdf file format.

Miranda Streaming Player



This section explains the Miranda Streaming Player.

Summary

<i>Overview</i>	45
<i>Detailed Directions</i>	47

Overview

In this section, you learn to:

- “To launch the player in Normal mode:” on page 47
- “To open a new stream:” on page 48
- “To access the statistics of the current streams:” on page 49

You will also be able to answer the following questions:

- “What is a Miranda Streaming Player?” on page 46
- “Are there recommendations for the size of the video stream?” on page 46

- “What are Miranda Streaming Player VBI Controls?” on page 46

Key Concepts

Miranda Streaming Player

What is a Miranda Streaming Player?

The Miranda Streaming Player is a standalone application integrated within the Allégro-1 Web-based access which enables the monitoring of the Allégro-1 streams without requiring another device or application.

Streaming Player Modes

What are the Miranda Streaming modes?

There are two different Streaming Player modes. Normal mode which permits regular operations with the player. Shortcut mode that permits limited functionality with the player.

Video Stream Size

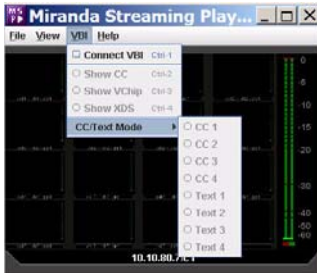
Are there recommendations for the size of the video stream?

Although you can choose to display a video stream at a size different than that selected for its encoding size, displaying a video stream at a size higher than its encoded size may result in severe distortion during playback.

VBI Controls

What are Miranda Streaming Player VBI Controls?

The streaming player also provides options to display Closed Captioning (CC), VChip, and XDS metadata as an overlay on the video. These are often referred to as VBI controls and can be freely selected. These options are not available with the RGB capture card.



VB controls

Detailed Directions

Launch the Streaming Player

There are two different ways to launch the Miranda Streaming Player.

To launch the player in Normal mode:

- From the Allégro-1 Startup Page, through the Miranda Streaming Player link.

The Player launches in **Normal Mode**.



Miranda Streaming Player operating in Normal mode

To launch the player in Shortcut mode:

- From the Allégro-1 System Status page, through the **Monitor this stream** button.

The Player launches in **Shortcut** Mode which means it will automatically connect to the Allégro-1 streams at startup.

OR

- From the Streaming Encoder Configuration page, through the **Monitor this stream** button.

The Player launches in **Shortcut** Mode.

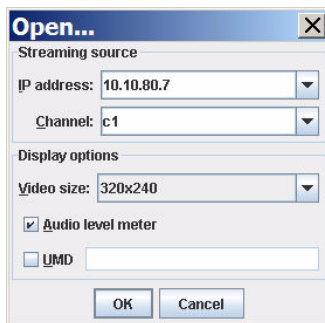
Open a Stream

The stream enables the display of images with the Streaming Player.

To open a new stream:

- From the Miranda Streaming Player, select **File| Open**.

The **Open** window appears.



Open window

- Enter the IP address of the Allégro-1 unit.
In this example, the IP address is 10.1.0.21.
- Enter c1 for the streaming channel.
- Select the display size of the video stream from the video size list.
- Use the Audio level meter checkbox to indicate if the audio stream should also be rendered. The audio stream will only operate if it is enabled on the Allégro-1 unit.

6. Finally, use the UMD checkbox to indicate if a UMD should be added under the video stream. If so, the string entered in the adjacent text field will be used as the UMD text.
7. Click OK.

The stream opens and displays the **Miranda Streaming Player Startup** page.

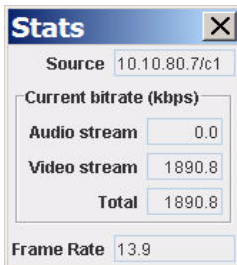


Miranda Streaming Player Startup page

To access the statistics of the current streams:

1. From the Miranda Streaming Player, select **View | Statistics**.

The **Stats** window appears.



Stats window

