Krontek World Clock

Operators Manual

Overview

The World Clock is a five zone time display and all zones are independently programmable. Each zone consists of a programmable ten character location or date display at the top with the time in hours and minutes displayed below. The character display is self-centering. The left hand zone also incorporates a seconds display.

The World Clock requires an Ethernet connection for time synchronisation and zone programming. Time is obtained from an SNTP compliant network timeserver. The time display colons flash on the minute to confirm that time is synchronised. Programming is accomplished via a telnet session.

The World Clock has a user programmable 200 entry zone table. Any entry in the zone table can be assigned to any of the five zone displays. Time zone attributes consist of: Time offset from UTC, Display of Location or Date and Daylight Saving parameters if required. A useful web site for obtaining zone times is: www.timeanddate.com.

Setup

The World Clock is equiped with a 10/100 Base-T autosensing network interface. This provides a telnet interface for time zone configuration and access to a SNTP compliant network timeserver.

After the World Clock has been installed it must be configured to operate on your network.

The Clock comes pre configured with an IP address of 192.168.0.128 and responds to a telnet session on default port 23. There are three options to enable communications with the Clock:

1. Your network is already compatible, i.e. 192.168.0.xxx
2. Configure a PC to a compatible IP address, i.e. 192.168.0.50, and use a network crossover cable.
3. Use the Krontek DeviceDetector utility (available from the krontek.com.au site).

DeviceDetector sends a UDP broadcast via port 10991 and displays the response from the clock. Each time the utility is opened it will send a single broadcast. It will display all Krontek time devices on the network – to change a device's settings click on that device. If you experience difficulties it may be that you are not on the same network or port 10991 is being blocked. Please note that a UDP broadcast will only operate within the same subnet – it will not pass through gateways. Please contact your supplier or Krontek if you require assistance.

Programming

Once the Clock is accessible on your network, open a telnet session using the IP address you have assigned:

telnet xxx.xxx.xxx.xxx

The following screen (or similar) will appear.

```
*********************************
*                               *
*            Krontek            *
*  KTWC5 Five Zone World Clock  *
*      Rev 1.00 28-Jan-2008     *
*                               *
*      MAC 00:20:4A:A1:F0:89    *
*                               *
*********************************


  -- Main Menu --

 1 - System Setup
 2 - Edit/Assign Zones

 99 - End telnet session

Select
```

The System Setup Menu:

```
   -- System Menu --

 1 - Display Setup
 2 - Set Time Server poll period
 3 - Set Time Server IP address
 4 - Set Clock IP address
 5 - Reset Poll Error Counts
 6 - Set/Change Passcode

 9 - Return To Main Menu

Select
```

1. Display Setup – Displays the current system settings including the zone assignment table.

2. Set Time Server Poll Period - Allows the selection of the period between SNTP server polls, the minimum is 1 hour and maximum is 24 hours, one hour is recommended. Any changes must be saved. Selecting this item will also force a poll of the timeserver.

3. Set Time Server IP Address - Enables you to set the IP address of the SNTP server on your network. The screen will prompt you by showing the first octet in brackets (xxx) and allow you to change it or leave as is. Pressing “enter” will take you to the next octet, continue until all four are set.

4. Set Clock IP Address allows you to change the IP address of the Clock. The screen will prompt you by showing the first octet in brackets (xxx) and allow you to change it or leave as is. Pressing “enter” will take you to the next octet, continue until all four are set. You can also set the subnet mask and *gateway in this menu option. * Note that incorrect setting of a gateway can result in the clock being “lost” as the DeviceDetector utility cannot detect the clock through a gateway. Always take note of MAC address on the signon screen before setting the gateway. This may be required to recover the clock on the network via ARP.

5. Reset Poll Error Counts – This allows you to reset the count of timeserver polls and any errors. These are displayed in the “Display Setup” screen.

6. Set/Change Passcode allows you to set the passcode to restrict unauthorized access to the controller. Four characters are required. Alpha (A-Z) and numeric (0-9) characters are accepted. Lower case characters are internally converted to upper case. A code of four zeros (0000) will disable passcode checking.

9. Returns you to the main menu screen.

Edit/Assign Zones Menu:

```
  -- Zone Edit Menu --

 1 - Display Setup
 2 - List Zone Table Entries
 3 - Edit Zone Table
 4 - Assign Display Zones


 9 - Return To Main Menu

Select
```

1. Display Setup – Displays the current system settings including the zone assignment table.

2. List Zone Table Entries – Asks for the start and end table entry and displays the zone settings for those entries.

3. Edit Zone Table – This allows you to modifiy the zone table. It is described below.

4. Assign Display Zones – This allows you to assign an entry from the zone table to one of the five displayed zones. Zone number 1 is the display on the left.

Edit Zone Table:

The zone table contains the preset configurations for time zones that can be assigned to the five displayed zones. All entries can be edited.

After selecting this option you are prompted for the table entry you wish to edit. A copy of the entry is then made available for editing. Note that at this stage you are not changing the actual table entry – that takes place when saved via option 6: Update Table Entry.

Also note that if you update the configuration of an entry that is currently assigned to one of the displays then the displayed zone will also be updated.

```
 1 - Display Zone Settings
 2 - Edit Location Name
 3 - Edit Date/Location Format
 4 - Edit Time Zone Offset
 5 - Edit Daylight Saving
 6 - Update Table Entry

 9 - Exit

Select
```

1. Display Zone Settings – This displays the current settings. Use this to verify the changes you have made before updating the table.

2. Edit Location Name – Allows you to change the name of the displayed location – up to 10 ascii characters can be entered. Note that the location name will self center when it is displayed so leading spaces are not required.

3. Edit Date/Location Format – Enables either the location name or the date to be displayed on the top line.

4. Edit Time Zone Offset – This is the time difference of the location from UTC. It can be a positive or negative number. The offset should always be entered as local Standard Time (not daylight savings time).

5. Edit Daylight Saving – This allows the setting of any daylight saving requirements for this location. The current daylight saving settings are displayed in square brackets on each input line. If you do not need to change the setting then you can simply step through using the enter key and the value in the brackets will be used.

6. Update Table Entry – After making the required changes you must save them to the table or the entry will not be changed.

9. Exit – you will be reminded to save the changes before returning to the previous menu.