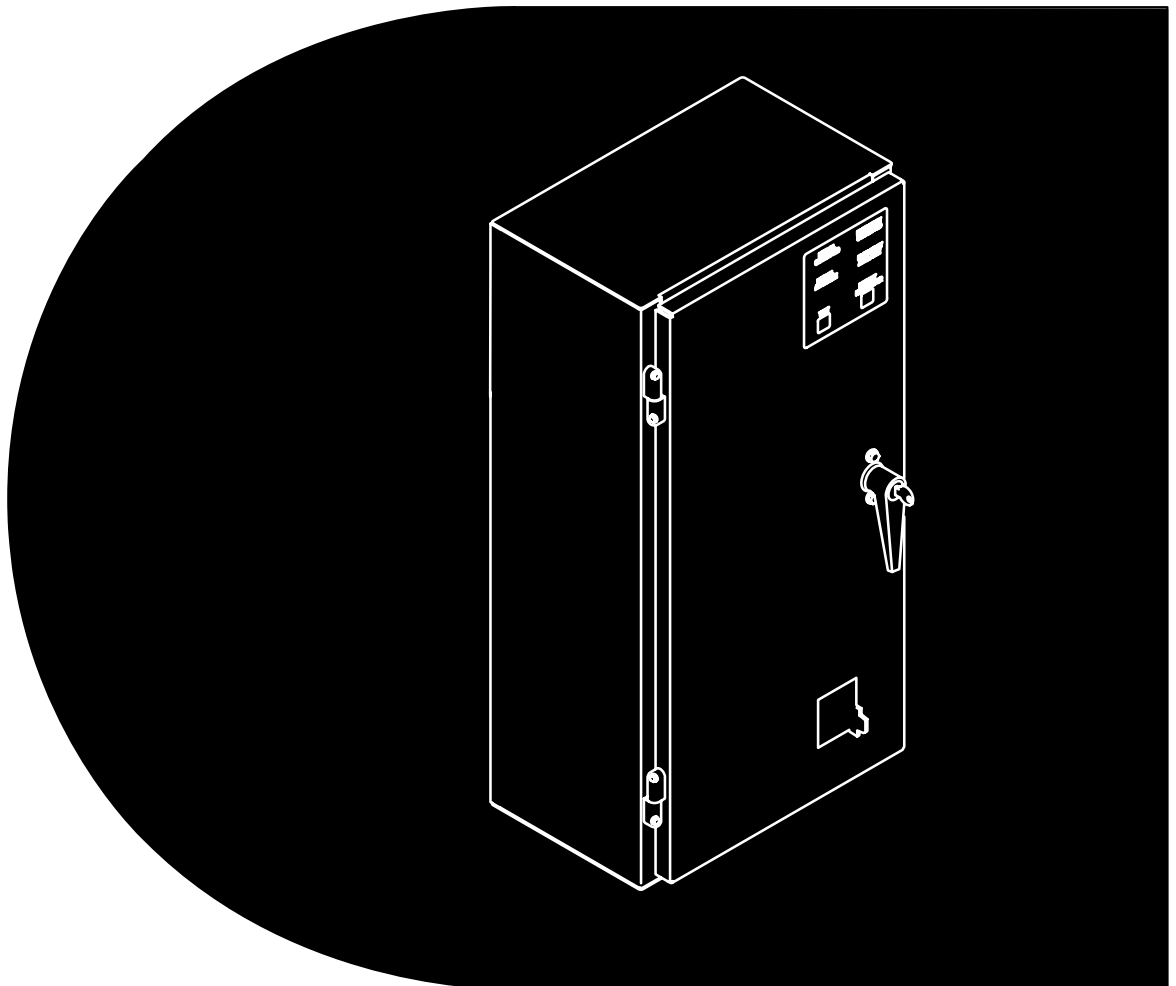


Service Manual

LC™
Automatic Transfer Panel
80 to 500 Amperes
Utility-to-Generator Set



FIVE BUTTON EXERCISE CLOCKS

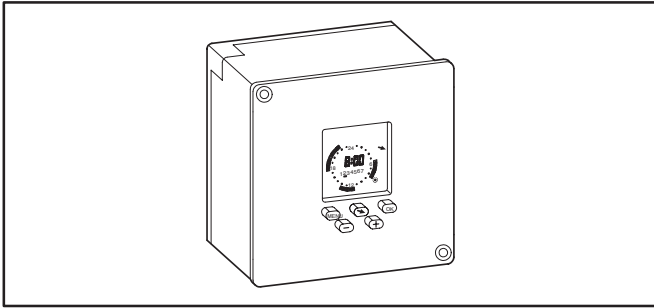


FIGURE 1. FIVE BUTTON EXERCISER CLOCK

Figure 3 shows the five operator buttons.

- The Menu button (MENU) is used to activate a menu or to break off the process.
- The Selector (Arrow) button (➤) is used to select menu topics and one of the four available modes of operation (Automatic Operation ⌚, Manual Override 🖱, Continuous Override On ⦿, and Continuous Override Off ○).

NOTE: The mode symbols are not included on the right side of the display (see Figure 2). They are included in this document for reference purposes only. The (➤) button must point to the relative position of the symbol shown in this document to select the desired mode (see Figure 3).

- The OK button (OK) is used to save changes.
- The (+) and (-) buttons are used to change values.

NOTE: After one minute of button inactivity, the home menu (see Figure 2) will be redisplayed and any changes made that weren't saved by pressing the OK button will be lost.

Figure 3 also shows the following clock features.

- The available menu topics are displayed at the top of the screen.
- When being programmed, indicators for change-over (SU/Wi) and the date (D/M/Y) are displayed beneath the menu topics.
- The clock displays the time and the day of the week (1 = Monday).
- Around the clock are segments showing when an exercise period is set.
- Near the right bottom corner is a circle indicating the exercise state (black = active, white = inactive).

NOTE: There is an audible click whenever an exercise period starts or stops.

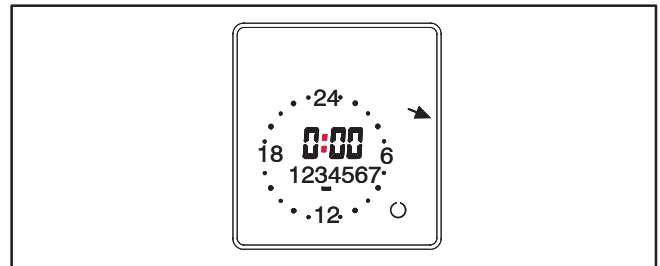


FIGURE 2. EXERCISER CLOCK HOME MENU

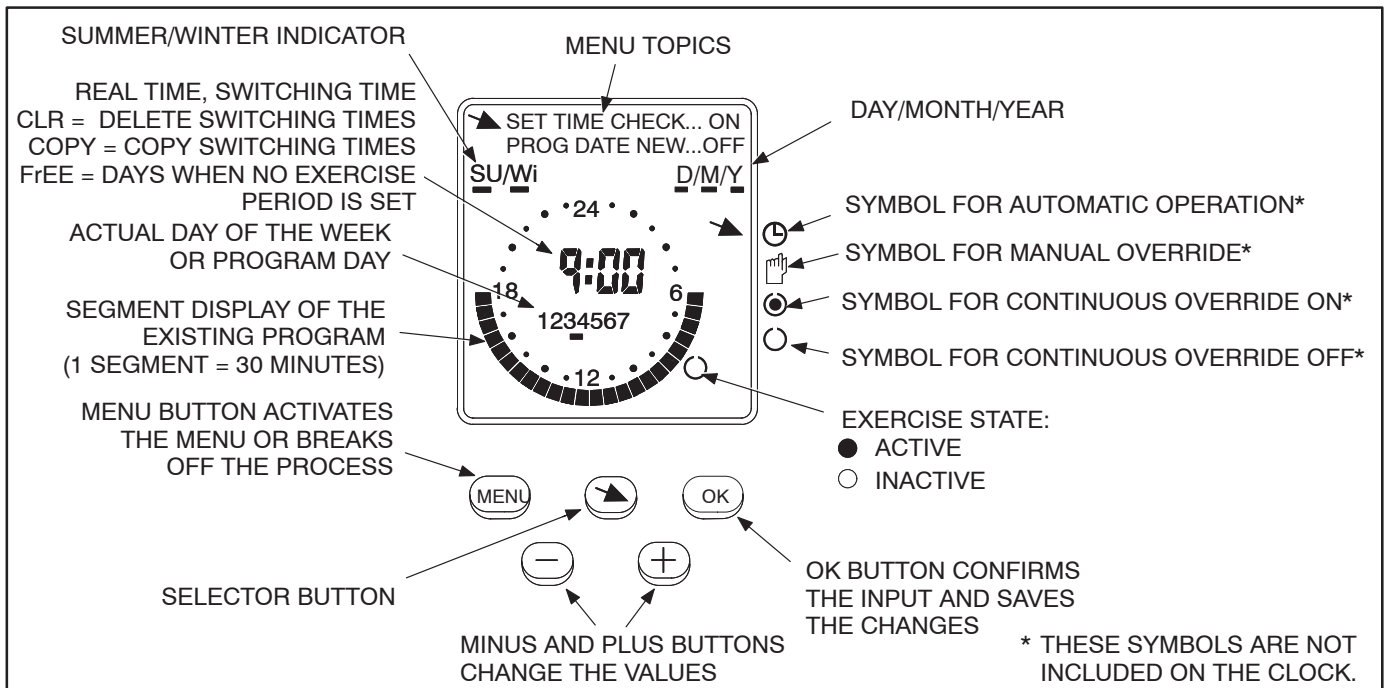


FIGURE 3. FIVE BUTTON EXERCISER CLOCK FEATURES

To reset the exerciser clock:

The clock is not pre-programmed. The clock can be reset to erase just the existing day and time settings or it can be reset to erase all existing day, time, and exercise program settings.

- To erase just the existing day and time settings, simultaneously press the **MENU**, +, and – buttons. The screen will go blank. When the buttons are released two sets of dashes will be momentarily displayed (-- --) and then the clock is displayed with the time set to midnight (0:00).
- To erase all existing day, time, and exercise program settings, simultaneously press all five buttons. The screen will go blank. Release the **MENU** button while continuing to press the other buttons. Two sets of dashes will be displayed (-- --). After three seconds have passed, release the remaining four buttons. The clock is then displayed with the time set to midnight (0:00).

To set the time:

- 1.. With the exerciser clock powered, press the **MENU** button. Use the selector button (⤵) to select **SET TIME** which is displayed in the upper left-corner of the display (see Figure 4).

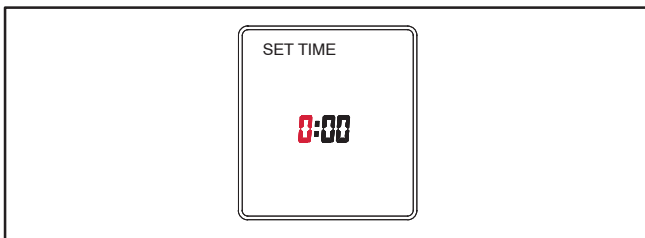


FIGURE 4. SETTING THE TIME

- 2.. Press the **OK** button. The word “DATE” is displayed. Press the **OK** button again. The time is displayed with the hour value flashing. The time displayed is based upon a 24 hour clock (military time).
Example: 2:00 PM = 14:00.
- 3.. Press the + or – buttons until the correct hour is displayed. Press the **OK** button. The minute value will then flash.
- 4.. Press the + or – buttons until the correct minute is displayed. Press the **OK** button. The home menu is redisplayed showing the set time (see Figure 5).

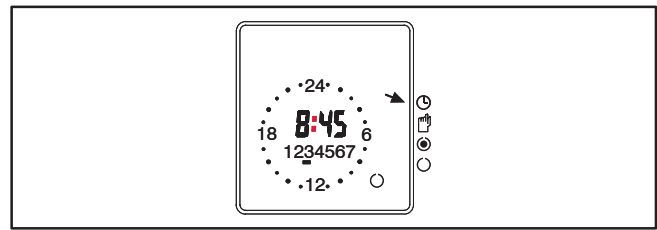


FIGURE 5. SET TIME

To set the date and summer/winter changeover:

- 1.. Press the **MENU** button. Use the selector button (⤵) to select **SET TIME** and press the **OK** button.
- 2.. Press the selector button (⤵) to select **DATE** and then press the **OK** button. The current year is displayed flashing and D/M/Y is displayed with the “Y” underlined (see Figure 6).

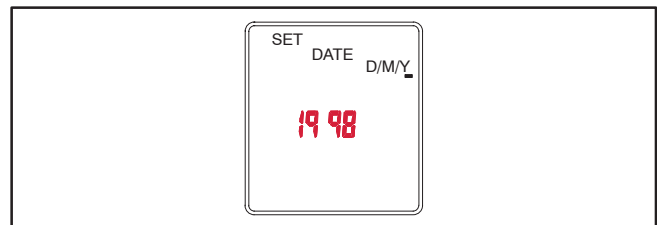


FIGURE 6. SETTING THE YEAR

- 3.. Press the + or – buttons until the correct year is displayed. Press the **OK** button. The day and month will then be displayed with the day flashing and D/M/Y is displayed with the “D” underlined (see Figure 7).

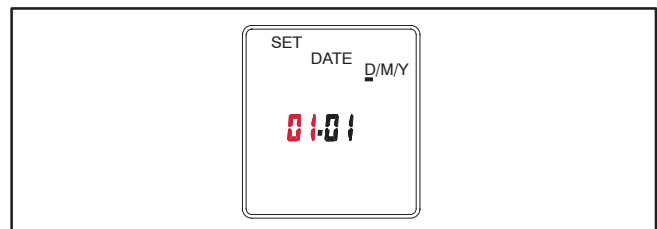


FIGURE 7. SETTING THE DAY AND MONTH

- 4.. Press the + or – buttons until the correct day (1 thru 31) is displayed. Press the **OK** button. The month value will then flash and D/M/Y will be displayed with the “M” underlined.
- 5.. Press the + or – buttons until the correct month (1 thru 12) is displayed. Press the **OK** button. The summer/winter changeover menu is displayed with the selected region flashing (see Figure 8).

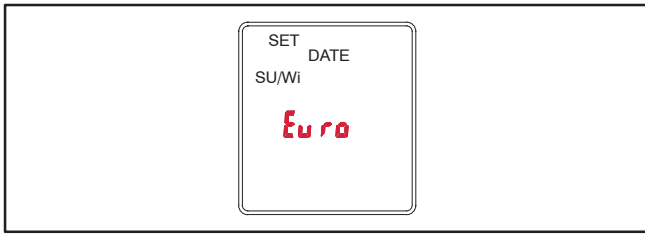


FIGURE 8. SUMMER/WINTER CHANGE OVER MENU

6.. To set the clock for summer/winter changeover (daylight savings time), press the + or – buttons to select the appropriate region (see Table 1) and then press the **OK** button. The home menu is redisplayed. The matching number for the current day of the week will be underlined.

*Examples: 1 = Monday
7 = Sunday*

NOTE: If you do not wish any changeover, select the nonE setting. If you wish to set changeover times different from one of the preset times, select **FrFr** and follow the instructions included in Table 1.

TABLE 1. SUMMER/WINTER CHANGE OVER INFORMATION

Choice	Beginning of Summertime	End of Summertime	Country/ Area
Euro	Last Sunday in March	Last Sunday in October	European Union
Gb	Last Sunday in March	Last Sunday in October	Great Britian
US	First Sunday in April	Last Sunday in October	North America
nonE	No changeover	No changeover	—
FrFr	Freely programmable date with regards to the change from summer to winter time. Northern Hemisphere: Use the + and – buttons to put in the date at which the summer time starts and ends at your location/in your country. The weekday is automatically allocated to the date. Southern Hemisphere: For the southern hemisphere, the date at which the summer time starts/ends must be programmed for the same year . Use the + and – buttons to set the year and then press the OK button. Use the + and – buttons to set the actual day and month of summer time and then press the OK button. Use the + and – buttons to set the actual day and month of real time and then press the OK button.		

To set exercise start and stop times:

NOTE: The start and stop time for an exercise period must both be in the same day. For example, you cannot have a 30 minute exercise period start at 23:45 on one day and stop at 0:15 on the following day.

- 1.. Press the **MENU** button. The selector button (⬆) will pointing at **PROG**. Press the **OK** button.
- 2.. The selector button (⬆) will be pointing at **PROG NEW**. Press the **OK** button again. “ON” is displayed in the top right corner of the screen and the first day of the week is underlined (see Figure 9).

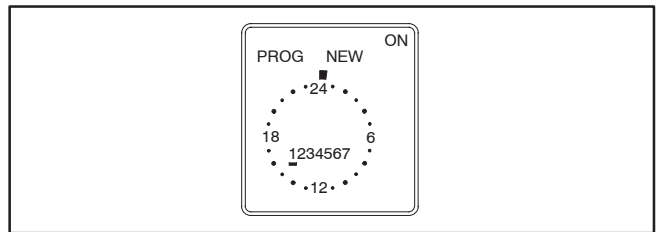


FIGURE 9. SETTING THE DAY OF THE WEEK THE EXERCISE IS TO BEGIN

- 3.. To select a different day, press the + or – buttons until the desired day is underlined.

NOTE: If an exercise period is already set for the selected day, the program and **CL r** will be displayed. If you wish to delete the set program, press the **OK** button.

- 4.. Press the **OK** button. The starting time (0:00) is flashed (see Figure 10).

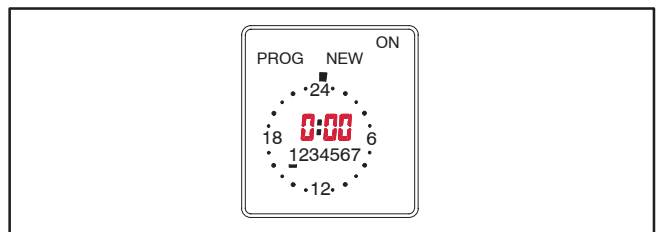


FIGURE 10. EXERCISE CLOCK MENU

- 5.. Press the + or – buttons to set the starting time for the exercise (see Figure 11).

NOTE: If you lightly press the + or – buttons, the value changes in one minute increments. If you press and hold the + or – buttons, the value changes in ten minute increments.

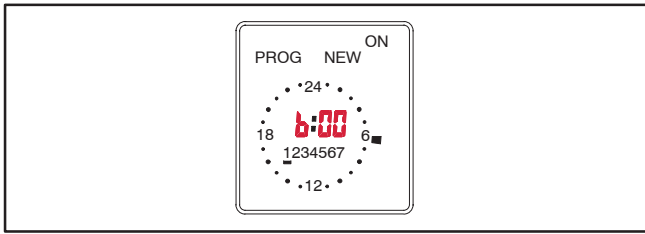


FIGURE 11. SETTING THE EXERCISE STARTING TIME

- 6.. Press the **OK** button. The starting time is still displayed and “OFF” is now displayed in the upper right corner of the screen (see Figure 12). Press the + button to set the exercise stop time.

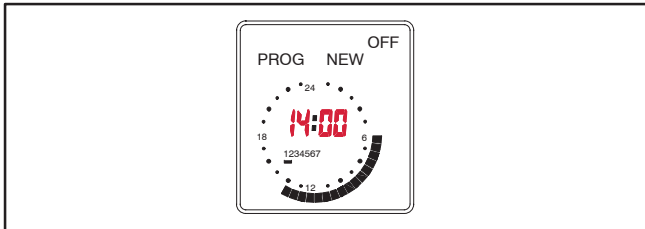


FIGURE 12. SETTING THE EXERCISE STOP TIME

- 7.. Press the **OK** button. Press the **OK** button again to save the exercise program.

NOTE: If the Delete Program menu is displayed (see Figure 13), **CL r** is displayed, indicating that the exercise program can be deleted by pressing the **OK** button.

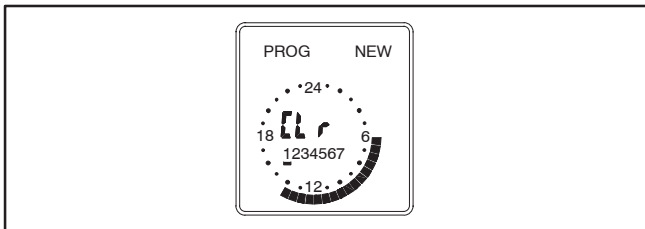


FIGURE 13. DELETE PROGRAM MENU

- 8.. Copy the set program, set an additional exercise period, or exit the the program input.
 - a. If you wish to copy the set program, see “To copy an exercise program” in the next column.

- b. If you do not wish to set any additional exercise periods, press the **MENU** button until the home menu is redisplayed.

NOTE: On the day that the exercise is to become active, segments will be displayed around the clock showing when the exercise period is set (see Figure 14).

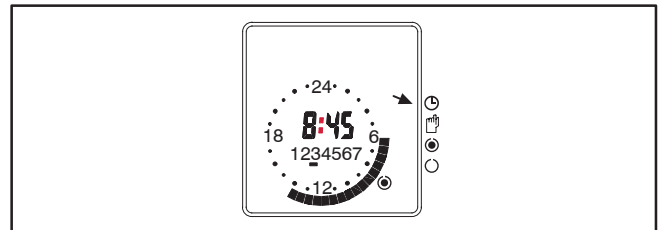


FIGURE 14. SET EXERCISE

To copy an exercise program:

- 1.. Once a set exercise program has been saved, press the selector button (⤵) to display the copy menu (see Figure 15).

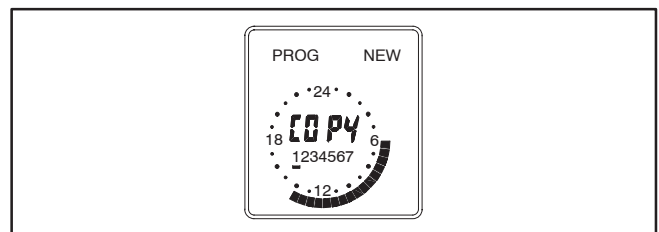


FIGURE 15. COPY EXERCISE MENU

- 2.. Press the + button to select the day of the week that you wish to include the same exercise period. Press the **OK** button.
- 3.. If you want the exercise to occur on additional days, repeat the copy procedure.
- 4.. To terminate setting exercise programs, press the **MENU** button until the home menu is redisplayed.

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⚠WARNING

INCORRECT SERVICE OR REPLACEMENT OF PARTS CAN RESULT IN DEATH, SEVERE PERSONAL INJURY, AND/OR EQUIPMENT DAMAGE. SERVICE PERSONNEL MUST BE QUALIFIED TO PERFORM ELECTRICAL AND/OR MECHANICAL SERVICE.

Safety Precautions

This manual includes the following symbols to indicate potentially dangerous conditions. Read the manual carefully and know when these conditions exist. Then take the necessary steps to protect personnel and the equipment.

⚠ DANGER *This symbol warns of immediate hazards that will result in severe personal injury or death.*

⚠ WARNING *This symbol refers to a hazard or unsafe practice that can result in severe personal injury or death.*

⚠ CAUTION *This symbol refers to a hazard or unsafe practice that can result in personal injury or product or property damage.*

High voltage in transfer panel components presents serious shock hazards that can result in severe personal injury or death. Read and follow these suggestions.

Keep the transfer panel cabinet closed and locked. Make sure only authorized personnel have the cabinet and operational keys.

Due to the serious shock hazard from high voltages within the cabinet, all service and adjustments to the transfer panel must be performed only by an electrician or authorized service representative.

If the cabinet must be opened for any reason:

1. Move the operation selector switch on the generator set or Stop/Auto/Handcrank switch on the automatic transfer switch (whichever applies) to Stop.
2. Disconnect the starting batteries of the generator set (remove the ground [-] lead first).
3. Remove AC power to the automatic transfer panel. If the instructions require otherwise, use extreme caution due to the danger of shock hazard.

Place rubber insulative mats on dry wood platforms over metal or concrete floors when working on any electrical equipment. Do not wear damp clothing (particularly wet shoes) or allow skin surfaces to be damp when handling any electrical equipment.

Jewelry is a good conductor of electricity and should be removed when working on the electrical equipment.

Do not work on this equipment when mentally or physically fatigued, or after consuming alcohol or any drug that makes the operation of equipment unsafe.

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