



MASTER SPG, MASTER CLOCK & TEST SET SYSTEM

Also Featured:



EVERTZ DIGITAL & ANALOG TIME DISPLAYS

- 1200DD
- 1201DD
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- 1275A

evertz®

COMBINATION MASTER SYNC PULSE GENER

5600MSC Master Sync & Time Reference Generator

The 5600MSC is a Master SPG, Master Clock and Master Time Code Generator all in one box. It provides analog black and HDTV tri-level sync signals and solves the problem of locking the in-house master clock system to the master video sync pulse generator. The separate 5600ACO automatic changeover unit completes the package.

A high stability, temperature controlled oscillator, provides the 5600MSC with better than 0.5×10^{-8} (0.005ppm) frequency reference. The free running drift of this 10MHz reference will be less than 0.1Hz (amounting to less than 1 millisecond time drift per day). This guarantees that any frequency drift, with time and temperature, will be within the tolerances expected from the best SPGs or master clocks available in the industry. The 5600MSC may also be referenced to an external 5MHz or 10MHz master oscillator if higher stability is required. By adding the GPS option, both the SPG and the Master Clock sections may be referenced to high stability time and frequency standards present in the Global Position System (GPS). The 5600MSC provides a high stability 10MHz output reference for use by other devices. Through VistaLINK® PRO it is possible to set up password-protected "user" and "engineering" modes. User mode limits menu access, thereby preventing potential mis-configurations of key sync outputs.



Master SPG Functions

- 6 independently timeable reference outputs
- PAL and NTSC blacks (simultaneously if required)
- 1Hz, 1/M Hz, 6/M Hz, PAL color frame
- HDTV Tri-level sync (simultaneously with blacks if required)
- All HDTV standards
- 5/10 MHz reference input
- 10MHz reference output
- Optional NTSC/PAL, SDI and HDTV test generators
- DARS reference (optional with +STG test generator)
- Analog and AES audio tones (optional with +STG test generator)
- Sub carrier stability of better than 0.1Hz per month
- Optional GPS receiver with ATR video phasing
- Audio work clock may be generated from DARS with 520DARS-W module

Slave SPG Functions

- Gen-lock mode for locking to other external black burst source

Test Generator Options

- PAL/NTSC/SDI/AES/DARS Test Generator and Analog Audio Tone outputs
- HD-SDI Test Generator with Source Ident and Audio Tones (embedded)
- Multiple test signals; 28 SDI/PAL, 33 SDI/NTSC over 30 HDTV
- Programmable Audio Tones (continuous or interrupted)

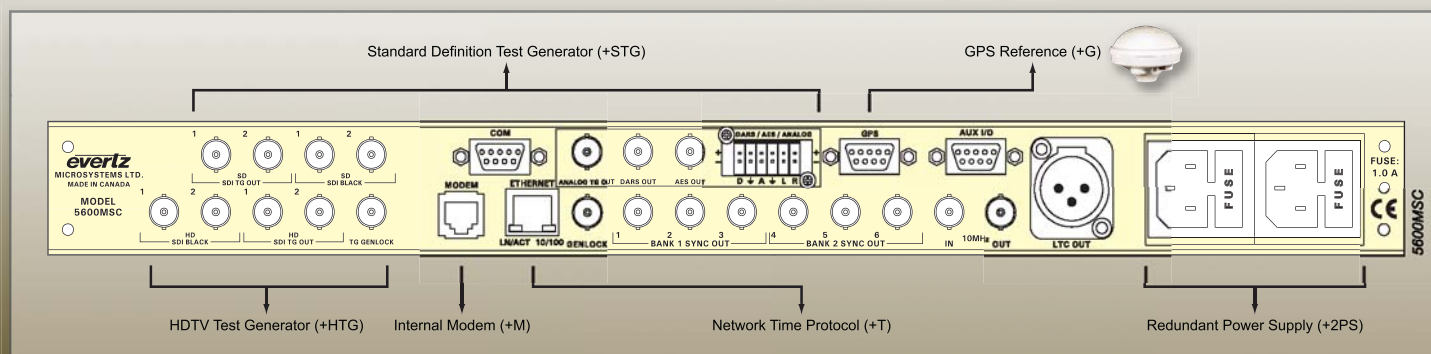
Master Clock Time Code Generator Functions

- Two master LTC time code generators - may be different frame rates and different times
- 23.98, 24, 25, 29.97 (drop frame & non-drop frame) and 30Fps Time Code
- Date in the user bits (4 standards supported + manual entry)
- Daylight saving time compensation
- 6 VITC timecode outputs (in video blacks)
- Can support 6 additional time zones
- Optional GPS receiver for time of day reference
- Optional modem for time of day reference
- Optional network time protocol server (NTP)

GPS Reference Option

- The GPS receiver provides a reference for frequency, time and video based on absolute time reference
- Remote SPGs also locked to GPS reference may be used to time remote sources
- As both SPGs are locked to GPS, no frames will be dropped or repeated

NOTE: When two SPGs are employed with an auto-changeover, it is recommended that each SPG have it's own GPS receiver to ensure complete redundancy.



Ordering Information

5600MSC Master SPG/Master Clock System
+STG Standard Definition Test Generator
+G GPS Reference

+HTG HDTV Test Generator
+M Internal Modem
+T Network Time Protocol
+2PS Redundant Power Supply

RATOR, MASTER CLOCK & TEST SET SYSTEM

5600ACO/5600ACO2 Automatic Changeovers

The 5600ACO and 5600ACO2 Automatic Changeovers are intended for use with two 5600MSC Master Clock/Sync Generators. The systems use latching relays to ensure maximum reliability and minimal disruption in the event of any failure. The complete system provides the highest level of security for television station video and time synchronization systems. The 5600ACO is a 1RU device for a subset of the 5600MSC outputs. The 5600ACO2 is a 2RU ACO for all outputs of the 5600MSC. Two power supplies are included to alleviate any single point-of-failure concerns.

In automatic mode, all signals from both 5600MSCs are monitored to detect any abnormal signals. For example, if a level, pulse width, phase, time code error or other abnormality is detected, the 5600ACO2 circuitry will trigger and the entire bank of signals will switch to the backup 5600MSC. In manual mode the changeover can be operated from a GPI or from the front panel switch. With VistaLINK® PRO, the user can configure switchovers through voting control menus of facility-critical inputs.



Features

- Three front panel switches select automatic, front panel or GPI activation of changeover
- Front panel switches are recessed to prevent accidental operation
- Front panel LEDs show the health of each of the inputs as well as the operational modes of the changeover
- Redundant power supply standard
- GPIO input/outputs
- Automatic changeover is a voting system based on which source has the most valid signals, and that the good signals on the present master are also on the backup
- VistaLINK® PRO switchover voting control

Protected Outputs

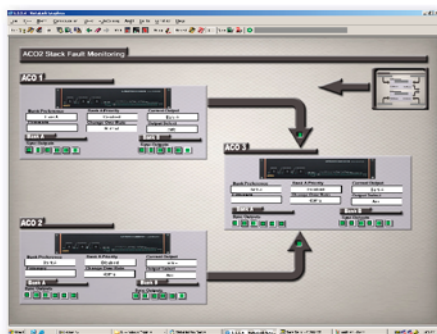
5600ACO & 5600ACO2

- 6 video/sync or other coaxial signals
- 10MHz frequency reference output
- DARS output
- 2 Linear Time Code outputs

Added Features of the 5600ACO2

- 4 HD-SDI and 4 SDI test signal outputs
- 1 analog video test signal output
- Balanced analog audio output (not monitored)

VistaLINK® Monitoring & Control



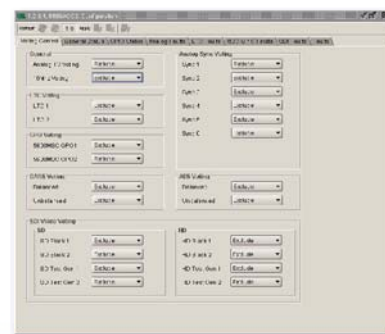
VistaLINK® PRO PLUS and
5600ACO Status Monitoring



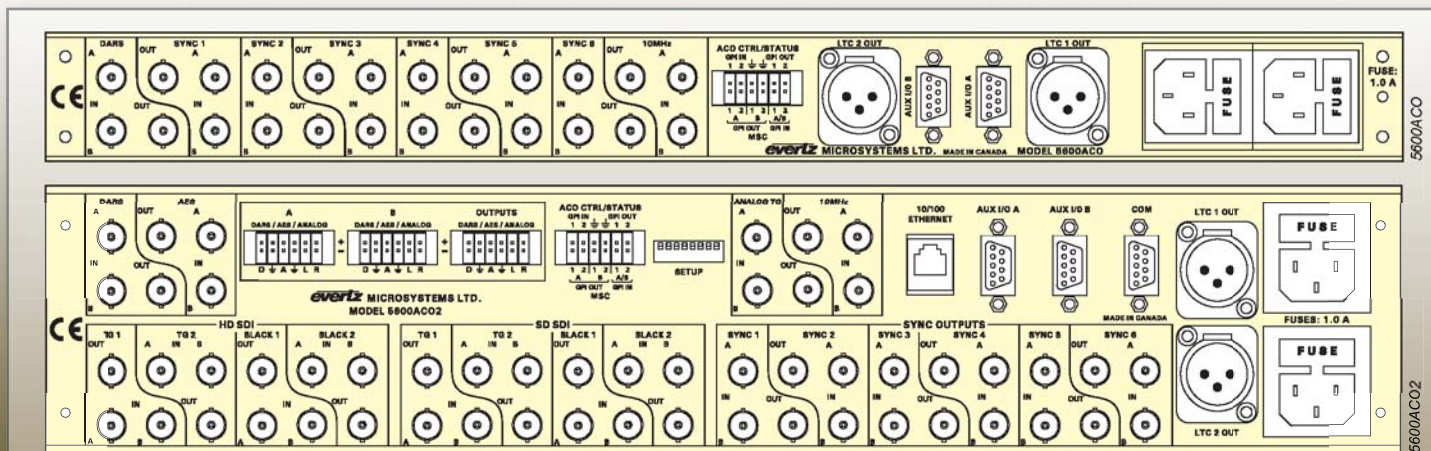
5600MSC Engineer vs User
Menu Display and Access



5600ACO Status Monitoring
with SNMP TRAPS



5600ACO Bank Switchover
Voting Control



Ordering Information

- 5600ACO** 1RU Automatic Changeover System
5600ACO2 2RU Automatic Changeover System

• Both Systems come complete with 2 power supplies, 2 power cords and 3 DB9 cables (BNC cables not included)

DIGITAL & ANALOG DIGITAL TIME DISPLAYS



1200DD & 1201DD Data Digital Display

- Completely self-setting with SMPTE/EBU timecode input or battery back-up
- Built-in quartz time base oscillator with battery back-up
- May be operated as a timecode reader for use with countdowns
- Digital display is user-selectable between HH:MM:SS, 12/24 hour, HH:MM:SS FF and date
- May be configured as a timecode generator to drive other clocks
- LED brightness is adjustable
- Runs on 50/60Hz, 115/230V AC power line
- Built-in NTP agent
- User-programmable time offsets
- Rack mountable

Ordering Information

1201DD	1RU Rackmount Digital Display
1200DD	2RU Rackmount Digital Display



1216 & 1212 Remote Time Display

- SMPTE/EBU timecode input
- Three motors for quiet operation and rapid hand setting
- Addressable slave clocks with programmable time offsets
- Automatic daylight saving time adjustment
- Single cable distribution for both power and timecode
- Low voltage (12V) operation
- Master or slave operation with battery backed up clock
- Sweep or step second hand movement
- Optional illumination
- Two sizes: 12" or 16"

Ordering Information

1212	12" Diameter Analog Clock Display
1216	16" Diameter Analog Clock Display
1212L	12" Diameter Analog Clock Display with Back Lighting
1216L	16" Diameter Analog Clock Display with Back Lighting



1275A Remote Time Display

- Multifunction time of day display
- Can be a slave to a master clock system or a self-contained presettable clock
- As a slave display, the unit will read SMPTE/EBU time code
- Programmable time zone offsets from the incoming code
- As a standalone clock, it can operate in 12 or 24 hour mode
- 2 unobtrusive front panel push buttons allow presetting and accurate synchronization to a standard time source
- An eight-position DIP switch permits user-selection of four different operating and display modes and the time zone offset

Ordering Information

1275A-110	Digital Clock Display 115V/60Hz
1275A-220	Digital Clock Display 220V/50Hz
+DQS	Optional DGS-B6 Code Format

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