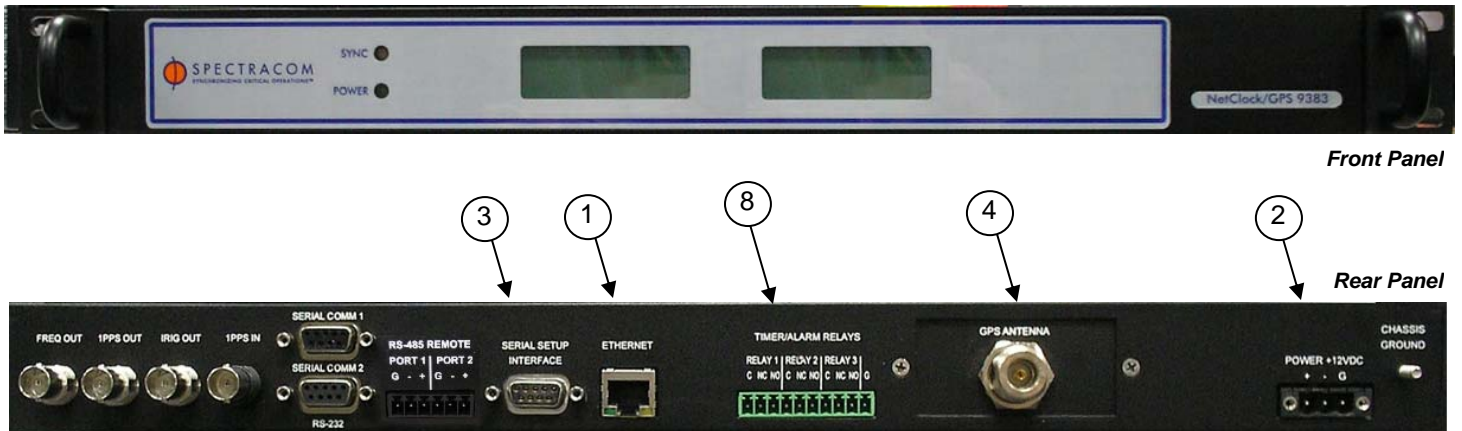


NetClock QuickStart Guide



- A. Unpack and inspect the unit and accessories. Retain all original packaging for use in return shipments. **Observe all ESD procedures when handling Spectracom equipment.**
- B. If installing the unit in a rack, install the rack-mount ears on the two sides of the front panel and install the unit in a standard 19 inch rack cabinet.
- C. Connect the NetClock's rear panel Ethernet port **[1]** to an available hub/switch on the network with a standard network cable (or use a crossover cable directly connected to a laptop PC).
- D. Connect the DC power input jack **[2]** on the rear of the NetClock to a standard AC outlet using the supplied power supply. Check the Ethernet connection **[1]**. The LED next to the connector should indicate green.
- E. If your network supports DHCP, the NetClock will be assigned an IP address (displayed on the front panel if supplied).
- F. If your network does not support DHCP or your NetClock does not have a front panel display, obtain an available static network IP address, the network subnet mask, and the IP address of the immediate gateway (if installed) if the subnet must access the NetClock. Using the **net config** command, assign the IP address, net mask, and gateway settings using the rear panel Serial Setup Interface DB9F connector **[3]** interfaced to a PC with the provided serial cable (the PC should be running either Microsoft HyperTerminal or ProComm).
- G. Install the GPS antenna, surge suppressor, antenna cabling, and GPS preamplifier if required. If using a window-mount antenna (Model 8228), place the antenna in a window that has no metallic tinting or screening in or on the glass. If position cannot be determined, place the NetClock in single satellite mode. Be advised that the NetClock must be in **position hold** if the unit is to use a window-mount GPS antenna. Position hold can be obtained by manually entering the GPS location or by receiving qualified GPS signal from at least four satellites at least once for a brief duration.
- H. Connect the GPS cable to the rear panel antenna input jack **[4]**. Verify the NetClock front panel Sync lamp illuminates green. Synchronization may take up to 20 minutes (approximately).

- I. If your NetClock has Option 03, Dial-out Modem, connect the dial-out modem to the rear panel serial setup interface [3]. Change the console/client mode of operation to Modem using the Web User Interface.
- J. Configure the NetClock front panel LCDs (if supplied) as desired using the Web User Interface.
- K. Connect the NetClock to wall display clocks and other peripheral devices as needed.
- L. Configure each of the rear panel outputs to these devices for desired local times, baud rates, and Data Formats using either the Web User Interface or the serial setup port. Each port is separately configured, so each port used may be configured for your desired configuration. Match NetClock and 9388 data formats.
- M. Unless you are using DNS in conjunction with DHCP (with the client configured using the NTP server's hostname instead of IP address), DHCP must be disabled and the IP address must be changed to a static address once the NetClock is properly configured. Failure to do this will result in a loss of time synchronization if the DHCP server assigns a new IP address to the NetClock. Verify your setup before synchronizing the network PCs via NTP.
- N. Synchronize the network PCs via NTP using the Ethernet port [1] as desired. (Refer to the Data Output tables for more on local time.) Spectracom's website includes troubleshooting application notes.
- O. Review your security configuration settings.

Data Output	From Port	Time Zone Offset for Local Time	AutomaticDST Adjustment?	Additional Notes
Network Time Protocol (NTP)	Ethernet port on front panel	NOT AVAILABLE	NO	NTP is always UTC. Must set Local time/DST correction on each PC via the Date/Time properties window.
Data Format 0	Remote/Serial on rear panel	00-23 Hours	YES	None
Data Format 1	Remote/Serial on rear panel	+/-12:00	YES	None
Data Format 2	Remote/Serial on rear panel	NOT AVAILABLE	NO	Data Format 2 always reflects UTC. It can't be configured as local time.
Data Format 3	Remote/Serial on rear panel	+/-12:00	YES	None
Data Format 4	Remote/Serial on rear panel	NOT AVAILABLE	NO	Data Format 4 always reflects UTC. It can't be configured as local time.
Data Format 5	Remote/Serial on rear panel	+/-12:00	YES	None
Data Format 7	Remote/Serial on rear panel	NOT AVAILABLE	NO	Data Format 7 always reflects UTC. It can't be configured as local time.
Data Format 8	Remote/Serial on rear panel	00-23 Hours	YES	None
Data Format 90	Remote/Serial on rear panel	NOT AVAILABLE	NO	Data Format 90 always reflects UTC. It can't be configured as local time.
IRIG B	IRIG port on rear panel	+/-12:00	YES	None
IRIG E	IRIG port on rear panel	+/-12:00	YES	None

Data Output	Port Available	Local Time Zone Offset	Automatic DST Adjustment?
IRIG B	IRIG port on rear panel	+/-12:00	YES
IRIG E	IRIG port on rear panel	+/-12:00	YES

IRIG Code Formats Provided by Spectracom NetClock Products		Code Description
B000		IRIG B, TTL, BCD, CF, and SBS
B120		IRIG B, AM, 1 kHz, BCD, CF, and SBS
E001		IRIG E TTL, BCD, CF
E111		IRIG E AM, 100 Hz, BCD, CF
E121		IRIG E AM, 1 kHz, BCD, CF

QuickStart Revision Level	ECN Number	Description
A	2210	First draft of QuickStart Guide.
B	2270	Correctd RS-485 pin-out depiction. Clarified 9388 data format match issue with NetClocks.