



# Avery Weigh-Tronix

SCALES FOR AGRIBUSINESS



## Model 1040/XL Indicator Service Manual



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# Specifications

|                          |  |
|--------------------------|--|
| Power Input:             | 10 to 18 volts, DC negative ground<br>400ma at 8 350 weigh-bar load  |
| Display:                 | 1.1 inch (Model 1040) 2.0 inch LCD (Model 1040XL), 6 Digits, 14 segment alpha-numeric, fiber optic backlight   |
| Display Rate:            | 1, 2, or 5 times per second  |
| Enclosure:               | Water/dust resistant, structural polycarbonate, 8.50" high x 10.5" wide x 6.0" deep<br>IP65 Water resistant  |
| Capacity Range:          | Up to 200,000 lb/kg  |
| Increment sizes:         | .01,.02,.05,.1,.2,.5,1,2,5,10,20,50,100,200 lb/kg  |
| Accuracy:                | +/- 0.1 % of applied load +/- 1 division   |
| Internal A/D resolution: | 1,000,000 counts   |
| Operational keys:        | 0-9 with alpha capabilities, Load/Unload, Gross, Recipe, Usage, Hold, Menu, Print, Id, Select, Timer, and Zero Clear   |
| Annunciators;            | Auto, Pen, Load, Gross, Recipe, Ingredient, Alarm, Usage, Motion, Hand-Add, Lb, and Kg. (12 annunciators)  |
| Audio Output:            | Audio tone feedback for key contact assurance  |
| Weigh-bar Drive:         | 10 350 ohm weigh-bars  |
| Serial Ports:            | 2 RS-232 serial ports programmable for different selectable output formats<br>(Std, TDM, Broadcast)  |
| Lower Assembly:          | Connectors for the following: Power, Com1, Com 2, Weigh-bar J-box, Alarm Output, RD64<br><br>Optional Connectors:Speed Sensor Input<br><br>There will be seven standard different lower base assemblies:<br><ol style="list-style-type: none"> <li>1. W/T standard 7 pin 5 conn<br/>(pwr/alm/RD64/Com1/j-box)</li> <li>2. W/T std 7 pin w/options 7 conn<br/>(pwr/alm/speed/RD64/Com1/Com2/j-box)</li> <li>3. Single conn (AMP) 5 conn<br/>(pwr/alm/RD64/Com1/j-box)</li> <li>4. Single conn (AMP w/options) 7 conn<br/>(pwr/alm/speed/RD64/Com1/Com2/j-box)</li> <li>5. *W/T 4 x 5pin w/ Com 1 and RD64 output 8 con<br/>(pwr/alm/RD64/Com1/4-5 pin conn)</li> <li>6. *W/T 3 x 5pin w/dual RS-232 and RD64 output 7 conn<br/>(pwr/alm/RD64/Com1/3-5 pin conn)</li> <li>7. *W/T 4 x 4pin w/dual RS-232 and RD64 output 8 conn<br/>(pwr/alm/RD64/Com1/4-4pin conn)</li> </ol> *NOTE: These versions do not offer Speed Sensor input or com 2. |

|                        |   |
|------------------------|---|
| Two TTL Inputs:        | Two programmable inputs (Std, Zero Clear, Menu, Hold, Print)  |
| Options:               | 1.1 inch LCD Display Option<br>TDM-40 Transfer Module/ with TDS-1040 or TDS-40 software packages<br>RD64 Remote Display<br>RD64XL Remote Display<br>RD125RF Remote Display<br>XM64 Transmitter/receiver set<br>Speed Sensor switch assembly |
| Operating Temperature: | -40° to 140° F (-40° to 60° C)  |
| Weight:                | 10 lb/ 4.5 kg   |
| Agencies:              | FCC Class A<br>CE (European Approval)   |
| Warranty:              | Three Year  |



# Introduction

This manual covers the setup and servicing of the Model 1040/XL indicator.

The first part of the manual covers the configuring of the indicator using menus you access through the front panel keys.

- Setup Menu (1040 password)
- Test Menu (111 password)
- History Menu (999 password)
- Calibration Menu (01010101 password)

The last part of the manual covers the parts and assemblies of the indicator.

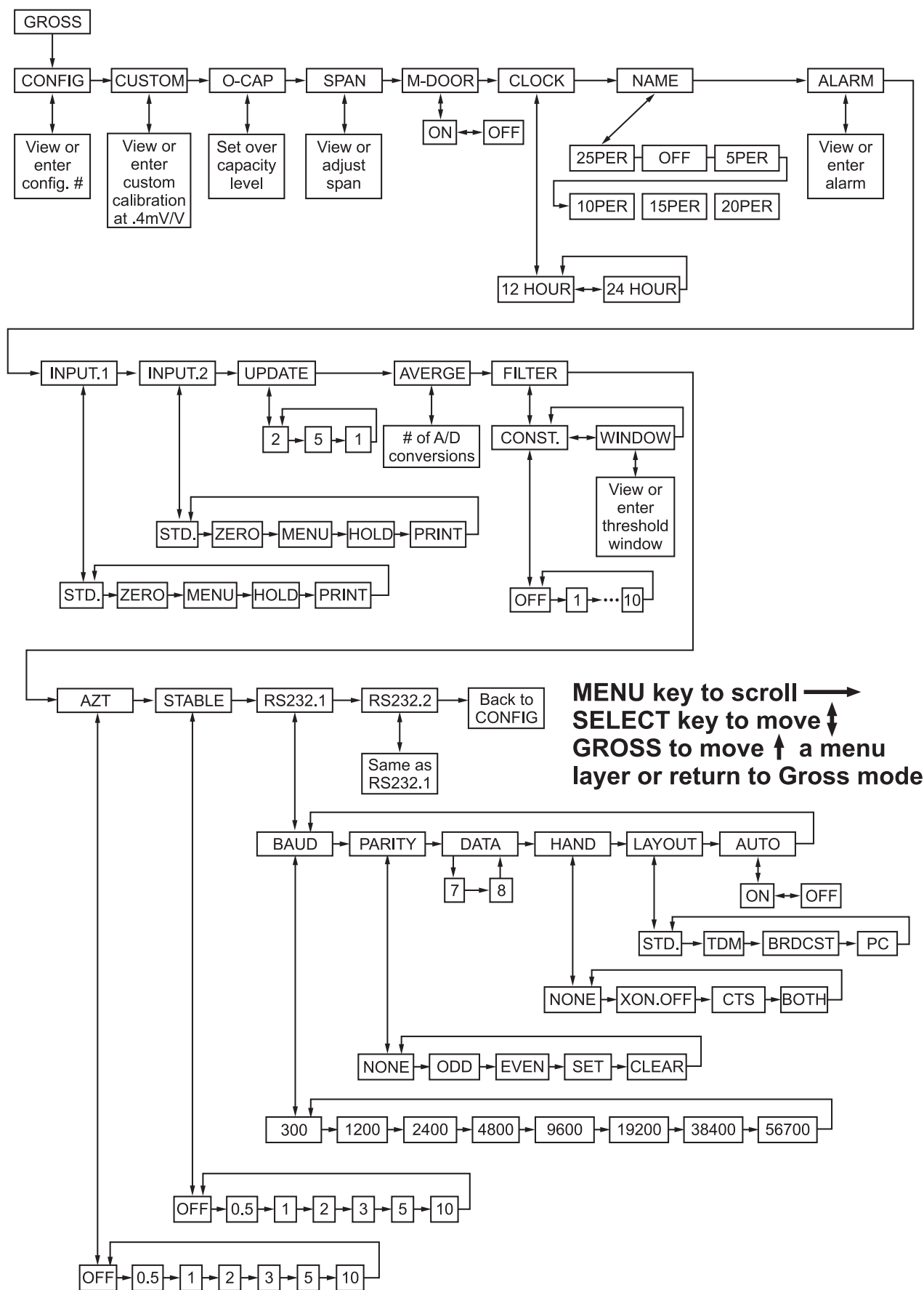
## Setup Menu (1040 password)

The Setup menu is shown in Figure 1. Following are the different parameters that can be configured under the Setup menu:

|                |   |
|----------------|---|
| <b>CONFIG</b>  | To enter the 4-5 digit configuration number                                   |
| <b>CUSTOM</b>  | Enter a weight value at .4 mv/v   |
| <b>O-CAP</b>   | Sets the over-capacity value of the scale. When reached display shows -----   |
| <b>SPAN</b>    | Used to adjust the span +/- 10 %.   |
| <b>M-DOOR</b>  | Turns the mixer door feature on/off.  |
| <b>CLOCK</b>   | To set the clock to either 12 or 24 hour clock                                |
| <b>NAME</b>    | To set the point where ingredient name stops flashing                         |
| <b>ALARM</b>   | To set the pre-alarm target value (percent or weight)                         |
| <b>INPUT.1</b> | To set input 1 for std, zero, menu, hold, or print                            |
| <b>INPUT.2</b> | To set input 2 for std, zero, menu, hold, or print                            |
| <b>UPDATE</b>  | Configure the indicator for 1,2, or 5 display updates/second                  |
| <b>AVERAGE</b> | Configure the indicator for the # of A/d conversions (1-60)                   |
| <b>FILTER</b>  | Configure the harmonizer filter and threshold                                 |
| <b>A.Z.T.</b>  | Configure the Automatic Zero Tracking. (off to 10.0 divisions)                |
| <b>STABLE</b>  | Configure the motion window (off to 10.0 divisions)                           |
| <b>RS232.1</b> | Configure the RS232 serial port 1 (baud, parity, data, hand, auto, or layout) |
| <b>RS232.2</b> | Configure the RS232 serial port 2 (baud, parity, data, hand, auto, or layout) |

### To Access The Setup Menu (1040)

1. From the gross mode, press and hold the **MENU** key for three beeps (3 seconds), then release. . .  
*SET.PAS* is displayed.
2. Key in 1040. .  
*\*\*\*\** is displayed
3. Then press the **SELECT** key. . .  
*CONFIG* is displayed.



**Figure 1**  
Setup menu



## Setup Menu Items

### CONFIG

*If you are using a custom weight sensor, see the next item, CUSTOM, to help you pick the correct first three digits of your configuration number.*

*You must press **SELECT** to actually store the CONFIG #. Pressing **GROSS** here will only return to Gross mode.*



The first menu item is **CONFIG**. This allows you to enter a 4-5 digit configuration number that sets up the indicator for the type of Weigh Bar, capacity, increment, pre-alarm mode, units, auto hold, and auto-mix.

Determine the correct configuration number for your system by using the table in Figure 2.

Example:

20,000 x 5 lb, 2 1/8 calibration, pre-alarm in weight with audible beeper, auto hold /auto-mix on, = 5233

Once a number is established simply enter as follows:

1. From **CONFIG**, press **SELECT**. . .  
Current code number is shown.
2. Use the keypad, enter configuration number. . .  
Entered number is shown. If attempting to enter an invalid number display will show **CAN'T** and return to **CONFIG**.
3. Press **SELECT**. . .  
**CONFIG** is shown.
4. Press the **GROSS** key. . .  
Returns to the Gross Weighing mode.

### CUSTOM

*If you press **SELECT** and the 1040 does not have a CONFIG# starting with 97, 98, or 99, the display will show **CAN'T**.*

The next item is **CUSTOM**. If you are using a custom weight sensor, the mv/v rating of the system needs to be known. You need to convert the values so you know what the weight value is at 0.4 mv/v. This weight value is then entered into the Model 1040. You can then look at the CONFIG chart in Figure 2 and decide if the code number would start with a 97, 98, or 99 configuration number.

EXAMPLE: If your custom system capacity is 2 mv/v at 20000 lb, when this is converted to weight at .4 mv/v, it comes to 4000 lb. Check out the math below:

$$2 \text{ mv/v at } 20000 \text{ lbs} = .4 \text{ mv/v at } 4000 \text{ lbs}$$

$$\frac{2 \text{ mv/v}}{.4 \text{ mv/v}} = 5 \rightarrow \frac{20000}{5} = 4000$$

4000 is the value to be entered in this menu item.

1. From the **CONFIG** display, press menu once. . .  
**CUSTOM** is shown
2. Press the **SELECT** key. . .  
current weight value is shown

Default value of custom = 20000, or 0.4 mv/v at 20,000 lb.

**Figure 2**  
Configuration number chart

| 1st # | CALIBRATION SIZE     | CAPACITY x INCREMENT SIZE |            |            |            |            |            |
|-------|----------------------|---------------------------|------------|------------|------------|------------|------------|
| 00    | 5/8 *                | 200 x 0.01                | 200 x 0.02 | 200 x 0.05 | 2K x 0.1   | 2K x 0.2   | 2K x 0.5   |
| 01    | 1                    | 2K x 0.1                  | 2K x 0.2   | 2K x 0.5   | 20K x 1    | 20K x 2    | 20K x 5    |
| 02    | 1-1/4                | 2K x 0.1                  | 2K x 0.2   | 2K x 0.5   | 20K x 1    | 20K x 2    | 20K x 5    |
| 03    | 1-7/8                | 20K x 1                   | 20K x 2    | 20K x 5    | 200K x 10  | 200K x 20  | 200K x 50  |
| 04    | 2                    | 20K x 1                   | 20K x 2    | 20K x 5    | 200K x 10  | 200K x 20  | 200K x 50  |
| 05    | 2-1/8                | 20K x 1                   | 20K x 2    | 20K x 5    | 200K x 10  | 200K x 20  | 200K x 50  |
| 06    | 2-1/4                | 20K x 1                   | 20K x 2    | 20K x 5    | 200K x 10  | 200K x 20  | 200K x 50  |
| 07    | 2-1/4D               | 20K x 1                   | 20K x 2    | 20K x 5    | 200K x 10  | 200K x 20  | 200K x 50  |
| 08    | 2-1/4D-P             | 200K x 10                 | 200K x 20  | 200K x 50  | 200K x 100 | 200K x 200 | 200K x 500 |
| 09    | 2-1/2                | 20K x 1                   | 20K x 2    | 20K x 5    | 200K x 10  | 200K x 20  | 200K x 50  |
| 10    | 3-1/8                | 200K x 10                 | 200K x 20  | 200K x 50  | 200K x 100 | 200K x 200 | 200K x 500 |
| 11    | 4                    | 200K x 10                 | 200K x 20  | 200K x 50  | 200K x 100 | 200K x 200 | 200K x 500 |
| 12    | CC20/CC30 (2.13mV/V) | 20K x 1                   | 20K x 2    | 20K x 5    | 200K x 10  | 200K x 20  | 200K x 50  |
| 13    | Alley Weigh          | 2K x 0.1                  | 2K x 0.2   | 2K x 0.5   | 20K x 1    | 20K x 2    | 20K x 5    |
| 14    | CC30-3 (3mV/V)       | 20K x 1                   | 20K x 2    | 20K x 5    | 200K x 10  | 200K x 20  | 200K x 50  |
| 18    | SPARE                | 20K x 1                   | 20K x 2    | 20K x 5    | 200K x 10  | 200K x 20  | 200K x 50  |
|       |                      |                           |            |            |            |            |            |
| 20    | 1 (DIGI)             | 2K x 0.1                  | 2K x 0.2   | 2K x 0.5   | 20K x 1    | 20K x 2    | 20K x 5    |
| 21    | 1 POLY(DIGI)         | 20K x 1                   | 20K x 2    | 20K x 5    | 200K x 10  | 200K x 20  | 200K x 50  |
| 22    | 1-7/8,2(DIGI)        | 20K x 1                   | 20K x 2    | 20K x 5    | 200K x 10  | 200K x 20  | 200K x 50  |
| 23    | 2-1/8,2-1/2,         | 20K x 1                   | 20K x 2    | 20K x 5    | 200K x 10  | 200K x 20  | 200K x 50  |
|       | 2-7/8,3-3/4 (DIGI)   |                           |            |            |            |            |            |
|       |                      |                           |            |            |            |            |            |
| 97    | Custom Setting       | 200 x 0.01                | 200 x 0.02 | 200 x 0.05 | 2K x 0.1   | 2K x 0.2   | 2K x 0.5   |
| 98    | Custom Setting       | 20K x 1                   | 20K x 2    | 20K x 5    | 200K x 10  | 200K x 20  | 200K x 50  |
| 99    | Custom Setting       | 200K x 100                | 200K x 200 | 200K x 500 |            |            |            |
|       | <b>2nd #</b>         | 0                         | 1          | 2          | 3          | 4          | 5          |

| 3rd # | Warning Alarm Method    |
|-------|-------------------------|
| 0     | OFF                     |
| 1     | WEIGHT                  |
| 2     | PERCENT                 |
| 3     | WEIGHT w/AUDIBLE ALARM  |
| 4     | PERCENT w/AUDIBLE ALARM |

The actual warning pre-alarm value is entered within the ALARM setting as weight or percentage based on actual configuration number. ALARM is located in the 1040 MENU. (Default is 50 lb)

| 4th # | units | Auto-hold | Auto-mix | 4th # | units | Auto-hold | Auto-mix |
|-------|-------|-----------|----------|-------|-------|-----------|----------|
| 0     | Lb    | Off       | Off      | 5     | Kg    | Off       | On       |
| 1     | Lb    | Off       | On       | 6     | Kg    | On        | Off      |
| 2     | Lb    | On        | Off      | 7     | Kg    | On        | On       |
| 3     | Lb    | On        | On       |       |       |           |          |
| 4     | Kg    | Off       | Off      |       |       |           |          |

## O-CAP

3. Use the keypad to enter in the calculated custom number. . .  
Entered number is shown.
4. Press the **SELECT** key. . .  
**CUSTOM** is shown.
5. Press the **GROSS** key to return to the Gross weighing mode.

The next item is **O-CAP**. Use this to set the overcapacity of the 1040 if the standard default of 200.00, 2000.0, 20000, or 200000 is not acceptable.

If you select 20,000 x 5, but really want a 25000 x 5, enter 25000 under this menu item. If this parameter is not used it will default to what was set in the **CONFIG** parameter.

1. From the **CONFIG** display, press the **MENU** key several times until. . .  
**O-CAP** is displayed.
2. Press the **SELECT** key. . .  
Current over capacity parameter is shown.
3. Using the keypad, enter in the overcapacity. . .  
New over capacity value is displayed.
4. Press the **SELECT** key. . .  
**O-CAP** is displayed.
5. Press the **GROSS** key to return to the Gross weighing mode.

## SPAN

The next item is **SPAN**. The indicator has two ways of adjusting span.

- A. Use the **SPAN** item and adjust the weight span reading by +/- 10%.
- B. Use a custom code and change the sensitivity number accordingly to change the span. (Example: If you need to adjust the span down by 5%, move the custom weight number down by 5%).

1. From the **CONFIG** display, press the **MENU** key several times until . . .  
**SPAN** is displayed.
2. Press the **SELECT** key. . .  
Current weight is displayed.
3. With either a calibrator or some known weight on the scale system put appropriate weight onto the scale system.  
Current weight is displayed.

*If adjustments differ from factory settings, when you access the CONFIG# \*5233 will be displayed.*

4. Use the keypad, adjust weight accordingly:

- To increase span, press 1,2,4,5
- To decrease span, press 6,7,9,0
- To return to the span factory calibrated value, press 3 or 8.

Each press of a key will decrement/increment one division of the scale.  
If you press and hold the key, weight will decrease/increase faster.

5. Once appropriate weight value is shown, press the **SELECT** key. . .

**SPAN** is shown.

6. Press the **GROSS** key to return to the Gross weighing mode.

The next item is **M-DOOR**. Use this to enable or disable the mixer door position feature.

1. From the **CONFIG** display, press the **MENU** key repeatedly until. . .

**M-DOOR** is displayed.

2. Press the **SELECT** key. . .

**OFF** is shown.

3. Press the **MENU** key to toggle between **ON** and **OFF**. When your choice is displayed, press the **SELECT** key. . .

**M-DOOR** is displayed.

4. Press the **GROSS** key to return to the Gross weighing mode.

The next item is **CLOCK**. Use this to set the clock in either 12 or 24 hour format. Default is 12 hour format.

1. From the **CONFIG** display, press the **MENU** key repeatedly until. . .

**CLOCK** is displayed.

2. Press the **SELECT** key. . .

**12 HR** is shown.

3. Press the **MENU** key. . .

**24 HR** is shown.

4. Pressing **MENU** key alternates between 12/24 hour setting. Once the proper selection is displayed press **SELECT**. . .

**CLOCK** is displayed.

5. Press the **GROSS** key to return to the Gross weighing mode.

## M-DOOR

## CLOCK

## NAME

The next item is **NAME**. Use this to set the percentage at which the ingredient name stops flashing in the Recipe mode.

1. From the **CONFIG** display, press the **MENU** key repeatedly until. . .  
**NAME** is displayed.
2. Press the **SELECT** key. . .  
**25PER** is shown.
3. Press the **MENU** key to scroll through list.
4. Press **SELECT** when your choice is displayed.  
**NAME** is displayed.
5. Press the **GROSS** key to return to the Gross weighing mode.

## ALARM

The next item in the menu is **ALARM**. Use this to set the point at which the alarm begins to flash in the load/unload modes. Default value is 50.

If you enter 30 and the code number sets the indicator for weight, then the alarm will start flashing 30 lb before the target is met. If set for percent, the alarm will start flashing when within 30% of the target.

1. From the **CONFIG** display, press the **MENU** key repeatedly until. . .  
**ALARM** is displayed.
2. Press the **SELECT** key. . .  
Current alarm setting is shown
3. Use the keypad, and enter in the custom alarm value. . .  
Entered value is shown.
4. Press the **SELECT** key. . .  
**ALARM** is shown.
5. Press the **GROSS** key to return to the Gross weighing mode.

## INPUT.1 (XM64)

The next item is **INPUT.1**. Use this to set the function of INPUT.1. Default is STD. This parameter allows user to set the function of input.1, or the XM64. The selections are as follows"

**STD, ZERO, MENU, HOLD, or PRINT.**

The **STD** selection means the following:

- If in the 0 Load/Unload mode, activating the input allows the tare/viewing of the Gross weight to take place.
- If in the RECIPE/Pen mode, activating the input allows the ingredient\pen advance, or activates like the MENU key.

**ZERO, MENU, HOLD, PRINT**, act exactly like the keys themselves.

1. From the **CONFIG** display, press the **MENU** key repeatedly until . . .  
INPUT.1 is displayed.
2. Press the **SELECT** key. . .  
current setting is shown
3. Using the **MENU** key, once the proper setting is displayed, press **SELECT**. . .  
**INPUT.1** is displayed.
4. Press the **GROSS** key to return to the Gross weighing mode.

## INPUT.2 (Spare)

The next item is **INPUT.2**. Use this to set the function of INPUT.2. Default is STD. This item is just like INPUT.1. Follow the same steps to set INPUT.2.

## UPDATE

The next item is **UPDATE**. Use this to set the display update rate. Choose from updates 1, 2, or 5 times /second. Default is 2 times/sec.

1. From the **CONFIG** display, press the **MENU** key repeatedly until. . .  
**UPDATE** is displayed.
2. Press the **SELECT** key. . .  
current selection is displayed.
3. Use **MENU** key to move to proper selection, then press the **SELECT** key. . .  
**UPDATE** is displayed.
4. Press the **GROSS** key to return to the Gross weighing mode.

## AVERAGE

*If you attempt to enter A/D conversions higher than 60, a value of 60 will be set automatically.*

The next item is **AVERAGE**. Use this to set the number of A/D conversions to average. Default is 30.

For example if you enter in 30, the unit will average the weight values from the last 30 A/D conversions and uses that value for displayed data. (Accepts values from 1-60)

1. From the **CONFIG** display, press the **MENU** key repeatedly until . . .  
**AVERAGE** is displayed.
2. Press the **SELECT** key. . .  
current selection is displayed.
3. Use the keypad enter the number of conversions. . .  
entered number is displayed
4. Press the **SELECT** key. . .  
**AVERAGE** is displayed.
5. Press the **GROSS** key to return to the Gross weighing mode.

## FILTER

The next item is **FILTER**. Use this to enable and configure the Harmonizer™ filtering.

If you program in a value for the constant other than off, then the Harmonizer is on, and you must also enter a threshold value. If the constant = off, then the Harmonizer filtering is not engaged. Set the number low for small vibration problems and higher for more dampening effect.

The purpose of the Harmonizer Threshold is so the indicator will respond quickly to large weight changes. Harmonizer Threshold is the amount of weight change, in calibration units, beyond which the Harmonizer will be temporarily disabled. For example, if you set this to 10 lbs, a weight change over 10 pounds occurring during the display time will disable the Harmonizer until the weight change during the sample time drops below 10 lbs.

1. From the **CONFIG** display, press the **MENU** key repeatedly until . . .  
**FILTER** is displayed
2. Press the **SELECT** key. . .  
**CONST** is displayed
3. Press the **SELECT** key. . .  
Current harmonizer setting is displayed.
4. Use **MENU** key until proper const. is shown.  
Value is shown

5. Press the **SELECT** key. . .  
**CONST.** is shown.
6. Press the **MENU** key. . .  
**WINDOW** is shown.
7. Press the **SELECT** key. . .  
Current threshold is displayed.
8. Use the keypad, enter the new value. . .  
Entered value is shown. (ENTERED VALUE MUST BE LOWER  
THAN THE SCALE CAPACITY)
9. Press the **SELECT** key. . .  
**WINDOW** is shown
10. Press the **GROSS** key. . .  
**FILTER** is displayed
11. Press the **GROSS** key to return to the Gross weighing mode.

## AZT

The next item is **AZT**. Use this to set the Automatic Zero Tracking window, with the following choices:

OFF, 0.5 , 1.0, 2.0, 3.0, 5.0, 10.0 divisions

Default setting is OFF.

1. From the **CONFIG** display, press the **MENU** key repeatedly until. . .  
**AZT** is displayed.
2. Press the **SELECT** key and. . .  
current selection is shown
3. Use the **MENU** key and move to the proper selection. . .  
proper choice is shown
4. Once proper choice is shown, press **SELECT**. . .  
**AZT** is shown
5. Press the **GROSS** key to return to the Gross weighing mode.



## MOTION

The next item is **MOTION**. Use this to set the motion window, with the following choices:

off, 0.5, 1.0, 2.0, 3.0, 5.0, 10.0 divisions

Default is OFF

1. From the **CONFIG** display, press the **MENU** key repeatedly until. . .  
**MOTION** is displayed.
2. Press the **SELECT** key and. . .  
current selection is shown
3. Use the **MENU** key and move to the proper selection. . .  
proper choice is shown
4. Once proper selection is shown, press the **SELECT** key. . .  
**MOTION** is shown
5. Press the **GROSS** key to return to the Gross weighing mode.

## RS232.1 RS232.2

The last items are the serial ports which are labeled **RS232.1** and **RS232.2**. Use these items to set the serial communication protocols.

RS232.1 represents com port 1

RS232.2 represents com port 2

### Setting The Baud Rate

Default baud rate is 9600.

1. From the **CONFIG** menu, press the **MENU** key repeatedly until. . .  
**RS232.1** is shown
2. Press the **SELECT** key. . .  
**bAUD** is shown
3. Press the **SELECT** key. . .  
Current baud rate is shown
4. Use the **MENU** key to scroll to the proper selection. . .  
Proper selection is shown
5. Press the **SELECT** key. . .  
**bAUD** is shown.
6. Press the **GROSS** key. . .  
**RS232.1** is shown
7. Press the **GROSS** key to return to the Gross weighing mode.

## Setting The Parity Selection

The default parity setting is NONE.

1. From the **CONFIG** menu, press the **MENU** key repeatedly until. . .  
**RS232.1** is shown
2. Press the **SELECT** key. . .  
**BAUD** is shown
3. Press the **MENU** key. . .  
**PARITY** is shown
4. Press the **SELECT** key. . .  
Current selection is shown.
5. Use the **MENU** key to scroll to the proper selection. . .  
Proper selection is shown.
6. Press the **SELECT** key. . .  
**PARITY** is shown
7. Press the **GROSS** key. . .  
**RS232.1** is shown
8. Press the **GROSS** key to return to the Gross weighing mode.

## Setting The Data Bits

The default is 8 data bits.

1. From the **CONFIG** menu, press the **MENU** key repeatedly until. . .  
**RS232.1** is shown
2. Press the **SELECT** key. . .  
**BAUD** is shown
3. Press the **MENU** key repeatedly until. . .  
**DATA** is shown
4. Press the **SELECT** key. . .  
Current selection is shown.
5. Use the **MENU** key to scroll to the proper selection. . .  
Proper selection is shown.
6. Press the **SELECT** key. . .  
**DATA** is shown
7. Press the **GROSS** key. . .  
**RS232.1** is shown.
8. Press the **GROSS** key to return to the Gross weighing mode.

## Setting The Handshaking

Default setting is NONE.

1. From the **CONFIG** menu, press the **MENU** key repeatedly until. . .  
**RS232.1** is shown
2. Press the **SELECT** key. . .  
**BAUD** is shown
3. Press the **MENU** key repeatedly until. . .  
**HAND** is shown
4. Press the **SELECT** key. . .  
Current selection is shown.
5. Use the **MENU** key to scroll to the proper selection. . .  
Proper selection is shown.
6. Press the **SELECT** key. . .  
**HAND** is shown
7. Press the **GROSS** key. . .  
**RS232.1** is shown
8. Press the **GROSS** key to return to the Gross weighing mode.

## Setting The Com Port Serial Data Layout

The default setting is STD.

The following parameters can be set as follows:

- STD: All printouts will be printed as standard, and auto printing at the end of batch will work if enabled.
- TdM.TDS: Setup for comma delimited information to be transferred into the TDM-40 Transfer Data Module or STD printouts.
- Brdcst: Broadcast continuous serial RS-232 data so this can be hooked up to an RD125RF unit.
- |              |  |
|--------------|--|
| GROSS:       | Continuous displayed weight data   |
| LOAD/UNLOAD: | Continuous displayed load/unload values  |
| RECIPE:      | Gross weight until the RECIPE is activated and the same information being displayed on the Model 1040 needs to be transferred. |
| TIMER:       | Transfer the same Model 1040 displayed information in this mode.   |
| PEN:         | Transfer the same Model 1040 displayed information in this mode.   |

1. From the **CONFIG** menu, press the **MENU** key repeatedly until. . .  
**RS232.1** is shown
2. Press the **SELECT** key. . .  
**BAUD** is shown

3. Press the **MENU** key repeatedly until. . .  
**LAYOUT** is shown
4. Press the **SELECT** key. . .  
Current selection is shown.
5. Use the **MENU** key to scroll to the proper selection. . .  
Proper selection is shown.
6. Press the **SELECT** key. . .  
**LAYOUT** is shown
7. Press the **GROSS** key. . .  
**RS232.1** is shown
8. Press the **GROSS** key to return to the Gross weighing mode.

## Setting The Auto Print Feature

*This parameter only works if  
Layout is set to STD.*

Default setting is OFF.

This selection needs to be turned on when wanting an automatic printing of batched data when using the Recipe/Pen batching features.

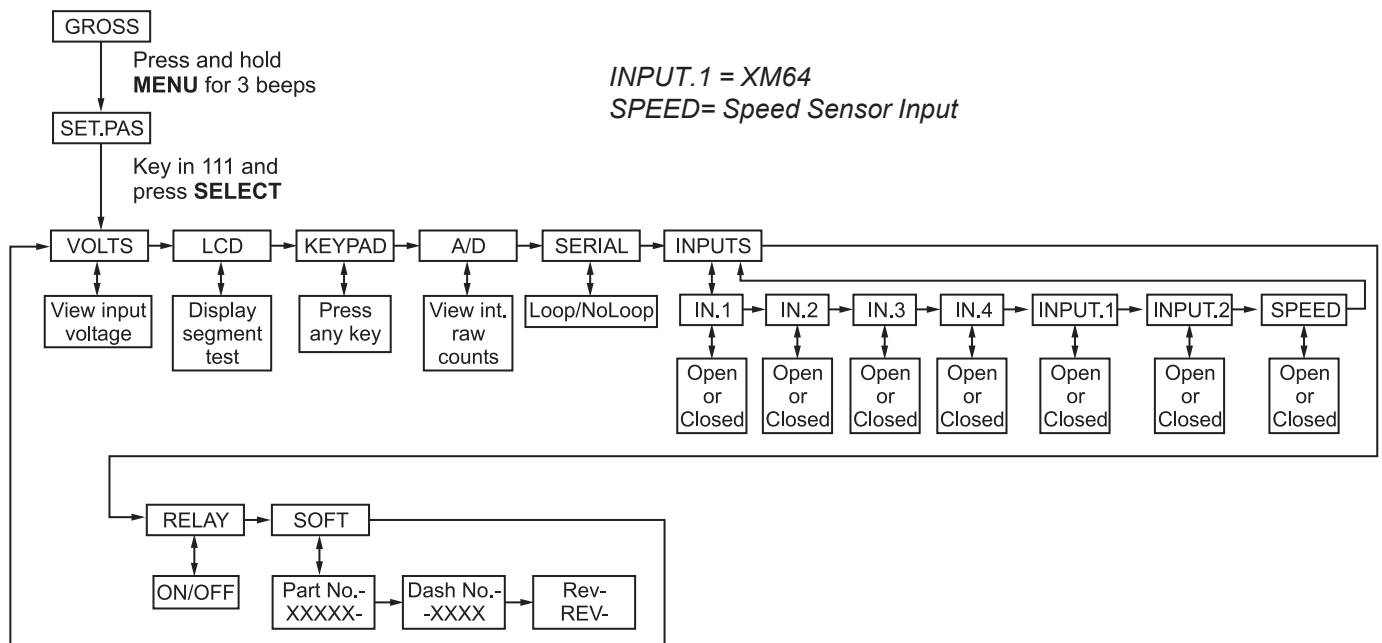
1. From the **CONFIG** menu, press the **MENU** key repeatedly until. . .  
**RS232.1** is shown
2. Press the **SELECT** key. . .  
**BAUD** is shown
3. Press the **MENU** key repeatedly until. . .  
**AUTO** is shown
4. Press the **SELECT** key. . .  
Current selection is shown.
5. Use the **MENU** key to scroll to the proper selection. . .  
Proper selection is shown.
6. Press the **SELECT** key. . .  
**AUTO** is shown
7. Press the **GROSS** key. . .  
**RS.232.1** is shown
8. Press the **GROSS** key to return to the Gross weighing mode.

# TEST ( 111 ) MENU

The test menu is a basic menu for self diagnostics. You can use this to test certain functions of the indicator.

- VOLTS      Monitor the input voltage of the indicator
- LCD        Do an LCD display test.
- KEYPAD    Do a keypad test
- A / d       Do an Analog to Digital Test (A/D)
- SERIAL     Check the serial ports (Ports 1 and 2).
- INPUTS    Check the 7 TTL inputs.
- RELAY      Check the alarm relay
- SOFT       Verify the software version of the indicator.

The Test menu is shown in Figure 3.



**Figure 3**  
Test menu

## Access the Test Menu

1. From the Gross mode press and hold the **MENU** key for three beeps (3 seconds), then release. . .  
**SET.PAS** is displayed.
2. Use the keypad to enter '111'. . .  
\*\*\* is displayed
3. Then press the **SELECT** key. . .  
**VOLTS** is displayed.

## Test Menu Items

### **VOLTS** (Input Voltage)

Following are the Test menu items and their explanations.

This allows a user to check the 12VDC input voltage that the Model 1040 is operating on.

1. Access the test menu. . .  
**VOLTS** is displayed.
2. Press the **SELECT** key. . .  
Current voltage is displayed.
3. Press the **SELECT** key . . .  
**VOLTS** is displayed
4. Press the **GROSS** key to return to the Gross weighing mode.

### **LCD** (LCD Display Test)

This test does a self test on the LCD , either a complete display test or a segment test.

1. From **VOLTS** press **MENU**. . .  
**LCD** is displayed.
2. Press the **SELECT** key. . .  
**TEST** is shown.
3. Press the **SELECT** key. . .  
Display performs a display test (15 sec).
4. When test is completed. . .  
**TEST** is shown.
5. Press **MENU**. . .  
**SEGMNT** is displayed.
6. Press the **SELECT** key. . .  
Display performs a segment test (70 sec)
7. When test is completed. . .  
**SEGMNT** is displayed.
8. Press **GROSS** key to. . .  
Return to **LCD** display.
9. Press the **GROSS** key to return to the Gross weighing mode.

## KEYPAD (Keypad Test)

*If a key is bad and the unit is turned ON, BAD.KEY will be displayed after 10 seconds. If the 1040 can detect, for example, that key 6 is faulty, the display will flash **BAD.KEY 6**.*

This test allows testing of all active keys. . .

1. From **VOLTS**, press **MENU**. . .  
**LCD** is displayed.
2. Press the **MENU** repeatedly until. . .  
**KEYPAD** is shown.
3. Press **SELECT**. . .  
**HIT.KEY** is displayed

**NO KEY** is shown if a key isn't being pressed. Below is the list of keys and what appears if you press that key:

| KEY         | DISPLAY |
|-------------|---------|
| 1           | 1       |
| 2           | 2       |
| 3           | 3       |
| 4           | 4       |
| 5           | 5       |
| 6           | 6       |
| 7           | 7       |
| 8           | 8       |
| 9           | 9       |
| 0           | 0       |
| RECIPE      | RECIPE  |
| GROSS       | GROSS   |
| LOAD/UNLOAD | LOAD    |
| PEN         | PEN     |
| HOLD        | HOLD    |
| TIMER       | TIMER   |
| ZERO        | ZERO    |
| PRINT       | PRINT   |
| USAGE       | USAGE   |
| ID          | ID      |

4. Press the **MENU** key. . .  
Display returns to **KEYPAD** display.
5. Press the **GROSS** key to return to the Gross weighing mode.

## **A/D (A to D Counts and mV/V Test)**

The test allows you to see the A to D raw counts and the current mV/V reading.

1. From **VOLTS**, press **MENU**. . .  
**LCD** is displayed.
2. Press **MENU** repeatedly until. . .  
**A/D** is shown
3. Press the **SELECT** key. . .  
**CNTS** is shown momentarily and then the actual A/D raw counts is shown.
4. Press the **SELECT** key. . .  
**MV/V** is shown momentarily and then the actual mV/V reading is shown.
5. Press the **SELECT** key. . .  
**A/D** is shown.
6. Press the **GROSS** key to return to the Gross weighing mode.

## **SERIAL (Serial Port Test)**

This test allows you to check the serial ports for proper operation.

1. From **VOLTS**, press **MENU**. . .  
**LCD** is displayed.
2. Press **MENU** repeatedly until. . .  
**SERIAL** is shown
3. Press the **SELECT** key and . . .  
**PORT 1** is displayed
4. Press the **SELECT** key and . . .  
**NOLOOP** is displayed
5. Short the XMT to RCV (Pins 2 and 4) and. . .  
**LOOP** will be displayed.
6. Press **SELECT** and. . .  
**PORT 1** is displayed.
7. Press the **MENU** key. . .  
**PORT 2** is displayed.
8. Repeat steps 4-6 . . .  
**PORT 2** is displayed.
9. Press the **GROSS** key to return to the Gross weighing mode.



## INPUTS (Inputs Test)

*INPUT.1 = XM64*

*SPEED = Speed Sensor Input*

Use this item to test the Inputs

1. From **VOLTS**, press **MENU**. . .  
**LCD** is displayed.
2. Press **MENU** repeatedly until. . .  
**INPUTS** is shown.
3. Press the **SELECT** key and . . .  
**IN.1** is displayed.
4. Press the **SELECT** key and. . .  
**OPEN** or **CLOSED** is displayed
5. Press the **SELECT** key. . .  
**IN.1** is displayed
6. Press the **MENU** key, and. . .  
**IN.2** is displayed
7. Press the **SELECT** key. . .  
**OPEN** or **CLOSED** is displayed.
8. Press the **SELECT** key. . .  
**IN.2** is displayed
9. Repeat steps 6-8 until all inputs are checked.
10. Press the **GROSS** key to return to the Gross weighing mode.

## RELAY (Alarm Light Test)

Use this test to check the Alarm light function.

1. From **VOLTS**, press **MENU**. . .  
**LCD** is displayed.
2. Press **MENU** repeatedly until. . .  
**RELAY** is shown.
3. Press the **SELECT** key and . . .  
**ON/OFF** is displayed. While this is selected on the display, the alarm light relay will flash at 2/sec.
4. Press the **SELECT** key and . . .  
**RELAY** is displayed.
5. Press the **GROSS** key to return to the Gross weighing mode.

## **SOFT** **(Software Version)**

Use this menu item to see the software information stored in the 1040.

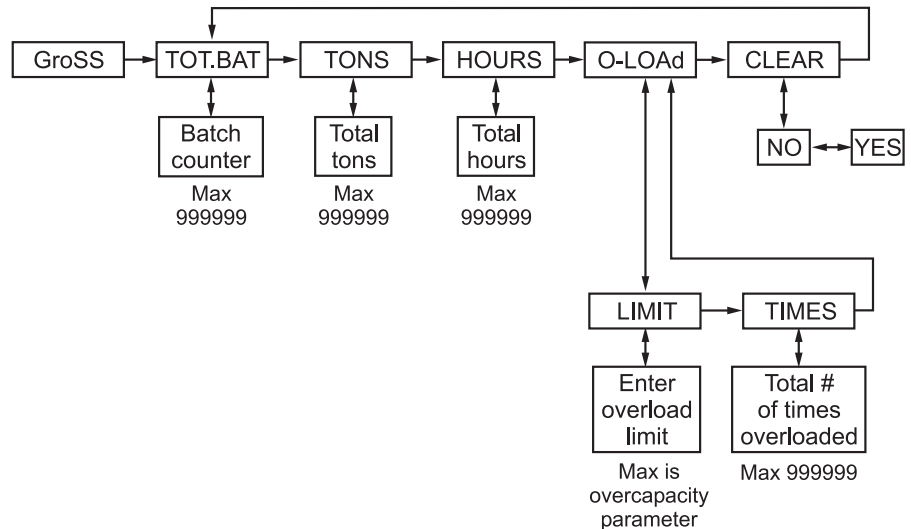
1. From **VOLTS**, press **MENU**. . .  
**LCD** is displayed.
2. Press **MENU** repeatedly until. . .  
**SOFT** is shown.
3. Press **SELECT** and. . .  
**PART:** is displayed.
4. Press **MENU** and. . .  
**55422-** is displayed
5. Press **MENU** and. . .  
**DASH:** is displayed.
6. Press **MENU** and. . .  
**0012** is shown
7. Press **MENU** and. . .  
**REV:** is shown
8. Press **MENU** and. . .  
Current revision date is shown
9. Press **MENU** and. . .  
**bAS.VER** is shown
10. Press **MENU** and. . .  
**15799** is displayed
11. Press **MENU** and. . .  
**bas.REV** is shown
12. Press **MENU** and. . .  
Current revision is shown
13. Press **MENU** and. . .  
**SOFT** is displayed
14. Press the **GROSS** key to return to the Gross weighing mode.

# History (999) Menu

The O-LOAD limit **MUST** be lower than the O-CAP limit set in the Setup menu.

In the History menu, Figure 4, you can view or do the following:

- **TOT.BAT** Displays the total batch counter.
- **TONS** Displays the total number of tons batched.
- **HOURS** Displays the total hours recorded in recipe batch mode.
- **O-LOAD** Lets you set the over-load limit and the number of times it has reached this limit.
- **CLEAR** Allows the user to reset all parameters other than the O-LOAD limit to be reset back to zero.



**Figure 4**  
History menu

## Access The History Menu

1. From the Gross Mode , press and hold on the **MENU** key for three beeps (3 seconds), then release. . .  
**SET.PAS** is displayed.
2. Use the keypad, enter 999. . .  
**\*\*\*** is displayed
3. Then press the **SELECT** key. . .  
**TOT.BAT** is displayed

## History Menu Items

### BAT.CNT (Batch Counter)

Following are the History menu items and their explanations.

Use this menu item to view the total tons of batches. Follow these steps:

1. From **TOT.BAT**, press **SELECT**. . .  
Total number of batches is displayed.
2. Press the **SELECT** key and. . .  
**TOT.BAT** is shown.
3. Press the **GROSS** key to return to the Gross weighing mode.

## **TONS** **(Batch Tonnage)**

This item allows you to view the total number of tons batched on the indicator. (1 ton = 2000 lb, 1 tonne = 1000 kg)

1. From **TOT.BAT**, press the **MENU** key . . .  
**TONS** is displayed
2. Press the **SELECT** key. . .  
Total number of tons is displayed.
3. Press the **SELECT** key. . .  
**TONS** is displayed.
4. Press the **GROSS** key to return to the Gross weighing mode.

## **HOURS** **(Hours in Recipe Batch Mode)**

This item allows you to view the total number of hours the mixer has accumulated in recipe batch mode.

1. From **TOT.BAT**, press the **MENU** key repeatedly until . . .  
**HOURS** is displayed
2. Press the **SELECT** key. . .  
Total number of hours is displayed.
3. Press the **SELECT** key. . .  
**HOURS** is displayed.
4. Press the **GROSS** key to return to the Gross weighing mode.

## **O-LOAD** **(Overload Occurences)**

This item allows you to set an overload limit and to view the total number of overloads the system has experienced.

1. From **TOT.BAT**, press the **MENU** key repeatedly until . . .  
**O-LOAD** is displayed.
2. Press the **SELECT** key. . .  
**LIMIT** is displayed.
3. Press the **SELECT** key. . .  
Current limit is displayed.
4. Use the keypad to key a limit value. . .  
The entered value is displayed.
5. Press the **SELECT** key. . .  
**LIMIT** is displayed.
6. Press the **MENU** key. . .  
**TIMES** is displayed.

## **CLEAR** **(Clear History)**

7. Press the **SELECT** key. . .  
The number of times O-LOAD has been reached is displayed.
8. Press the **SELECT** key. . .  
**TIMES** is displayed.
9. Press the **GROSS** key. . .  
**O-LOAD** is displayed.
10. Press the **GROSS** key to return to the Gross weighing mode.

Use this item reset all the parameters in the History menu to 0.

1. From **TOT.BAT**, press **MENU** repeatedly until. . .  
**CLEAR** is displayed.
2. Press the **SELECT** key. . .  
**NO** is displayed.
3. Press the **MENU** key. . .  
**YES** is displayed.
4. Pressing on **MENU** key alternates between **NO/YES**. Once proper message is shown simply press **SELECT**. . .  
**CLEAR** is displayed.
5. Press the **GROSS** key to return to the Gross weighing mode.

## Setting Factory Defaults

Accessing this menu will set all parameters to factory defaults.

**It is very important that you do this only if you are sure. All entered information is lost and there is no way to retrieve it.**

1. From the Gross Mode, press and hold on the **MENU** key for three beeps (3 seconds), then release. . .  
**SET.PAS** is displayed.
2. Use the keypad, enter '222174'. . .  
**\*\*\*\*\*** is displayed
3. Then press the **SELECT** key. . .  
**DFAULT** is displayed
4. The unit returns to the Gross weighing mode.

## Production Or Service Factory Calibration

Accessing this menu gives production or service access to calibrating factory calibration as follows: (1 mv/v = 10000 lb)

1. From the Gross Mode, press and hold on the **MENU** key for three beeps (3 seconds), then release. . .  
**SET.PAS** is displayed.
2. Use the keypad, enter '010101'. . .  
**\*\*\*\*\*** is displayed
3. Then press the **SELECT** key. . .  
**ZERO** is displayed

### Accessing Factory Calibration Mode

### Setting Zero Calibration

1. From **ZERO**, press **SELECT**. . .  
**SET.0MV** is displayed.
2. Dial calibrator to 0 mV/V, press **SELECT**. . .  
**DET.ZER** then **DONE** is displayed.
3. Returns to the **ZERO** display
4. Press the **GROSS** key to return to the Gross weighing mode.

---

## Setting the Span Calibration

---

1. From **ZERO**, press **MENU**. . .  
**SPAN** is displayed.
2. Press **SELECT** and. . .  
**SET1MV** is displayed.
3. Dial calibrator to 1 mV/V, press **SELECT**. . .  
**DET.SPN** then **DONE** is displayed
4. Returns to the **SPAN** display.
5. Press the **GROSS** key to return to the Gross weighing mode.

---

## Viewing Current Calibration

---

1. From **ZERO**, press **MENU** repeatedly until. . .  
**DISP** is displayed.
2. Press **SELECT** and. . .  
Current weight calibration is displayed
3. Press **SELECT**. . .  
**DISP** is displayed.
4. Press the **GROSS** key to return to the Gross weighing mode.

---

## Viewing Factory Span Factor

---

1. From **ZERO**, press **MENU** repeatedly until. . .  
**VIEW** is displayed
2. Press **SELECT** and. . .  
Current span factor is displayed. 1 mv/v = 100000 if electronics are all exact. For example if off 0.01%, could read 99990
3. Press **SELECT**. . .  
**VIEW** is displayed
4. Press **GROSS** key . . .  
To return to the Gross weighing mode

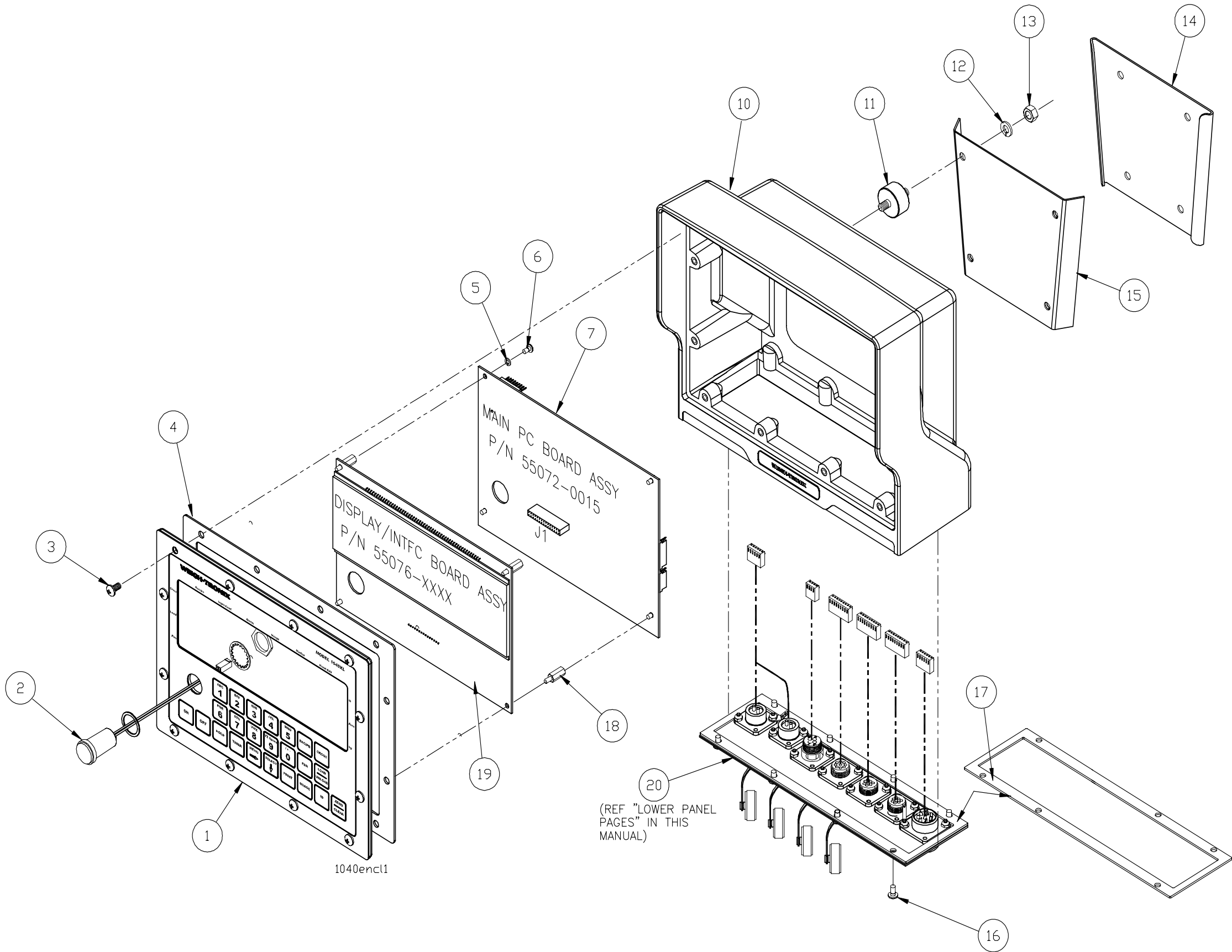
## Re-setting Factory Span Without Calibrating with a Simulator

Use this to return the unit to its factory calibration. You need to first retrieve the factory span value from the indicator, clear memory and re-enter the value at this point.

1. From **ZERO**, press **MENU** repeatedly until. . .  
**SET** is displayed.
2. Press **SELECT** and. . .  
**FAC.SPN** is displayed.
3. Enter factory span value. . .  
Entered value is displayed.
4. Press **SELECT** and. . .  
**SET** is displayed
5. Press the **GROSS** key to return to the Gross weighing mode.

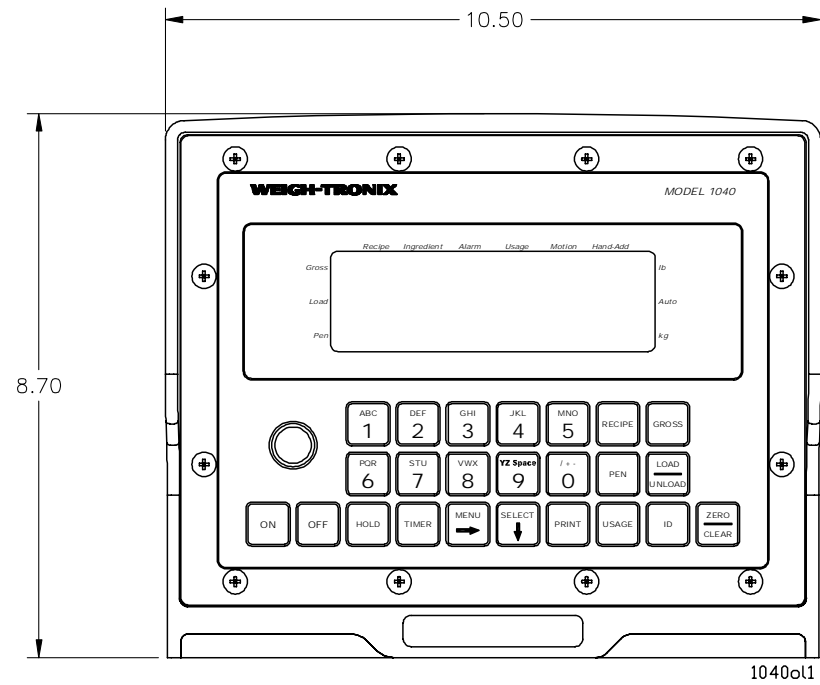


MODEL 1040/1040XL INDICATOR  
PARTS AND ASSEMBLY

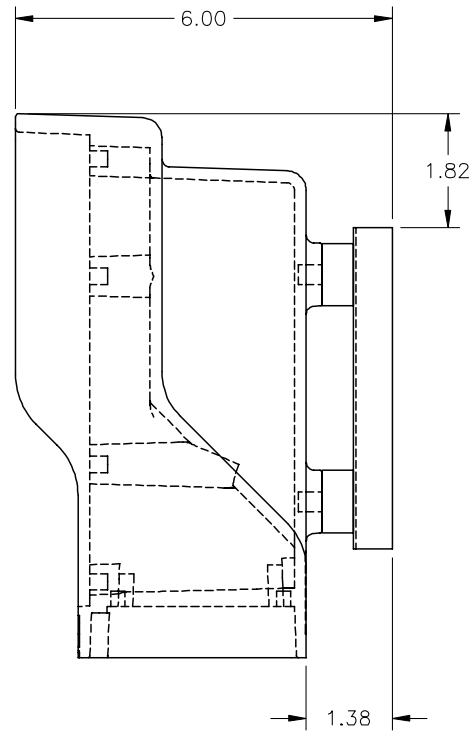


| ITEM NO. | DESCRIPTION  | W-T P/N       | QTY |
|----------|--|---------------|-----|
| 1        | Keypad/Backer Plate Assy,XL (includes gasket)                                      | 55087-0018    | 1   |
|          | Keypad/Backer Plate Assy (includes gasket)   | 55087-0042    | 1   |
| 2        | Alarm Light Assy   | 24129-0014    | 1   |
| 3        | Screw, #10-32 x .38"L  | 14503-8030    | 12  |
| 4        | Replacement Gasket, sticky one side, (for item 1)                                  | 47694-0010    | 1   |
| 5        | Lock Washer, #6  | 14474-0032    | 4   |
| 6        | Screw, #6-32 x .25"L   | 14473-0223    | 4   |
| 7        | Main Pc Bd Assy  | 55072-0015    | 1   |
| 8        | --NO PART--  | -----         | --- |
| 9        | --NO PART--  | -----         | --- |
| 10       | Enclosure  | 47017-0010    | 1   |
| 11       | Rubber Vibration Mount (incl. w/ Indicator)  | 17807-0108    | 4   |
| 12       | Lock Washer, .25" (incl. w/ Indicator)   | 14474-0198    | 4   |
| 13       | Hex Nut, .25-20 (incl. w/ Indicator)   | 14471-0209    | 4   |
| 14       | Mtg. Bracket (optional)  | 12339-0015    | 1   |
| 15       | Mtg. Bracket (included w/ Indicator)   | 11899-0043    | 1   |
| 16       | Screw, #8-32 x .31"L   | 14473-0348    | 8   |
| 17       | Replacement Gasket, sticky one side(for item 20)                                   | 47695-0019    | 1   |
| 18       | Standoff, hex, #6-32 x .50"L, M/F  | 15437-0449    | 4   |
| 19       | Display/Interface XL Board Assy (large display)                                    | 55076-0011    | 1   |
|          | Display/Interface Board Assy (std. display)  | 55076-0029    | 1   |
| 20       | Lower Panel Assembly options :<br>(ref. lower pnl. option pages in this manual)    |               |     |
|          | W-T 7-pin j-box interface (basic version)  | 55373-0144svc | 1   |
|          | W-T 7-pin j-box interface (basic version, plus<br>Revolution Count input & Com-2)  | 55373-0169svc | 1   |
|          | Amp. 4-pin j-Box interface (basic version)   | 55373-0151svc | 1   |
|          | Amp. 4-pin j-Box interface (basic version, plus<br>Revolution Count input & Com-2) | 55373-0177svc | 1   |
|          | 5-pin (full bridge) 3-weigh bar (w/o j-box intfc.)                                 | 55374-0085svc | 1   |
|          | 5-pin (full bridge) 4-weigh bar (w/o j-box intfc.)                                 | 55374-0077svc | 1   |
|          | 4-pin (quarter bridge) 4-weigh bar (w/o j-box intfc.)                              | 55374-0093svc | 1   |

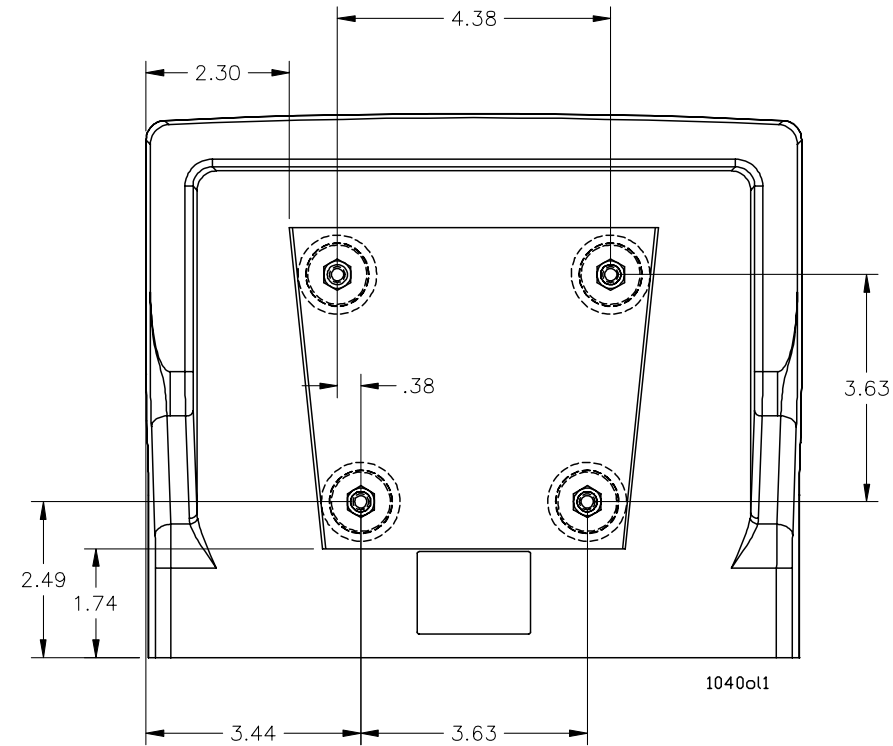
MODEL 1040/1040XL INDICATOR  
OUTLINE DRAWING



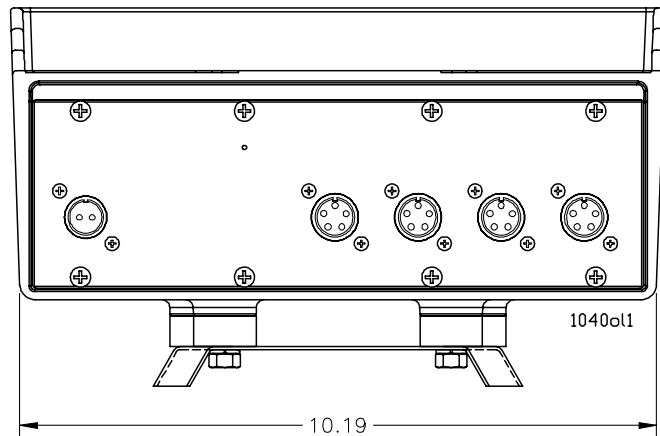
(FRONT VIEW)



(SIDE VIEW)

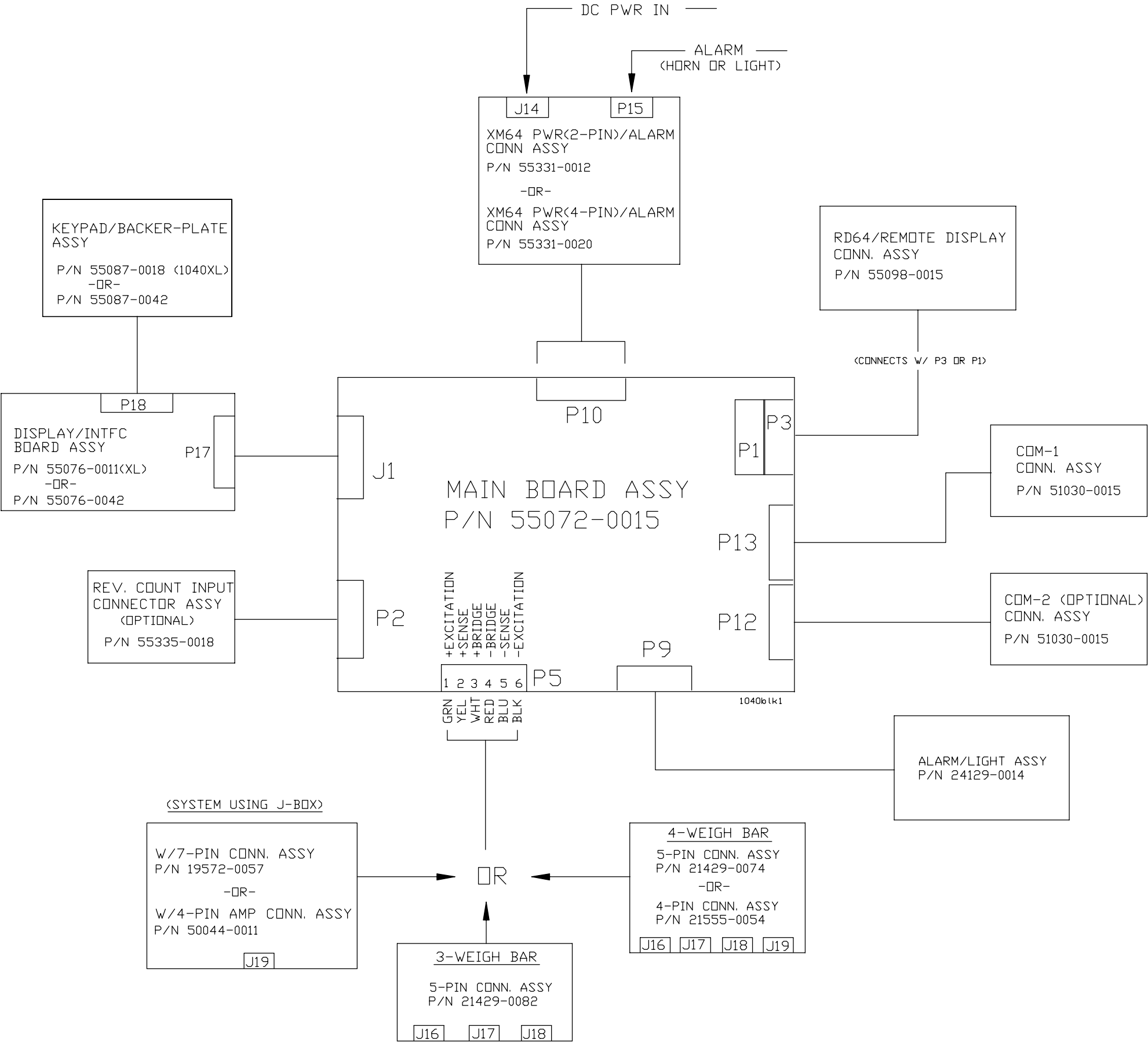


(REAR VIEW)

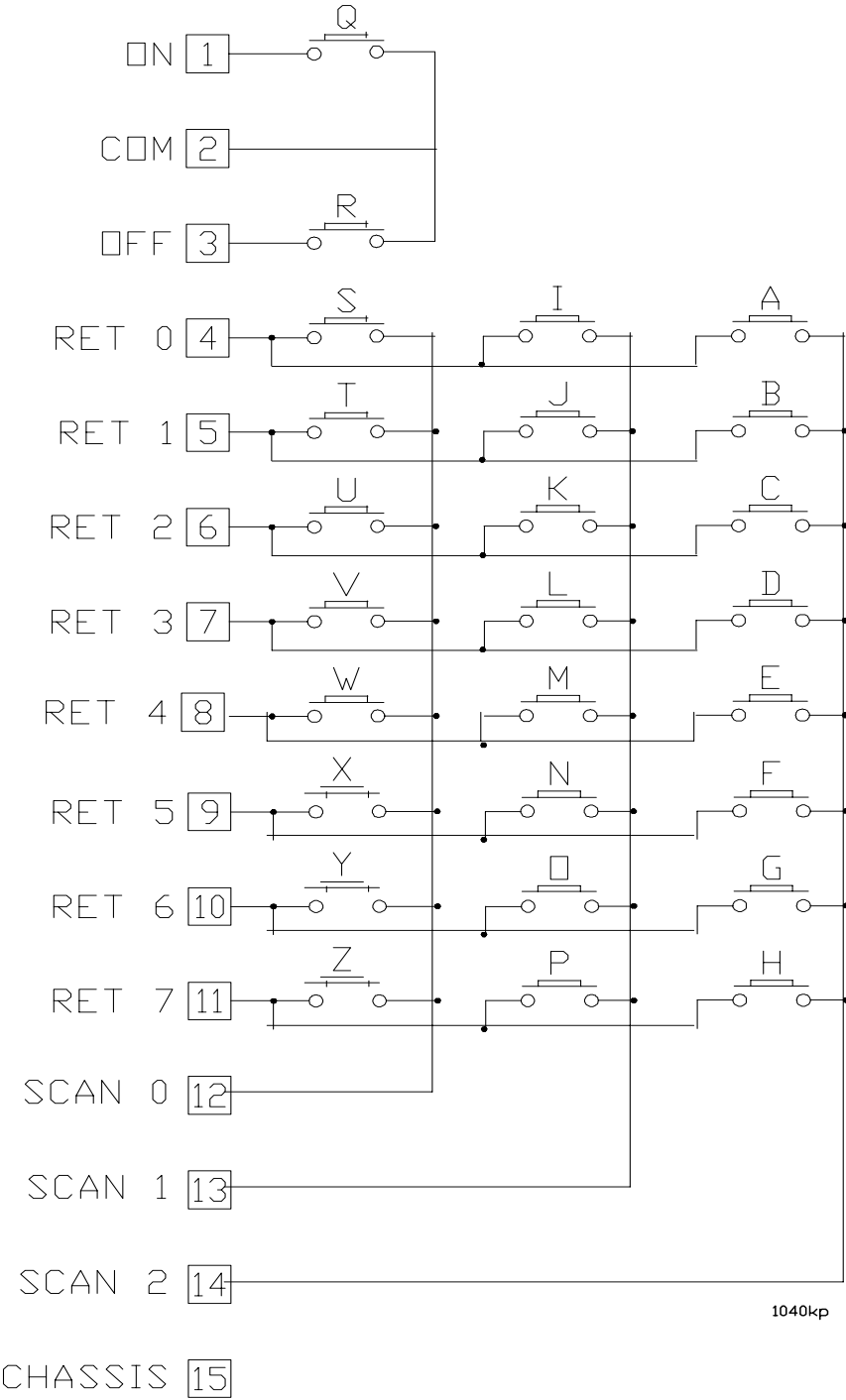
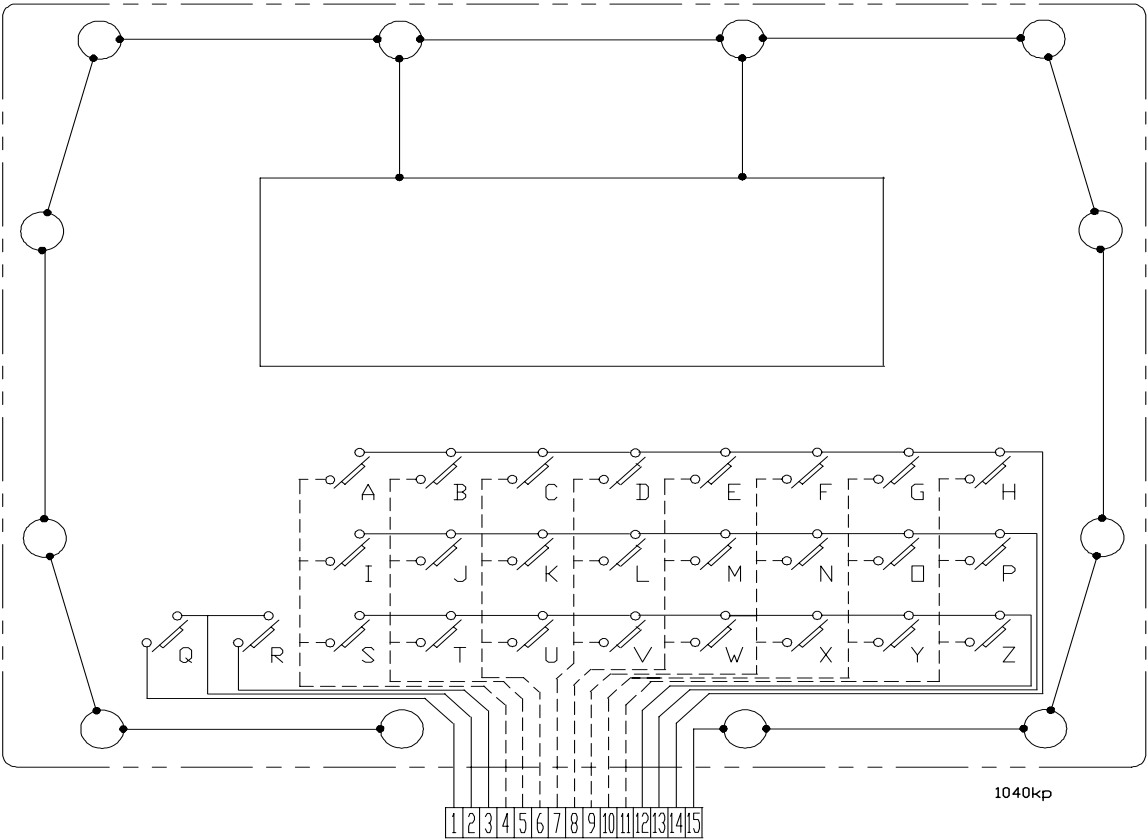


(BOTTOM VIEW)

MODEL 1040/1040XL INDICATOR  
SYSTEM BLOCK DIAGRAM

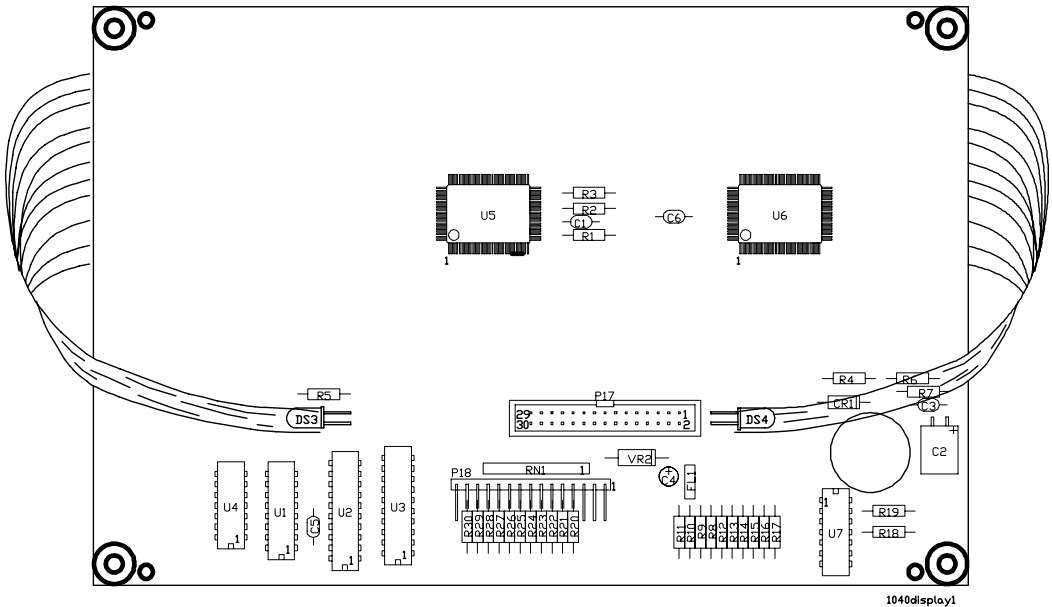


**MODEL 1040/1040XL INDICATOR**  
KEYPAD/BACKER PLATE ASSY  
55087 -0018 (XL, large display), -0042 (std. display)

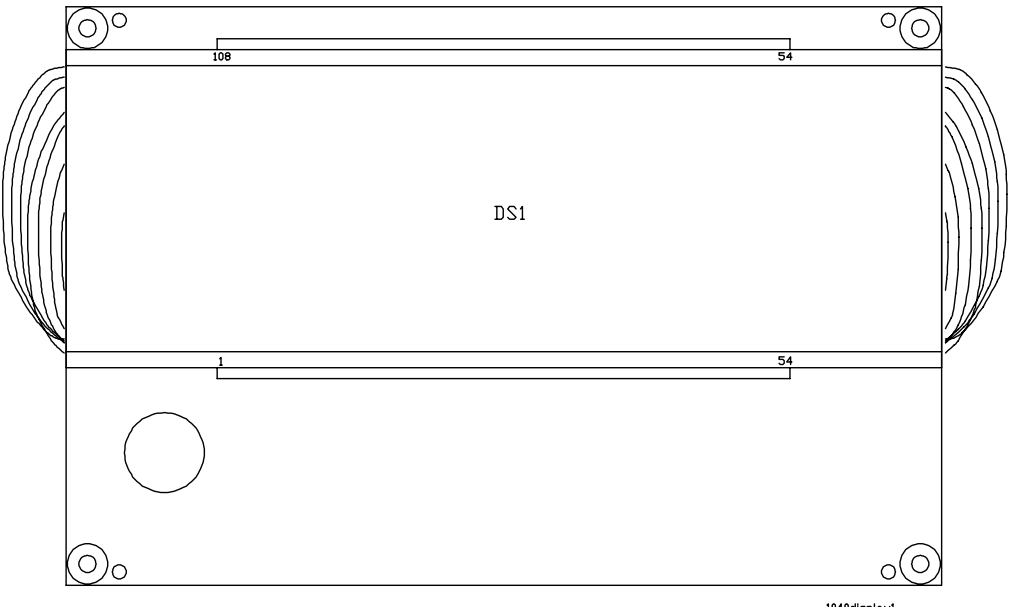


SCHEMATIC DIAGRAM

1040XL display Bd.  
(55076-0011)

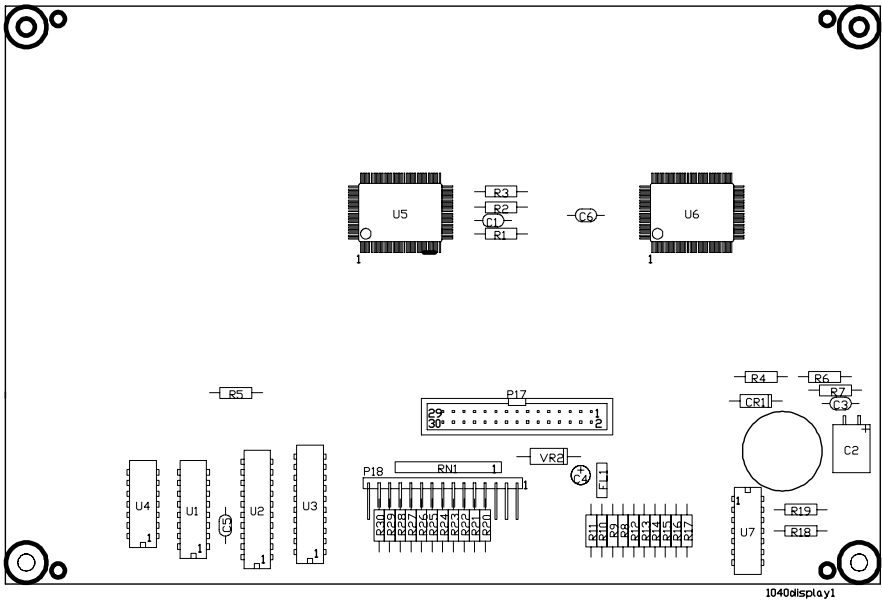


COMPONENT SIDE

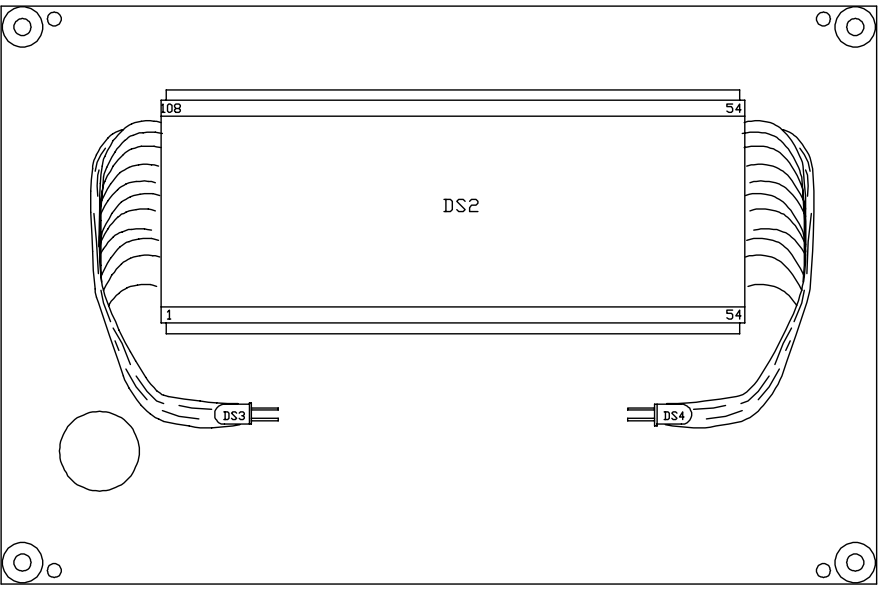


DISPLAY SIDE

1040 display Bd.  
(55076-0029)



COMPONENT SIDE



DISPLAY SIDE

MODEL 1040/1040XL INDICATOR  
MAIN PC BOARD  
P/N 55072-0015

CAUTION !

DANGER OF EXPLOSION IF BATTERY IS INCORRECTLY REPLACED.

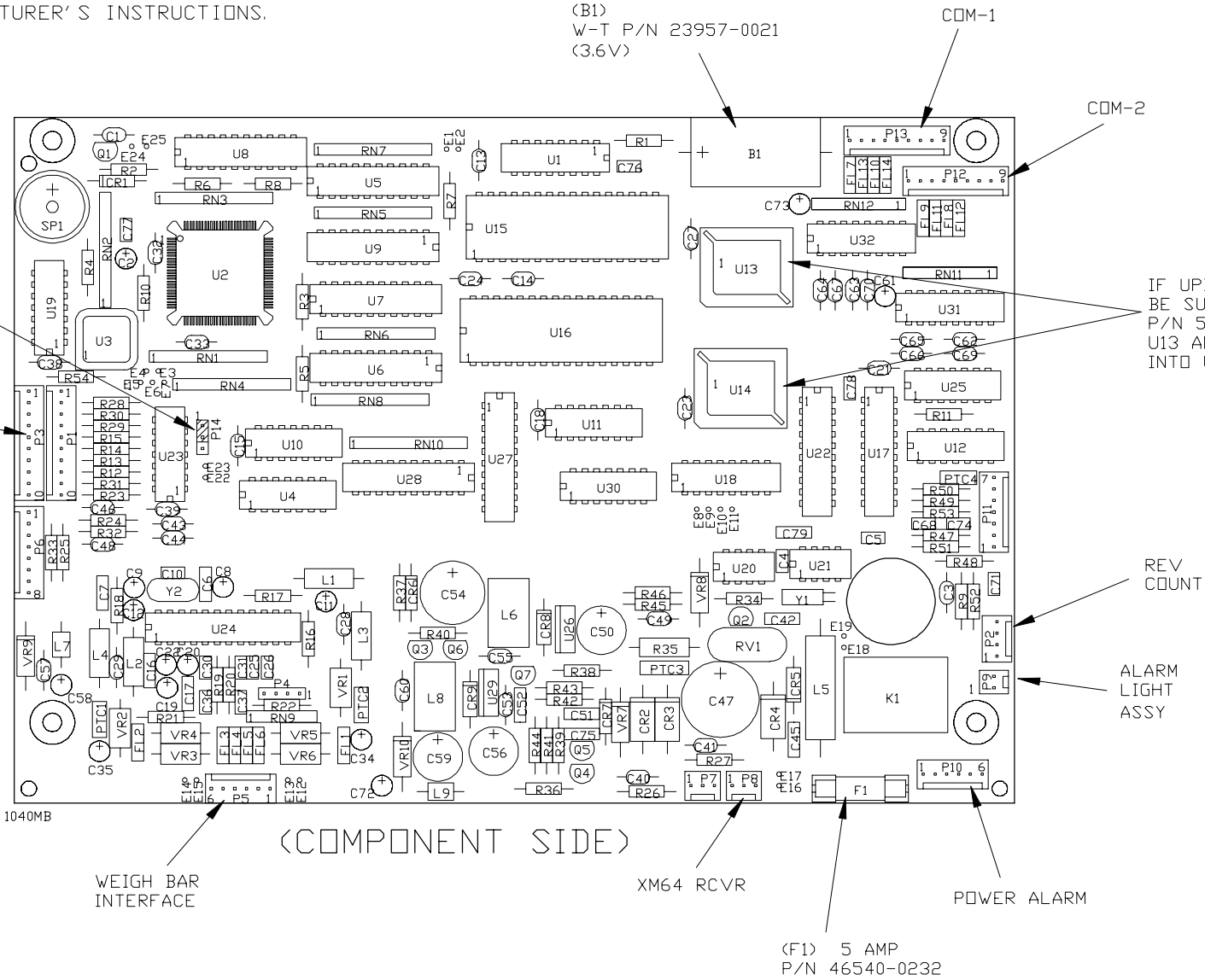
REPLACE BATTERY (B1) ONLY WITH THE SAME  
OR EQUIVALENT TYPE RECOMMENDED BY THE  
MANUFACTURER.

DISPOSE OF USED BATTERIES ACCORDING TO  
THE MANUFACTURER'S INSTRUCTIONS.

NOTE:

WHEN USING RD64 or RCV-64  
WITH AN XMT/RCVR SET, INSTALL  
JUMPER ON P14, PINS 1-2.

RD64  
REMOTE  
DISPLAY  
(P1 OR P3)



TO P17  
(DISPLAY/INTFC BD.)

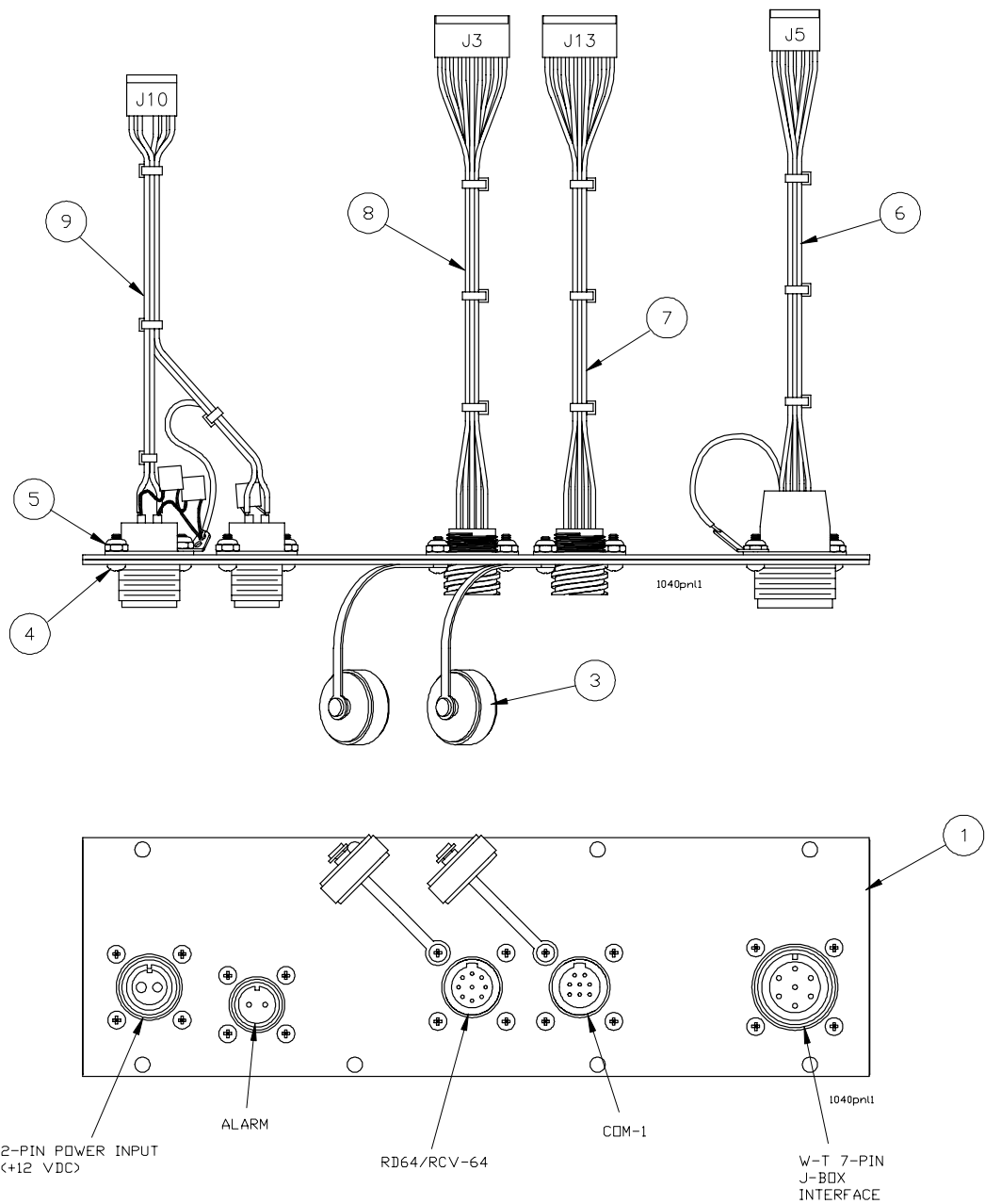
J1

(BACK SIDE)

MODEL 1040/1040XL INDICATOR  
LOWER PANEL OPTIONS  
(FOR SYSTEMS USING J-BOX)

Complete Panel Assembly as shown: p/n 55373-0144

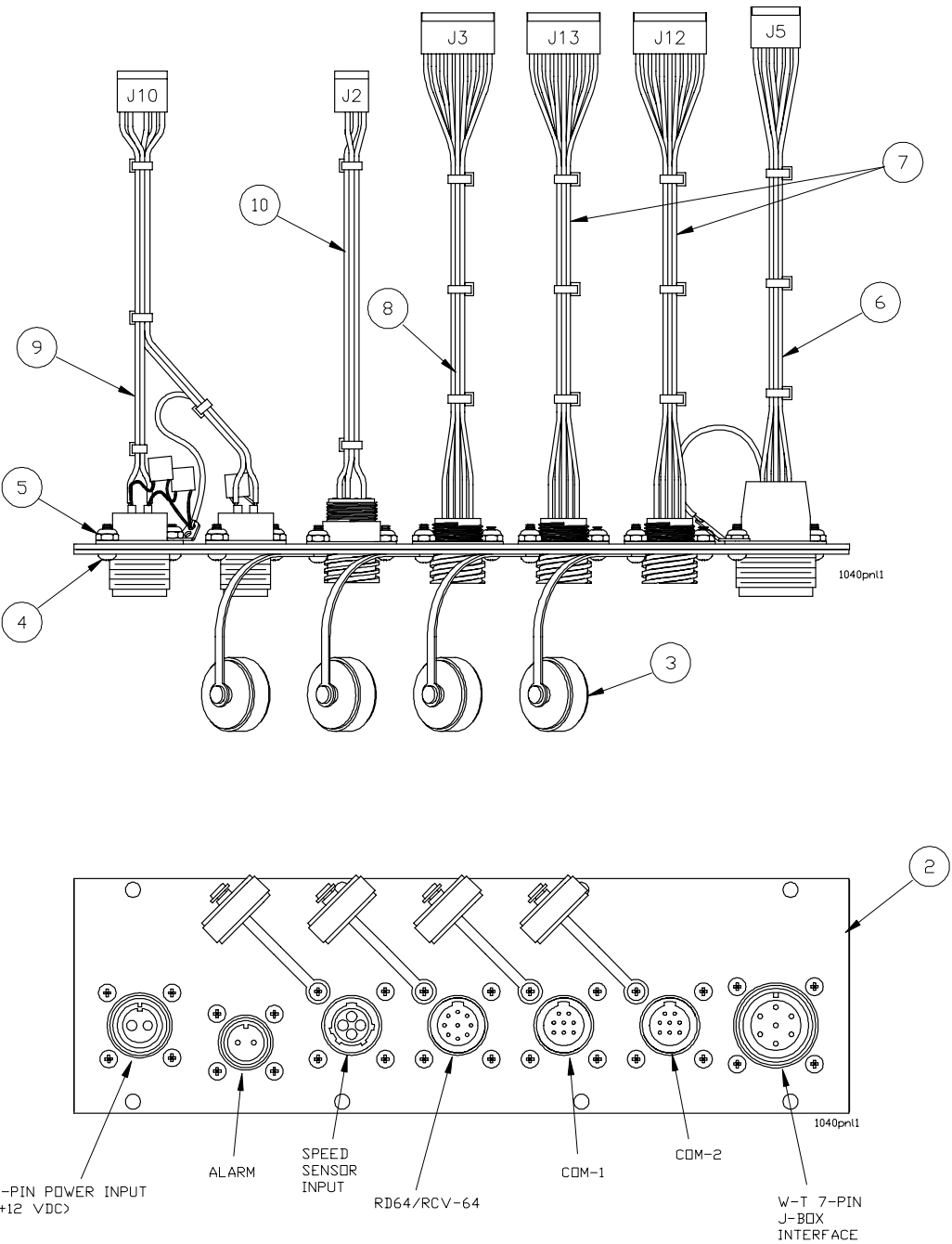
(Ref: "Pin-Out" Pages in this Manual)



| ITEM NO. | DESCRIPTION                                   | W-T P/N    | QTY     |
|----------|---|------------|---------|
| 1        | Bottom Plate ( <i>std.</i> ), stainless       | 55091-0020 | 1       |
| 2        | Bottom Plate ( <i>w/ options</i> ), stainless | 55091-0046 | 1       |
| 3        | Cover Cap w/ strap                            | 48684-0010 | 4(max)  |
| 4        | Screw, #4-40 x .38"L                          | 14473-0124 | 28(max) |
| 5        | Lock Nut, #4-40                               | 14464-0026 | 28(max) |
| 6        | Weigh Bar Cable Assy (7-pin)                  | 19572-0057 | 1       |
| 7        | Cable Assy, RS232 (Com-1)                     | 51030-0015 | 1       |
| 8        | Cable Assy, RS232 (Com-2) ( <i>optional</i> ) | 51030-0015 | 1       |
| 9        | Cable Assy, RD64 (remote display)             | 55098-0015 | 1       |
| 10       | Cable Assy, 2-pin Pwr/Alarm                   | 55331-0012 | 1       |
|          | Cable Assy, Speed Sensor ( <i>optional</i> )  | 55335-0018 | 1       |

Complete Panel Assembly as shown: p/n 55373-0169

(Ref: "Pin-Out" Pages in this Manual)



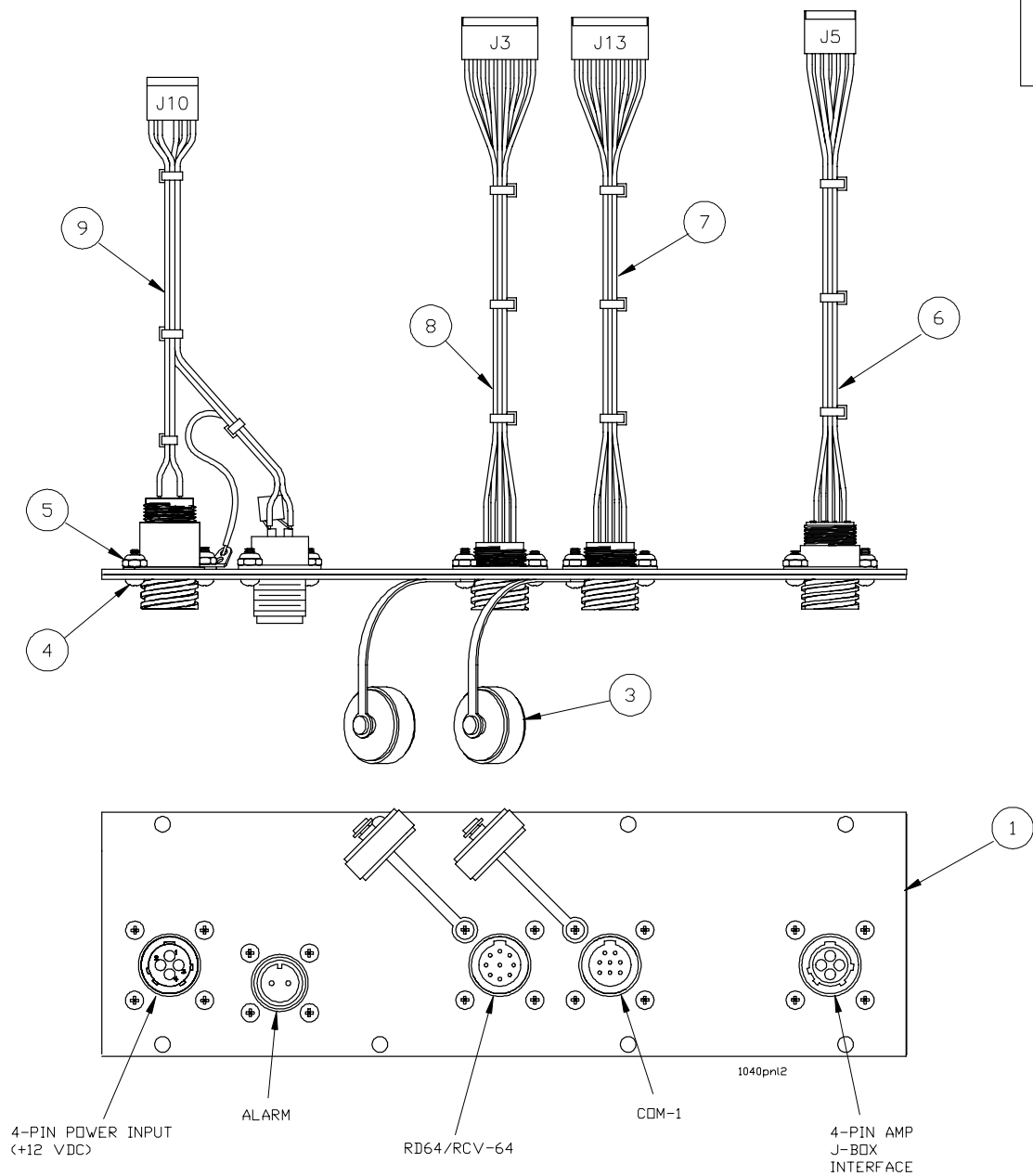
MODEL 1040/1040XL INDICATOR

LOWER PANEL OPTIONS

(FOR SYSTEMS USING J-BOX)

Complete Panel Assembly as shown: p/n 55373-0151

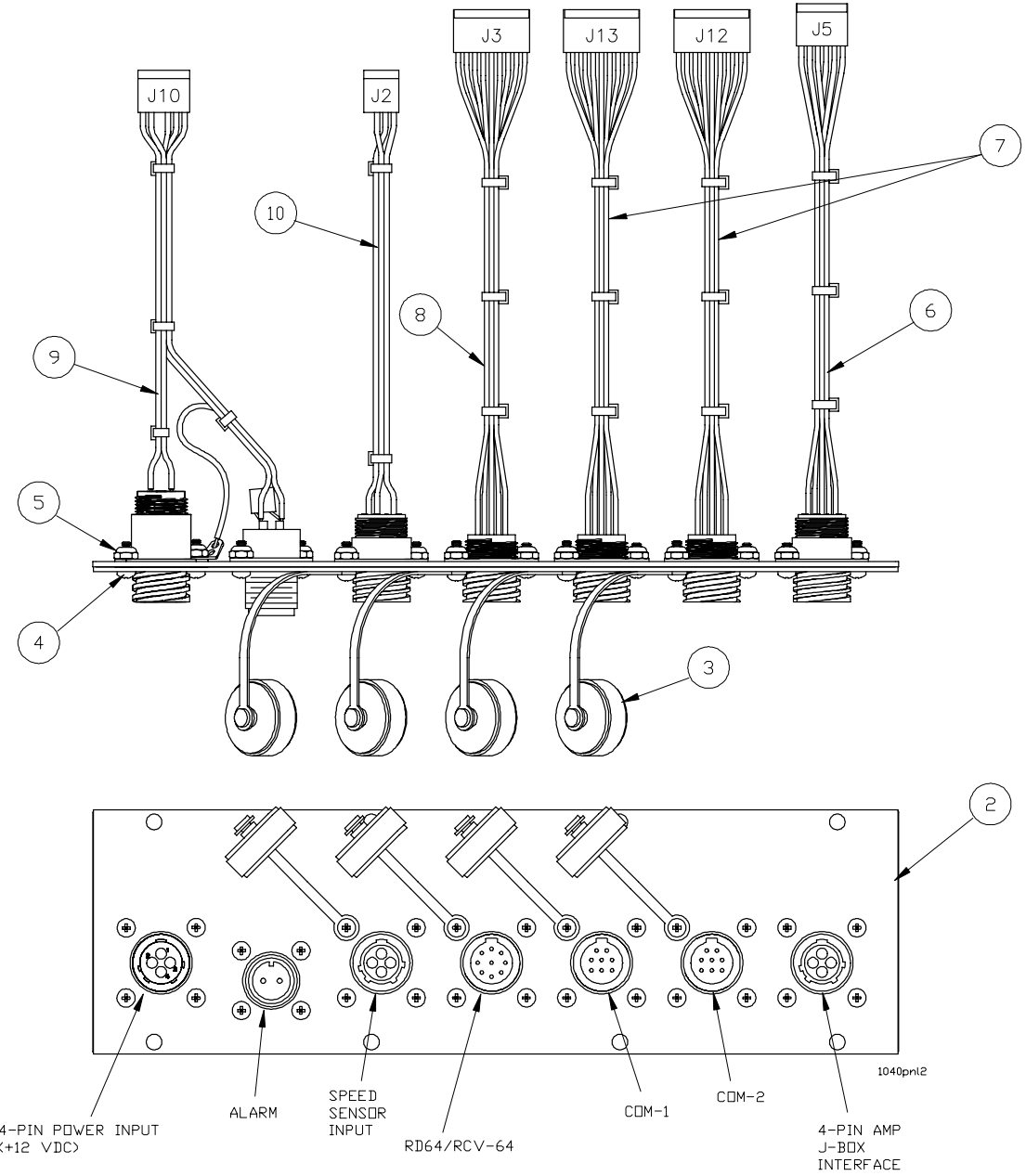
(Ref: "Pin-Out" Pages in this Manual)



| ITEM NO. | DESCRIPTION                             | W-T P/N    | QTY     |
|----------|---|------------|---------|
| 1        | Bottom Plate (std.), stainless          | 55091-0038 | 1       |
| 2        | Bottom Plate (w/ options), stainless    | 55091-0053 | 1       |
| 3        | Cover Cap w/ strap                      | 48684-0010 | 4(max)  |
| 4        | Screw, #4-40 x .38"L                    | 14473-0124 | 28(max) |
| 5        | Lock Nut, #4-40                         | 14464-0026 | 28(max) |
| 6        | Weigh Bar Conn. Cable Assy (4-pin Amp.) | 50044-0011 | 1       |
| 7        | Cable Assy, RS232 (Com-1)               | 51030-0015 | 1       |
|          | Cable Assy, RS232 (Com-2) (optional)    | 51030-0015 | 1       |
| 8        | Cable Assy, RD64 (remote display)       | 55098-0015 | 1       |
| 9        | Cable Assy, 4-pin Pwr/2- pin Alarm      | 55331-0012 | 1       |
| 10       | Cable Assy, Speed Sensor (optional)     | 55335-0018 | 1       |

Complete Panel Assembly as shown: p/n 55373-0177

(Ref: "Pin-Out" Pages in this Manual)





MODEL 1040/1040XL INDICATOR  
LOWER PANEL OPTIONS  
(FOR SYSTEMS W/O J-BOX)

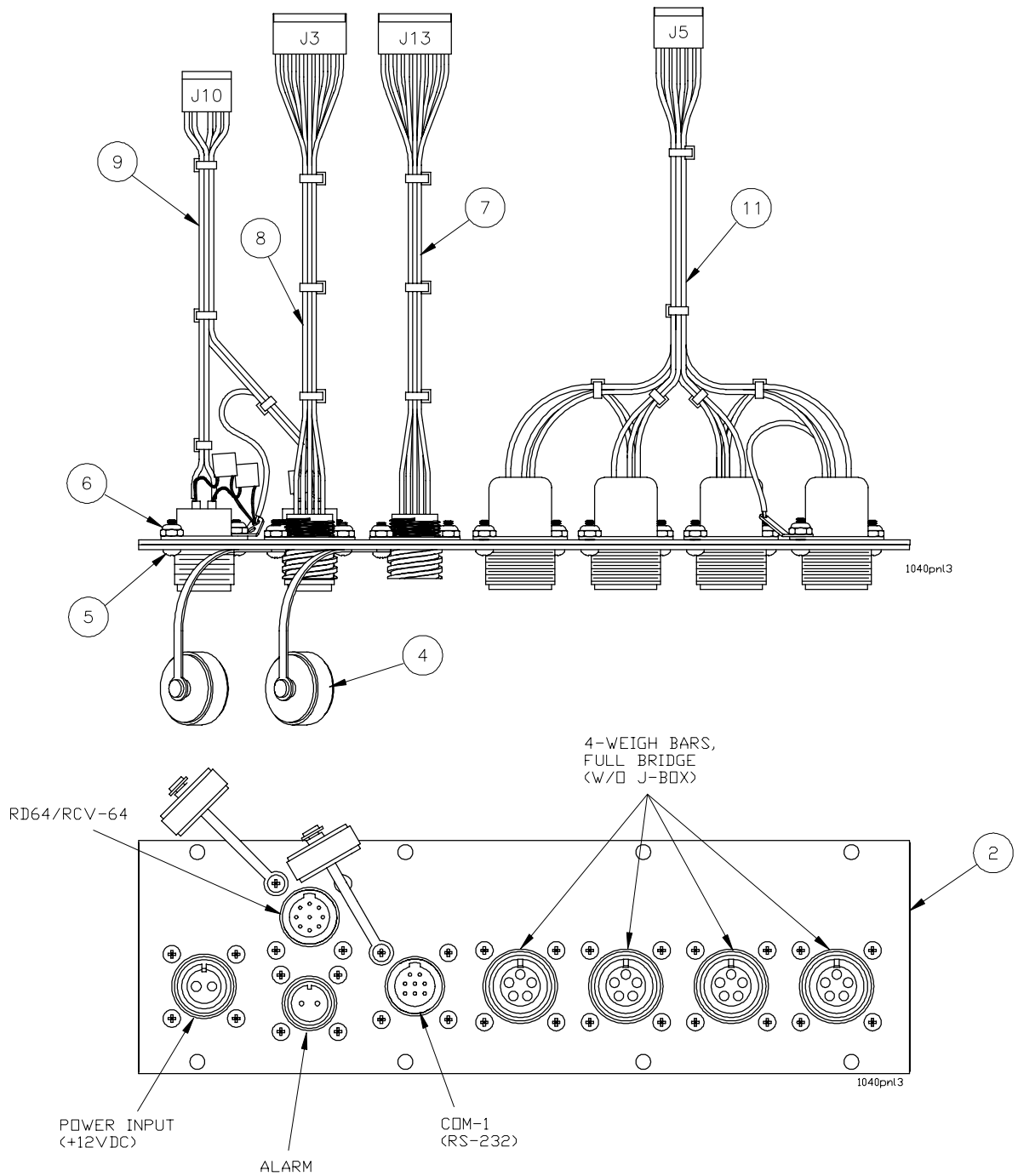
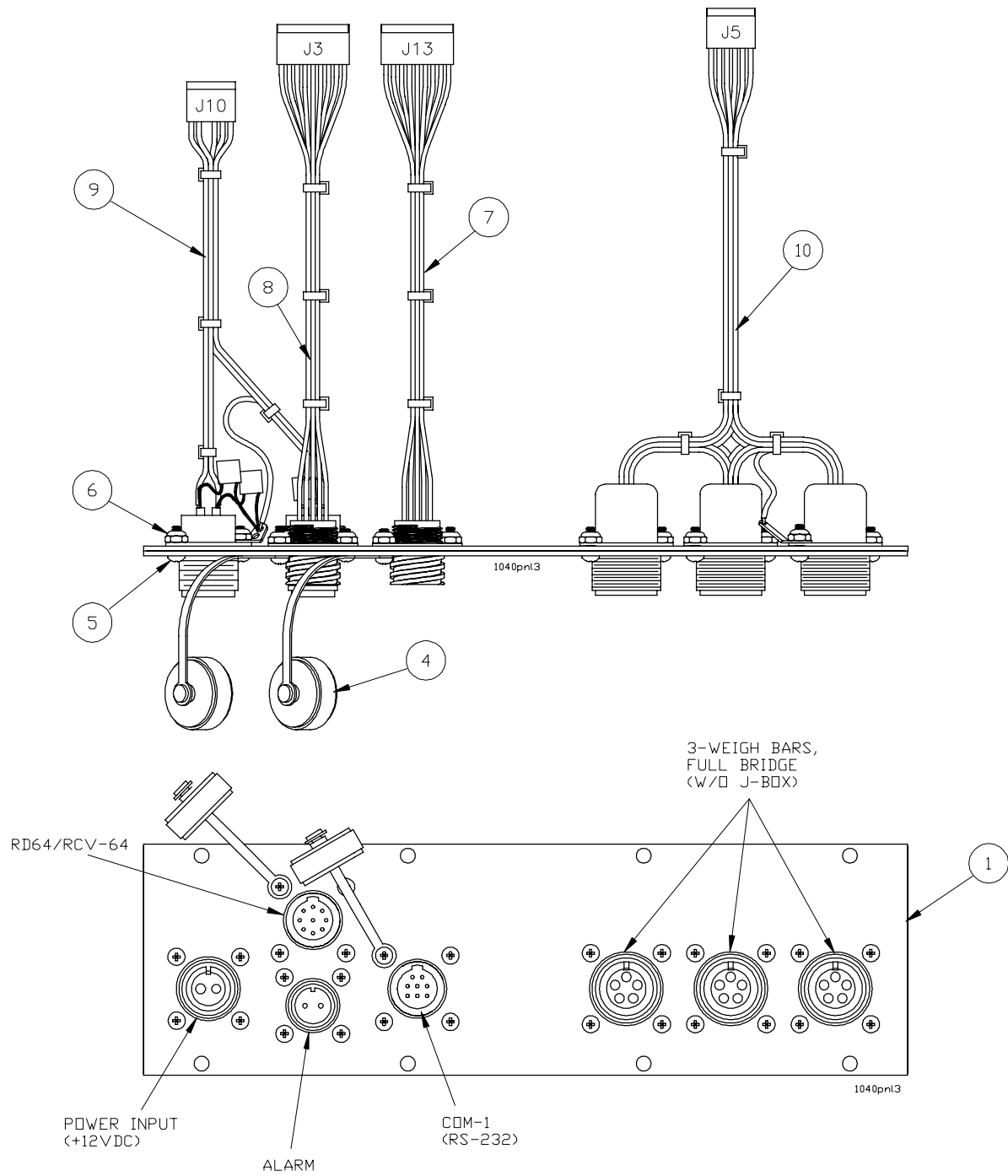
Complete Panel Assembly as shown: p/n 55374-0085

Complete Panel Assembly as shown: p/n 55374-0077

(Ref: "Pin-Out" Pages in this Manual)

(Ref: "Pin-Out" Pages in this Manual)

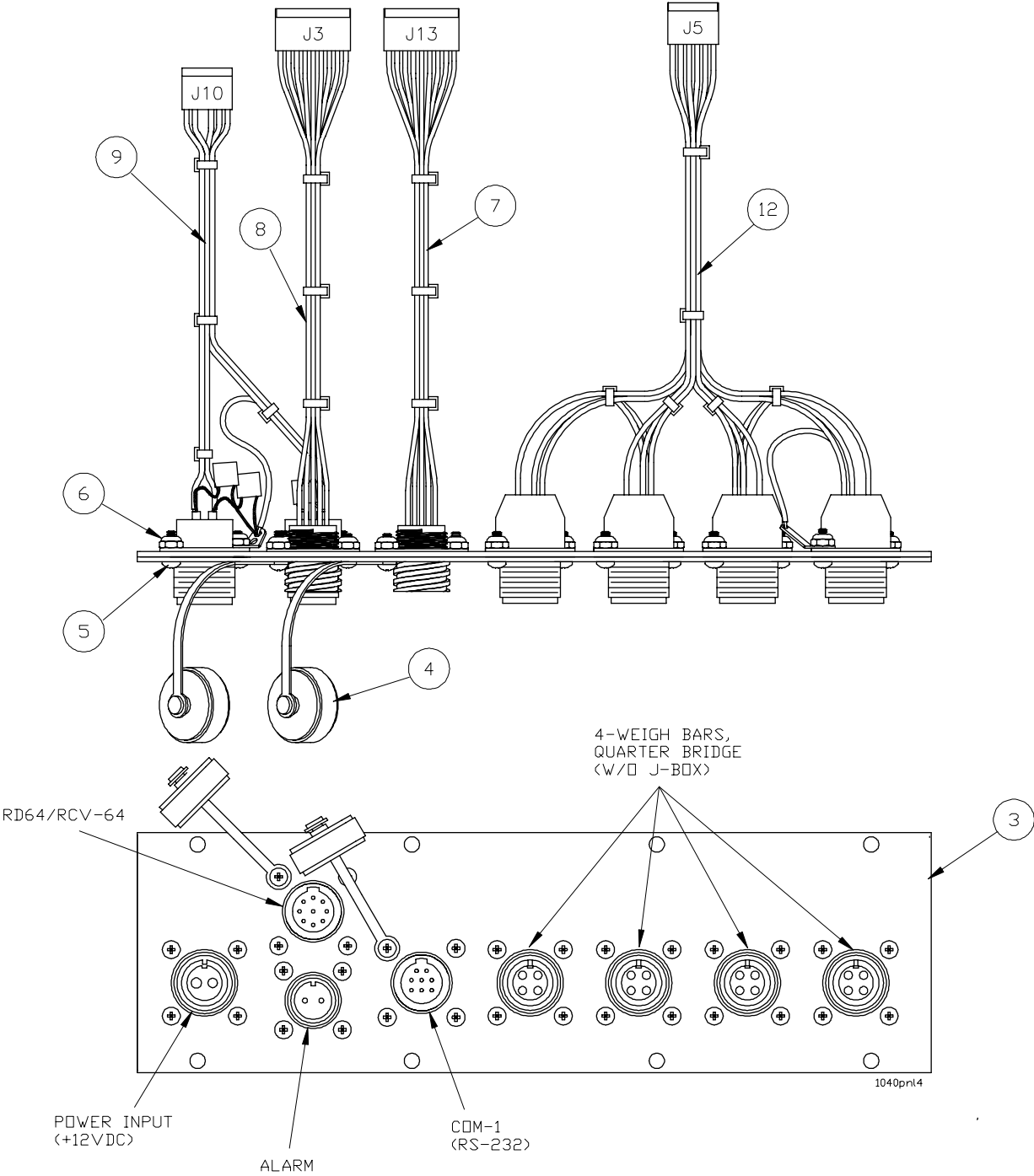
(Note: See "Parts List" next page)



MODEL 1040/1040XL INDICATOR  
LOWER PANEL OPTIONS  
(FOR SYSTEMS W/O J-BOX)

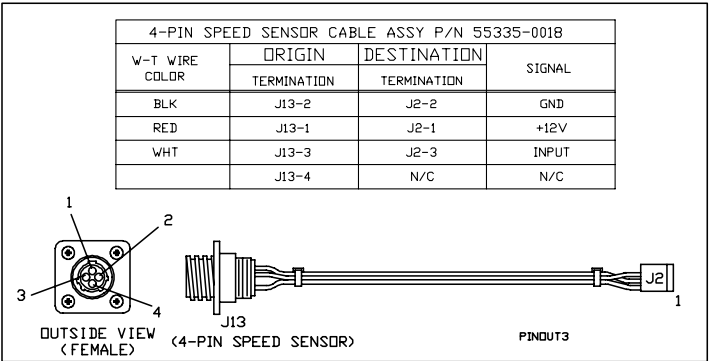
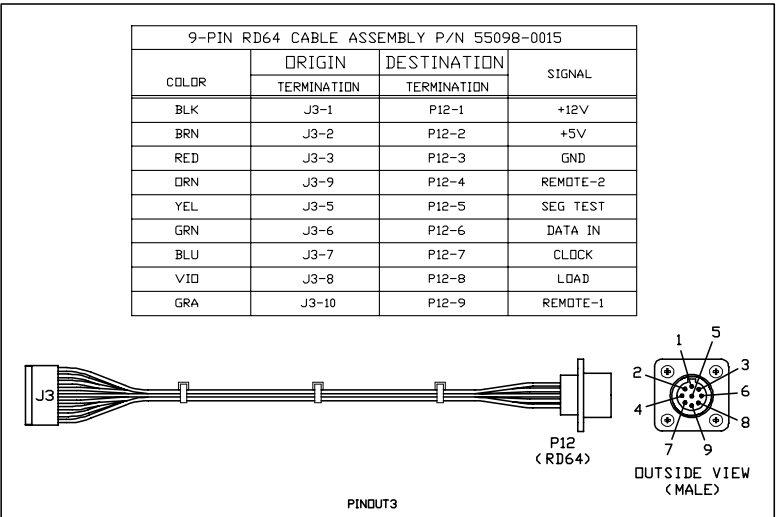
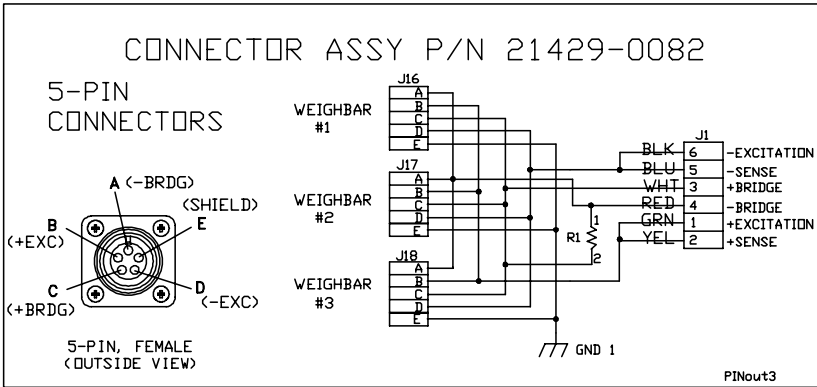
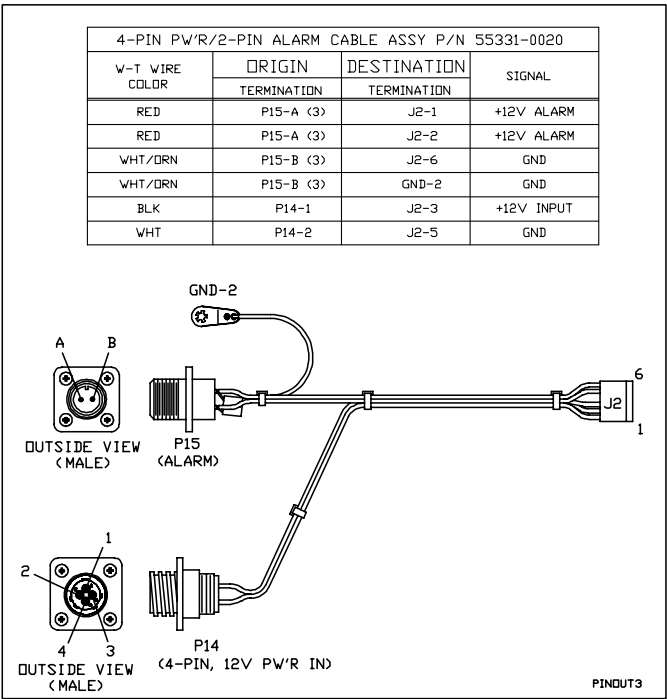
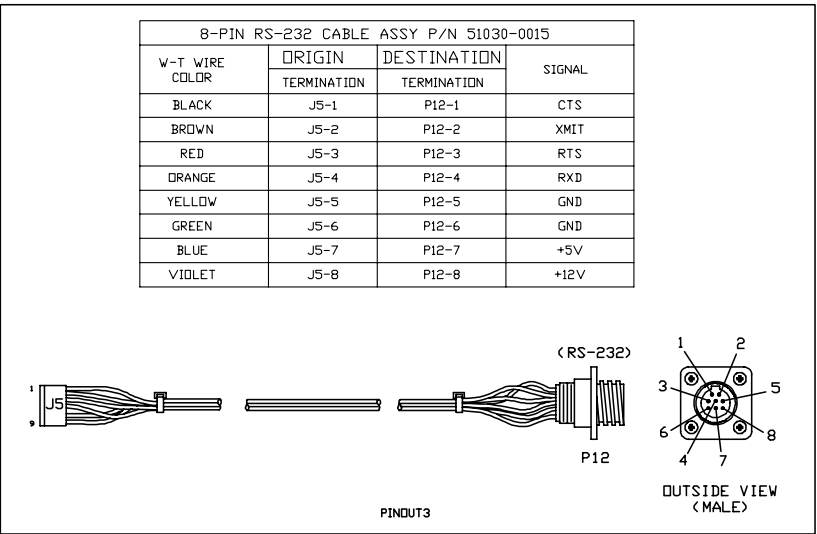
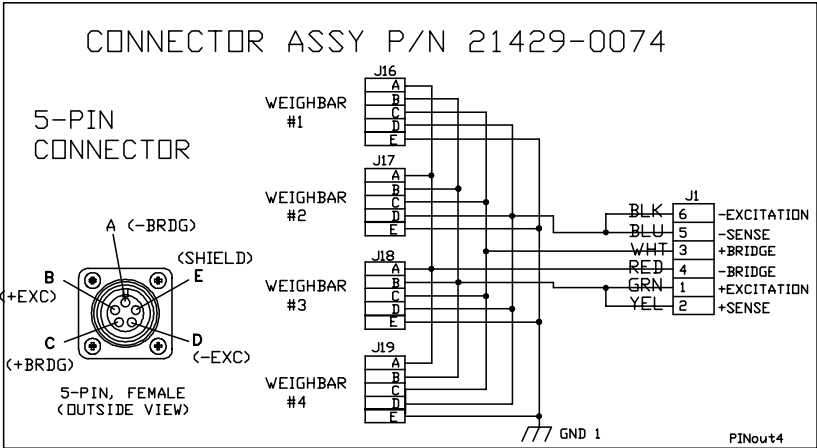
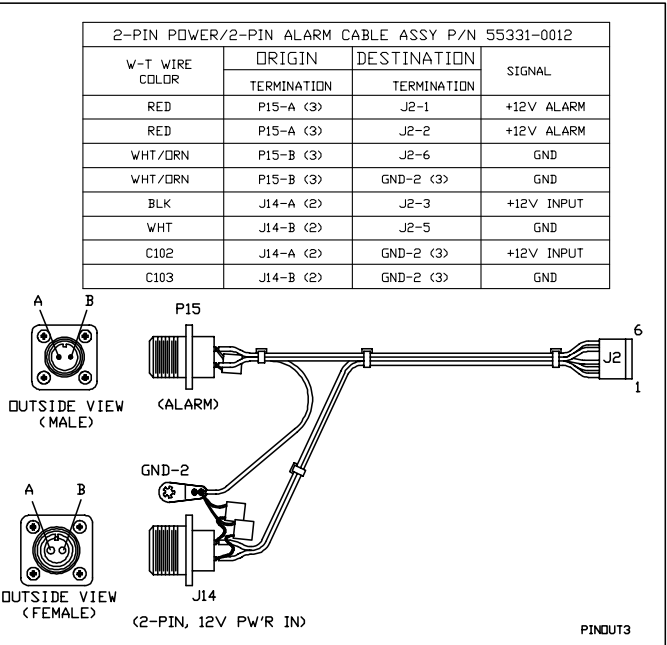
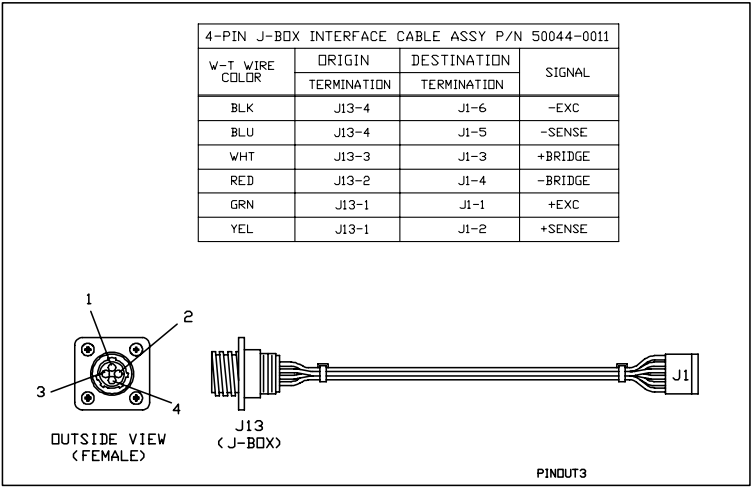
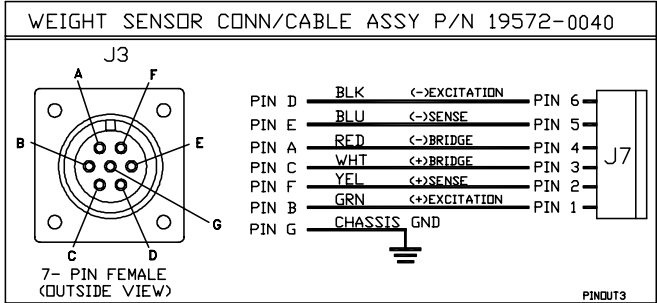
Complete Panel Assembly as shown: p/n 55374-0093

(Ref: "Pin-Out" Pages in this Manual)



| ITEM NO. | DESCRIPTION                                  | W-T P/N    | QTY     |
|----------|--|------------|---------|
| 1        | Bottom Plate (5-pin, 3-weighbars), stainless | 55092-0029 | 1       |
| 2        | Bottom Plate (5-pin, 4-weighbars), stainless | 55092-0011 | 1       |
| 3        | Bottom Plate (4-pin, 4-weighbars), stainless | 55092-0037 | 1       |
| 4        | Cover Cap w/ strap                           | 48684-0010 | 2       |
| 5        | Screw, #4-40 x .38"L                         | 14473-0124 | 32(max) |
| 6        | Lock Nut, #4-40                              | 14464-0026 | 32(max) |
| 7        | Cable Assy, RS232 (Com-1)                    | 51030-0015 | 1       |
| 8        | Cable Assy, RD64 (remote display)            | 55098-0015 | 1       |
| 9        | Cable Assy, 2-pin Pwr/2- pin Alarm           | 55331-0012 | 1       |
| 10       | Weigh Bar Conn. Assy (5-pin, 3-weigh bar)    | 21429-0082 | 1       |
| 11       | Weigh Bar Conn. Assy (5-pin, 4-weigh bar)    | 21429-0074 | 1       |
| 12       | Weigh Bar Conn. Assy (4-pin, 4-weigh bar)    | 21555-0054 | 1       |

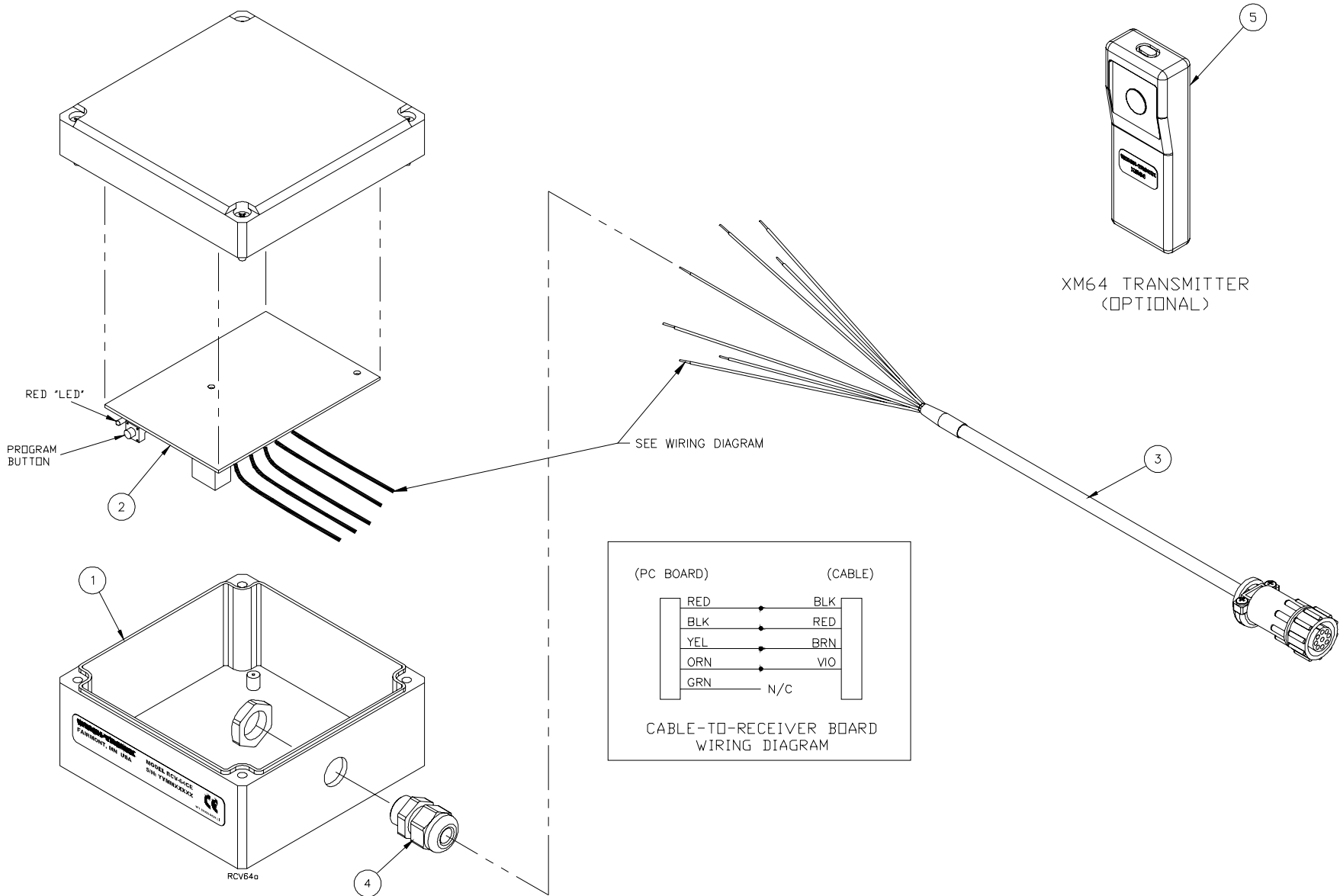
MODEL 1040/1040XL INDICATOR  
“LOWER PANEL” CONNECTOR/CABLE ASSY  
-PIN-OUTS-



MODEL 1040/1040XL INDICATOR  
RCV-64 RECEIVER ASSY, (optional)  
COMPLETE RCV-64 ASSY: P/N 55920-0019 (Std.), 55920-0027 (Euro-CE)  
and XM64 TRANSMITTER (optional)

Parts List

| ITEM NO. | DESCRIPTION  | W-T P/N                  | QTY    |
|----------|--|--------------------------|--------|
| 1        | RCV-64 Enclosure   | 55921-0018               | 1      |
| 2        | Receiver Board, 315MHZ (std)<br>Receiver Board 433MHZ (Euro-CE)      | 27290-5043<br>27290-5050 | 1<br>1 |
| 3        | Cable Assy, 15' Length   | 55101-0085               | 1      |
| 4        | Strain Relief (incl. hex nut)  | 15257-0032               | 1      |
| 5        | XM64 Transmitter, 315MHz (std)<br>XM64 Transmitter, 433MHz (Euro-CE) | 55096-0017<br>55096-0025 | 1<br>1 |



The following are instructions for the transmitter receiver kits used in the Model 1040/RD64 and the RCV-64 products. Please read through the following when debugging the XM-64 operation.

Checking Memory:

1. Press the program button on the receiver and hold for about two seconds until the Red LED illuminates, then release.
2. Count the number of times the Red LED blinks, this is the total number of transmitters programmed into the receiver.

Erasing Memory

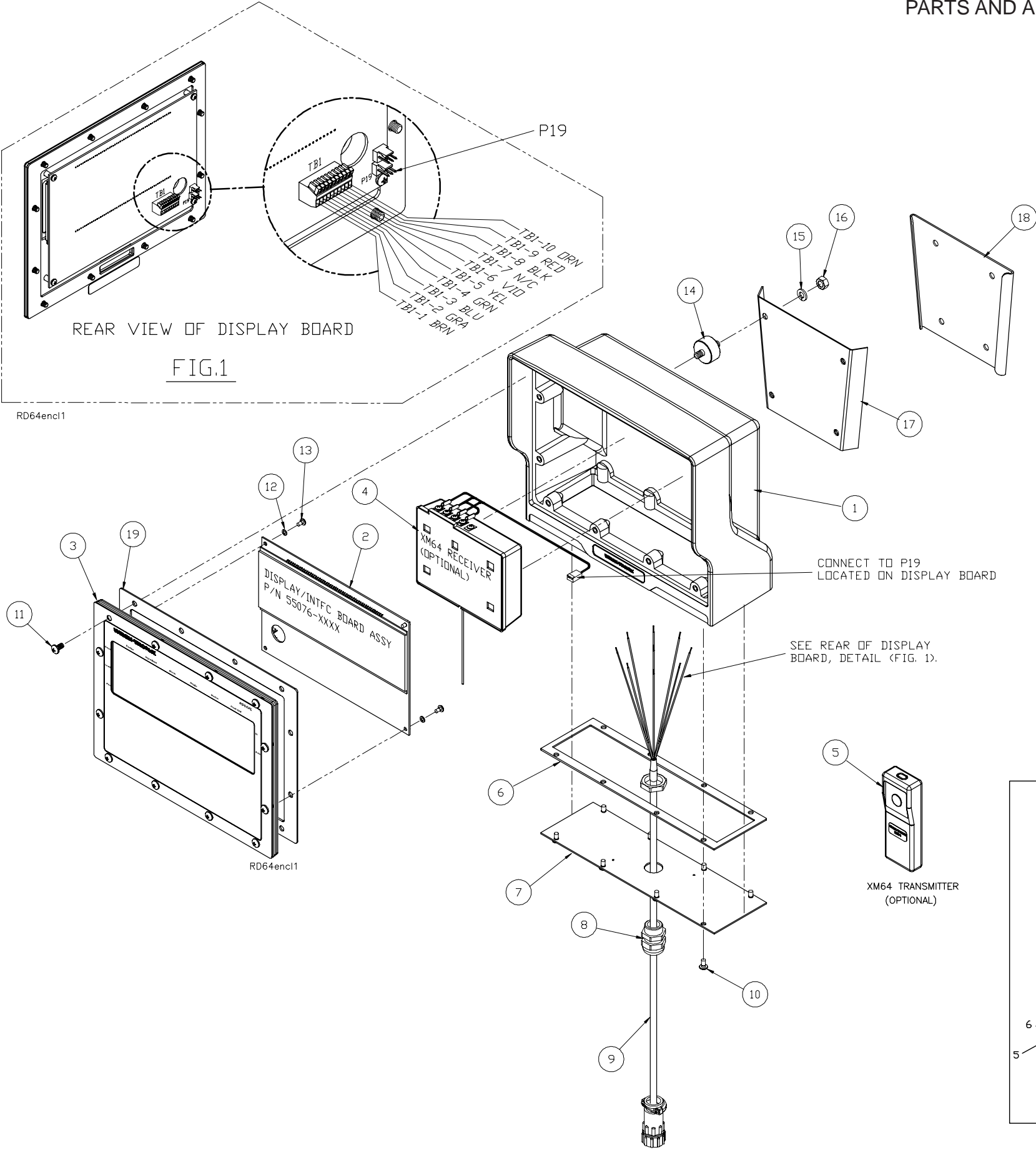
1. Press the program button on the receiver and continue to hold it through the count of the transmitters.
2. Continue to Hold the button after the count until the indicator blinks one more time (about five seconds after the count)
3. All transmitters programmed into the memory will be erased.

Programming Memory

1. Press and release program button on the receiver.
2. Program indicator will light if there is room in memory for another transmitter. (32 transmitters max)
3. Press the button on the transmitter (XM64), indicator on receiver will flicker as signal is received.
4. Repeat the above three steps for each additional transmitter.

**NOTE:** The receiver can memorize each transmitter more than once. To prevent duplicate entries, program each transmitter into receiver only once.

RD64/RD64XL REMOTE DISPLAY  
PARTS AND ASSEMBLY



| ITEM NO. | DESCRIPTION                                       | W-T P/N    | QTY |
|----------|---|------------|-----|
| 1        | Enclosure   | 47017-0010 | 1   |
| 2        | Display/Interface XL Board Assy (large display)   | 55076-0037 | 1   |
|          | Display/Interface Board Assy (std. display)       | 55076-0045 | 1   |
| 3        | Keypad/Backer Plate Assy,XL (includes gasket)     | 55087-0034 | 1   |
|          | Keypad/Backer Plate Assy (includes gasket)        | 55087-0059 | 1   |
| 4        | XM64 Receiver, Std. version-315MHz (optional)     | 55095-0018 | 1   |
|          | XM64 Receiver, Euro version-433MHz (optional)     | 55095-0026 | 1   |
| 5        | XM64 Transmitter, Std. version-315MHz (optional)  | 55096-0017 | 1   |
|          | XM64 Transmitter, Euro version-433MHz (optional)  | 55096-0025 | 1   |
| 6        | Replacement Gasket, sticky one side(for item 7)   | 47695-0019 | 1   |
| 7        | Bottom Panel                                      | 48413-0018 | 1   |
| 8        | Strain Relief                                     | 15257-0040 | 1   |
| 9        | Cable Assy, Indicator to RD64 (15 ft.)            | 55101-0085 | 1   |
|          | Cable Assy, Indicator to RD64 (30 ft.)            | 55101-0093 | 1   |
|          | Cable Assy, Indicator to RD64 (50 ft.)            | 55101-0101 | 1   |
|          | Cable Assy, Indicator to RD64 (75 ft.)            | 55101-0119 | 1   |
|          | Cable Assy, Indicator to RD64 (100 ft.)           | 55101-0127 | 1   |
|          | Cable Assy, Indicator to RD64 (150 ft.)           | 55101-0135 | 1   |
|          | Cable Assy, Indicator to RD64 (200 ft.)           | 55101-0143 | 1   |
| 10       | Screw, #8-32 x .31"L                              | 14473-0348 | 8   |
| 11       | Screw, #10-32 x .38"L                             | 14503-8030 | 12  |
| 12       | Lock Washer, #6                                   | 14474-0032 | 4   |
| 13       | Screw, #6-32 x .25"L                              | 14473-0223 | 4   |
| 14       | Rubber Vibration Mount                            | 17807-0108 | 4   |
| 15       | Lock Washer, .25"                                 | 14474-0198 | 4   |
| 16       | Hex Nut, .25-20                                   | 14471-0209 | 4   |
| 17       | Mtg. Bracket (attaches to Inclosure)              | 11899-0043 | 1   |
| 18       | Mtg. Bracket (attaches to wall, etc.)             | 12339-0015 | 1   |
| 19       | Replacement Gasket, sticky one side, (for item 3) | 47694-0010 | 1   |

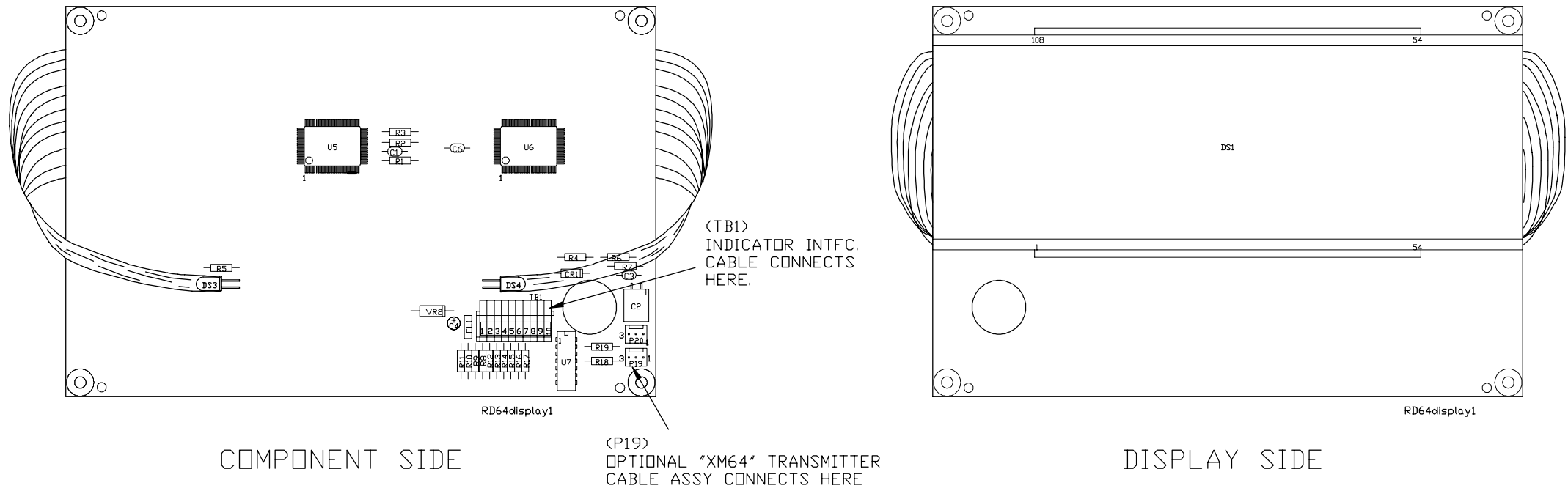
| RD64 REMOTE DISPLAY CABLE ASSY P/N 55101-XXXX |                    |                         |          |
|---|--------------------|-------------------------|----------|
| W-T WIRE COLOR                                | ORIGIN TERMINATION | DESTINATION TERMINATION | SIGNAL   |
| BRN   | J11-2              | <TINNED END>            | +5V      |
| RED   | J11-3              | <TINNED END>            | GND      |
| DRN   | J11-4              | <TINNED END>            | REMOTE 2 |
| YEL   | J11-5              | <TINNED END>            | SEG TEST |
| BLU   | J11-7              | <TINNED END>            | CLOCK    |
| VID   | J11-9              | <TINNED END>            | REMOTE 1 |
| GRA   | J11-8              | <TINNED END>            | LOAD     |
| BLK   | J11-1              | <TINNED END>            | +12V     |
| GRN   | J11-6              | <TINNED END>            | DATA IN  |

OUTSIDE VIEW (FEMALE)

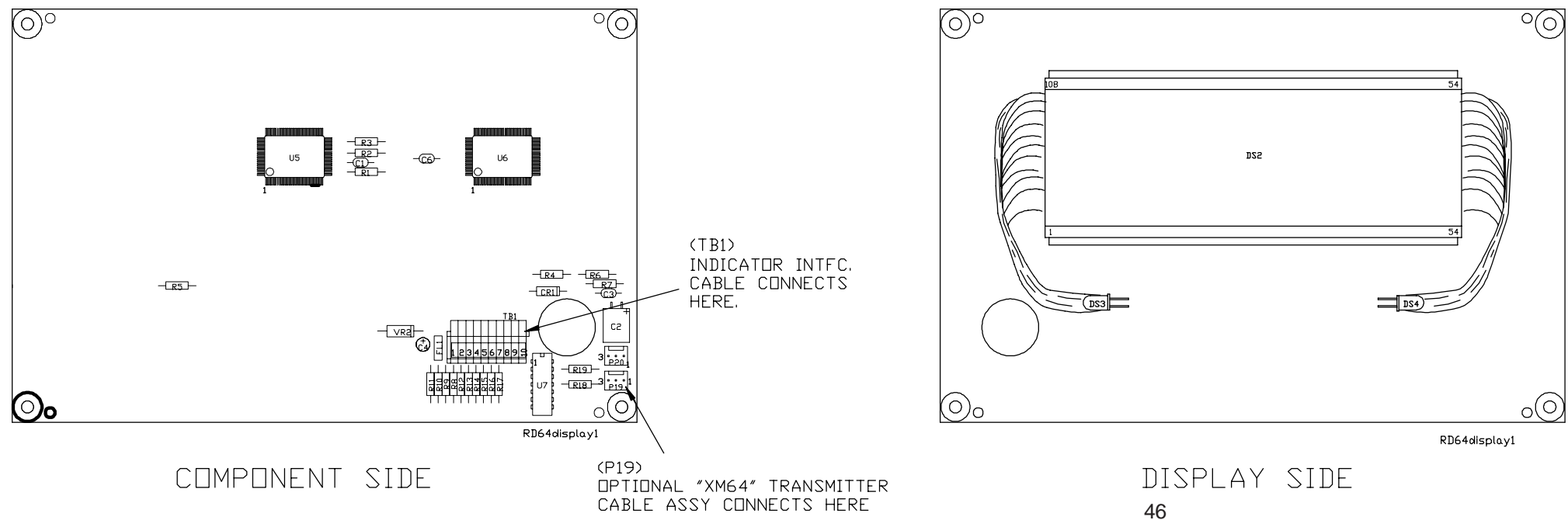
P19OUT3

RD64/RD64XL REMOTE DISPLAY  
DISPLAY/INTERFACE BOARD ASSY  
55076 -0037 (XL, large display), -0045 (std. display)

RD64XL Display Bd.  
(55076-0037)



RD64 Display Bd.  
(55076-0045)





# RD64M REMOTE DISPLAY

## PARTS AND ASSEMBLY

NOTE:

APPLY RTV TO INSIDE OF CABLE STRAIN RELIEF (ITEM 9), SCREWS AND WASHERS ON BACK OF UNIT (ITEMS 2 & 3), AND THE FOUR SCREW HOLES ON THE COVER. APPLY A SMALL BEAD OF RTV AROUND THE ENTIRE LID BEFORE CLOSING AND TIGHTENING SCREWS. WIPE OFF EXCESS RTV THAT EXITS THE ENCLOSURE.

SEE NOTE

SEE NOTE

CABLE CONNECTION TO  
REAR OF DISPLAY BOARD (TB1)

SEE NOTE

- SEE NOTE

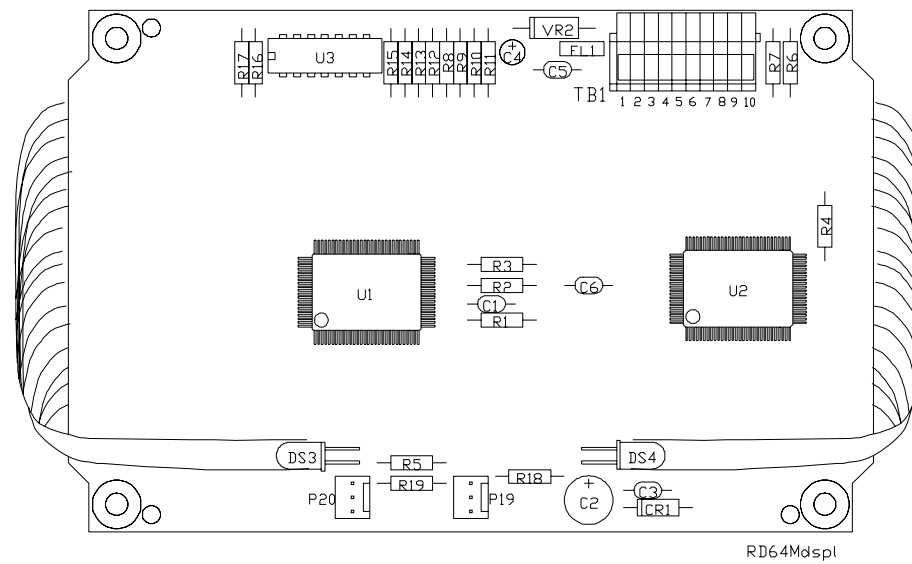
| ITEM NO. | DESCRIPTION   | W-T P/N    | QTY |
|----------|---|------------|-----|
| 1        | Screw   | 46572-0100 | 4   |
| 2        | Screw, #8-32 x .38"L                                  | 14473-0249 | 8   |
| 3        | Lock Washer, #6                                       | 14474-0032 | 8   |
| 4        | Standoff, 6-32 x1 .50"L (F/F)                         | 14510-0848 | 4   |
| 5        | Standoff, 6-32 x .50"L (M/F)                          | 15437-0449 | 4   |
| 6        | Cable Tie   | 13762-0019 | 2   |
| 7        | Mtg. Bracket (attaches to Inclosure)                  | 55325-0010 | 1   |
| 8        | Enclosure (includes front cover)                      | 55329-0016 | 1   |
| 9        | Strain Relief   | 15257-0032 | 1   |
| 10       | Cable Assy, Indicator to RD64 (15 ft.)                | 55101-0085 | 1   |
|          | Cable Assy, Indicator to RD64 (30 ft.)                | 55101-0093 | 1   |
|          | Cable Assy, Indicator to RD64 (50 ft.)                | 55101-0101 | 1   |
|          | Cable Assy, Indicator to RD64 (75 ft.)                | 55101-0119 | 1   |
|          | Cable Assy, Indicator to RD64 (100 ft.)               | 55101-0127 | 1   |
|          | Cable Assy, Indicator to RD64 (150 ft.)               | 55101-0135 | 1   |
|          | Cable Assy, Indicator to RD64 (200 ft.)               | 55101-0143 | 1   |
| 11       | RD64M Remote DisplayPC Board Assy                     | 55283-0010 | 1   |
| 12       | Front Panel Overlay                                   | 55104-0017 | 1   |
| 13       | Mirror Mount Bracket (optional)                       | 52652-0010 | 1   |
| 14       | screw, (optional)                                     | 14473-0496 | 2   |
| 15       | Locknut, (optional)                                   | 14464-0059 | 2   |
| 16       | Mirror Mounting Kit (optional, incl. items 13,14,15)) | 53813-0014 | 1   |

| RD64 REMOTE DISPLAY CABLE ASSY P/N 55101-XXXX |             |              |          |
|---|-------------|--------------|----------|
| W-T WIRE<br>COLOR                             | ORIGIN      | DESTINATION  | SIGNAL   |
|   | TERMINATION | TERMINATION  |          |
| BRN   | J11-2       | (TINNED END) | +5V      |
| RED   | J11-3       | (TINNED END) | GND      |
| ORN   | J11-4       | (TINNED END) | REMOTE 2 |
| YEL   | J11-5       | (TINNED END) | SEG TEST |
| BLU   | J11-7       | (TINNED END) | CLOCK    |
| VIO   | J11-9       | (TINNED END) | REMOTE 1 |
| GRA   | J11-8       | (TINNED END) | LOAD     |
| BLK   | J11-1       | (TINNED END) | +12V     |
| GRN   | J11-6       | (TINNED END) | DATA IN  |

OUTSIDE VIEW  
(FEMALE)

PINOUT3

**RD64M REMOTE DISPLAY**  
DISPLAY BOARD ASSY  
55283 -0010



COMPONENT SIDE

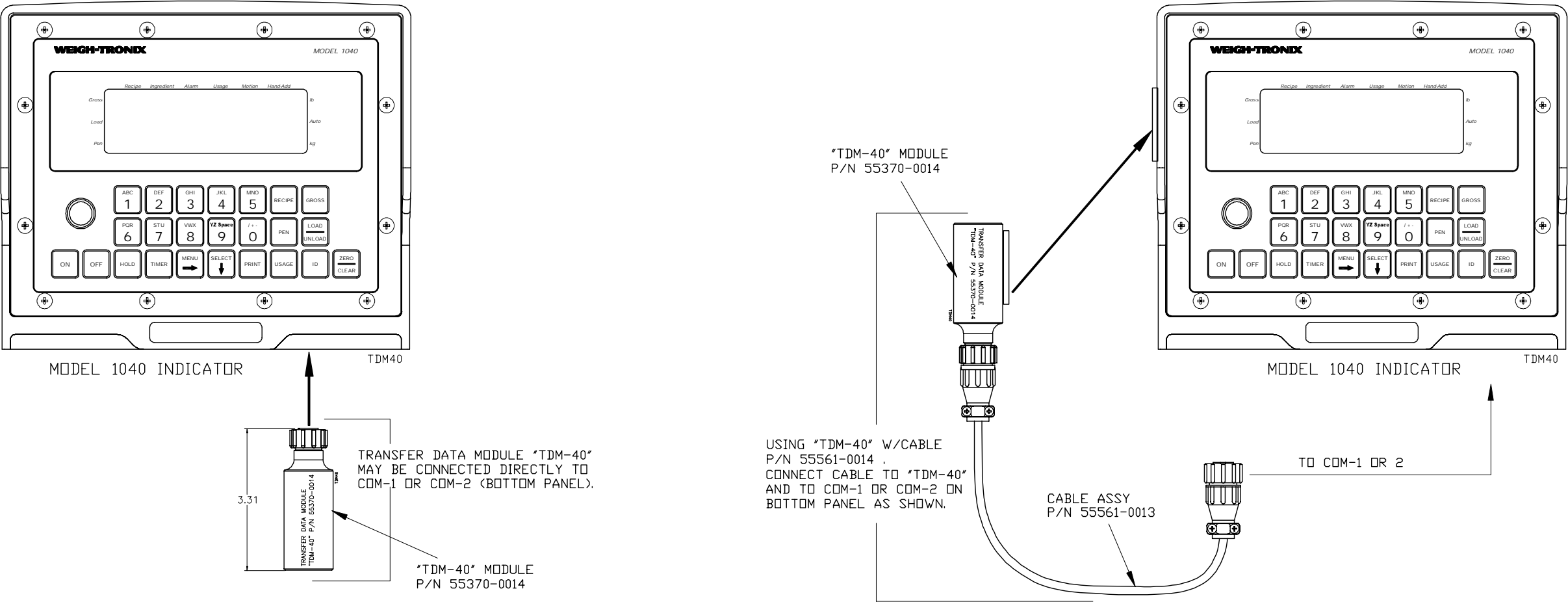


DISPLAY SIDE

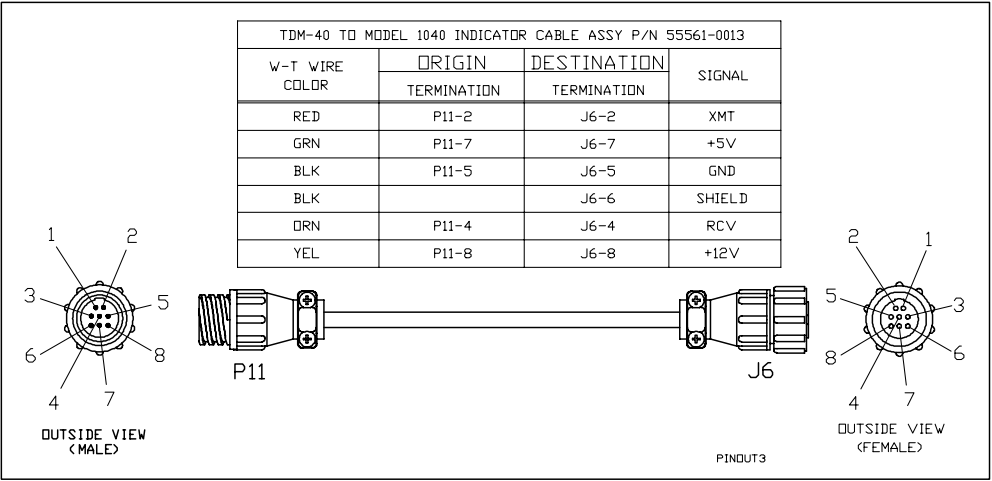
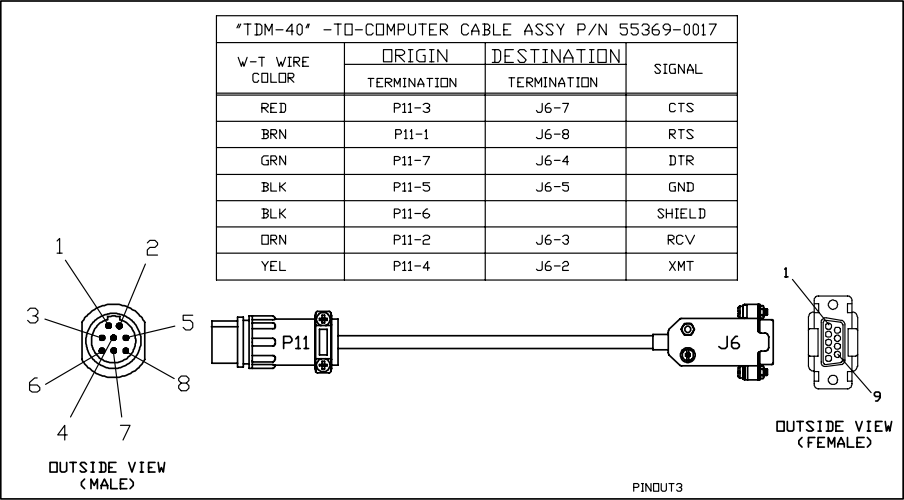
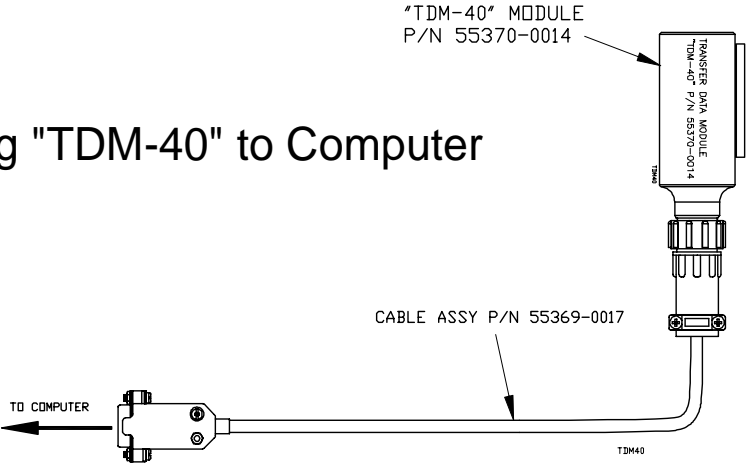


TDM-40 TRANSFER DATA MODULE (OPTIONAL)  
P/N 55370-0014 AND CABLE PIN-OUTS

Down Loading Indicator to "TDM-40"



Down Loading "TDM-40" to Computer



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