SCP-1121

DESCRIPTION

The SCP-1121 is a non-intrusive probe for the quality control of SDI SMPTE 259M-C type digital video signal with embedded SMPTE 272M digital audio. The SCP-1121 probe integrates several advanced features for monitoring both video and embedded audio signals. It offers complete real-time measurement and analysis of all relevant signal parameters as well as flexible alarm thresholds and user-defined profiles. In addition, the SCP-1121 probe functions as a distribution amplifier, with its non-intrusive SDI video looped single input and three SDI reclocked outputs. Used in conjunction with Miranda's iControl family of products, the SCP-1121 allows users to see and hear the signals they are monitoring. The probe generates real-time video thumbnails, audio level meters and streamed audio for transmission over IP networks. As part of the Miranda Densité series, the probe can be used along with a wide variety of interface and distribution amplifiers, and allows users to benefit from extensive flexibility and ease of use so unique to Miranda's Densité platform.

Line Scope option

The SCP-1121-LS is optional software that adds waveform monitor and vectorscope over IP functions to the SCP-1121 Digital video probe, expanding its extensive control and monitoring capabilities. It allows precise analysis of 525 and 625 lines digital video signals to be performed from practically anywhere and at a low cost. The waveform monitor and vectorscope displays are created from data generated by the line scope embedded in the SCP-1121 probe, which is transmitted in real-time over IP. This functionality is activated via a software key.

Video standard and presence
- Video format detection
- Carrier detect
- TRS error
- Freeze detection
- Black detection
- EDH full field, active picture an ANC
- Ancillary data detection and identification
- Luma min and max
- APL limit min and max
- Chroma
- Black min
- White max
- CC presence

VBI signal extraction and analysis
- 24-bit digital audio disembedding

Monitoring of embedded audio
- Signal presence detection and format validation
- Presence control for each group
- Adjustable level, phase and mono signal alarms
- Selectable group, pair or individual channel monitoring

Extensive profile management
- Multiple factory preset configurations
- User defined profile can be stored directly in the probe memory
- Fully-configurable signal alarm thresholds and sensitivities
  - Duration adjustable granularity range from 0 to 90 sec.
  - Number of occurrences within period ranging between 1 min. and 24 hours
- Remote configuration with iControl software

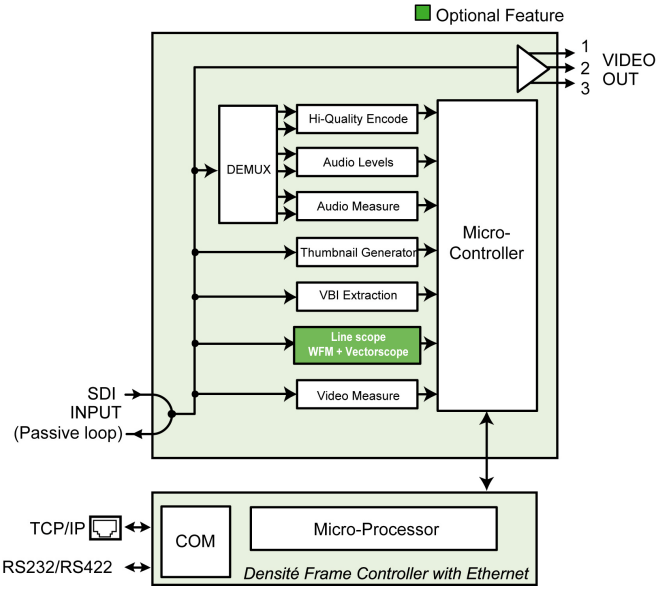
Transmission over IP for display and listen
- Thumbnails with adjustable picture format, quality and transmission rate
- Alarms and status
- VITC, Closed captioning, V-chip, WSS and XDS
- Audio level meters and phase meter
- Audio overload counter
- Selectable video test pattern and audio reference signals

Input/output
- Supports SMPTE 259M-C digital video signal with embedded272M digital audio
- One non-intrusive looping input
- Three outputs

Remote control and status
- On card status Led
- Current & latch status for remote reporting

Line Scope option
- Waveform monitor & Vectorscope
- High quality Real-time measurement
- Low bit rate allowing use of several Line Scopes simultaneously using minimum bandwidth
- Real time operation
- Multi-standard: NTSC and PAL
- Vector process display for picture scaling without bitmap degradation

FUNCTIONAL BLOCK DIAGRAM



SPECIFICATIONS

VIDEO INPUT WITH PASSIVE LOOP-THROUGH

Signal:	SMPTE 259M-C (270Mbps) with embedded audio (SMPTE 272M)
Cable length:	250 m (850') up to 270Mbps (Belden1694A)
Return loss:	> 15 dB up to 270Mbps

SERIAL DIGITAL OUTPUTS (3)

Signal:	Reclocked SMPTE259M-C (270 Mbps) with embedded audio(SMPTE 272M)
Cable length:	> 15 dB up to 270 Mbps
Return loss:	< 0.2 UI p-p (WIDEBAND)

PROCESSING PERFORMANCE

Signal Path:	10 bits
Processing Delay:	<10 ns

STREAMING PERFORMANCE

VIDEO SUSTAINED BIT RATE**:**

Video sustained Bit rate:	Minimum : 9 kbits/sec Maximum : 45 kbits/sec
Audio sustained Bit rate:	Minimum : 8 kbits/sec Maximum : 52 kbits/sec

THUMBNAILS

Picture size (525):	352 X 240 or 176 X120or 88 X 56
Picture size (625):	352 X 288 or 176 X144or 88 X 72
Return Loss:	>15 dB, 5 MHz to 1.5 GHz

LINE SCOPE OPTION

GRATICULES – WAVEFORM MONITOR

Vertical scale (525):	Divided from - 300 to 800 mV
Vertical scale (625):	Divided from - 350 to 800 mV
Vertical gradation:	100 mV increments

SPECIFICATIONS(cont'd)

Additional marks:	700 mV (100%) Max peak excursion for 100% color difference signal 610 mV (75%) Max peak excursion for 75% color difference signal 350 mV (50%) Center line for color difference signal 90 mV min peak excursion for 75% color difference signal 0 mV Min peak excursion for 100% color difference signal
H. cal normal mode:	5µS/ div. (Major division) 1µS/ div. (Minor division)
H. cal mag mode :	1µS/ div. (Major division) 200 nS/ div. (Minor division)

GRATICULES – VECTORSCOPE

Mode:	75%, 100% color bars
Box:	2% of 700mv (+/-14mv)

DISPLAY

On-screen indication:	Standard, Line selection, Field
Scope representation:	Waveform monitor, Vectorscope, W+V
Scalable picture:	Scalable from very small to full screen without picture degradation (true vector process display)
Frame rate:	Up to 10 fps

WAVEFORM MONITOR CONTROL

Zoom:	Normal, Upper bottom
Display selector:	ANC, Y, Pb, Pr
Display mode:	Overlay, Parade
Offset level Pb/Pr:	0mV, 350mV
Horizontal magnifier	1X, 5X , Manual
Vertical magnifier:	1X, 5X , Manual
Trace position:	Auto centering, Manual, Reset
Line/field selector:	525; F1: 1-263 F2: 264-525 625; F1: 1-313 F2: 314-625
Intensity:	Trace & Graticule (controlled individually)
Color:	Trace & Graticule (Definable by the user)
Standard select:	525/625 (Auto sensing)

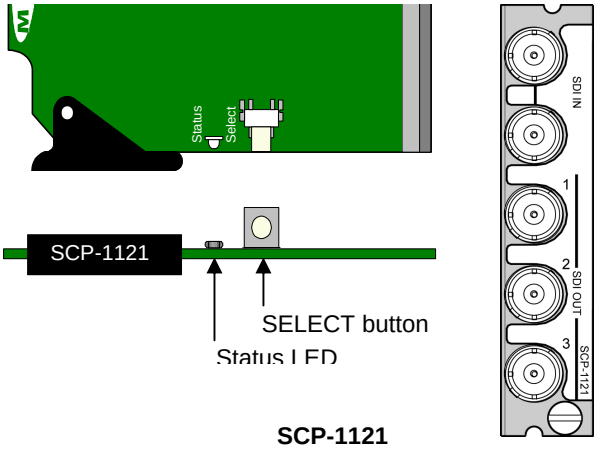
VECTOR SCOPE CONTROL

Zoom:	Center, Quadrant 1,2,3,4
Magnifier:	1X, 5X , Manual
Trace position:	Auto centering, Manual, Reset
Amplitude:	75%, 100 %
Setup :	Yes, No
Intensity:	race & Graticule (controlled individually)
Trace color:	Trace & Graticule (Definable by the user)
Standard select:	525/625 (Auto sensing

IP TRANSPORT

Data compression	Proprietary
Bit rate transmission over IP; WFM and Vectorscope:	.5 to 5 kb/s (525)1 to 8 kb/s (625)

Power: 4 W



SCP-1121
Front card edge and Rear Connector Panel

INSTALLATION

Make sure the following items have been shipped with your SCP-1121. If any of the following items are missing, contact your distributor or Miranda Technologies Inc.

* SCP-1121 Digital Video Control Probe w. Embedded Audio
* SCP-1121 Rear Panel (see figure)

The SCP-1121 and its associated rear connector rear panel must be mounted in a DENSITÉ frame. It is not necessary to switch off the frame's power when installing or removing the SCP-1121. See the DENSITÉ Frame manual for detailed instructions for installing cards and their associated rear panels.

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 chart on page 4.

Status Monitor LED

The status monitor LED is located on the front card-edge of the SCP-1121 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:

S	C	P	-	1	1	2	1								
N	O		S	I	G	N	A	L							

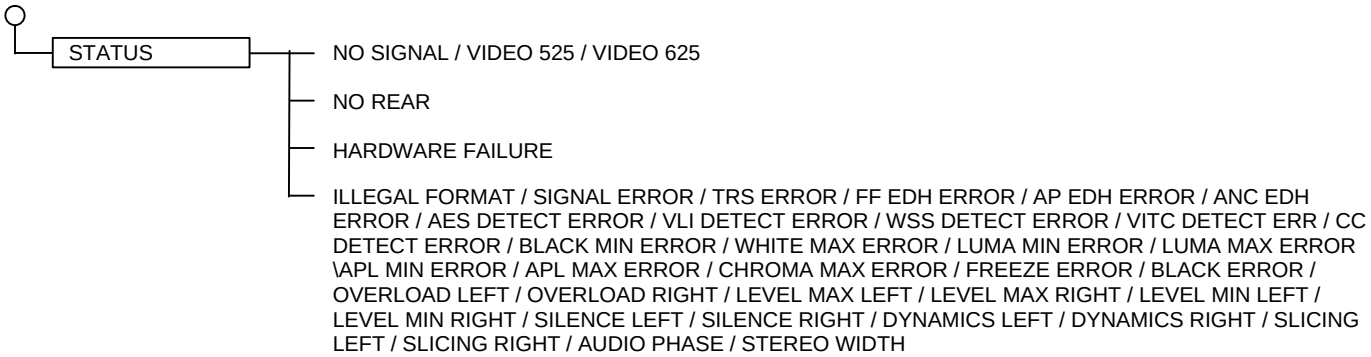
Use the local control panel to access the detailed status report shown in the STATUS menu on page 4.

	Serial Report	GPI Report	Green	Yellow	Red	Flashing Red
No input signal presence					✪	
Illegal format					✪	
Black limit min					✪	
White limit max					✪	
Luma min					✪	
Luma max					✪	
APL limit min					✪	
APL limit max					✪	
Chroma limit max					✪	
Freeze detection					✪	
Black detection					✪	
VLI detection					✪	
Close caption detection					✪	
VITC detection					✪	
WSS detection					✪	

✪ : Factory default.

Local Display of Error Messages

When the Status LED indicates an error, you can press the SELECT button on the card-edge interface to show error details on the Densité frame's on-board display. After pressing the SELECT button on the SCP-1121 card, use the keys on the local control panel (described in the Controller card manual) to step through the displayed error messages. The menus are shown below.



***Press **Select** pushbutton to activate selection*

STATUS menu

NO SIGNAL/VIDEO 525/VIDEO 625: Displays presence and format of the SDI input signal.

NO REAR: Indicates an absence of the rear panel or an incompatibility between the module and the rear panel. The *STATUS* led turns on flashing red.

HARDWARE FAILURE: Indicates a general hardware failure.

ALARMS: Displays status of the different board alarms, even if not configured to activate the *STATUS* Led:

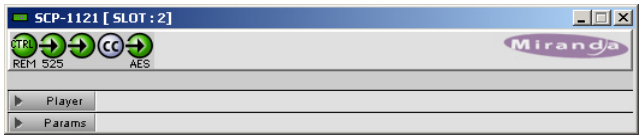
ILLEGAL FORMAT	Indicates a video signal format not recognized by the card
SIGNAL ERROR	Indicates an error in the video input signal
TRS ERROR	Indicates a Timing Reference Signal error
FF EDH ERROR	Indicates a full field EDH error
AP EDH ERROR	Indicates an active video EDH error
ANC EDH ERROR	Indicates a ANC EDH error
AES DETECT ERROR	Indicates absence of AES audio groups in the video input signal
VLI DETECT ERROR	Indicates absence of Vertical Line Interval data in the VBI portion of the input signal.
WSS DETECT ERROR	Indicates absence of Wide Screen Signaling data in the VBI portion of the input signal
VITC DETECT ERROR	Indicates absence of Vertical Interval Time Code data in the VBI portion of the input signal
CC DETECT ERROR	Indicates absence of Close Caption data in the VBI portion of the input signal
BLACK MIN ERROR	Indicates a peak minimum luminance error of the input video signal
WHITE MAX ERROR	Indicates a peak maximum luminance error of the input video signal
LUMA MIN ERROR	Indicates an average minimum luminance error of the input video signal
LUMA MAX ERROR	Indicates an average maximum luminance error of the input video signal
APL MIN ERROR	Indicates an average minimum Average Picture Level error on the input video signal
APL MAX ERROR	Indicates an average maximum Average Picture Level error on the input video signal
CHROMA MAX ERROR	Indicates a peak chrominance error of the input video signal
FREEZE ERROR	Indicates that a frozen image has been detected on the input signal
BLACK ERROR	Indicates that a video black has been detected on the input signal

OVERLOAD LEFT	Indicates a peak level error in left channel
OVERLOAD RIGHT	Indicates a peak level error in right channel
LEVEL MAX LEFT	Indicates an average maximum level error in left channel
LEVEL MAX RIGHT	Indicates an average maximum level error in right channel
LEVEL MIN LEFT	Indicates an average minimum level error in left channel
LEVEL MIN RIGHT	Indicates an average minimum level error in right channel
SILENCE LEFT	Indicates audio silence in left channel
SILENCE RIGHT	Indicates audio silence in right channel
DYNAMICS LEFT	Indicates lack of dynamics in left channel
DYNAMICS RIGHT	Indicates lack of dynamics in right channel
SLICING LEFT	Indicates sounds with cuts in left channel
SLICING RIGHT	Indicates sounds with cuts in right channel
AUDIO PHASE	Indicates a phase error
STEREO WIDTH	Indicates a stereo width error

iCONTROL INTERFACE

The operation of the SCP-1121 is controlled using Miranda's iControl system. This manual describes the control panels associated with the SCP-1121 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 SCP-1121 icon to open the control panel.



The control panel has three sections:

Status Bar: at the top of the panel, shows status icons for several key items, and text messages describing detected errors. A complete description of the status bar begins on page 5

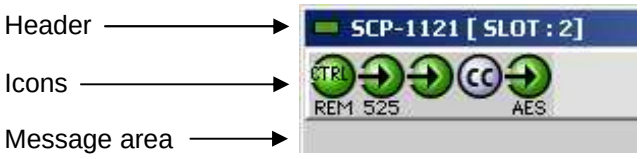
Player: shows images and status messages associated with the data stream being monitored by this probe. Click on the box with the arrow icon to open or close this section. A complete description of the Player begins on page 6

Params: gives access to all controls and adjustments associated with this probe. Click on the box with the arrow icon to open or close this section. A complete description of the how to set up the probe using the Params section begins on page 7

These sections are described in more detail below.

Status Bar

The status bar provides a continuous update of the status of the SCP-1121. The status bar includes three sections:



The ***header*** gives the product name, and identifies the slot in which it is installed in its Densité frame. At the left is a status icon whose color shows the overall status of the probe:

Green = OK
Yellow = warning
Red = error

The five ***Icons*** monitor some specific aspects of the SCP-1121's operation:

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

(a) this icon shows whether remote control of this SCP-1121 is enabled

(b) this icon identifies the video standard detected on the probe's SDI input. The line rate is shown under the icon; a more detailed description is seen in the message area if you move the cursor over the icon.

(c) this icon shows the status of the alarms associated with this probe

(d) this icon shows the status of closed captioning in the SDI input signal.

(e) this icon shows the status of AES audio in the SDI input to this probe.

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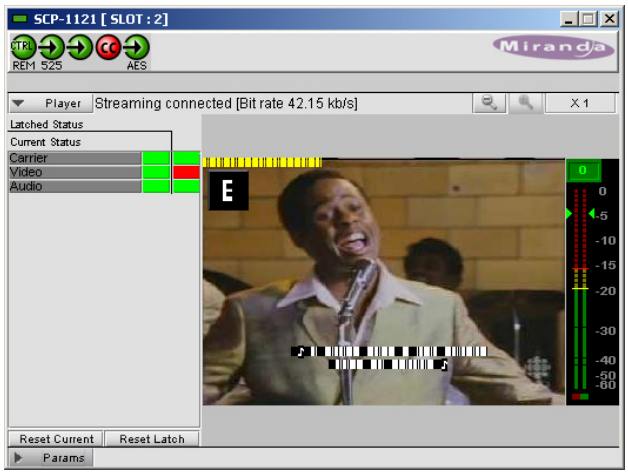
Move the cursor over an icon to see its current status in the ***message area*** below the icons. If there is an error status, the message will appear automatically, as shown in the example. If there are multiple error messages, the display will cycle through them.

Player

The Player is Miranda's module for displaying streaming video, plus audio meters and waveform/vectorscope screens, from the source that the probe is monitoring. The player window also shows the status of all parameters measured by the probe.

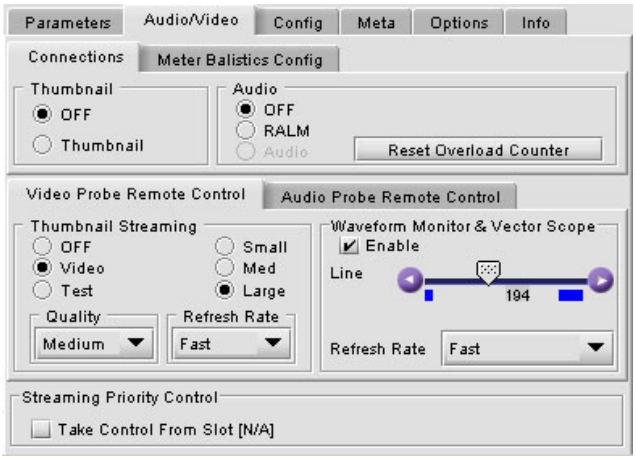
Click on the arrow icon to open the Player panel.



The display on the right side shows the thumbnail associated with the SDI video stream that is being monitored by the SCP-1121, and the audio level meter monitoring the audio in the data stream..

Note: you must turn the thumbnail streaming ON to see the video image. To do this:

- Click on the Params box to open the Parameters pane
- Click on the Audio/Video tab on the right side of the pane
  - Under the Connections sub-tab, in the Thumbnail section, click on the Thumbnail radio button
  - Under the Video Probe Remote Control tab, in the Thumbnail Streaming section, click on the Video radio button



Click on the arrow icon to close the Params pane

Complete instructions for using the Params pane are given below, beginning on page 7

Image size: at the top right side of the pane are zoom controls to increase or decrease the size of the image. The current zoom is shown beside the controls.

Status Display: on the left side of the panel is a display of the current status of the parameters measured by the probe. Two separate status columns are shown:

- *Current status* shows the status now.
- *Latched status* shows the status as affected by latching.

When an error is detected, it is flagged in both columns. When the error disappears, the current status returns to OK. However, the Latched status shows the error until it is manually cleared using the Reset Latched button beneath the status monitors. You can also reset the Current status, to confirm the presence of displayed errors.

The status display initially shows the worst-case status of all parameters in each of the three classes of parameters measured by the SCP-1121: Carrier, Video, and Audio, as shown in the figure on the left.

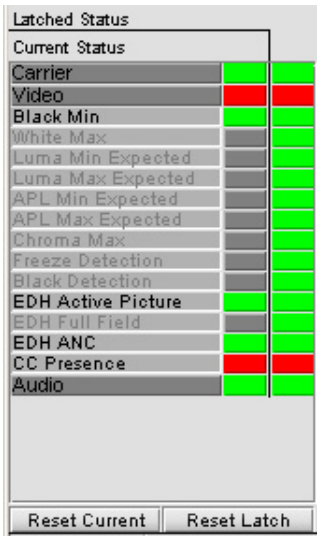
You can expand the display to show the status of each individual parameter:

- Click on the class name in the grey box on the left side

All of the individual parameters in that class will be listed, and their current and latched status shown. In the following example, the *Video* box has been clicked. This allows you to see which parameters have caused the overall status to report an error.

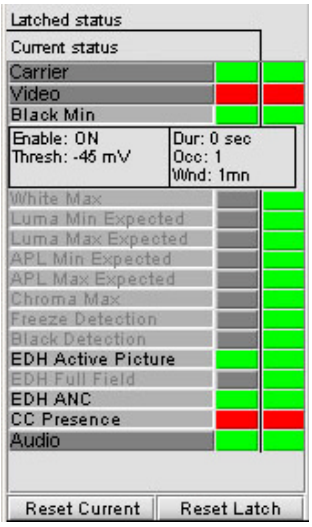
In the expanded list, only those parameters which have been enabled are reported in the current status list; the others show a gray status box and their names are grayed in the list.

See the individual parameter descriptions in the *Params* section beginning on below for information on enabling and configuring parameter tests.



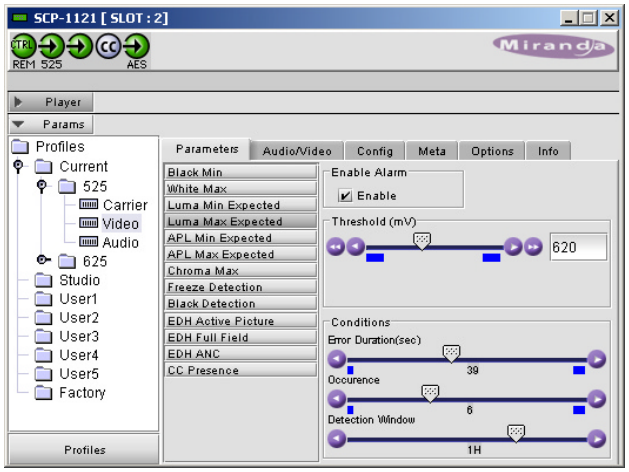
Click on an individual parameter name to see the current settings for it's measurement (Black Min in this example). If the **Params** pane is open to the *Parameters* tab, it will switch to show the parameter you have selected in the status list, permitting rapid access to the parameter settings.

You can open both enabled and disabled tests using this method.



Params

The Params pane has two sections:



On the left, there is a tree chart of the eight Profiles available on the probe. A **Profile** is a set of values for all adjustable parameters and settings for the probe.

You always work with the current profile. As explained below, you can access and change all of the parameters and settings in the current profile.

The Studio and Factory Profiles are read-only data sets:

- Studio – a typical studio grade configuration
- Factory – a set of factory-selected values that can be used to return your probe to a standard operating condition.

To load one of these profiles into the Current profile, right-click on the appropriate profile in the tree, then right or left click on the *Load in Current* text that appears.

The five User Profiles are read-write data registers that allow you to save the contents of the Current Profile for later recall.

- Once you have configured a set of parameters that you want to save and reuse, right-click on the Current folder in the tree chart. A dialog will appear permitting you to save the current profile into one of the five User profiles. *Note that you will overwrite the current contents of that User profile without additional warning*.
- To load a saved profile back into the Current profile, right-click on the User profile in the tree, then right or left click on the Load in Current text that appears.

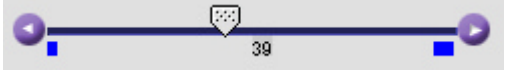
Double-click on the Current folder to open it, then open the appropriate 525/625 folder to see the three classes of parameters that the SCP-1121 can monitor: Carrier, Video, Audio, as shown in the figure. Select one by clicking on it.

On the right, a pane with 6 tabs allows you to select a number of options:

- Parameters - set conditions for detecting and flagging errors (see page 8)
- Audio/Video - configure the probe's audio and video outputs (see page 17)
- Config - identify the video, audio and VBI components that the probe will detect (see page 18)
- Meta - reports the metadata detected in the program stream (see page 18)
- Options - activation and status of the optional IP Scope (see page 19)
- Info - enter and retrieve information about this SCP-1121 (see page 19)

In many cases, controls are provided to configure the probe's features. Types of controls that may be found are:

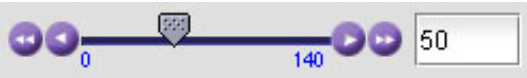
Slider:



The current value is displayed beneath the center of the slider bar (e.g. 39 in the example shown). To change the

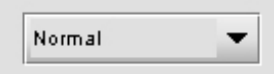
value, move the slider by clicking and dragging it, or by clicking the arrow icon at either end.

Slider with data box:



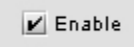
The current value is displayed in the data box at the right hand side (e.g. 50 in the example shown). To change the value, move the slider by clicking and dragging it, or by clicking the arrow or double-arrow icon at either end, or type a new value directly into the data box, and hit "enter" from your keyboard. If you enter a value outside the permitted range (as shown beneath the slider), the data box will flash red and the value will not be changed.

Pull-down list:



The current selection is shown on the icon. To change it, click on the down arrow at the right of the box, and click on the desired option in the list that appears below the box.

Check box (with label):



A selected box has a checkmark in it, as shown in the example, while an unselected box is blank. Click on the box to change its status.

Parameters tab

The **Parameters** tab lists all parameters detected and/or measured by the SCP-1121 in the class selected in the tree diagram (i.e. carrier, video or audio). The top parameter in the list is selected when you open the view, indicated by the darker color of its name box. To select any other parameter, click on it.

To the right of the parameter list appear all the controls necessary to configure the selected parameter.

The parameter configuration pane usually includes, from top to bottom:

- **Enable**: a checkbox to enable the alarm associated with this parameter
- **Threshold:** a threshold value for detection of an error. The error will be detected when the measured parameter falls above (or below, depending on the nature of the parameter) the indicated threshold value. The values are those of the equivalent analog signal. In most cases this is a slider with data entry box.
- **Conditions:** indicates the conditions under which a detected error is flagged and reported.
  - ◊ ERROR DURATION – the length of time during which a parameter allowed to be out-of-tolerance without being identified as an error. This is useful for situations such as a hard switch or patch of a video signal where there is a discontinuity in the signal which the user has deliberately caused and does not need to be flagged as an error. If a parameter is continuously out of tolerance for the specified duration, then an error is considered to have been detected. However, this error will not be flagged (causing the status LED to change color and an error message to be sent out on the frame's interface) until the OCCURRENCE / DETECTION WINDOW conditions have been satisfied.
    (Range: 0 to 90 seconds)
  - ◊ OCCURRENCE: the number of times that a detected error is allowed to occur in a specified DETECTION WINDOW before an error flag is set, and the error is reported (status LED changes color, and message sent on the interface)
    (Range: 1 to 16)
  - ◊ DETECTION WINDOW: the time duration during which errors are counted to determine if the error flag should be set. This is a moving window, e.g. the previous 2 minutes, and only errors falling within that window are counted.
    (Range: 1 min to 24 hours)

  In all cases except one (CC presence), all three conditions are defined:

  - ◊ The CC Presence parameter has only ERROR DURATION, with a range of 1 to 250 seconds.

The SCP-1121 monitors the following parameters. The values shown in the figures are the FACTORY values for 525 line systems.

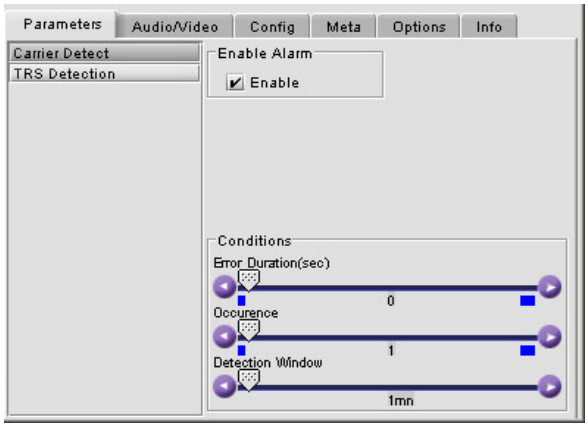
Carrier – Carrier Detect

Detect the presence of the carrier signal in the channel

Enable Alarm: check to enable this test

Conditions: set the Error Duration, Occurrence and Detection Window using the sliders.

- See page 8 for definitions of these variables



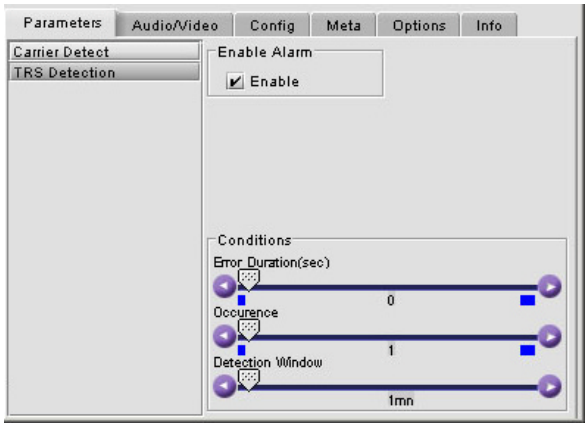
Carrier – TRS Detection

Detect the presence of the Timing Reference Signal (TRS) in the channel

Enable Alarm: check to enable this test

Conditions: set the Error Duration, Occurrence and Detection Window using the sliders.

- See page 8 for definitions of these variables



Video – Black Min

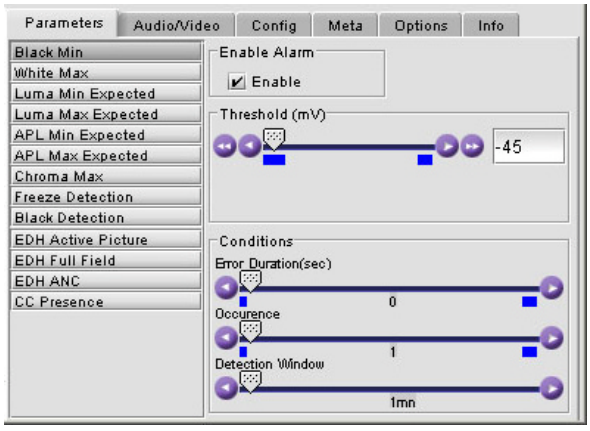
Detect the lowest level present in the active video signal

Enable Alarm: check to enable this test

Threshold: set the level (in mV) above which this condition will be flagged

Conditions: set the Error Duration, Occurrence and Detection Window using the sliders.

- See page 8 for definitions of these variables



Video – White Max

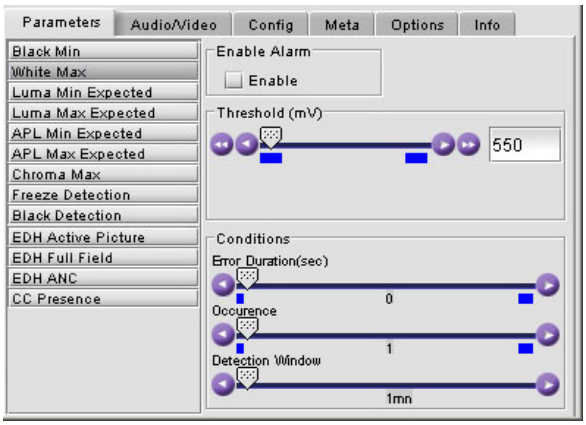
Detect the highest level present in the active video signal

Enable Alarm: check to enable this test

Threshold: set the level (in mV) below which this condition will be flagged

Conditions: set the Error Duration, Occurrence and Detection Window using the sliders.

- See page 8 for definitions of these variables



Video – Luma Min Expected

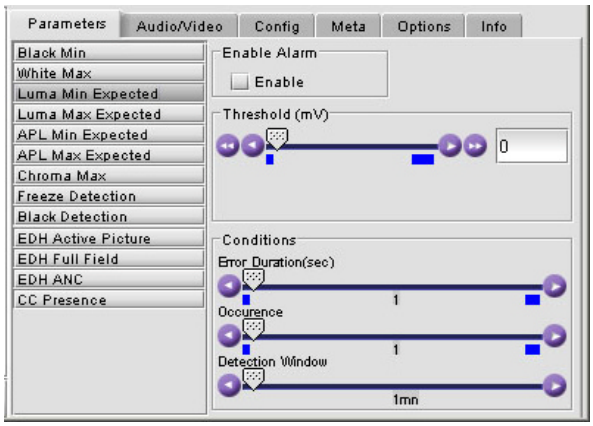
Detect the highest luminance level present in the signal

Enable Alarm: check to enable this test

Threshold: set the level (in mV) below which this condition will be flagged

Conditions: set the Error Duration, Occurrence and Detection Window using the sliders.

- See page 8 for definitions of these variables s



Video – Luma Max Expected

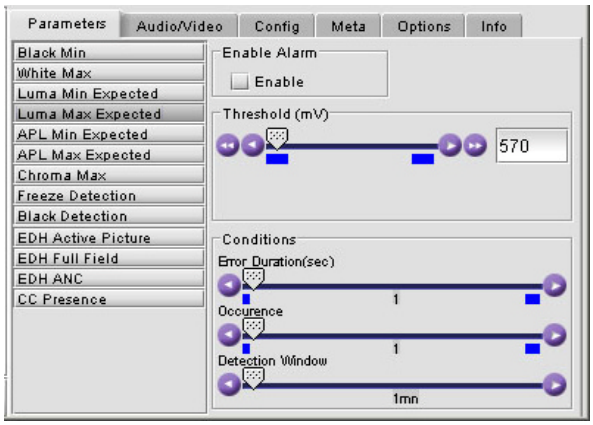
Detect the highest level present in the signal

Enable Alarm: check to enable this test

Threshold: set the level (in mV) above which this condition will be flagged

Conditions: set the Error Duration, Occurrence and Detection Window using the sliders.

- See page 8 for definitions of these variables



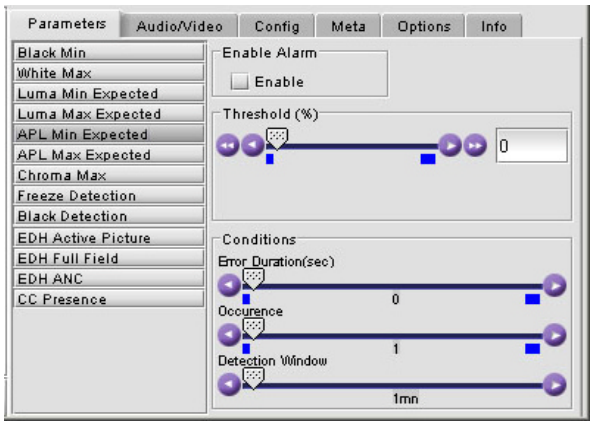
Video – APL Min Expected
Detect the Average Picture Level (APL) in the active video signal

Enable Alarm: check to enable this test

Threshold: set the level (in mV) below which this condition will be flagged

Conditions: set the Error Duration, Occurrence and Detection Window using the sliders.

- See page 8 for definitions of these variables



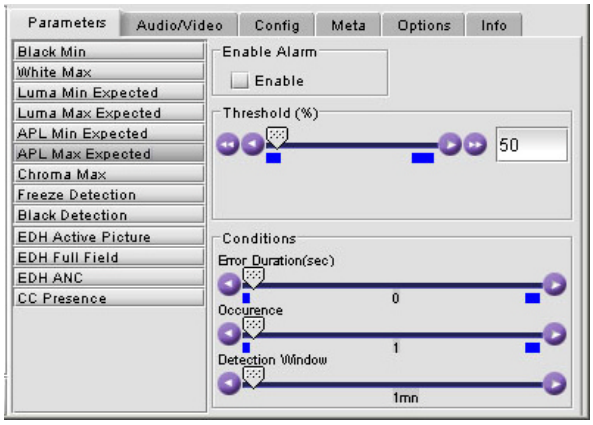
Video – APL Max Expected
Detect the Average Picture Level (APL) in the active video signal

Enable Alarm: check to enable this test

Threshold: set the level (in mV) above which this condition will be flagged

Conditions: set the Error Duration, Occurrence and Detection Window using the sliders.

- See page 8 for definitions of these variables



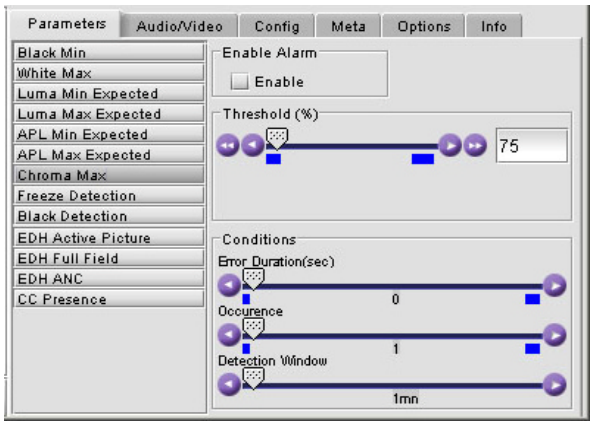
Video – Chroma Max
Detect the highest level of chroma present in the signal

Enable Alarm: check to enable this test

Threshold: set the level (in mV) above which this condition will be flagged

Conditions: set the Error Duration, Occurrence and Detection Window using the sliders.

- See page 8 for definitions of these variables



Video – Freeze Detection

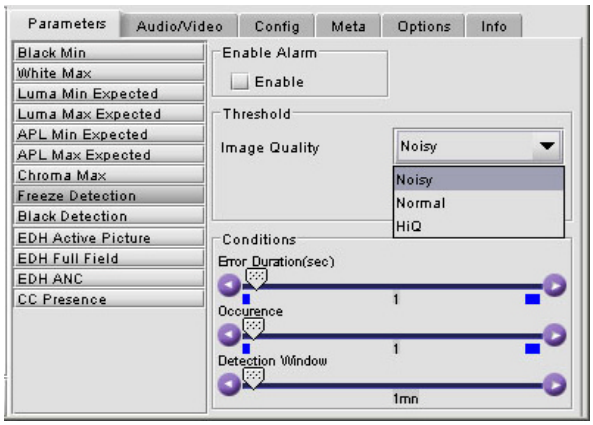
Detect whether a sequence of video frames are identical

Enable Alarm: check to enable this test

Threshold: in the pulldown box, choose the term that best describes the signal being monitored. The SCP-1121 will use an appropriate threshold to detect a video freeze

Conditions: set the Error Duration, Occurrence and Detection Window using the sliders.

- See page 8 for definitions of these variables



Video – Black Detection

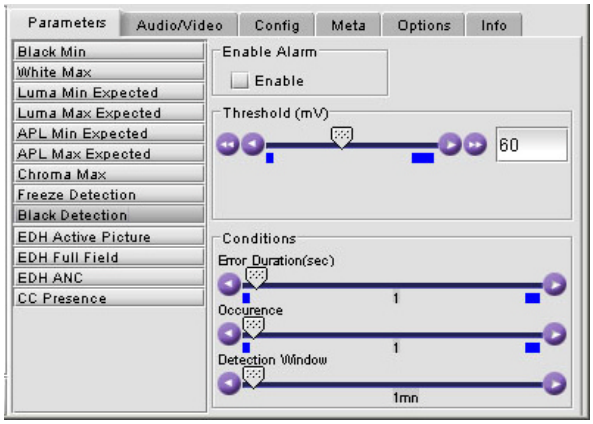
Detect whether a sequence of video frames contain only black

Enable Alarm: check to enable this test

Threshold: set the level (in mV) below which this condition will be flagged

Conditions: set the Error Duration, Occurrence and Detection Window using the sliders.

- See page 8 for definitions of these variables



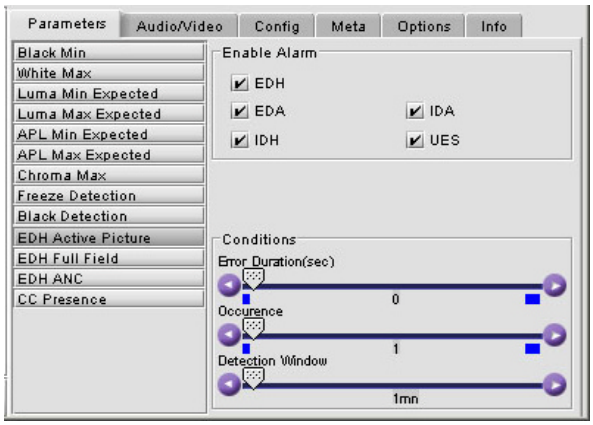
Video – EDH Active Picture

Detect the EDH data fields for the active picture area

Enable Alarm: check the box associated with each VBI flag that you want to detect

Conditions: set the Error Duration, Occurrence and Detection Window using the sliders.

- See page 8 for definitions of these variables



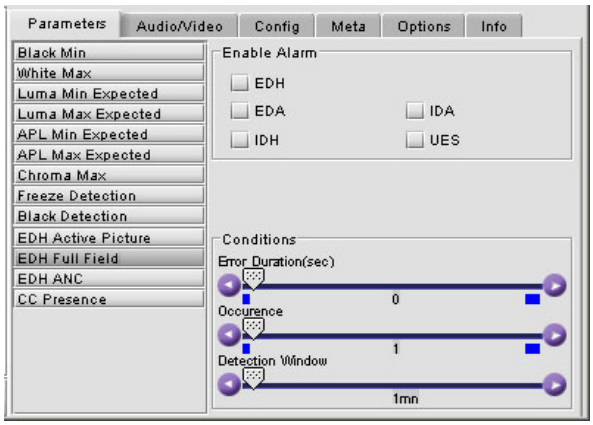
Video – EDH Full Field

Detect the EDH data fields for the full video field

Enable Alarm: check the box associated with each VBI flag that you want to detect

Conditions: set the Error Duration, Occurrence and Detection Window using the sliders.

- See page 8 for definitions of these variables



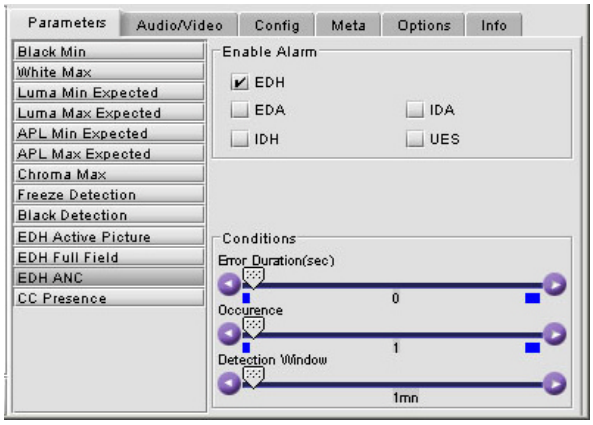
Video – EDH ANC

Detect the EDH data fields for the ancillary (ANC) data carried in the SDI signal

Enable Alarm: check the box associated with each VBI flag that you want to detect

Conditions: set the Error Duration, Occurrence and Detection Window using the sliders.

- See page 8 for definitions of these variables



Video – CC Presence

Detect the presence of Closed Caption (CC) data in the SDI video signal

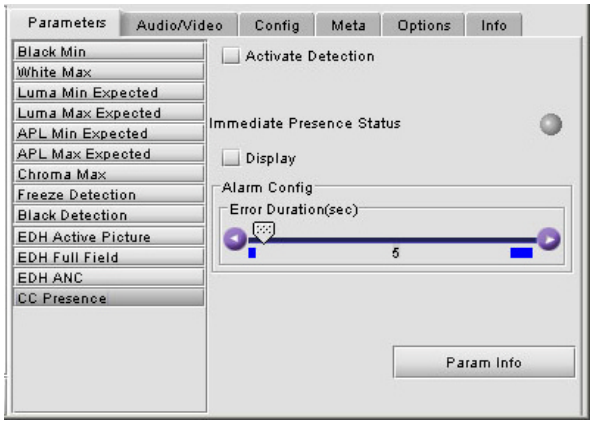
Activate Detection: check to enable this test

Immediate Presence Status:

Display:

Conditions: set the Error Duration using the slider.

- See page 8 for a definition of this variables



Audio – Silence

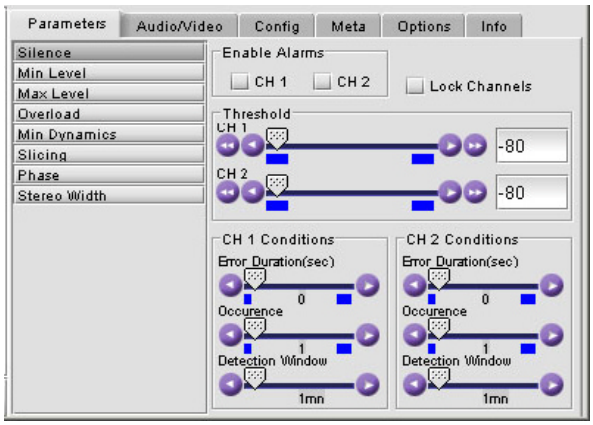
Detect the absence of audio in the signal (both channels checked separately)

Enable Alarms: check to enable this test

Threshold: set the level (in dB) below which this condition will be flagged

Conditions: set the Error Duration, Occurrence and Detection Window using the sliders.

- See page 8 for definitions of these variables



Audio – Min Level

Detect the highest level present in the signal (both channels checked separately)

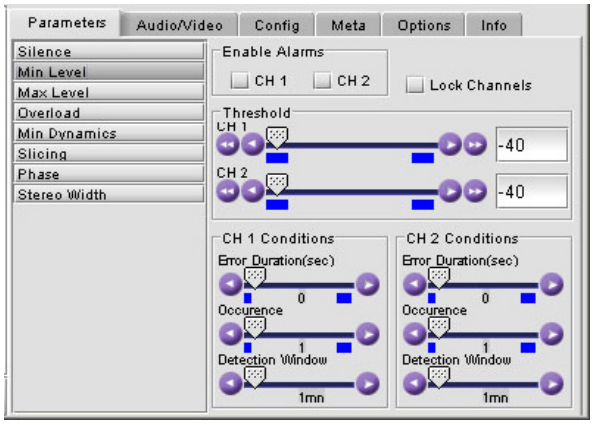
Enable Alarms: check to enable this test

Lock Channels:

Threshold: set the level (in dB) below which this condition will be flagged

Conditions: set the Error Duration, Occurrence and Detection Window using the sliders.

- See page 8 for definitions of these variables



Audio – Max Level

Detect the highest level present in the signal (both channels checked separately)

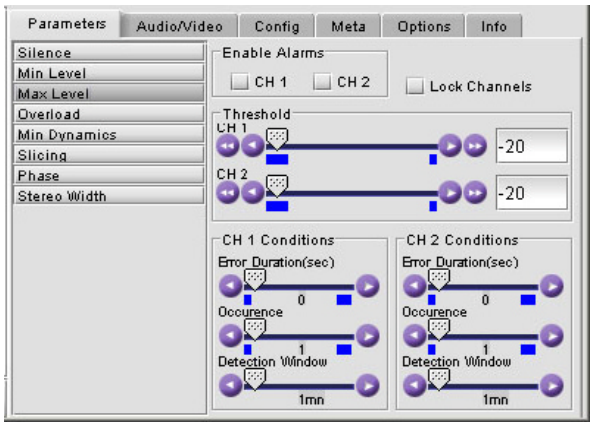
Enable Alarms: check to enable this test

Lock Channels:

Threshold: set the level (in dB) above which this condition will be flagged

Conditions: set the Error Duration, Occurrence and Detection Window using the sliders.

- See page 8 for definitions of these variables



Audio – Overload

Detect the highest level present in the signal (both channels checked separately)

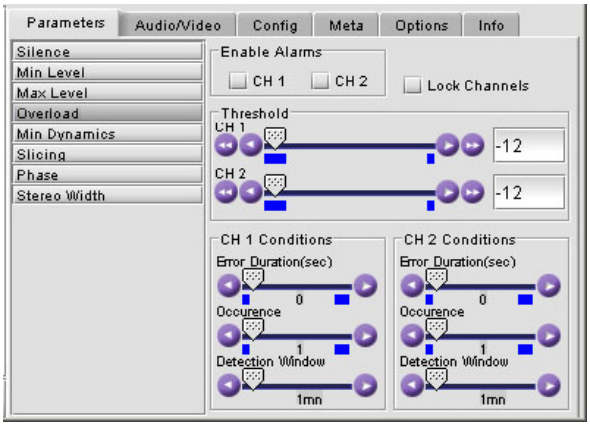
Enable Alarms: check to enable this test

Lock Channels:

Threshold: set the level (in dB) above which this condition will be flagged

Conditions: set the Error Duration, Occurrence and Detection Window using the sliders.

- See page 8 for definitions of these variables



Audio – Min Dynamics

Detect low dynamic range (both channels checked separately)

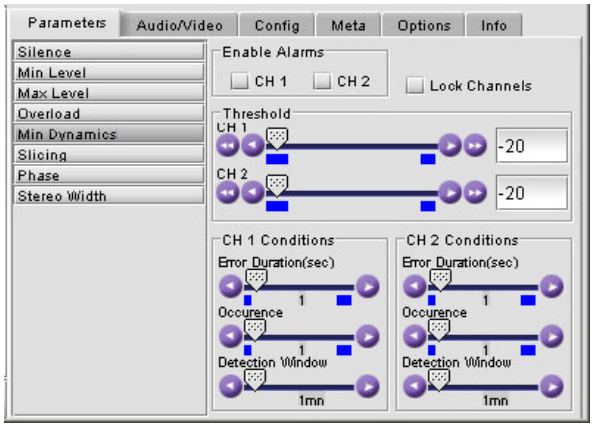
Enable Alarms: check to enable this test

Lock Channels:

Threshold: set the level (in dB) above which this condition will be flagged

Conditions: set the Error Duration, Occurrence and Detection Window using the sliders.

- See page 8 for definitions of these variables



Audio – Slicing

Detect slicing in the audio (both channels checked separately)

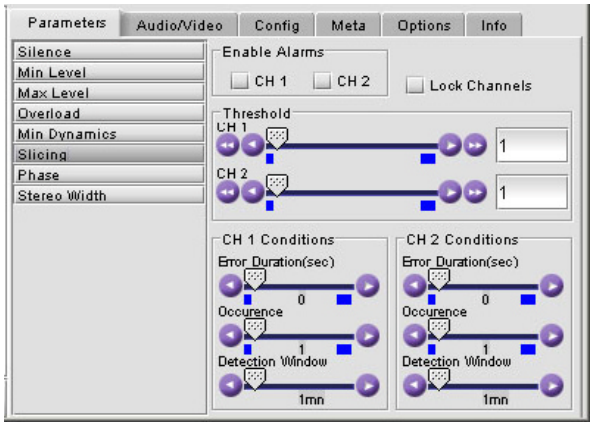
Enable Alarms: check to enable this test

Lock Channels:

Threshold: set the level (in dB) above which this condition will be flagged

Conditions: set the Error Duration, Occurrence and Detection Window using the sliders.

- See page 8 for definitions of these variables



Audio – Phase

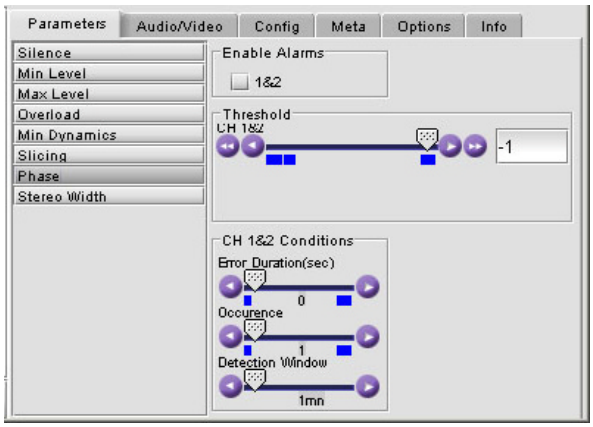
Detect phase errors (channels checked together)

Enable Alarms: check to enable this test

Threshold: set the level (in dB) above which this condition will be flagged

Conditions: set the Error Duration, Occurrence and Detection Window using the sliders.

- See page 8 for definitions of these variables



Audio – Stereo Width

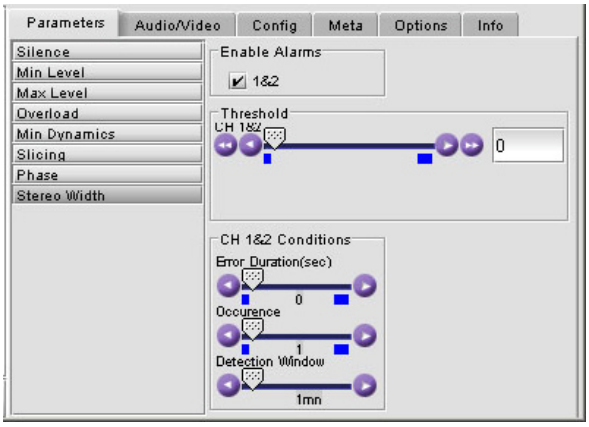
Detect stereo width errors (channels checked together)

Enable Alarms: check to enable this test

Threshold: set the level above which this condition will be flagged

Conditions: set the Error Duration, Occurrence and Detection Window using the sliders.

- See page 8 for definitions of these variables



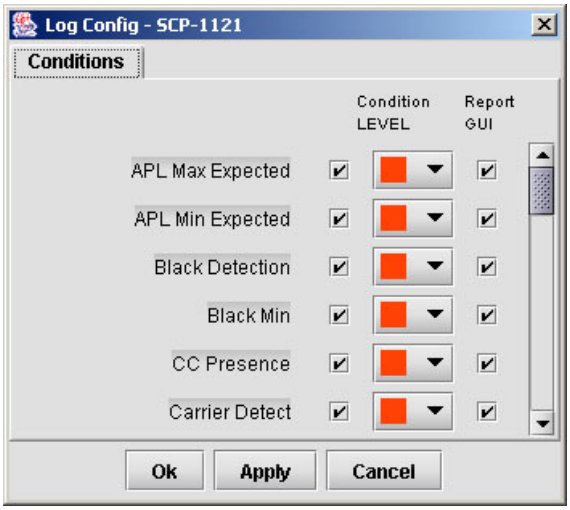
CONFIGURING ERROR STATUS REPORTING

The user can configure the response of the SCP-1121 to errors detected on any of its measured parameters. In iControl Navigator, right-click on the SCP-1121 icon, and select *Error/Warning Configuration* from the popup menu.

The Log Config panel opens, showing all measured parameters, and offering the following options for each:

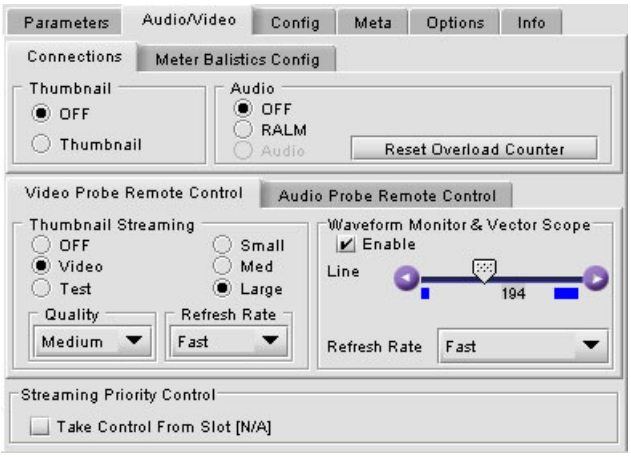
- Select the checkbox between the Condition name and the Condtion Level pulldown to enable reporting of that condition.
- Select the LEVEL that will be associated with a condition from the pulldown:
  - YELLOW = Warning
  - RED = Error

- Click the Report GUI checkbox to allow the status of this condition to be reflected in the SCP-1121's icon in iControl screens.



Audio/Video tab

The **Audio/Video** tab gives access to five control panes (four on subsidiary tabs) that provide resources to configure the audio and video connections to the probe.



Connections

Thumbnail – Click on the Thumbnail button to connect the player window on this control panel to the IP stream from the SCP-1121

Audio:

- OFF – No audio metering on this panel
- RALM – Remote Audio Level Meter – connects the audio meter on the player window of this control panel to the sampled audio level data received from the SCP-1121 card.
- Audio – (not supported in this version)

Reset Overload Counter – reset the overload counter to zero. See Overload Cursor in the Meter Ballistics section for more information.

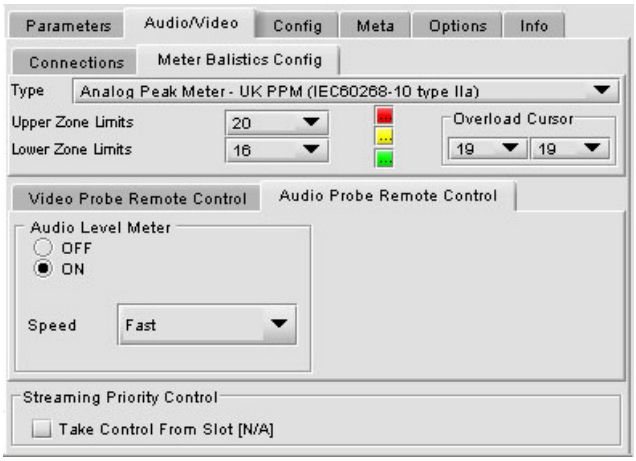
Video Probe Remote Control

Thumbnail Streaming:

- *OFF/Video/Test* – select the contents of the thumbnail image (Video or Test) or turn thumbnails OFF
- *Small/Med/Large* – select the size of the Thumbnail image.
- *Quality* – select Poor, Medium or HiQ from the pulldown list.
- *Refresh Rate* – select the desired refresh rate from the pull-down box
  The choices are: Fast, 1 sec, 2 sec, …, 9 sec, 10 sec.

Waveform Monitor and Vectorscope:

- Enable – check the box to enable the line scope function (if the IP scope option is enabled)
- Line – select the video line that will be displayed on the line scope, using the slider. The range is from 1-525 (NTSC) or 1-625 (PAL)
- Refresh Rate – select the rate at which the scope display will be refreshed. The choices are: Fast, 1 sec, 2 sec, …, 9 sec, 10 sec.



Meter Ballistics

Type – select a type of meter from the pull-down list
Upper Zone Limits – select the crossover level between the upper and middle zones of the meter (the range of values shown in the pull-down list depends on the type of meter selected)
Lower Zone Limits – select the crossover level between the middle and lower zones of the meter (the range of values shown in the pull-down list depends on the type of meter selected)
Color samples – the three samples show the current selected color for the upper, middle and lower zones of the meter.

- Click on the color sample of a zone to open a color selection panel to choose a different color for that zone

Overload Cursor – The overload cursor appears on the meter as an arrowhead in the meter scale. The two pulldown boxes set the position of the overload cursor on the left and right meters. If the audio level on that channel goes above the cursor, the Overload Counter at the top of the meter is incremented.

Audio Probe Remote Control

Audio Level Meter – turn the meter off or on
Speed **–** select the meter response from the pull-down list, either fast, medium or slow.

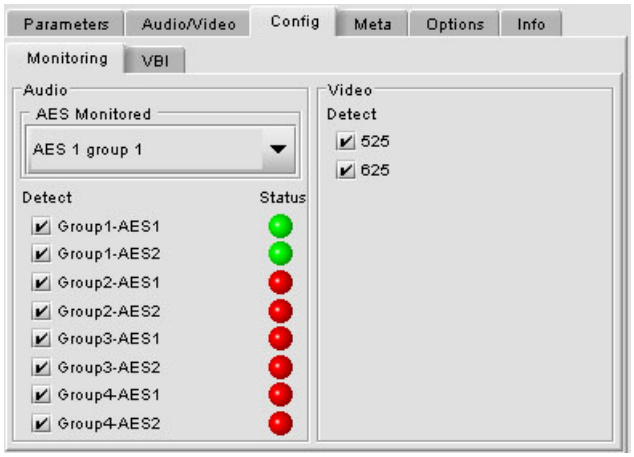
Streaming Priority Control

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.

Config tab

The **Config** tab configures detection and monitoring of Audio, Video and VBI data, on two sub-tabs.

Monitoring sub-tab:

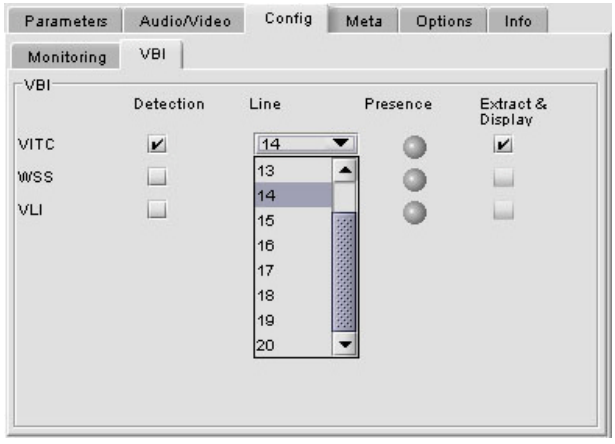


Audio: AES Monitored – select one of the eight possible groups for monitoring.

Audio: Detect – click on the checkboxes to select which of the eight possible AES audio groups will be detected. The Status indicator turns green when a group is detected.

Video: Detect – click on the check box to enable detection of a video standard

VBI sub-tab:



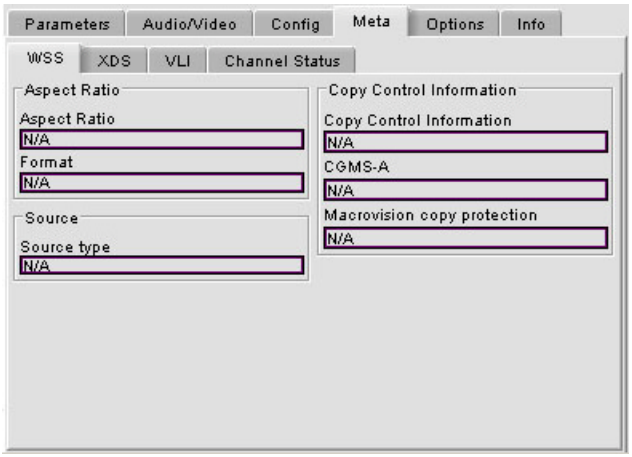
The SCP-1121 can detect and process three VBI data components:

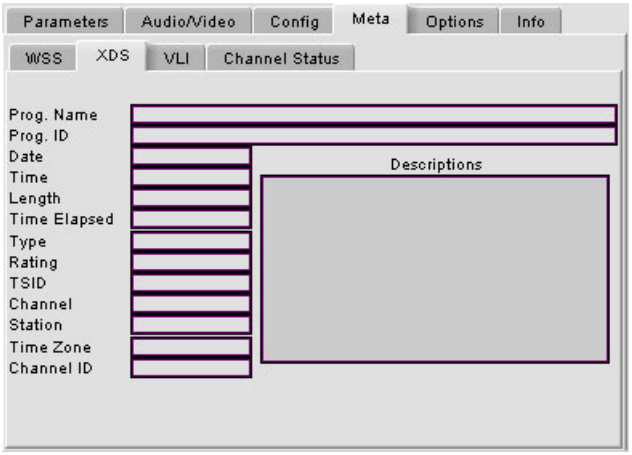
- VITC (Vertical Interval Time Code)
- WSS (Wide Screen Signaling)
- VLI (Vertical Line Interval)

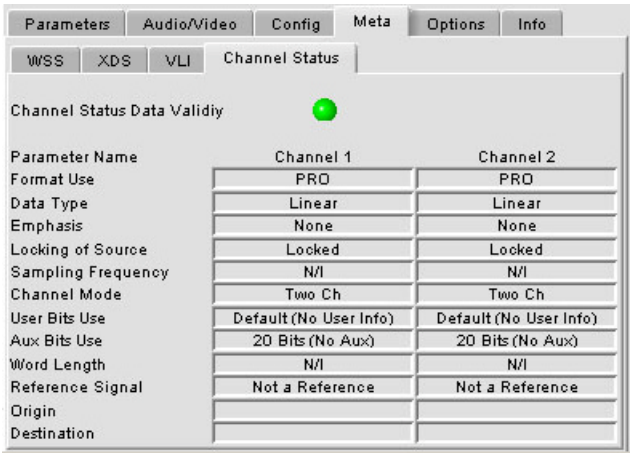
For each of these: click on the *Detection* box to enable detection
For VITC only, select the line on which the VITC will be detected
The *Presence* indicator will turn green if the component is detected
Click on the *Extract and Display* checkbox to extract the information and display it in the player window of all clients.

Meta tab

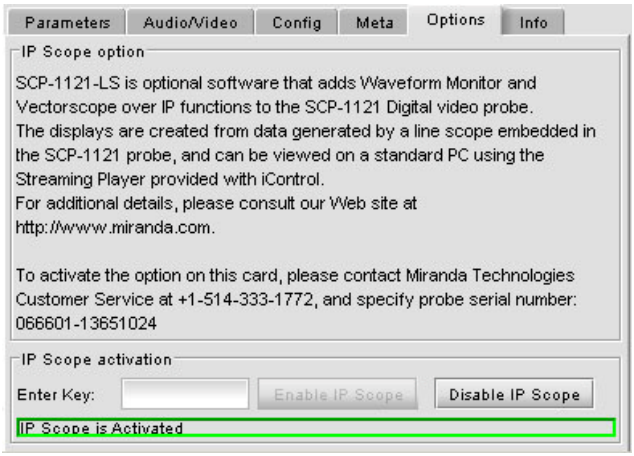
The **Meta** tab gives information extracted from the Metadata incorporated in the SDI video signal. There are no adjustments on the four subsidiary tabs.







Options tab

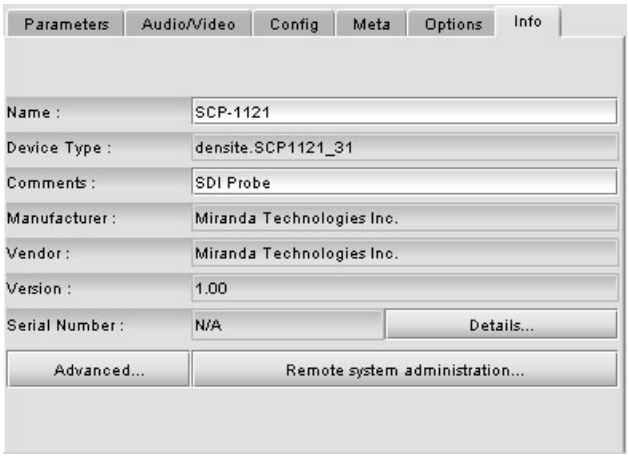


The Options tab explains the functionality of the IP scope option, and provides a data entry box “Enter Key” where the activation key supplied when the option is purchased can be entered.

Once the Key has been entered, and the IP Scope is activated, it may be enabled and disabled using the labeled buttons.

Info tab

The **Info** tab provides information about the SCP-1121, and provides some data entry options.



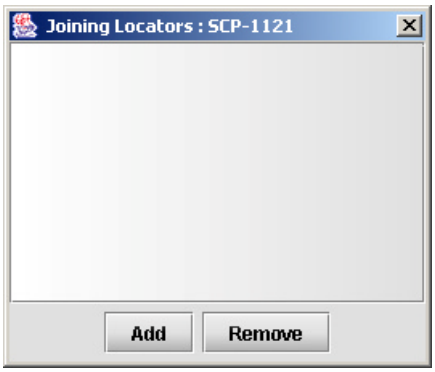
Name: Type a name for this device into the data entry box

Comments: Type any desired text into this box

Details…: click on this button to get information about the manufacturing process and panel version.

Advanced…: Click on this button to get the Miranda Long ID of this SCP-1121. The Miranda Long ID is the address of this probe in the iControl network, and is required by some devices, e.g. Kaleido, to access this probe.

Remote System Administration…: Click on this button to open the *Joining Locators: SCP-1121* data entry box.



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; EN55022; EN50204; EN61000-3-2, -3; EN61000-4-2, -3, -4, -5, -6, -11

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