WiFi NTP Sync Device
For Nixie Clock

REVISION HISTORY

Issue Number	Date	Reason for Issue
1	20 January 2017	New document

Standard Features:

- **Compatibility:** All our kits with GPS input from 3.5mm Jack Socket
- **Status Indicator LEDs:** WiFi, NTP and Data Transmission
- **Main power input:** ~5V DC direct from clock PCB
- **Baud rate:** 9,600 bps
- **Data Format**: $GPRMC GPS Sentence.
- **Cable length:** 15cm / 6" (included)
- **For use indoors only**

Introduction:
The NTP Sync Device provides a convenient and low cost method to synchronise time and date on our compatible Nixie Clocks.

Introduction:
On a factory power up, the device sets up in Access Point (AP) Mode. This is a wireless network that you can connect to with your computer or Smartphone. Once connected, you use your Smartphone to enter some simple configuration settings and then re-boot the module. The module then powers up in active mode, which will connect to your home WiFi network and retrieve the time and date from an NTP server of your choice. Time and date are sent to the clock as a 'fake' GPS Data Sentence.

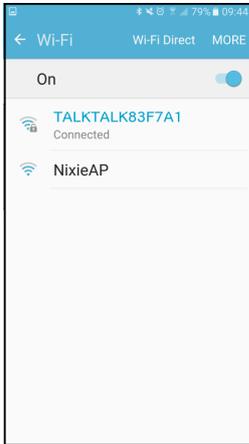**Setup Guide:**

1. Configure Clock
Setup the clock for GPS reception at 9,600 bps. Don't forget to set your local offset from GMT (UTC).
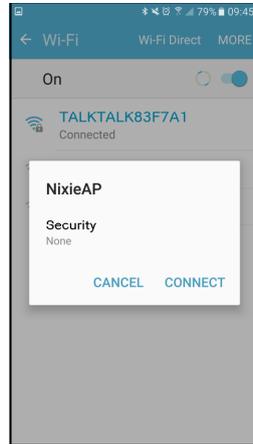
2. Connect
Always connect and disconnect whilst the clock is powered off.
Insert the cable into the back of the clock, and the other end of the cable into the NTP Sync Device. Then power up the clock again.
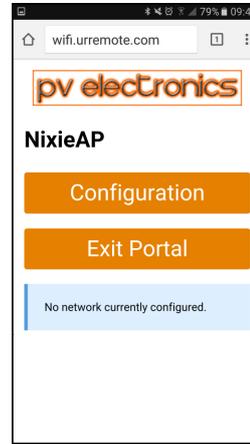
3. Configure Device:

Upon initial power up, the 3 LEDs light briefly and then the orange DATA LED will light constantly. This indicates the device is in AP mode.
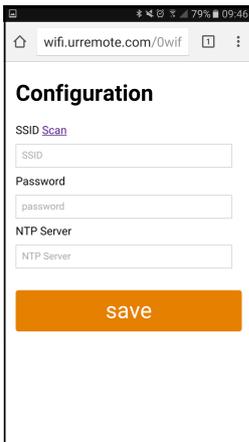

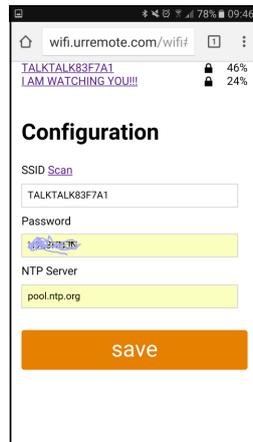1. Open up the Network or WiFi settings on your phone and look for the NixieAP Access Point
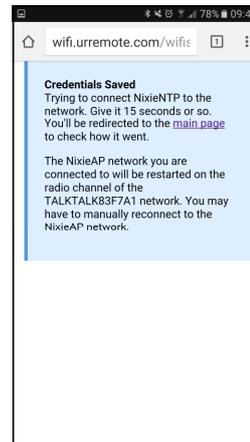

2. Connect to NixieAP

3. You may automatically get the landing page. If not, open up your browser and try to load a web page

4. Click 'Configuration and you will be taken to this screen to set up your WiFi and server. Click 'Scan'

5. You should see your WiFi name (SSID) - select it. Then enter your WiFi password. For the NTP Server, we suggest pool.ntp.org but there are many others

6. Click 'save' and the wait to be redirected back to the home landing page.......

You are now back at the landing page. Click Exit Portal. You must do this, to save the settings.

IMPORTANT: Now click 'Exit Portal' to close the Access Point. The NTP Sync Device will reboot and attempt to connect to your WiFi.

Status Indicator LEDs:

WIFI Steady: The module is connected to your WiFi Router
WIFI Flashing: The module is trying to connect to your WiFi Router

NTP Steady: The module successfully contacted the NTP Server
NTP Flashing: The module is trying to contact the NTP Server

DATA Steady: The module is in access point mode
DATA Flashing: Time data is being sent to the clock

Advanced:

To reset the module into AP Mode without erasing all stored WiFi and server settings, press the button for 3 seconds.

To reset the module and erase all stored WiFi and server settings, power up and whilst all 3 LEDs are lit, press and hold the button for 3 seconds.