

2.3.1 Battery Replacement

The battery is a lithium primary battery, and is not rechargeable. Whenever power is applied to the terminals, the battery is not loaded, and the shelf-life of the battery is more than 10 years. When the unit is without any input power and when the battery switch jumper is ON, the battery supplies the real time clock and the primary RAM memory within the HD63A03 (IC201).

The lifetime of the battery when continuously loaded can be expected to be approximately 3.5 years. If the switch jumper is not set to ON until the installation is complete, the battery can safely be expected to last the effective lifetime of the system.

However, if the battery for some reason is exhausted, replace it with the same or a similar Lithium battery of 3V/appx. 160 mAh. The board footprint will accommodate batteries with various pin configurations. Use solder wick to remove the old battery and solder the new one into place.

OBSERVE CORRECT BATTERY POLARITY!

Also disconnect the battery jumper before any soldering operations on the board.

2.3.2 Real Time Clock adjustment

The accuracy of the real time clock is dependant on a fine frequency adjustment on the 32 768 Hz crystal. Readjustment will only be required if the crystal for some reason is replaced. Adjust capacitor CT501 using a frequency counter connected to IC503 pin 14 to obtain 32 768 Hz \pm 0.1 Hz corresponding to appx. \pm 3 ppm or \pm 100 seconds per year.

Depending on the available counter, IC503 pin 11 may be used to monitor the frequency. Adjust CT501 for an output frequency of 128 Hz \pm 0.0004 Hz

2.3.3 Digital/Analogue Converter Reference Adjustment (Optional).

The optional D/A converter for longitudinal speed has an adjustment for the reference voltage. Adjust P501 to read 5V \pm 25 mV on IC502 pin 14, corresponding to appx. \pm 0.5%.