

The Spectracom IP Display Clock is a digital time display powered by, or connected in conjunction with, a DHCP-enabled network.

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1 Inventory and Inspection

Before installing the IP Display Clock, please verify that all material ordered has been received. If there is a discrepancy, please contact Spectracom Customer Service at US +1.585.321.5800.

CAUTION:		<i>Electronic equipment is sensitive to Electrostatic Discharge (ESD). Observe all applicable ESD precautions and safeguards when handling the Spectracom equipment.</i>
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NOTE: If equipment is returned to Spectracom, it must be shipped in its original packing material. Save all packaging material for this purpose.

Unpack the equipment and inspect it for damage. If any equipment has been damaged in transit, please contact Spectracom Customer Service at US +1.585.321.5800.

NOTE: Your Spectracom equipment is not field-serviceable. If you experience any problems with your equipment, these components must be shipped to Spectracom for service. Please contact Spectracom directly at US +1.585.321.5800 before returning any equipment. Always ship the equipment in its original packaging material.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. FCC recommends a distance of 10cm from the clock to constant human physical exposure.

Revision History	
ECN	2424
	Rev A: First draft of Spectracom instructions.

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2 Installation

Installing the IP Display Clock consists of these operations:

- Physically install the clock(s).
- Connect the display clock to your network.
- Configure the display clock using the Web UI.

WARNING:		<i>Spectracom recommends this equipment be installed by qualified personnel only. Installation by unqualified personnel may cause injury or death. It may also result in equipment damage that will void the Spectracom product warranty.</i>
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2.1 Install the Display Clock

Install the display clock using the mounting slots on the rear of the clock chassis (Figure 2-1). If necessary, the clock cover may be pulled off from the front (it is held in place by plastic tabs) and the screws holding the chassis together may be removed to permit access to the rear of the clock from the inside (Figure 2-2).

NOTE: Remove only the OUTER set of screws mounted in the black chassis, not the white-backed screws that hold the LED display in position (Figure 2-2).



Figure 2-1: Mounting Slots



Figure 2-2: Startup Sequence

After the clock is mounted physically, connect the network cord attached to the rear of the display clock (Figure 2-3). Your clock should enter the startup sequence (Figure 2-6).



Figure 2-3: Connect the Network Cord

NOTE: If your network provides power over IP, no power adapter is required. If your clock does not receive the necessary power from your network, a network power adapter (Figure 2-4) is required.



Figure 2-4: Startup Sequence

2.2 IP Display Clock Startup

Refer to Figure 2-6. When power is applied, the display clock LEDs will illuminate and display “P-20” before reverting to the held time (which may or may not be the synchronized time, depending on when the clock was last connected). After a brief delay, the IP address should display (twice) in three-digit increments. Record this IP address.

NOTE: Your network must be DHCP-enabled for the IP Display Clock to acquire an IP address. To configure a static IP address, install a jumper as described herein. **DO NOT** push the buttons on the front of the clock. Any changes made by pressing the buttons will revert automatically.

2.3 Setting to the Default Static IP Address

If your clock is not shipped from the factory with a static IP address set already, disconnect the clock face, unscrew the unit's inner housing, and attach a jumper to the middle two pins on the middle set of jumper posts on the clock's IP board. This sets the clock's IP address to **192.168.0.123**. (Make sure this address is not shared by another device on your network.) Refer to Figure 2-5.



Figure 2-5: Installing the Jumper to Activate Factory IP Address

NOTE: You must set the IP address for one clock at a time, configuring from the default to a new static IP address using the Web UI before applying power to another clock. If more than one clock is connected to the network with the same default IP address, you may not be able to access any of these units through your network.

2.4 IP Display Clock Configuration (Web UI)

Using a suitable browser, navigate to the DHCP-obtained IP address displayed by the clock (or navigate to the default static IP address). The clocks Web User Interface (Web UI) should load (Figure 2-7). The default factory password is **6063**.

After you have successfully logged into the Web UI, choose the Network Servers tab (Figure 2-8). Erase any IP addresses that may be listed and enter the IP address of your network timing reference. Click “Submit” to enter your changes.

NOTE: The IP address of your timing reference is NOT the IP address you recorded for your display clock. It is the network address of the NetClock or other time server that provides your external timing synchronization signal.



Figure 2-6: Startup Sequence

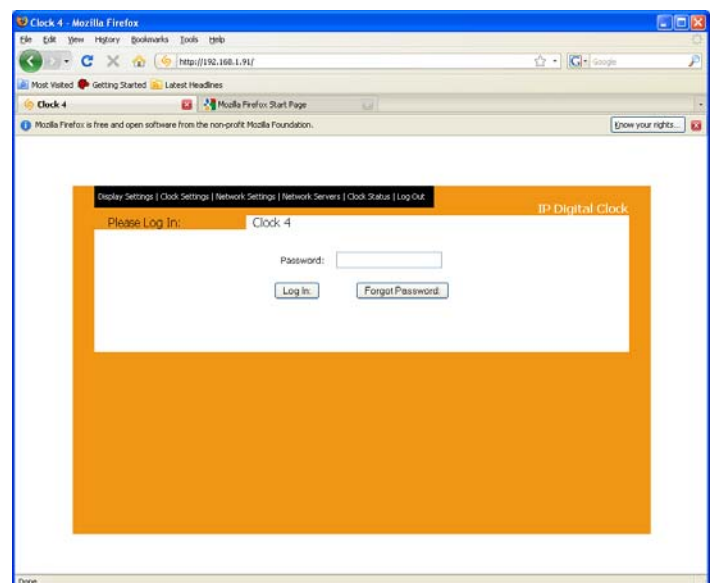


Figure 2-7: Web UI Login Screen

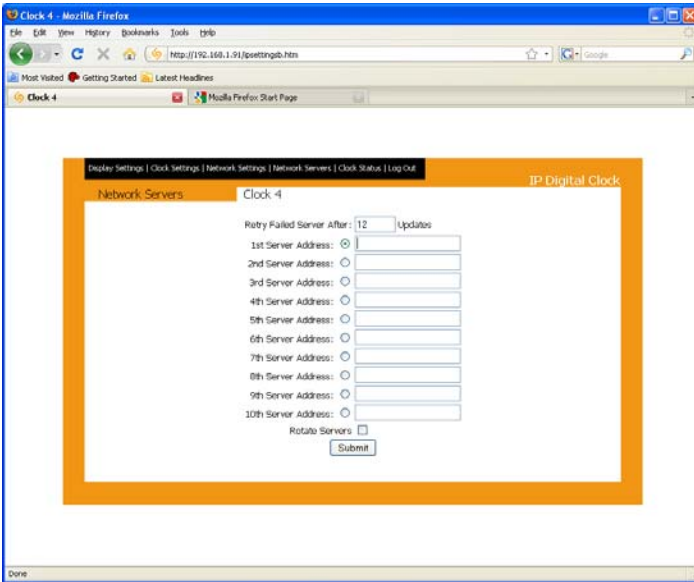


Figure 2-8: Network Servers Screen

Choose the Display Settings tab (Figure 2-9) to configure 12- or 24-hour time, date, brightness, and alternating display. If alternating display is enabled, you may choose the duration, in seconds, that the date and time display before switching from one to the other.

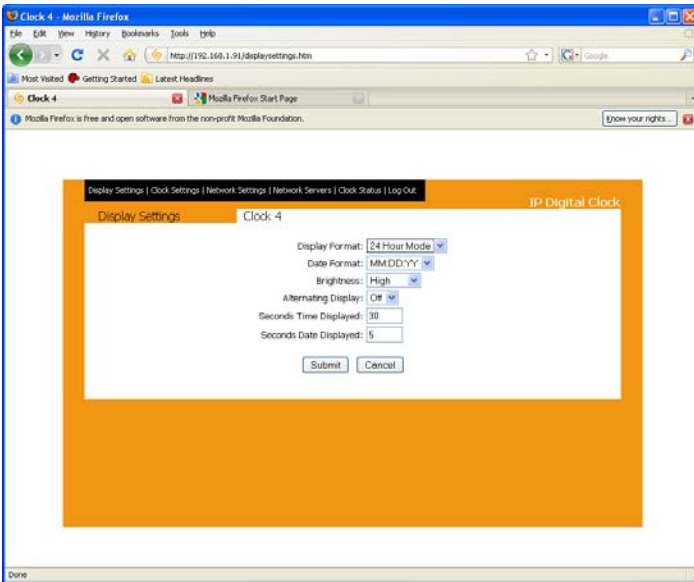


Figure 2-9: Display Settings Screen

Choose Network Settings Tab (Figure 2-10) to verify the clock IP address and to enable or disable DHCP.

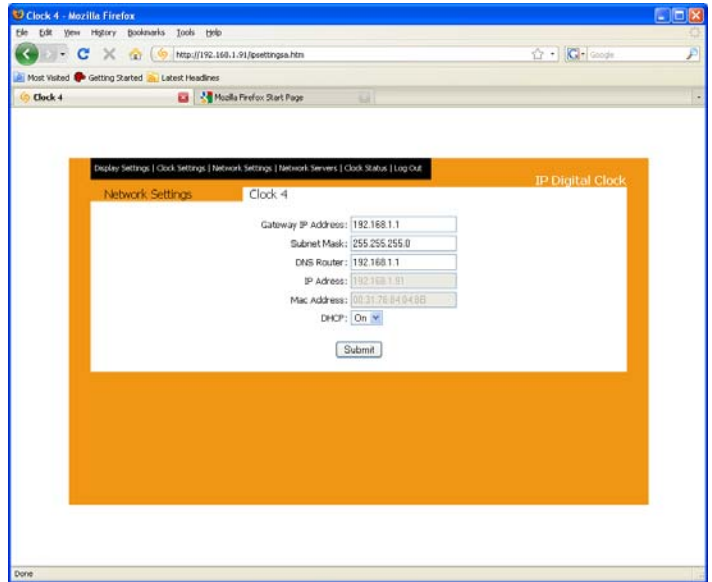


Figure 2-10: Network Servers Screen

Choose the Clock Status tab (Figure 2-11) to view statistics concerning the IP Display Clock's operation. There is no indication of synchronization status at the display clock itself; status is indicated on this screen. Look for the statement, "Last Sync at: 11-11-11 00:00:00," where the 1 and 0 values are date and time, respectively. If the clock has not synchronized since power-up, "X" flags will appear in the "Currently Failed" row.

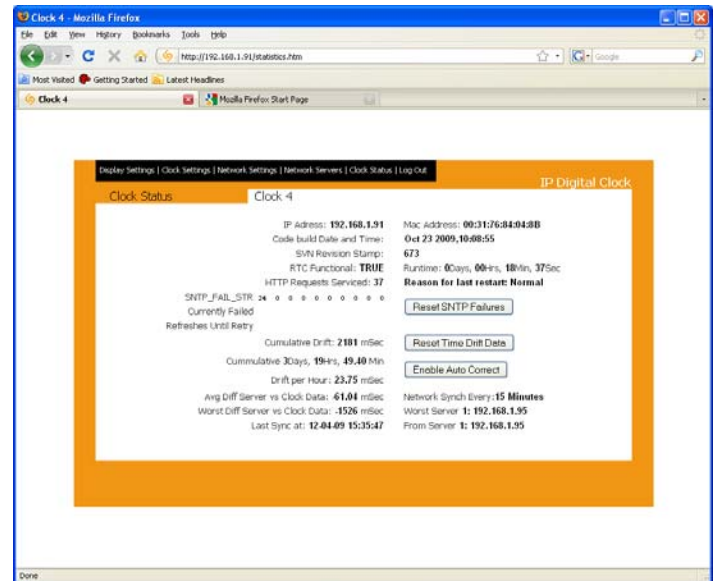


Figure 2-11: Clock Status Screen