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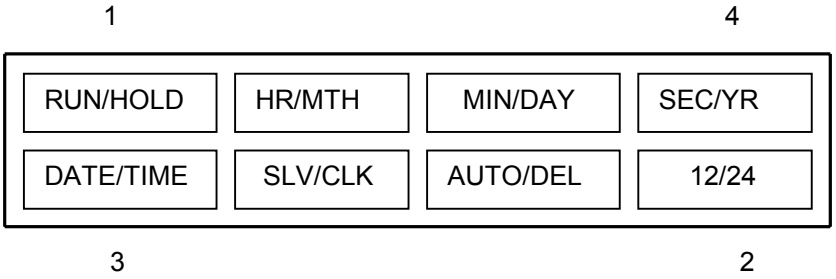
SECURITY CODE and SETTING INSTRUCTIONS

FRANKLIN QUARTZ-F MASTER

SECURITY ENTRY CODE



To prevent setting mode access by unauthorized fingers, the FRANKLIN QUARTZ-F has been designed with a security code to restrict access to those who are responsible for operating the time system.

Upon power up, the master clock will allow access to the set button for two minutes. While you are making program adjustments security automatically engages two minutes after the last entry. Should the keyboard lock up it will be necessary to re-enter the security code in order to continue. Note: Anytime the power removed (including power failure) upon resumption of power the security is open for 2 minutes.

RUN/HOLD, 12/24, DATE/TIME, SEC/YEAR.

PROGRAM SETTING

The following order is suggested for review and initial programming of the Quartz F Master Clock. Enter the **SECURITY CODE** and press the **RUN/HOLD** button to stop the system. Set the **SLAVE TIME, DAYLIGHT SAVING, 12/24-HOUR FORMAT, DATE and TIME as follows:**

SET SLAVE TIME

This function is required for FRANKLIN MARK 5M/5MS, BI-POLAR Minutes Impulse, MARK 8M/8S BI-POLAR, Seconds Impulse and MARK 7M 58th or 59th Minute Impulse, Corrective clocks. As Impulse Secondary Clocks have no onboard time keeping ability and will only respond to the commands of the Master Clock it is necessary to enter the **SLAVE CLOCK TIME** as a reference point. ***The SLAVE CLOCK value is the TIME DISPLAYED on your Impulse Secondary Clocks .*** Before power up all secondary impulse clocks should be inspected to verify they all display the same time.
NOTE: SHOULD YOU ENTER THE CURRENT OR CORRECT TIME IN THE SLAVE CLOCK MODE THE MASTER CLOCK WILL ASSUME THE SECONDARY CLOCKS ARE IN SYNC AND MAKE NO ATTEMPT TO CORRECT THEM.

Please refer to the **IMPULSE SYSTEM STARTUP** section for additional information.

To enter the function press **SLV/CLK** then use the **HR, MIN** and **SEC** buttons to duplicate the time displayed on the slave clocks. Impulsing is suspended within this function to allow you to do a final visual check of the slaves. The second's portion of this mode is only used for second's impulse clocks; it is irrelevant for minute impulse systems and does not need to be set.

AUTOMATIC SPRING/FALL CORRECTION:

Press the **AUT/DEL** button to display current setting, **"AU.CH"** indicates AUTOMATIC CHANGES will occur; "**dE. CH"** will appear indicating AUTOMATIC CHANGE is deactivated. The value that appears as you go to the next function will be activated.

12 OR 24-HOUR MODE:

The 6-digit MP will display time either in 12 or 24-hour format. To change the mode, press the **12/24**-hour button. Note the **PM** indicator will activate only in the 12-hour mode and the leading zero (**0**6:30) only in the 24-hour mode. When shifting modes there will be no visual change noted between 10:00 A.M. and 11:59 A.M.

SET DATE:

Correct date is essential for activation of Daylight Saving Time and Leap Year correction.

Press the **TIME/DATE** once to access (**HH:MM:SS**) and a second time to display **MM.DD.YY**. Adjust to correct value using the **MTH, DAY** and **YEAR** buttons as required. Adjustments are made by scrolling up. As there is no back up feature should you over shoot your target you will have to advance for a second opportunity. Holding the set button down accesses rapid advance.

SET TIME: After the correct date is displayed press the **TIME/ DATE** button to enter the ***DATE*** and display the **TIME**. Should the colons be illuminated press **HOLD** to stop the system. You will now set the **HH:MM:SS**. While in the 12 hour mode the **AM/PM** indicator lamp located in upper left corner of display does not appear during **AM** hours. Set the time a minute or two ahead of the standard you wish to synchronize with and wait for the correct moment to press the **RUN/HOLD** to start your system. After a 1-minute delay, you will notice either a rapid impulse as the secondaries catch up to the Master or suspended motion when the Master determines their waiting to be more efficient. N.I.S.T. Time can be accessed via telephone, dial **1-900-410-TIME**.

RS232 OUTPUT

This function is used to send communication data to properly configured FRANKLIN digital secondary clocks. With optional MP-PC DOS SOFTWARE, the Quartz F utilizes RS232 for bi-directional transfer of time code with PC or Server.

IMPULSE SYSTEM STARTUP

Bi-polar impulse secondary clocks must be completely wired in accordance with manufacturers instructions and wiring diagrams. In most situations this is accomplished with 2 or 3 conductor low voltage cable in a parallel configuration. All Secondary Clocks should be inspected to verify the displayed time is consistent clock to clock. Should your system include multiple disciplines IE: Minute Impulse and Second Impulse, the clocks must be wired to their respective outputs. They cannot be mixed on the same line. Minute and Seconds Clocks may each have a different displayed time however all Minute Clocks must read the same as must all Second's Clocks. **Note the time displayed on the secondary clocks, as this is your SLAVE TIME value.**

Once power is applied the red LED display on the Quartz F will illuminate and TIME will advance. You may notice the displayed time will be very close to accurate as it was set during final inspection and protected by a Lithium battery powered memory circuit. Pressing the **RUN/HOLD** button within 2-minutes of power up places the Master Clock in HOLD with the colons between HH**:**MM**:**SS and MM**:**SS extinguished. Press the SLV/CLK button and either a 4-digit (HH:MM) or 6-digit (HH:MM:SS) time will appear. **This value must be set to equal the TIME displayed on your analog secondary clocks.** Pressing the SLV/CLK button again alternates between the 4 and 6-digit display. 6-digit entries are only required for systems controlling MK-8 second's impulse clocks. Continue programming the remaining functions including DATE and TIME as outlined above.

Should questions arise regarding any FRANKLIN INSTRUMENT product don't hesitate to call for technical support or customer service at 1-800-321-2353.