

Ethernet Communications Option

This option adds Ethernet local area network communications to a clock. Clocks may be synchronized using existing network wiring. This option includes the hardware necessary to connect to the network. Windows software is available for download that allows sending time from a PC to clocks connected to the network, or from a master clock to slave clocks connected the network, or to other PC connected to the local area network.

Ethernet Interface

The controller expects to communicate with a local area network via a 10Base-T connection. This Ethernet option utilizes UDP broadcast communication and thus cannot communicate outside a local area subnet. Only Master and Slave devices on this subnet have access to the Real Time Clock data packets. The clock includes an RJ45 connector at the rear of the display to allow connection to the local area network.

Ethernet Addressing

This option uses UDP broadcast addressing (IP address 255.255.255.255) and will communicate using IP Port number 16000. If required, other IP port numbers may be requested. However, this requires returning the clock(s) to the factory for reprogramming.

Mode Change

The operating mode of the Ethernet may be changed at any time. Mode 32-40 determines the operating mode. 1=master, 2=slave. In master mode, the clock will broadcast the time over the network. In slave mode, the clock expects to receive time broadcasts.

PC Software

Windows software drivers are available for download from <http://www.brgprecision.com>. These drivers may be used to send, receive and test time transmissions.

Drivers:

UDPxmit.exe – This program broadcasts the time and date once per second. Place this program in the startup directory, or autoexec.bat so it will start when the PC is power up. This program will run as long as the PC is running. To stop the service, close it from the Task Manager.

UPDrec.exe – This program expects to receive time and date broadcasts from the local area network. Place this program in the startup directory, or autoexec.bat so it will start when the PC is power up. This program will run as long as the PC is running. To stop the service, close it from the Task Manager.

UDPPrecTest.exe – This program is used to test for time broadcasts. It displays IP address, data, and port information as time packets are received. Clicking on the Stop button will stop the program.