

7800SRG-IP PTP Slave Sync Generator User Manual

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IMPORTANT SAFETY INSTRUCTIONS

	The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "Dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.
	The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (Servicing) instructions in the literature accompanying the product.

- Read this information
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, or other apparatus (including amplifiers) that produce heat.
- Do not defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades, one blade being wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way (i.e. liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped).

WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.

WARNING

DO NOT EXPOSE THIS EQUIPMENT TO DRIPPING OR SPLASHING AND ENSURE THAT NO OBJECTS FILLED WITH LIQUIDS ARE PLACED ON THE EQUIPMENT.

WARNING

TO COMPLETELY DISCONNECT THIS EQUIPMENT FROM THE AC MAINS, DISCONNECT THE PLUG FROM THE DUAL POWER SUPPLIES AC RECEPTACLE.

WARNING

THE MAINS PLUG OF THE POWER SUPPLY CORD SHALL REMAIN READILY OPERABLE.

FIBER OPTIC DEVICES

Some modules in this product may have fiber optic outputs. The following safety information applies to the optical outputs of these modules. Consult individual chapters for specific safety information for handling fiber optics.

WARNING



Never look directly into an optical fiber. Irreversible eye damage can occur in a matter of milliseconds.

MODULES WITH LITHIUM BATTERIES

Some modules may be fitted with a 3V Lithium battery type CR2032. Consult servicing information individual chapters for specific safety information for replacing batteries.



CAUTION

Danger of explosion if battery is exposed to excessive heat such as direct sunlight, fire, etc.

ELECTROSTATIC SENSITIVE DEVICES



The hand symbol within an equilateral triangle is intended to alert the user to instructions related to precautions for handling electrostatic-sensitive devices. See “Electro Static Discharge (ESD) Precautions” section for further details.

INFORMATION TO USERS IN EUROPE

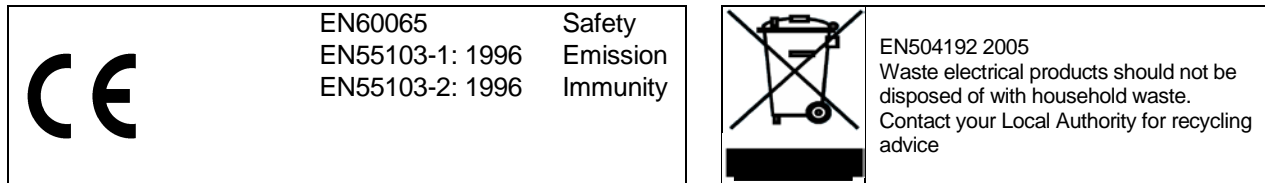
NOTE

This equipment with the CE marking complies with both the EMC Directive (2004/108/EC) and the Low Voltage Directive (2006/95/EC) issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European standards:

- EN60065 Product Safety
- EN55103-1 Electromagnetic Interference Class A (Emission)
- EN55103-2 Electromagnetic Susceptibility (Immunity)
-

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



INFORMATION TO USERS IN THE U.S.A.

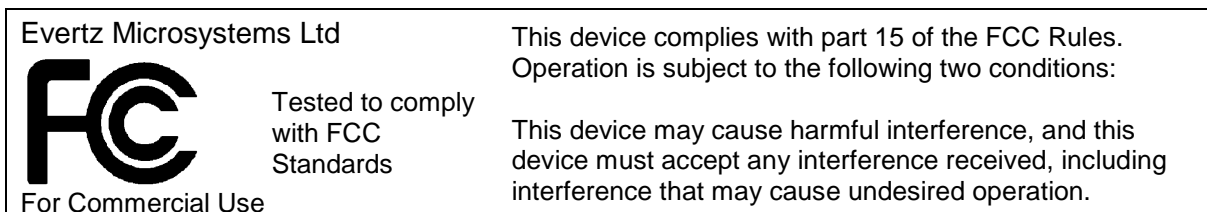
NOTE

FCC CLASS A DIGITAL DEVICE OR PERIPHERAL

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

WARNING

Changes or modifications not expressly approved by Evertz Microsystems Ltd. could void the user's authority to operate the equipment. Use of unshielded plugs or cables may cause radiation interference. Properly shielded interface cables with the shield connected to the chassis ground of the device must be used.



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REVISION HISTORY

<u>REVISION</u>	<u>DESCRIPTION</u>	<u>DATE</u>
1.0	Initial Release	June 2018

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Although every attempt has been made to accurately describe the features, installation and operation of this product in this manual, no warranty is granted nor liability assumed in relation to any errors or omissions unless specifically undertaken in the Evertz sales contract or order confirmation. Information contained in this manual is periodically updated and changes will be incorporated into subsequent editions. If you encounter an error, please notify Evertz Customer Service department. Evertz reserves the right, without notice or liability, to make changes in equipment design or specifications.

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1.1.1.1. OVERVIEW

The 7800SRG-IP is a precision time protocol (PTP) referenced black burst sync generation module. In the modern media facility or data center, timing can be distributed along with the video and audio essence over IP. Hence, reducing or eliminating the need for traditional large coaxial black burst or sync distribution systems.

This module is ideal for hybrid IP-Baseband systems which have remote edit suites, campus distributed LAN timing, WAN based systems and baseband islands. Particularly in areas which will not have traditional sync distribution systems or where the application doesn't warrant an enterprise level GPS based grand master clock system, like the 5700MSC-IP.

The 7800SRG-IP locks to PTP from one of the 10/100/1000BASE-T ports and generates 6 black burst outputs that are locked to the upstream grand master clock system.

Each of the six BNC outputs may be configured to provide independently timed color black (black burst) outputs or independently timed HDTV tri-level sync outputs. Also, each output can be configured to provide 10MHz, 5MHz, PAL Subcarrier, NTSC Subcarrier, and other bespoke sync signals for timing to legacy equipment.

It is an excellent complementary product to the 5700MSC-IP Grand Master Clock system.

Features & Benefits:

- Primary/secondary 10/100/1000 BASE-T input for timing reference
- 6 independent timeable and configurable sync outputs
- Derives frequency and phase from Precision Time Protocol (IEEE1588-J, SMPTE 2059-2, or AES67 profile)
- Excellent for edit suites or remote baseband islands in hybrid IP/baseband plants
- VistaLINK enabled for control

Ordering Information:

Rear Plate Suffix

- +3RU 3RU Rear Plate for use with 350FR, 7700FR-C, or 7800FR Multiframe

Enclosures

- 350FR 3RU Portable Multiframe which holds up to 7 single slot modules
- 7700FR-C 3RU Multiframe which holds up to 15 single slot modules
- 7800FR 3RU Multiframe which holds up to 15 single slot modules
- 7801FR 1RU Multiframe which holds up to 4 single or 2 dual slot modules

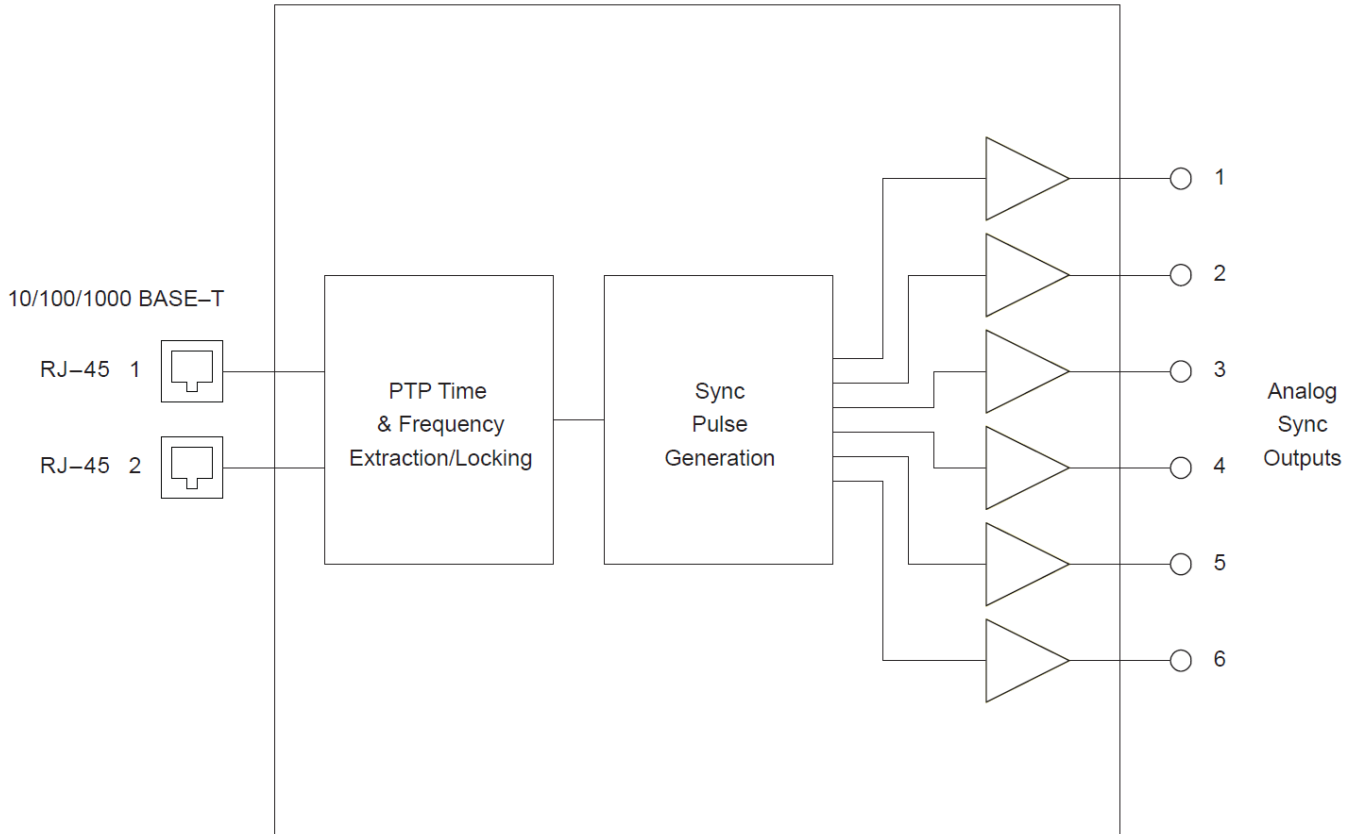


Figure 1-1: 7800SRG-IP Block Diagram

2. TECHNICAL SPECIFICATIONS

2.1. 10/100/1000 BASE-T TIMING NETWORK

Quantity: 2
Network Type: IEEE 802.3 (10BASE-T)
IEEE 802.3u (100BASE-TX)
IEEE 802.3ab (1000BASE-T)
Connector: RJ-45
Timing: IEEE1588 (annex J)
SMPTE 2059-2
AES67

2.2. ANALOG SYNC OUTPUTS

Output Standards:

Black Burst: SMPTE ST 170 (NTSC-M), ITU-R BT.1700-1 (PAL-B)
Bi-Level: Slo-Pal 625i/48, 625i/47.95, 480p/59.94
HD Tri-Level: SMPTE ST 274 (1080p/23.98, 1080p/24, 1080i/50, 1080i/59.94, 1080i/60, 1080p/23.98sF, 1080p/24sF, 1080p/25, 1080p/29.97, 1080p/30, 1080p/50, 1080p/59.94, 1080p/60)
SMPTE ST 296 (720p/59.94, 720p/60, 720p/50, 720p/30, 720p/24)
Pulse Signals: PAL color frame, 1Hz pulse, IRIG DATUM 1/1.001Hz pulse, 6/1.001Hz pulse
CW Signals: 5MHz, 10MHz, NTSC-M Subcarrier, PAL-B Subcarrier
Wordclock: 48kHz Wordclock
Level 5V CMOS (1k Ω) or \pm 1V (75 Ω)
10MHz Output: 1.0V p-p, 2.0V p-p, in 75 Ω
SNR > 70dB rms
SFDR > 50dBc
Connector: 75 Ω HD-BNC
Number of Outputs: 6
DC Offset: 0V \pm 0.05V
Return Loss: > 40dB up to 10MHz
SNR: > 75dB rms
Output Levels: 1.0V p-p, 2.0V p-p, in 75 Ω , selectable

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3. INSTALLATION

3.1. REAR PANEL DESCRIPTION

Figure 3-1 provides an illustration of the 7800SRG-IP rear panel.

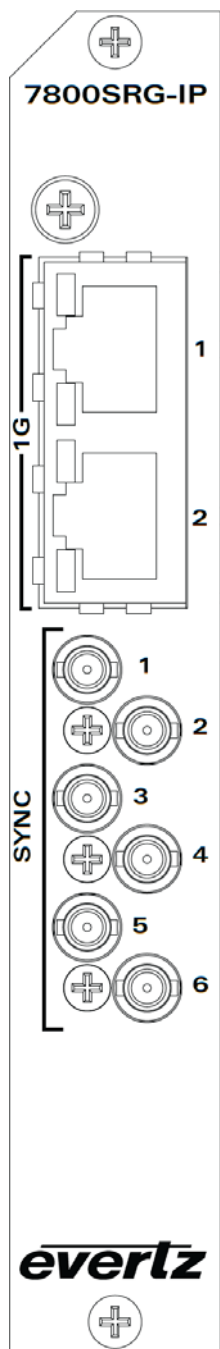


Figure 3-1: 7800SRG-IP Rear Panel

3.1.1. Sync Outputs

The BNC connectors provide six independent programmable sync outputs. The different output modes are described below:

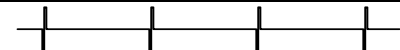
Black Burst Signals



NTSC-M
PAL-B

There are two color black output modes, one in NTSC-M format and the other in PAL-B format. These modes are referred to as “black burst” or “color black” because they contain black video and have a colorburst to provide a colorframe reference. Vertical Interval Time Code (VITC) can be inserted on up to two lines in these modes. Additionally, a SMPTE ST 318 ten-field reference can be inserted onto line 15 for the NTSC-M output mode. Both these outputs modes can be phased independently over the entire color frame sequence.

HD Tri-Level Signals



North American
1080i/60
1080i/59.94
1080p/60
1080p/59.94
1080p/30
1080p/29.97
720p/60
720p/59.94
720p/30

European
1080i/50
1080p/50
1080p/25
720p/50

Film Standards
1080p/24
1080p/24sF
1080p/23.98
1080p/23.98sF
720p/24

Analog tri-level sync output modes are available for a variety of HD formats. These outputs are generated according to SMPTE ST 274 and SMPTE ST 296. All tri-level sync formats can be phased independently.

If the 1035i/59.94 format is required, select 1080i/59.94. These sync formats are identical to each other. Similarly, if 1035i/60 is required, select 1080i/60.

The 1080p/30sF, 1080p/29.97sF, and 1080p/25sF sync formats are identical to the 1080i/60, 1080i/59.94, and 1080i/50 output modes available here.

The 1080p/60, 1080p/59.94, and 1080p/50 sync formats can be used for 3G 1080p synchronization, but contain no field information. The 1080i/60, 1080i/59.94, and 1080i/50 formats should be used instead, whenever possible.

Continuous Wave (CW) Signals




10MHz
5MHz
NTSC-M Subcarrier
PAL-B Subcarrier


The continuous wave (CW) output modes produce a sine wave at a specific frequency. The 10MHz and 5MHz outputs are locked in frequency to the reference but are not phased with respect to the reference.


The NTSC Subcarrier (3.579MHz) is phase locked only when using NTSC black burst as a reference. It will be inverted (180° out of phase) with respect to a proper NTSC subcarrier and is better described as a “burst-locked sinewave”.

The PAL Subcarrier (4.434MHz) is phase locked only when using PAL black

burst as a reference. It is generated at sine (U) phase.

Wordclock		
Wordclock Level 5V CMOS	The wordclock output mode produces a square wave at 48kHz. It is high during subframe1 (left channel) and low during subframe2 (right channel). Sync outputs that are set to wordclock cannot be independently phased.	

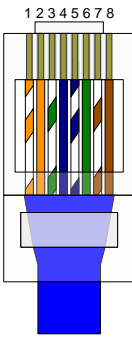
Pulse Signals		
1Hz 1/1.001Hz 6/1.001Hz PAL Colorframe IRIG1 Datum	<p>The pulse output modes provide timing pulses that can be used to lock downstream equipment or can be helpful for troubleshooting purposes. These outputs cannot be phased and always remain phase-locked to the frequency reference. These signals may not be affected by any global phase offset.</p> <p>The 1Hz pulse goes high at the beginning of each second.</p> <p>The 1/1.001Hz pulse indicates the start of the second for 29.97Hz LTC/VITC rates and is also synchronized to NTSC color field 1. Will be high for the duration of NTSC color field 1.</p> <p>The 6/1.001Hz pulse indicates where 59.94Hz video coincides with the 23.98Hz standards. This pulse is only phase locked when using a NTSC with a ten-field pulse.</p> <p>The PAL Colorframe pulse will be high during PAL color field 1. It will only be phase locked when referenced to a PAL-B reference.</p> <p>The IRIG1 Datum pulse will go high at the start of the IRIG second for 100ms.</p>	

Bi-Level		
625i/48 625i/47.95 480p/59.94	<p>The slo-PAL sync output modes use the PAL video format but run at a slower frame rate to be synchronous with 24Hz and 23.98Hz film standards. These output modes consist of sync pulses only and do not have a colorburst.</p> <p>These outputs can be phased independently. Note that VITC cannot be inserted onto slo-PAL outputs.</p>	

3.1.2. Ethernet Connections

The 7800SRG-IP is equipped with two 1G ports. Both ports can do PTP, FTP and SNMP. The 1G ports can be used with 10Base-T (10 Mbps), 100Base-TX (100 Mbps) or 1000Base-T (1000Mbps) twisted pair Ethernet cabling systems. When connecting for 10Base-T systems, category 3, 4, or 5 UTP cable as well as EIA/TIA – 568 100Ω STP cable may be used. When connecting for 100Base-TX and 1000Base-T systems, category 5 or better UTP cable is required. The cable must be straight-through with an 8-pin modular connector at each end.

The straight-through Ethernet cable can be purchased or constructed using the pinout information in Table 3-1. A color code wiring chart is provided in Table 3-1 for the current Ethernet standards (AT&T 258A or EIA/TIA 258B color coding shown). Also refer to the notes following the table for additional wiring guide information.



Pin #	Signal	EIA/TIA 568A	AT&T 258A or EIA/TIA 568B	10BaseT or 100BaseTX	1000BaseT
1	Transmit +	White/Green	White/Orange	X	X
2	Transmit –	Green	Orange	X	X
3	Receive +	White/Orange	White/Green	X	X
4	Bi-Directional +	Blue	Blue	Not used (required)	X
5	Bi-Directional –	White/Blue	White/Blue	Not used (required)	X
6	Receive –	Orange	Green	X	X
7	Bi-Directional +	White/Brown	White/Brown	Not used (required)	X
8	Bi-Directional –	Brown	Brown	Not used (required)	X

Table 3-1: Standard 8-pin Modular Connector Wiring Color Codes

Note the following cabling information for this wiring guide:

- Only two pairs of wires are used in the 8-pin modular connector to carry Ethernet signals for 10BaseT and 100BaseTX. 1000BaseT uses all four pairs.
- Even though pins 4, 5, 7 and 8 are not used for 10BaseT and 100BaseTX, it is mandatory that they be present in the cable.
- 10BaseT and 100BaseTX use the same pins; the same crossover cable will work with both.
- Pairs may be solid colors and may not have a stripe.
- Category 5 cable must use Category 5 rated connectors.

The maximum cable run between the 7800SRG-IP and the supporting switch is 328 ft (100 m).

3.2. HARDWARE INSTALLATION

To successfully install the 7800SRG-IP you will require the following:

1. An unused IP address on the network
2. An empty slot in the 350FR, 7700FR-C, 7800FR, or 7801FR frames
3. An Evertz serial ribbon cable
4. VistaLINK[®] PRO Server IP address

Before handling the card it is important to minimize the potential effects of static electricity. It is therefore recommended that an ESD strap be worn.

Locate a vacant slot on the frame chassis. Unpack the 7800SRG-IP and separate the rear panel from the main card. Insert the rear panel into the back of the chassis and secure using the screws provided. Once the rear panel is secured, slide in the main card along the slot runners and mate it into the rear panel.

3.3. INITIAL NETWORK CONFIGURATION

1. Connect the Evertz serial ribbon cable to the Front Panel Emulation Port (2x3 header) at the front edge of the 7800SRG-IP main card, as outlined in red in Figure 3-2.



Figure 3-2: 7800SRG-IP Main Card

2. Start a terminal program and configure the port settings.
Baud Rate: 460800
Data: 8 bit
Parity: None
Stop: 1 bit
3. Type the following commands to configure network settings:

```
ifconfig ifnum inet srg-ip-address netmask srg-netmask
```

Where *ifnum* is either **0** (1G-1), **1** (1G-2) or **2** (MI)
srg-ip-address is user defined
srg-netmask is user defined

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4. VISTALINK[®] PRO INTERFACE

The 7800SRG-IP is controlled using VistaLINK[®] PRO. VistaLINK[®] PRO operates using Ethernet and SNMP control protocols. This section assumes that the VistaLINK[®] PRO server and client are already configured for your network and you have basic knowledge of the VistaLINK[®] PRO interface. It also assumes that the user or network administrator has already added the appropriate JAR file to the server, and both the client and server applications have been restarted, as shown in Section 5.

To communicate with the 7800SRG-IP and VistaLINK[®] PRO, use one of the module's 1G Ethernet ports and the appropriate JAR file.

Open VistaLINK[®] PRO and click on the refresh tree icon. The IP address of the 7800SRG-IP port should appear in the tree formation. The system configuration controls can be accessed by right-clicking on the module name in the hardware tree and selecting **View Configuration**. The following sections outline the various tabs and parameters that can be defined.

4.1. OUTPUT



Figure 4-1: Output Tab

Output

VITC Jam All: This commands the 7800SRG-IP to jam all the VITC, LTC and burn-in time outputs to the selected time reference immediately. If the time reference is LTC, or VITC, the input time will be jammed to the outputs. Otherwise, it will jam the time to the system time.

Global Pedestal

Enable: This parameter controls whether the global pedestal is active in NTSC standards.

4.2. GENERAL

Figure 4-2: General Tab

Set Time Date

Set System Time: This parameter sets the time. Format is hh:mm:ss.

Set System Date: This parameter sets the date. Format is yy:mm:dd.

VITC Ltc User Bits

User Bit Mode: This parameter sets the mode of user bits.

User Bits: This parameter sets the user bit field for VITC and LTC. Data input format is hex characters. Note this parameter is only valid if **User Bit Mode** is set to *Manual*.

TRAP <1-4>

TRAP Enable: This parameter is used to turn trap IPs on and off.

TRAP IP: This parameter sets the IP address for trap destinations. This should be entered in a decimal dot format. Any combination of address and mask that gives an IP of 0.0.0.0 will be ignored.

Syslog

Syslog IP: This parameter sets the destination IP address for Syslog messages.

Syslog Enable: This parameter enables the sending of Syslog messages.

Level 1 is normal

Level 2 is large spam

DST Rules

Mode: This parameter selects Daylight Saving Time mode.

Day of Week of Month selects a time such as Day 1 of Week 1 of Month 4 (i.e. the first Sunday in April).

Day of Month selects an absolute date such as Day 3 of Month 5 (i.e. May 5).

Start Hour: This parameter selects the Daylight Saving Time starting hour. The integer range is from 0 = midnight to 23 = 11PM.

Start Day: This parameter selects the Daylight Saving Time starting day. If **Mode** is set to *Day of Week of Month*, then the maximum should be 7 which represents 1 = Sunday through 7 = Saturday. Otherwise the range is 1 to 31.

Start Week: This parameter selects the Daylight Saving Time starting week.

Start Month: This parameter selects the Daylight Saving Time starting month.

End Hour: This parameter selects the Daylight Saving Time ending hour. The integer range is from 0 = midnight to 23 = 11PM.

End Day: This parameter selects the Daylight Saving Time ending day. If **Mode** is set to *Day of Week of Month*, then the maximum should be 7 which represents 1 = Sunday through 7 = Saturday. Otherwise the range is 1 to 31.

End Week: This parameter selects the Daylight Saving Time ending week.

End Month: This parameter selects the Daylight Saving Time ending month.

Offset: This parameter selects the Daylight Saving Time offset that will be used in hours.

4.3. STATUS

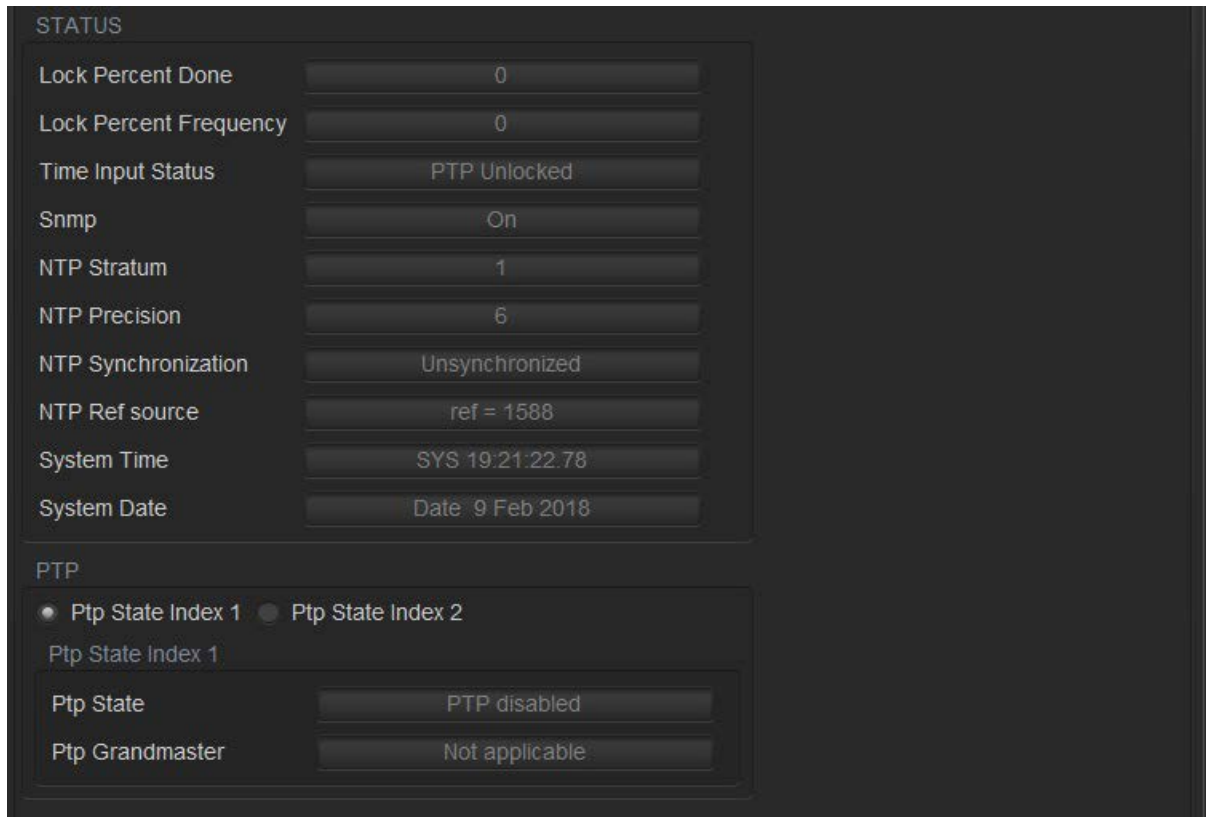


Figure 4-3: Status Tab

Status

Lock Percent Done: This parameter displays the percentage completion of a locking operation. It must be 100% to be considered locked. 0 to 49% is initialization, 50 to 99% is when the phase lock of the 7800SRG-IP is approaching lock.

Lock Percent Frequency: This parameter shows the centering of the reference with respect to the high stability internal reference. It is a relative number and must be between -75% and +75% to be able to lock.

Time Input Status: This parameter shows the input reference status.

SNMP: This parameter shows the state of the SNMP control.

NTP Stratum: This parameter sets the Stratum put in the server and broadcast messages. It represents hops from the master. 0 is used to tell clients to stop asking. 1 is highest, and 15 is generally the lowest usable.

NTP Precision: This parameter displays the estimated precision. It is a \log_2 number of seconds.

NTP Synchronization: This parameter displays the leap indicator put in the server and broadcast packet.

NTP Ref Source: This parameter displays the reference type put in the server and broadcast packets.

System Time: This parameter displays the current system time.

System Date: This parameter displays the current system date.

PTP

PTP State: This parameter shows the PTP engine state.

PTP Grandmaster: This parameter shows the PTP grandmaster ID.

4.4. INPUT

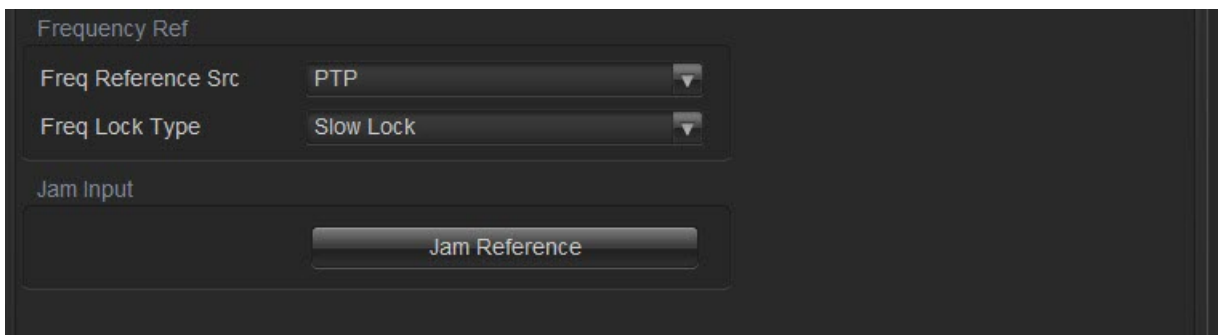


Figure 4-4: Input Tab

Frequency Ref

Freq Reference Src: This parameter selects the system frequency reference source. This is the reference used to set the frequency and phase of the system clock if PTP is selected.

Freq Lock Type: This parameter allows the 7800SRG-IP to jam its input reference whenever it needs to, if set to *Abrupt Lock*, or only on user command if set to *Slow Lock*.

Jam Input

Jam Reference: This button commands the 7800SRG-IP to jam the frequency reference if needed. It is only valid if **Freq Lock Type** is *Slow Lock* and the 7800SRG-IP has determined that frequency reference will need a significant time to lock. In this case a Reference Jam Needed warning will be active. This button will clear that warning.



CAUTION: This may cause a discontinuity in all the outputs' timing. This may have adverse effects on downstream equipment.

4.5. SYNC

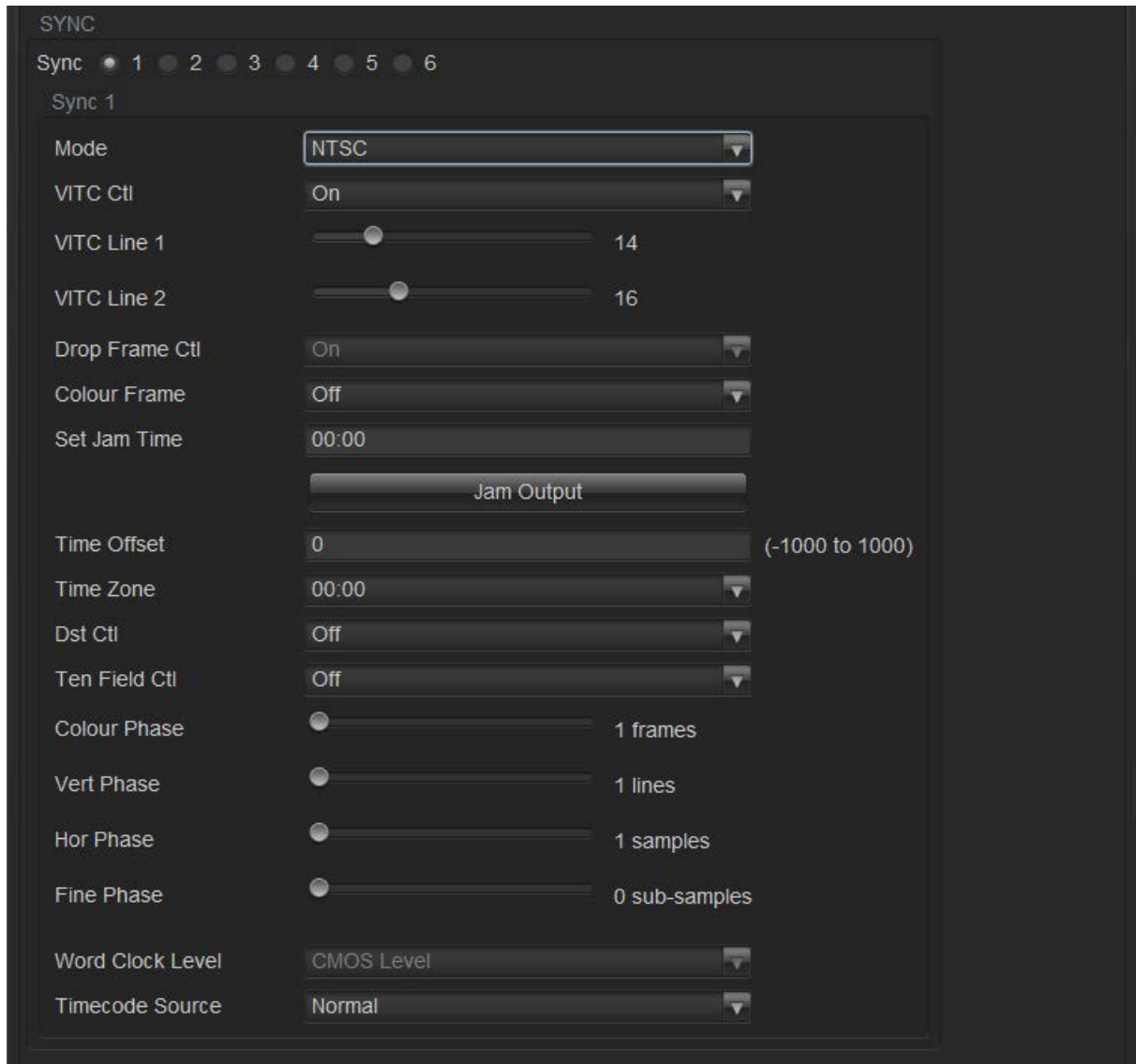


Figure 4-5: Sync Tab

Sync <1-6>

Mode: This parameter sets the sync mode selection.

VITC Ctl: This parameter enables embedded VITC on PAL or NTSC outputs.

VITC Line <1-2>: This parameter sets embedded VITC Line <1-2> on PAL or NTSC outputs. If PAL, the range is 6 to 31. If NTSC, the range is 10 to 30.

Drop Frame Ctl: This parameter enables a drop frame bit on NTSC.

Colour Frame: This parameter enables a colour frame bit on PAL or NTSC outputs.

Set Jam Time: This parameter sets the jam time for video output. The format is hh:mm. Minutes must be modulo ten.

Jam Output: This parameter jams the output video VITC time to reference.

Time Offset: This parameter sets the offset in frames to the video VITC output.

Time Zone: This parameter sets the time zone of the video VITC output. Steps -1200, -1130, -1100, -1030 ... 1130, 1200.

Dst Ctl: This parameter enables automatic Daylight Saving Time.

Ten Field Ctl: This parameter enables Ten Field pulse on NTSC outputs.

Colour Phase: This parameter sets the colour frame phase of video on PAL or NTSC outputs. If PAL, the range is 1 to 4. If NTSC, the range is 1 to 2.

Vert Phase: This parameter sets the vertical phase of video.

Hor Phase: This parameter sets the horizontal phase of video.

Fine Phase: This parameter sets the fine phase of video. It should be displayed as a percentage, i.e. 0.00 to 99.4%, where each count represents 100/256%.

Word Clock Level: This parameter sets the sinusoidal output to 5V CMOS or $\pm 1V$. The 5V output can only be achieved with a high impedance load.

Timecode Source: This parameter sets the timecode source to normal (compatible with existing 560x) or SMPTE (SMPTE-2059), which obtains DST and time zones from the master, or SMPTE Local which obtains DST and time zones from local settings.

4.6. PTP

Figure 4-6: PTP Tab

PTP

PTP Priority <1-2>: This parameter sets IEEE1588 priority <1-2>.

PTP SMPTE Enable: This parameter enables IEEE1588 SMPTE-2059 and sets a source to get settings from.

PTP Domain: This parameter sets the IEEE1588 domain.

Port

PTP Mode: This parameter sets the operation mode of the PTP master.

PTP Sync Rate: This parameter sets the rate of IEEE1588 sync packets. If the **PTP Mode** is *IEEE1588*, the range is 1 to 3. If the **PTP Mode** is *SMPTE-2059*, the range is 3 to 9.

PTP Announce Rate: This parameter sets the rate of IEEE1588 announce packets. If **PTP Mode** is *IEEE1588*, the range is 1 to 5. If **PTP Mode** is *SMPTE-2059*, the range is 4 to 8.

PTP Timeout: This parameter sets the timeout of IEEE1588 in units of announce packets.

PTP Enable: This parameter enables IEEE1588 PTP.

PTP Acc Mst Enable: This parameter enables IEEE1588 PTP list of acceptable masters. If not enabled, then any master can be valid.

List

Master Enable: This parameter enables IPs. If on, then this IP is included in the acceptable master list.

Acceptable Master IP: This parameter sets the acceptable master IP address.

Acceptable Master Alternate Priority 1: This parameter sets the priority 1 to be used for this acceptable master.

4.7. NOTIFY

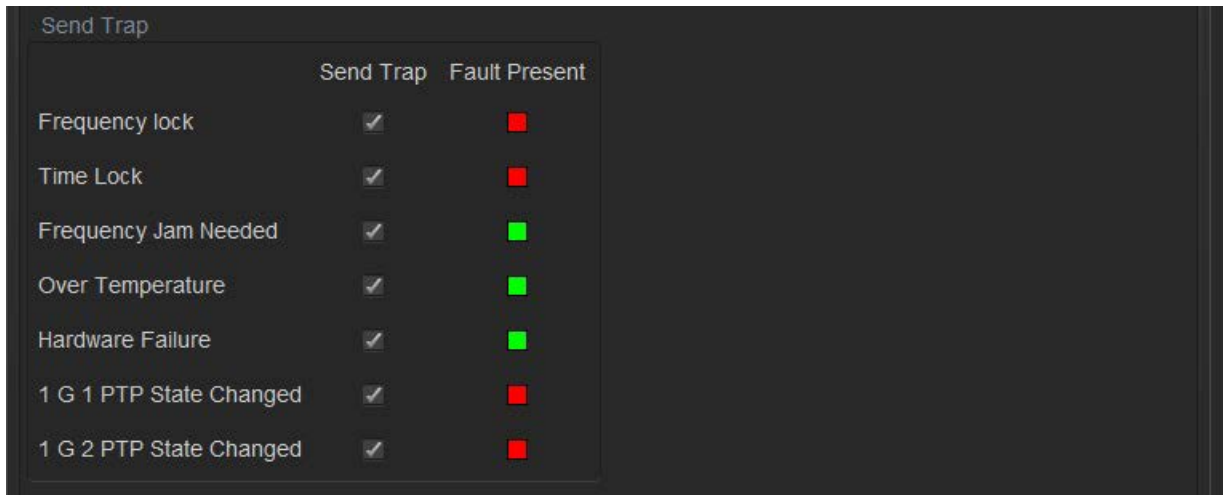


Figure 4-7: Notify Tab

Send Trap: This parameter is used to turn traps on and off.

Fault Present: This control checks whether a fault is currently present. Red indicates a fault is present while green indicates no fault.

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5. FIRMWARE UPGRADE PROCEDURES

5.1. VISTALINK[®] PRO UPGRADE PROCEDURE

Products from Evertz are constantly evolving and new features are often added. It is therefore important to update the JAR files in use to provide access to all the latest features or enhancements. It will also be necessary to add JAR files for new products.

To perform a JAR update:

1. Ensure that all VistaLINK[®] PRO clients are closed (the clients which are not closed will automatically be disconnected as soon as the VistaLINK[®] PRO Server is restarted).
2. Open the VistaLINK[®] PRO Server and select **Help>Apply Update>Product** from the menu.
3. In the window that opens, select the latest JAR file for the 7800SRG-IP from its saved location on the computer and select **Open**.
4. At this point the VistaLINK[®] PRO Server will send a message asking to restart, select **Yes**. This will apply the update firmware to the 7800SRG-IP.
5. Once complete you may reopen the VistaLINK[®] PRO Client.



NOTE: To confirm that all updates have been successfully applied, select from the VistaLINK[®] PRO Server menu: Tools>View>Show/Hide Product update log.

5.2. FIRMWARE UPGRADE

To upgrade the firmware open a Windows Explorer window to <ftp://srg-ip-address/firmware> and drag and drop the .bin file to that location.

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