# Cissell

# Electronic Conveyor Control

## OWNER'S MANUAL

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**THIS MANUAL MUST BE GIVEN TO THE EQUIPMENT OWNER.**

**MAN 383 11/98 2C** Part No. D0094

# WARRANTY

The Cissell Manufacturing Company (Cissell) warrants all new equipment (and the original parts thereof) to be free from defects in material or workmanship for a period of one (1) year from the date of sale thereof to an original purchaser for use, except as hereinafter provided. With respect to non-durable parts normally requiring replacement in less than one (1) year due to normal wear and tear, including, but not limited to, cloth goods, valve discs, hoses, and iron cords, and with respect to all new repair or replacement parts for Cissell equipment for which the one (1) year warranty period has expired, or for all new repair or replacement parts for equipment other than Cissell equipment, the warranty period is limited to ninety (90) days from date of sale. The warranty period on each new replacement part furnished by Cissell in fulfillment of the warranty on new equipment or parts shall be for the unexpired portion of the original warranty period on the part replaced.

With respect to electric motors, coin meters and other accessories furnished with the new equipment, but not manufactured by Cissell, the warranty is limited to that provided by the respective manufacturer.

Cissell's total liability arising out of the manufacture and sale of new equipment and parts, whether under the warranty or caused by Cissell's negligence or otherwise, shall be limited to Cissell repairing or replacing, at its option, any defective equipment or part returned f.o.b. Cissell's factory, transportation prepaid, within the applicable warranty period and found by Cissell to have been defective, and in no event shall Cissell be liable for damages of any kind, whether for any injury to persons or property or for any special or consequential damages. The liability of Cissell does not include furnishing (or paying for) any labor such as that required to service, remove or install; to diagnose troubles; to adjust, remove or replace defective equipment or a part; nor does it include any responsibility for transportation expense which is involved therein.

The warranty of Cissell is contingent upon installation and use of its equipment under normal operating conditions. The warranty is void on equipment or parts; that have been subjected to misuse, accident, or negligent damage; operated under loads, pressures, speeds, electrical connections, plumbing, or conditions other than those specified by Cissell; operated or repaired with other than genuine Cissell replacement parts; damaged by fire, flood, vandalism, or such other causes beyond the control of Cissell; altered or repaired in any way that effects the reliability or detracts from its performance, or; which have had the identification plate, or serial number, altered, defaced, or removed.

No defective equipment or part may be returned to Cissell for repair or replacement without prior written authorization from Cissell. Charges for unauthorized repairs will not be accepted or paid by Cissell.

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For warranty service, contact the Distributor from whom the Cissell equipment or part was purchased. If the Distributor cannot be reached, contact Cissell.

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## FOR YOUR SAFETY

Always shut off or disconnect power to the conveyor before servicing.

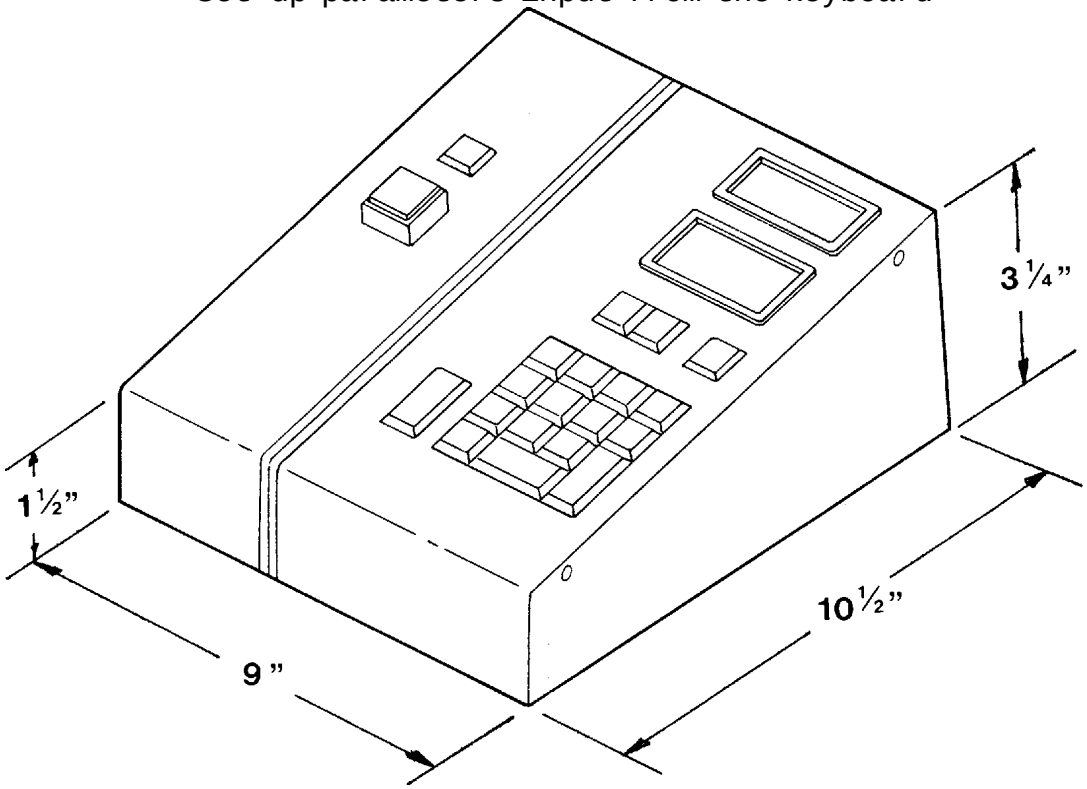
Be careful of any loose article of clothing or jewelry that might become entangled in the conveyor links, trolleys, or drive mechanism.

Be careful of any body part (hair, finger, etc.) that may get caught in any moving component on the conveyor. Always shut off or disconnect power when performing
maintenance or adjustment work.

Post operator instructions and safety warnings in a prominent location.

## SPECIFICATIONS

Input power: 24VAC
Six position memory
Dual display: current position, desired position
Range: 1-9999 positions
Second range available for double deck conveyors
Automatic coast
Set-up parameters input from the keyboard



# DESCRIPTION

This control operates one garment conveyor. It allows the attendant to automatically bring any position on the conveyor to the unloading area by entering the position number into the control's memory and initiating the search operation.

Features:

- Memory can hold up to six positions at one time
- Dual display shows CURRENT POSITION and DESIRED POSITION
- Range 1-9999 positions
- Second range available for double deck conveyors
- Jog buttons on control panel
- Pause button (interrupts search operation)
- Calibrate current conveyor positions from control panel
- One shaft encoder works with all conveyors
- "Pick as entered" / "Shortest route" options
- Auto-coast
- Abnormal speed detection
- Set-up parameters entered into the control's memory from the keyboard.

# DESCRIPTION OF CONTROL PANEL

1. ON/POWER. Turns power on. Resets the control after an emergency stop.

2. EMERGENCY STOP. Turns power off to control box. Stops conveyor.

3. CURRENT POSITION DISPLAY. Shows the current position of the conveyor or the number being entered on the keyboard. The keyboard entry is only displayed for 5 seconds.

4. NEXT DESIRED POSITION DISPLAY. Shows the position that the conveyor will stop at next.

5. JOG. Will manually run the conveyor in the direction indicated on the button as long as the button is depressed. Is disabled when the conveyor is automatically seeking a position. Jog will work during PAUSE.

6. SET. Used in conjunction with a keyboard entry and the SHIFT key to input the current position.

7. SHIFT. Used in conjunction with other keys.

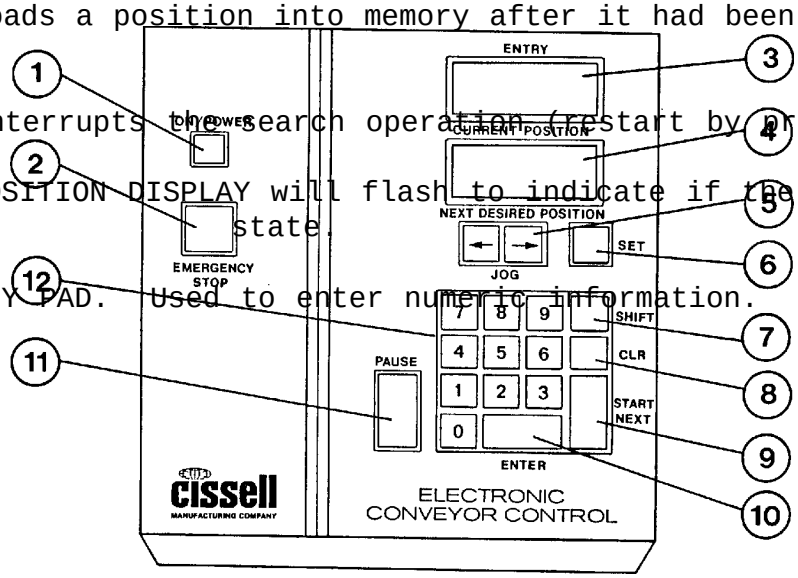
8. CLR. Clears current entry shown on the CURRENT POSITION/ENTRY display if pressed by itself or if pressed with the SHIFT key, clears the memory of all positions previously entered.

9. START/NEXT. Initiates or continues after a PAUSE, the search operation.

10. ENTER. Loads a position into memory after it had been entered on the keyboard.

11. PAUSE. Interrupts the search operation (restart by pressing NEXT). The NEXT DESIRED POSITION DISPLAY will flash to indicate if the conveyor is in the paused state.

12. NUMERIC KEY PAD. Used to enter numeric information.



## INSTALLATION

1. Locate the Conveyor control.

2. Route the connection cable (C2102, supplied with control) between the Conveyor control and the electrical box near the drive on the conveyor. The end with the large connector mounts to the conveyor control.

3. Remove the bottom from the conveyor control and install the connector into the socket on the processor board. Tighten the screws on the plug that attaches it to the socket to prevent it from coming loose. Install the cable bushing into the slot at the rear of the control enclosure and tighten. Reattach the bottom of the conveyor control and tighten the screws.

4. On the Conveyor end of the cable, connect the leads in the large bundle of 12 wires to the appropriate wires/terminals in the electrical box per the wiring diagram. The small bundle of 4 wires is connected to the digital encoder (attached to the drive shaft) by the small nylon plug. Be sure to properly orient it (match the numbers on the plug to the numbers on the encoder).

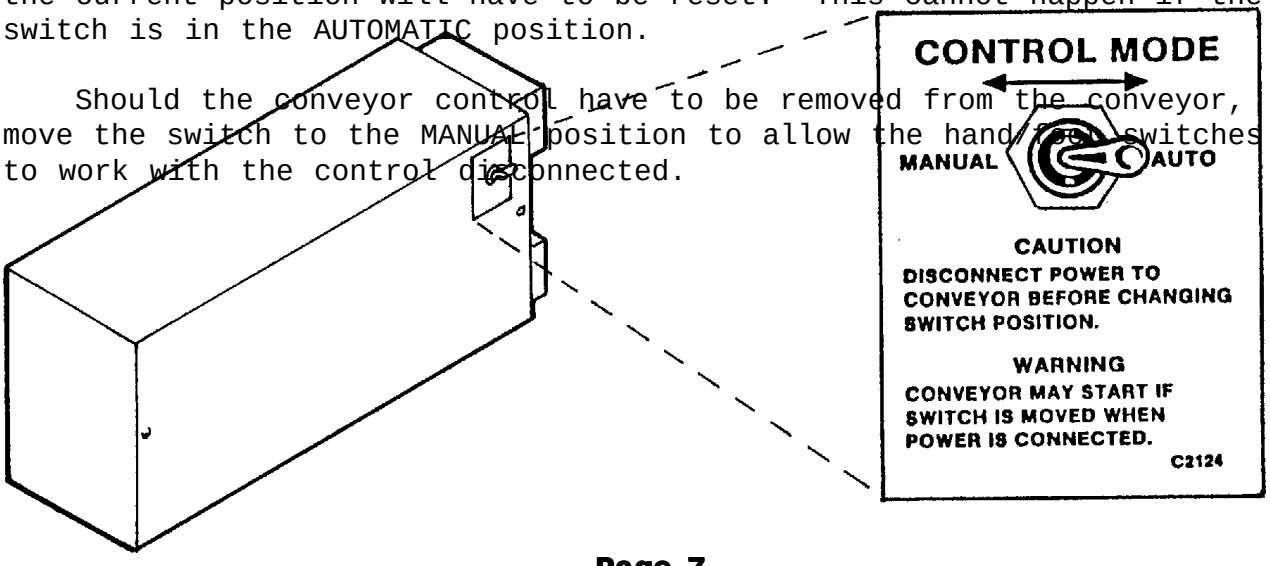
5. Connect power to the conveyor. Go through the SET-UP procedures to input the conveyor parameters into the memory of the conveyor control.

6. The conveyor control is now ready for operation.

## SETTING CONTROL MODE SWITCH

This switch should be in the AUTOMATIC position for normal operation. In this position, the hand/foot switches will work only when the conveyor control is ON. This is to prevent the control from losing its current position. If the conveyor is run with the control turned OFF, the current position will have to be reset. This cannot happen if the switch is in the AUTOMATIC position.

Should the conveyor control have to be removed from the conveyor, move the switch to the MANUAL position to allow the hand/foot switches to work with the control disconnected.



# SETTING UP THE CONVEYOR PARAMETERS AND USING THE CUSTOMIZING KEYS

The parameters of the conveyor must be input to the control before it can operate properly. See the instructions below that describe how to input parameters. There are also customizing keys that allow the operator several options.

Note: When "SHIFT+#" is indicated, this means that the SHIFT key and the number key must be depressed at the same time.

## PARAMETERS

*( * For Standard Conveyor, see below:)*

SHIFT+9 (hold for 3 seconds)...When this function is enabled, the control will step through the conveyor parameters in the order listed below. To accept the value shown in the lower display, press ENTER. To change the value, enter the new value and then press ENTER.

| Parameter | Description | Range |
|---|---|---|
| 1 | Number of conveyor positions | 1-9999 |
| 2 | Starting number (1st deck) | 1-9999 |
| 3 | Starting number (2nd deck) | 1-9999 |
| 4 | Encoder counts per revolution | 100 (see note) |
| 5 | Conveyor positions per revolution | 60 (see note) |

NOTE: The values of 100 and 60 are for Cissell conveyors. If this control is used on another conveyor, these values might be different.

Inside of the control box on the rear of the control board are two jumpers (see drawing).

They can be used to "lock out" the parameters to prevent someone from changing them once they are set. Their functions are listed below:

| Jumper | Function |
|---|---|
| A | Adding this jumper presets the values of parameters 4 and 5 to 100 and 60 and locks out these two parameters to prevent them from being changed. |
| B | Removing this jumper disables the SHIFT+9 function. It is removed after the parameters are set to prevent unauthorized persons from changing the parameters. |

* *Run Conveyor to get #1 position to the desired location, then; press Power On button to turn on.*
*Press Shift and #9 and hold until unit stops changing.*
*Press CLR*
*#1 Enter # of positions on Conveyor (500 = 50 links).*
*#2 Press 1 and Enter.*
*#3 Press 1 and Enter.*

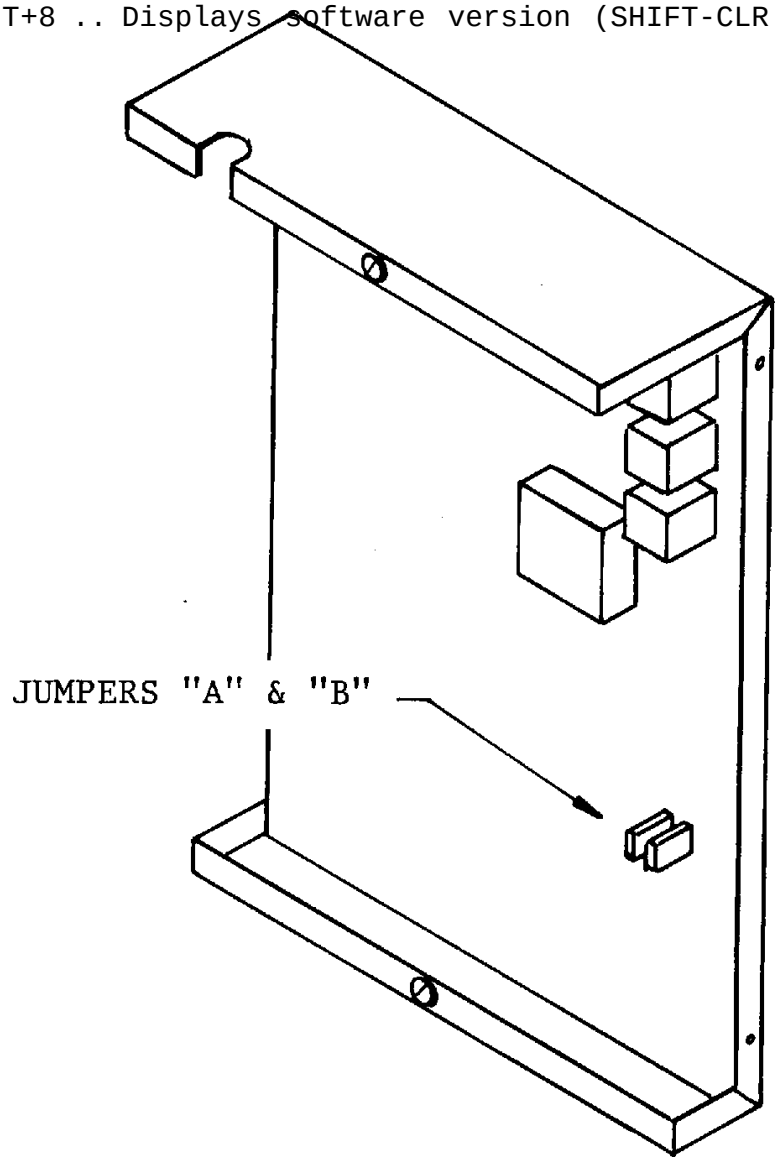
NOTE: With power removed, the parameters will be retained for approximately 100 hours. Should the power be off for a longer period of time, the parameters will have to be re-entered.

CURRENT POSITION

To “calibrate” the conveyor control to set the current conveyor position at the uploading point, key in the current position and press SHIFT + SET. The top display should now show the position that is at the unloading point.

CUSTOMIZING KEYS

SHIFT+1 .. Turns “beep” on
SHIFT+2 .. Turns “beep” off
SHIFT+3 .. Selects “shortest route” option
SHIFT+4 .. Selects “pick as entered” option
SHIFT+8 .. Displays software version (SHIFT-CLR cancels)



# OPERATING INSTRUCTIONS

Before operating the conveyor, the conveyor parameters must be entered into the control and the "current position" set. See "SETTING UP THE CONVEYOR PARAMETERS" on page 7.

To automatically seek positions on the conveyor, enter the desired position on the keyboard (it will show on the upper display). If the entry is correct, press the ENTER key to enter the position into the memory. If the entry is incorrect, press CLR and start again. A total of six positions can be in the memory at one time. These can be entered all at once or at any other time even while the conveyor is in the precess of seeking a position. Once a position is brought to the unloading point, it is automatically removed from the memory. Should incorrect positions be entered into the memory, SHIFT+CLR will remove ALL positions from the memory.

The next position that the conveyor will seek is shown in the lower display. The order that the conveyor places the entered positions into the memory depends on which option ("pick as entered" or "shortest route") was selected. If "pick as entered" was selected, the order of the positions in the memory will be the same order as they were entered. If "shortest route" was selected, the control will order the positions in the memory so that the conveyor will travel the shortest distance (shortest time) to reach all of the positions in the memory.

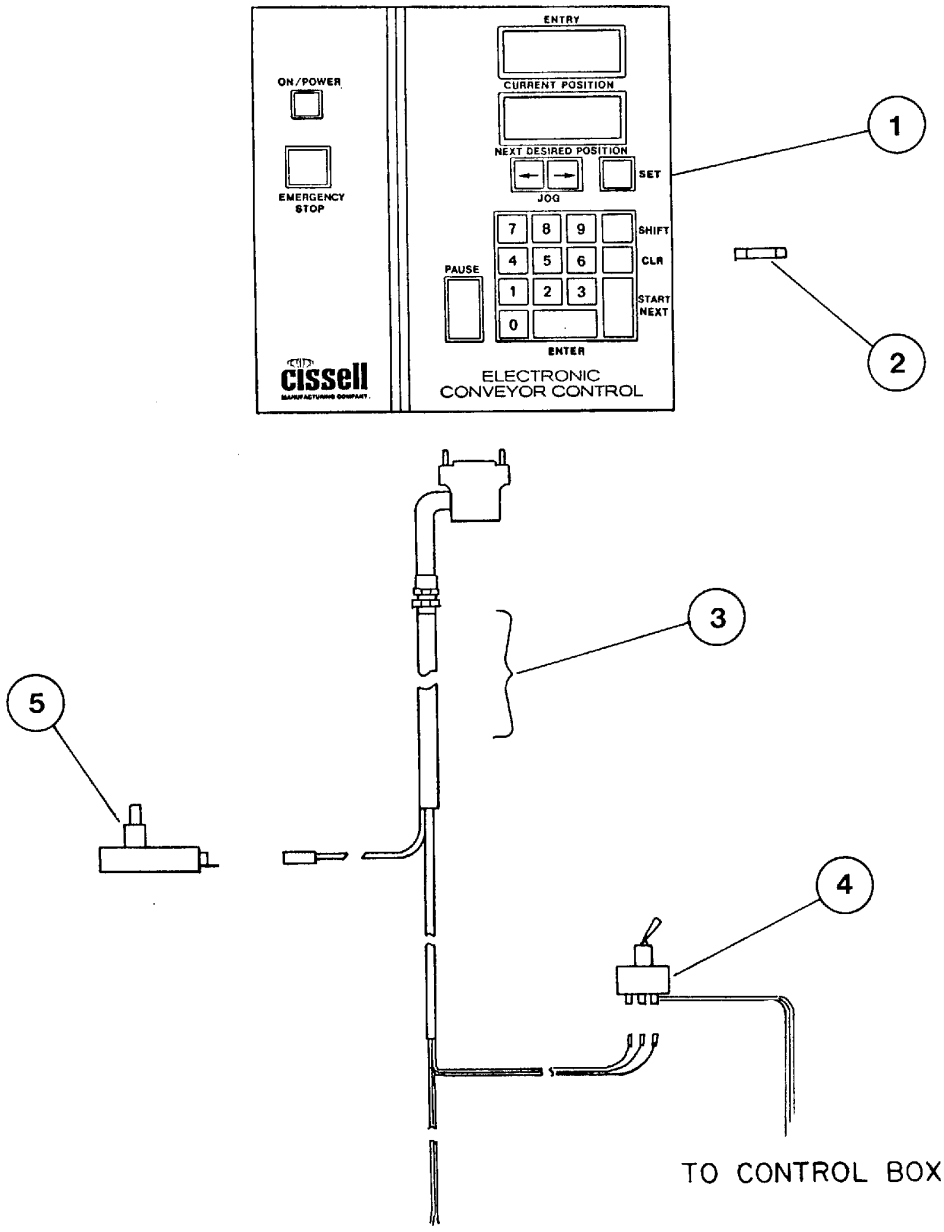
To start the seek operation press the NEXT button. When the position is brought to the unload point the conveyor will stop. Press NEXT to start the next seek operation.

Pressing the PAUSE button will interrupt the seek operation and stop the conveyor. The lower display will flash to indicate that the control is in the pause condition. To restart the seek operation press the NEXT button.

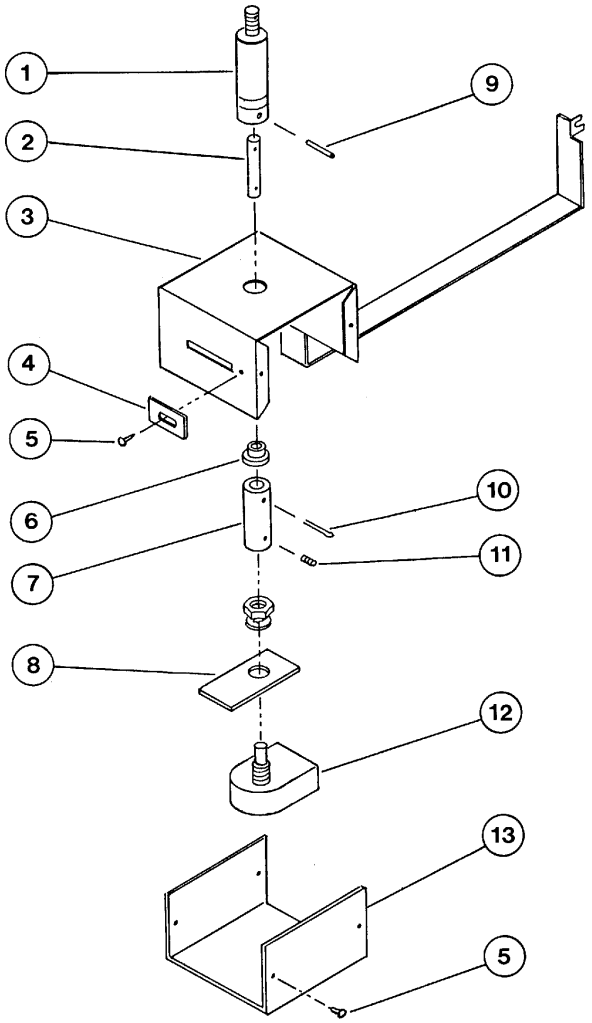
The conveyor can be operated manually by pressing and holding down one of the JOG buttons. The conveyor will run only while the button is depressed. When the button is released, the conveyor will stop. The JOG buttons are disabled when the conveyor is seeking a position. To go to manual while the conveyor is seeking a position, press PAUSE. This will interrupt the seek operation. Now the JOG buttons can be used. After completing the manual operation, press NEXT to restart the seek operation.

Pressing the EMERGENCY STOP button at anytime will immediately remove power from the control and stop the conveyor. Press ON/POWER to reactivate the control.

If "SLO" appears in the display, this indicates that there is a mechanical problem with the conveyor. The control monitors the speed of the conveyor and stops it if it detects an abnormal speed or if the conveyor is running in the wrong direction.

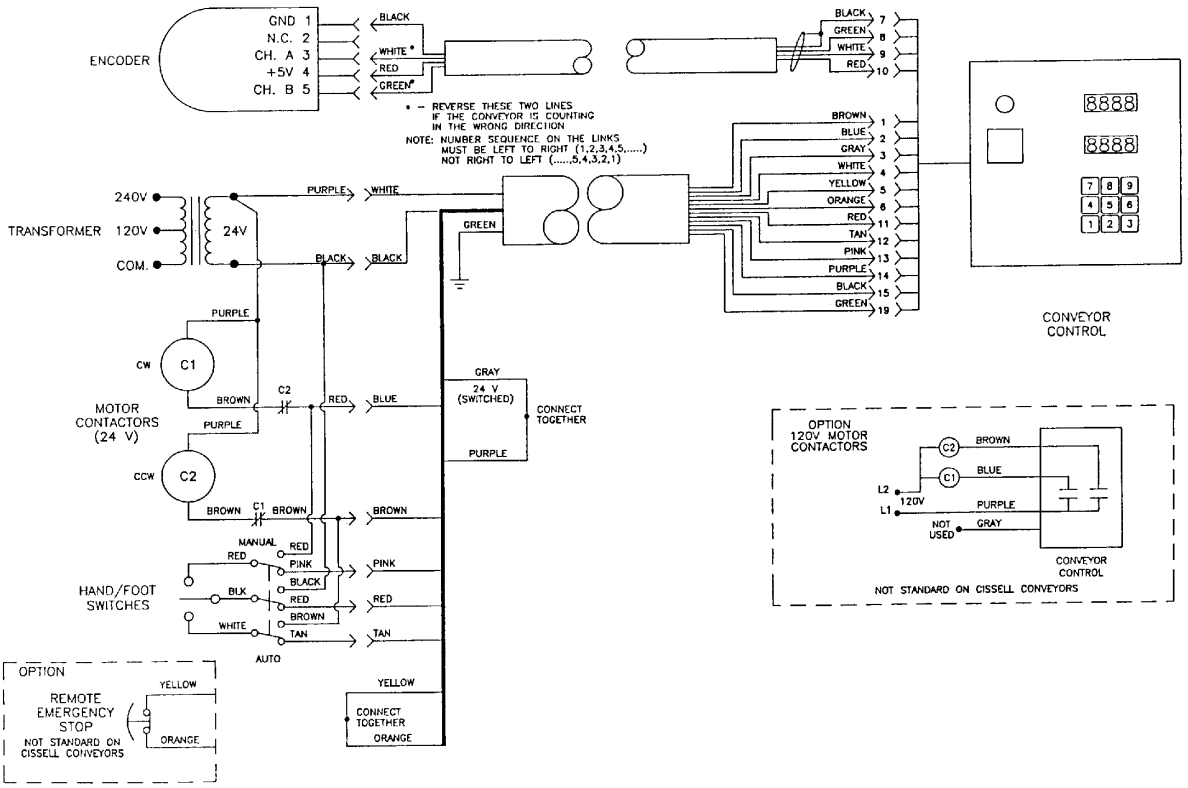


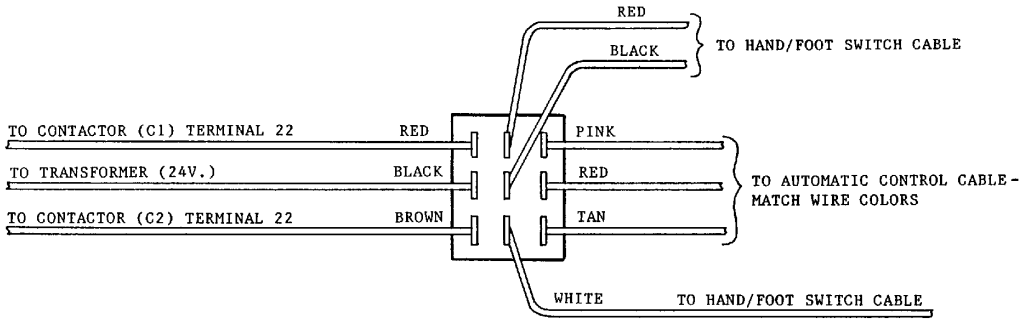

| Ref. No. | Part No. | Description |
|---|---|---|
| 1 | C2101 | Electronic Control Box |
| 2 | C2129 | Replacement Fuse |
| 3 | C2102 | Cable Assembly |
| 4 | C2126 | Switch Assembly |
| 5 | C2103 | Optical Encoder |




| Ref. No. | Part No. | Description |
|---|---|---|
| 1 | C2118 | Drive Shaft |
| 2 | C2114 | Adapter Shaft |
| 3 | C2104 | Encoder Housing |
| 4 | C2109 | Clamp Plate |
| 5 | TU7733 | Self Drill Screw |
| 6 | C2115 | Flange Bearing |
| 7 | C2116 | Adapter Cylinder |
| 8 | C2108 | Anti-Rotation Strip |
| 9 | OP546 | Roll Pin |
| 10 | 602300441 | Cotter Pin |
| 11 | C196 | Set Screw |
| 12 | C2103 | Optical Encoder |
| 13 | C2107 | Housing Cover |

# WIRING DIAGRAM




AUTOMATIC/MANUAL SWITCH
TERMINAL SIDE