

PRE99-1211 Turret Clock & Timer INSTALLATION & OPERATION

GENERAL INFORMATION

The PRE99-1211 Turret Clock & Timer mounts in the PRE99-1213 Turret. It features a 12/24-hour Clock that can be slaved to an ESE master clock and an Event Timer that can be locally and remotely controlled. When operated autonomously, the clock time is manually set using front panel accessible switches, or through circuit board connector J4. The timer is manually controlled through Start, Stop, Hold, and Reset buttons, or automatically controlled via a console reset logic connection on J4.

Power is supplied by a "wall-wart" type of 5 volt DC supply (PRE50-23). Two accessory power connectors (J2 and J3) can provide power for up to eight 1.6" Turret Panels.

CLOCK MODES

When used autonomously (the factory preset), a temperature-controlled quartz crystal oscillator controls the clock timing. In slave mode, clock timing is derived from a TC89- or TC90-compatible ESE master clock reference signal.

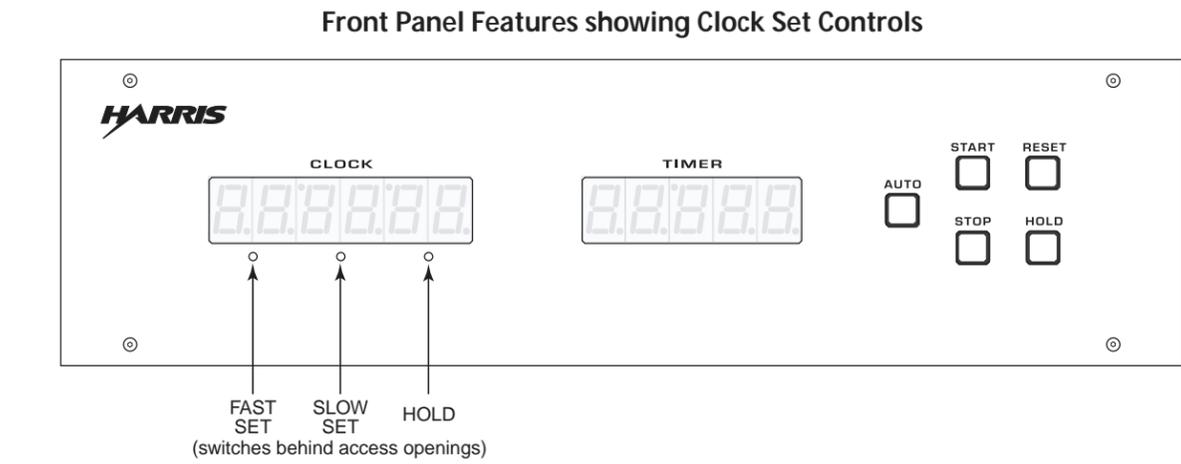
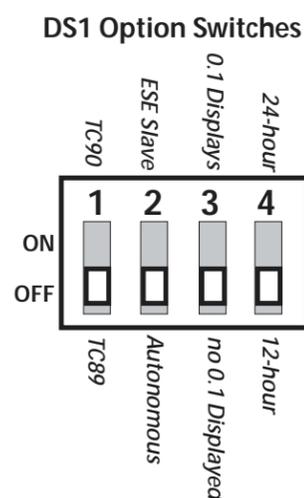
The operating mode (autonomous or ESE slave), the type of ESE time-code compatibility (TC89 or TC90), and the type of clock display desired (12-hour or 24-hour) is set using DIP switch DS1 on the clock circuit board.

To reach DS1, remove the Clock & Timer from the Turret, or, if there is access, reach from below the countertop up into the Turret. DS1 is located below the clock display on the back side of the circuit board.

In autonomous mode, one must manually set the clock after power is applied. Use a small greenie or other pointed object that can pass through the round holes below the clock display to press on the clock set switches just behind the front panel.

- The left switch is Fast Set. Press and hold it to quickly advance minutes at a time.
- The middle switch is Slow Set. Press and hold it to quickly advance seconds at a time.
- The right switch is Hold Time. Press and hold this switch to freeze the clock time display.

DIP switch on the clock circuit board.
Factory default settings shown.



To set the clock; press the Fast or Slow switches to advance the time to be slightly ahead of an external time reference. Then press the Hold switch to freeze the time. Release the Hold switch to start the clock in sync with the external time reference.

These three switch contacts are also available on the Remote Connector, J4. Fast Set is on pin 6, Slow Set is on pin 7 and Hold is on pin 8. The switch common (GND) is on pin 5.

ESE Slave Operation

Connect the ESE TC-89 or TC-90 time code signal to the clock through J4 (Pins 1 and 2) or the optional BNC connector J6. Set DS1 switch 2 to ON (ESE Slave mode) and set DS1 switch 1 to match the ESE signal format (TC-89 or TC-90).

The clock does not require setting in Slave mode since the ESE time code signal is the time reference. If the ESE time code signal is interrupted (as indicated by the colons alternately flashing), the clock automatically defaults to its internal crystal reference oscillator to keep time until the ESE signal is restored.

Master clocks are available from:
ESE, 142 Sierra St., El Segundo, CA 90245.
Telephone: 310.322.2136 www.e-se-web.com

CLOCK BACKUP BATTERY

When operated in autonomous mode, a 9-volt battery can power the clock circuit during momentary power outages so that it doesn't have to be set again after power is restored.

A battery will power the clock circuit for about four hours total and should be changed yearly. Remove the battery when the Clock will be unplugged for an extended period.

TIMER DISPLAY

The event timer displays time in minutes, seconds, and tenths of seconds. The tenths of seconds are always displayed while the timer is in the Stop or Hold modes. In Run mode the tenths of seconds display is normally turned off. To display the tenths of seconds in Run mode, set DS1 switch 3 to ON.

Console Remote Connection

The Timer can be reset automatically to follow any console's External Timer Reset logic via connector J4 pins 3 and 4. The Timer Reset input is only active when the front panel AUTO button is lit.

The External Timer Reset connectors are on the Session module on a BMXdigital, and on the Meter Switcher module on the Legacy.

TECHNICAL INFORMATION

Over time the front panel display elements may dim or discolor. Each segment is socketed for easy field replacement. The green clock displays are PRE12-110, while the orange timer displays are PRE12-111. There are no other user-serviceable parts on the Clock & Timer.

Separate fusistors (resettable current limiting devices) protect the clock circuitry and the J2, J3 power connections. Thus, if the Clock & Timer fails to function, unplug the power supply from J1 and any 1.6" Turret Panels connected to J2 and J3. Check the wall-wart's voltage (nominal 5 volts DC) while waiting a few minutes to ensure the fusistors automatically reset. Plug in the supply to J1. If the Clock & Timer again works, plug in J2 and/or J3 to see if a short circuit on the external wiring is causing a problem. If the display does not work correctly even with J2 and J3 unplugged, then the unit should be returned to Harris for repair, after first receiving a RA number.

Harris Corporation
Attn: Tech Services Dept.
4240 Irwin Simpson Road
Mason, OH 45040 USA
Phone: 513.459.3503
8:00 to 5:00 EST
Fax: 513.701.5309
E-mail: presupport@harris.com

J1, J2, J3, J4 Connections

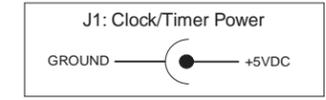
J2/J3: Turret Panel Power		J4: Remote Logic Connections	
Signals	J2 / J3 Pin	Signals	J4 Pin Source or Destination
+ 5 VDC *	1	ESE shield **	1 ESE Shield/GND
Ground	2	ESE signal **	2 ESE TC-89/TC-90 output
+ 5 VDC *	3	Ground ***	3 Console logic ground
Ground	4	Timer Reset ***	4 Console External Timer
+ 5 VDC *	5	Ground	5 Switch Common
Ground	6	Fast Set	6 Fast Set Switch
+ 5 VDC *	7	Slow Set	7 Slow Set Switch
Ground	8	Hold Time	8 Hold Switch

Use Harris cable PRE99-785 to connect up to four turret panels to either J2 or J3.

** These signals connect to a balanced input so that UTP (unshielded twisted pair) wiring can be used.

*** Use Harris cable PRE99-793-CU to connect only these pins to the timer reset output of the BMXdigital or Legacy consoles.

* The total combined current draw of all Turret Panels should not exceed 750 mA. The +5 VDC outputs are current limit protected from short circuits. If there is no voltage, unplug the panels to allow fusistor to cool down and reset.



Circuit Board Features, rear view

