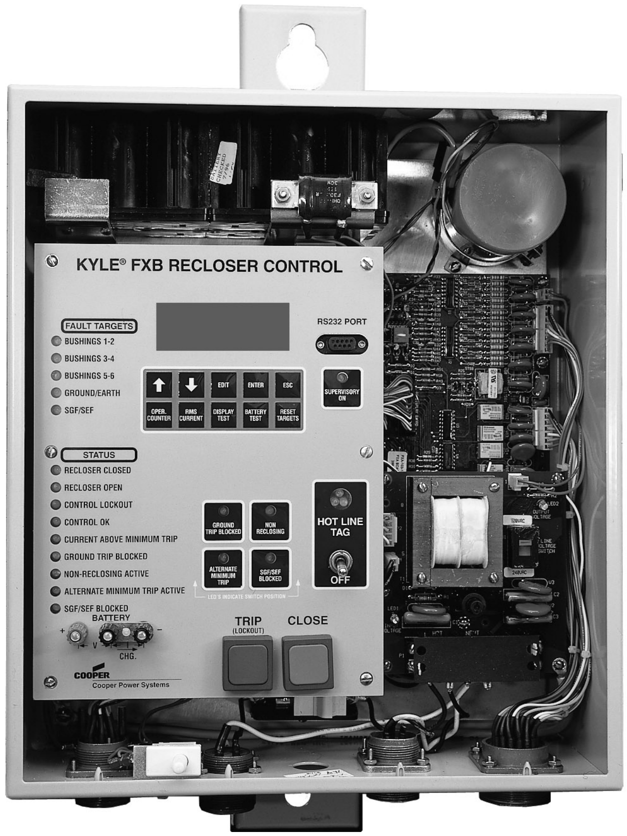
Reclosers

COOPER Power Systems

Kyle® Type FXB Microprocessor-Based Electronic Recloser Control Front Panel Programming Instructions

Service Information

S280-78-3



97KM-A

Figure 1.
Kyle® Type FXB Microprocessor-Based Electronic Recloser Control.

Contents

Safety Information 2
Product Information 3
Introduction 3
FXB Control Front Panel 4
LCD User Interface 4
Menu System 4
Control Security 4
Control Panel LED Indicators 6
Fault Target LEDs 6
Status LEDs 6
Control Panel Keyboard Functions 7
Using Hot Keys 7
Manual Operation 8
Using Manual-Operation Switches 8
Viewing Menus 10
Editing Parameters 10
Editing the Password 11
Editing Control Date/Time 11
Editing TCCs 12
Warnings and Errors 13
Resetting Max Demand Current Settings 14

SAFETY FOR LIFE

Cooper Power Systems products meet or exceed all applicable industry standards relating to product safety. We actively promote safe practices in the use and maintenance of our products through our service literature, instructional training programs, and the continuous efforts of all Cooper Power Systems employees involved in product design, manufacture, marketing, and service.

We strongly urge that you always follow all locally approved safety procedures and safety instructions when working around high voltage lines and equipment and support our "Safety For Life" mission.

SAFETY INFORMATION

The instructions in this manual are not intended as a substitute for proper training or adequate experience in the safe operation of the equipment described. Only competent technicians, who are familiar with this equipment should install, operate, and service it.

A competent technician has these qualifications:

- *Is thoroughly familiar with these instructions.*
- *Is trained in industry-accepted high- and low-voltage safe operating practices and procedures.*
- *Is trained and authorized to energize, de-energize, clear, and ground power distribution equipment.*
- *Is trained in the care and use of protective equipment such as flash clothing, safety glasses, face shield, hard hat, rubber gloves, hotstick, etc.*

Following is important safety information. For safe installation and operation of this equipment, be sure to read and understand all cautions and warnings.

Hazard Statement Definitions

This manual may contain four types of hazard statements:

DANGER: Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

WARNING: Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION: Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

CAUTION: Indicates a potentially hazardous situation which, if not avoided, may result in equipment damage only.

Safety Instructions

Following are general caution and warning statements that apply to this equipment. Additional statements, related to specific tasks and procedures, are located throughout the manual.

DANGER: Hazardous voltage. Contact with hazardous voltage will cause death or severe personal injury. Follow all locally approved safety procedures when working around high- and low-voltage lines and equipment. G103.3

WARNING: Before installing, operating, maintaining, or testing this equipment, carefully read and understand the contents of this manual. Improper operation, handling or maintenance can result in death, severe personal injury, and equipment damage. G101.0

WARNING: This equipment is not intended to protect human life. Follow all locally approved procedures and safety practices when installing or operating this equipment. Failure to comply may result in death, severe personal injury and equipment damage. G102.1

WARNING: Power distribution equipment must be properly selected for the intended application. It must be installed and serviced by competent personnel who have been trained and understand proper safety procedures. These instructions are written for such personnel and are not a substitute for adequate training and experience in safety procedures. Failure to properly select, install, or maintain power distribution equipment can result in death, severe personal injury, and equipment damage. G122.2

PRODUCT INFORMATION

Introduction

Service Information S280-78-3 provides front panel keypad programming information for the FXB microprocessor-based electronic recloser control. These instructions are designed to assist engineers and qualified technicians with programming the FXB control. These individuals must be familiar with the functions and programming parameters required for specific recloser installations.

The information contained in this manual is organized into the following major categories: *Safety Information, Product Information, Front Panel Keypad Programming, Control Security, Control Panel LED Indicators, Keypad Functions, Manual Operating Controls, Viewing Menus, Editing Parameters,* and *Warnings and Errors*. Refer to the table of contents for page numbers.

These instructions contain a listing of program settings and detailed operating descriptions. The settings and detailed operating descriptions are also listed on the control information label, located inside the cabinet door.

Read This Manual First

Read, understand, and follow the contents of these instructions, plus *Service Information S280-78-1, FX, FXA, and FXB Microprocessor-Based Electronic Recloser Control Installation Instructions* and *Service Information S280-78-2 FX, FXA, and FXB Microprocessor-Based Electronic Recloser Control Programmer's Software User's Manual,* and follow all locally approved procedures and safety practices before installing or operating this equipment.

Additional Information

These instructions cannot cover all details or variations in the equipment, procedures, or process described nor provide directions for meeting every possible contingency during installation, operation, or maintenance. When additional information is desired to satisfy a problem not covered sufficiently for the user's purpose, please contact your Cooper Power Systems Division sales engineer.

Acceptance and Initial Inspection

Each Type FXB control is completely assembled, tested, and inspected at the factory. It is carefully calibrated, adjusted, and in good condition when accepted by the carrier for shipment.

Upon receipt, inspect the carton for signs of damage. Unpack the control and inspect it thoroughly for damage incurred during shipment. If damage is discovered, file a claim with the carrier immediately.

Handling and Storage

Be careful during handling and storage of the control to minimize the possibility of damage. If the control is to be stored for any length of time prior to installation, provide a clean, dry storage area. If storage is in a humid atmosphere, make provisions to keep the control circuitry energized.

Note: To energize the control, apply ac power to the ac supply input terminal block located in the lower right hand corner of the back panel of the control cabinet. Refer to the Customer Connection for Ac Power section in this manual.

ANSI Standards

Kyle reclosers are designed and tested in accordance with ANSI standards C37.60 and C37.85 and ANSI guideline C37.61.

Quality Standards

ISO 9001:2000-Certified Quality Management System

FXB CONTROL FRONT PANEL

The FXB control front panel (see Figure 2) offers extensive user interface status as well as control interrogation through the menu-driven keypad and LCD display.

The FXB control, equipped with discrete SCADA (available as an accessory), allows 23 different status monitoring points.

LCD User Interface

The FXB control LCD user interface consists of the following elements:

- A row of five manual-operation buttons or keys (located below the 4-line x 20-character LCD display) that are used to navigate through the menu system and to view or edit control parameters. These keys are UP, DOWN, EDIT, ENTER, and ESC.
- A text-based 4-line x 20-character LCD display (located above the first row of five manual operation buttons or keys).
- A second row of five operation buttons or "hot keys" that are used to perform specific functions. These hot keys are OPER COUNTER, RMS CURRENT, DISPLAY TEST, BATTERY TEST, and RESET TARGETS.

Specific usage of the LCD keys is described in the *Viewing Menus, Editing Parameters,* and *Using Hot Keys* sections of these instructions.

Menu System

The LCD menu system (see Figure 3) consists of the following levels:

- Level 1 Main Menu Items.
- Level 2 Sub-Menu which contains items within each main menu item.
- Level 3 Page Menu which may contain up to four parameters within each submenu item.

Where possible, menus and parameters have been grouped to follow the arrangement of the Cooper Power System Kyle® Distribution Switchgear FX, FXA, and FXB Programmer software. The following formatting rules have been established for displaying menu labels and parameters on a single LCD line:

- All text may use up to a maximum of 19 characters. The 20th character is reserved to indicate menu direction/mode by using special characters.
- All menu labels are left justified.
- Parameters that have a value with units use the following format:

  [Parameter Label - left justified]
  [Parameter Value]
  [Units - right justified]
- Parameters that have a value with no units use the following format:

  [Parameter Label - left justified]
  [Parameter Value - right justified]

For an overview of the FXB menu system, see Figure 3.

Control Security

IMPORTANT: Security is provided and designed so that only personnel completely familiar with the operation of the control may gain access. Faulty programming could lead to unintentional control performance.

FXB control security provides limited access to functions appropriate to responsibility levels of personnel. The four-digit security code (or password) prohibits unauthorized keypad access to programming and other operating parameters. No programming commands are accepted by the control unless the operator enters the appropriate four-digit security code. Provide the necessary security codes to programming personnel.

The FXB is programmed at the factory with a standard security code (or password) of AAAA. This code is changeable to any 4-digit number via the front panel under CONFIGURATION at the Password screen. See the *Editing Password* section of these instructions for more information.

A security password is not required for interrogation of the control to display all operating parameters and read-only functions of the control front panel.

Note: The security code is stored in nonvolatile random-access memory (RAM). Therefore, it will never be lost, even if ac power is lost and the battery is discharged.

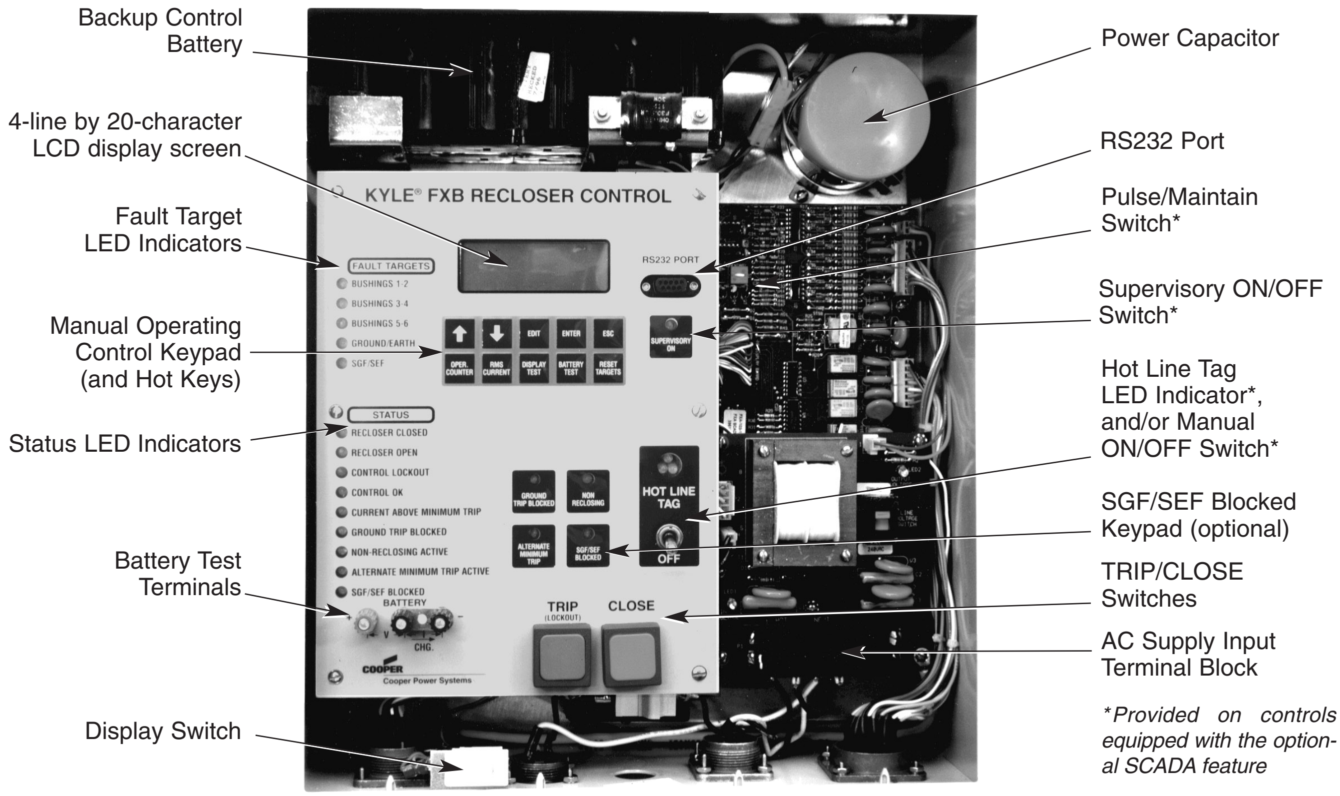


Figure 2.
Type FXB recloser control front panel and unit interior.

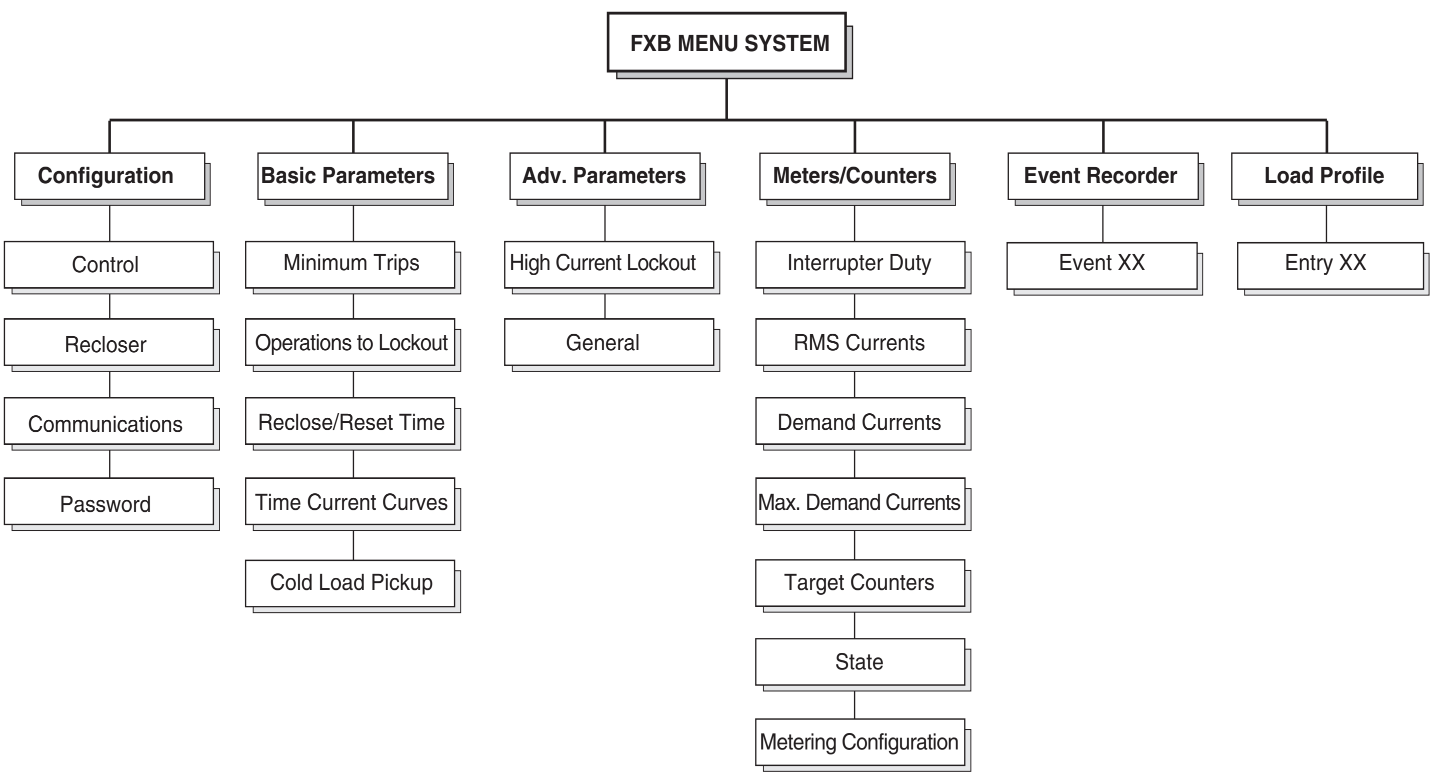


Figure 3.
The FXB menu system.

Control Panel LED Indicators

Light-emitting diode indicators, or LEDs (see Figure 4), are arranged along the left side of the control front panel and provide a visual report of control and recloser operating status. The LEDs are grouped to display fault targets and status functions.

Fault Target LEDs

Bushing 1-2, Bushing 3-4, Bushing 5-6, Ground/Earth, and **SGF/SEF** (Sensitive Ground/Earth Fault, an optional fault target feature) indicate the detection of fault current on individual phases or ground.

Status LEDs

RECLOSER CLOSED: Indicates that the recloser contacts are in the CLOSED position.

RECLOSER OPEN: Indicates that the recloser contacts are in the OPEN position.

CONTROL LOCKOUT: Indicates that the control has operated to lockout.

CONTROL OK: Indicates that the control's continuous self-diagnostics have detected no EEPROM malfunctions.

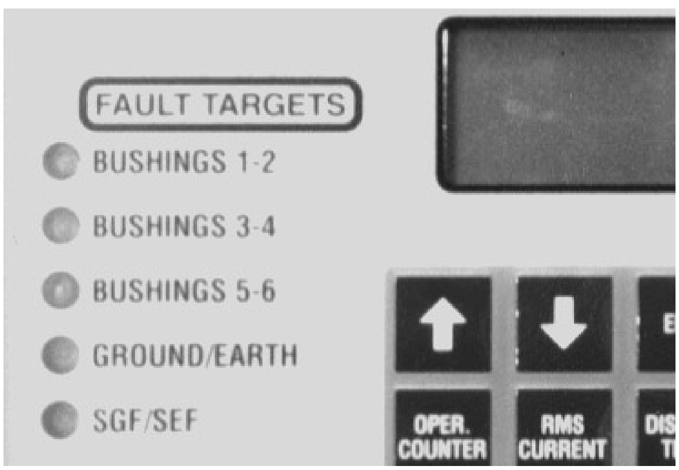
CURRENT ABOVE MINIMUM TRIP: Indicates that line current is above the programmed minimum trip current.

GROUND TRIP BLOCKED: Indicates whether or not ground trip blocked has been activated by either the front panel switch or via the supervisory control.

NON-RECLOSING ACTIVE: Indicates whether non-reclosing has been activated either by the front panel switch or via supervisory control.

ALTERNATE MINIMUM TRIP ACTIVE: Indicates whether alternate minimum trip has been activated by the front panel or via supervisory control.

SGF/SEF BLOCKED: Indicates whether the Sensitive Ground/Earth Fault Blocked feature has been activated by the front panel or via supervisory control.



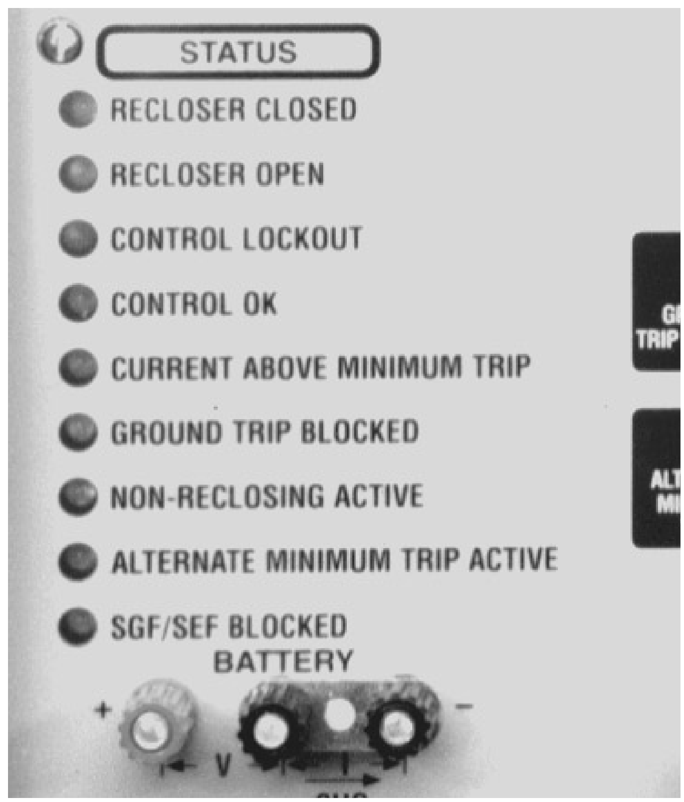


Figure 4.
Kyle® FXB Fault Target LEDs (above left) and Status LEDs (right).

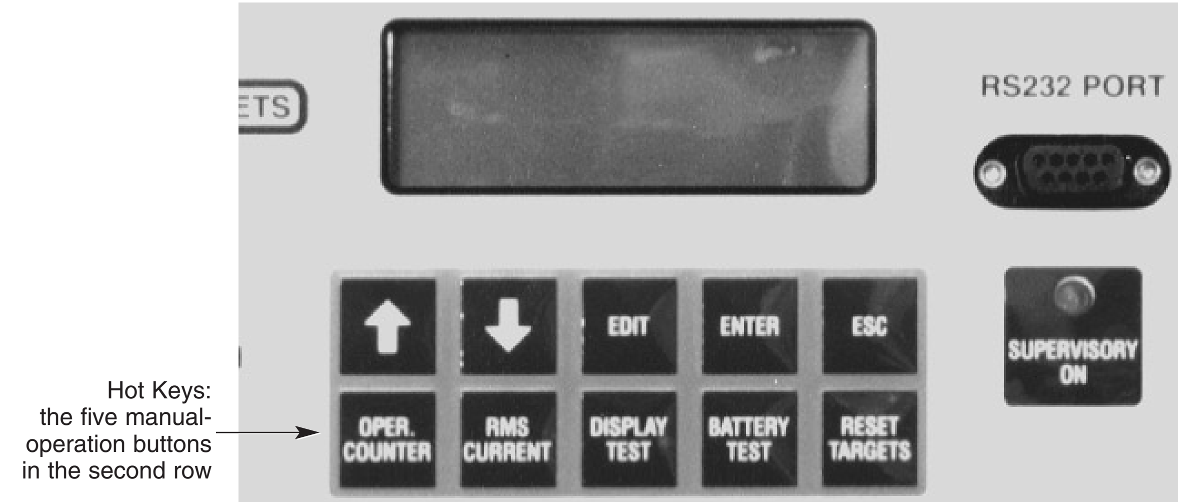


Figure 5.
FXB control Hot Keys (second row).

Control Panel Keyboard Functions

Located below the 4-line x 20-character LCD display are two rows of five manual-operation buttons or keys. The second row of five operation buttons are referred to as Hot Keys (see Figure 5) and are used to perform specific control functions. The Hot Keys are

> OPER COUNTER, RMS CURRENT, DISPLAY TEST, BATTERY TEST, and RESET TARGETS.

Using Hot Keys

The use of Hot Keys (see Figure 5) quickly displays the LCD menu range for the selected key. Hot Keys also provide a quick alternative to using a computer interface or scrolling through the LCD menus.

UP Arrow: This key is used to scroll UP through the programming menu.

DOWN Arrow: This key is used to scroll DOWN through the programming menu.

EDIT: This key, for programmable functions, will (with the use of the UP and DOWN scroll keys) allow a different parameter to be selected and changed.

ESC (Escape): This key allows user to back out of each submenu or menu and return to the main programming menu. Pressing this key while in the edit mode will immediately return the user to the viewing mode.

OPER. COUNTER (Operations Counter): This key displays the operations counter value on the LCD display (i.e., OPERATIONS XX). This value updates once every second or until the ESC key is pressed to escape from this menu.

RMS CURRENT: Pressing this key displays the four instantaneous currents on the LCD display. The currents update once every second or until the ESC key is pressed to escape from this menu.

DISPLAY TEST: Pressing this key toggles all LEDs on the front panel on and off three times then returns each LED to its current status. The DISPLAY TEST hot key also tests each segment on the LCD display and returns it to its previous state.

BATTERY TEST: This key starts the battery test sequence. The battery is measured with no load, then the voltage is displayed via the LCD. A 15 Ω load is then applied directly across the battery. Five seconds later, the loaded battery voltage is displayed on the LCD screen with a **Battery OK** or **Battery Not OK** message. This message remains on the screen until the ESC key is pressed to escape from this menu.

RESET TARGET: Pressing this key turns off all Fault Target LEDs that are currently on. This function can be performed at any time without affecting the LCD menu system. Pressing this key has no effect if all Fault Target LEDs are off.

MANUAL OPERATION

Manual operation of the FXB control occurs through the use of the front-panel manual-operation switches. The switches are

- SGF/SEF BLOCK (optional)
- NON-RECLOSING
- GROUND TRIP BLOCKED
- ALTERNATE MINIMUM TRIP
- SUPERVISORY ON
- HOT LINE TAG
- MANUAL CONTROL SWITCH

Refer to Figure 6 as needed to locate each key.

Using Manual-Operation Switches

The use of manual-operation switches (see Figure 6) provides designated control commands to the recloser. The switches also provide an alternative to using a computer interface or scrolling through the LCD menus.

SUPERVISORY ON: The SUPERVISORY ON feature is provided on controls equipped with the optional SCADA accessory. If the SUPERVISORY ON switch is on, it allows supervisory operation of the control. Conversely, if the SUPERVISORY ON switch is *not* on, it prevents supervisory operation of the control.

HOT LINE TAG: HOT LINE TAG prevents all closing operations by opening control contacts in series with the recloser low-voltage closing-circuit coil. If the feature is activated while the recloser is closed and the control is in the reset (home) position, a fault will cause one trip operation to lockout.

GROUND TRIP BLOCKED: Ground-fault trip operation of the control is disabled when the GROUND TRIP BLOCK switch is set in the block position. Blocking ground-trip operations is useful during known periods of three-phase load imbalance and is recommended while performing single-phase load imbalance, testing, or switching.

NON-RECLOSING: By setting the operating mode switch to NON RECLOSING, the FXB control will block reclosing after an automatic trip (one trip operation to lockout) on TCC #1 for phase and ground. When set in the NORMAL RECLOSING mode, the FXB control will operate on its programmed operating sequence.

SGF/SEF BLOCK: This switch controls the detection of and recloser tripping operations for Sensitive Ground/Earth fault currents below the normal programmed SGF/SEF minimum trip level (optional feature).

ALTERNATE MINIMUM TRIP: This switch permits switching to alternate preprogrammed phase, ground, and sensitive ground-fault minimum-trip values.

TRIP (LOCKOUT) AND CLOSE SWITCHES: Pressing the green TRIP switch opens the recloser, and the control locks out. Pressing the red CLOSE button returns the recloser to the reset condition, and the recloser closes. While the switch is in the close position, the control is still free to trip and lockout if closed into a fault.

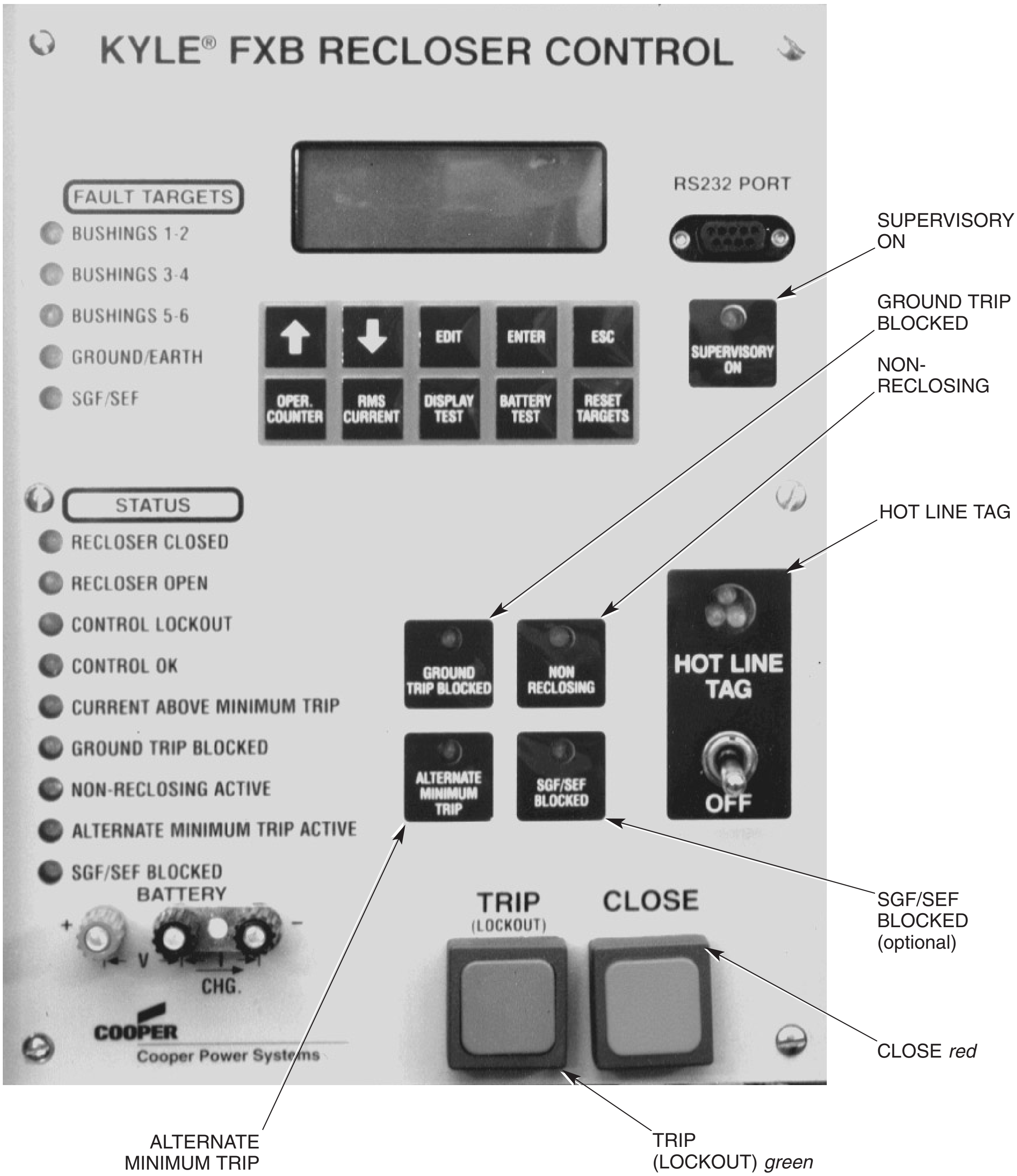


Figure 6.
Location of FXB manual-operation switches.

Viewing Menus

Accessing the menus for viewing purposes is accomplished by using the UP, DOWN, ENTER, and ESC (ESCAPE) keys. The direction of available menus is indicated to the user by display of special characters; down arrow, up arrow, and up and down arrow; on the last column of the first LCD line. The initial state of the menu system displays the first item from the main menu, CONFIGURATION; this is called the home position. From this point the user can proceed as follows:

1. Press the UP and DOWN key to view other main menu items.
2. Press the ENTER key to access the first submenu from the selected main menu item.
3. Press the ESC key to go back to the home position if the menu is not already there.

Once the first submenu item from a selected main menu item is displayed, the user can proceed as follows:

1. Press the UP and DOWN key to view other submenu items.
2. Press the ENTER key to access the first page menu from a selected submenu item.
3. Press the ESC (escape) key to go back to the previously selected main menu item.

Once the first page menu item from a selected submenu item is displayed, the user can proceed as follows:

1. Press the UP and DOWN key to view other page menu items.
2. Press the ESC (escape) key to go back to the previously selected submenu item.

The FXB function tree (Figure 3) illustrates the sublevels of the FXB Menu System. The first row contains the six main menu items: Configuration, Basic Parameters, Advanced Parameters, Meters/Counters, Event Recorder, and Load Profile. Under each of these main menu items is a number of submenus demonstrating what type of information can be obtained or changed at the next level or page menu.

Editing Parameters

The EDIT key becomes active when a page menu is being displayed and at least one parameter from the menu has the write or reset attribute. For example, the RMS currents are read-only parameters, so the EDIT key has no effect when they are displayed.

To edit a parameter, proceed as follows:

1. Press the EDIT key. A left arrow character is displayed on the last column of the LCD line to indicate which parameter to select for editing.
2. Press the UP or DOWN key to select which parameter to edit.
3. Press the EDIT key. The left arrow character changes to a blinking up & down arrow character to indicate that the parameter can now be edited.
4. Press the UP or DOWN key to select the desired parameter value. For parameters that have a wide range of values such as Minimum Trips, a speed increment/decrement feature has been implemented. If the UP or DOWN key is held pressed-in for up to approximately 3 seconds, the parameter value is updated at a rate of approximately 10 times per second. After 3 seconds of continuously pressing either key, the parameter value is increased or decreased, respectively, by approximately 5% of its remaining range and updated at a rate of approximately 10 times per second.
5. Once the desired parameter has been selected, press the ENTER key to perform the change and then exit from the edit mode. If the previously selected parameter is rejected by the control, the message PARAMETER REJECTED is displayed. Press the ESC (escape) key to clear the message, then return to the view mode. For example, the range of valid minimum trips depend on the CT ratio, so it is possible to have a minimum trip setting that would be considered invalid at the time a CT ratio change is attempted.

When the LCD becomes active, the first parameter to be edited requires the user to enter the active password.

To enter the password, proceed as follows:

1. Press the EDIT key. The blinking up and down arrow character is displayed to indicate that the active PASSWORD can now be entered. Then use the UP and DOWN key to select an alphanumeric number.
2. Press the ENTER key. This will store the first character and set up the selection of the next character. Since the password consists of four characters, select and enter the second, third, and fourth characters. The user can only see the character being selected. Other characters are displayed as asterisks (*).
3. After selecting the fourth character, press the ENTER key. If the password just entered is the same as the active password, the LCD returns to the view mode and the previous sequence for editing parameters can now be followed. If not the same, the message INVALID PASSWORD is displayed.
4. If the ERROR message is displayed, press the ESC key to clear it and return to the view mode.

If the user has changed the password but is unable to remember it, contact your Cooper Power Systems representative.

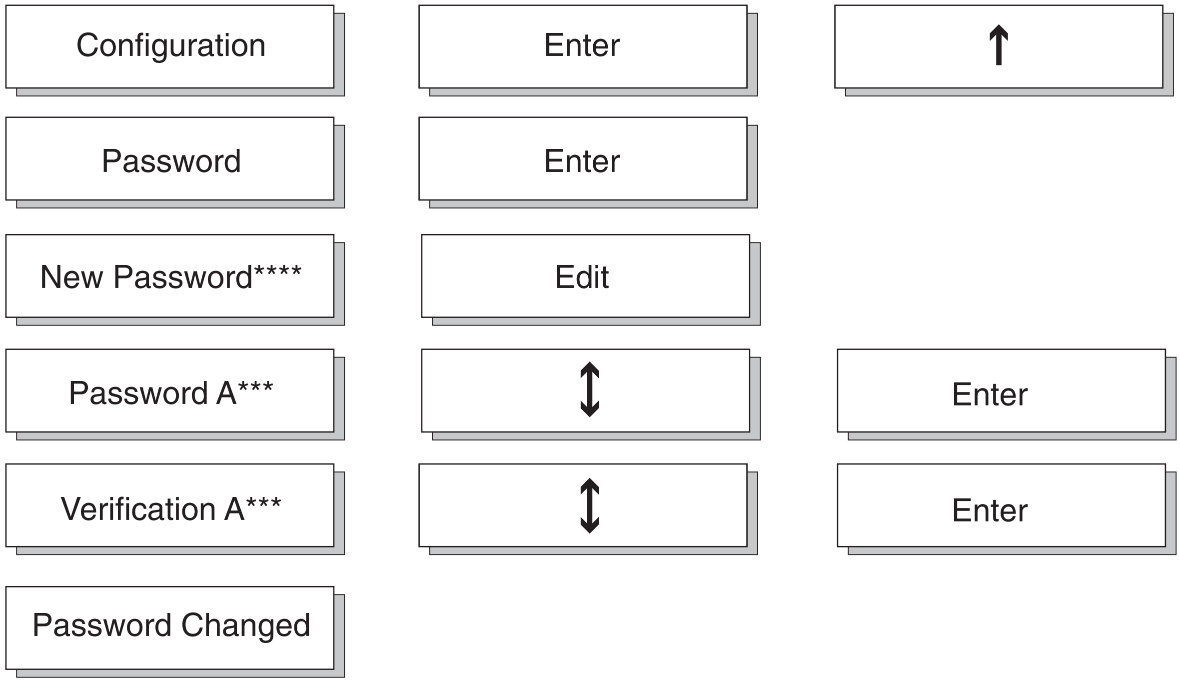


Figure 7.
Password Editing Flowchart.

Editing the Password

The FXB is programmed at the factory with a standard security code (or password) of AAAA.

The password parameter can be found under CONFIGURATION/ PASSWORD, refer to Figure 7.

To edit the Password, proceed as follows:

1. Press the EDIT key. The blinking up and down arrow character is displayed to indicate that a NEW PASSWORD can be entered. Then use the UP and DOWN key to select an alphanumeric character.

2. Press the ENTER key. This will store the first character and set up the selection of the next character. Since the password consists of four characters, select and enter the second, third, and fourth characters. The user can only see the character being selected; other characters are displayed as asterisks (*).

3. After selecting the fourth character, press the ENTER key. The blinking up and down arrow character is displayed to indicate that password VERIFICATION can now be entered. Select and enter the first through fourth characters.

4. After selecting the fourth character, press the ENTER key. If the VERIFICATION password is the same, the message PASSWORD CHANGED is displayed and the newly entered password becomes the active password. If not the same, the message VERIFY FAILED is displayed and the old password remains as the active password.

5. Press the ESC key to clear the message and return to view mode.

Edit mode for the password can be terminated at any time by pressing the ESC key.

Editing Control Date/Time

Control Date/Time parameters can be found on the first page menu under CONFIGURATION/CONTROL.

To edit these parameters, proceed as follows:

1. Press the EDIT key. The blinking up & down arrow character is displayed to indicate that the MONTH can now be edited. Then, use the UP or DOWN key to select the MONTH.

2. Press the ENTER key. The blinking up & down arrow character is displayed to indicate that the DAY can now be edited. Then, use the UP or DOWN key to select DAY.

3. Press the ENTER key. The blinking up & down arrow character is displayed to indicate that the YEAR can now be edited. Then use the UP or DOWN key to select the YEAR.

4. Press the ENTER key. The blinking up & down arrow character is displayed to indicate that the HOUR can now be edited. Then, use the UP or DOWN key to select the HOUR.

5. Press the ENTER key. The blinking up & down arrow character is displayed to indicate that the MINUTE can now be edited. Then, use the UP or DOWN key to select the MINUTE.

6. Press the ENTER key to perform the changes and exit the edit mode.

Editing TCCs

The TCC page menu can be found under BASIC PARAMETERS/TIME CURRENT CURVES. If a standard curve is required for a phase or ground operation, the editing procedure consists of only the selection of the desired curve from the standard library. If a modified curve is required, the following TCC modifiers are available for editing:

• MULT/ADDER	OFF/ON
• MULTIPLIER	0.100-2.000
• ADDER	0.000-0.200 (sec)
• MIN RESP TIME (MRT)	OFF/ON
• MR TIME (MRT)	0.013-1.000 (sec)
• HI CURRENT TRIP (HCT)	OFF/ON
• HCT TIME	0.016-0.150 (sec)
• HCT RATIO	1.00-29.00

NOTE: Communication between the control and the keypad is temporarily interrupted when reading a TCC and the screen will go blank.

To edit a TCC for phase or ground operation, proceed as follows:

1. Press the EDIT key. The blinking up & down arrow character is displayed to indicate that the CURVE TYPE can now be edited. Then, use the UP or DOWN key to select STANDARD or MODIFIED.
2. Press the ENTER key. The blinking up & down arrow character is displayed to indicate that a TCC from the standard Kyle library can now be edited. Then, use the UP or DOWN key to select the TCC.

If the CURVE TYPE was selected as STANDARD, continue with step 11.

3. If the CURVE TYPE was selected as MODIFIED, press the ENTER key twice. The blinking up & down arrow character is displayed to indicate that the MULT/ADDER can now be edited. Then use the UP or DOWN key to select ON or OFF.
4. If the MULT/ADDER selected was ON, press the ENTER key. The blinking up & down arrow character is displayed to indicate that the MULTIPLIER can now be edited. Then, use the UP or DOWN key to select the MULTIPLIER.

If the MULT/ADDER selected was OFF, continue with step 6.

5. If the MULT/ADDER was selected as ON, press the ENTER key. The blinking up & down arrow character is displayed to indicate that the ADDER can now be edited. Then, use UP or DOWN key to select the ADDER.
6. Press the ENTER key. The blinking up & down arrow character is displayed to indicate that the MIN RESP TIME can now be edited. Then, use the UP or DOWN key to select ON or OFF.

If MIN RESP TIME was selected as OFF, continue with step 8.

7. If MIN RESP TIME was selected as ON, press the ENTER key. The blinking up & down arrow character is displayed to indicate that the MR TIME can now be edited. Then, use the UP or DOWN key to select the MR TIME.
8. Press the ENTER key. The blinking up & down arrow character is displayed to indicate that the HI CURRENT TRIP flag can now be edited. Then, use the UP or DOWN key to select ON or OFF.

If HI CURRENT TRIP was selected as OFF, continue with step 11.

9. If HIGH CURRENT TRIP was selected as ON, press the ENTER key. The blinking up & down arrow character is displayed to indicate that the HCT TIME can now be edited. Then, use the UP & DOWN key to select the HCT TIME.
10. If HIGH CURRENT TRIP was selected as ON, press the ENTER key. The blinking up & down arrow character is displayed to indicate that the HCT RATIO can now be edited. Then, use the UP or DOWN key to select the HCT RATIO.
11. Press the ENTER key to perform changes. The completion of these changes will take a few seconds. The following messages are displayed sequentially to indicate progress in the transaction: CALCULATING TCC, WRITING TCC, READING TCC, and TCC editing is now complete.

Warnings and Errors

Warnings and errors may occur after a TCC is calculated. A warning means that the TCC was generated, but something is unusual. An error means that the TCC was not generated.

Warnings and Errors are as follows:

CURVE CLIPPED WARNING

The TCC time exceeded the minimum or maximum time that is allowed in the graph workspace of the TCC Editor. Time must be greater than or equal to 0.008 and less than or equal to 100 seconds.

HCT IGNORED WARNING

The selected HCT time was ignored because using it would have resulted in non-monotonic curve.

MRT BELOW CURVE WARNING

The selected MRT had no effect because the TCC always times longer than the MRT.

CALCULATION ERROR

This system error occurs if the FXB cannot allocate enough memory to calculate TCC.

Edit mode for TCC modifiers can be terminated at any time by pressing the ESC key.

The TCC calculation generates data for 50 or 60 Hz frequencies automatically. The data that is generated for a modified TCC is not stored by the FXB. Names for modified TCCs are automated. For example, the standard curve “Kyle-101 60” will have the name “Kyle-101 60 mod” when it has been modified.

Resetting Maximum Demand Current Settings

1. Using the DOWN arrow on the front panel of the FXB control, scroll to Meters/Counters menu and press ENTER.
2. Using the DOWN arrow, scroll to MAX DEMAND CURRENTS and press ENTER. The following information will be displayed:

MAX GND	__________	23 AMP
MAX Ph 1-2	__________	4 AMP
MAX Ph 3-4	__________	6 AMP
MAX Ph 5-6	__________	5 AMP

3. Press the EDIT key one time. The password dialog box will be displayed. Enter your password if it has been changed from the factory set password "AAAA". If the password has not been changed, press the ENTER key 4 times.
4. Press the EDIT key twice. A blinking cursor will be displayed to the right of the text.

MAX GND	__________	23 AMP ■
MAX Ph 1-2	__________	4 AMP
MAX Ph 3-4	__________	6 AMP
MAX Ph 5-6	__________	5 AMP

5. Press the DOWN arrow to reset the value to 0.

MAX GND	__________	0 AMP
MAX Ph 1-2	__________	4 AMP
MAX Ph 3-4	__________	6 AMP
MAX Ph 5-6	__________	5 AMP

6. Press the EDIT key. An left-facing arrow will be displayed to the right of the text. Using the DOWN arrow, scroll to MAX PH 1-2.

MAX GND	__________	0 AMP
MAX Ph 1-2	__________	4 AMP🡐
MAX Ph 3-4	__________	6 AMP
MAX Ph 5-6	__________	5A

7. Press the EDIT key. The left-facing arrow wil turn into a blinking cursor to the right of the text.

MAX GND	__________	0 AMP
MAX Ph 1-2	__________	4 AMP ■
MAX Ph 3-4	__________	6 AMP
MAX Ph 5-6	__________	5 AMP

8. Press the DOWN arrow to reset the value to 0.

MAX GND	__________	0 AMP
MAX Ph 1-2	__________	0 AMP
MAX Ph 3-4	__________	6 AMP
MAX Ph 5-6	__________	5 AMP

9. Follow steps 6 through 8 to reset the remaining Maximum Phase Demands.

SAFETY
FOR LIFE

COOPER Power Systems

1045 Hickory Street
Pewaukee, WI 53072
www.cooperpower.com