

DR 4500 & DR4500A Circular Chart Recorder Motherboard Kit Replacement Instruction

Motherboard Assembly 30754919-501

Form: 44-45-33-17A
Effective: 2/95
Supersedes: 44-45-33-17 -- 3/88

Summary

Enclosed with this instruction is a motherboard assembly for either your

- DR4500 Recorder (Truline or Classic)
- DR4500A Recorder (Truline or Classic)

WARNING Never access components inside the case with the power applied.

CAUTION When handling electronic assemblies, care should be taken to avoid damage by electrostatic discharge. Use a wrist strap connected to an earth ground before removing the suspect board or withdrawing the replacement from its container and installing it into the recorder.

Removing an existing motherboard

Table 1 Procedure for Removing an Existing Motherboard.

Step	Action
1	Open the recorder door.
2	If you have a Truline recorder, press the [CHART] key. The pen arm will move to its outer limit and stop. Prompt "CHT HOLD" will appear in the lower display.
3	Remove power from the recorder.
4	Loosen the captive screw on the right side of the chart plate and swing the plate out.
5	Tag and disconnect all the cable plugs from the motherboard and all other boards plugged into it. (See figure 1 for motherboard and Option board locations)
6	Remove the ground wire connected to the post on the Main printed circuit board.
7	Remove the four screws holding the motherboard in place and lift the mother printed circuit board from the case.

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Table 2 Procedure for Installing the New or Existing Motherboard or Adding Additional Option Boards.

Step	Action
1	<p>Lay the replacement motherboard next to the existing motherboard and install the new card guides supplied with the kit into locations that match the old motherboard.</p> <p>CAUTION Install the guides with a steady downward pressure. Excessive rocking will destroy it's latch.</p> <p>ATTENTION If you are adding additional Option boards, refer to Figure 1 for board location.</p> <p><i>Refer to the instructions supplied with the Option board for installation, wiring, and calibration information</i></p>
2	<p>Orient the new Motherboard with the transformer in the upper left-hand corner. Route the A/C power feed for the option transformer under the motherboard. (See Figure 2, 3, 4, or 5)</p>
3	<p>With the A/C power feed routed under the motherboard, position the motherboard over four standoffs in the left hand part of the case and secure with four screws. Attach the ground wire to the post on the Main printed circuit board.</p>
4	<p>Plug the main transformer power connector into the secondary transformer cable plug that comes from the motherboard and then plug the complete assembly into J2 on the Main printed circuit board as shown below.</p> <div data-bbox="730 1018 1193 1461" data-label="Diagram"> <p>The diagram illustrates the wiring connection between three components. At the top is the 'J2 Connector on Main PCB' with four pins. Below it is the 'Plug from T1 Transformer on Motherboard' with four wires: green, white, black, and red. At the bottom is the 'Plug from Main Transformer' with four wires: red, black, white, and green. The diagram shows the wires from the T1 transformer plug being inserted into the J2 connector, and the wires from the Main Transformer plug being inserted into the T1 transformer plug. The number 22757 is printed at the bottom right of the diagram.</p> </div> <p>WARNING Make sure that the red, white, black, and green wires on the main transformer plug match the orientation of the same colors on the plug from the motherboard transformer when connecting them together. (red to red, white to white, etc.) Incorrect orientation of the plugs could damage the recorder.</p>
5	<p>Install any existing or new option boards onto the Motherboard.</p> <p><i>If you are adding a new Option Board, refer to the instructions supplied with the Option board for installation, wiring, and calibration information</i></p>

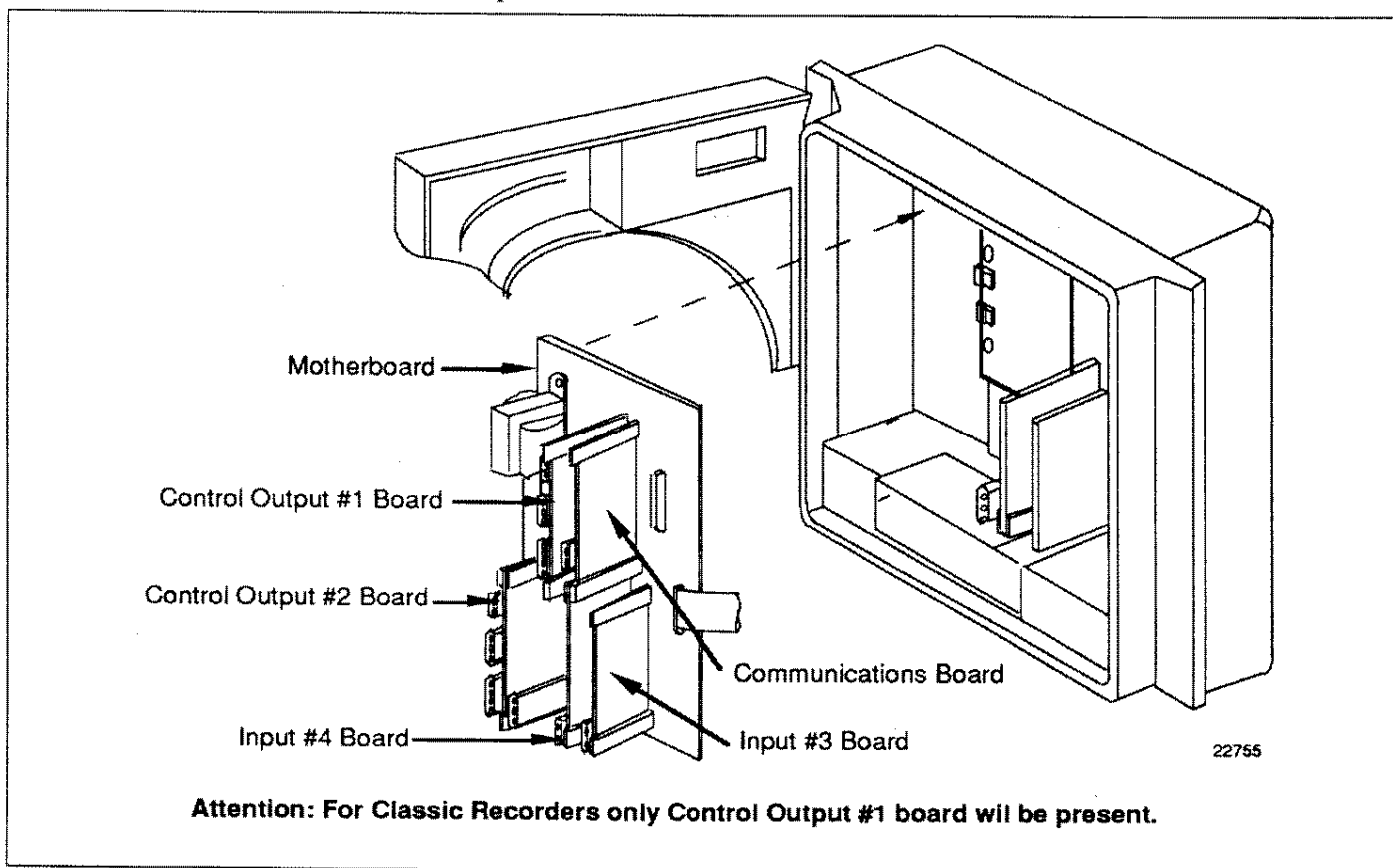
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Installing the new motherboard or adding additional option boards, continued

Table 2 Procedure for Installing the New or Existing Motherboard or Adding Additional Option Boards, continued.

Step	Action
6	Replace all the cable plugs removed in step 5 of Table 1. ATTENTION Refer to Figures 2 , 3, 4, or 5 for clarification of transformer lead destination.
6	Close the chart plate and tighten the captive screw.
7	Apply power and check the recorder operation.

Figure 1 Motherboard and Option Board Locations

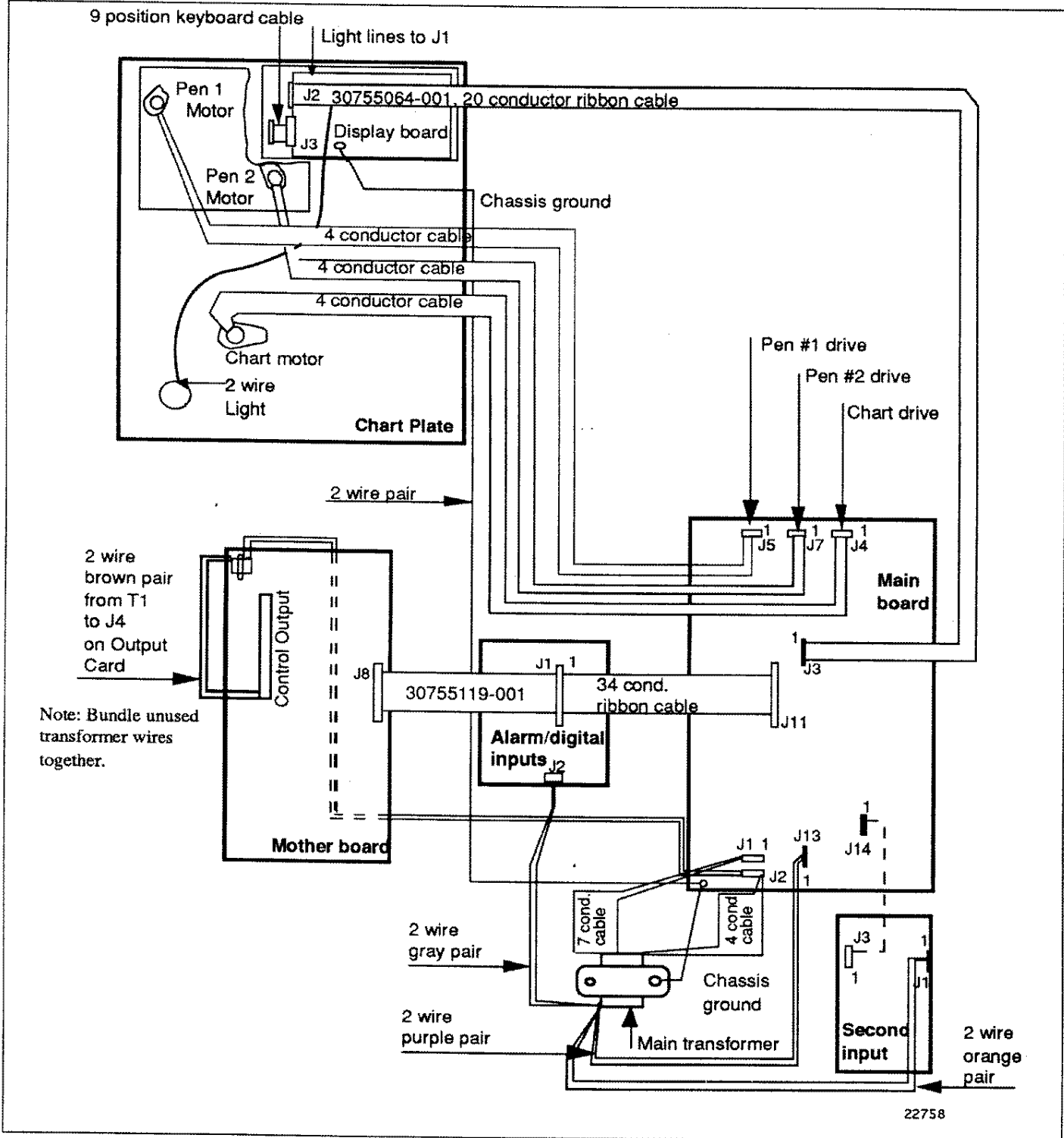


Internal Cabling Data - DR4500 Classic Recorder (Old Design)

DR4500 Classic recorder

Figure 2 is a view of the internal cabling data for a DR4500 Classic Recorder.

Figure 2 Internal Cabling - DR4500 (Old Design) Classic Recorder



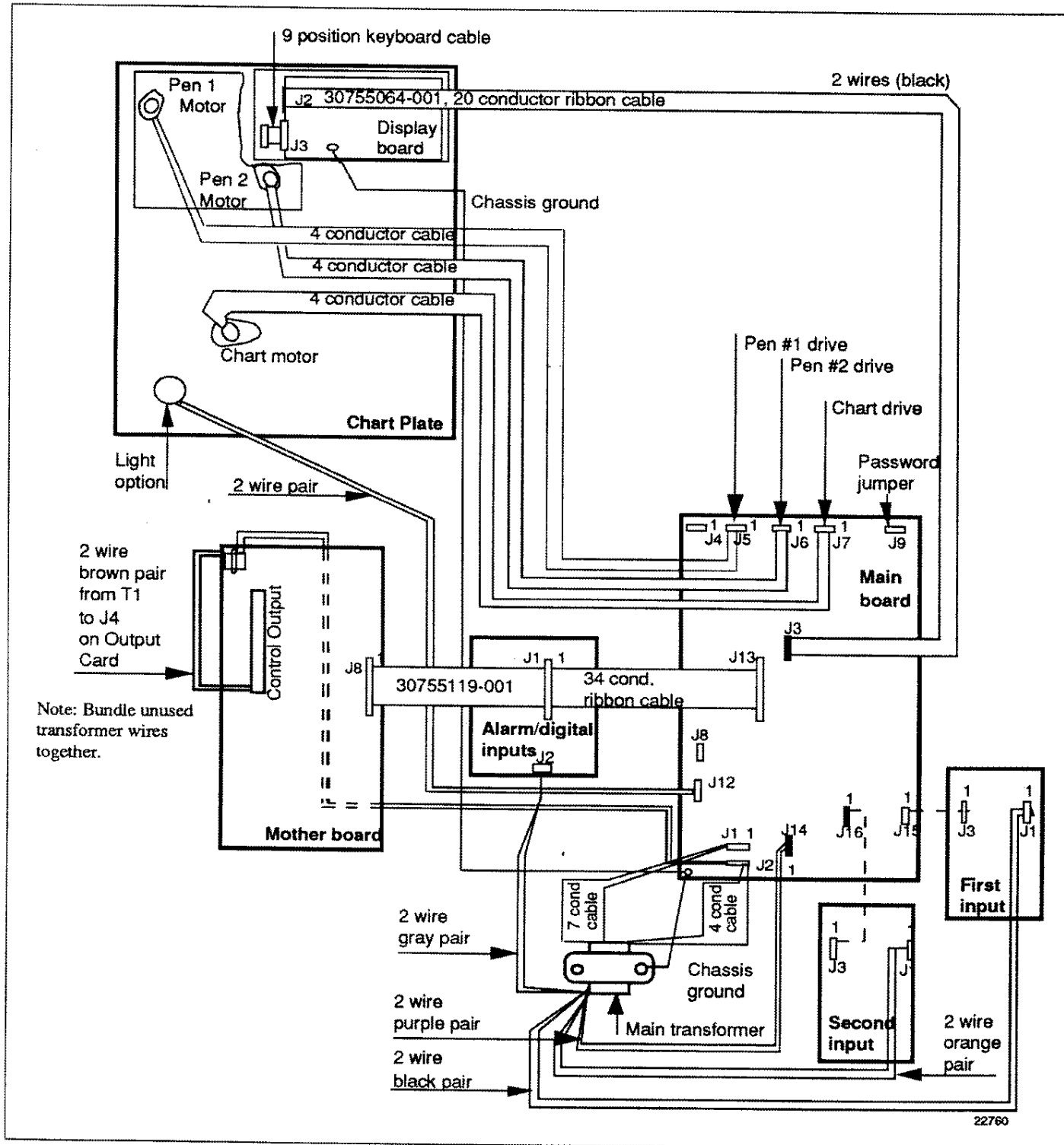
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Internal Cabling Data - DR4500A Classic Recorder

DR4500A Classic recorder

Figure 3 is a view of the internal cabling data for a DR4500A Classic Recorder.

Figure 3 Internal Cabling - DR4500A Classic Recorder



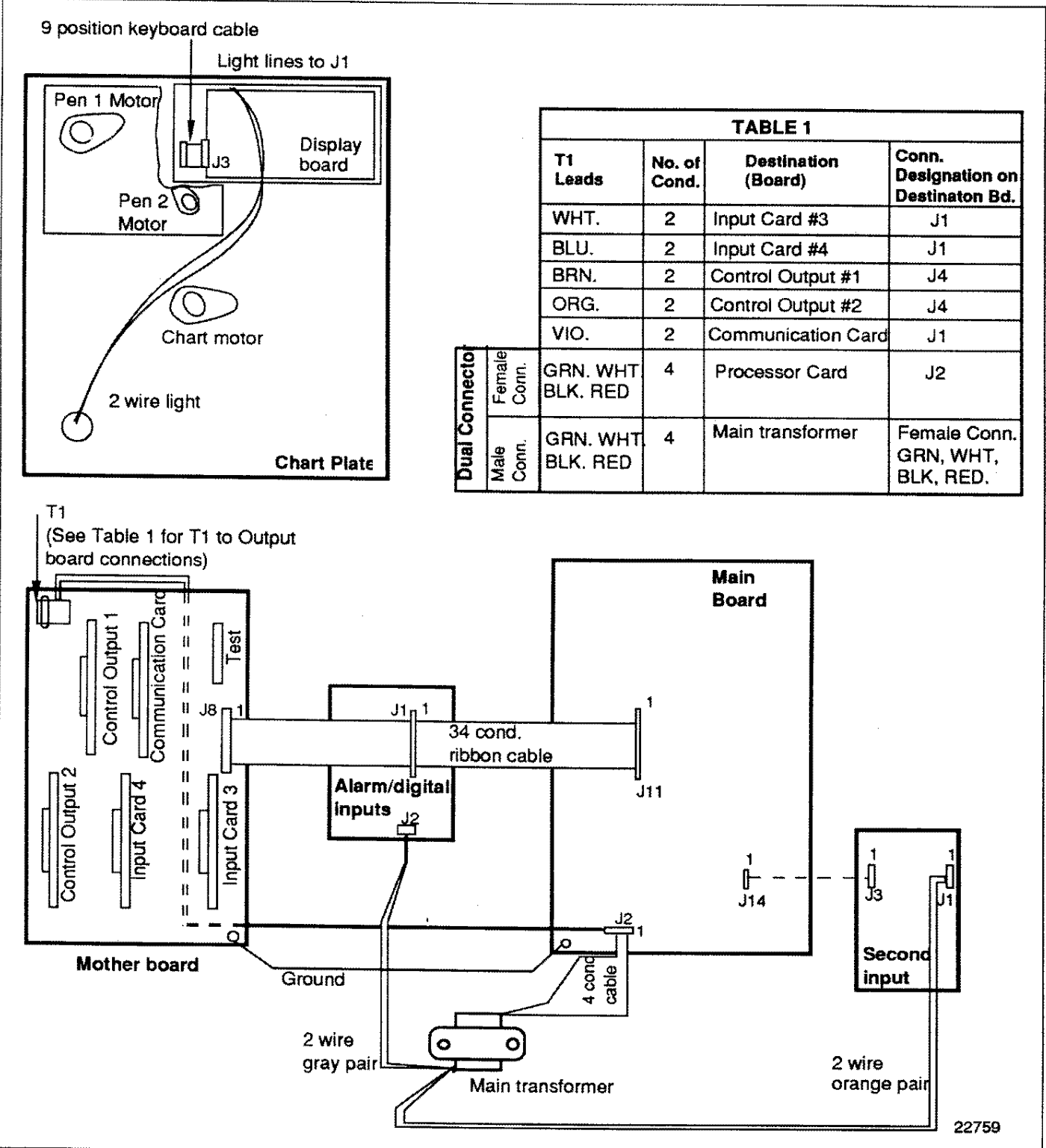
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Internal Cabling Data - DR4500 Truline Recorder (Old Design)

DR4500 Truline recorder

Figure 4 is a view of the internal cabling data for a DR4500 Truline Recorder.

Figure 4 Internal Cabling - DR4500 (Old Design) Truline Recorder



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Internal Cabling Data - DR4500A Truline Recorder

DR4500A Truline recorder

Figure 5 is a view of the internal cabling data for a DR4500A Truline Recorder.

Figure 5 Internal Cabling - DR4500A Truline Recorder

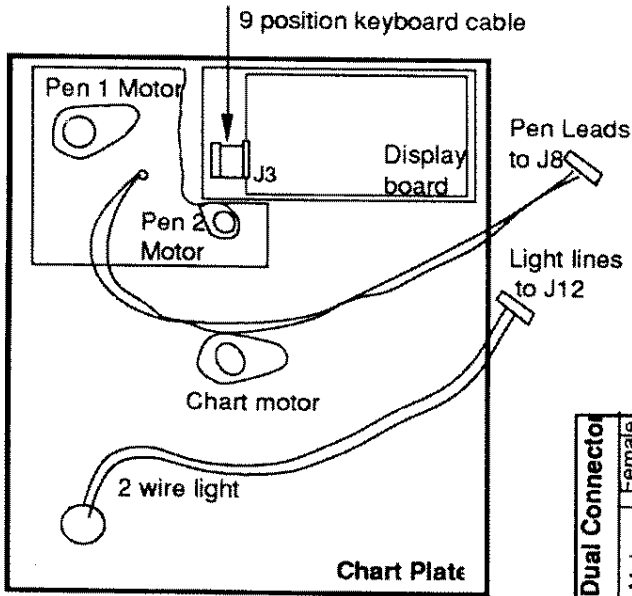


TABLE 1			
T1 Leads	No. of Cond.	Destination (Board)	Conn. Designation on Destination Bd.
WHT.	2	Input Card #3	J1
BLU.	2	Input Card #4	J1
BRN.	2	Control Output #1	J4
ORG.	2	Control Output #2	J4
VIO.	2	Communication Card	J1
Dual Connector			
Female Conn.		GRN. WHT. BLK. RED	4 Processor Card J2
Male Conn.		GRN. WHT. BLK. RED	4 Main transformer Female Conn. GRN, WHT, BLK, RED.

