MAXCESS

MAGPOWR   FIFE   TIDLAND

FIFE-500

Quick-Start Manual

Narrow Web Guiding System

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Copyright information

All of the information herein is the exclusive proprietary property of Maxcess International, and is disclosed with the understanding that it will be retained in confidence and will neither be duplicated nor copied in whole or in part nor be used for any purpose other than for which disclosed.

This Instruction Manual is intended to be used in addition to the *FIFE-500 Web Guiding System User Manual, MI 2-262,* which contains all safety warnings and complete customer service contact information.

General information

The instructions contained in this Quick Start Setup Manual are written to support operation of the FIFE -500 Web Guiding System.

Language

These are the original instructions, written in English.

Display definitions

The FIFE-500 uses a QVGA Touchscreen for Operator command inputs and status displays. This Control Panel is divided into 5 sections of information for which a brief description is listed below.

Refer to the Figure 1, for the button locations in the standard, horizontal Control Panel. Also refer to the *FIFE-500 Web Guiding System User Manual, MI 2-262* for complete display definitions.

1. The vertical section on the left side contains the Operation Mode selection buttons (Automatic, Servo-Center, and Manual) and indicates the current Operation Mode selection by displaying the corresponding button in a green color. (Other buttons are blue).

2. The horizontal section along the top, above the line, contains the status bar which always contains the menu number. It may also indicate statuses, errors, and digital I/O.

3. The middle section indicates the current Operation Mode, the selected sensor signal level in a bar graph, and the level of Guidepoint Shift. This section also contains buttons for Guidepoint Shift and Guidepoint Reset.

4. The lower middle section contains the Left and Right Jog buttons.

5. The vertical section on the right side contains the Sensor Selection and Setup buttons and indicates the current Sensor Mode selection by displaying the proper sensor symbol in the Sensor Select button.
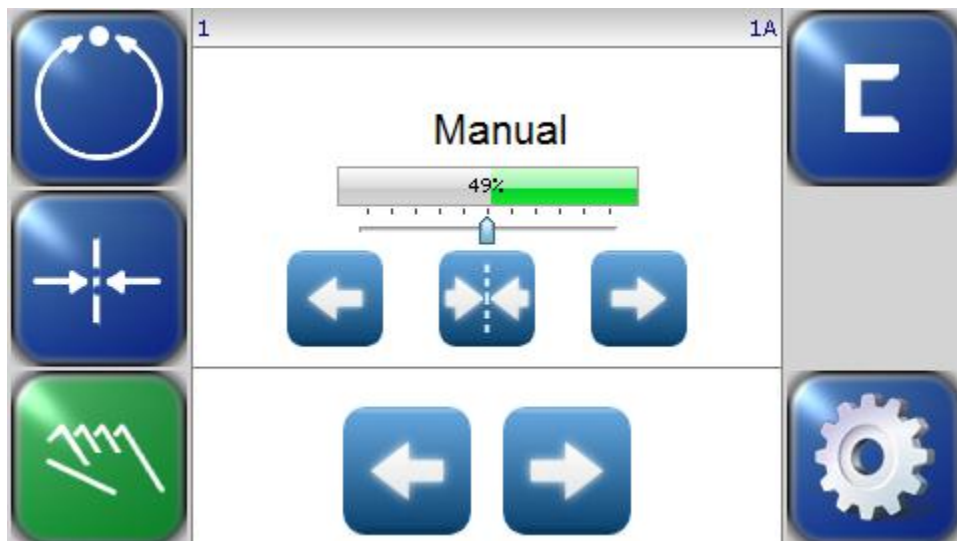

Figure 1.
FIFE-500 CONTROL PANEL
(0° AND 180° ROTATION)

The Control Panel can also be configured in a vertical orientation. For the vertical orientation, the following display descriptions apply. Refer to Figure 2 for the button locations.

1. The horizontal section along the top, above the line, contains the status bar which always contains the menu number. It may also indicate statuses, errors, and digital I/O.
2. The horizontal section near the top, just below the line, contains the Operation Mode selection buttons (Automatic, Servo-Center, and Manual) and indicates the current Operation Mode selection by displaying that button in a green color.
3. The section just below the Operation Mode buttons, indicates the current Operation Mode, the selected sensor signal level in a bar graph, and the level of Guidepoint Shift. This section also contains the Guidepoint Shift buttons and the Guidepoint Reset button.
4. The section below that, just above the Sensor Select and Setup buttons, contains the Left and Right Jog buttons.
5. The horizontal section along the bottom contains the Sensor Selection and Setup buttons and indicates the current Sensor Mode selection by displaying the proper sensor symbol in the Sensor Select button.
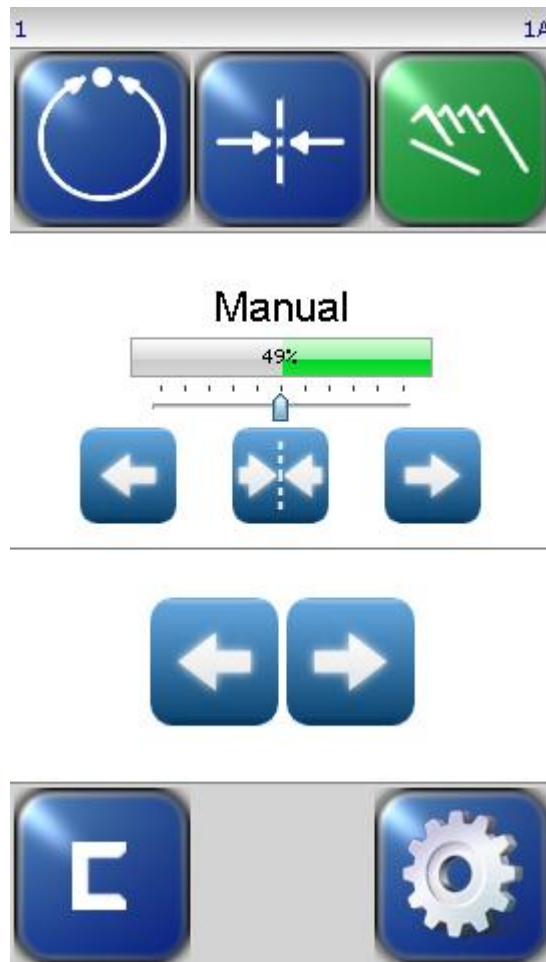

Figure 2.
FIFE-500 CONTROL PANEL
(90° AND 270° ROTATION)

Button functions and definitions

The table below gives the name along with an operational function description of each button displayed on the FIFE-500 Web Guiding System.

AUTOMATIC   This button initiates the Automatic mode. Correction is applied to the web by moving the guide in response to the output of the sensor(s) that have been selected.

SERVO-CENTER   This button initiates the Servo-Center mode. The guide is centered in its travel in response to the output of the internal Servo-Center transducer.

MANUAL   This button initiates the Manual mode. No correction is applied to the guide.

SENSOR SELECTION   This button is used to select the sensor(s) to be used for monitoring the web position when the system is in Automatic mode. Sensor selection is allowed in Manual and Servo-Center modes only.

SETUP   This button is used to enter the Setup Menus for configuring and adjusting the guiding system.

ARROWS   These buttons are used to jog the guide. The direction of guide movement is configurable.
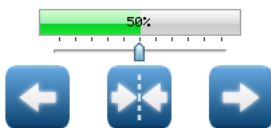
GUIDEPOINT ADJUST   The two arrow buttons near the bar graph are used to adjust the System Guidepoint while in Automatic Mode or Manual Mode. The button in the center is used to reset the System Guidepoint to the default value, which is 50% of the sensor bandwidth.

BACK   This menu navigation button is used to return to the previous menu level.

HOME   This button is used to return to the Operator Level screen.

MENU ARROWS   These buttons are used in the menu system to page forward/backward when multiple pages of menu choices are available. The arrows will appear disabled (grayed-out) when no more choices are available in the respective direction.

ACCEPT   This button is used to save a changed value and return to the previous screen.

REJECT   This button is used to discard a changed value and return to the previous screen.

Status bar definitions

The status bar located horizontally across the top of the FIFE-500 Web Guide Operator Level screen remains visible at all times. The number on the left side of the status bar contains the numerical address of the connected motor controller. The number on the right side of the status bar indicates a hierarchical screen number. The first numerical value indicates the operation mode (1=Manual, 2=Servo-Center, 3=Automatic). The second alphabetic character indicates the sensor mode (A=S1, B=S2, C=S1-S2). This screen number uniquely identifies each screen of the FIFE-500 Web Guiding System. The status bar also displays various icons, which are described on the following pages.

OPERATION MODE   One of these icons will appear to indicate the operation mode of the FIFE-500 Web Guiding System. These do not appear on the Operator Level screen since the mode buttons already indicate this information. These will only appear while in the setup screens.

SENSOR One of these icons will appear to indicate the currently selected sensor mode. These do not appear on the Operator Level screen since the SENSOR button already contains this information.

MENU TIMEOUT   The menu screens in the FIFE-500 Web Guiding System close automatically after 3 minutes of touch screen inactivity. The inactivity timeout option and the timeout value are configurable. The clock icons will appear during stages of the timeout process as the inactivity timer counts down. If a timeout occurs, the respective menu will abort any changes applied and return to the Operator Level screen. Some service-related screens are immune from the timeout option and are indicated by the presence of the orange clock icon.

LOGIN AUTHORIZATION LEVEL   When security has been configured, one of these icons will appear to indicate the authorization level of the current user. Security is disabled in the factory default configuration so these icons will not be displayed. All menu screens are accessible when security is disabled.

READ ONLY MENU   When security is enabled, options are available to make menus "read only", allowing an operator to view the settings but not change them. This icon will appear when the active menu is a "read only" menu.

DIGITAL INPUT COMMAND   This icon appears when a valid digital input command is present. Depending on the command, some touch panel controls may be disabled during this time. A red arrow in the down direction indicates digital input influence is disabled. A red up arrow indicates the digital outputs are disabled.

GUIDEPOINT CHANGED   This icon appears when a new System Guidepoint has been applied. This icon will appear on the status bar until the System Guidepoint remains unchanged for approximately 20 seconds.

EXTERNAL LOCK   This icon indicates the acceptance of the "External Lock" digital input command. Automatic guide movement is prohibited while in this state.

ASC ON   Automatic Sensor Control (ASC) is enabled for the current sensor mode. See the menu description in the *FIFE-500 Web Guiding System User Manual, Figure Sheet 2-262.*

ASC ACTIVE   Automatic Sensor Control (ASC) is enabled and the ASC state has been triggered. Automatic guide movement is prohibited. See the menu description for ASC in the *FIFE-500 Web Guiding System User Manual, MI 2-262.*

MOTOR BLOCKED   This icon indicates the motor is stalled.

COMMUNICATION ERROR   This error icon indicates communication is not working between the operator interface and the motor controller.

VOLTAGE ERROR   This error icon appears when the input voltage, motor rail voltage, or internal 12 volt power is outside acceptable range.

NETWORK ERROR   This icon appears when the operator interface is unable to gain network control.

LINKED MODE   This icon appears when the "linked mode" is active. Linked mode is used in networked systems to send the Automatic, Manual, and Servo-Center commands to all network devices simultaneously.

MOTOR TYPE FAULT   This icon appears when there is no motor type configured.

COMMUNICATION FAULT   This icon appears when a problem is detected with the communication signals. This can be caused by hardware or an addressing conflict in a networked system.

LINE SPEED ZERO   This icon appears when line speed control is enabled and the sensed line speed is zero. Guide correction is inhibited in Automatic mode under these conditions.

MCP-05 SEEK   If the MCP-05 option has been enabled, this icon will blink while a seek operation is in progress.

System setup

Setup screens

Figure 3.
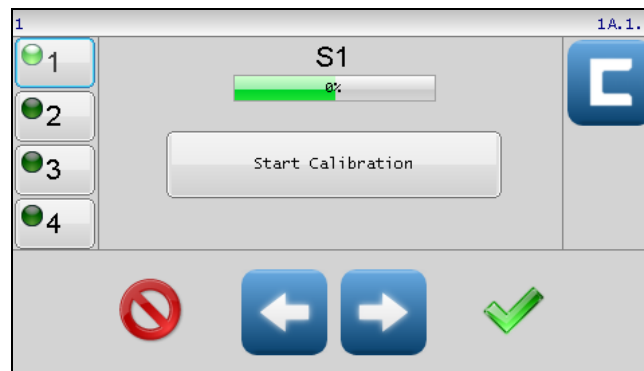**FIFE-500 CONTROL PANEL**
LEVEL 1 SETUP SCREEN

Figure 4.
FIFE-500 CONTROL PANEL
SENSOR CALIBRATION SCREEN

1. Connect +24 VDC Power to the input receptacle, located on the top side of the Base Assembly. Refer to *MI 1-915*, which is supplied with each system.
2. Apply the proper power to the system.

Continued next page

System setup

3. Verify the system is in Manual Mode by pressing the MANUAL button on the Control Panel.

4. Switch the system to Servo-Center Mode by pressing the SERVO-CENTER button.

5. Thread the web/strip to be used, through the system and pull proper tension, if possible.

6. Switch the system to Manual Mode by pressing the MANUAL button.

7. Perform Sensor Calibration on the sensor(s) that will provide position feedback for the web/strip. If two sensors are being used, they must be calibrated independently. Refer to Figures 3 and 4 shown on page 3-1. Be sure to use the web to be guided to calibrate the sensor(s).

   a. Press the SETUP button to enter the Setup menus.

   b. Press the SENSOR SETUP icon to enter the Sensor Calibration menu.

   c. Select the desired sensor by pressing the SENSOR SELECTION button.
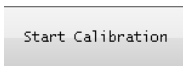
   d. Press the 'Start Calibration' button to begin the calibration.

   e. The Jog buttons at the bottom of the screen may be used to move the web material in and out of the sensor as needed during calibration.

   f. Follow the instructions displayed on the Control Panel.

   g. When prompted to save the calibration, select YES or NO.

   h. Repeat this procedure for each sensor, if two sensors are to be used.

   i. Once this procedure has been completed, Press the ACCEPT (√) button to save the changes.

   j. Press the BACK or HOME button to return to the Operator Level screen. In simulation, these buttons are not available.

Once this procedure has been performed for each sensor, it does not need to be repeated, unless the web/strip opacity has changed.

Auto setup configuration

NOTE: If Manual Configuration is desired, go to page 3-5.

Figure 5.
FIFE-500 CONTROL PANEL
AUTOSETUP SCREEN

1. Place the web/strip in the proper position and then position the sensor(s) to align the center of the sensor(s) bandwidth with the edge of the web/strip to be guided.

2. Verify the system is in Manual Mode by pressing the MANUAL button. Refer to Figure 1 on page 2-1.

Continued next page

Auto setup

3. Perform Auto Setup to automatically determine the proper polarity and gain for the system. If two sensors are being used, Auto Setup must be performed independently, in each sensor mode. Refer to Figure 3 on page 3-1 for button locations.

a. Select the desired sensor mode by pressing the SENSOR SELECTION button.

b. Press the SETUP button to enter the Setup menus.

c. Press the AUTOSETUP icon to enter the AUTOSETUP menu.

d. Position the web edge near the center of the sensor proportional band as indicated in Figure 5 on previous page.
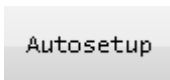
e. Press the Autosetup button to start. The guide will move a short distance and indicate the result as shown in Figure 6 below.
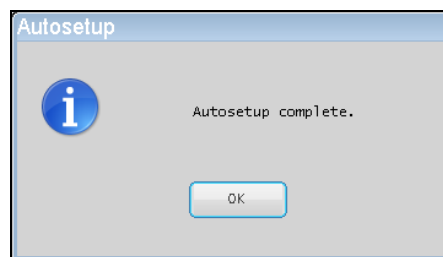
Figure 6.
FIFE-500 CONTROL PANEL
SUCCESSFUL AUTOSETUP COMPLETION

4. Press the ACCEPT button to save the setting.

5. Press the BACK or HOME button to return to the Operator Level Screen.

6. Repeat this procedure for each sensor mode that will be used.

7. Switch the system to Automatic Mode by pressing the AUTO button. This initiates the guiding function of the system.

Once this procedure has been performed for each sensor mode, it does not need to be repeated.
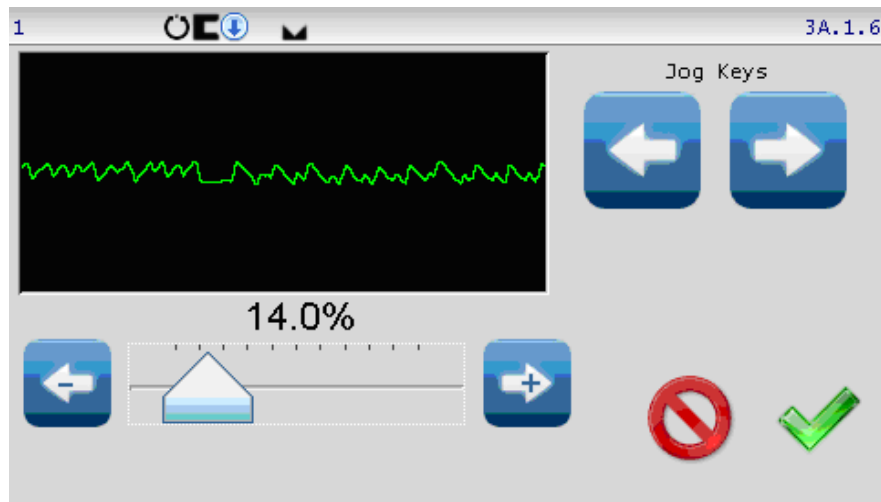
Optional manual configuration

Figure 7.
FIFE-500 CONTROL PANEL
SYSTEM GAIN SETUP SCREEN

Setting the gain

1. Press the SETUP button to enter the Setup menus.

2. Press the GAIN icon to enter the Gain menu.

3. Use the + and - ARROW buttons, or use the slider control to adjust the Gain to the desired level. (The display indicates the sensor signal stability to assist in the Gain adjustment).

4. Press the ACCEPT (√) button to save the new Gain value.

5. Press the BACK or HOME button to return to the Operator Level screen.

Optional manual configuration
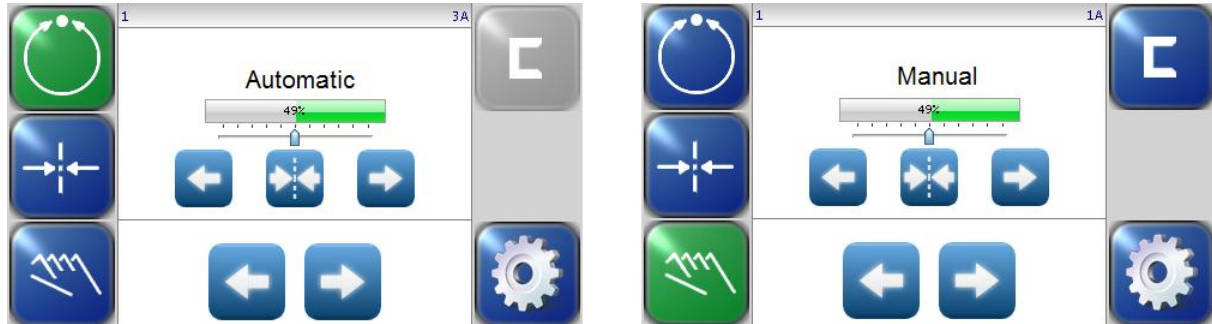
Figure 8.
FIFE-500 CONTROL PANEL
GUIDEPOINT SETUP SCREENS

Changing the guidepoint while in automatic or manual mode

The arrow controls shift the Guidepoint within the active sensor bandwidth.

Press the center button near the bar graph to reset the Guidepoint to the default of 50%.

Note: If the Guidepoint is changed while in Automatic Mode, the change is effective immediately, but if the Guidepoint is changed while in Manual Mode or Servo-Center modes, the change is effective when Automatic Mode is initiated.