Chapter 16 Time/Date Setup (OPTION)

16.1 Time and Date Operations
(GSE Part #: 200550-00TD0)

The standard Model 450 indicator includes a Time-Date feature which is non-battery backed. This means that when the feature is used, the time and date must be entered every time the instrument is powered up. The indicator can be set up to prompt you to enter the time and date at power up. If entering the time and date at each power up is considered undesirable, a battery-backed Time-Date option is available at additional cost. The Time-Date feature permits printouts with time and day of the week and the date in many possible formats.

NOTE:
In the following discussion, HH is a 2 digit representation for hours, MM is minutes, SS is seconds, MO is month, DA is day and YR is year. When the indicator is powered up, the time and date clock is set to Jan 1, 1970, 00:00:00 am (the UNIX computer standard). If the clock is not reset at power up, either by the operator or by having the time-date option chip installed, the current time and date will be the elapsed time since power up. The alarms, if enabled, will also show that as their setting prior to their setup.
It is recommended that the indicator be set up so that the time and date are displayed upon power up (P502). Time and date are displayed in the large numeric display in the format HH.MM.SS and MO.DA.YR (or DA.MO.YR if set for the international style). If not battery-backed, the upper line of the character display reads enter. The lower line of the character display reads time or date as appropriate. If the battery-backed time-date option is installed, time and date are each displayed for about 3 seconds and no changes are permitted. If desired, you can press **[ENTER]** to end the Time-Date display before the 3 seconds is over. A new Time and Date value can also be keyed in by accessing the setup parameters as described in the Advanced Setup, section.

16.1.1 Viewing Time And Date

While in the Weigh Mode, the time and date can be displayed simultaneously by placing parameter 11 as one of the selectable modes. The operator will need only to press the **[SELECT]** key a few times to toggle to view the time and date (see chapter 12 Operating Modes). Serially sending the indicator "11%s" will also place the indicator in the time/date view mode.

The date will be displayed on the large numeric display in the format MO.DA.YR (or DA.MO.YR for international style) and the time is displayed on the dot matrix display in the format HH:MM:SS. The time may be displayed in a 24 or 12 hour format with an am or pm displayed as appropriate, depending on the setup of time-date. Press **[SELECT]** to toggle back to where you were.

16.1.2 Entering Time

As mentioned previously, a new time may be entered at power-up or into P500 by keying in HH.MM.SS in a 24 hour format. Hours and minutes entries must be separated by a decimal point. Seconds entry is optional, and if omitted, they are initially set to zero. To specify seconds, they also must be separated from minutes by a decimal point. Leading zeroes need not be entered. For example, if you enter 8.9.45 and press **[ENTER]**, the time will be set to 08:09:45; if you enter 15.02 and press **[ENTER]** the time is set to 15:02:00. Use the arrow keys to scroll through numeric selections. Each time the **[PRINT]** key is pressed a decimal point is displayed. Continually pressing the **[PRINT]** key will scroll through numeric characters 0-9. The **[UNITS]** key will move to the next character location (use numeric keys on a 455). After all entries are selected and the hours, minutes and seconds are separated by a decimal point, press **[ENTER]**.

ie. 04.03.30 [ENTER]

If time is entered improperly, the prompt try h.m.s is displayed. This means try entry as hours, minutes and seconds each separated by a decimal point.

16.1.3 Entering Date

A new date may be entered at power-up or into P501 by keying in MO.DA.YR (or DA.MO.YR if international format was selected) followed by the **[ENTER]** key. Month, day and year entries must be separated by decimal points. Leading zeroes need not be entered.

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For example, if you enter 1.4.96 and press **[ENTER]** the date is set to 01/04/96. Use the arrow keys to scroll through numeric selections. Each time the **[PRINT]** key is pressed a decimal point is displayed. Continually pressing the **[PRINT]** key will scroll through numeric characters 0-9. The **[UNITS]** key will move to the next character location (use numeric keys on a 455). After all entries are selected and the month, day and year are separated by a decimal point, press **[ENTER]**.

ie. 06.9.93 [ENTER]

If the date is entered improperly, the prompt try m.d.y (or try d.m.y for international format) is displayed.

16.2 Time and Date Parameter Setup

P500.SS Time

This parameter displays the current time setting displayed in a military-style 24 hour format. The dot matrix portion of the display shows Time HH:MM while the seconds are shown to the right of the decimal in the numeric display. A new time may be entered by keying in the desired entry as HH.MM.SS with the seconds optional. Note that the hour and minutes entries must be separated by a decimal point. For example, if you enter 8.9.45, the time will be set to 08:09:45; if you enter 15.02, the time will be set to 15:02:00.

P501.YR Date

This parameter displays the current date setting. If P510 is set to USA, the dot matrix display will show Date MO/DA; if P510 is set to International, the dot matrix will show Date DA/MO. The year is shown in the rightmost digits of the numeric display. Depending on whether the USA or International date display is used, a new date may be entered by keying in the correct digits in the format MO.DA.YR or DA.MO.YR followed by the **[ENTER]** key. Note that the months, day and year entries must be separated by a decimal point. For example, if you enter **9.1.95**, the date will be set to **09/01/95**.

P502.XX TmDat

This parameter determines whether the time and date will be displayed upon power-up: P502.00 sets Time-Date to no; P502.01 sets Time-Date to yes. Having Time and Date appear upon power-up for systems not having the optional clock installed can be a very beneficial way of prompting the operator to key in the time and date.

NOTE:
The optional battery-backed Time-Date function must be installed for the correct time and date to appear upon power-up. (Time/date option - GSE Part Number 200550-00TD0).

P503.XX AM/PM

This parameter determines whether time will be displayed in a 12 hour or 24 hour format. The selection here does not change the display method for the setup modes and the time must always be entered into P500 or upon power-up using the 24 hour format.

P510.XX Style

This parameter provides the time and date format you desire, either USA (MO/DA/YR) or International (DA/MO/YR). The selection made here does not affect the printing of time and date since print format is specified with the format entry during the Custom Transmit setup.

16.3 Time and Date Battery Backed Option

The GSE Time/Date Option (GSE Part Number 200550-00TD0) is designed to provide battery backed-up time and date for the GSE Model 450 Weigh indicator. While the standard indicator has an on-board clock, it requires that the time and date be set every time the indicator is powered up. The Time/Date Option provides battery backed time and date which keeps the clock running continuously, even when the indicator is powered down. The time and date are programmed (Eastern Standard Time/Factory Default) into the option module at GSE when the module is tested prior to shipment.

16.3.1 Specifications

Accuracy:	+/- 1 minute per month at 25 degrees Centigrade. The module automatically corrects for leap year.
Battery Life:	Minimum of 10 years with indicator

power off.

16.3.2 Installation Procedure

a. Remove power from the indicator by disconnecting the line cord from the AC power source.

b. Take the indicator to a static-protected workstation. Wear a static control wrist strap. If this equipment is not available, ground your hands to the enclosure before touching any of the internal integrated circuits.

c. Open the indicator by removing the rear panel. It is secured by eight screws along the perimeter. Use either a medium size Phillips-head screwdriver or an 8mm hex socket (5/16" will also work).

d. Carefully lift the rear panel from the enclosure, rotating it about the left edge near the J1 load cell strain relief. Disconnect the keypad ribbon cable from J5 on the main board. Place the rear panel assembly on a table with the circuit board facing up.

e. Refer to Figure 16-1, Time/Date Option Installation on Main Board PC777C or Figure 16-2, PC800. Locate the U3 RAM IC on the Main Board PC777, PC800 or U3 on a 455. It is a large 28 pin IC located under the display module (standard enclosure types), near the display ribbon cable.

f. Use a small screwdriver and carefully pry the chip up and out of its socket. Do this by sliding the end of the screwdriver between the chip and its socket and lifting up slightly, first at one end of the chip and then at the other end. Alternate the ends being pried until the chip is loose. Be careful where the screwdriver is placed so as not to pry the socket out of the board!

g. The removed RAM chip may be saved for use as a spare part, or in case the clock chip needs to be removed.

h. On the top of the Time/Date module supplied with this Option is a shiny black circle which indicates the pin 1 location. This end will go toward the top end of the socket, near the U3 marking on the Main PC Board.

i. The socket from which the RAM was removed will have 28 pins. The bottom side of the Time/Date module has 28 pins, two rows of 14 pins.

j. Carefully press the module into the socket. Double check to verify that the proper alignment has been achieved and that no pins have been bent over.

k. Hold the rear panel assembly at a right angle to the main enclosure with the edge having the keypad cable adjacent to the enclosure.

l. Reconnect the keypad ribbon cable from the back side of the keypad to J5 on the Main Board. The 'bump' on one side of the connector should align with the slot on one side of the J5 header.

m. Lower the rear panel against the enclosure, being careful not to bump the display. Secure the enclosure with the screws which were removed previously in step c.

16.3.3 Time/Date Option Operation

Apply power to the indicator and verify proper operation. To verify the time and date values, select the time/date mode. Place parameter 11 into the selectable mode table of the 300 parameters. From the weigh mode press the **[SELECT]** key until the time/date mode appears.

The display will show the date on the large numeric digits and the time on the dot matrix display. For example, for November 12, 1995 at 3:27:23pm the display will appear as follows:

11.12.95 03:27:23pm

Refer to the 500 parameters setup to enter the time and date or to change the format of the time and date. To include the current time and / or date into the data transmissions to a printer or other peripheral, refer to the Custom Transmit Setup in Chapter 8. The time/date data is parameter ID 11.

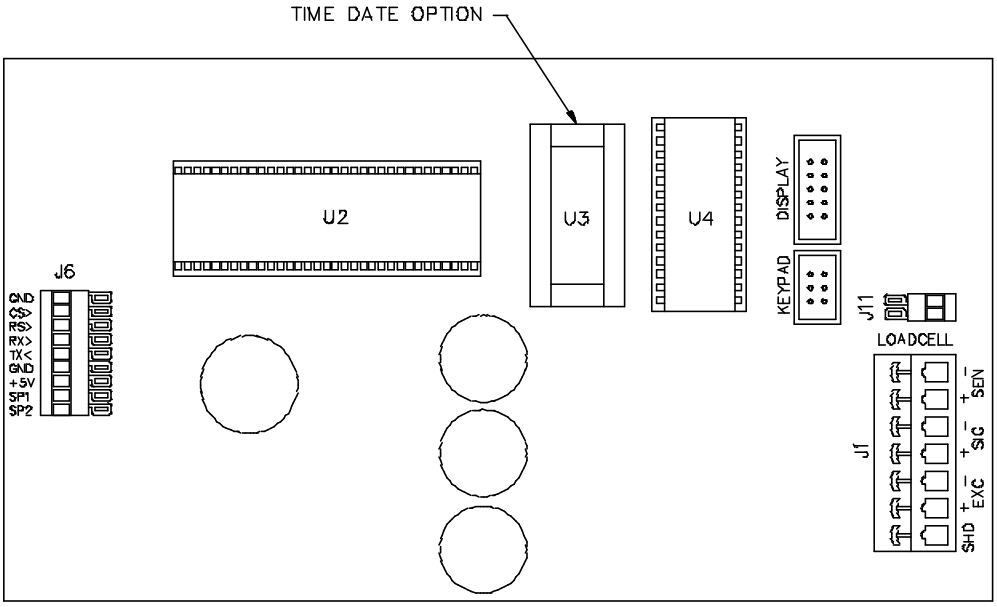

Figure 16-1 Time/Date Option Installation on Main Board PC777C

CAUTION:

All electrical connections and access to the inside of the indicator enclosure should be performed by qualified service personnel only!

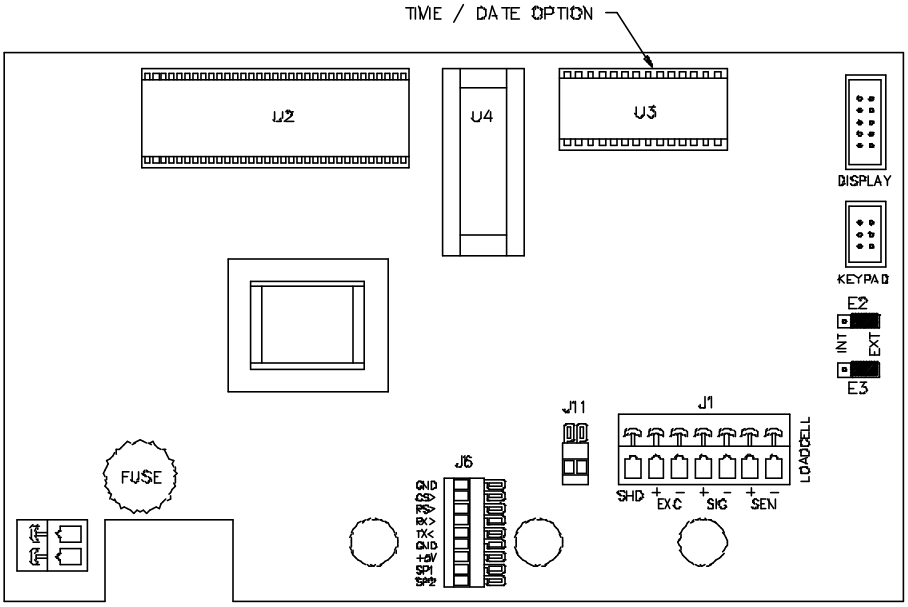

Figure 16-2 Time/Date Option Installation on Main Board, PC800