



Snell  
Advanced  
Media

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# User Instruction Manual

## **IQSYN10**

3G/HD/SD-SDI Frame Synchronizer

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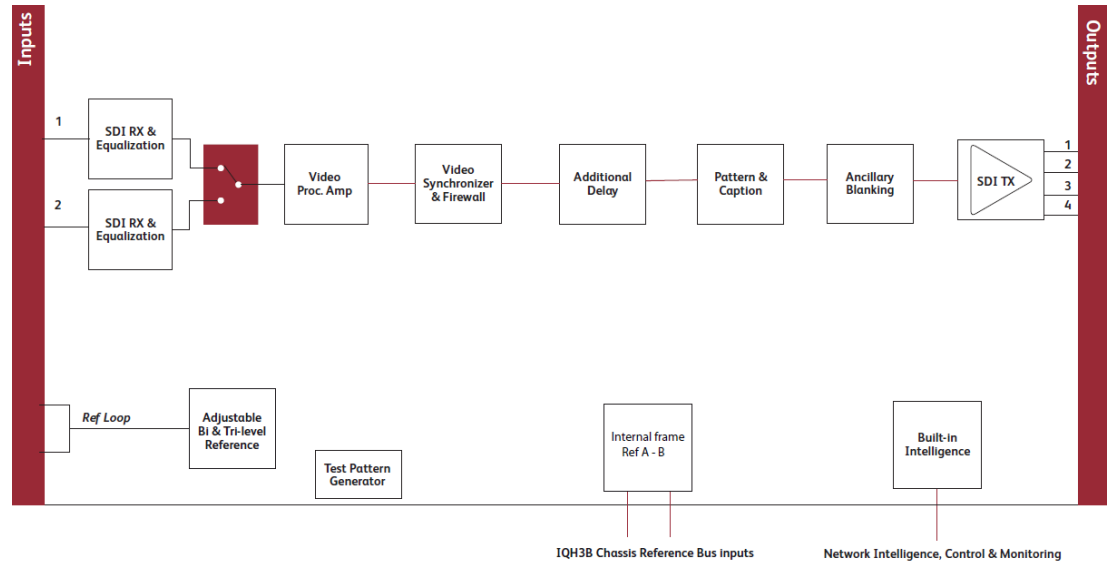
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# 1. Introduction

## 1.1 Module Description

The IQSYN10 provides frame synchronization for 3 Gbit/s SDI, HD-SDI 1.5 Gbit/s or SD-SDI 270 Mbit/s signals. The module includes 2 SDI inputs with clean-switching functionality, agile synchronization, and video delay. A video processing amplifier provides complete control over the video levels.



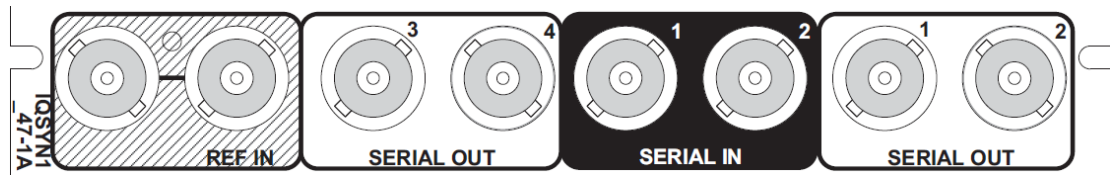
## 1.2 Order Codes

**Note:** Modules with “A” order codes (for example, IQSYN1047-1A) can be fitted into either A- or B-style enclosures. Modules with “B” order codes (for example, IQSYN1047-1B) can only be fitted into B-style enclosures. See page 7.

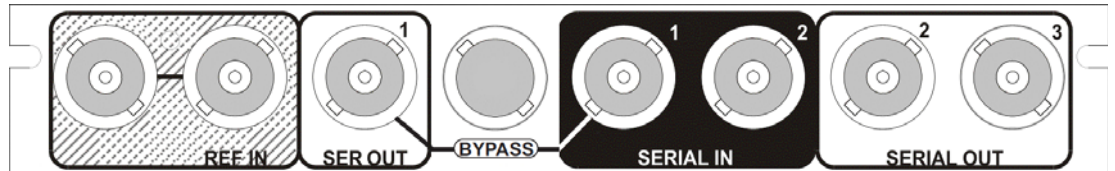
The following product order codes are covered by this manual:

|                      |  |
|----------------------|--|
| <b>IQSYN1047-1A</b>  | HD/SD-SDI Synchronizer. 2 inputs, 4 outputs, reference loop-through.             |
| <b>IQSYN1047-1B</b>  |  |
| <b>IQSYN1047-1A3</b> | 3G/HD/SD-SDI Synchronizer. 2 inputs, 4 outputs, reference                        |
| <b>IQSYN1047-1B3</b> | loop-through.  |
| <b>IQSYN1000-1A3</b> | 3G/HD/SD-SDI Synchronizer. 2 inputs, 3 outputs, reference                        |
| <b>IQSYN1000-1B3</b> | loop-through, relay bypass.  |
| <b>IQSYN10-3G</b>    | Upgrade for IQSYN10 HD/SD-SDI Synchronizer to operate with 3 Gbit/s SDI signals. |

### 1.3 Rear Panel View



**IQSYN1047-1A(B)/IQSYN1047-1A(B)3**



**IQSYN1000-1A(B)3**

**Note:**

A relay bypass exists between serial input 1 and serial output 1. In the event of module removal, power failure, or certain types of module failure, the signal from serial input 1 to serial output 1 will bypass the module.

### 1.4 Enclosures

The module can be fitted into the enclosure types shown.

**Important:** Although IQ modules are interchangeable between enclosures, their rear panels are enclosure specific. An IQH3B enclosure accepts modules with either “A” or “B” order codes. An IQH3A or IQH1A enclosure accepts modules with “A” order codes only. See page 5.

#### 1.4.1 B-style Enclosure



**Enclosure order codes: IQH3B-S-0, IQH3B-S-P**

**Note:** The IQH3B enclosure provides two internal analog reference inputs. These inputs are applicable to modules with “B” order codes only.

#### 1.4.2 A-style Enclosures



**Enclosure order code: IQH1A-S-P**



**Enclosure order codes: IQH3A-S-0, IQH3A-S-P**



**Enclosure order codes: IQH3A-E-0, IQH3A-E-P, IQH3A-0-0, IQH3A-0-P**



**Enclosure order code: IQH1A-S-P**

## 1.5 Feature Summary

The IQSYN10 provides the following features:

- 3G/HD/SD-SDI synchronizer with up to 9 frames of video delay.
- Standards supported:
  - 3G-SDI to SMPTE 424M/425M level A and B compatible
  - HD-SDI to SMPTE 292M/274M/296M
  - SD-SDI to SMPTE 259M-C
- Loop-through reference capable of referencing to a bi-level or tri-level signal.
- Select either external input reference direct or from internal IQH3B chassis reference bus.
- Precision genlock adjustment allowing you to time any SDI signal to pixel accuracy.
- Agile, router switching tolerant synchronizer operation.
- Able to pass all ancillary data with independent HANC and VANC blanking control.
- Input loss detection – default output of black/pattern/freeze.
- Edit function for static/animated caption overlay on video output.
- Can be used as a video delay, up to 9 frames.
- Video processing amplifier controls including video gain, offset, hue, and Y/C picture position adjustment.
- In-built test pattern generator.
- 16 user memories, save/recall/rename.
- RollCall control and monitoring compatible.



## 2. Technical Specification

| <b>Inputs and Outputs</b>      |   |
|--------------------------------|---|
| <b>Signal Inputs</b>           |   |
| SDI Inputs                     | 2x  |
| Input 1 Cable Length           | Up to 70 m Belden 1694A @ 3 Gbit/s<br>Up to 160 m Belden 1694A @ 1.5 Gbit/s<br>>350 m Belden 1694A @ 270 Mbit/s   |
| Input 2 Cable Length           | Up to 60 m Belden 1694A @ 3 Gbit/s<br>Up to 100 m Belden 1694A @ 1.5 Gbit/s<br>Up to 100 m Belden 1694A @ 270 Mbit/s  |
| <b>Signal Outputs</b>          |   |
| SDI Outputs                    | 4x  |
| <b>Controls</b>                |   |
| <b>Indicators</b>              |   |
| Power                          | OK (Green)  |
| CPU running                    | OK (Green flashing)   |
| FPGA running                   | OK (Green flashing)   |
| Status                         | OK (Green), Warning (Yellow), Error (Red)   |
| Input 1                        | OK (Green), Loss (Off)  |
| Input 2                        | OK (Green), Loss (Off)  |
| Reference lock                 | OK or Cross-locking (Green), Loss (Off), Std err (Flashing)   |
| <b>Genlock and Video Delay</b> |   |
| Genlock Mode                   | Free-run, Lock to Reference, Lock to input  |
| Genlock H-Phase                | $\pm 0.5H$ in 1 pixel steps.  |
| Genlock V-Phase                | $\pm 0.5F$ in 1 line steps  |
| Video H-Delay                  | 0-1 Line in 1 pixel steps   |
| Video V-Delay                  | 0-1 Frame in 1 line steps   |
| Video Delay Frames             | 0-9 Frames  |
| Reference select mode          | Module input reference or IQH3B reference A or B  |
| <b>Video Controls</b>          |   |
| Input Standard                 | 1125(1080)/50P (A & B), 1125(1080)/59P (A & B),<br>1125(1080)/29i, 1125(1080)/25i,<br>750(720)/59P, 750(720)/50P,<br>525(480)/29i, 625(576)/25i                     |
| Default Video Output Type      | Pattern, Freeze, Black  |
| Default Video Output Standard  | Last Known Good,<br>1125(1080)/50P (A & B), 1125(1080)/59P (A & B),<br>1125(1080)/29i, 1125(1080)/25i,<br>750(720)/59P, 750(720)/50P,<br>525(480)/29i, 625(576)/25i |
| Input Select                   | Input 1, Input 2  |
| Manual Freeze                  | On/Off  |
| Freeze                         | Field/Frame   |

|                       |   |
|-----------------------|---|
| VANC Data             | Blank VANC  |
| SD VANC Data          | Line Blanking (23/336 in 625, 21, 22, 283, 284 in 525)  |
| HANC Data             | Blank HANC (removes all HANC data)  |
| ProcAmp Enable        | On/Off  |
| Black Level           | ±100 mV in steps of 0.8 mV  |
| Hue Adjust            | ±180° in steps of 1°  |
| Master Video Gain     | ±6 dB in steps of 0.1 dB  |
| Y-Gain                | ±6 dB in steps of 0.1 dB  |
| Cb/Cr Gain            | ±6 dB in steps of 0.1 dB  |
| Y/C Timing            | ± 8 pixels in 2 pixel steps SD<br>± 16 pixels in 2 pixel steps HD/3G  |
| Picture Position      | ± 8 pixels in 2 pixel steps SD<br>± 16 pixels in 2 pixel steps HD/3G  |
| Pattern On            | On/Off  |
| Pattern Select        | 75% Color Bars, Black   |
| Caption On            | On/Off  |
| Edit Caption          | 19 characters available   |
| HANC Data             | Blank HANC (removes all HANC data). Note that this includes removal of embedded audio   |
| VANC Data             | Blank VANC  |
| Animated Caption      | Slow, Medium, Fast  |
| <b>Other Controls</b> |   |
| User Memories         | 16 x Save, Recall, Rename   |
| Memory Naming         | User configurable naming of memories 1-16   |
| RollTrack Sources     | Unused, Video Delay (1&2), Input Present (1&2), Input Loss (1&2), Input Select (1&2), Output Rate/Std, Output Freeze, Output Unfreeze, Output Pattern On, Output Pattern Off, Output Black On, Output Black Off, Output Caption On, Output Caption Off, Reference OK & Loss |
| Information Window    | Video Input Status, Reference Status  |
| Factory Default       | Resets all module settings to factory specified default values and clears memories  |
| Default Settings      | Resets all module settings factory specified default values but does not clear memories   |
| Restart               | Software restart of the module  |
| Module Information    | Reports the following module information: Software Version, Serial Number, Build Number, KOS Version, Firmware Version, PCB Version   |

## Specifications

|                              |   |
|------------------------------|---|
| Electrical                   | 3 Gbit/s SDI, SMPTE 424M<br>1.5 Gbit/s HD-SDI, SMPTE 292M<br>270 Mbit/s SDI, SMPTE 259M-C / DVB-ASI |
| Connector / Format           | BNC/ 75 Ohm panel jack on standard IQ connector panel   |
| Return Loss                  | >-15 dB (270 Mbit/s, 1.5 Gbit/s)<br>>-10 dB (3 Gbit/s)  |
| Output Jitter                | SD-SDI 0.2 UI (10 Hz) / 0.2 UI (1 kHz)<br>3G/HD-SDI 1.0 UI (10 Hz) / 0.2 UI (100 kHz)               |
| Reference Source             | External - HD tri-level / SD bi-level / Input video syncs   |
| Electrical                   | Black (HD tri-level and SD bi-level) and Black Burst (SD bi-level)                                  |
| Connector / Format           | BNC 75 Ohm panel jack on standard IQ connector panel  |
| Analog Reference Return Loss | SD bi-level > 40 dB to 5.5 MHz<br>HD tri-level > 35 dB to 30 MHz                                    |

## Video Standards

|   |   |
|---|---|
| Standards                                   | 1125(1080)/50p (A & B), 1125(1080)/59p (A & B),<br>750(720)/50p, 750(720)/59p,<br>1125(1080)/25i, 1125(1080)/29i,<br>625(576)/25i, 525(480)/29i |
| Minimum Delay (Reference Clock of Free Run) | SD: 67 $\mu$ s<br>HD: 28 $\mu$ s<br>3G-A: 15 $\mu$ s<br>3G-B: 25 $\mu$ s  |
| Typical Delay (Input Lock)                  | Typical delay (input lock with Dolby E alignment off): 2 lines<br>Typical delay (input lock with Dolby E alignment on): 1 frame                 |
| Synchronizer Hysteresis Window              | 5 $\mu$ s   |

## Power Consumption

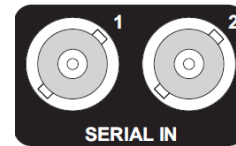
|                          |   |
|--------------------------|---|
| Module Power Consumption | 7.5 W max (A Frames)<br>7.5 PR (B Frames) |
|--------------------------|---|

## 3. Connections

This section describes the physical input and output connections provided by the IQSYN10.

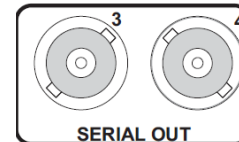
### 3.1 SDI Inputs

Serial digital input to the module is made to the module via BNC connectors which terminate in 75 Ohms.



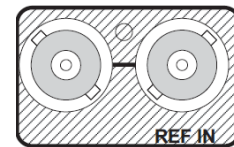
### 3.2 SDI Outputs

Serial digital output from the module is made to the module via BNC connectors which terminate in 75 Ohms.



### 3.3 Analog Reference Input

The external sync input to the module is made via the passive loop-through BNC connectors for 75 Ohms.



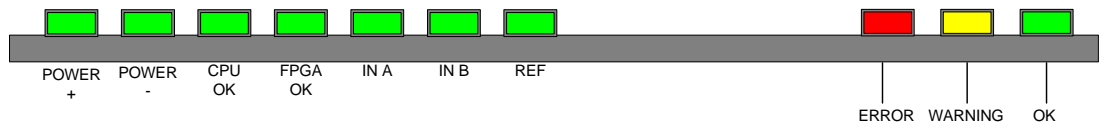
It should be noted that proper operation to the full specification can only be achieved with a correctly terminated, noise-free, stable, black sync reference input. Whilst lock may be achieved with an unsuitable sync source the increased jitter evident on the SDI output will affect locking and cable length performance at the receiving equipment.

**Note:** If the loop-through facility is not used, the unused BNC socket must be fitted with a 75 Ohm terminator.

**Note:** The IQSYN10 also has 75 R termination link for reference input located on the board.

## 4. Card Edge Controls

The LEDs on the edge of the module indicate its operating status.



| LED               | Color  | Description  |
|-------------------|--------|--|
| <b>POWER +</b>    | Green  | Indicates that a positive power supply is present.   |
| <b>POWER -</b>    | Green  | Indicates that a negative power supply is present.   |
| <b>CPU OK</b>     | Green  | This LED will flash to indicate that the CPU is running.   |
| <b>FPGA OK</b>    | Green  | Flashes when the FPGA is running. When the module is booting, this LED is illuminated continuously, until the SDI is enabled.                            |
| <b>IN A, IN B</b> | Green  | These LEDs are illuminated when valid input is present.  |
| <b>REF</b>        | Green  | This LED indicates that a reference signal is present.   |
| <b>ERROR</b>      | Red    | This LED indicates board fault conditions. When the module is booting, this LED is illuminated, until the SDI is enabled.                                |
| <b>WARNING</b>    | Yellow | This LED is illuminated if one or more of the SDI inputs is not valid or if the reference signal is missing when the module is set to Lock to Reference. |
| <b>OK</b>         | Green  | Indicates that the module is operating correctly.  |

## 5. Controlling the IQSYN10 from the RollCall Control Panel

### 5.1 The Information Window

The information window is displayed in the upper-right corner of each screen and displays basic information about the video and reference status of the module.

Select either **Video Status** or **Reference Status** to display the corresponding information.

#### 5.1.1 Video Status

When **Video Status** is selected, the video input status is displayed:



| Name | Status  | Description  | Standard   |
|------|---|--|--|
| IN1: | <b>OK</b>   | Input signal received  | Detected video input standard is displayed, e.g. <b>1080/29i</b> (Blank if input lost).  |
| IN2: | <b>FAIL</b>   | Input signal failed  |  |
|      | <b>LOST</b><br><b>MISM</b>                          | No signal received<br>Mismatch format detected   |  |
| OUT: | <b>OK</b><br><b>BLK</b><br><b>FRZ</b><br><b>PAT</b> | Output signal delivered<br>Black output delivered<br>Frozen output delivered<br>Pattern output delivered | Selected video output standard is displayed, e.g. <b>1080/29i</b> . A \$ symbol indicates that the caption is enabled. (Blank if disabled) |

#### 5.1.2 Reference Status

When **Reference Status** is selected, the following information is displayed:



| Name | Status   | Description  | Standard                         |
|------|--|--|----------------------------------|
| REF: | <b>FREE + STD</b><br><b>LOCK + STD</b><br><b>Cross + STD</b> | Free running<br>Locked to reference<br>Cross lock to reference | Displays the Reference standard. |

## 5.2 Video

The **Video** screen enables you to specify the settings for the serial data input:

- Valid Input standards.
- The default output standard.
- Any required ancillary blanking.
- Freeze options and apply a manual freeze to the output image.
- The default output.

### 5.2.1 Input Select

This control is used to select either Input 1 (SERIAL IN 1) or Input 2 (SERIAL IN 2).

### 5.2.2 Valid Input Standards

The **Valid Input Standards** check boxes specify the video input standards that the module will accept. The module will automatically detect the standard of the received input and block any signal that does not comply with these selected video formats.

By default, all input standards are selected.

### 5.2.3 Default Output

The **Default Output** control specifies the module's output in the event of signal loss at the input. Options are:

- **Black:** video out is a black screen
- **Freeze:** video output is frozen/paused
- **Pattern:** video output is a pre-determined test pattern or information screen

### 5.2.4 Default Output Standard

The **Default Output Standard** settings specify the output standard that the module will use if it cannot determine the correct output standard to use.

By default, the **Last Known Good** setting is selected, which uses the last valid output standard.

### 5.2.5 Blanking

The **Blanking** controls enable specific lines of VANC to be blanked.

- **625 blank lines:** Applied to 625 only, you can blank either or both of line 23 or line 336.
- **525 blank lines:** Applied to 525 only, you can blank any or all of lines 21, 22, 283, or 284.
- **Blank VANC:** Selecting this option blanks the following lines inclusively:

525: 11 – 20, 274 – 282

625: 7 – 22, 320 – 335

720: 8 – 25

1080i: 8 - 20, 570 – 583

1080P: 8 – 41

All VANC data from the end of the last active video line to the end of the RP168 switch line is always blanked, irrespective of this control.

- **Blank HANC:** Selecting this option removes all horizontal ancillary data.

### 5.2.6 Freeze

The **Manual Freeze** control freezes/pauses the output. Freeze type can be specified as either **Field** or **Frame**.

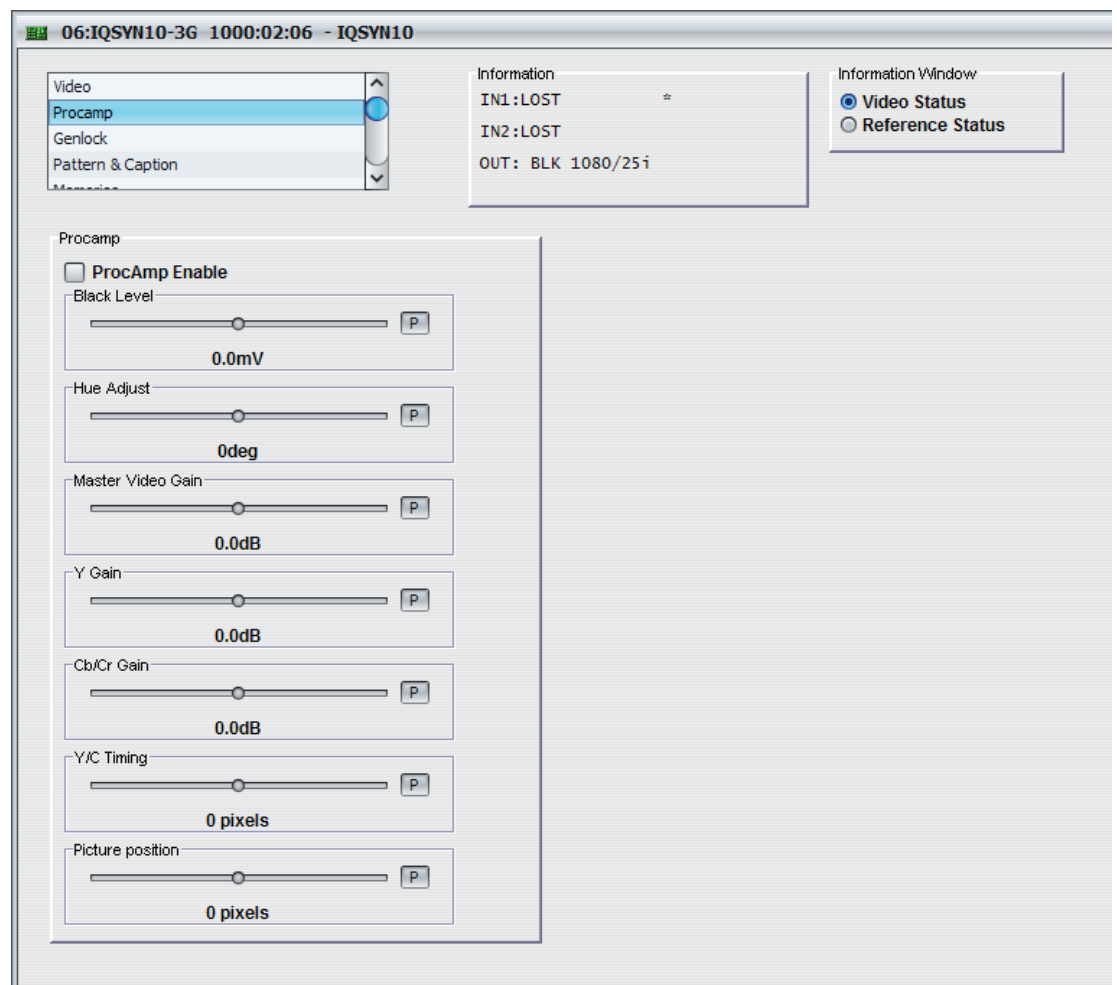
**Note:** This function is disabled on a power cycle of the module.



## 5.3 Procamp

The **Procamp** screen enables the processing amplifier settings to be adjusted:

- Black Level
- Hue Adjust
- Master Video Gain
- Y Gain (Luma)
- Cb/Cr Gain (Chroma)
- Y/C Timing
- Picture position



### 5.3.1 Procamp Enable

The **Procamp Enable** check box enables the video processing amplifier functions for the relevant channel. Clear the check box to disable the Procamp functions.

### 5.3.2 Black Level

The **Black Level** control allows the channel's black level to be adjusted over a range of  $\pm 100$  mV in steps of 0.8 mV. The preset value is 0.

### 5.3.3 Hue Adjust

The **Hue** control allows the channel's hue to be adjusted over a range of  $\pm 180^\circ$  in steps of  $1^\circ$ . The preset value is 0.

### 5.3.4 Master Video Gain

The **Master Video Gain** control allows the video gain to be adjusted over a range of  $\pm 6$  dB in steps of 0.1 dB. The preset value is 0.

### 5.3.5 Y Gain

The **Y Gain** control allows the luma to be adjusted over a range of  $\pm 6$  dB in steps of 0.1 dB. The preset is 0.

### 5.3.6 Cb/Cr Gain

The **Cb/Cr Gain** control allows the chrominance to be adjusted over a range of  $\pm 6$  dB in steps of 0.1 dB. The preset value is 0.

### 5.3.7 Y/C Timing

The **Y/C Timing** control allows the luma/chroma timing to be adjusted over a range of:

- $\pm 8$  pixels in 2 pixel steps in SD
- $\pm 16$  pixels in 2 pixel steps in HD

The preset value is 0.

### 5.3.8 Picture Position

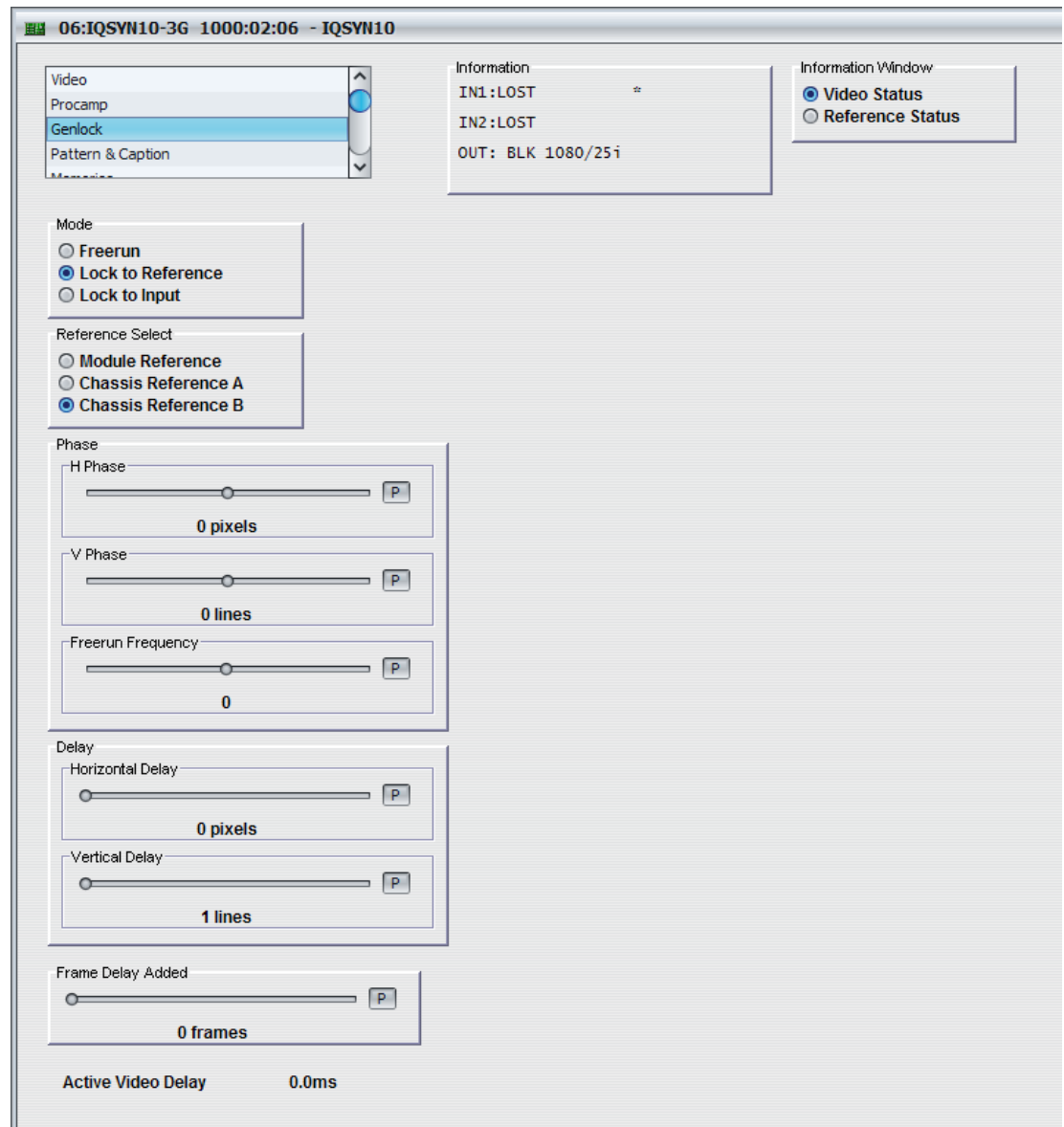
The **Picture Position** control allows the picture position to be adjusted over a range of:

- $\pm 8$  pixels in 2 pixel steps SD
- $\pm 16$  pixels in 2 pixel steps HD

The preset value is 0.

## 5.4 Genlock

The **Genlock** screen enables the module's generator lock (synchronizer) settings to be specified.



### 5.4.1 Mode

There are three main genlock modes:

- **Freerun:** When selected, the module's output will not be locked to any input signal. Instead, it will run nominally at the correct frame rate and synchronize input video to this.
- **Lock to Reference:** This is the default reference mode. When selected, the module will lock to an external tri-level / bi-level reference source. If the reference source is lost, the module will switch to Freerun mode. On return of the reference signal, the module will return to Lock to Reference mode.

**Note:** The module will clock lock to signals of different frame rates.

- **Lock to Input:** When selected, the module locks to Input 1. If Input 1 is lost, the reference mode will switch to Freerun. In this mode, the delay can be adjusted by changing the horizontal and vertical timing.

### 5.4.2 Reference Select

Enables the module to work with Reference A and Reference B on 3B frames.

### 5.4.3 Phase

Three phase controls are provided:

- **H Phase:** If the module is referenced locked, use the slider bar to adjust the horizontal genlock phase over a range of  $\pm 0.5 H$  in 1 pixel steps. The preset value is 0.
- **V Phase:** If the module is referenced locked, use the slider bar to adjust the vertical genlock phase over a range of  $\pm 0.5 F$  in 1 line steps. The preset value is 0.
- **Freerun Frequency:** The slider bar may be used to adjust the module's freerun frequency.

### 5.4.4 Delay

- **Horizontal Delay:** The slider bar may be used to adjust the horizontal delay over a range of 0 to 1 line in 1 pixel steps. The preset value is 0. Note that when the module is input locked, if the delay is set to lower than the latency, the delay will stop at the latency but this will not be indicated. Additionally, if the vertical delay is set to 0, the lowest horizontal delay will equal the latency of the module rather than the delay specified by this control.
- **Vertical Delay:** The slider bar may be used to add up to 1 frame of vertical delay in steps of 1 line. The preset value is 0.

### 5.4.5 Frame Delay Added

Up to 9 additional frames of delay may be selected using this slider bar. This delay can be added in all reference modes, including freerun.

The delay of non-PCM audio, or "pass-through" audio is also set by this control.

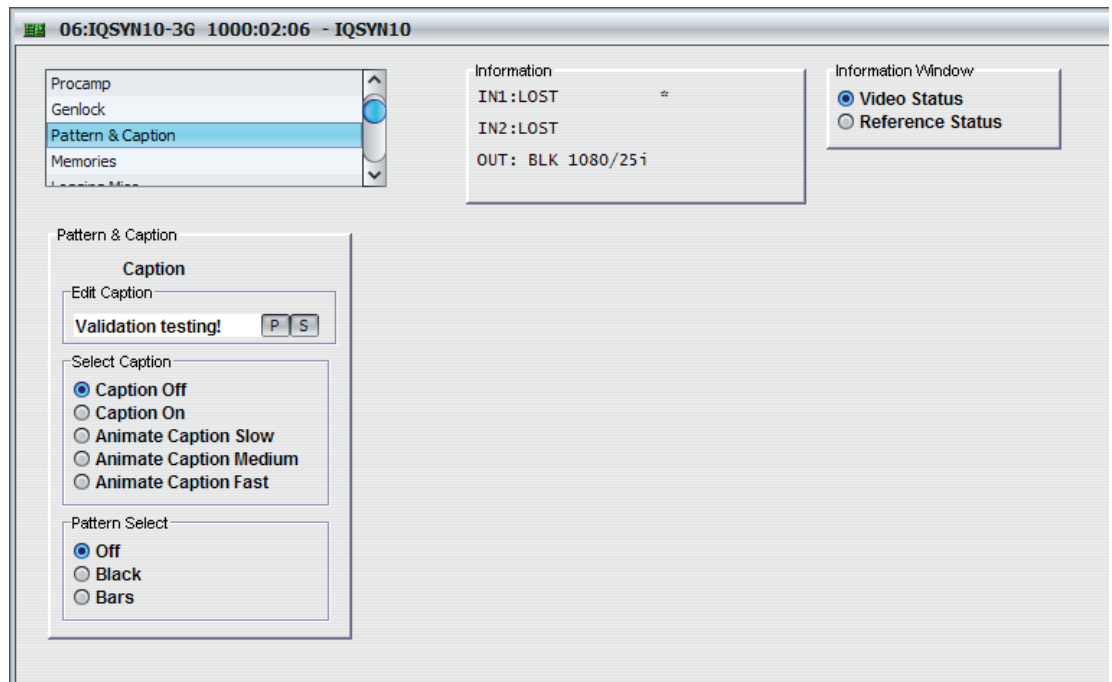
The delay, in ms, is displayed below this control.

### 5.4.6 Active Video Delay

The total active video delay (in ms) is displayed at the bottom of this screen.

## 5.5 Pattern & Caption

The **Pattern & Caption** screen settings enables a caption to be specified, turned on and off and pattern generation to be enabled.



### 5.5.1 Edit Caption

In the **Edit Caption** text field, a caption of up to 19 characters may be entered to be displayed when the caption function is enabled.

Clicking the **S** button saves the caption as entered.

Clicking the **P** button returns the caption to the default preset value.

### 5.5.2 Select Caption

The radio buttons are used to turn the caption on and off, and to apply a slow, medium, or fast animation to the caption. This animation is a scrolling effect from right to left, also known as a “ticker-tape” effect.

When enabled, the caption will appear as white text on a black background in the lower portion of the picture.

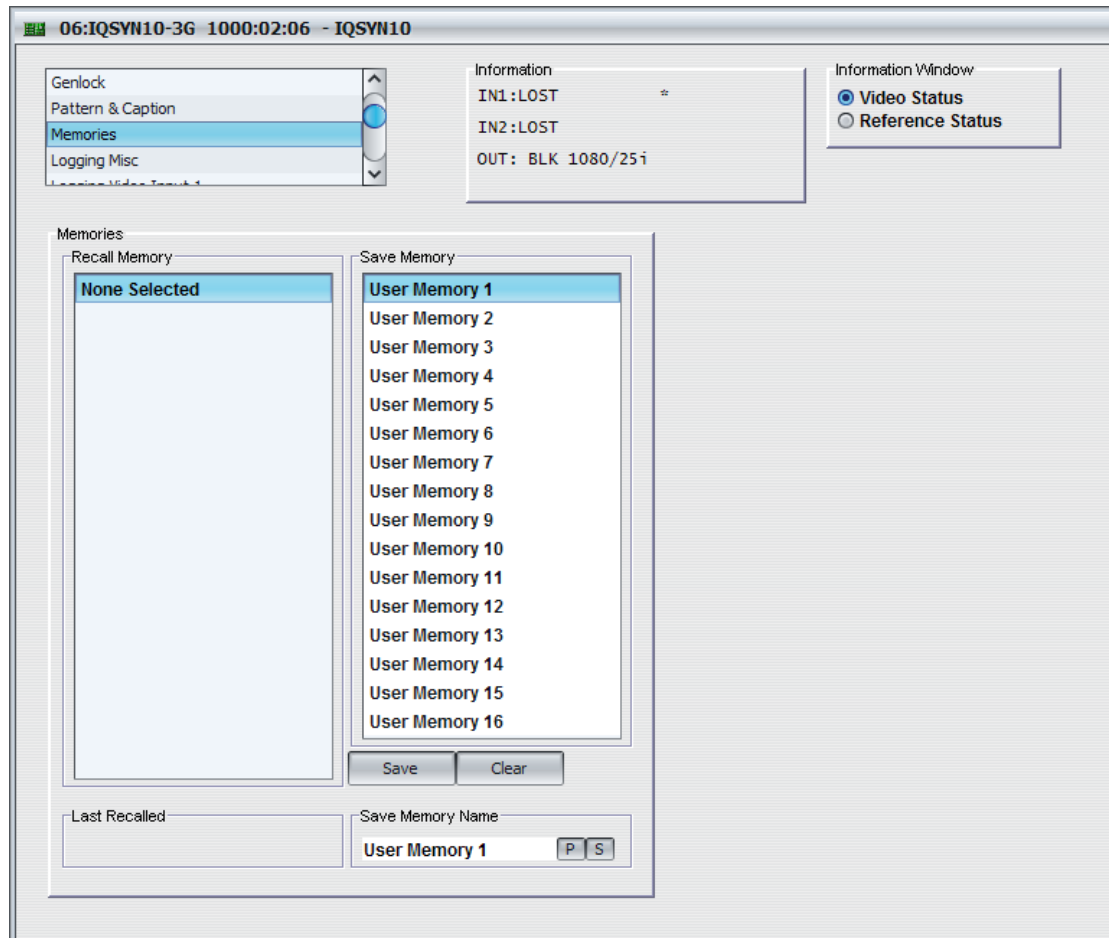
### 5.5.3 Pattern Select

The radio buttons enable / disable pattern generation. The options are:

- **Off**
- **Black**
- **Bars**

## 5.6 Memories

The **Memories** screen enables up to 16 setups to be saved and recalled later. Default memory names can be changed to provide more meaningful descriptions.



### 5.6.1 Recall Memory

This column lists the settings that have been previously saved. If no settings have been saved, **None Selected** is displayed.

**To recall the settings saved in a memory:**

In the **Recall Memory** column, select the memory to recall by clicking on it. The recalled settings will be applied and the memory name will appear in the **Last Recalled Memory** section.

**Note:** User memories do not recall log field states. I.e., whether a log value has been enabled or disabled.

### 5.6.2 Save Memory

This column lists the 16 pre-set memory names that are available for use.

**To save settings:**

In the **Save Memory** column, select a memory location, and then click **Save**. The current settings are saved and the memory appears in the **Recall Memory** column.

### 5.6.3 Last Recalled

The **Last Recalled** pane displays the most recently recalled memory. If any of the settings have been changed since it was recalled, an asterisk will be displayed after the memory name.

#### 5.6.4 Save Memory Name

This option enables the pre-set memory names to be changed (to something more memorable or meaningful), if required.

**To change a memory name:**

In the **Save Memory Name** field, type the new memory name, and then click the **S** button. To return the memory to its default preset value, click **P** button.

## 5.7 Logging

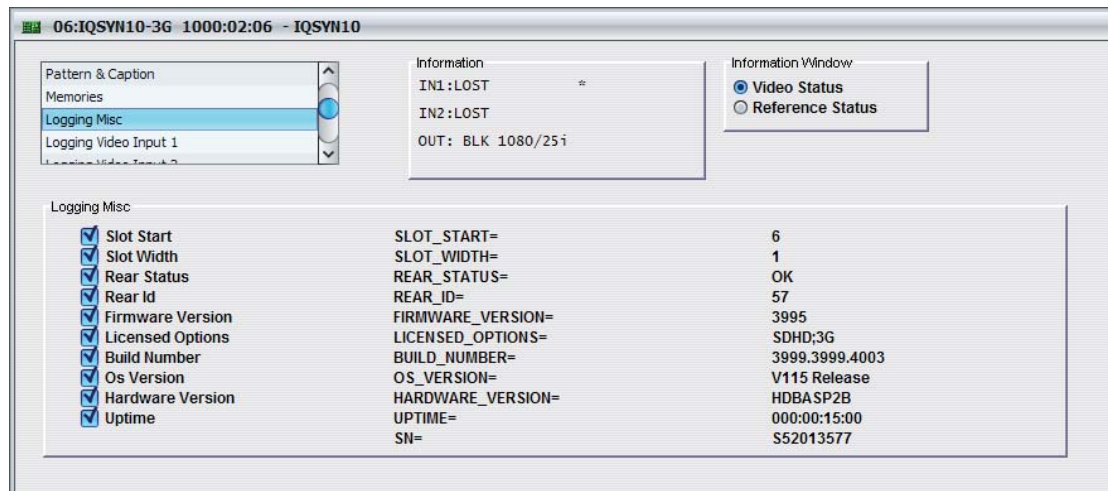
Information about several parameters can be made available to a logging device that is connected to the RollCall network.

Each logging screen comprises three columns:

- **Log Enable:** Select the check boxes that correspond to the parameters for which log information should be collected.
- **Log Field:** Displays the name of the logging field.
- **Log Value:** Displays the current log value.

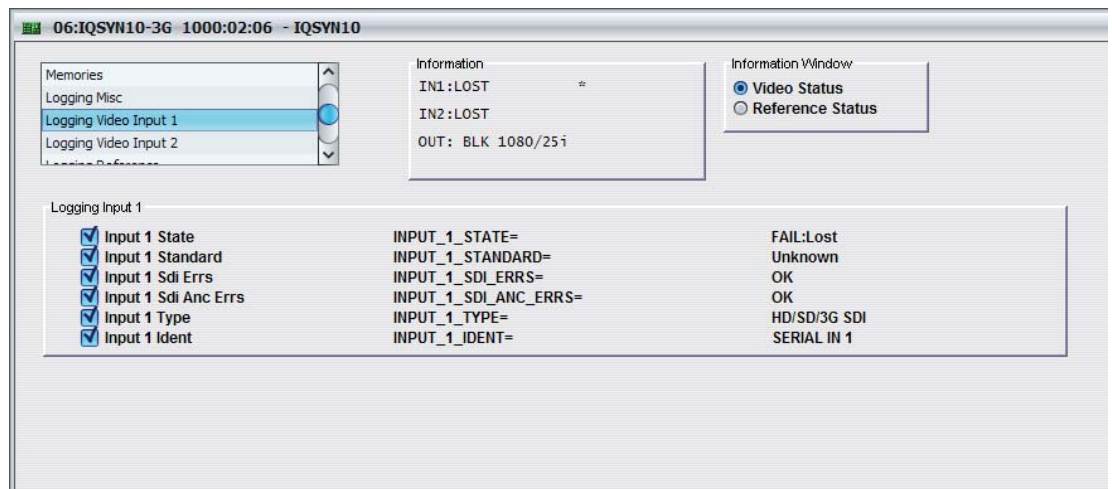
### 5.7.1 Logging Misc

The **Logging Misc** screen displays the current log information about the module's basic parameters.



### 5.7.2 Logging Video Input 1/2

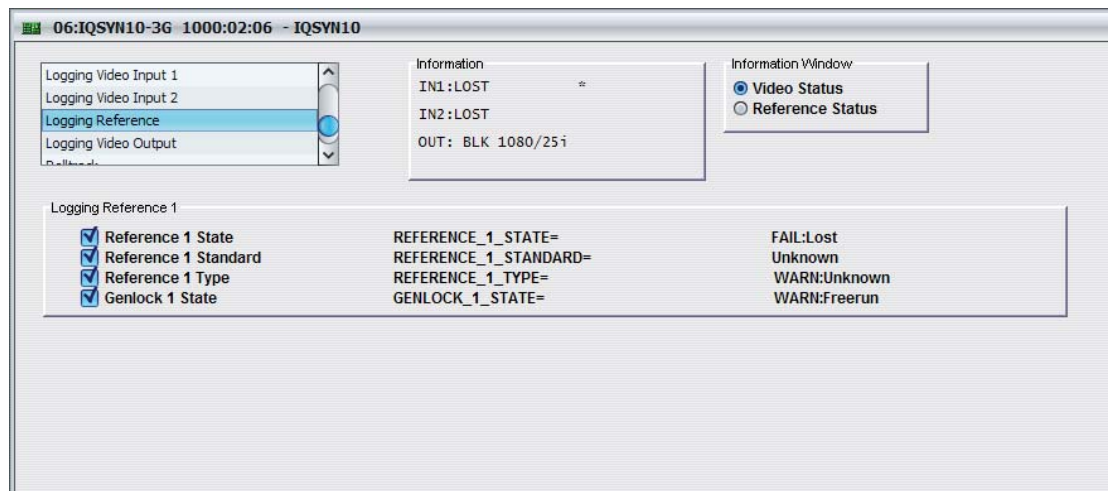
The **Logging Video Input 1/2** screens display the current log information for the relevant video inputs.





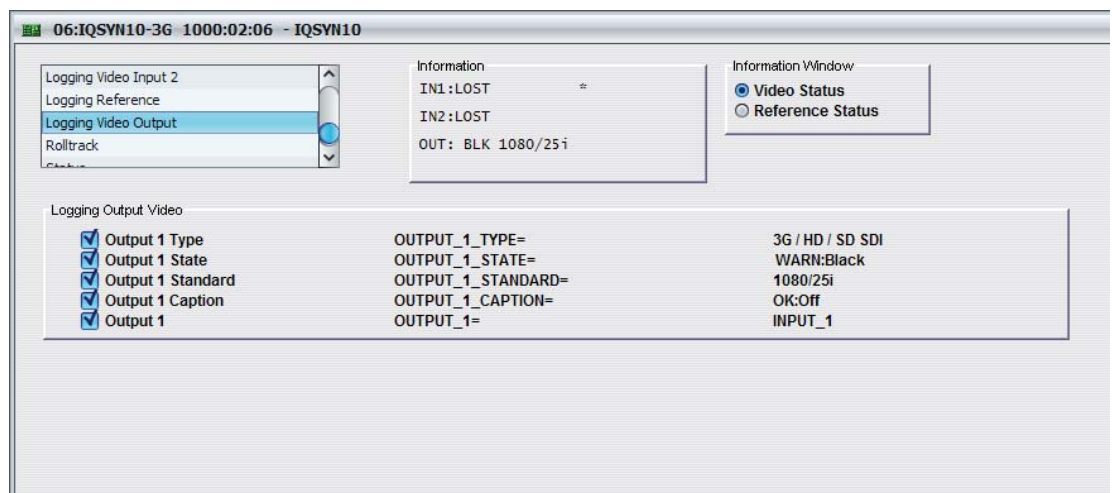
### 5.7.3 Logging Reference

The **Logging Reference** screen displays the current log information for the reference input.



### 5.7.4 Logging Video Output

The **Logging Video Output** screen displays the current log information for the video output.



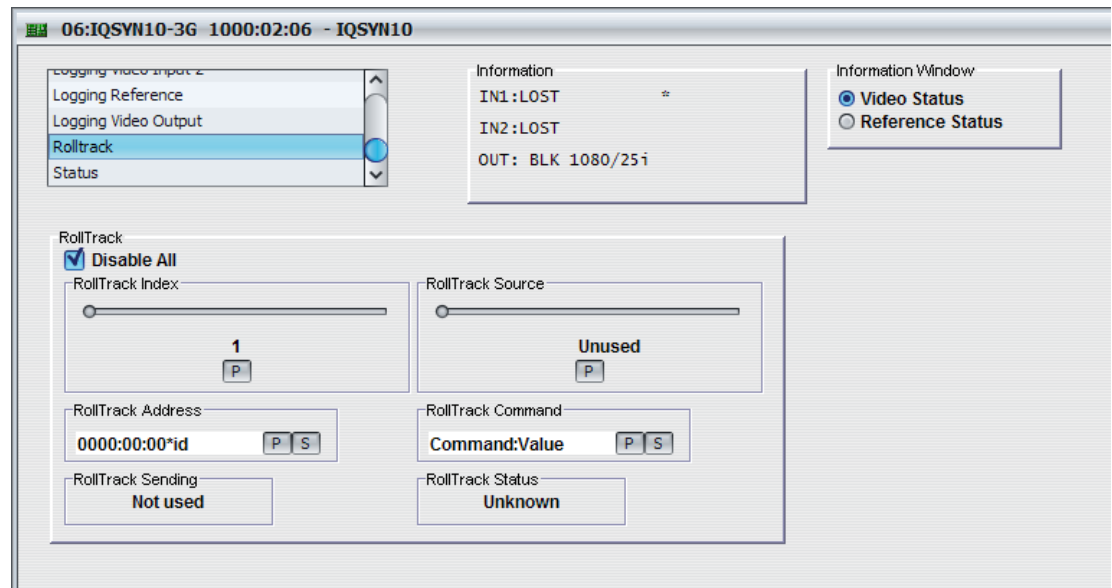
### 5.7.5 Log Field Descriptions

| Log Field             | Description  |
|-----------------------|--|
| SLOT_START=           | Displays the rear panel slot start (boot-up) number.   |
| SLOT_WIDTH=           | Displays the rear panel slot width. For example, 1 or 2.   |
| REAR_STATUS=          | Display the status of the rear panel. Valid values are: <ul style="list-style-type: none"> <li>• OK</li> <li>• FAIL:Lost</li> </ul>  |
| REAR_ID=              | Displays a rear panel identifier number.   |
| FIRMWARE_VERSION=     | Displays the FPGA version.   |
| LICENSED_OPTIONS=     | Displays any specially licensed options, if applicable.  |
| BUILD_NUMBER=         | Displays the build number.   |
| OS_VERSION=           | Displays the operating system name and version. For example, KOS V115.   |
| HARDWARE_VERSION=     | Displays the hardware version number.  |
| UPTIME=               | Displays the time since the last restart in the format ddd:hh:mm:ss.   |
| SN=                   | Displays the module serial number, which consists of an S followed by eight digits.  |
| INPUT_N_STATE=        | Displays the current input state. Valid values are: <ul style="list-style-type: none"> <li>• OK</li> <li>• WARN:Mismatch</li> <li>• FAIL:Lost</li> </ul> <p><b>Note:</b> WARN:Mismatch indicates that the input and output standards are not the same.</p> |
| INPUT_N_STANDARD=     | This displays the current input signal standard. For example, 1080/29i.<br><br>If the input standard is not recognized or supported the field will display: WARN:Unknown   |
| INPUT_N_SDI_ERRS=     | Displays SDI errors. Valid values are: <ul style="list-style-type: none"> <li>• OK</li> <li>• WARN</li> </ul>  |
| INPUT_N_SDI_ANC_ERRS= | Displays ANC errors. Valid values are: <ul style="list-style-type: none"> <li>• OK</li> <li>• WARN</li> </ul>  |
| INPUT_N_TYPE=         | This displays the type of input as specified by the module's configuration. Valid values are 3G / HD /SD SDI.  |
| INPUT_N_IDENT=        | Display the input ID.  |
| REFERENCE_1_STATE=    | Displays the reference state. Valid values are: <ul style="list-style-type: none"> <li>• OK</li> <li>• FAIL:Lost</li> </ul>  |

| Log Field             | Description  |
|-----------------------|--|
| REFERENCE_1_STANDARD= | Displays the current video standard of the reference signal.<br>For example, 1080/59P  |
| REFERENCE_1_TYPE=     | Displays the reference type. Valid values are: <ul style="list-style-type: none"> <li>• OK:Tri-Level</li> <li>• OK:Bi-Level</li> <li>• WARN:Unknown</li> </ul>                       |
| GENLOCK_1_STATE=      | Displays the Genlock state. Valid values are: <ul style="list-style-type: none"> <li>• OK:Reference</li> <li>• OK:Input</li> <li>• WARN:Freerun</li> <li>• WARN:CrossLock</li> </ul> |
| OUTPUT_N_TYPE=        | 3G / HD / SD SDI   |
| OUTPUT_N_STATE=       | <ul style="list-style-type: none"> <li>• OK</li> <li>• WARN:Pattern</li> <li>• WARN:Black</li> <li>• WARN:Freeze</li> </ul>  |
| OUTPUT_N_STANDARD=    | Displays the current output video standard.  |
| OUTPUT_N_CAPTION=     | <ul style="list-style-type: none"> <li>• OK:Off</li> <li>• WARN:On</li> </ul>  |
| OUTPUT_N=             | Displays the relevant input source for the output video.   |

## 5.8 RollTrack

The **RollTrack** screen allows information to be sent, via the RollCall™ network, to other compatible units connected on the same network.



### 5.8.1 Disable All

When checked, all RollTrack items are disabled.

### 5.8.2 RollTrack Index

This slider enables up to 70 RollTrack outputs to be setup. Dragging the slider selects the RollTrack Index number, displayed below the slider. Clicking the **P** button selects the default preset value.

### 5.8.3 RollTrack Source

This slider enables the source of information that triggers the transmission of data to be selected. Dragging the slider selects the RollTrack source, displayed below the slider. Clicking the **P** button selects the default preset value. When no source is selected, **Unused** is displayed.

### 5.8.4 RollTrack Address

This item enables the address of the selected destination unit to be set.

The address may be changed by typing the new destination in the text area and then selecting the **S** button to save the selection. Clicking the **P** button returns to the default preset destination.

The RollTrack address consists of four sets of numbers, for example, **0000:10:01\*99**.

- The first set (**0000**) is the network segment code number.
- The second set (**10**) is the number identifying the (enclosure/mainframe) unit.
- The third set (**01**) is the slot number in the unit.
- The fourth set (**99**) is a user-defined identification number for the destination unit in a multi-unit system. This ensures that only the correct unit will respond to the command. If left at 00 an incorrectly fitted unit may respond unexpectedly.

### 5.8.5 RollTrack Command

This item enables a command to be sent to the selected destination unit.

The command may be changed by typing a code in the text area and then selecting the **S** button to save the selection. Clicking the **P** button returns to the default preset command.

The RollTrack command consists of two sets of numbers, for example: **84:156**.

- The first number (**84**) is the actual RollTrack command.
- The second number (**156**) is the value sent with the RollTrack command.

### 5.8.6 RollTrack Sending

A message is displayed here when the unit is actively sending a RollTrack command. Possible RollTrack Sending messages are:

|                            |   |
|----------------------------|---|
| <b>String</b>              | A string value is always being sent.                        |
| <b>Number</b>              | A number value is always being sent.                        |
| <b>No</b>                  | The message is not being sent.                              |
| <b>Yes</b>                 | The message is being sent.                                  |
| <b>Internal Type Error</b> | Inconsistent behavior. Please contact your local SAM agent. |

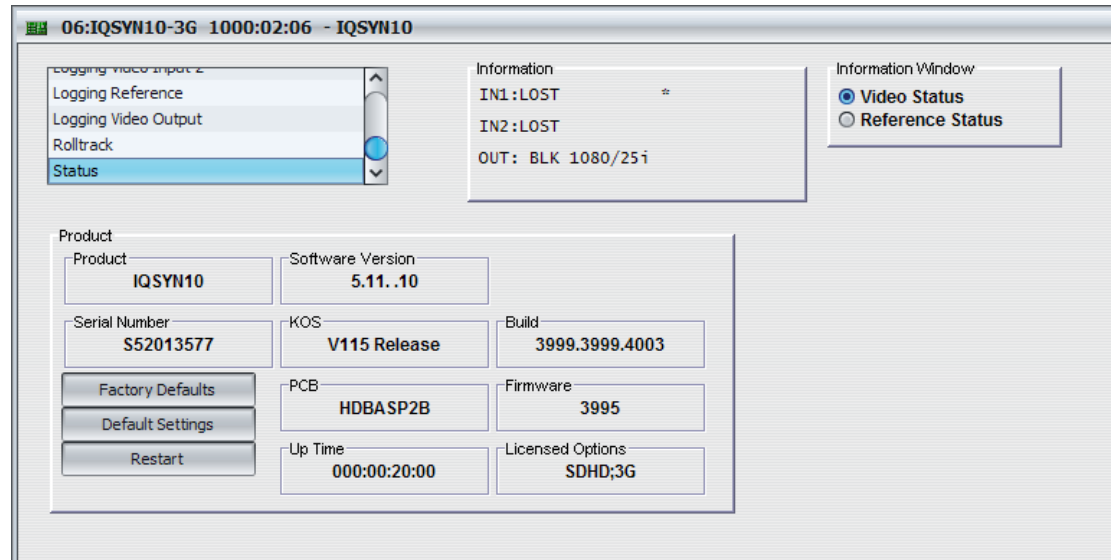
### 5.8.7 RollTrack Status

A message is displayed here to indicate the status of the currently selected RollTrack index. Possible RollTrack Status messages are:

|                 |   |
|-----------------|---|
| <b>OK</b>       | RollTrack message sent and received OK.   |
| <b>Unknown</b>  | RollTrack message has been sent but it has not yet completed.   |
| <b>Timeout</b>  | RollTrack message sent but acknowledgement not received. This could be because the destination unit is not at the location specified.                   |
| <b>Bad</b>      | RollTrack message has not been correctly acknowledged at the destination unit. This could be because the destination unit is not of the type specified. |
| <b>Disabled</b> | RollTrack sending is disabled.  |

## 5.9 Status

The **Status** screen displays basic information about the module, such as the serial number and software versions. The functions on the screen may be used to restart the module or return all settings to their factory or default settings.



- **Product:** The name of the module.
- **Software Version:** The currently installed software version number.
- **Serial No:** The module serial number.
- **Build:** The factory build number. This number identifies all parameters of the module.
- **KOS:** The operating system version number.
- **PCB:** The Printed Circuit Board revision number.
- **Firmware:** The module firmware revision number.
- **Up Time:** The time since the module was last started.
- **Licensed Options:** The currently installed licensed options associated with the module.

### 5.9.1 Factory Defaults

The **Factory Defaults** button enables the module settings to be reset to their factory defaults.

**Note:** Resetting the module to its factory defaults also clears all the saved memory settings.

### 5.9.2 Default Settings

The **Default Settings** button enables module settings to be reset to their factory defaults, leaving user memories intact.

### 5.9.3 Restart

The **Restart** button enables the module to be rebooted, simulating a power-up/power-down cycle.