

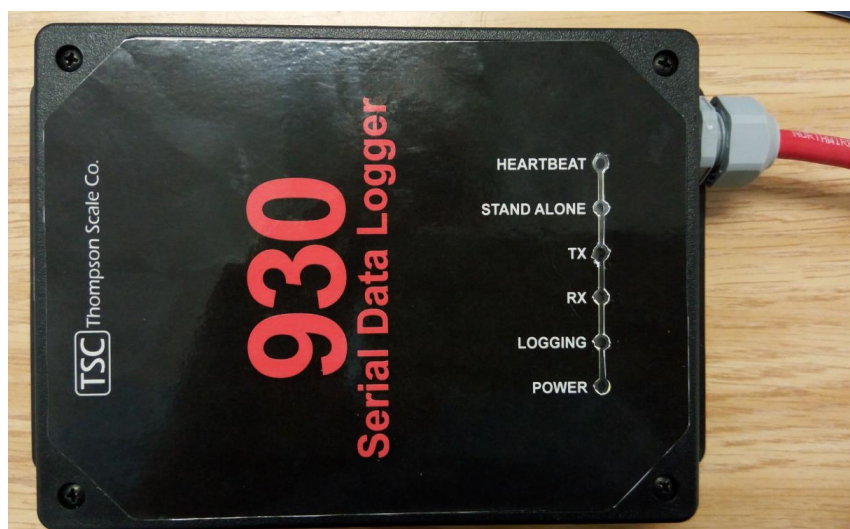
Thompson Scale Company

930 Serial Data Logger

User's Manual

Version 1.7

December 2016



Thompson Scale Company

WEIGHING SYSTEMS & PACKAGING MACHINERY CONTROLS

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Overview

The TSC 930 Serial Data logger (hereafter referred to as 930 SDL) is an add-on to the Thompson Scale Company's Model 5511/6611 Universal Scale Controller and the Model 4693 Universal Scale Controller as well as to a Custom Controller to capture log data to a removable TSC flash drive for analysis. The 930 SDL also has enhanced capability to save the 5511/6611 USC configuration and its recipes which can be later restored back to the original 5511/6611 USC or restored to multiple 5511/6611 USCs that have a 930 SDL attached.

A TSC flash drive is a type of portable USB memory device that can be used to store and transfer computer files. Files saved on the TSC flash drive can be copied, deleted, and moved to and from a modern computer. There are various flash drives available on the market today. Thompson Scale Company recommends the TSC flash drive to store and transfer files from the 930 SDL to assure the highest reliability and performance when saving vital information.

WARNING: THIS EQUIPMENT TO BE INSTALLED & SERVICED BY TRAINED PERSONNEL ONLY

Instructions within this manual are to be strictly followed to insure both personnel safety and proper operation of the equipment. Please carefully read these instructions regarding mechanical and electrical installation, and controller configuration before attempting to install or operate this equipment.

1.0 930 SDL Panel Indicators

The 930 SDL panel indicators are a visual means of determining its current operation. See Figure 1 for panel indicator details.

Figure 1.

930 SDL Panel Indicators

Power..... The Power indicator (Red) will be lit when power is applied.

Logging..... The Logging indicator (Blue) when steadily lit indicates the 930 SDL is ready to capture log data. The TSC flash drive must be installed for the logging indicator to be lit. The Logging indicator will toggle on and off when recording log data.

RX and TX..... The RX and TX indicators (Green/Red) will flash from Green to red when data is being transferred between the 930 SDL and a controller. If the RX or TX indicator stays steadily lit (Red) without momentary flashes is a sign of an improper serial connection or a communication fault.

Stand Alone..... The Stand Alone indicator (Yellow) indicates jumper JP5 is removed for Stand Alone mode of operation for 4693 USC and custom controller data logging. If the Stand Alone indicator is un-lit the 930 SDL is set to 5511/6611 USC mode of operation.

Heartbeat..... The Heartbeat indicator (Green) will toggle on and off after power is applied. If the Heartbeat indicator stops flashing is an indication that an internal fault has occurred and the 930 SDL must be serviced.

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2.0 5511/6611 Universal Scale Controller

When connecting the 930 SDL to a 5511/6611 USC, the checkweigher/filler log data can be save as well as saving the 5511/6611 USC configuration and recipes. The following sections detail the 5511/6611 USC setup and operation with the 930 SDL.

2.1 5511/6611 USC Mode of Operation

To use the 930 SDL with the 5511/6611 USC requires mode of operation jumper JP5 on the 930 SDL to be installed. With the jumper JP5 removed, the 930 SDL is placed in the Stand Alone mode of operation for use with either the 4693 USC or a custom controller. See Appendix E. 930 SDL PC Board Layout for jumper JP5 location.

2.2 5511/6611 USC Serial Interface

The 5511/6611 USC Serial Interface baud rate is selectable and can be set to operate at baud rates of 1200, 2400, 4800, 9600, 19200, 38400, 57600 or 115200 with no parity, 8 data bits, and 1 stop bit. The 930 SDL serial interface jumper JP1, JP2, and JP3 factory setting is set to run at 9600 baud. To change the serial interface baud rate setting, see Appendix A. 930 SDL & 5511/6611 USC Baud Rate Settings. The factory setting on the 5511/6611 USC factory setting is set to 9600 baud and can be changed by way of menus on the 5511/6611 USC. See Section 2.7 5511/6611 USC Data Logger Ticket Mode & Baud Rate Setting.

2.3 5511/6611 USC Serial Interface Connections

The 5511/6611 USC serial interface connection to the 930 SDL consists of a 2-wire RS-232 serial interface and 4-wire RS-422 differential serial interface as well as supplying +5VDC power to the 930 SDL. See Figure 2 below for the wire connections between the 5511/6611 USC and the 930 SDL. For specific Port 1 interface connector location, see Appendix E. 930 SDL PC Board Layout and Appendix F. 5511/6611 USC PC Board Layout. Note: Connect 2-wire RS-232 or connect 4-wire RS-422 serial interface connections. Connecting both serial interfaces could cause 930 SDL erratic operation.

Figure 2.

5511/6611 USC	930 SDL
Port 1 Connections	Port 1 Connections
PIN 1 (RX-422A).....	PIN 1 (TX-422A)
PIN 2 (RX-422B)	PIN 2 (TX-422B)
PIN 3 (TX-422A)	PIN 3 (RX-422A)
PIN 4 (TX-422B)	PIN 4 (RX-422B)
PIN 5 (RX-232).....	PIN 5 (TX-232)
PIN 6 (TX-232).....	PIN 6 (RX-232)
PIN 7 (+5VDC).....	PIN 7 (+5VDC)
PIN 8 (-5VDC Return).....	PIN 8 (-5VDC Return)

RS-232 Serial Cable Connections

For serial interface and power connections, connect between the 5511/6611 USC and the 930 USC pins 5 through 8.

RS-422 Serial Cable Connections

For serial interface power connections, connect between the 5511/6611 USC and the 930 USC pins 1 through 4 and pins 7 and 8.

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2.4 5511/6611 USC Data Log File Name

The 5511/6611 USC Data Log File Name has a date format "YYMMDD" followed by a two digit "nn" file number. See Figure 3 below for the data log filename format. At the 5511/6611 USC Data Logging Filename menu, the file name can be changed to the current date by incrementing or decrementing the file number. The last date/file-number change is the file name used to save log data. Pressing the "RETURN TO PREVIOUS MENU" button will abort any changes made to the current data logging file name. After making changes to the data log file name, press the "SAVE FILENAME" button on the DATA LOGGING FILENAME menu to accept the new data log file name. Note: Ticket Mode of operation on the 5511/6611 USC must be enabled to change the data log filename. To set to Ticket mode of operation, see Section 2.1 5511/6611 USC Mode of Operation for selecting Ticket Mode. To proceed to the 5511/6611 USC Data Logging Filename Menu follow the menus below.

Figure 3.

Data Log File Name Format

YYMMDDnn{.Ext}

Where:

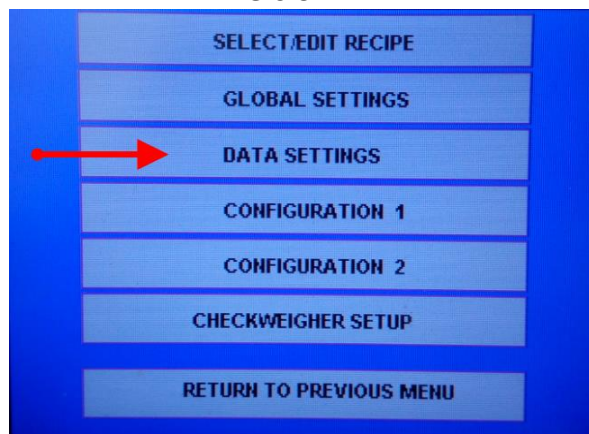
- | | | |
|--------|---|---|
| YY | – | Two digit year |
| MM | – | Two digit month |
| DD | – | Two digit day |
| nn | – | Two-digit file number 0-99 which can be incremented or decremented by the user. |
| {.Ext} | – | ".txt" |

To proceed to the Data Logging Filename Menu

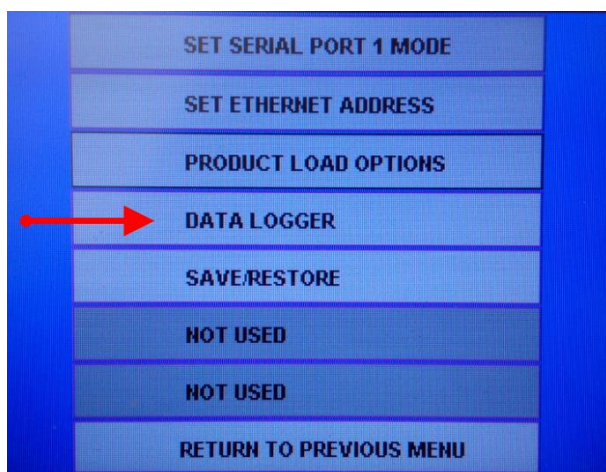


Select TOOLS

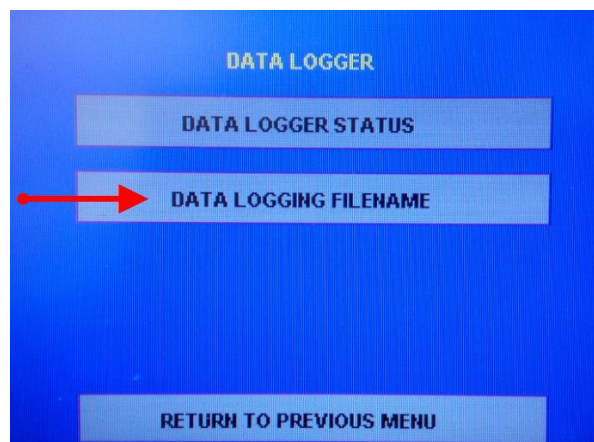
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Select DATA SETTINGS

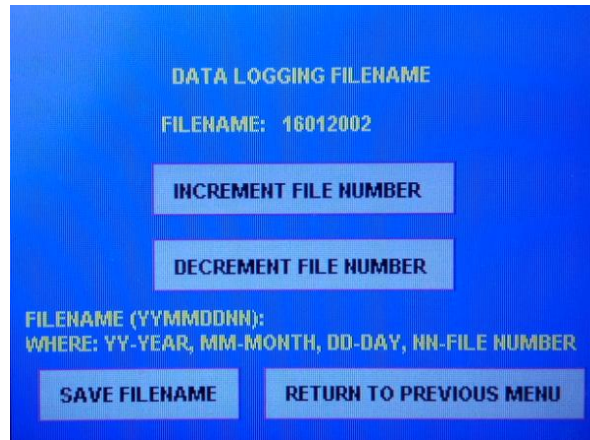


Select DATA LOGGER



Select DATA LOGGING FILENAME

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DATA LOGGING FILENAME

FILENAME: 16012002

INCREMENT FILE NUMBER

DECREMENT FILE NUMBER

FILENAME (YYMMDDNN):
WHERE: YY-YEAR, MM-MONTH, DD-DAY, NN-FILE NUMBER

SAVE FILENAME RETURN TO PREVIOUS MENU

DATA LOGGING FILENAME Menu



IMPORTANT
MUST ENABLE SERIAL PORT 1 TO TICKET MODE FIRST

DATA LOGGING FILENAME

FILENAME: 16062404

INCREMENT FILE NUMBER

DECREMENT FILE NUMBER

FILENAME (YYMMDDNN):
WHERE: YY-YEAR, MM-MONTH, DD-DAY, NN-FILE NUMBER

SET PORT 1 MODE RETURN TO PREVIOUS MENU

SET PORT 1 MODE button appears if TICKET MODE has not been enabled.
See the next section to enable TICKET MODE operation.

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2.5 5511/6611 USC Data Logging Information

The 930 SDL will save to the TSC flash drive the weight data information transmitted as ASCII data, one (1) time at the completion of a fill or as weight is terminated on the 5511/6611 USC checkweigher/filler. Multiple data can be transmitted in this mode, including actual weight, target, TARE weight, reject limits and pass/fail information on TICKET MODE selection. Note: Data information enabled will always be placed in the same position in the string.

Serial Port 1 will, at a minimum, transmit: <SPACE or – Sign><7 Digits, Leading Zeros Suppressed>

A checked weight of 3.982 lb. would transmit as: <A><Space>< 3.982><CR><LF>

Data Logging Information format

ID

Last Weight,

Target Weight,

High Reject,

Low Reject,

TARE Weight,

Pass or Fail,

Date (as MM:DD:YY),

Time (as HH:MM:SS),

Total Units

Sample Data Log File Content

A, 51.00, 50.00, 51.00, 49.00, 0.00,FAIL,101415,082803,	1
A, 50.50, 50.00, 51.00, 49.00, 0.00,PASS,101415,082803,	2
A, 50.00, 50.00, 51.00, 49.00, 0.00,PASS,101415,082803,	3
A, 49.50, 50.00, 51.00, 49.00, 0.00,PASS,101415,082803,	4
A, 49.00, 50.00, 51.00, 49.00, 0.00,FAIL,101415,082804,	5
A, 51.00, 50.00, 51.00, 49.00, 0.00,FAIL,101415,082804,	6
A, 50.50, 50.00, 51.00, 49.00, 0.00,PASS,101415,082804,	7
A, 50.00, 50.00, 51.00, 49.00, 0.00,PASS,101415,082804,	8
A, 49.50, 50.00, 51.00, 49.00, 0.00,PASS,101415,082804,	9
A, 49.00, 50.00, 51.00, 49.00, 0.00,FAIL,101415,082805,	10

Note: For further details see Model 5511 User's Manual for configuring controller for equipment type.

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2.6 5511/6611 USC Data Logger Status Menu

The 5511/6611 USC Data Logger Status menu provides information regarding the operation of the 930 SDL with the 5511/6611 USC. See below for the specific Data Logger and Save/Restore Configuration and Recipe requirements. For proper operation of the 930 SDL to log information, or save and restore configuration/recipes on the 5511/6611 USC, proceed through the 5511/6611 USC Data Logging Status Menus below to check the connected 930 SDL status.

Data Logger Status Requirements

FLASH DRIVE: Inserted

DATA LOGGING: Enabled

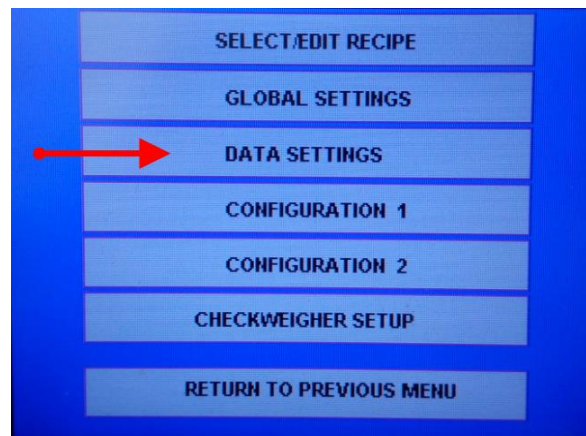
Save/Restore Configuration and Recipes Requirement

FLASH DRIVE: Inserted

Proceed to the 5511/6611 USC Data Logger Status Menu

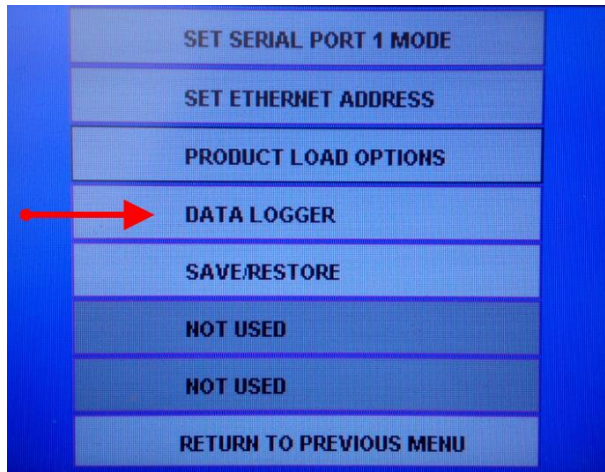


Select TOOLS

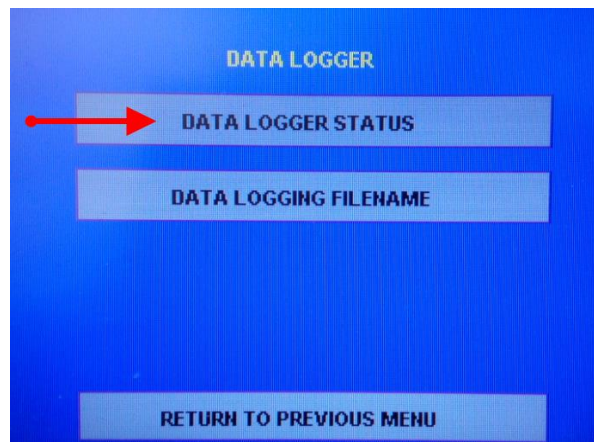


Select DATA SETTINGS

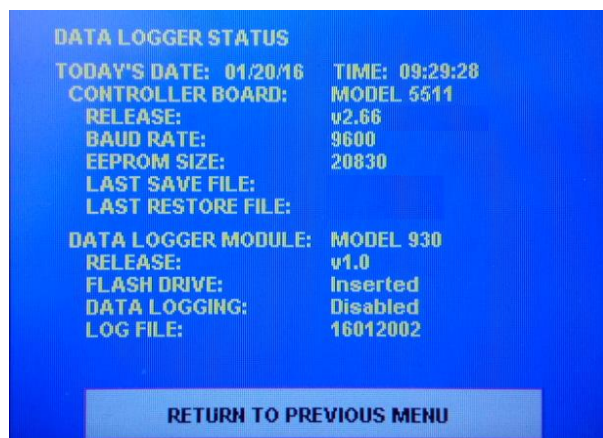
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Select DATA LOGGER



Select DATA LOGGER STATUS



DATA LOGGER STATUS Menu

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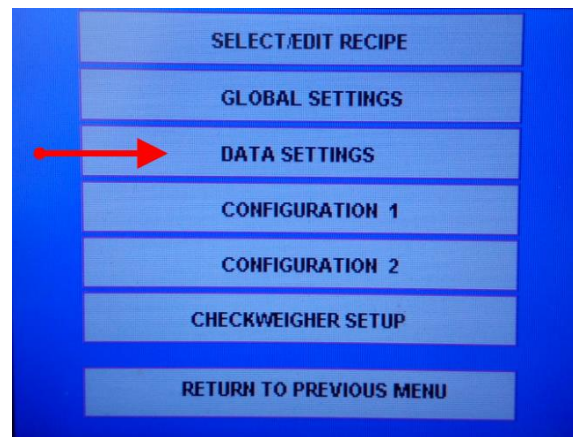
2.7 5511/6611 USC Data Logger Ticket Mode Operation & Baud Rate Setting

To begin saving log data information to the TSC flash drive, the 5511/6611 USC must be set to PORT 1 TICKET MODE. When Ticket Mode is enabled on the 5511/6611 USC and the 930 SDL is connected, will begin saving checkweigher/filler information when available from the 5511/6611 USC to the TSC flash drive. Proceed through the following menu to set PORT 1 TICKET MODE as well as setting the PORT 1 BAUD RATE.

To proceed to the Data Logging Ticket Mode Menu

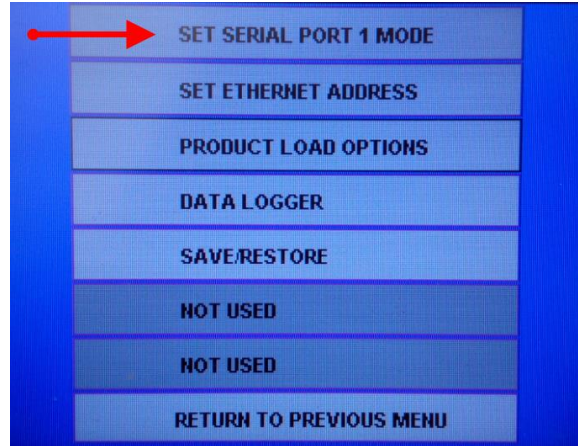


Select TOOLS

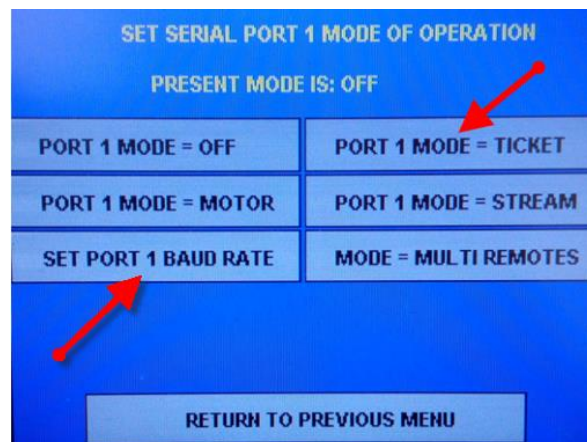


Select DATA SETTINGS

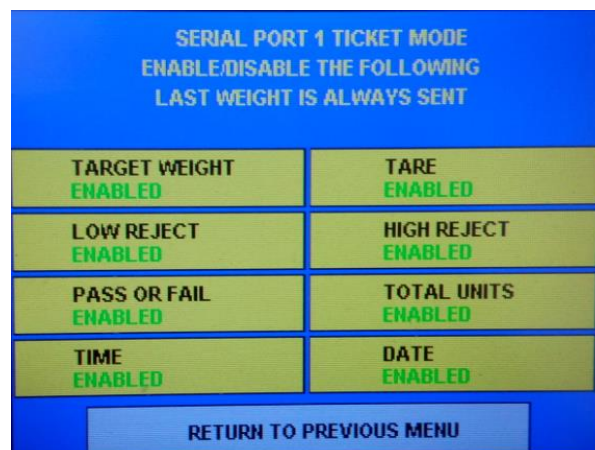
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Select SET SERIAL PORT 1 MODE



Select PORT 1 MODE = TICKET and SET PORT 1 BAUD RATE



Select SERIAL PORT 1 TICKET MODE Weight Data Information Desired

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2.8 5511/6611 USC Save/Restore Configuration and Recipes

The 5511/6611 USC Configuration and Recipes can be saved to the TSC flash drive and can later be restored. There are four methods the user can choose to save and restore the controller's configuration and recipes. Each of the methods has a different file extension to distinguish the files content. The file extension can't be entered by the user since this is done by the 930 SDL. The filename can be the same for all four methods so the user can identify the information saved across multiple files types. See Figure 4 below for the specific save/restore configuration and recipe file extensions. Note: When restoring files, selecting "YES" button for "ARE YOU SURE," If the file name doesn't exist on the TSC flash drive an error will occur. Note: It is mandatory to disable data logging when saving or restoring the configuration and recipes. To disable data logging, see the preceding Section 2.1 5511/6611 USC Mode of Operation.

Figure 4.

Save/Restore Configuration and Recipe File Extensions

Save/Restore 5511/6611 USC Configuration/All Recipes	– File Extension = .ALQ
Save/Restore 5511/6611 USC Configuration	– File Extension = .CNL
Save/Restore 5511/6611 USC All Recipes	– File Extension = .RNP
Save/Restore 5511/6611 USC Single Recipe	– File Extension = {.nnn}

Where "nnn" is the recipe number (001-099).

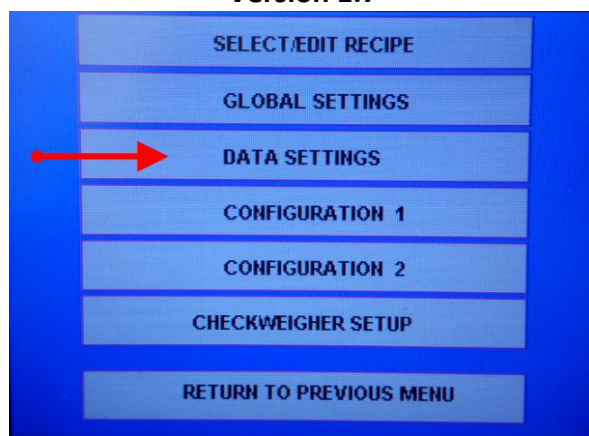
WARNING: When saving or restoring the 5511/6611 USC configuration and recipes, do not turn-off the 5511/6611 USC or remove the TSC flash drive from the USB slot. Doing so can cause unrecoverable damage to the files on the TSC flash drive or corrupt the 5511/6611 USC's EEPROM (Non-Volatile memory).

To proceed to the Save/Restore Configuration and Recipe Menu

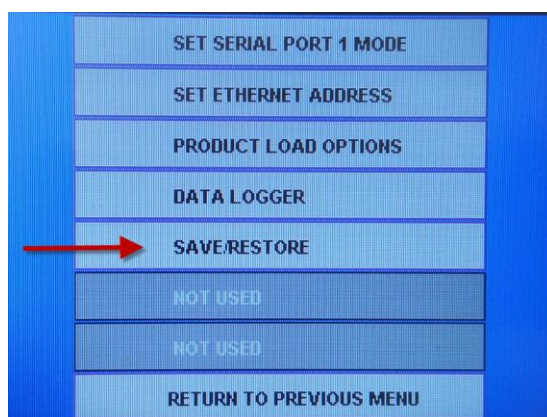


Select TOOLS

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Select DATA SETTINGS

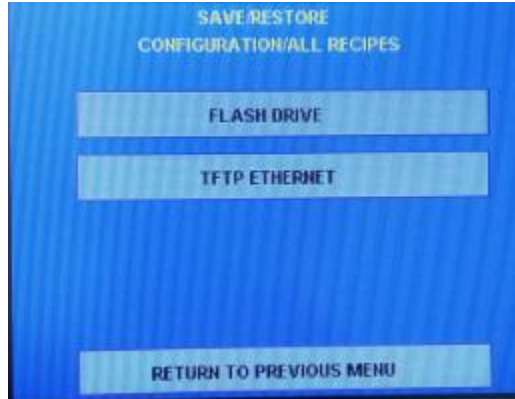


Select SAVE/RESTORE

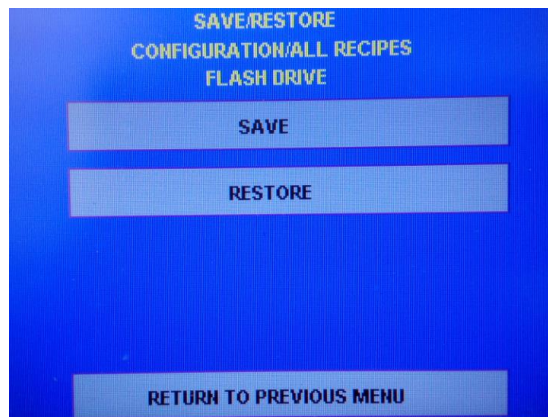


Select a Save/Restore Method

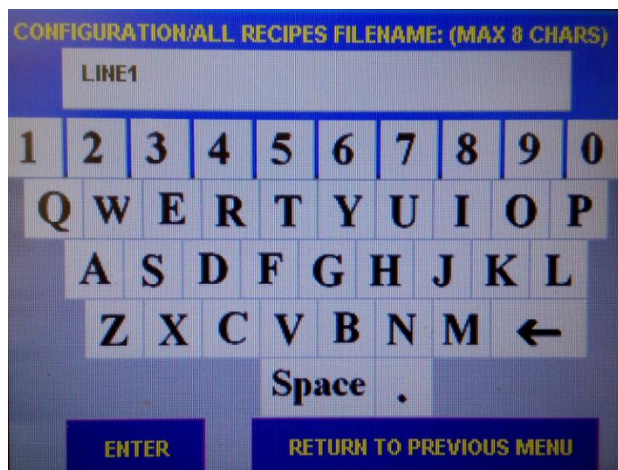
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Select FLASH DRIVE

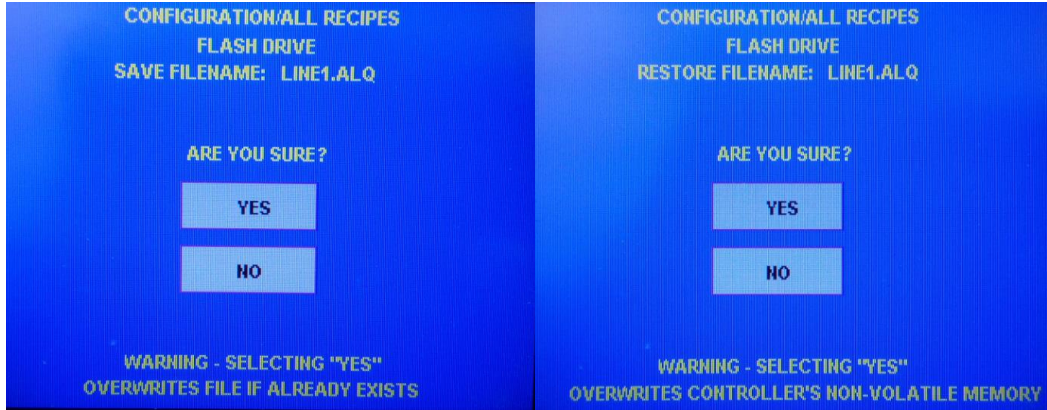


Select Save or Restore



A virtual keyboard will appear on the 5511/6611 USC touch-screen display. Enter a file name from one (1) up to a maximum of eight (8) alpha-numeric characters for the Save/Restore file name. Note: The Space ' ' and dot '.' characters should not be used as part of the file name.

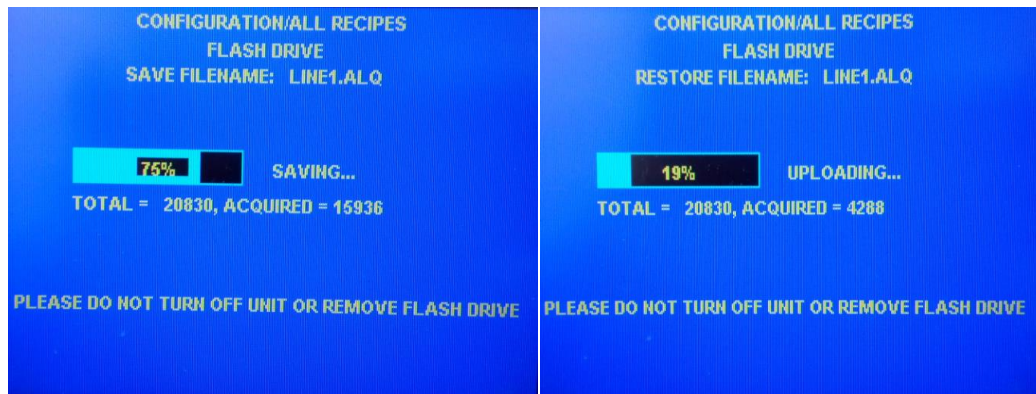
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SAVE

RESTORE

Note: When Saving, if the file name already exists, selecting "YES" the file will be overwritten.



SAVE

RESTORE

Saving/Restoring Configuration and Recipe(s) to and from the FLASH DRIVE.



SAVE

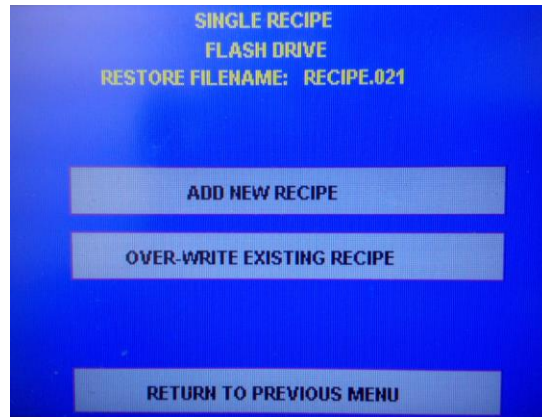
RESTORE

Save/Restore Completed

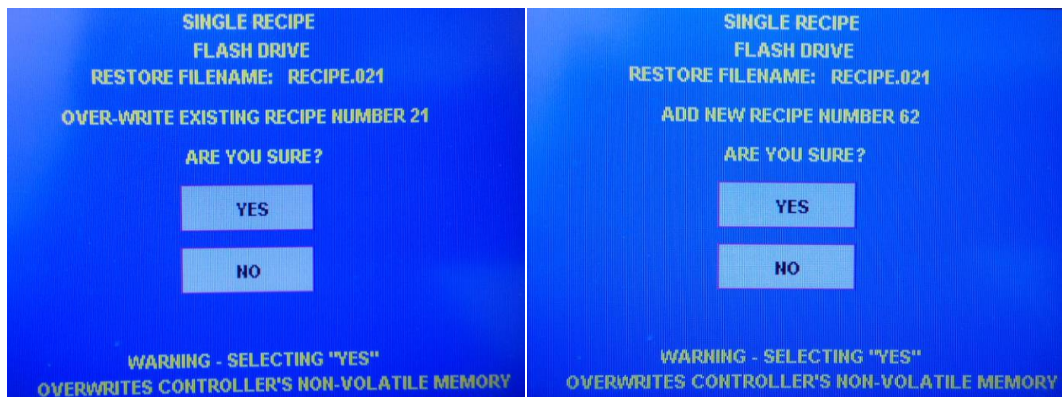
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2.9 5511/6611 USC Single Recipe Restore Menus

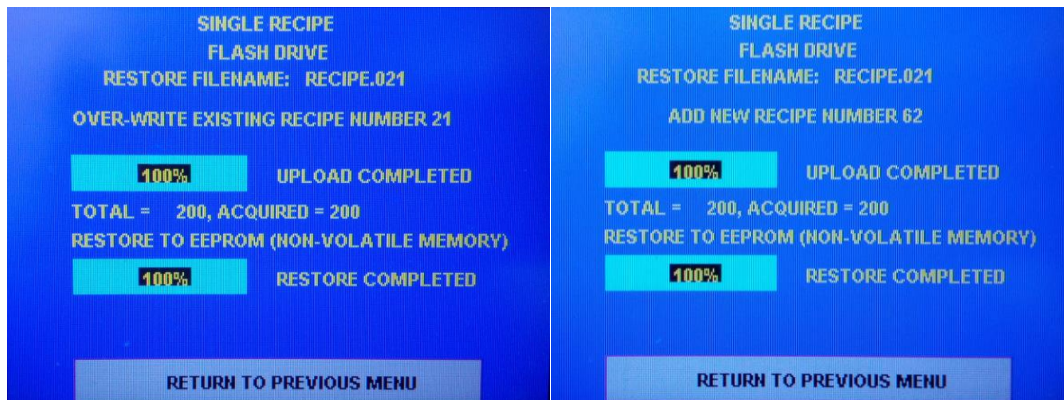
The following menu is for Single Recipe Restore only. The user can select either "ADD NEW RECIPE" or "OVER-WRITE EXISTING RECIPE."



Single Recipe Restore (Add New Recipe or Over-Write Existing Recipe Selection)



Single Recipe Restore (YES/NO Selection)



Single Recipe Restore Completed

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3.0 4693 Universal Scale Controller

The 930 SDL can be connected to the Thompson Scale Company's Model 4693 Universal Scale Controller to save checkweigher/filler log data. The following sections detail the 4693 USC setup and operation with the 930 SDL.

3.1 4693 USC Mode of Operation

To use the 930 SDL with the 4693 USC requires mode of operation jumper JP5 on the 930 SDL to be removed to place the 930 SDL in the Stand Alone mode of operation. See Appendix E. 930 SDL PC Board Layout for jumper JP5 location on the 930 SDL.

3.2 4693 USC Serial Interface

The 4693 USC Serial Interface baud rate is set to operate at a fixed baud rate of 9600, with no parity, 8 data bits, and 1 stop bit. The 930 SDL serial interface jumper JP1, JP2, and JP3 factory setting is set to 9600 baud. To change the serial interface baud rate setting, see Appendix A. 930 SDL & 5511/6611 USC Baud Rate Settings.

3.3 4693 USC Serial Interface Connections

The 4693 USC serial interface connection to the 930 SDL consists of a 2-wire RS-232 serial interface and 4-wire RS-422 differential serial interface as well as supplying +5VDC power to the 930 SDL. See Figure 5 below for the wire connections between the 4693 USC and the 930 SDL. For specific Port 1 interface connector location, see Appendix E. 930 SDL PC Board Layout and Appendix G. 4693 USC 483 4-Port Serial Card Layout. Note: Connect either 2-wire RS-232 or 4-wire RS-422 serial interface connections. Connecting both serial interfaces could cause erratic operation of the 930 SDL.

Figure 5.

483 4-Port Serial Card	930 SDL
Port 1 Connections	Port 1 Connections
PIN 1 (RX-422A)	PIN 1 (TX-422A) (Do no connect)
PIN 2 (RX-422B)	PIN 2 (TX-422B) (Do no connect)
PIN 3 (TX-422A)	PIN 3 (RX-422A)
PIN 4 (TX-422B)	PIN 4 (RX-422B)
PIN 5 (RX-232)	PIN 5 (TX-232) (Do no connect)
PIN 6 (TX-232).....	PIN 6 (RX-232)
PIN 9 (+5VDC).....	PIN 7 (+5VDC)
PIN 10 (-5VDC Return).....	PIN 8 (-5VDC Return)

RS-232 Serial Cable Connections

For serial interface connection, connect pins 6 on the 4693 USC to pin 6 on the 930 SDL and pin 10 on the 4693 USC to pin 8 on the 930 SDL. For power connect pin 9 on the 4693 to pin 7 on the 930 SDL.

RS-422 Serial Cable Connections

For serial interface connection, connect pins 1 through 4 on the 4693 to pins 1 through 4 on the 930 SDL and pin 10 on 4693 to pin 8 on 930 SDL. For power connect pin 9 on the 4693 to pin 7 on the 930 SDL.

3.4 4693 USC Data Log File Name

The 4693 USC Data Log File Name defaults to "LOGDATA.txt".

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3.5 4693 USC Data Logging Information

The 930 SDL will save to the TSC flash drive the weight data information transmitted as ASCII data, one (1) time at the completion of a fill or as weight is terminated on the 4693 USC checkweigher/filler. Multiple data can be transmitted in this mode, including actual weight, target, TARE weight, reject limits and pass/fail information on TICKET MODE selection. Note: Data information enabled will always be placed in the same position in the string.

Serial Port 1 will, at a minimum, transmit: <SPACE or – Sign><7 Digits, Leading Zeros Suppressed>

A checked weight of 3.982 lb. would transmit as: <A><Space>< 3.982><CR><LF>

Data Logging Information format

ID

Last Weight,

Target Weight,

High Reject,

Low Reject,

TARE Weight,

Pass or Fail,

Date (as MM:DD:YY),

Time (as HH:MM:SS),

Total Units

Sample Data Log File Content

A, 51.00, 50.00, 51.00, 49.00, 0.00,FAIL,101415,082803,	1
A, 50.50, 50.00, 51.00, 49.00, 0.00,PASS,101415,082803,	2
A, 50.00, 50.00, 51.00, 49.00, 0.00,PASS,101415,082803,	3
A, 49.50, 50.00, 51.00, 49.00, 0.00,PASS,101415,082803,	4
A, 49.00, 50.00, 51.00, 49.00, 0.00,FAIL,101415,082804,	5
A, 51.00, 50.00, 51.00, 49.00, 0.00,FAIL,101415,082804,	6
A, 50.50, 50.00, 51.00, 49.00, 0.00,PASS,101415,082804,	7
A, 50.00, 50.00, 51.00, 49.00, 0.00,PASS,101415,082804,	8
A, 49.50, 50.00, 51.00, 49.00, 0.00,PASS,101415,082804,	9
A, 49.00, 50.00, 51.00, 49.00, 0.00,FAIL,101415,082805,	10

Note: For further details see Model 4693 User's Manual for configuring controller for equipment type.

4.0 Custom Controller

The 930 SDL can be connected to a Custom Controller to save log data. The following sections detail the custom controller setup and operation with the 930 SDL.

4.1 Custom Controller Mode of Operation

For Custom Controller Mode of Operation, Stand Alone jumper JP5 must be removed to log data from a custom controller. For jumper JP5 location, see Appendix E. 930 SDL PC Board Layout.

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4.2 Custom Controller Serial Interface

For Custom Controller Serial Interface the 930 SDL serial Interface baud rate is selectable and can be set to operate at baud rates of 1200, 2400, 4800, 9600, 19200, 38400, 57600 or 115200 with no parity, 8 data bits, and 1 stop bit. The 930 SDL serial interface jumper JP1, JP2, and JP3 factory setting is set to 9600 baud. To change the serial interface baud rate setting, see Appendix A. 930 SDL & 5511/6611 USC Baud Rate Settings.

4.3 Custom Controller Serial Interface Connections

The Custom Controller Serial Interface Connections to the 930 SDL consists of a 2-wire RS-232 serial interface or 4-wire RS-422 differential serial interface as well as supplying +5VDC power to the 930 SDL. An optional AC power adapter can be used to power the 930 SDL instead through the serial interface connection. See Figure 6 below for the cable connections between the custom controller and the 930 SDL. For 930 SDL port 1 interface connector location, see Appendix E. 930 SDL PC Board Layout. Note: Connect either 2-wire RS-232 or 4-wire RS-422 serial interface connections. Connecting both serial interfaces could cause erratic 930 SDL operation.

Figure 6.

Custom Controller	930 SDL
Port Connections	Port 1 Connections
(RX-422A).....	PIN 1 (TX-422A) (Do not connect)
(RX-422B)	PIN 2 (TX-422B) (Do not connect)
(TX-422A)	PIN 3 (RX-422A)
(TX-422B)	PIN 4 (RX-422B)
(RX-232).....	PIN 5 (TX-232) (Do not connect)
(TX-232).....	PIN 6 (RX-232)
(+5VDC).....	PIN 7 (+5VDC)
(-5VDC Return).....	PIN 8 (-5VDC Return)

RS-232 Serial Cable Connections

For serial interface connection, connect the custom controller to port 1 connector pins 6 and pin 8 on the 930 SDL. For power connect +5VDC power from the custom controller to pin 7 and pin 8 on the 930 SDL or use the optional 930 SDL +5VDC Power Adapter.

RS-422 Serial Cable Connections

For serial interface connection, connect the custom controller to port 1 connector pins 3, pin 4 and pin 8 on the 930 SDL. For power connect +5VDC power from the custom controller to pin 7 and pin 8 on the 930 SDL or use the optional 930 SDL +5VDC Power Adapter.

4.4 Custom Controller Data Log File Name

The Custom Controller Data Log File Name defaults to "LOGDATA.txt".

Appendix A. 930 SDL & 5511/6611 USC Baud Rate Settings

5511/6611 USC Baud Rate Settings

The 5511/6611 USC baud rate must match the baud rate setting on the 930 SDL. The baud rates supported are 1200, 2400, 4800, 9600, 19200, 38400, 57600, and 115200. The communication factory default serial setting is

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9600 baud, no parity, 8 data bits, 1 stop bit. See below for the serial baud rate jumper setting on the 5511/6611 USC. For the 5511/6611 USC baud rate jumper location see Appendix F. 5511/6611 USC PC Board Layout. Note: The 5511/6611 USC power must be powered off and then back on for the new baud rate setting to take effect.

5511/6611 USC Serial Communication Jumper Positions

RS-232 Serial Communications: On the 5511/6611 USC, move jumper J4 to J3 position.

RS-422 Serial Communications: On the 5511/6611 USC, move jumper J3 to J4 position.

930 SDL Baud Rate Setting

The 930 SDL baud rate must match the baud rate setting on the controller the 930 SDL is connected to. The baud rates supported are 1200, 2400, 4800, 9600, 19200, 38400, 57600, and 115200. The communication factory default serial setting is 9600 baud, no parity, 8 data bits, 1 stop bit. See below for setting JP1, JP2, and JP3 baud rate jumpers on the 930 SDL. Power off then back on the 930 SDL is required for the selected baud rate setting to take effect. See Appendix E for 930 SDL PC Board Layout for baud rate jumper location.

930 SDL Baud Rate Jumper Settings

JP3	JP2	JP1	BAUD RATE
OFF	OFF	OFF	1200
OFF	OFF	ON	2400
OFF	ON	OFF	4800
OFF	ON	ON	9600
ON	OFF	OFF	19200
ON	OFF	ON	38400
ON	ON	OFF	57600
ON	ON	ON	115200

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Appendix B. Optional Remote Data Logging Indicator Connections

Optional Remote Logging Indicator Connections

An optional remote logging indicator (LED or incandescent) can be installed. The logging indicator can be attached to the 930 SDL using either the internal 5VDC power source or a remote up to 30VDC power source. See Appendix E for 930 SDL PC Board Layout for Port 1 connector location. Note: If the LED indicator doesn't have an internal load resistor one must be installed in series with the LED. Also, an AC powered LED or incandescent indicator should not be used on this device.

Optional Remote Logging Indicator using internal DC Supply

Port 1 pin 9 → Connect an incandescent indicator lead or LED CATHODE lead (Data Logging Ready Out).

Port 1 pin 10 → Connect other incandescent indicator lead or LED ANODE lead (Internal +5VDC supply).

Note: Internal DC Supply maximum 5VDC at 1 ampere.

Optional Remote Logging Indicator using remote DC Supply

Port 1 pin 9 → Connect an incandescent indicator lead or LED CATHODE lead (Data Logging Ready Out).

Connect the other incandescent indicator lead or LED ANODE lead to the remote positive DC supply.

Port 1 pin 11 → Connect to the remote -5VDC Return supply.

Note: Remote DC Supply maximum 30VDC at 3 amperes.

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Appendix C. 5511/6611 USC Error Messages

5511/6611 USC Error Codes

14101	Unknown failure	Unknown error occurrence.
14102	Data Logger Module not attached	930 Serial Data Logger not detected.
14103	flash drive missing	TSC flash drive not inserted in 930 Serial Data Logger USB slot.
14104	Missing Flash file on Flash drive	TSC flash drive file name when restoring configuration.
14105	Memory allocation error	Bad or insufficient memory, an internal program error.
14106	Timeout	930 Serial Data Logger did not respond to a command.
14107	Device error	930 Serial Data Logger internal device error.
15130	Check Data Logger or Flash drive	Communication link disconnected or TSC flash drive file missing.
15131	Memory allocation error	Bad or insufficient memory, an internal program error.
15132	Save Configuration Timeout	930 Serial Data Logger didn't respond to Save Configuration.
15133	Restore Configuration Timeout	930 Serial Data Logger didn't respond to Restore Configuration.
161XX	Unknown failure	Command not recognized or an error occurred. XX substituted with an error code received from the 930 Serial Data Logger.

Troubleshooting Common Errors

Most common errors are due to one of the following reasons.

1. Serial baud rate setting is different between the controller and 930 SDL.
2. TSC flash drive is not inserted into one of the 930 SDL USB slots.
3. An incorrect or poor serial interface connection from the controller to the 930 SDL.

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Appendix D. 930 SDL Parts List and Optional Accessories

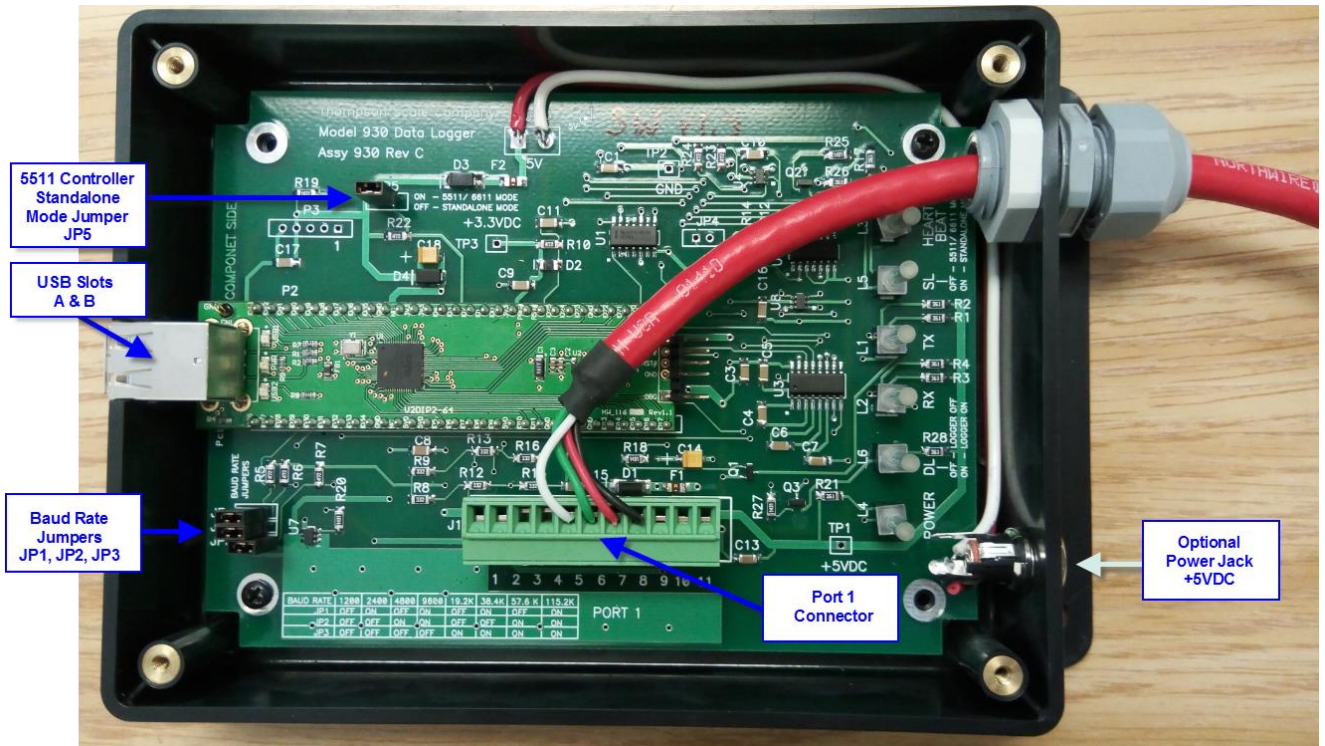
930 SDL Parts List and Accessories

TSC 930	930 Serial Data Logger
{TBL}	TSC Flash Drive
{TBL}	Panel Mount Data Logging Indicator Kit
{TBL}	930 Serial Data Logger Enclosure
{TBL}	930 SDL +5VDC Power Adapter (for Custom Controller operation)

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Appendix E. 930 SDL PC Board Layout

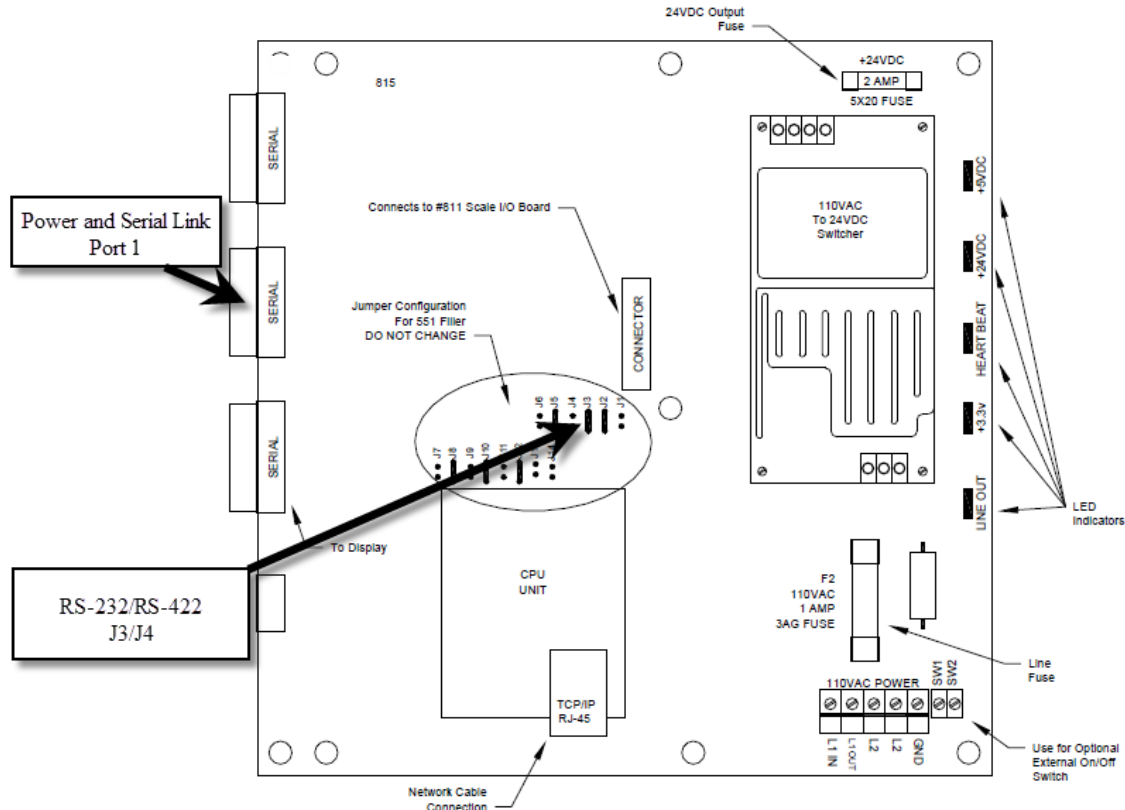
930 SDL PC Board Layout



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Appendix F. 5511/6611 USC PC Board Layout

5511 /6611 USC PC Board Layout



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Appendix G. 4693 USC 483 4-Port Serial Card

483 4-Port Serial Card Layout

