



HOW TO OPERATE YOUR 4 TUBE NIXIE CLOCK

There are two buttons that have the following functions:

SET: Exit tube test routine on cold power-up; Set: time, Enter configuration menu;

ADJ: Adjust: time, configuration parameters;

Setting the Time:

From time display mode, press and hold **'SET'** button for 2 seconds until the seconds digits are displayed counting up. Press the **'ADJ'** button to reset seconds to zero. Briefly Press **'SET'** again and the minutes will be highlighted. Press the **'ADJ'** button to set the minutes. Briefly Press **'SET'** again and the hours will be highlighted. Press the **'ADJ'** button to set the hours. Finally, briefly Press **'SET'** again to revert to normal clock operation.

Sleep Mode Override:

During programmed sleep mode, the sleep may be overridden to see the time by briefly pressing the **'SET'** button. Tubes will remain lit in seconds for the period defined in parameter (15).

Entering configuration menu:

The main settings of the clock are stored in flash memory - your preferred configuration is stored even after powering off the clock for extended periods. To access the configuration mode press and hold the **'SET'** button. After 2 seconds the seconds will become highlighted. Continue holding the button a further 2 seconds until the clock displays in this format: 00-XX. The 'XX' is the software version. Eg.15 means version 1.5. In configuration mode the hours digits display the current parameter being adjusted, and the minutes digits display the current value stored against the parameter. For each parameter, and referring to the table below, scroll through the range of possible values by pressing the **'ADJ'** button. When the desired value has been reached, move on to the next parameter by pressing the **'SET'** button. When the last parameter has been set, pressing **'SET'** one more time will revert the clock back to time display mode. The first parameter (0) cannot be changed as it is the software revision number. It will show for several seconds and then move to parameter 1.

| Parameter | Description | Values |
|-----------|---------------------------------------|--|
| 0 | Software revision | 10 = version 1.0 11 = version 1.1 etc |
| 1 | 12 / 24 Hr mode | 0 - 12 Hr (default) 1 - 24 Hr |
| 2 | Leading zero blanking eg. 01:54:32 | 0 - leading zero blanked (default) 1 - leading zero displayed |
| 3 | Sleep mode start hour | 0 - 23 |
| 4 | Sleep mode end hour | 0 - 23 |
| 5 | Sleep mode | 0 - Tubes off 1 - Dimmed display (default) |

| Parameter | Description | Values |
|-----------|---|---|
| 6 | Colon neon mod | 0 - AM/PM Indication, flashing 1 - AM/PM Indication, illuminated 2 - Flashing (default) 3 - Constantly illuminated 4 - Switched Off |
| 7 | Colon neon during sleep mode: Note 1 | 0 - AM/PM Indication, flashing 1 - AM/PM Indication, illuminated 2 - Flashing 3 - Illuminated (default) 4 - Off |
| 8 | LED backlight tube lighting brightness | 0 - 10 (default 9) |
| 9 | LED backlight tube lighting brightness (Night mode) | 0 - 10 (default 3) |
| 10 | Time Calibration Factor | 0 - 99 (each adjusts by 0.2 per day) |
| 11 | Time Calibration Polarity | 0 - Make clock slower 1 - Make clock faster |
| 12 | Slots mode: Note 2 | 0 - Slots disabled 1 - Slots every minute 2 - Slots every 10 minutes (default) 3 - Slots every hour 4 - Slots at midnight |
| 13 | Display mode | 0 - standard change of digits 1 - crossfading digits 2 - crossfading digits + scroll back (default) |
| 14 | Seconds Display each minute | 0 - Off 1 - On (default): Note 3 |
| 15 | Sleep mode override period (seconds) | 0 - 50 (default 0 gives 15 seconds override): Note 4 |
| 16 | Restore default settings | 0 - Keep user settings 1 - Restore original default settings: Note 5 |

Notes:

1. Night time neon mode is active when sleep mode is set to dim. During night time blanking the tubes AND neon are disabled.
2. Visual effect / cathode poisoning prevention - all digits on all tubes are cycled for 10 seconds. Not active during night blanking or dimmed modes (10 seconds).
3. Seconds will be displayed each minute between 55 and 59 seconds past the minute.
4. Press 'SET' briefly during blanking to show time for prescribed period.
5. Set this parameter to '1' to restore original default settings. Internal operations will then load all the original settings and restore the value to '0'

Maintenance:

The Nixie tubes are good for approximately 20 years, some versions of clock will have tubes that can be unplugged and swapped, other clocks will have tubes that will need to be returned to the workshop to be replaced. There is no real maintenance that is required other than periodic dusting or polishing of the case.

Warranty:

All clocks and tubes come with a years warranty from purchase date as standard. Tube failures are rare, even though the tubes are some 40 years old before they are used by us to make into a clock.



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