

VCP-1021

DESCRIPTION

The VCP-1021 is a non-intrusive probe for the quality control of analog NTSC, PAL, PAL-M, PAL-N and SECAM video signals. The VCP-1021 probe integrates several advanced features for monitoring video 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 VCP-1021 probe functions as a distribution amplifier, with a non-intrusive looped single input and three outputs. Used in conjunction with Miranda's iControl, the VCP-1021 allows users to see the signals they are monitoring. The probe generates video thumbnails 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 the extensive flexibility and ease of use so unique to the Densité platform.

Line Scope option

The VCP-1021-LS is optional software that adds waveform monitor and vectorscope over IP functions to the VCP-1021 Composite probe, expanding its extensive control and monitoring capabilities. It allows precise analysis of NTSC and PAL standard 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 VCP-1021 probe, which is transmitted in real-time over IP. This functionality is activated via a software key.

Video standard and presence

- Video format detection
- Video loss

Signal Alarms

- Sync limit min and max
- Burst limit min and max
- Sync noise detection
- Black limit low
- White limit high
- Luma min and max
- Chroma limit max
- APL limit min and max
- Composite limit min and max
- Freeze frame detection
- Black detection

Extensive profile management

- Multiple factory preset configuration
- User defined profile can be stored directly in the probe memory
- Fully configurable signal alarm threshold 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

VBI signal extraction and analysis

Closed Captioning extraction and presence detection with adjustable duration

- V-Chip
- VITC
- WSS
- XDS
- Teletext (presence only)

Transmission over IP for display and listen

- Thumbnails with adjustable picture format, quality and transmission rate
- Alarms and status
- Closed Captioning, V-Chip, VITC, WSS, XDS, Teletext presence
- Test pattern
- Line scope

Input/output

- Differential 75Ω non-intrusive looping input
- Support NTSC, PAL, SECAM video signal formats
- DC coupled
- 3 composite outputs

Remote control and status

- On-card status LED
- Current & latch status for remote reporting

Line Scope option

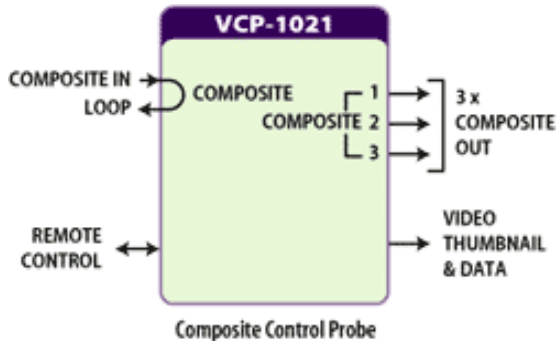
- Waveform monitor & Vectorscope
- High quality real-time measurement
- Low bit rate allowing use of several Line Scopes simultaneously using minimum bandwidth
- Real-time operation
- Multi-standard: NTSC and PAL
- Vector process display for picture scaling without bitmap degradation

MSB Support

- Provides output to Monitoring Switching Bridge option (MSB-1121)

VCP-1021 Composite Video Control Probe Guide to Installation and Operation

FUNCTIONAL BLOCK DIAGRAM



Return loss: > 40 dB up to 10MHz
 Impedance: 75Ω
 Output signal isolation: > 40 dB @ 10MHz
 Response variation: <0.1dB, 1 to 3 loads to 10 MHz

PROCESSING PERFORMANCE

Frequency response: ± 0,05 dB up to 5 MHz
 ± 0.1 dB up to 10 MHz
 - 3 dB @ 50 MHz typically
 Differential gain: <0.5%
 Differential phase: <0.5 ° at 3 loads
 Horizontal tilt: <0.25%, DC coupling
 Vertical tilt: <0.25%, DC coupling
 SNR: > 60 dB up to 5,75 MHz
 (rms noise/0.714 V, unweighted)

SPECIFICATIONS

VIDEO INPUT WITH PASSIVE LOOP-THROUGH

Signal: NTSC (525/60) SMPTE 170M or PAL (625/50), PAL-M (525/60), PAL-N (625/50) ITU-R_BT.470-6 or SECAM (625/50) ITU-R_BT.470-6
 Return loss: > 35 dB up to 10Mhz
 Coupling: DC
 Level: 2 Vp-p max
 Impedance: 75Ω bridging

VIDEO OUTPUTS (3)

Signal: NTSC (525/60) SMPTE 170M or PAL (625/50), PAL-M (525/60), PAL-N (625/50) ITU-R_BT.470-6 or SECAM (625/50) ITU-R_BT.470-6

STREAMING PERFORMANCE

Video sustained: Minimum : 9 Kbits/s
 Bit rate: Maximum : 45 Kbits/s

THUMBNAILS

Picture size (525): 352 X 240 or 176 X 120 or 88 X 56
 Picture size (625): 352 X 288 or 176 X 144 or 88 X 72
 Bit rate: 8 Kbits/s to 80 Kbits/s

LINE SCOPE OPTION

See detailed VCP-1021-OPT-LS Spec sheet

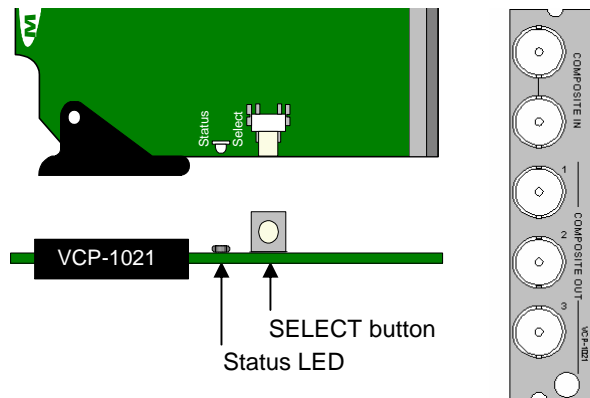
POWER 3.5 W

INSTALLATION

Make sure the following items have been shipped with your VCP-1021. If any of the following items are missing, contact your distributor or Miranda Technologies Inc.

- * VCP-1021 Composite Control Probe
- * VCP-1021 Rear Panel (see figure)

The VCP-1021 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 VCP-1021. See the DENSITÉ Frame manual for detailed instructions for installing cards and their associated rear panels.



**VCP-1021
Front card edge and Rear Connector Panel**

OPERATION

Overview

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

The primary control interface for the VCP-1021 is Miranda's iControl system. The iControl interface is explained in detail beginning on page 4.

Local User Interface – status reporting

The status monitor LED is located on the front card-edge of the VCP-1021 module, and is visible through the front access door of the DENSITÉ frame.

The VCP-1021 STATUS LED is green under normal operation. When the VCP-1021 detects an error, the STATUS LED turns yellow or red. Pushing the SELECT button will cause the STATUS LED to flash yellow, and the card identification and the current status message will be shown on the controller card's display. The STATUS LED will revert to its normal state upon a second push of the button, or after a short delay. The color of the status LED and the reporting of errors are user-configurable via the

Log Config panel of the iControl interface. See page 15 for details.

After pressing the SELECT button on the VCP-1021 card, use the keys on the local control panel (described in the Controller card manual) to step through the displayed status messages. The message structure is shown below.

The controller display will look like this:

V	C	P	-	1	0	2	1								
N	O	S	I	G	N	A	L								

Local User Interface – operation

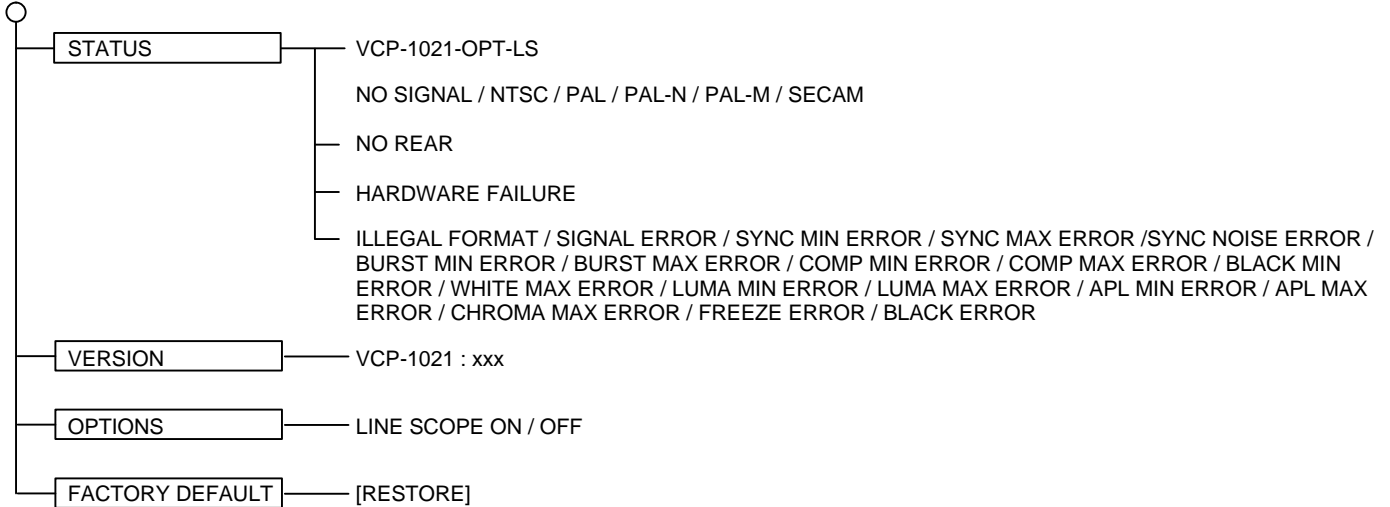
In addition to its use in monitoring the status of the card, the VCP-1021 local user interface gives access to several operating functions.

OPTIONS – the OPTIONS menu allows the line scope option to be turned ON and OFF. See the *Options Tab* section on page 14 for a more complete description.

FACTORY – the RESTORE function resets all parameters on the VCP-1021 to a factory-defined condition.

VERSION returns the card version number

Menu Structure (Status Messages and Operation)



Status Messages

NO SIGNAL / NTSC / PAL / PAL-N / PAL-M / SECAM: Displays presence and format of the composite 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.

ILLEGAL FORMAT etc: Displays errors detected by the VCP-1021 when measuring the input signal.

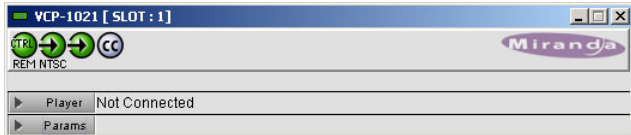
A complete description of the measurements made by the VCP-1021 begins on page 16.

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iCONTROL INTERFACE

The operation of the VCP-1021 is controlled using Miranda's iControl system. This manual describes the control panels associated with the VCP-1021 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 VCP-1021 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 below.

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 this page.

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 how to set up the probe using the Params section begins on page **Error! Bookmark not defined.**



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

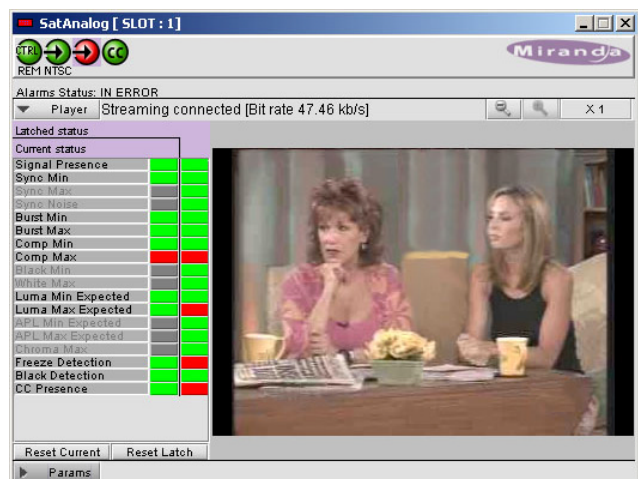
- (a) this icon shows whether manual card configuration of this VCP-1021 is on [LOC] or off [REM]
- (b) this icon identifies the video standard detected on the probe's composite input. The video format is shown under the icon; move the cursor over the icon to see a more detailed description in the message area.
- (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.

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 and waveform/vectorscope screens, from the source that the probe is monitoring. The player window in the VCP-1021 control panel shows the video window, plus the status of all parameters measured by the probe.

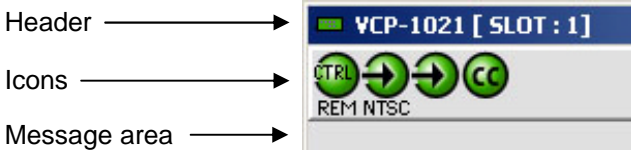
Click on the arrow icon to open the Player panel.



The display on the right side shows the thumbnail associated with the component video signal that is being monitored by the VCP-1021.

Status Bar

The status bar provides a continuous update of the status of the VCP-1021. The status bar includes three sections:



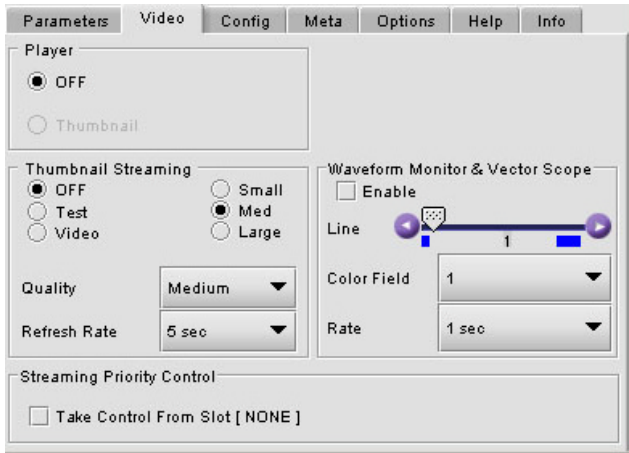
The **header** gives the product name (by default) or user-assigned name, and identifies the slot in which it is installed in its Densité frame. At the left is a status icon whose color shows the overall status of the probe:

- Green = OK
- Yellow = warning
- Red = error

The four **icons** monitor some specific aspects of the VCP-1021's operation:

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 Video tab on the right side of the pane
 - Under *Thumbnail Streaming*, click on the *Video* radio button
 - Under *Player*, click on the *Thumbnail* radio button



Click on the arrow icon to close the Params pane

See the next section for complete instructions on using the Params pane.

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. Only those parameters that 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.

Latched status	
Current status	Latched status
Signal Presence	OK
Sync Min	OK
Sync Max	OK
Sync Noise	OK
Burst Min	OK
Burst Max	OK
Comp Min	OK
Comp Max	OK
Black Min	OK
White Max	OK
Luma Min Expected	OK
Luma Max Expected	OK
APL Min Expected	OK
APL Max Expected	OK
Chroma Max	OK
Freeze Detection	OK
Black Detection	OK
CC Presence	OK

Reset Current Reset Latch

See the individual parameter descriptions in the *Params* section beginning below for information on enabling and configuring parameter tests. Click on an individual parameter name to see the current settings for its measurement (Sync Noise 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.

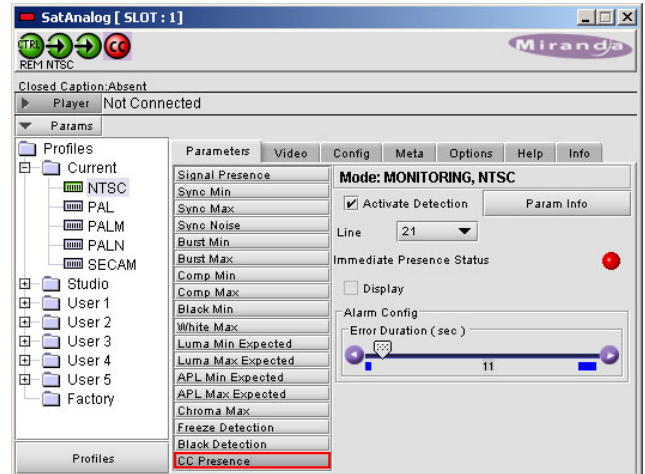
Latched status	
Current status	Latched status
Signal Presence	OK
Sync Min	OK
Sync Max	OK
Sync Noise	OK
Enable: ON	D: 1x1 sec
Tresh: 10 IRE	Wnd: 1mn
Burst Min	OK
Burst Max	OK
Comp Min	OK
Comp Max	OK
Black Min	OK
White Max	OK
Luma Min Expected	OK
Luma Max Expected	OK
APL Min Expected	OK
APL Max Expected	OK
Chroma Max	OK
Freeze Detection	OK
Black Detection	OK
CC Presence	OK

Reset Current Reset Latch

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.

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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 and see the five video formats supported by the VCP-1021: NTSC, PAL, PAL-M, PAL-N and SECAM. Select one by clicking on it. Note that the profile associated with the probe's current input will be identified by a colored icon.

On the right, a pane with 7 tabs allows you to select a number of options:

- Parameters - set conditions for detecting and flagging errors (see page 6)
- Video - configure the probe's video outputs (see page 13)
- Config - identify the video and VBI components that the probe will detect (see page 13)
- Meta - reports the metadata detected in the program stream (see page 14)
- Options - activation and status of the optional IP Scope (see page 14)
- Help – display information about a selected parameter (see page XX)
- Info - enter and retrieve information about this VCP-1021 (see page 15)

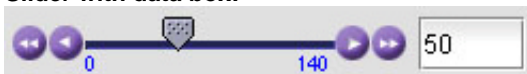
In many cases, controls are provided to configure the probe's features. Types of controls that may be found are:

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.

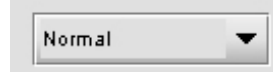
Slider with data box:



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

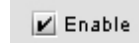
type a new value directly into the data box, and hit "enter" from your keyboard. If you enter a value outside the permitted range (as shown beneath the slider), the data box will flash red and the value will not be changed.

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 VCP-1021 for the video format selected in the tree diagram (i.e. NTSC, PAL, PAL-M, PAL-N or SECAM). 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 configuration panels for all of the parameters measured by the VCP-1021 are shown here, beginning below and continuing to page 13.

At the top of each panel, the **Mode** is shown. Mode is either MONITORING or CONFIGURATION, followed by the standard whose profile is currently selected:

- MONITORING is shown if the current profile matches the detected input standard
- CONFIGURATION is shown if the current profile does not match the detected input standard

For example:

- In the figures in the table below, adjustments are being made to the NTSC profile, and NTSC is the standard detected at the input. The indicated mode is MONITORING, NTSC.
- If adjustments are being made to the PAL profile, and NTSC is the standard detected at the input, the indicated mode would be CONFIGURATION, PAL.

Signal Presence

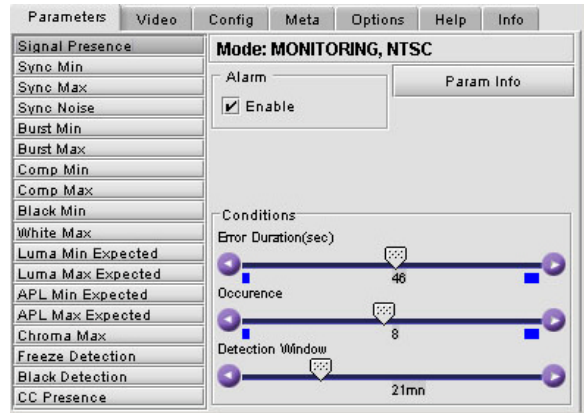
Detect the presence of an input signal.

Enable Alarm: check to enable this test

Param Info: click to open the *Help* tab with this parameter selected, giving a description of the measurement.

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

- See page 6 for definitions of these variables



Sync Min

Detect if the amplitude of Sync is too low.

- See page 16 for a more detailed description

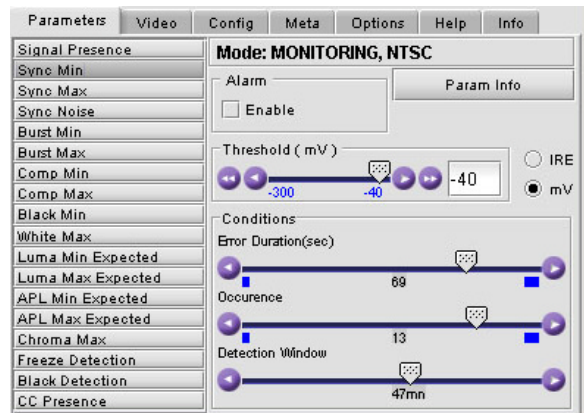
Enable Alarm: check to enable this test

Param Info: click to open the *Help* tab with this parameter selected, giving a description of the measurement.

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

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

- See page 6 for definitions of these variables



Sync Max

Detect if the amplitude of Sync is too high.

- See page 16 for a more detailed description

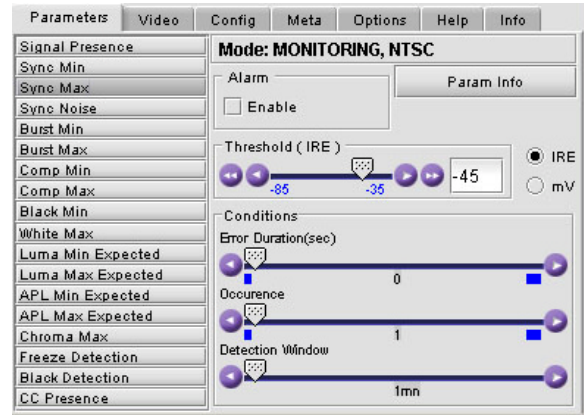
Enable Alarm: check to enable this test

Param Info: click to open the *Help* tab with this parameter selected, giving a description of the measurement.

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

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

- See page 6 for definitions of these variables



Sync Noise

Detect if there is excessive noise in the H-blanking of the input signal.

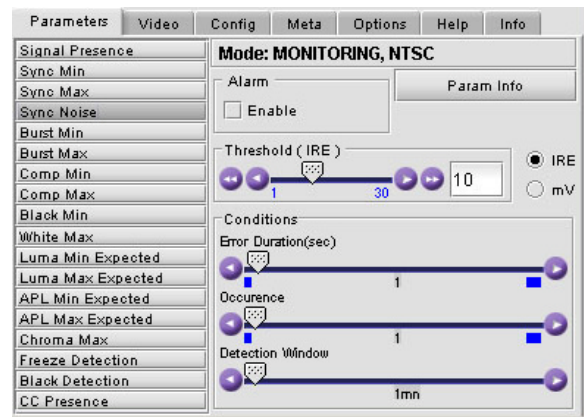
Enable Alarm: check to enable this test

Param Info: click to open the *Help* tab with this parameter selected, giving a description of the measurement.

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

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

- See page 6 for definitions of these variables



Burst Min

Detect if the amplitude of color burst is too low.

- See page 16 for a more detailed description

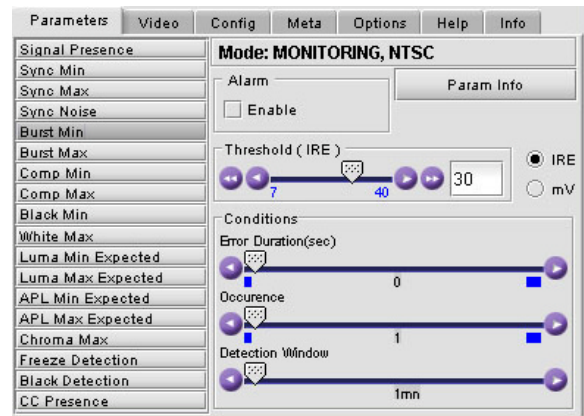
Enable Alarm: check to enable this test

Param Info: click to open the *Help* tab with this parameter selected, giving a description of the measurement.

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

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

- See page 6 for definitions of these variables



Burst Max

Detect if the amplitude of color burst is too high.

- See page 16 for a more detailed description

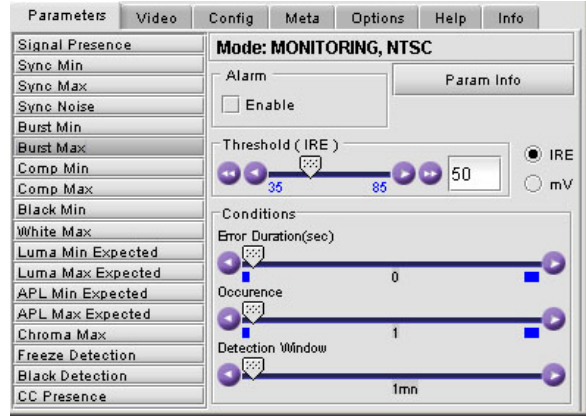
Enable Alarm: check to enable this test

Param Info: click to open the *Help* tab with this parameter selected, giving a description of the measurement.

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

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

- See page 6 for definitions of these variables



Comp Min

Detect whether the minimum level of the composite input signal is too low.

- See page 16 for a more detailed description

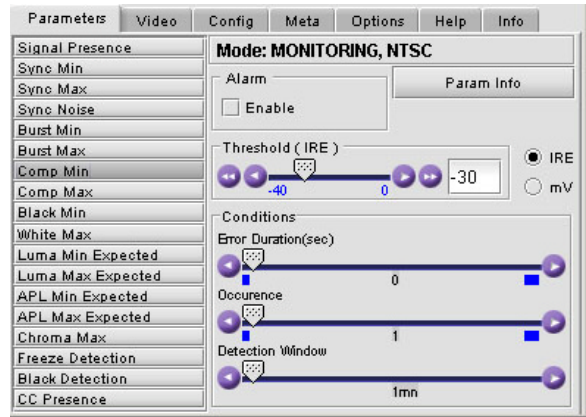
Enable Alarm: check to enable this test

Param Info: click to open the *Help* tab with this parameter selected, giving a description of the measurement.

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

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

- See page 6 for definitions of these variables



Comp Max

Detect whether the maximum level of the composite input signal is too high.

- See page 16 for a more detailed description

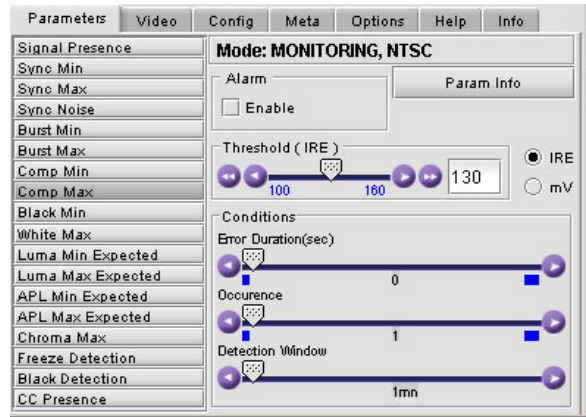
Enable Alarm: check to enable this test

Param Info: click to open the *Help* tab with this parameter selected, giving a description of the measurement.

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

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

- See page 6 for definitions of these variables



Black Min

Detect whether the minimum luminance level of the input video signal is too low.

- See page 16 for a more detailed description

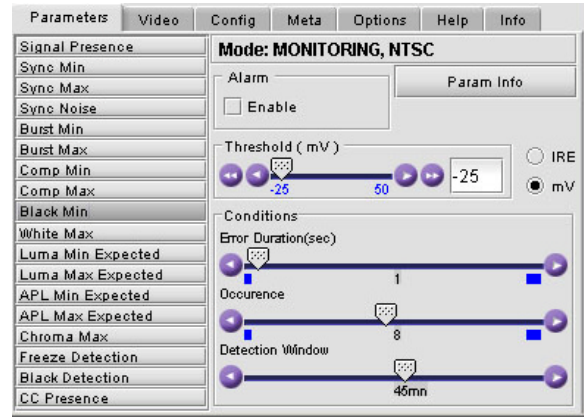
Enable Alarm: check to enable this test

Param Info: click to open the *Help* tab with this parameter selected, giving a description of the measurement.

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

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

- See page 6 for definitions of these variables



White Max

Detect whether the maximum luminance level of the input video signal is too high.

- See page 16 for a more detailed description

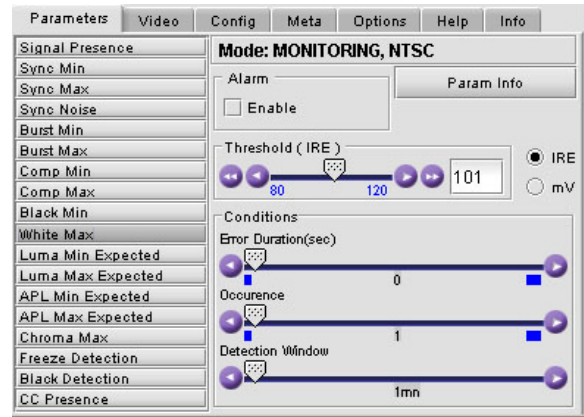
Enable Alarm: check to enable this test

Param Info: click to open the *Help* tab with this parameter selected, giving a description of the measurement.

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

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

- See page 6 for definitions of these variables



Luma Min Expected

Detect whether the video signal contains some nearly-black information.

- See page 17 for a more detailed description

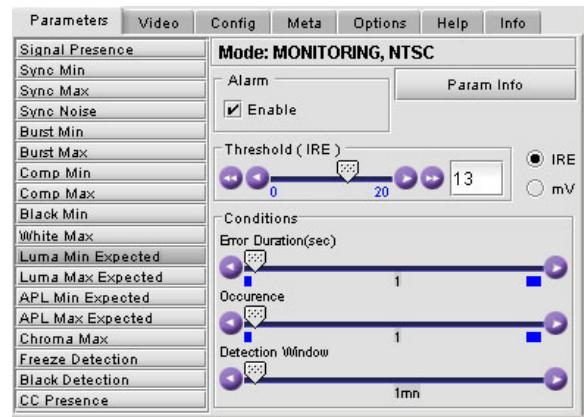
Enable Alarm: check to enable this test

Param Info: click to open the *Help* tab with this parameter selected, giving a description of the measurement.

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

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

- See page 6 for definitions of these variables



Luma Max Expected

Detect whether the video signal contains some nearly-white information.

- See page 17 for a more detailed description

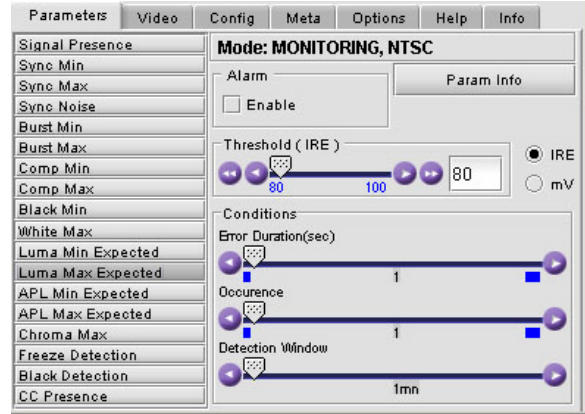
Enable Alarm: check the box associated with each VBI flag that you want to detect

Param Info: click to open the *Help* tab with this parameter selected, giving a description of the measurement.

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

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

- See page 6 for definitions of these variables



APL Min Expected

Detect whether the Average Picture Level (APL) is lower than expected.

- See page 17 for a more detailed description

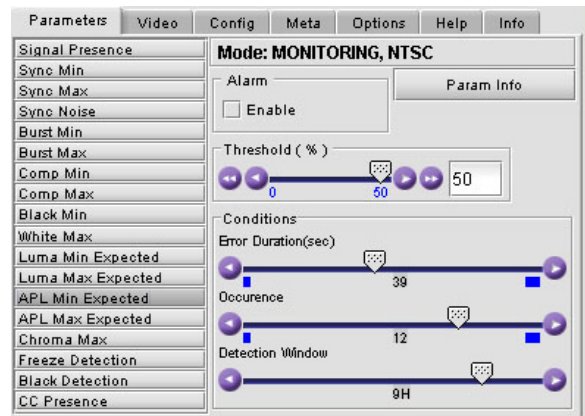
Enable Alarm: check the box associated with each VBI flag that you want to detect

Param Info: click to open the *Help* tab with this parameter selected, giving a description of the measurement.

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

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

- See page 6 for definitions of these variables



APL Max Expected

Detect whether the Average Picture Level (APL) is higher than expected.

- See page 17 for a more detailed description

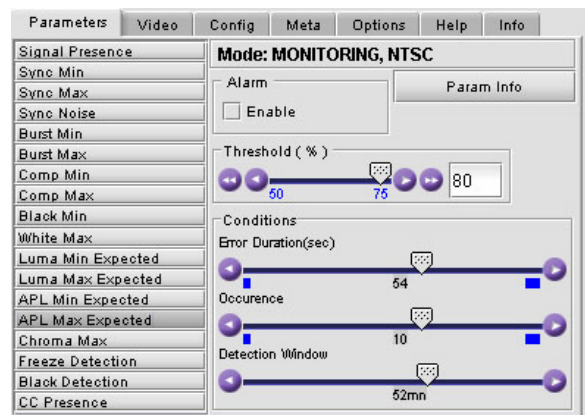
Enable Alarm: check the box associated with each VBI flag that you want to detect

Param Info: click to open the *Help* tab with this parameter selected, giving a description of the measurement.

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

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

- See page 6 for definitions of these variables



Chroma Max

Detect whether the amplitude of the chroma information in the video signal is too high.

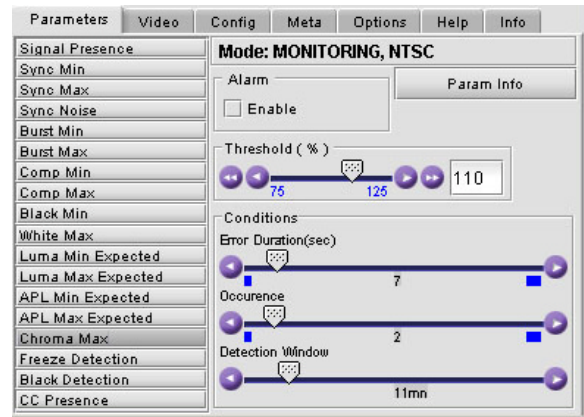
Enable Alarm: check to enable this test

Param Info: click to open the *Help* tab with this parameter selected, giving a description of the measurement.

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

Conditions: set the Error Duration using the slider.

- See page 6 for a definition of this variables



Freeze Detection

Detect whether a sequence of video frames are identical.

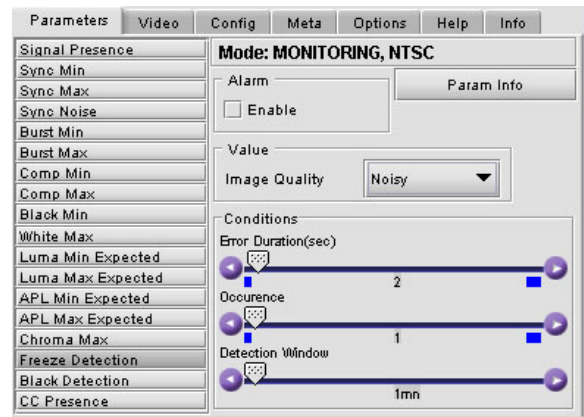
Enable Alarms: check to enable this test

Param Info: click to open the *Help* tab with this parameter selected, giving a description of the measurement.

Value: select an image quality to be used as a reference in determining whether the current image is frozen. Choices are Noisy, Normal and HiQ.

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

- See page 6 for definitions of these variables



Black Detection

Detect whether a sequence of video frames contain only black.

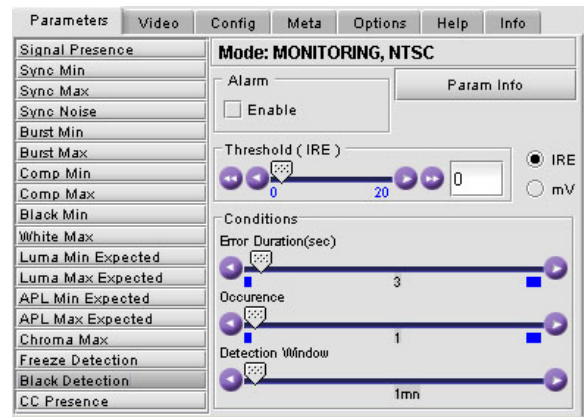
Enable Alarm: check to enable this test

Param Info: click to open the *Help* tab with this parameter selected, giving a description of the measurement.

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

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

- See page 6 for definitions of these variables



CC Presence

Detect the presence of Closed Captioning (CC) information in the VBI of the input video signal.

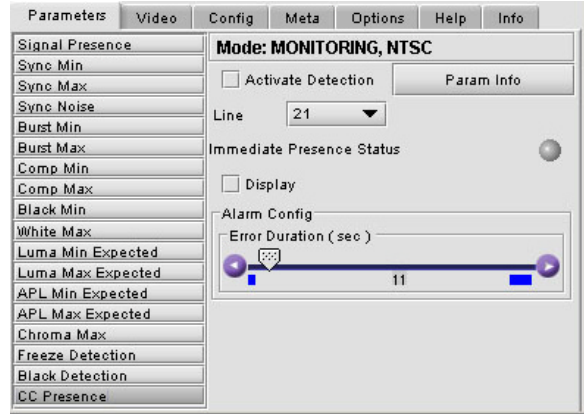
Activate Detection: check to enable this test

Line: click to open the *Help* tab with this parameter selected, giving a description of the measurement.

Immediate Presence Status: show the current status of CC – green for present, and red for absent.

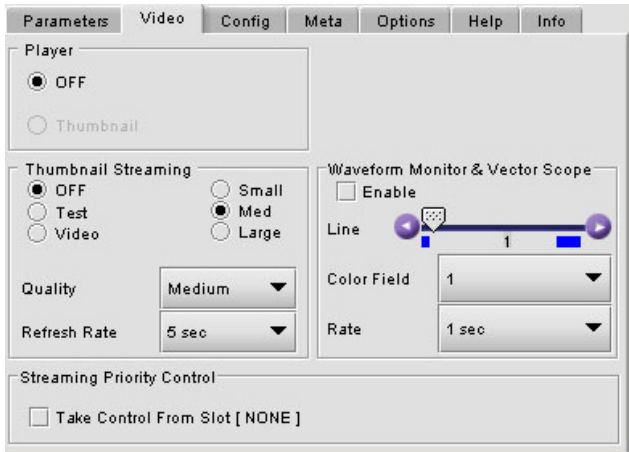
Display: Check the box to enable display of CC in the Player window

Alarm Config: use the slider to set the Error Duration – the period during which CC must be continuously absent before the CC Presence error will be flagged



Video tab

The **Video** tab gives access resources to configure the video connections to the probe.



Player – Click on the *Thumbnail* button to connect the player window on this control panel to the IP stream from the VCP-1021 (enabled only when a thumbnail streaming source – Test or Video – has been enabled)

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 pull-down 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)
- **Color Field** – select whether the selected line will be from color field 1, 2, 3 or 4 (NTSC) or 1, 2, ..or 8 (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.

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 Video and VBI data.

Signal Standards Detection

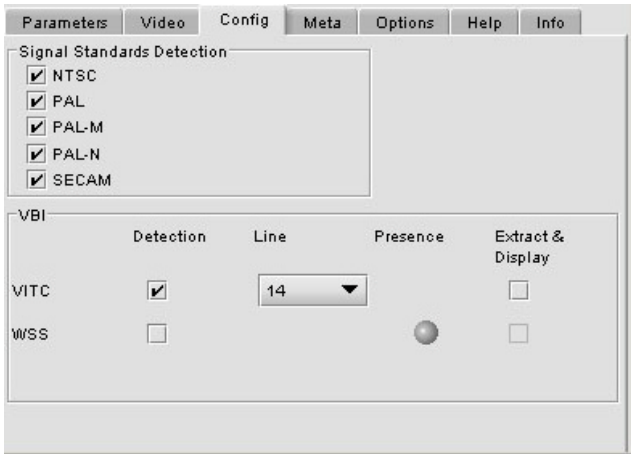
Click on the checkboxes to select the video standards that this probe will recognize.

VBI

The VCP-1021 can detect and process two VBI data components:

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

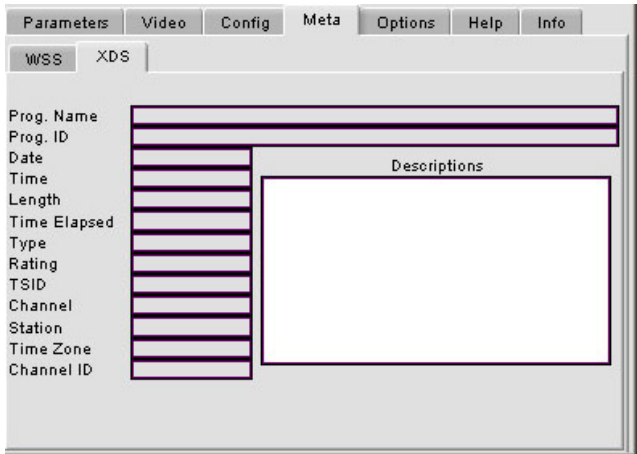
VCP-1021 Composite Video Control Probe Guide to Installation and Operation



For each of these: click on the *Detection* box to enable detection

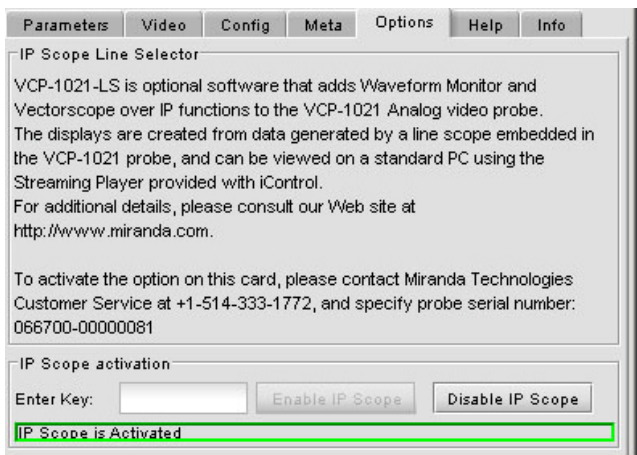
- For VITC only, select the line on which the VITC will be detected
- For WSS only, the *Presence* indicator will turn green if the component is detected

Click on the *Extract and Display* checkbox to extract the information and display it in the player window of all clients.



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 to activate the IP Scope, it may be enabled and disabled using the labeled buttons.

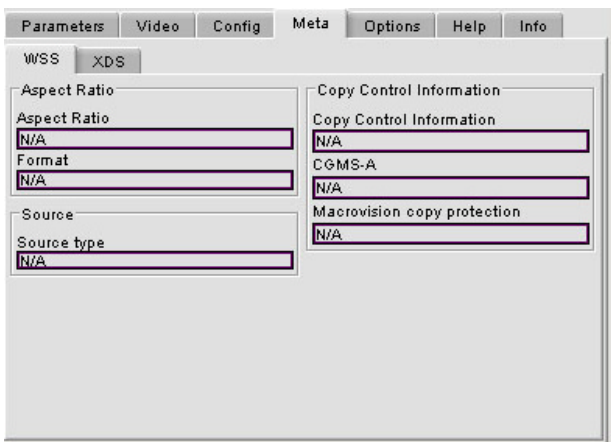
Help tab

The **Help** tab shows information concerning the currently-selected parameter. A text definition and in some cases a diagram explain the measurement made by the VCP-1021.

The content of these Help windows is similar to the content of the **Definitions** section of this manual, which begins on page 16.

Meta tab

The **Meta** tab gives information extracted from the WSS and XDS Metadata incorporated in the composite video signal. There are no adjustments on the two sub-tabs.



Info tab

The **Info** tab provides information about the VCP-1021, and provides some data entry options.

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

Short Label: Enter an alternative short-form label

Source ID: Enter the name of the source this probe is monitoring

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 VCP-1021. 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: VCP-1021* data entry box.

CONFIGURING ERROR STATUS REPORTING

The user can configure the response of the VCP-1021 to errors detected on any of its measured parameters. In iControl Navigator, right-click on the VCP-1021 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:

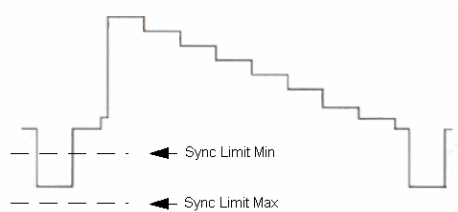
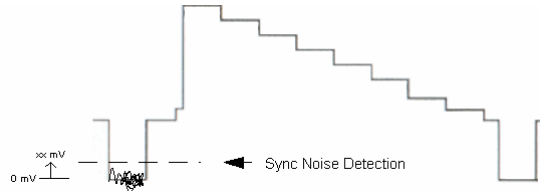
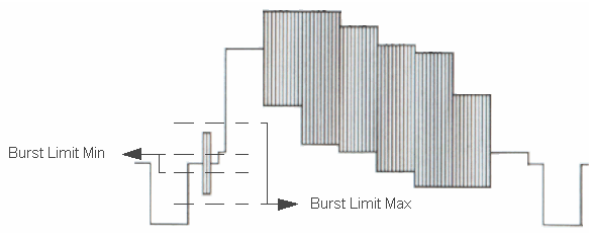
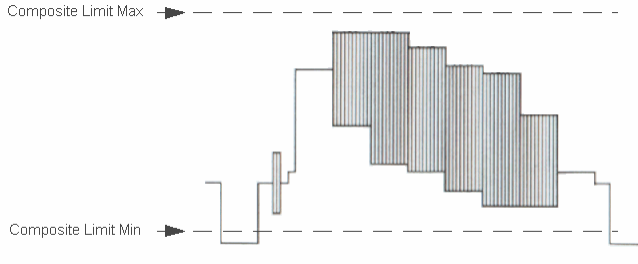
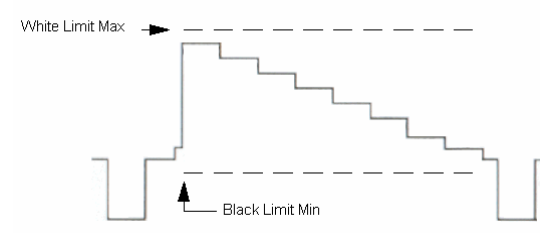
- Select the checkbox between the Condition name and the Condition Level pulldown to enable reporting of that condition.
- Select the LEVEL that will be associated with a condition from the pulldown:
 - YELLOW = Warning
 - RED = Error
- Click the Report GUI checkbox to allow the status of this condition to be reflected in the VCP-1021's icon in iControl screens.

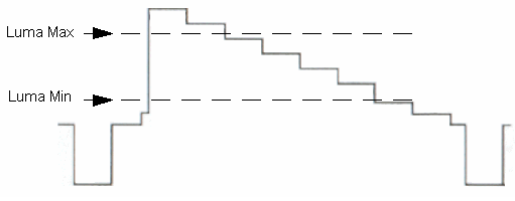
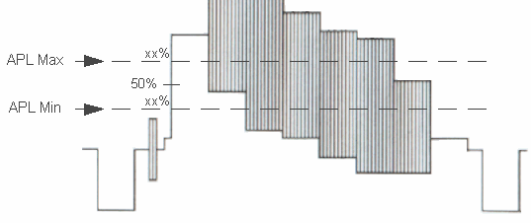


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DEFINITIONS

The following chart describes the parameters measured by the VCP-1021

<p>SIGNAL PRESENCE verifies that a video signal in a recognized format is present at the input.</p>	
<p>SYNC MIN checks that the input sync amplitude is greater than a specified threshold.</p> <p>SYNC MAX checks that the input sync amplitude is less than a specified threshold.</p>	
<p>SYNC NOISE checks that the noise on the input video signal is less than a specified threshold (measured on the sync tip of the input signal)</p>	
<p>BURST MIN Checks that the amplitude of burst on input signal is greater than a specified minimum value.</p> <p>BURST MAX Checks that the amplitude of burst on input signal is less than a specified threshold.</p>	
<p>COMP MIN Checks that the minimum level of composite video (luminance plus chrominance) is higher than a specified threshold.</p> <p>COMP MAX Checks that the maximum level of composite video (luminance plus chrominance) is less than a specified threshold.</p>	
<p>BLACK MIN Checks that the minimum luminance level of the video signal is greater than a specified minimum value.</p> <p>WHITE MAX Checks that the maximum luminance level of the video signal is less than a specified threshold.</p>	

<p>LUMA MIN EXPECTED</p>	<p>Checks that the Luma component of the video signal includes information below a specified threshold.</p>	
<p>LUMA MAX EXPECTED</p>	<p>Checks that the Luma component of the video signal includes information above a specified threshold.</p>	
<p>APL MIN EXPECTED</p>	<p>Checks that the Average Picture Level of the input video signal is higher than a specified threshold.</p>	
<p>APL MAX EXPECTED</p>	<p>Checks that the Average Picture Level of the input video signal is lower than a specified threshold.</p>	
<p>CHROMA MAX</p>	<p>Checks that the peak chrominance of the input video signal is less than a specified threshold.</p>	
<p>FREEZE DETECTION</p>	<p>Checks whether a sequence of identical frames (taking account of noise) has been detected on the input signal</p>	
<p>BLACK DETECTION</p>	<p>Checks whether a sequence of frames containing only video black has been detected on the input signal</p>	

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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

CONTACT MIRANDA

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

Americas

Telephone:
+1-800-224-7882

e-mail:
techsupp@miranda.com

Asia

Telephone:
+81-3-5730-2987

e-mail:
asiatech@miranda.com

**Europe, Middle East,
Africa, UK**

Telephone:
+44 (0) 1491 820222

e-mail:
eurotech@miranda.com

France (only)

Telephone:
+33 (0) 1 55 86 87 88

e-mail:
francetech@miranda.com

Visit our web site at www.miranda.com