(DENSITÉ) SERIES

ENC-1103

DESCRIPTION

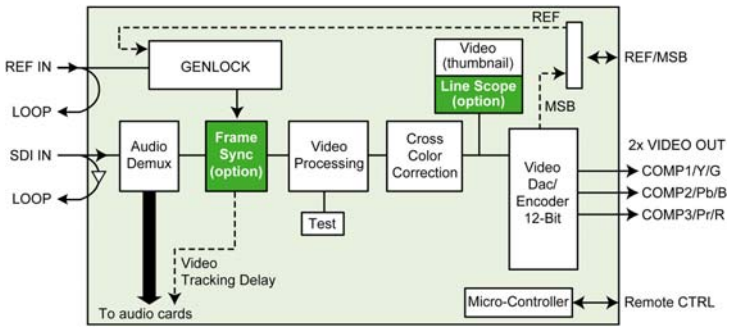
The ENC-1103 is a high-quality encoder with 12-bit conversion allowing operators to convert a SDI signal to Composite, CAV or RGB. The composite outputs can be NTSC, PAL or PAL-M and the component outputs can be SMPTE, BETACAM or GBR formats. With its on-board Genlock and Video Proc-Amp, the card provides flexible system integration. An optional Frame Sync provides infinite timing adjustment relative to an external reference. When embedded audio is required to be separated into discrete channels, the built-in audio demux (24-bit) allows up to 8 channels (2 groups) to be passed to an audio card. New technology includes thumbnail generation and an optional Waveform/Vectorscope over IP of the output signal which allows operators to control and see the changes made to the signal.

This card operates with the MSB-1121 Monitoring Switching Bridge which allows the output of any module in the Densité frame to be monitored.

Features and Benefits

- SDI isolated input w/active loop-through
- External reference input w/passive loop-through
- Up to six (6) Composite / two (2) CAV analog video outputs
- 12-bit D to A video conversion
- Line comb pre-filter selection for NTSC
- Video processing controls
- Hot-switch detection and handling
- Frame Sync Option provides timing, full phasing and freeze modes
- Thumbnail Generation
- Waveform/Vector over IP option (operates with iControl)
- Provides output to Monitoring Switching Bridge option (MSB-1121)
- De-embedding of 8 channels (2 groups) of audio to a linked audio card (ex: UAP-1781)

FUNCTIONAL BLOCK DIAGRAM



SPECIFICATIONS

INPUT

SIGNAL:	SMPTE 259M-C (270 Mbps) isolated with active loop through
EMBEDDED AUDIO:	SMPTE 272M-A
CABLE LENGTH:	300 m (1000') of Belden 1694A
RETURN LOSS:	> 15 dB up to 270 MHz

EXTERNAL REFERENCE

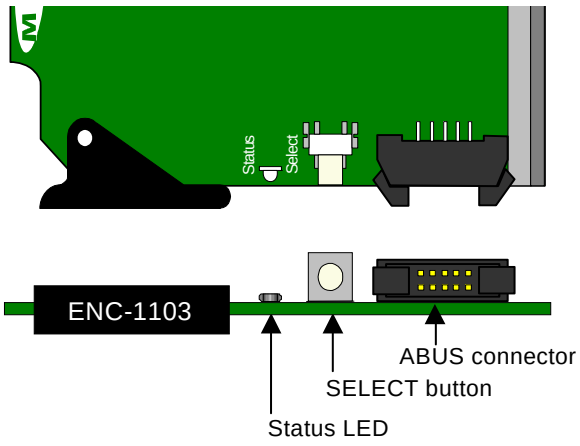
SIGNAL:	NTSC SMPTE 170M, PAL ITU 624-4 or Composite sync with passive loop-through
RETURN LOSS:	> 35 dB up to 5.75 MHz

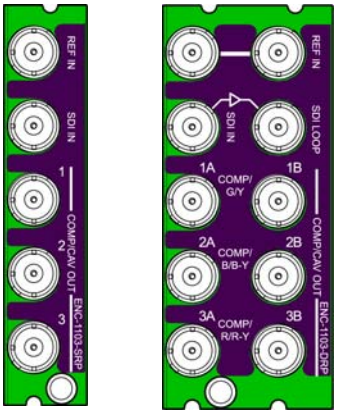
VIDEO OUTPUTS (6)

SIGNAL:	NTSC (525/60) SMPTE 170M, PAL (625/50) ITU 624-4, incl. PAL-M Component Analog (GBR with sync on G or Y/B-Y/R-Y) Betacam and SMPTE Levels
RETURN LOSS:	> 35 dB up to 5.75 MHz

VIDEO PROCESSING PERFORMANCE

SIGNAL PATH:	10 bits
QUANTIZATION:	10 bits
DAC:	12 bits
SAMPLING:	108 MHz (8X over-sampling)
FREQ. RESPONSE:	COMP./Y : ± 0.1dB to 5.5 MHz, +0/-0.6 dB from 5.5 to 5.75 MHzR-Y/B-Y : ± 0.15 dB to 2.0 MHz
NOISE:	< -60 dB to 5.75 MHz (UNWEIGHTED)
DIFFERENTIAL PHASE:	< 1.5 degree
DIFFERENTIAL GAIN:	< 1%
PROCESSING DELAY:	75 µs (min.)
TEST GENERATOR:	75% color bars
POWER:	5 W





Single Double

ENC-1103 Rear Connector Panels

INSTALLATION

Make sure you have ordered and received the ENC-1103 and its associated rear panel. If any of the following items are missing, contact your distributor or Miranda Technologies Inc.

* ENC-1103 SDI to Composite/CAV/RGB Encoder
* ENC-1103-SRP or ENC-1103-DRP Rear Panel (see figure)

The ENC-1103 must be mounted in a DENSITÉ frame. The installation includes both the ENC-1103 module, and the rear panel module. It is not necessary to switch off the power from these frames when installing or removing the ENC-1103.

When used in conjunction with an audio module such as the UAP-1781, the ABUS flat cable needs to be installed between the ABUS connector of the ENC-1103 and the connector of the audio module. The ABUS flat cable is supplied with the audio module.

Detailed instructions for installing cards and their associated rear panels in the Densité frame are given in the Densité Frame manual.

Rear Panel Options

The ENC-1103 has different output types: composite, CAV and RGB. Three composite outputs or one CAV/RBG output is available on the single-width rear panel; six composite outputs or two CAV/RGB outputs are available with the double-width rear panel.

When a double-width rear panel has been installed, the module must be installed in the right-most of the two slots covered by the panel in order to mate with the rear panel connectors. Should it be installed in the wrong slot, the front panel LED will flash red. Move the card to the other slot for correct operation. No damage will result to the card should this occur.

OPERATION

Overview

The DENSITÉ frame incorporates a central controller card, located in the center of the frame, it is equipped with an LCD display and a control panel. The controller handles error reporting and local and remote control for all cards installed in the frame. The display and control panel are assigned to the card in the frame whose SELECT button has been pushed.

User Interface

Pushing the SELECT button will cause the on-card STATUS LED to flash yellow, and the card identification and the current status will be shown on the controller card's display. The STATUS LED will revert to it's normal state upon a second push of the button, or after a short delay. The messages which may appear are shown in the top line of the menu chart on page 3

Status Monitor LED

The status monitor LED is located on the front card-edge of the ENC-1103 module, and is visible through the front access door of the DENSITÉ frame. This multi-color LED indicates module status by color, and by flashing/steady illumination, according to the following chart (which also indicates fault reporting for this card on the DENSITÉ frame's serial and GPI interfaces).

A "Flashing Yellow" Status LED indicates that the SELECT button on the front panel has been pushed, and the controller display and control panel are now assigned to this card.

The LED color assignments for some error conditions can be reconfigured by the user (see the chart and menu for details).

Example :

-SELECT button pushed twice when there is no input signal connected to the rear panel and the LED is steady red:

E	N	C	-	1	1	0	3							
N	O		S	I	G	N	A	L						

Use the local control panel to access the detailed status report shown in the STATUS menu below.

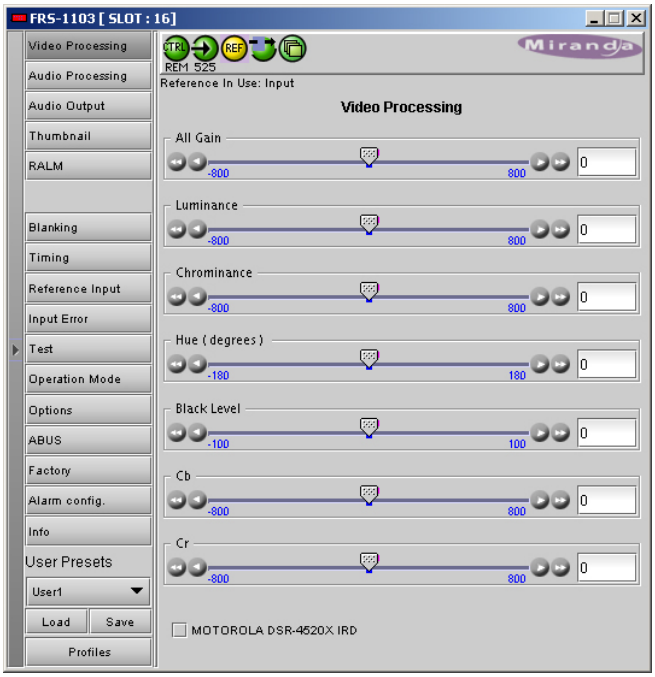
	Serial Report	GPI Report	Green	Yellow	Red	Flashing Red
No input signal presence					✪	
Reference mismatch					✪	
No reference					✪	
No audio group 1				✪		
No audio group 2				✪		
No audio group 3				✪		
No audio group 4				✪		
Test				✪		
Card System					✪	

✪ : Factory default

iControl Interface

The operation of the ENC-1103 may be controlled using Miranda's iControl system. This manual describes the control panels associated with the ENC-1103 and their use. Please consult the iControl User's Guide for information about setting up and operating iControl.

In *iControl Navigator* or *iControl Websites*, double-click on the ENC-1103 icon to open the control panel.



Note the following features of this panel:

Status Icons - At the top, to the left of the Miranda logo, are five status icons that report various aspects of the card's operation:

(a) (b) (c) (d) (e)

(a) this icon shows whether manual card configuration of this ENC-1103 is on [LOC] or off [REM]

(b) this icon reports the input format (525 or 625 lines)

(c) reference status – green if OK, red if an error has been detected, white if the reference is absent, yellow if the input is used as a reference

(d) Audio/video test – green during normal operation, yellow (as shown) when Test Mode is activated

(e) ABUS multiple card configuration – green if configuration and card setup are OK; red if there is a mismatch between the ENC-1103 configuration and the actual card setup

Move the cursor over an icon to see its current status in the ***message area*** below the icons. If there is an error status, the message will appear automatically. If there are multiple error messages, the display will cycle through them

Panel selection buttons – the buttons on the left side of the panel are used to select the contents of the main portion of the screen. The selected button is highlighted, and the main screen heading matches the button name. The column of buttons can be hidden/revealed by clicking the arrow icon at the left-hand side.

User Presets – the buttons at the bottom left control the saving and recovery of sets of user-defined card configurations

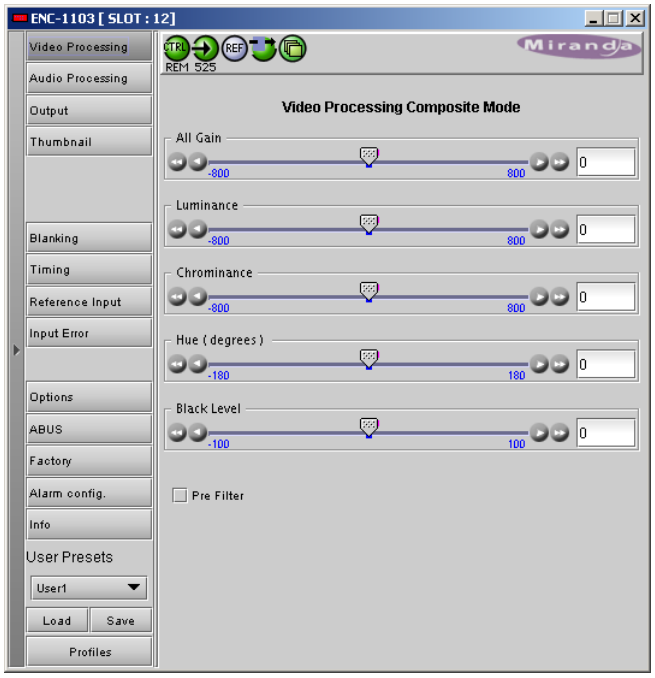
Profiles – the Profiles button opens a panel that allows the entire card set-up to be copied to other ENC-1103 cards

All of the individual control panels are described in detail below.

Panel **See Page**

Video Processing tab

These controls reflect the type of output selected: *NTSC* or *PAL-M* (composite), *GBR, YUV* or *Betacam.*



ALL GAIN: -800, -799, …, 799, 800: Sets Luma and Chroma gains to a specific value. When others gains are individually set, ALL GAIN reflects the average value of the combined gains for a given output format.

LUMA GAIN: -800, -799, …, 799, 800: In Composite mode, sets Luma gain to a specific value.

CHROMA GAIN: -800, -799, …, 799, 800: In Composite mode, sets Chroma gain to a specific value.

G GAIN; B GAIN; R GAIN: -800, -799, …, 139, 140: In RGB mode, sets the gains for the individual components of the video signal to a specific value.

Y GAIN; B-Y GAIN; R-Y GAIN: -800, -799, …, 799, 800: In YUV and BETACAM mode, sets the gains for the individual components of the video signal to a specific value.

HUE:-180, -179, …, 179, 180: Sets Hue to a specific value in degrees.

BLACK LEVEL: -100, -99, …, 99, 100: In NTSC mode, sets Black level to a specific value.

PRE FILTER: OFF, ON: In NTSC mode, applies a line comb pre-filter to the video input signal.

Audio Processing tab

Group Detected: highlights the AES audio groups detected in the input signal.

CH1,2,3,4, and *CH 5,6,7,8:* select the AES group to be used as source for channel 1 to 4 and 5 to 8.

Output tab

These controls allow the selection of the different output formats and parameters.

OUTPUT FORMAT: NTSC, PAL-M, GBR, YUV, BETACAM (for 525) or *PAL, GBR, YUV, BETACAM* (for 625): Sets the video output type.

VIDEO SETUP: O IRE, 7.5 IRE: In 525 lines operation, enables or disables 7.5 IRE units set-up on the output NTSC video signal.

H BLANKING: WIDE, NARROW: Sets the value of the horizontal blanking interval.

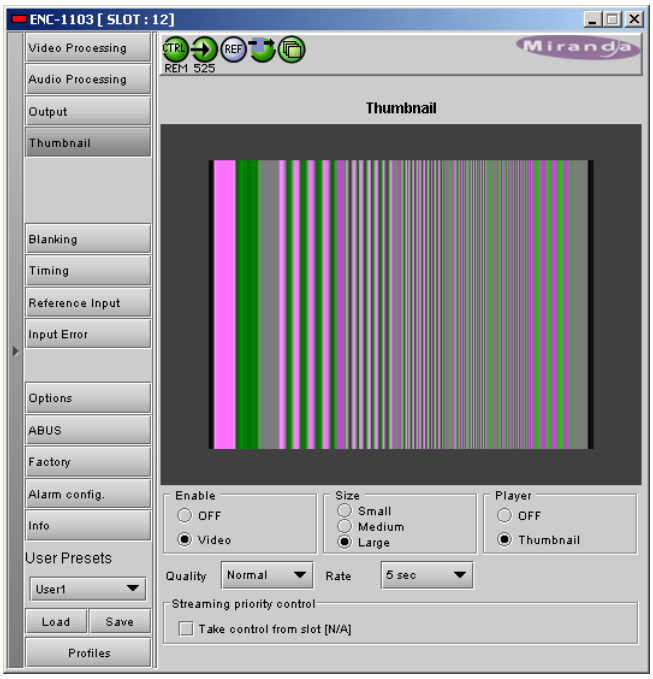
CLOSE CAPTION: In 525 lines operation, check the box to enable 7.5 IRE units set-up on line 21 of the output NTSC video signal.

GAIN: -75, -74, …, 74, 75: Sets the value of the overall output gain; this gain modifies the amplitude of the analog video signal amplification.

COLOR BARS: check the box to select a 75% color bar test signal at the output.

Thumbnail tab

Thumbnails are used to monitor the video output signal of the ENC-1103. Streaming parameters are set using these controls.



ENABLE: OFF, VIDEO: enables thumbnail streaming or turn streaming OFF

SIZE: SMALL, MEDIUM, LARGE: select the size of the Thumbnail image.

PLAYER: OFF,THUMBNAIL: Click on the Thumbnail box to enable the thumbnail Player. A window opens in the top section and shows a thumbnail associated with the SDI video stream that is being encoded by the ENC-1103.

- Note: you must check the VIDEO box in the ENABLE section to see the video image.

Quality and Refresh Rate:

- Use the left-hand pulldown to select the video quality to be sent by the streaming encoder. The choices are Poor, Normal and HiQ (e.g. high quality).
- Use the right-hand pulldown to select the refresh rate for the transmitted thumbnails. The choices are Fast, 1 sec, 2 sec, … 10 sec.

Streaming Priority Control: Click the *Take control from Slot [##]* checkbox to force the Densité Controller for this frame to assign more bandwidth for this card's streaming output. Only one card in the frame can use this feature. It has no effect unless you have selected *Fast* for the refresh rate. The actual slot number of this card, as shown in the window title bar, will appear when the checkbox is ticked.

Blanking tab

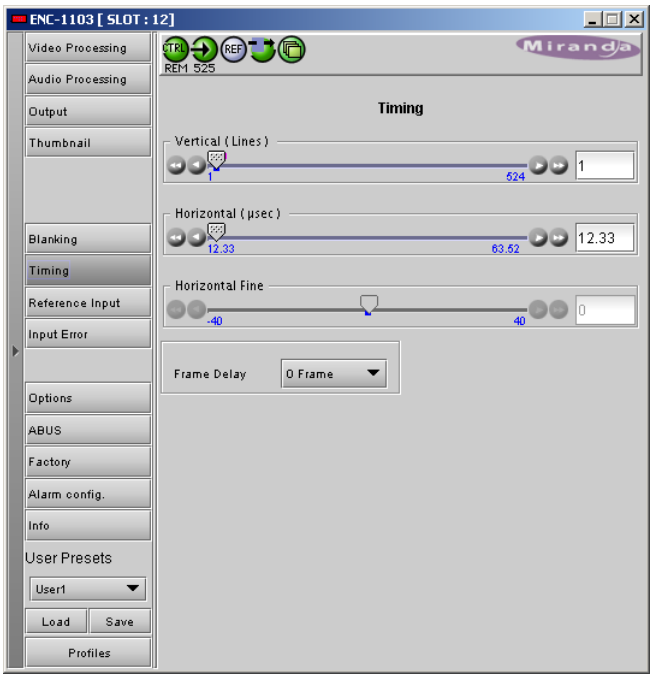
Control over VBI data is achieved using this tab.

VBI: PROCESS, PASS, BLANK, LINE BY LINE: select whether the overall VBI data field will be processed, will pass or be blanked. If *Line By Line* is selected, use the right-side panel to set each line individually.

LINE BY LINE: Available when Line by Line is checked in the previous section. Radio buttons allows the selection of conditions for each line of the VBI data field.

SETUP: check this box to enable a 7.5IRE setup on the VBI.

Timing tab



These controls provide access to timing adjustments which affect the signal outputs. There are three slider controls, each with a data reporting box which shows the current value, and into which values can be typed directly. If the Frame Sync option is not enabled, only the Horizontal delay may be accessed.

VERTICAL: 0, 1, …, 523, 524 (for 525 operation), 623, 624 (for 625 operation): sets the number of lines for vertical delay. This control is available when the *Frame Sync option* has been activated (see *Options* tab).

HORIZONTAL (µs): 69.7, 70, …, 132, 133.22 (for 525 operation), 133.7 (for 625 operation): sets the horizontal delay in µs.

HORIZONTAL FINE: -40, -39 …, 39, 40: provides fine adjustment for the horizontal delay. This control is available when the *Frame Sync option* has been activated (see *Options* tab).

FRAME DELAY Pulldown box: sets delay by frame steps: 0, 1, or 2 frames. This control is available when the *Frame Sync option* has been activated (see *Options* tab).

Reference Input tab

These controls allow selection of the reference signal.

REFERENCE SOURCE: Select between *AUTO*, *EXTERNAL* (use the REF input signal connected to the rear panel), *URS* (see below) or *INPUT* (use the input video signal as reference) as the reference source. AUTO mode searches for available signal in this order: REF input, URS and finally video input signal.

URS FORMAT: Select between OFF, 525 or 625 for the Universal Reference Signal format.

- The URS is a multistandard audio/video reference generated by an REF-1801 card, and distributed internally to all cards in the Densité frame
- The REF-1801 card must be installed in slot 10 of the Densité frame

Input Error tab

INPUT ERROR: KILL, BLACK, FREEZE: Sets card behavior when an input error is detected. When KILL is selected, the card will not take any action; BLACK will generate a video black at the output, and FREEZE will freeze the last video frame before the error was detected.

Options tab

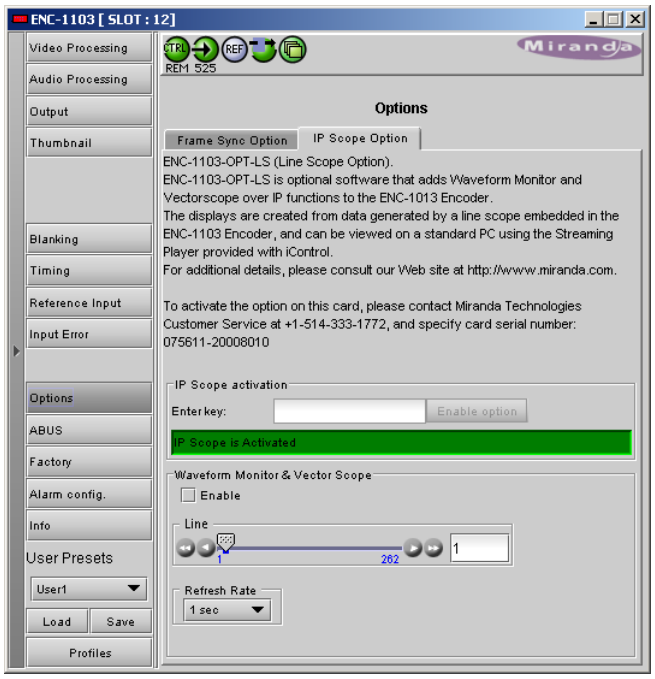
Two options are available for the ENC-1103: the Frame Sync option (ENC-1103-OPT-FS) and the Line Scope over IP option (ENC-1103-OPT-LS).

FRAME SYNC Option : to activate this option, you must obtain a licence key from Miranda Technologies. Type in the licence key in the data box. Click the ENABLE OPTION button to enable additional timing controls.

IP SCOPE Option: to activate this option, you must obtain a licence key from Miranda Technologies. Type in the licence key in the box. Click the ENABLE OPTION button to enable the waveform monitor and vector scope feature.

To view the waveform monitor and vector scope data, use the Streaming Player that is provided with the iControl software. Consult the iControl documentation to learn more about the Streaming Player.

Click in the *ENABLE* checkbox to enable the waveform monitor and vector scope data transmission, and select the line that will carry the data using the slider below. The *REFRESH RATE* pulldown box selects the desired refresh rate: *Fast*, *1 sec*, *2 sec*, …, *9 sec*, *10 sec*.



ABUS tab

When optional audio cards such as the UAP-1781 are used to provide additional audio signals, the ABUS audio bus links installed audio cards and the ENC-1103. The ABUS tab is used to instruct the ENC-1103 about the presence of installed audio cards.

Multiple Card Config sub-section:

The indicators signal the presence of UAP-1781 cards installed in the chassis. To enable the audio bus, use the pulldown box and select your system's configuration. Selecting *Video* restricts available audio signals to audio channels embedded in the SD input signal; Video / A1 or Video / A1 / A2 adds signals incoming from the installed audio cards detected.

Factory tab

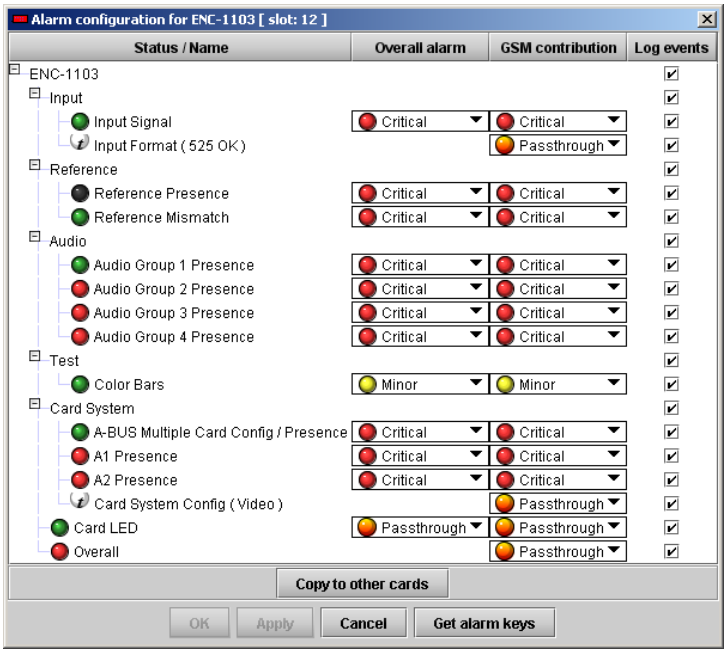
The Factory tab contains only the LOAD FACTORY button. Clicking this button will reinstate all default parameter values.

See the ENC-1103 Menu below (page 16) to see the default value for all parameters.

Alarm Config button

This panel allows the alarm reporting of the ENC-1103 to be configured. The panel opens in a new window when the button is clicked, and can be resized if needed.

The panel is organized in columns.



Status/Name

This contains an expandable tree listing all the alarms reported by this ENC-1103 card.

- Each alarm name includes an icon that shows its current status
- Some alarms may be text-only and the alarm status is shown in the name and not by a status icon, e.g.

The **Overall alarm** and **GSM contribution** columns contain pulldown lists that allow the level of contribution of each individual alarm to the alarm named in the column heading to be set.

- If there is no arrowhead in the box, there is no pulldown and the alarm is not user-configurable

Overall Alarm

This column allows configuration of the contribution of each individual alarm to the Overall Alarm associated with this card. The Overall Alarm is shown in the upper left corner of the iControl panel, and also appears at the bottom of the Status/Name column.

- ***GSM Contribution***
  This column allows configuration of the contribution of each individual alarm to the GSM Alarm Status associated with this card. GSM is a dynamic register of all iControl system alarms, and is also an alarm provider for external applications. The possible values for this contribution are related to the Overall alarm contribution:
  - If the Overall alarm contribution is selected as Disabled, the GSM alarm contribution can be set to any available value
  - If the Overall alarm contribution is selected as any level other than disabled, the GSM contribution is forced to follow the Overall Alarm.

Levels associated with these alarms:

The pulldown lists may contain some or all of the following options:

Disabled	The alarm makes no contribution (black icon)
Minor	The alarm is of minor importance (yellow icon)
Major	The alarm is of major importance (orange icon)
Critical	The alarm is of critical importance (red icon)
Passthrough	The alarm exists but has no effect (used for text and composite alarms)

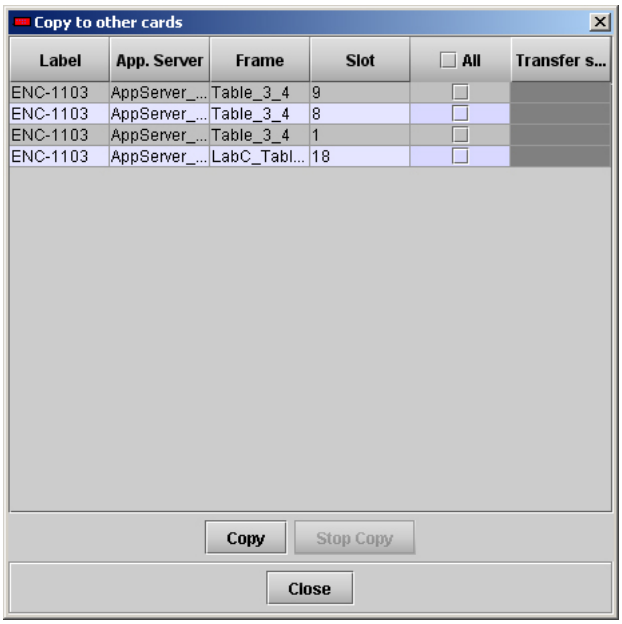
Shortcut: *if you click in one of the columns beside a major heading in the Status/Name column (where there is no pulldown shown), you will open an "invisible" pulldown that lets you assign a level to all alarms in that section of the column simultaneously.*

Log Events
iControl maintains a log of alarm events associated with the card. The log is useful for troubleshooting and identifying event sequences. Click in the checkbox to enable logging of alarm events for each individual alarm.

At the bottom of the window are several other controls

Copy to other cards
Click this button to open a panel that allows the alarm configuration set for this card to be copied into other ENC-1103 cards.

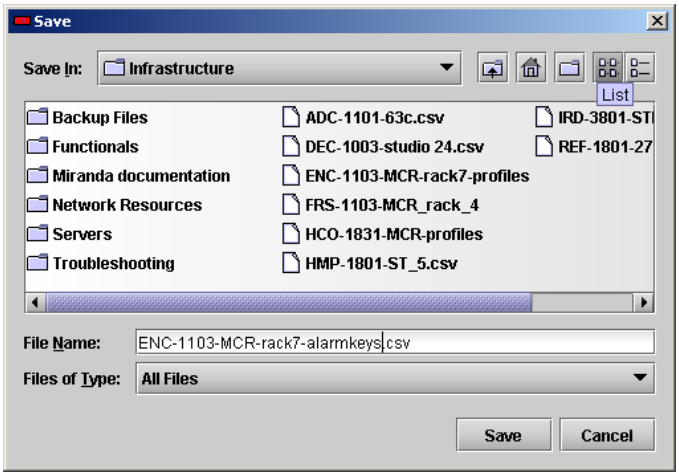
- Select one or more destination cards from the list in the window by clicking in the checkboxes, or all of them by clicking in the *All* checkbox
- Note that when you do a Copy Profile for this card (see page 14), the alarm configuration is copied along with all the other settings.



Get alarm keys

Click this button to open a save dialog where you can save a file containing a list of all alarms on this card and their current values, along with an Alarm Key for each. The alarm keys are useful for system integration and troubleshooting.

- The file is saved in Excel.csv format



OK, Apply, Cancel

- ***OK*** accepts the settings and closes the window once the card confirms that there are no errors.
- ***Apply*** accepts the settings, but leaves the window open
- ***Cancel*** closes the window without applying any changes, and leaves the previous settings intact.

Info tab

When the ENC-1103 is included in an iControl environment, certain information about the card should be available to the iControl system. The user can enter labels and comments that will make this card easy to identify in a complex setup. This information is entered via the Info control panel. This panel also shows other information about the card.

Label: type the label that appear for this ENC-1103 when it appears in iControl applications

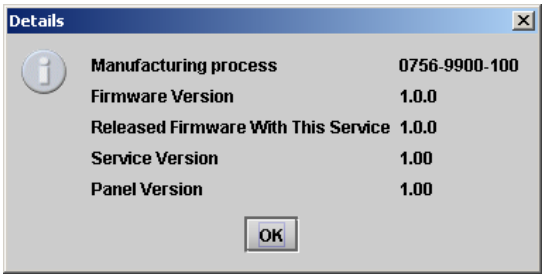
Short Label type the short-form label that iControl uses in some cases (8 characters)

Source ID type a descriptive name for this ENC-1103

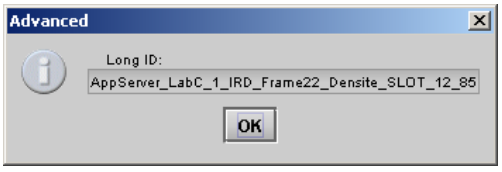
Comments: type any desired text

The remaining data boxes show manufacturing information about this card.

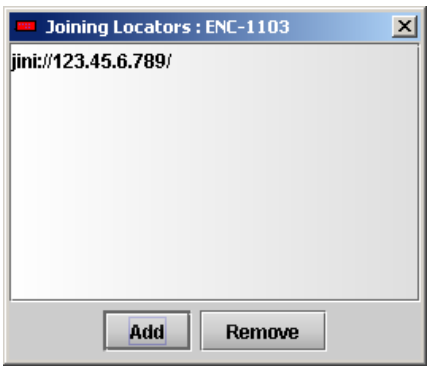
- Details…: Reports the Firmware version, service version, and panel version for this card



- Advanced…: Shows the Miranda LongID for this card. The Miranda LongID is the address of this ENC-1103 in the iControl network.



- Remote System Administration – opens the Joining Locators data box, which lists remote lookup services to which this ENC-1103 is registered.

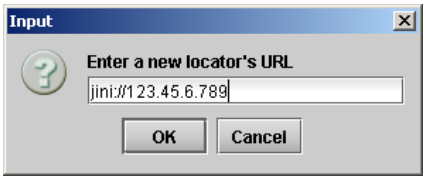


Add: Force the iControl service for this ENC-1103 to register itself on a user-specified Jini lookup service, using the following syntax:

jini://<ip_address>

where <ip_address> is the ip address of the server running the lookup service

Enter the address in the Input data box, e.g.:



Remove: select one of the services listed in the window by clicking on it, and click *Remove* to delete it from the window.

User Presets

The User Preset controls allow the user to save and recover all configuration settings on the card.

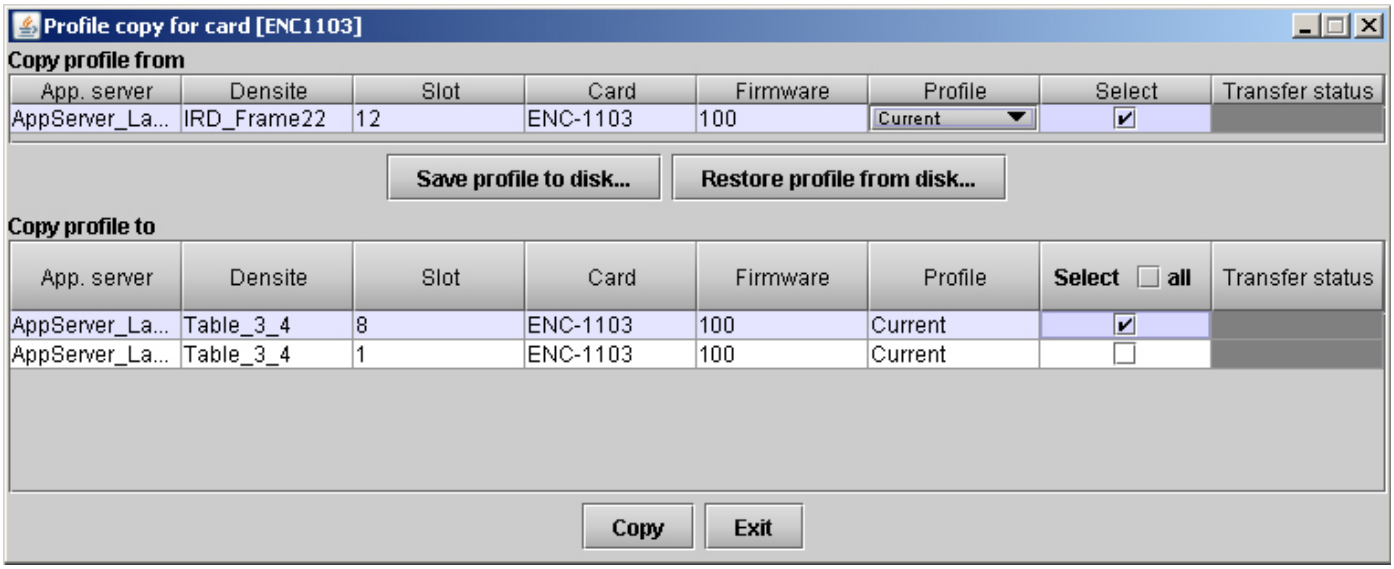
Select any one of the five presets using the pulldown list. The name of the currently-selected User Preset is shown on the on the pulldown icon (e.g. *User1*, *User2*,… *User5*)

- Click *Load* to load the contents of the selected User Preset into the ENC-1103. All parameter settings and values will be replaced by the contents of the selected User Preset.
- Click *Save* to store the current parameter settings and values from the ENC-1103 into the selected User Preset. The existing contents of the preset will be overwritten.

Profiles

This section provides the option to save and recover the entire card configuration (including user presets if desired) on an external disk, or to copy it to another ENC-1103 card.

Click on the *Profiles* button at the bottom left corner of the control panel to open the Profile Copy window.



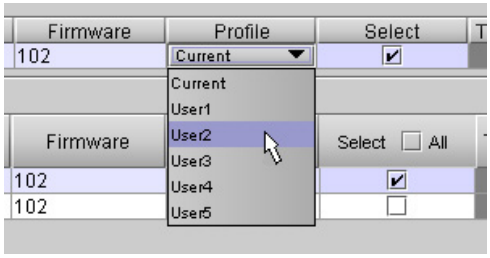
***Copy Profile From*:**

This line shows this ENC-1103 card, and identifies it by App server, Densité frame and slot number, card type and firmware version.

The *Profile* column has a pulldown that allows you to select which profile you will work with, and gives these choices:

- Current, User1, User2, User3, User4, User5

The *Select* column includes a checkbox, preselected as checked, to confirm that you want to work with the current card.

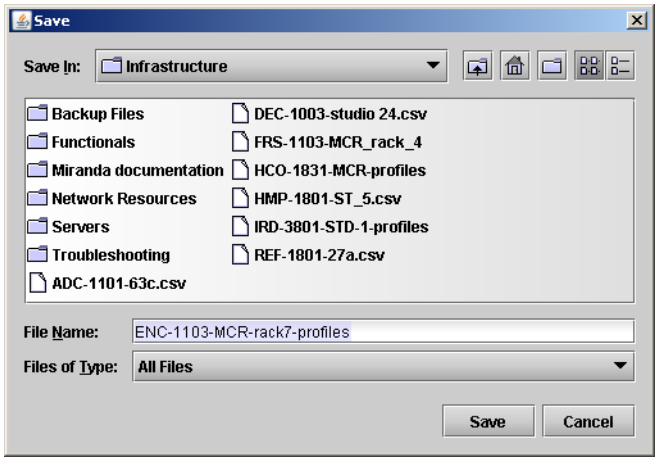


Save Profile to Disk…

Click this button to open a Save dialog allowing you to specify a file name and location to which the selected profiles for this card will be saved.

Hint - It is a good idea to create a folder for these files, because they are not explicitly identified as ENC-1103 profiles, and will be difficult to find and identify if not clearly named and conveniently located.

- Click the save button once the name and location have been identified in the Save box
- If the file is saved correctly, the Transfer Status box on the right of the *Copy profile from* line will indicate *Succeeded* against a green background
- If the file was not saved for some reason, the Transfer Status box to the right of the *Copy profile from* line will indicate *Failed* against a red background

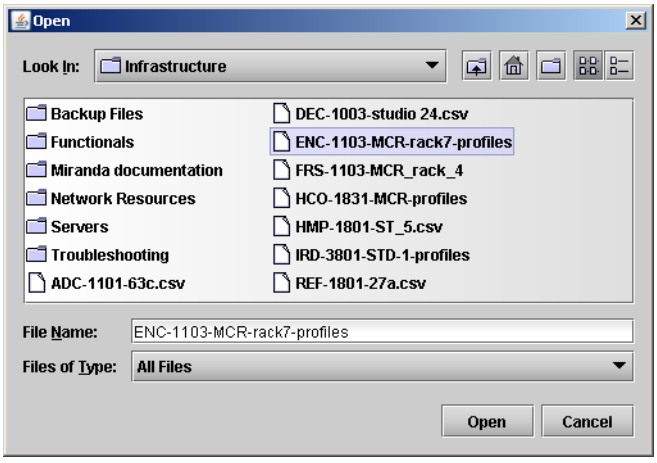


Restore profile from disk…

Click this button to open an *Open* dialog box within which you can locate and select a valid ENC-1103 profile file.

- Click Open to read the contents of the file and to reconfigure this ENC-1103's profiles according to its contents
- While the reconfiguration is in progress, the Transfer Status box on the right of the *Copy profile from* line will indicate *Working* against a yellow background
- When the reconfiguration is complete, the Transfer Status box on the right of the *Copy profile from* line will indicate *Succeeded* against a green background

Note: There is no need to select a profile using the Profile pulldown (e.g. current, User1, etc.) when restoring a profile from disk. The profile selection is stored within the file.



***Copy profile to* section**

This line shows other ENC-1103 cards that are available on the iControl network, each identified by App server, Densité frame and slot number, card type and firmware version.

The *Profile* column shows the same information as is shown for the current card in the Copy profile from line, i.e.

- Current, User1, User2, User3, User4, User5

The *Select* column includes a checkbox to identify which ENC-1103 cards you wish to copy profiles into from the current card.

- For convenience, a *Select all* checkbox is provided in the column header

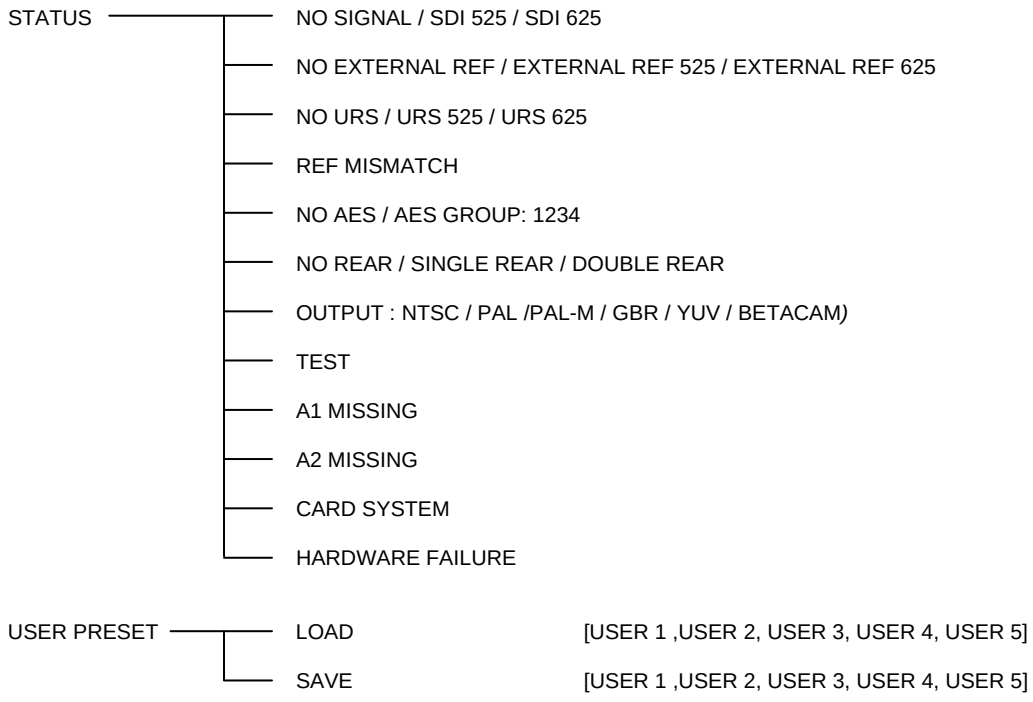
Click *Copy* to copy the selected profiles from this card into the selected other ENC-1103 cards

- While the profile copy operation is in progress, the Transfer Status box on the right of the *Copy profile to* line will indicate *Working* against a yellow background
- When the profile copy operation is complete, the Transfer Status box on the right of the *Copy profile to* line will indicate *Succeeded* against a green background

ENC-1103 Menu

Operating Parameter Adjustment

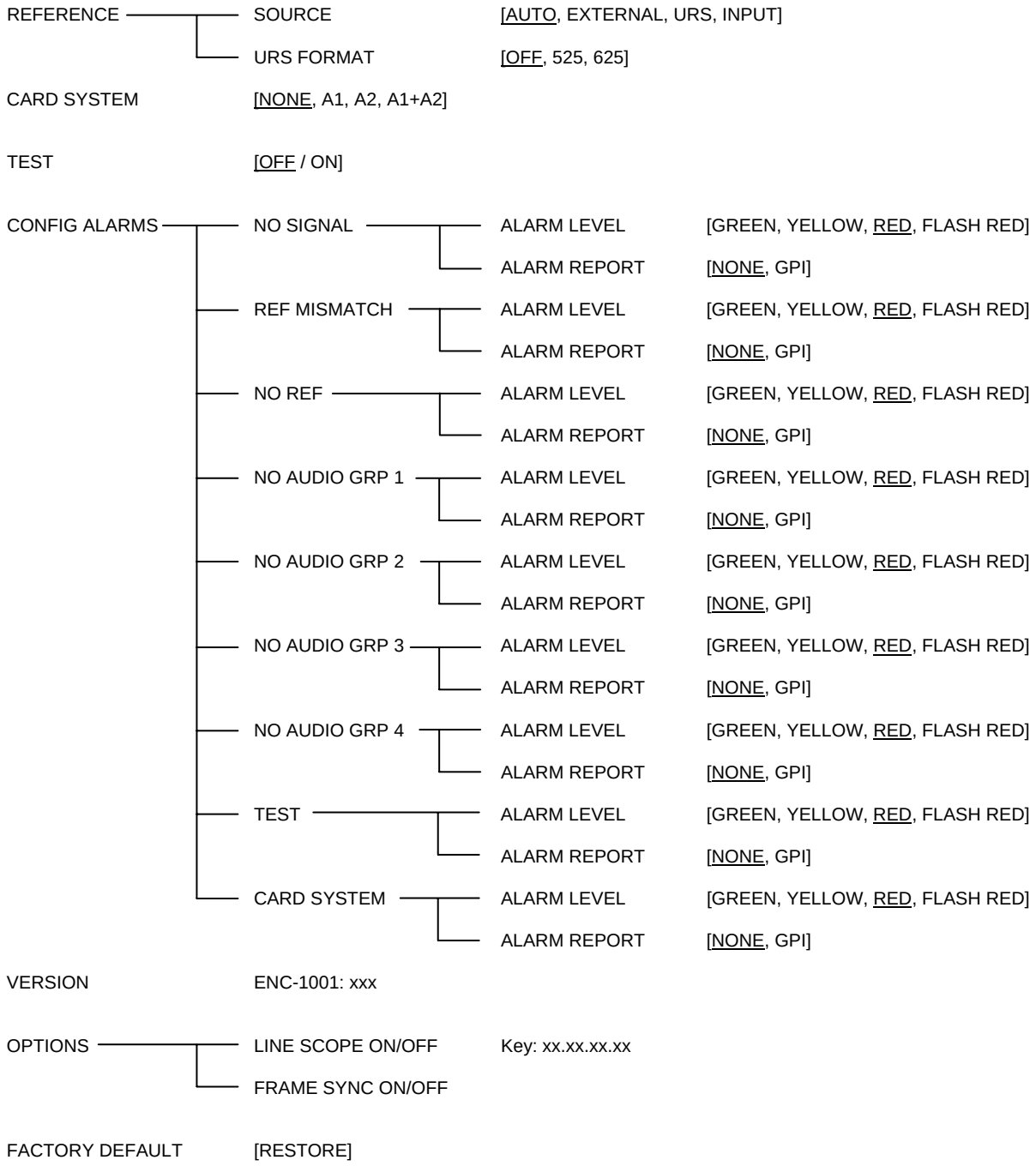
The ENC-1103 has operating parameters which may be adjusted locally at the controller card interface. After pressing the SELECT button on the ENC-1103 module, use the keys on the local control panel (described in the Controller card manual) to step through the displayed menu and adjust the parameters. The menus are shown below; <u>underlined</u> values are factory defaults.



(CONTINUED…)

OUTPUT	FORMAT	[NTSC, PAL-M, GBR, YUV, BETACAM]	*(525)*
		[PAL, GBR, YUV, BETACAM]	*(625)*
	SETUP	[0, 7.5] (*IRE)*	* Available with 525 input
	GAIN	[-75, -74, ….0….74, 75]	
	H BLANKING	[WIDE, NARROW]	
	CC	[OFF / ON]	* Available with 525 input
VIDEO PROC	ALL GAIN	[-800, -799, …0…799, 800]	
	LUMA GAIN	[-800, -799, …0…799, 800]	* Available in composite mode
	CHROMA GAIN	[-800, -799, …0…799, 800]	* Available in composite mode
	G GAIN	[-800, -799, …0…139, 140]	* Available in RGB mode
	B GAIN	[-800, -799, …0…139, 140]	* Available in RGB mode
	R GAIN	[-800, -799, …0…139, 140]	* Available in RGB mode
	Y GAIN	[-800, -799, …0…799, 800]	* Available in YUV mode
	B-Y GAIN	[-800, -799, …0…799, 800]	* Available in YUV mode
	R-Y GAIN	[-800, -799, …0…799, 800]	* Available in YUV mode
	Y GAIN	[-800, -799, …0…799, 800]	* Available in Betacam mode
	B-Y GAIN	[-800, -799, …0…799, 800]	* Available in Betacam mode
	R-Y GAIN	[-800, -799, …0…799, 800]	* Available in Betacam mode
	HUE	[-180, -179,…0, …. 179,180]	(*degrees)*
	BLACK LEVEL	[-100, -99, ..,0, …, 99, 100]	* Available with 525 input
	PRE-FILTER	[OFF / ON]	
AUDIO DE-EMBED	CHANNELS 1234	[GRP 1, GRP 2, GRP 3, GRP 4]	
	CHANNELS 5678	[GRP 1, GRP 2, GRP 3, GRP 4]	
BLANKING	LINE 10 – 20	[PASS, BLANK, PROCESS, USER]* Available with NTSC output	
	LINE 6 – 22	[PASS, BLANK, PROCESS, USER]* Available with PAL output	
	LINE 11 – 20	[PASS, BLANK, PROCESS, USER]* Available with PAL-M output	
	VBI SETUP	[OFF / ON]	
INPUT ERROR		[KILL, BLACK, FREEZE FIELD]	
TIMING	FRAME DELAY	[0, 1, 2, 3]	
	VERTICAL	[0, 1, 2, …. 523, 524] (lines)	*(525)*
		[0, 1, 2, …. 623, 624] (lines)	*(625)*
	HORIZONTAL	[0, 0.037, 0.064, …. 63,5] (us)	*(525)*
		[0, 0.037, 0.064, …. 64] (us)	*(625)*
	H FINE	[-40, …. 0,…. 40]	

(CONTINUED…)


REFERENCE
SOURCE
[AUTO, EXTERNAL, URS, INPUT]
URS FORMAT
[OFF, 525, 625]
CARD SYSTEM
[NONE, A1, A2, A1+A2]
TEST
[OFF / ON]
CONFIG ALARMS
NO SIGNAL
ALARM LEVEL
[GREEN, YELLOW, RED, FLASH RED]
ALARM REPORT
[NONE, GPI]
REF MISMATCH
ALARM LEVEL
[GREEN, YELLOW, RED, FLASH RED]
ALARM REPORT
[NONE, GPI]
NO REF
ALARM LEVEL
[GREEN, YELLOW, RED, FLASH RED]
ALARM REPORT
[NONE, GPI]
NO AUDIO GRP 1
ALARM LEVEL
[GREEN, YELLOW, RED, FLASH RED]
ALARM REPORT
[NONE, GPI]
NO AUDIO GRP 2
ALARM LEVEL
[GREEN, YELLOW, RED, FLASH RED]
ALARM REPORT
[NONE, GPI]
NO AUDIO GRP 3
ALARM LEVEL
[GREEN, YELLOW, RED, FLASH RED]
ALARM REPORT
[NONE, GPI]
NO AUDIO GRP 4
ALARM LEVEL
[GREEN, YELLOW, RED, FLASH RED]
ALARM REPORT
[NONE, GPI]
TEST
ALARM LEVEL
[GREEN, YELLOW, RED, FLASH RED]
ALARM REPORT
[NONE, GPI]
CARD SYSTEM
ALARM LEVEL
[GREEN, YELLOW, RED, FLASH RED]
ALARM REPORT
[NONE, GPI]
VERSION
ENC-1001: xxx
OPTIONS
LINE SCOPE ON/OFF
Key: xx.xx.xx.xx
FRAME SYNC ON/OFF
FACTORY DEFAULT
[RESTORE]

COMPLIANCE

Radio Frequency Interference and Immunity

This unit generates, uses, and can radiate radio frequency energy. If the unit is not properly installed and used in accordance with this guide, it may cause interference with radio communications. Operation with non-certified peripheral devices is likely to result in interference with radio and television reception. This equipment has been tested and complies with the limits in accordance with the specifications in:

FCC Part 15, Subpart B; CE EN50081-1:1992; CE EN50082-1:1992.

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