Getting Started With MediaStar Evolution
772 MPEG 2/4 Encoder

The MediaStar Evolution 772 Encoder converts analogue video and audio signals to MPEG-2 or MPEG-4 digital signals and streams them over a LAN/WAN data network. It is designed for multi-encoder installations with the MediaStar Evolution 770, a 19" rack enclosure.

Separate hardware decoders or software viewing applications connected to the LAN/WAN can decode the data streams from the network and present video and audio for viewing at multiple remote locations.

What’s in the box
- 772 Encoder unit
- RJ45 patch cable
- BNC to phono adaptor
- Video source/IP address label

Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer’s instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarised or grounding-type plug. A polarised plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles and the point where they exit from the apparatus.
11. Only use attachments or accessories specified by manufacturer.
12. Use only with the cart, stand tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
Installation

Up to 9 MediaStar Evolution 772 Encoders can be installed into each MediaStar Evolution 770 rack occupying 3U of cabinet space.

On power up the green 5V and 12V LEDs on the front will be lit. Should a ventilation fan fail, the red FAN WARNING LED will illuminate.

Insert the MediaStar Evolution 772 Encoder card into the first available slot and ensure that the plastic covers detach. Tighten the two knurled front panel retaining screws and then connect the chosen video and audio inputs. Note that Encoder cards can be safely inserted or removed with the AC power connected to the rack.

Encoder Function

Ensure that the 772 Encoder’s blue Power LED is lit, showing that power is on. All the LEDs on the front may briefly turn on and then off after approximately 30 seconds but the blue Power LED will stay lit, along with the video input indicator and the MPEG stream status LEDs.

The video input indicator LED shows what type of video input is selected: RGB/YPbPr, SCART (RGB with sync on Composite), CVBS (Composite) or S-Video. When YPbPr is selected, the RGB LED will be lit. Stereo audio inputs are unbalanced with 10k ohm impedance.

The Encoder’s configuration is set using web pages served by the Encoder unit. A network connection is required to view these and a suitable IP address will need to be assigned.

Connecting Video And Audio Inputs

Only one type of video input source can be selected at a time, either RGB/YPbPr, SCART (RGB with sync on Composite), CVBS (Composite) or S-Video. When YPbPr is selected, the RGB LED will be lit. Stereo audio inputs are unbalanced with 10k ohm impedance.

772 Encoder Front Panel

Selected Video Input Indicator

MPEG Stream status LED

MPEG-2 Enabled = Orange LED
MPEG-4 Enabled = Green LED
MPEG Stream Disabled = LED Flashes
Service Required = Solid Red
Software Upgrade = Flashing Red
Selecting IP Address

A suitable IP address for the Encoder should be selected before it is connected to a network. The Evolution 772 Encoder is pre-configured with a static IP address of 191.53.51.208, however if this is not suitable for use on your network the Encoder must be reconfigured. Reconfiguring the Encoder IP address can be achieved using the RS232, USB, or Telnet Command interface, or via a browser application such as Internet Explorer connected locally to a PC with a Cat-5 network crossover cable.

Configuring With A Browser Application

Using a browser such as Internet Explorer, type the IP address (http://191.53.51.208) into the browser window and the Evolution Encoder Admin window will open. This allows entry and adjustment of all Encoder operational parameters such as network setup, video input, encoding stream, and password protection.

Configuring With RS232 Serial Or USB Communications

Plug the supplied cable into the Encoder’s RS232 interface and connect with a laptop/PC. If this is not available a USB interface may be used. A CD supplied with the 770 rack contains the appropriate USB driver software to install a USB ‘com’ port onto a Microsoft Windows 2000 or XP platform when there is no RS232 serial port available on the laptop/PC.

Use a terminal emulator program (e.g. HyperTerminal) to issue commands. The serial communications settings are: 115200 Baud, 8 bits data, 1 stop bit, no parity, no flow control.

To set the static IP address, use the command:

Setipconf, mpeg_encoder=“Encoder1”,
localaddr=192.168.66.10,
localnetmask=255.255.255.0,
gatewayaddr=0.0.0.0, dnsaddr=0.0.0.0, dscp=0

In the command response you will see that status = “0” and statusstring = “Success”

Connecting To The Network

Only when you are satisfied that the IP address of the Encoder is suitable, plug the Encoder into the LAN using the RJ45 patch cable supplied. The RJ45 LEDs will illuminate to indicate a network connection.

Important: Ensure That The Encoder Is Connected To A Network Port Configured With ‘Auto-Negotiation’ On.

Evolution Encoder Admin

These HTML configuration menus allow you to enter and adjust all Encoder operational parameters. Full contextual HELP is provided on the right side of the screen. When alterations and changes have been made, press the APPLY button at the bottom of the page to make these take effect. The Encoder configuration menus include:

Status

Shows the current status of the Encoder, including: encoder network name, serial number, encoding standard, video source present status, stream details, IP address, video input selected, software/hardware versions, and enablement codes entered.

Encoder

Allows selection of the video encoding standard, either MPEG-2 or MPEG-4. MPEG-4 provides a similar picture quality as MPEG-2 but at a lower network bandwidth.
Quick Start Guide

Stream Setup
Defines the details of the video and audio streams being produced.

SDP Files
This functionality retrieves files conforming to the Session Description Protocol (SDP). These files are used by some players/decoders to select an MPEG-4 stream.

Video Input
Select the video input connector(s) and video format for the source signal to be encoded:
- CVBS (Composite), S-Video, RGB, SCART (RGB with sync on Composite), YPbPr (Component).
- Select the video format: PAL or NTSC
- Set interlacing: Progressive or Interlaced
- Set the video aspect ratio: 4:3 or 16:9

IP Configuration
Network configuration of the Encoder is set up here. These settings should be confirmed with your network administrator before installing this unit on the network.

Note: that if the DHCP setting is used, following an Encoder reset, the unit may be given an IP address that is different from the one previously used.
Quick Start Guide

Enablement Code
To upgrade the Encoder with an additional feature (e.g. additional type of video encoder: MPEG-2/MPEG-4) a suitable enablement code must be obtained from your reseller or Cabletime. This 15-digit number is entered into the fields on this screen. The Encoder will validate the code and enable any appropriate feature. Note that all enablement codes are unique to an individual unit.

Software Upgrade
Encoder software may be upgraded to facilitate new functionality or provide support related upgrades. This screen enables hourly upgrade checks and specifies the HTP file server location that the Encoder will check for upgrades.

Set Password
A password will prohibit unauthorised access to all the Encoder configuration web pages, and will also prohibit changes being made through the RS232, USB or Telnet command interfaces (unless the password is specified in each command). Valid passwords consist of six numbers 0-9.

Locator Leds
The locator LED functionality causes the LEDs on the front of an Encoder to flash in a ‘rippling’ sequence. This allows for identification of a specific Encoder in a multi-Encoder rack system. The location LED flash duration is: /Off /5 secs/ 2 mins/ 20 mins.
## Technical Specifications

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Regulatory Requirement Notices

EUROPE

Cabletime Limited declare that the products described in this manual conform to the requirements of the following Directives:

- 89/336/EEC amended by 92/31/EEC

THE STANDARDS APPLIED ARE:

- EN55022:1998 Limits and methods of measurement of radio interference characteristics of information technology equipment
- EN61000-6-1:2001 Electromagnetic compatibility – generic immunity standard
- IEC60950-1:2001 Specification for safety of information technology equipment, including electrical business equipment
- EN60950-1:2001

UNITED STATES OF AMERICA

Cabletime Limited declare this equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

- This device complies with part 15 of the FCC Rules.

Operation is subject to the following conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

Correct Disposal Of This Product

This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

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