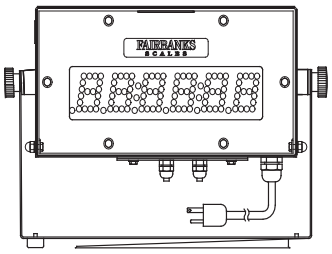
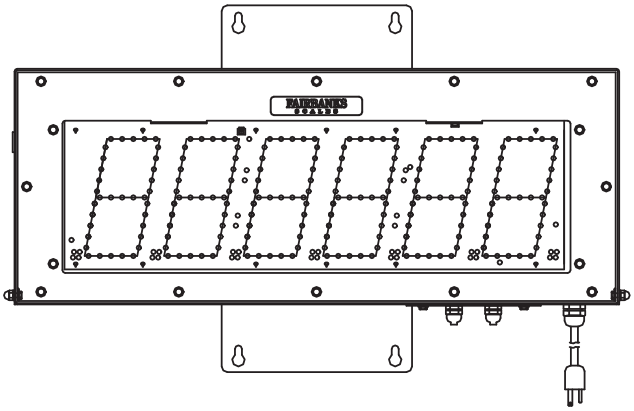
Installation Manual

1500 Series LED Remote Display

Model: 1501

1505





50685

Issue #5 10/06

Amendment Record

1500 Series
L.E.D. Remote Display
50685

Manufactured by Fairbanks Scales Inc.
821 Locust
Kansas City, Missouri 64106

Created	05/02	
Issue #1	05/02	Created New Product
Issue #2	05/02	Specification correction page 18
Issue #3	09/02	Adding model 1501 and updating the 1505
Issue #4	09/02	Updated parts lists and technical information corrections
Issue #5	10/06	Updated to reflect current software programming.

Table of Contents

Section 1: General Information

A. Introduction:

This manual provides specifications, installation procedures, programming, and service information for the Fairbanks model 1500 series L.E.D. remote display.

B. Description:

The Fairbanks 1500 series is a intelligent L.E.D. remote display with the capability to learn the data communication protocols of nearly every scale manufacturers instruments. The bright red L.E.D. display is easily viewed from distances of up to 160 feet. The display has no moving parts and all digits are active. The unit is housed in a weather-tight enclosure for inside or outside use. The enclosure is complete with a hooded shield to eliminate glare and protect the display from debris or other objects that could contact and damage the display.

Benefits:

- Bright Red L.E.D. Display
- Adjustable Intensity control
- Programmable 'learning mode'
- Reflect Mode' displays the weight information so it may be viewed correctly in a mirror.
- No moving parts

C. Specifications:

Display	1501:	1.5 in High intensity L.E.D.
	1505:	5.5 in High intensity L.E.D.
		6 digit, 7 segment includes decimal and colon
Communication		RS232, 50 ft maximum
Interface		20mA current loop, 1000 ft maximum
		Active or Passive use 22 AWG cable
Program Setup		Automatic / Manual
Viewing Distance		Up to 50 ft. 1501 / Up to 160 ft. 1505
Enclosure		NEMA 3
Temperature Range		-29C to 49C / -20F to 120F
Power		115 VAC 100mA maximum

Section 2: Installation

A. General Service Policy

Prior to installation, it must be verified that the equipment will satisfy the customer's requirements as supplied, and as described in this manual. If the equipment cannot satisfy the application and the application cannot be modified to meet the design parameters of the equipment, the installation should not be attempted.

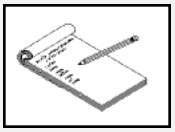
It is the customer / operators responsibility to ensure the equipment provided by Fairbanks is operated within the parameters of the equipment's specifications and protected from accidental or malicious damage. Other than the procedures authorized in the Operating manual, no service, repair, or adjustments may be performed by unauthorized / untrained service personnel. Any unauthorized repairs will void any verbal, implied, or written warranties.

B. Overview:

1. These instructions apply to the remote display and its specific installation procedures. The instructions include a pre-installation checkout, which must be performed, either at the service center before the technician goes to the site, or at the site before he places the equipment in service.

2. All electronic and mechanical calibrations and or adjustments required to make this equipment perform to accuracy and operational specifications are considered to be part of the installation, and are included in the installation charge. Only those charges which are incurred as a result of the equipment's inability to be adjusted or calibrated to performance specifications may be charged to warranty.

3. Absolutely no physical, electrical or program modifications other than selection of standard options and accessories are to be made to this equipment. Electrical connections other than those specified may not be performed, and physical alterations (holes, etc.) are not allowed.



Note : The equipment consists of printed circuit assemblies which must be handled using ESD handling procedures, and must be replaced as units. Replacement of individual components is not allowed. The assemblies must be properly packaged in ESD protective material and returned intact for replacement credit per normal procedures.

4. Before the installation is considered complete, the equipment is to be programmed to satisfy any applicable weights and measures requirements. The installing technician is responsible to make certain that personnel are fully trained and familiar with the capabilities and limitations of the equipment. Be prepared to recommend the arrangement of components which will provide the most efficient layout, utilizing the equipment to the best possible advantage. The warranty policy must be explained and reviewed with the customer.

The complete installation consists of:

1. Verifying the application

2. Unpacking

3. Remote display checkout

4. Customer and site readiness:

- **a.** Is the Location ready?
- **b.** Is the customer aware there may be work disruptions?
- **c.** Are the operators available for training?

5. Remote display connections

6. Programming and Adjustments

7. Customer training

C. Pre-Installation Checklist:

The following points should be checked and discussed with the Area Sales Manager and/or customer, if necessary, before the technician goes to the site to install the equipment.

1. Has the customer's application been checked to make certain that it is within the capabilities and design parameters of the equipment?

2. If the installation will disrupt the customer's normal operations, is he aware and has he made arrangements?

3. Is properly grounded power available at the installation location?

4. Will the equipment operator(s) be available for training?

5. Has the service technician thoroughly reviewed the installation procedures?

6. Has the service technician reviewed the recommended setup with the Area Sales Manager or Area Service Manager, and identified all necessary variations to satisfy the customer's particular application?

D. Unpacking:

1. Check that all components are on hand, and agree with the customer's order.

2. Remove all components from their packing material, checking to make certain that all parts are accounted for and no parts are damaged. Advise the shipper immediately, if damage has occurred. Order any parts necessary to replace those which have been damaged. Keep the shipping container and packing material for future use. Check the packing list.

3. Collect all necessary installation manuals for the remote display.

4. Open the remote display and perform an inspection, making certain that all hardware, electrical connections and PC Assemblies are secure. Do not reinstall cover if final installation is to be performed after the pre-installation checkout.

E. Safety:

As is the case with any equipment, certain safety precautions should be observed during operation:

1. Ensure that any structure which supports the remote display is capable of withstanding the weight of the display.

F. Wiring:

The setup of the remote display consists of wiring the display to the indicator, wiring displays together, if there is more than one, and programming the displays. The display can be wired for 20 mA, active or passive, or RS232.

G. Wiring Configuration:

NOTE: ***If remote display is early style 1505 (23134), the display assembly is connected to the display controller using pins 2 and 4 on TB3 of the display controller as shown in the wiring diagrams below. The current 1505 (23841) and the 1501 (23733) are connected to pins 2 and 3 on TB4. Use the proper diagram below.***

1. Models 1501 and Current 1505

a. Indicators with Passive 20mA output (polarity sensitive)

Indicator	Interface Assy	TB3
20mA (+)	(+) 15 VDC	(1)
	GND	(2)
		Jumper to (6)
	RS232 Rx	(3)
	RS232 Tx	(4)
20mA (-)	C Loop +	(5)
	C Loop -	(6)
		Jumper to (2)

b. 9201-x Indicators with Passive 20mA output (polarity sensitive)

Indicator	Interface Assy	TB3
	(+) 15 VDC	(1)
		Jumper to (5)
20mA (-)	GND	(2)
	RS232 Rx	(3)
	RS232 Tx	(4)
	C Loop +	(5)
		Jumper to (1)
20mA (+)	C Loop -	(6)

c. Indicators with Active 20mA output.

Indicator	Interface Assy	TB3
	(+) 15 VDC	(1)
	GND	(2)
	RS232 Rx	(3)
	RS232 Tx	(4)
20mA (+)	C Loop +	(5)
20mA (-)	C Loop -	(6)

d. Indicators with RS232 output.

Indicator	Interface Assy	TB3
	(+) 15 VDC	(1)
GND	GND	(2)
Tx	RS232 Rx	(3)
	RS232 Tx	(4)
	C Loop +	(5)
	C Loop -	(6)

2. Early Model 1505 (23134)

a. Indicators with passive 20mA output (polarity sensitive)

Indicator	Interface Assy	TB3	Display Assy
20mA (+)	(+) 15 VDC	(1)	
	GND	(2) Jumper to (6)	GND
	RS232 Rx	(3)	
	RS232 Tx	(4)	RS232 Rx
20mA (-)	C Loop +	(5)	
	C Loop -	(6) Jumper to (2)	

b. 9201-x Indicators with Passive 20mA output (polarity sensitive)

Indicator	Interface Assy	TB3	Display Assy
	(+) 15 VDC	(1) Jumper to (5)	
20mA (-)	GND	(2)	GND
	RS232 Rx	(3)	
	RS232 Tx	(4)	RS232 Rx
	C Loop +	(5) Jumper to (1)	
20mA (+)	C Loop -	(6)	

c. Indicators with Active 20mA output

Indicator	Interface Assy	TB3	Display Assy
	(+) 15 VDC	(1)	
	GND	(2)	GND
	RS232 Rx	(3)	
	RS232 Tx	(4)	RS232 Rx
20mA (+)	C Loop +	(5)	
20 mA (-)	C Loop -	(6)	

d. Indicators with RS232 output

Indicator	Interface Assy	TB3	Display Assy
	(+) 15 VDC	(1)	
GND	GND	(2)	GND
Tx	RS232 Rx	(3)	
	RS232 Tx	(4)	RS232 Rx
	C Loop +	(5)	
	C Loop -	(6)	

H. Display Assembly Switch Settings:

The display assembly board has a switch for performing a variety of different configurations. **Use the factory defaults for proper normal operation.**

Display Assembly DS1	Function	Factory Default Setting
1	Self Test	0
2	Self Test	0
3	Lead Zero Suppression	0
4	Baud Rate	**1**
5	Baud Rate	0
6	Address	**1**
7	Address	0
8	Address	0

1. Self test

Two self test features may be selected by using DS1 positions 1 and 2.

Function	1	2
Self Test All '888888'	1	0
Self Test All Count '000000' to '999999'	1	1

2. Leading Zero Suppression

Leading zeros may be suppressed by using DS1 position 3.

Function	3
Leading Zero Suppression Enabled	1
Leading Zero Suppression Disabled	0

3. Baud Rate

The baud rate may be changed by using DS1 position 4 and 5.

Function	4	5
1200 Baud	0	0
2400 Baud	1	0
4800 Baud	0	1
9600 Baud	1	1

4. Unit Addressing

The unit address may be changed by using DS1 position 6, 7, and 8. This feature is typically used for RS485 unit addressing.

Function	6	7	8
Display Address is 0	0	0	0
Display Address is 1	1	0	0
Display Address is 2	0	1	0
Display Address is 3	1	1	0
Display Address is 4	0	0	1
Display Address is 5	1	0	1
Display Address is 6	0	1	1
Display Address is 7	1	1	1

I. Installation

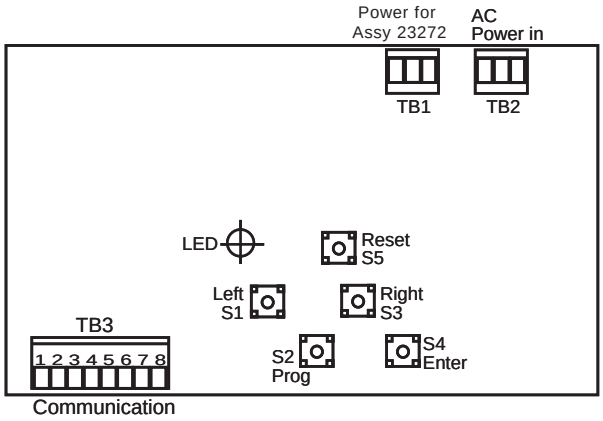
The display comes with a mounting bracket on the back of the enclosure. The display can be wall mounted or, using ACC 1400, mounted on a post. The AC power cord exits the enclosure through a watertight gland in the bottom of the case. A second watertight gland is provided for the RS232 or 20mA loop cable from the indicator.

Install the display:

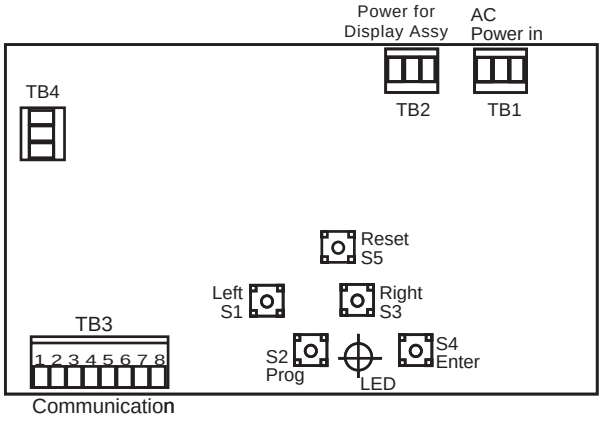
1. Choose the location and mount the display.

2. Remove the four screws holding the access panel and liquid tight gland on the bottom of the display enclosure.

3. Bring the communications cable from the indicator through the watertight gland in the plate from the bottom of the display. Provide enough cable inside the display to reach TB3 on the PC Board.



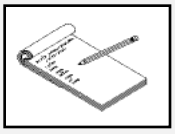
Early Models: 15710 Controller



Current Models: 23420 Controller

4. Dress and tin the ends of the communications cable wires.

5. Remove the plug-in connector from TB3. Wire the plug per the selected wiring configuration.



NOTE: The pins ARE NOT labeled on the display board. The numbers in parentheses in the wiring configuration charts are included for clarity.

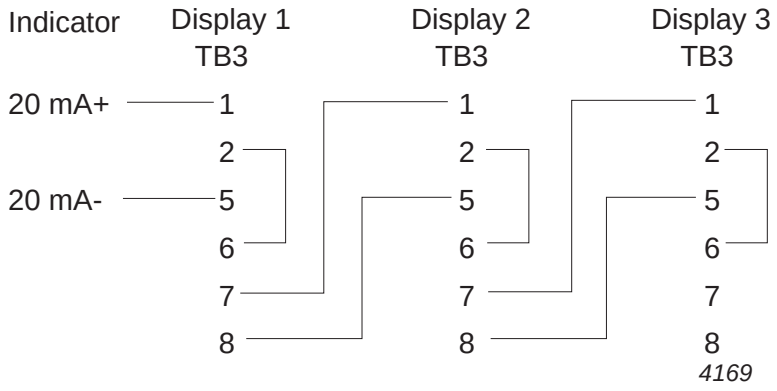
Interface Assy	TB3	Display Assy*	Remarks
(+) 15 VDC	(1)		
GND	(2)	GND	
RS232 Rx	(3)		
RS232 Tx	(4)	RS232 Rx	
C Loop +	(5)		
C Loop -	(6)		
C Loop +	(7)		Daisy Chain Connection
C Loop -	(8)		Daisy Chain Connection

***** Early model 1505 display assemblies only.

6. Insert the plug into TB3.

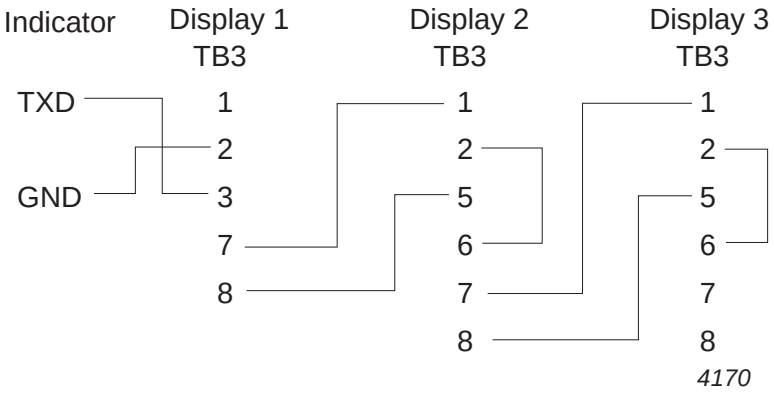
J. Multiple Displays:

Multiple displays can be "daisy chained" together using the passive 20mA retransmit.



20mA Configuration:

Additional displays are wired the same as Display 2 and Display 3.



RS232 Configuration

Additional displays are wired the same as Display 2 and Display 3.

K. Warm-Up

When the display is turned ON, it first displays the program and revision number, and proceeds through a counting sequence*. At the end of the sequence, the display will blank and display the weight value sent by the indicator.

* On current models, the intensity of the display will change as the counting sequence proceeds.

Section 3: Programming

A. Introduction

This section covers the general navigation and communication programming of the Fairbanks model 1500 series L.E.D. remote display.

B. Navigation

There are five switches located on the PC Board used to program the display. These switches can be accessed through the small access door on the under side of the display enclosure. The function of the switches is as follows:

S1 LEFT

Shifts the displayed data one place to the LEFT. This switch will also ADVANCE to the next program step.

S3 RIGHT

Shifts the displayed data one place to the RIGHT. This switch will also BACKUP to the previous program step.

S2 PROG

Allows access for manual programming or auto programming.

S4 ENTER

Accepts the displayed choice during the programming operation.

S5 RESET

Resets the microprocessor and allows the display to go through the warm-up sequence.

C. Communications Programming

The communications programming may be accomplished automatically or manually. In the automatic mode the display will automatically try and determine the communications protocol sent by the indicator during the warm-up sequence. Once the protocol is determined, it is stored in memory for use in the future. The protocol parameters that are being set are the baud rate, data bits, and parity. It is recommended that the automatic method be used first. If it does not succeed, use the manual method.

Automatic Programming Mode:

The instrument interfaced to the 1500 Series remote display must have the proper port configured and cable connected before proceeding.

1. Press the RESET switch to start the warm-up sequence.

2. During the sequence, press and hold the PROG switch until the display "blanks". Release the PROG switch. This process will interrupt the warm-up sequence.

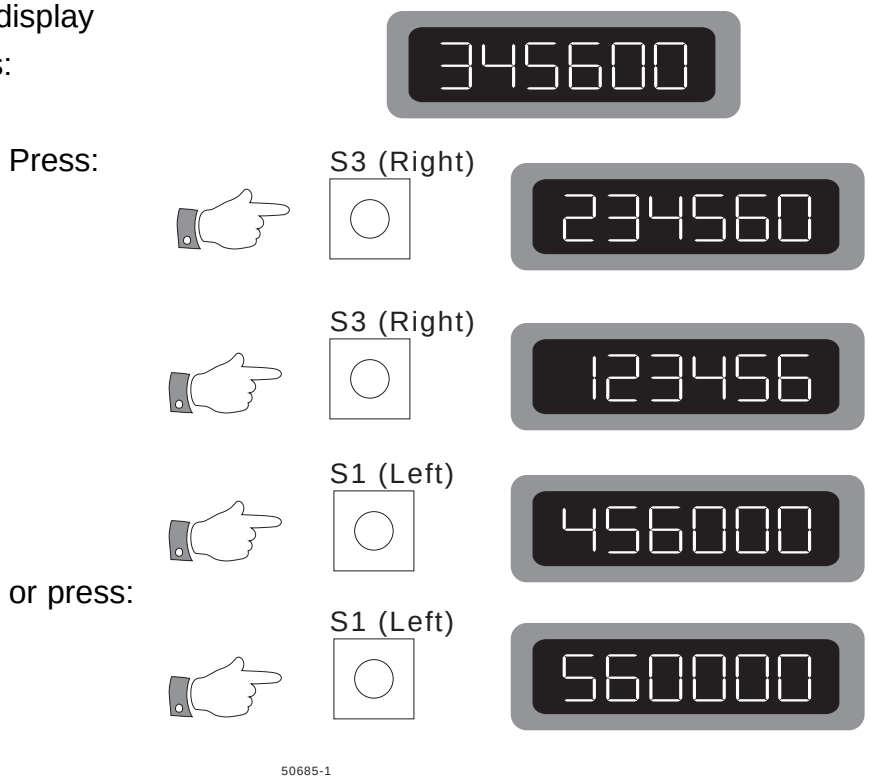
3. The display will show AUTO to indicate the display is in the process of determining the communications protocol. During the process, various numbers will be displayed.

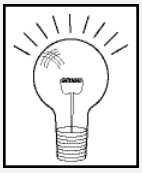
4. If a match is made, the display will flash SUCCESS and return to the normal display mode. If no match is made, the display will show DEFAULT and return to the normal display mode. The communications parameters will have to be programmed by the manual method.

5. If Step 4 was successful, and weight information is being received, use the LEFT and RIGHT switches to move the displayed digits to their appropriate location.

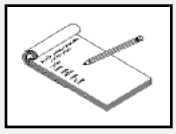
Left and Right Switches

Press the LEFT or RIGHT switch to shift the displayed data. Pressing a LEFT or RIGHT switch will shift the display in that direction one place for each press.





TIP: For best results with programming the 2500 Series instruments, ensure the remote display output is set for gross ONLY. If the time output is desired, program the remote with the gross only output, then change to the time output.
If the remote display shows success but the data is incorrect or not displayed properly, simply change the data bits i.e.: “8” to “7”.

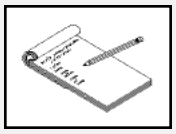


NOTE : Fairbanks remote display output is 2400 Baud, 7 Data bits, Odd parity, and 2 stop bits.

Manual Programming Mode:

The procedure below lists the method of programming the communications protocol manually:

1. Power-up the display. After the warm-up sequence is completed, press and hold the PROG switch for one second, then release.



NOTE : Press the LEFT or RIGHT switch to advance or backup through the program parameters. With the appropriate parameter displayed, press the ENTER switch to see the stored value.

2. The display will show the current program revision number. Press the LEFT switch.

3. The display will show BAUD. Press the ENTER switch and the display will show the current baud rate setting such as 2400. Use the LEFT or RIGHT switches to toggle through the available choices: 300, 600, 1200, 2400, 4800, and 9600. When the appropriate value is displayed, press the ENTER switch.

4. The display will show CHAR. Press the ENTER switch and the display will show "x" BITS where "x" is a 7 or 8. This is the current data bits setting. Use the LEFT or RIGHT switches to toggle between the choices, 7 or 8. With the appropriate choice displayed, press the ENTER switch.

5. The display will show PARITY. Press the ENTER switch and the display will show the current parity setting. Use the LEFT or RIGHT switches to toggle through the choices, odd, even or none. With the appropriate legend displayed, press the ENTER switch.

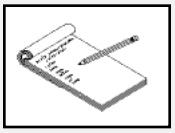
6. The display will show ID. Press the ENTER switch and the display will show: ALPH N. Use the LEFT or RIGHT switches to toggle through choices. Y = Yes or N = No. If N is selected, the display will use a numeric ID. If Y is selected, the display will use alpha characters for the ID. Press the ENTER switch and the display will show the current ID setting being used by the display, "xx" . The code tells the display what data is to be shown.

ID Formats for Most Fairbanks Indicators

CODE	Data Displayed
40	lb GROSS
41	lb NET
42	lb TARE
43	kg GROSS
44	kg NET
45	kg TARE
00	display all data received.

Alpha ID Formats

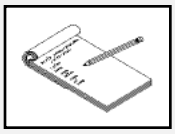
CODE	Data Displayed
00	Display all data received
AA	
AB	
AC	
|	
YY	



NOTE: The letters K,M,Q,W, X and Z will not be displayed.

Use the LEFT switch to toggle the left digit and the RIGHT switch to toggle the right digit. With the appropriate choice displayed, press the ENTER switch.

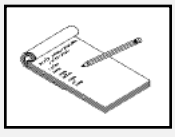
7. The display will show REFLECT. Press the ENTER switch and the display will show "x", where "x" is an YES for reflect, mirror viewing, or NO for normal. This option allows the digits to be presented in reverse order so they can be correctly viewed by the driver through the truck mirrors. Press the LEFT or RIGHT switches to toggle the choices, NO for normal viewing or YES for mirror viewing. With the appropriate selection displayed, press the ENTER switch.



NOTE: The Time Output MUST be disabled if the reflect mode is enabled.

8. The display will show IDLE. Press the ENTER switch and the display will show the current idle time out value in seconds. Use the LEFT or RIGHT switches to select a value between 1-15 seconds. With the appropriate selection displayed, press the ENTER switch.

9. The display will show INT. (Unavailable on 1505 early models.) Press the ENTER switch and the display will show _XXX_ where XXX is a value from 000 to 100. By pressing the LEFT/RIGHT switches the digits will increase/decrease in value. This value corresponds to the intensity of the LED's with 000 being auto intensity. Auto intensity will automatically adjust the brightness of the display dependent upon ambient light conditions. Otherwise, the larger the number, the brighter the display will be. With the desired setting displayed, press the ENTER switch.



NOTE: The Intensity feature is not functional on early 1505 models due to hardware limitations.

10. The display will show COLON. (Unavailable on some early models.) Press the ENTER switch and the display will show YES or NO. This will allow the remote to place a colon on the display when a 2500 indicator is transmitting in the clock mode if YES is selected. For indicators other than the 2500 Series, this should be set to NO, or display errors may occur.

11. The display will show SYNC. (Unavailable on some early models.) Press the ENTER switch and the display will show YES or NO. Use the LEFT or RIGHT switches to toggle through the choices, and the ENTER switch to accept and advance to the next step. SYNC is used for all instrumentation having high speed data transmissions (Toledo, Cardinal, Condec, and the 2800) and should be set to YES. For all other applications (including the FB2200) it should be set to NO.

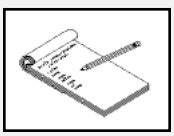
12. The display will show DONE. Press the ENTER switch or use the LEFT or RIGHT switches to cycle back through the program steps.

13. The display will show STORE. Press the PROG switch to toggle the display between STORE and CANCEL. The store selection will keep the program changes made, the cancel selection will not store the changes made. Press the ENTER switch.

14. If store was selected, the display will flash SAVED and it will save the changes, and return to the normal mode. If CANCEL is selected, the changes are not saved and the display will return to the normal mode.

DISPLAY TEST MODE (CURRENT MODELS ONLY)

These models have a display test mode. This test mode is accessed by pressing the RESET switch and, while REV XX is displayed, pressing and holding the RIGHT switch for approximately one second. This will allow the operator to step through values 000000 to 999999 using the RIGHT switch. As the numbers are incremented, the intensity will change from AUTO at 000000 to 1% at 111111 through 90% at 999999. Press RIGHT after 999999 to return to normal display mode.



NOTE: When interfacing to an FB2200 the SYNC function, must be set to NO. If not when power is recycled to either the remote or the FB2200 the remote will loose its marker place in the data string and will not function correctly

Section 4: Service and Maintenance

A. Receive / Warning

There is a "green" LED located by the switches on the PC Board that verifies the data flow in the system.

When the LED flashes ON and OFF continuously, this means data is being received and everything is normal.

When the display is not receiving data from the indicator, the display will "blank" within "x" seconds where "x" is the programmed IDLE time value. If the display receives invalid data from the indicator, the display will "blank". Invalid data is data without a string terminator or the data does not comply with the ID codes programmed into the display.

B. Error Codes

Error Code	Remarks
Err 1	Index pointer out of range
Err 2	Parity setting out of range
Err 4	Baud setting out of range
Err 8	Code value out of range
Err 16	Code out of range
Err 32	dBits setting out of range
Err 64	Idle timeout setting out of range
Err 369	EEPROM not initialized

The codes can be independent or summed together. For example, a code of Err 28 consists of Err 4 + Err 8 + Err 16 = Err 28.

Solution:

If any of these Err codes are displayed the following procedure must be performed.

1. Press and hold the Program switch until the display blanks, then release the Program switch.

The remote display should function normally. If it does not, replace the display controller assembly.

Section 5: Parts List

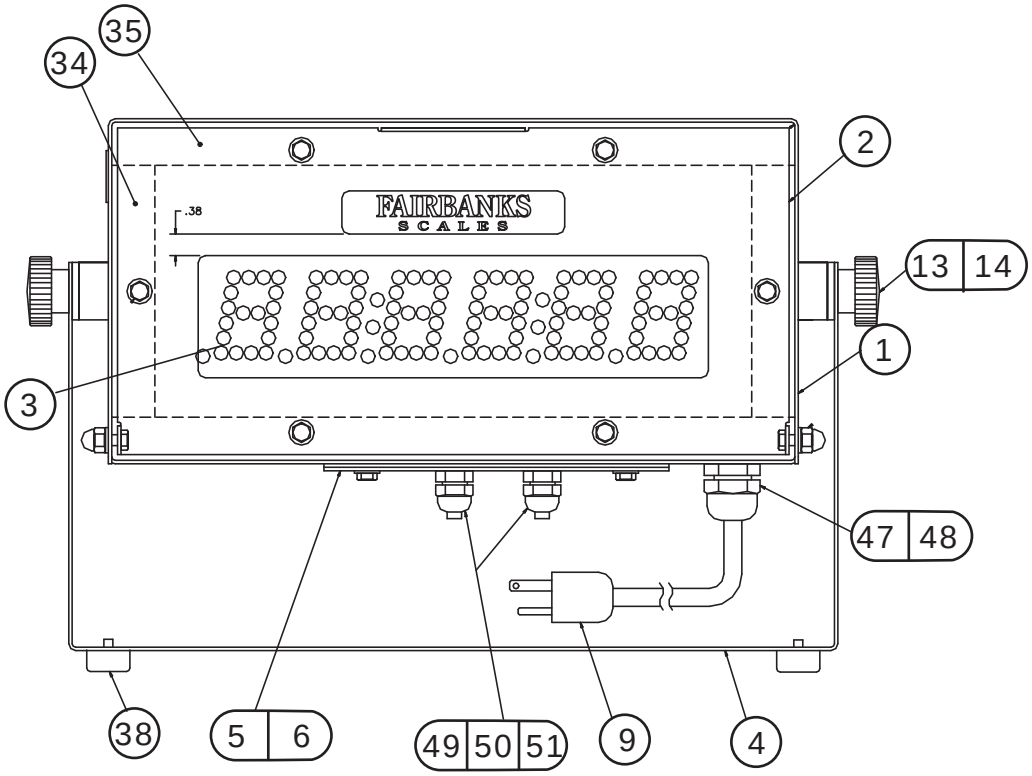
A. Replacement Parts

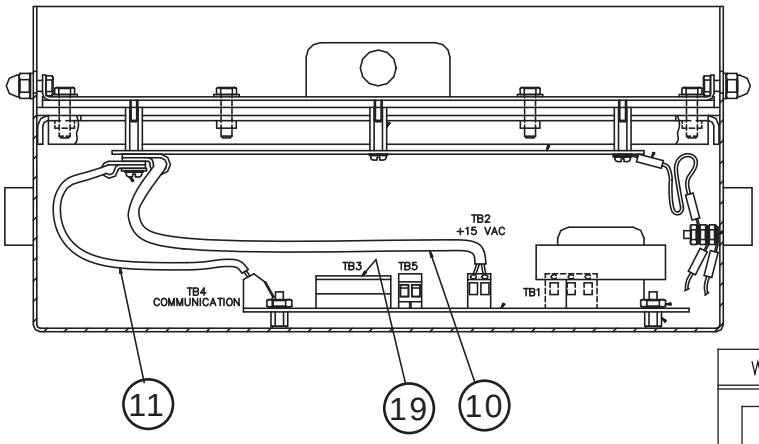
Model 1501 (23733)

Item	Part No.	Description
1	21032	Housing Assembly
2	23726	Door
3	23727	Panel, Display window
4	23728	Bracket
5	19557	Door, Access
6	19558	Gasket, Access Door
7	23420	PCB Assy, Display Controller
8	23729	Display Assy, 1.5”
9	15435	Power Cord Assy
10	23730	Cord, Power
11	23731	Cable, RS232
13	15745	Knob
14	12621	Washer, Retainer
19	17527	Block, Terminal, Plug 8 position
34	15776	Gasket, Side
35	15777	Gasket, Top and Bottom
38	12103	Foot
47	17534	Connector, Liquid Tight
48	12342	Ring “0”
49	17545	Connector Liquid Tight
50	15651	Ring “0”
51	12609	Rod, Nylon
*	23284	Prom Kit

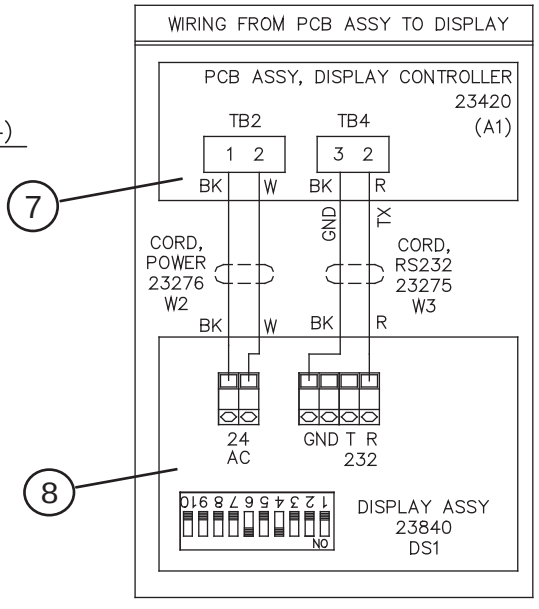
***** Not shown in Illustration

Replacement Diagram: Model 1501 (23733)





VIEW SHOWN WITHOUT BRACKET (ITEM 4)



WIRE NO.	FROM TERMINATION	FROM NOTE	WIRE ITEM #	WIRE COLOR	WIRE GAGE	WIRE LGTH	RTE	TO TERMINATION	TO NOTE	REMARKS
1	W1-BR	–	9	BR	–	–	–	XTB1-1	4	AC
2	W1-BL	–	9	BL	–	–	–	XTB1-2	4	ACC
3	W1E1	–	9	G/Y	–	–	–	E1	4	CHASSIS GND.
4	W1E2	–	9	G/Y	–	–	–	E1	4	CHASSIS GND.
5	W1E2	–	9	G/Y	–	–	–	XTB1-3	4	GND.
6	XTB3	–	19	–	–	–	–	A1TB3	5	RS232
7										
8										

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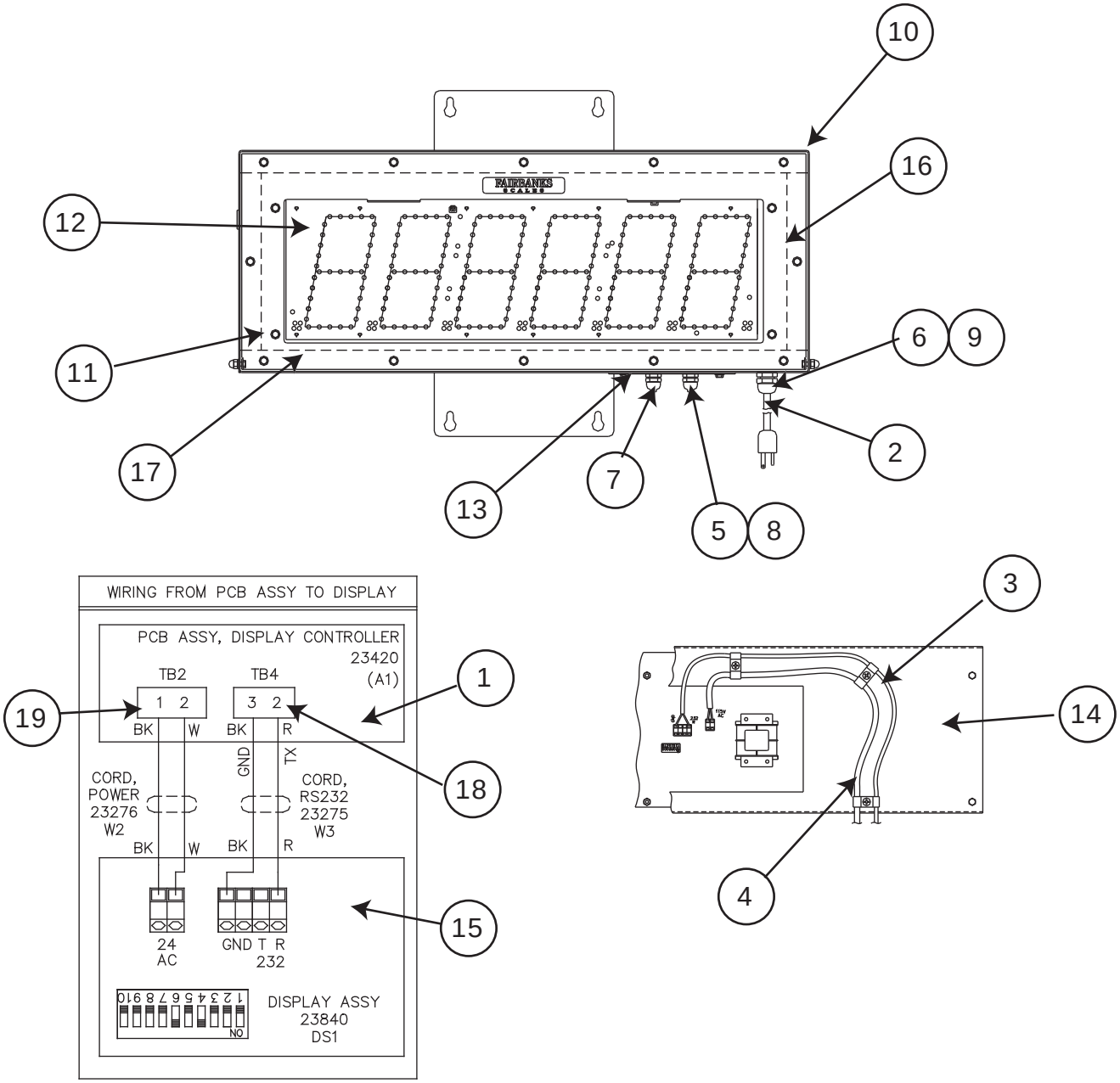
B. Replacement Parts

Current Model 1505 (23841)

Item	Part No.	Description
1	23420	Assembly, Display Controller
2	15435	Power Cord Assembly
3	23276	RS232 Cable Assembly
4	23275	Cord, Power LED Display
5	17545	Connector, Liquid Tight (small)
6	17534	Connector, Liquid Tight
7	12609	Rod,Nylon
8	15651	Ring, "O" (small)
9	12342	Ring, "O"
10	23135	Housing Assembly
11	23137	Door
12	23138	Panel, Display Window
13	23140	Door, Access
14	23139	Bracket, Display Mounting
15	23840	Assembly, 5.5" LED Display
16	23141	Gasket, Side
17	23142	Gasket, Top and Bottom
*	23277	Cable Assembly, Ground
18	17503	Block, Terminal (3 position)
19	17527	Block, Terminal (8 position)
*	23407	Spacer, Support (Self tapping)
*	23284	Prom Kit

***** Not shown in Illustration

Replacement Diagram: *Current Model 1505 (23841)*



WIRE NO.	FROM TERMINATION	FROM NOTE	WIRE ITEM #	WIRE COLOR	WIRE GAGE	WIRE LGTH	RTE	TO TERMINATION	TO NOTE	REMARKS
1	W1-BR	–	9	BR	–	–	–	XTB1-1	4	AC
2	W1-BL	–	9	BL	–	–	–	XTB1-2	4	ACC
3	W1E1	–	9	G/Y	–	–	–	E1	4	CHASSIS GND.
4	W1E2	–	9	G/Y	–	–	–	E1	4	CHASSIS GND.
5	W1E2	–	9	G/Y	–	–	–	XTB1-3	4	GND.
6	XTB3	–	19	–	–	–	–	A1TB3	5	RS232
7										
8										

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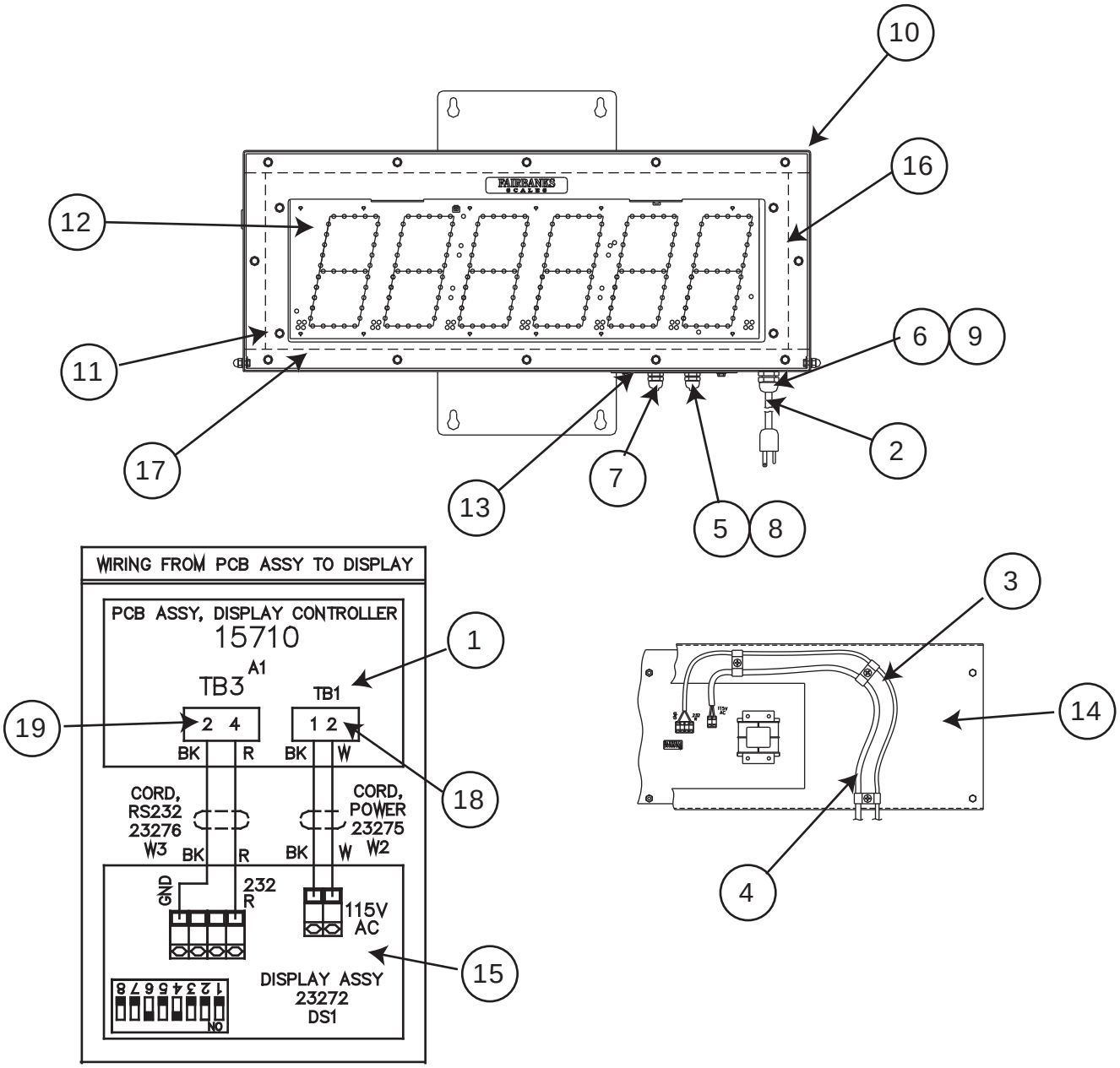
C. Replacement Parts

Early Model 1505 (23134)

Item	Part No.	Description
1	15710	Assembly, Display Controller
2	15435	Power Cord Assembly
3	23276	RS232 Cable Assembly
4	23275	Cord, Power LED Display
5	17545	Connector, Liquid Tight (small)
6	17534	Connector, Liquid Tight
7	12609	Rod,Nylon
8	15651	Ring, "O" (small)
9	12342	Ring, "O"
10	23135	Housing Assembly
11	23137	Door
12	23138	Panel, Display Window
13	23140	Door, Access
14	23139	Bracket, Display Mounting
15	23272	Assembly, 5.5" LED Display
16	23141	Gasket, Side
17	23142	Gasket, Top and Bottom
*	23277	Cable Assembly, Ground
18	17503	Block, Terminal (3 position)
19	17527	Block, Terminal (8 position)
*	23407	Spacer, Support (Self tapping)
*	23284	Prom Kit
*	23521	Fuse, 1.5A 250 V Busfuse
*	23522	Fuse, 1A 115 V

***** Not shown in Illustration

Replacement Diagram: Early Model 1505 (23134)



WIRE NO.	FROM TERMINATION	NOTE	WIRE ITEM #	COLOR	GAGE	LGTH	RTE	TO TERMINATION	NOTE	REMARKS
1	W1–BR	–	10	BR	–	–	–	XTB2–1	6	AC
2	W1–BL	–	10	BL	–	–	–	XTB2–2	6	ACC
3	W1E1	–	10	G/Y	–	–	–	E1	6	CHASSIS GND.
4	W1E2	–	10	G/Y	–	–	–	E1	6	CHASSIS GND.
5	W1E2	–	10	G/Y	–	–	–	XTB2–3	6	GND.
6	XTB2	5	21	–	–	–	–	A1TB2	7	POWER IN
7	XTB1	–	21	–	–	–	–	A1TB1	7	POWER TO DISPLAY
8	XTB3	–	22	–	–	–	–	A1TB3	7	RS232

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