GENERIC NIXIE CLOCK

MENU STRUCTURE

Digits: 4 or 6 with at least 1 DP each

MODES:

1. Cathode train

* Activated: holding either input button at powerup
* Display event: 1 second interval
* Displays: All digits show each value in turn, cycling 1/sec approx
* Deactivated/next mode: N/A

1. Display time

* Activated: no other menu active, timeout, etc.
* Display event: GPS serial received (1/sec)
* Displays: Digits show time (hhmm or hhmmss), dp’s show alarm state(s)
  1. Waiting for fix (optional)
* Activated: As per display time, when GPS has no fix (NMEA GPRMC has validity indicator not ‘A’)
* Display event: GPS serial received (1/sec)
* Displays: Single DP, cycles through digits

1. Alarm selection

* Activated: pressing alarm button once
* Display event: button interrupt input
* Displays: single digit indicating alarm number (0-9)
* Deactivation: menu timeout 🡪 alarm on/off
* Button effect: RH = increase alarm number, LH = decrease alarm number

1. Alarm on/off

* Activated: menu timeout from alarm selection
* Display event: button input
* Displays: digit0 = alarm number, digit1 = “1” for on, “0” for off
* Deactivation: menu timeout 🡪 alarm set time
* Button effect: RH = alarm on, LH = alarm off

1. Alarm set time

* Activated: menu timeout from alarm on/off
* Display event: button input (+ tick timer approx. 0.3 sec for flash)
* Displays: (6 digit) as per alarm on/off, and alarm time (hhmm) in digits 2-5

(4 digit) alarm time (hhmm)

(both with flashing DP for selected alarm, if alarm no <= digits)

* Deactivation: menu timeout 🡪 display time (+ save settings to EEPROM)
* Button effect: RH = increase time by 5 min (configurable). LH = decrease. REPEATING.

1. Timezone

* Activated: pressing timezone button once
* Display event: button input
* Displays: timezone in hhmm, DP in first digit as minus sign
* Deactivation: timeout 🡪 display time (+save settings to EEPROM)
* Button effect: RH = increase TZ by 30 min, LH = decrease. REPEATING.

OPTIONS:

* Enable/disable cathode train mode
* Enable/disable fix waiting masking mode
* Selection of 4 or 6 digit mode
* Number of available alarms (0-9)
* EEPROM support on/off