

Option 28 – Time, Frequency, Phase Monitor Firmware Upgrade Instructions

Introduction

These instructions cover the installation of replacement Option 28 program ROMs (firmware) in all Arbiter GPS clocks *with Option 28 installed*. Due to the changes included with the new main program ROM, only those clocks with Option 28 need to have the Option ROM firmware changed. Therefore, at the same time that you replace the main program ROM on the clock main board, you will also need to replace the Option 28 program ROM that is located on the Option 28 board. This board is located adjacent to the main board (to the right of the main board, viewed from the front panel).

Installation Instructions

1. Locate the Option ROM (located at U4) on the Option 28 board (see Figure 1), remove and replace with the new Option 28 ROM (included). Be careful for correct orientation and that all of the pins fit in the ROM socket.
2. Go back to **Reassembly and Startup** on the Main Document.
3. After configuring the options and prior to recycling power to the clock, make sure to stay connected using the null-modem cable and terminal program.
4. Run the two Option 28 calibration commands listed below. These commands restore the voltage and phase calibration initially installed at the factory. Calibration constants are normally located on a white label fixed on the Option 28 board (close to the ROM socket).

Voltage Calibration: V,KRV (command is NOT case sensitive)

where V = the voltage calibration constant, K = the key code, clock model (e.g. 1093, 1084, 1088)

Example, where the voltage constant is 1.015 type in the value,

1.015,1093RV or 1.015,1084RV or 1.015,1088RV

Phase Calibration: P,KPC (command is NOT case sensitive)

where P = the phase calibration constant, K = the key code, clock model (e.g. 1093, 1084, 1088)

Example, where the phase constant is -0.05 type in the value,

-0.05,1093PC or -0.05,1084PC or -0.05,1088PC

5. Go back to Step 7, on the main Firmware Upgrade Instructions sheet, and complete the installation.

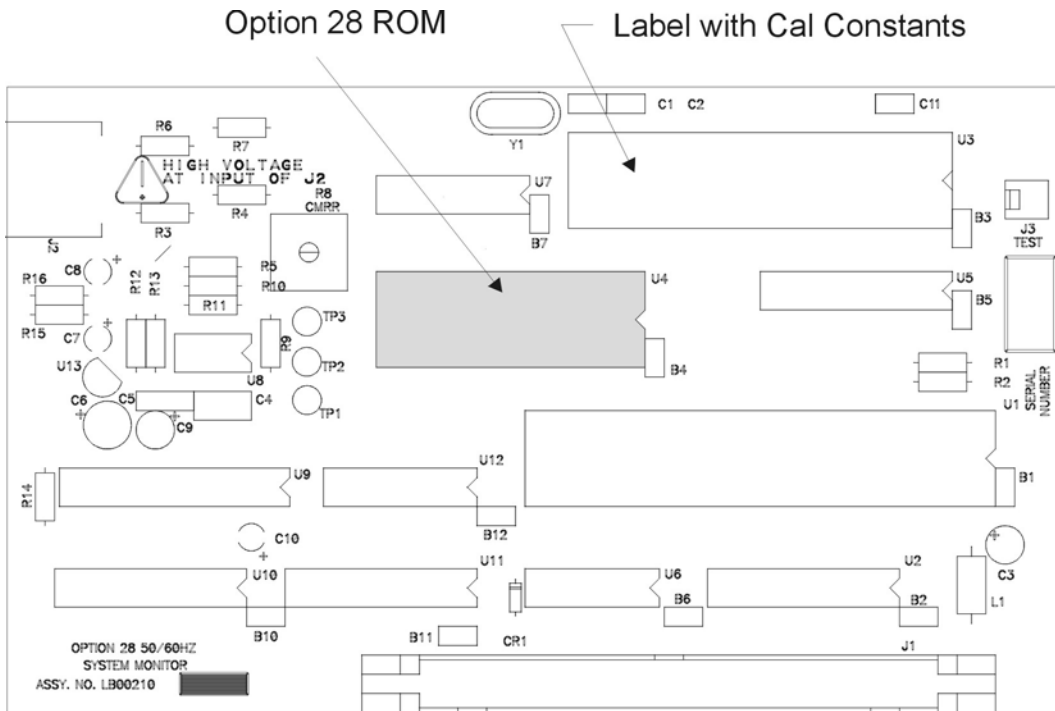


Figure 1 – Option 28 Board Layout