

**Radio Shack**


# **Service Manual**

26-1162

## **TRS-80 MODEL III MODIFICATION KIT**

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**FIRST INTERNAL DISK DRIVE  
CATALOG NUMBER 26-1162**

CUSTOM MANUFACTURED IN U.S.A. BY RADIO SHACK  A DIVISION OF TANDY CORPORATION



## PARTS LIST

Description	Quantity	Manufacturer's Part Number	Radio Shack Part Number
Cable, Disk Ground	1	8709166	AW2533
Cable, Disk I/O	1	8709154	AW2535
Cable, 20 pos, 4.5", FF	1	8459020	AW2631
Cable, 8 pos, 8.5", FFC	1	8459108	AW2632
Clip, RICHCO, LCBS - 4R	2	8559018	AHC0071
Disk Drive	1	8790112	AXX5019
Fastex, 16402 - 04	2	8559020	AHC0073
FDC Board	1	8859029	AXX0510
Mounting Bracket (left)	1	8719106	ART3083
Mounting Bracket (right)	1	8719106	ART3086
Power Harness, Disk DC	1	8709183	
Power Supply	1	8790021	AXX6005
RF Shielding	1	8729041	ART3085
Screw, #6 - 32 x 1/2", PH	4	8569039	AHD1548
Screw, #6 x 3/8", plastite	6	8569047	AHD1552
Screw, #8 - 32 x 1/2", PH	4	8563078	AHD2307
Tab, Ground, PS Conn.	1	8529019	AHC0325
Washer, #6, flat	4	8589017	AHD8514
Washer, #8, flat	4	8589016	AHD8513

## DISASSEMBLY

1. Remove all cables from the bottom and rear of the Computer and position the Computer on its rear panel. Remove the ten screws from the case bottom. Hold the case together as you take out the last few screws.
2. Position the Computer upright and remove the #6 screw and washer from the top of the back panel of the Case.
3. Carefully remove the Case Top, lifting straight up and off to the left (if facing the video screen). Disconnect all cables connecting the video assembly to the computer and set the Case Top aside.
4. Remove all cables connecting the CPU Board (main DC power harness, CRT wiring harness, keyboard and cassette cables, and RS-232 inter-connect cable if used).
5. Remove the five screws fastening the CPU Board (two in upper right corner, three on bottom). Remove the small Board Mount Support Bracket and its two screws from atop the metal chassis bracket.
6. Make sure all cables to the CPU Board have been disconnected. To remove PC Board, press the small tabs on the plastic spacer mounts (RICHCO clips) through the mounting holes in the PCB and gently pull the CPU Board off.

## PROCEDURE

1. Install the two RICHCO clips (plastic spacer mounts) and the two Fastex clips in their positions on the left-hand side of the metal chassis bracket. See Figure 1.
2. Install the FDC Board (with J4 upward) onto the plastic RICHCO clips and fasten the bottom part of the Board using two #8 x 3/8" screws.
3. Attach the appropriate connector of the Disk DC Power Harness (see Figure 2) to J3 on the FDC Board.
4. Note that two of the connectors on one end of the Disk I/O cable has some pins missing and the connector on the other end of the cable has all its pins in place. Connect the end with all pins in place to J4 of the FDC Board so that the cable is coming out away from the metal chassis bracket.
5. Connect one end of the 4.5", 20 position FFC cable to J2 on the FDC Board.
6. Make sure that all unconnected ends of the cables are placed over the metal chassis bracket. Replace the CPU Board onto the plastic spacer mounts (RICHCO clips) and fasten the bottom part of the Board and upper right corner using five #8 x 1/4" screws.

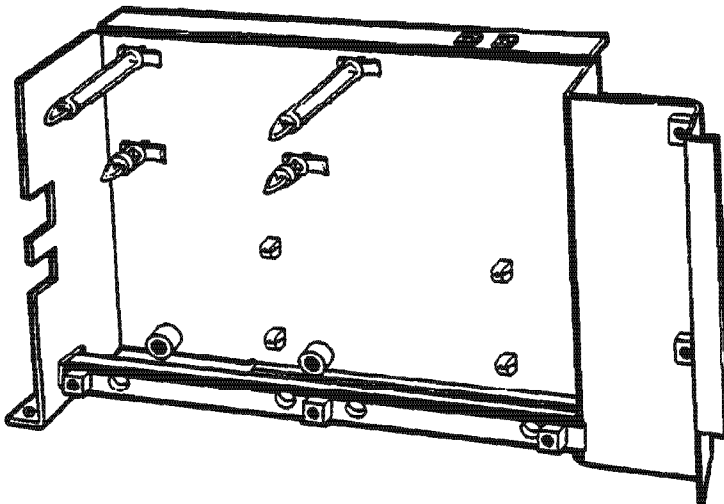


FIGURE 1. RICHCO AND FASTEX CLIP POSITIONING

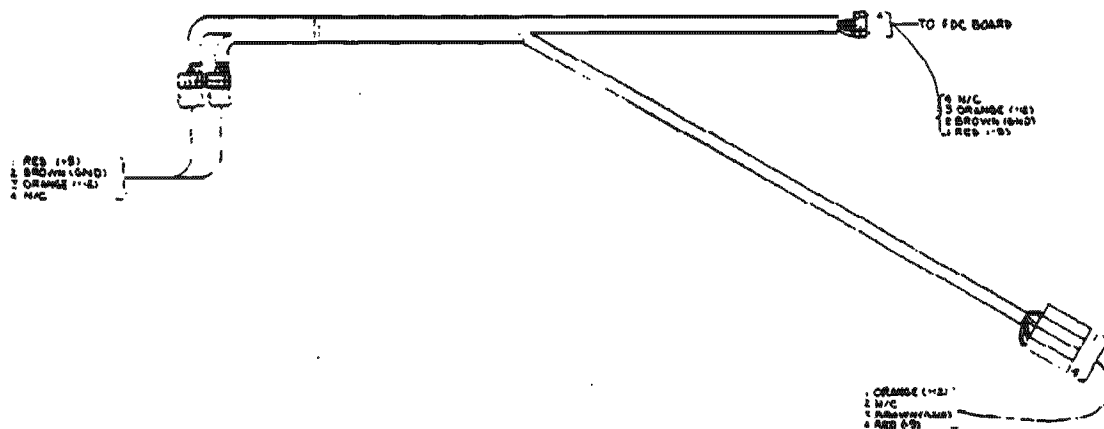


FIGURE 2. DISK DC POWER HARNESS

7. Connect one end of the 8.5", eight position FFC cable to JP1A on the CPU Board. Bend the cable so as to make it flat (see Figure 3) and connect the other end to JP1B.
8. Reconnect cables to the CPU Board (main DC power harness, CRT wiring harness, and cassette cables). Do not connect the keyboard cables at this time. Lay it beside the computer case so it will not be in the way when mounting

the Disk Brackets. Don't forget to connect the RS-232 inter-connect cable if used, or the FDC inter-connect cable which connects to J7 on the CPU Board.

9. Attach the small Board Support Bracket to the metal chassis bracket with two #8 x 1/4" screws.

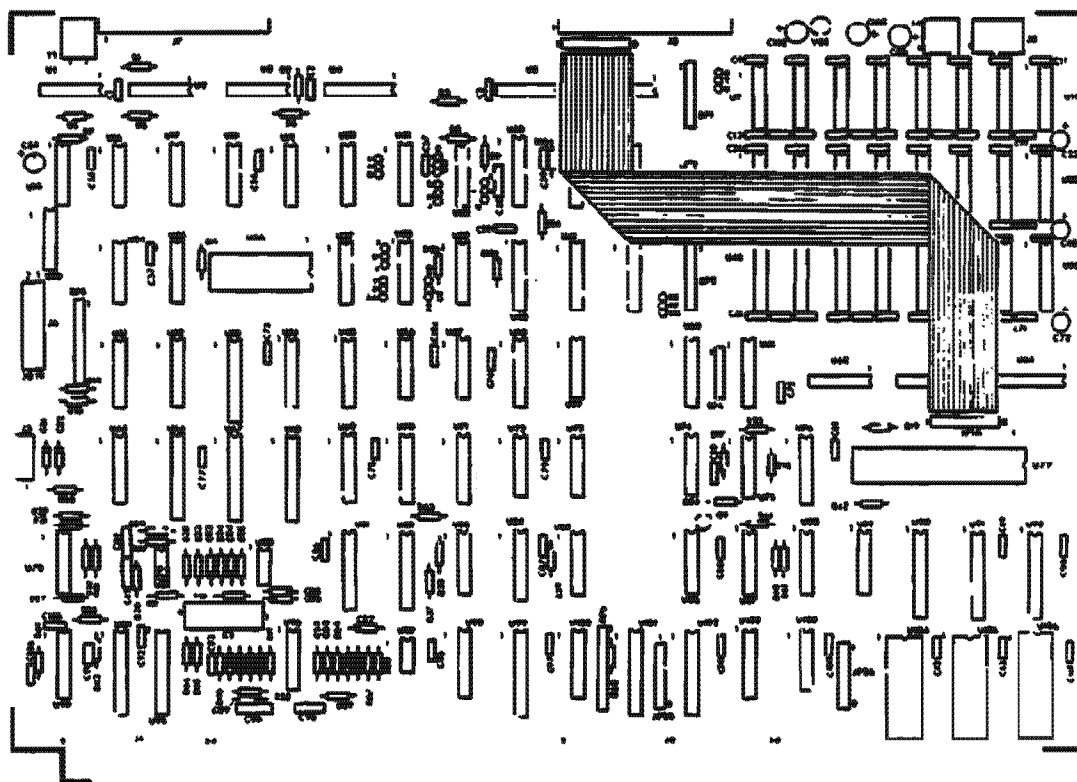
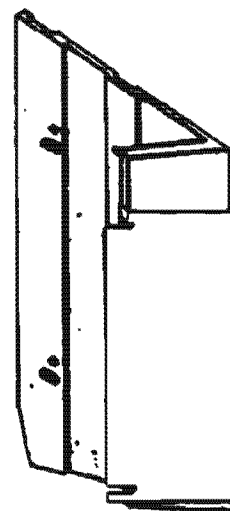


FIGURE 3. EIGHT POSITION CABLE BETWEEN JP1A AND JP1B

10. Now find the left Disk Mounting Bracket (the taller of the two brackets) and install the RF shield around the Bracket as shown in Figure 4. Bend the tabs around the rear of the Bracket to hold the shield in place.
11. Attach the Disk Mounting Brackets to the Case Bottom (stubby rests positioned inward) using four #8 flat washers (two for each bracket).
12. Position the Keyboard cable between the two brackets and connect it to the CPU Board.

FIGURE 4. LEFT DISK BRACKET WITH SHIELD



13. Attach the large connector of the Disk DC Power Harness to J2 on the Disk Drive PC Board.
  14. Find the Disk Ground Cable and notice that one end has two connectors close together. This is the Disk Drive end. Connect the end connector on the Disk Drive end to the grounding tab on the disk drive chassis. Attach the *other end* of the ground cable to the main ground tab to the left on the metal chassis bracket.
  15. Attach the bottom connector of the Disk I/O cable to the Disk Drive PC Board (J1). The other connector will remain unattached.
  16. Position the Disk Drive in the bottom position between the Mounting Brackets and fasten the Drive using four #8 x 1/2" screws and four #8 flat washers. Be careful not to tighten the screws too tight. Refer to Figure 5.
  17. Position the Disk Power Supply (with power connectors SK-2, 3, and 4 positioned upward) on the left Disk Mounting Bracket. Fasten using four #6 x 1/2" screws and four #8 washers. Refer to Figure 5.
- NOTE: The ground lug must be installed underneath the Board when the screw is installed in the lower right-hand position (at the ground symbol).
18. Attach the two connectors of the Disk DC Power Harness to SK2 and SK3 on the Power Supply Board.
  19. Connect the middle connector of the Disk Ground Cable to the ground tab on the lower right of the Power Supply.
  20. Connect the unattached connector of the AC Power Harness to SK1 on the Power Supply Board.

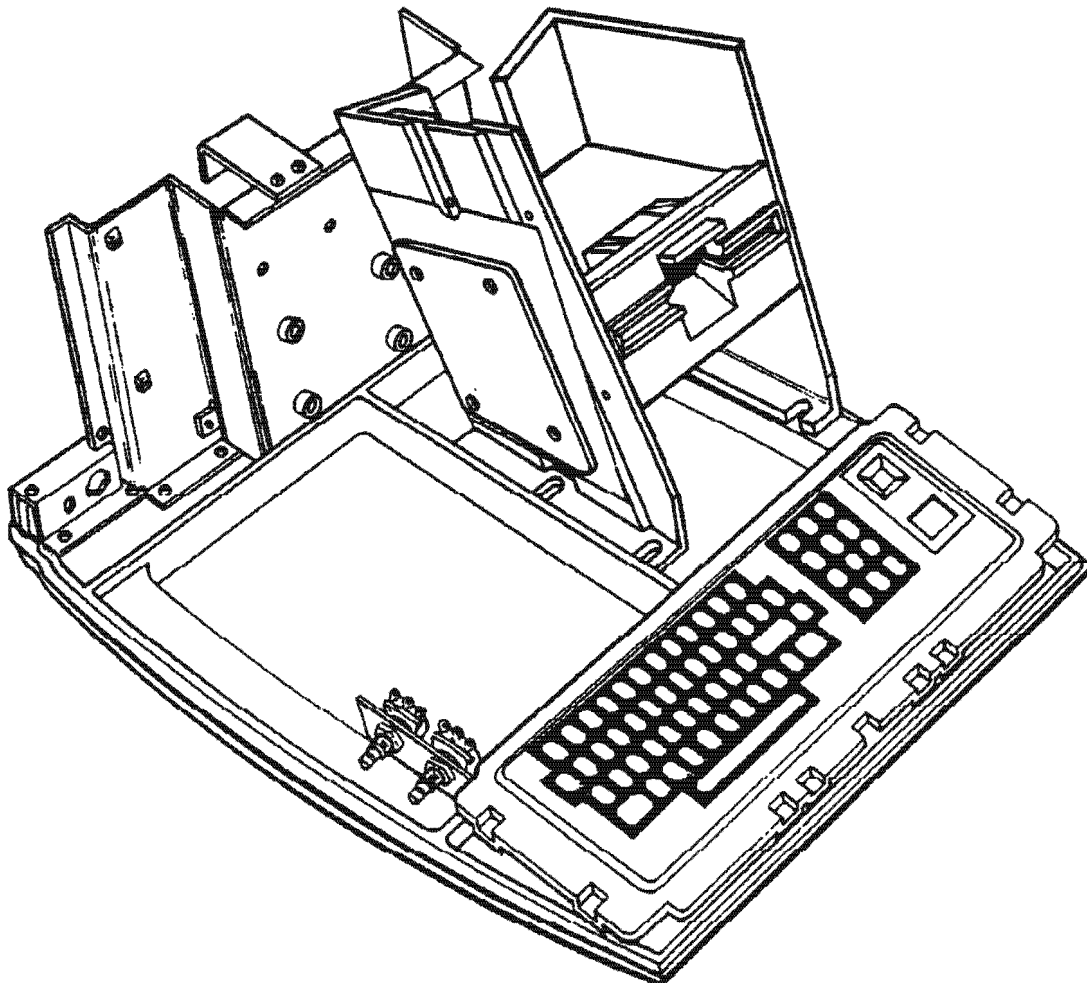


FIGURE 5. DISK DRIVE & DISK POWER SUPPLY  
IN POSITION

21. Use a pair of large dykes to cut the bottom position insert in the Case Top as illustrated in Figure 6. After the insert is cut loose, remove it by pushing on it from outside of the case. Trim off the rough edges around the opening.
22. Check back over your work and see that all cables are properly connected. Reconnect the video unit and power up the Computer. Check the unit's operation. After unit is proved working correctly, turn power switch off and disconnect the AC line cord.
23. Carefully place the Case Top over the Case Bottom. Do not hit the CRT neck. It could implode or break off. Install the #8 screw and flat washer in the top of the rear panel of the Case Top.
24. Carefully rest the Computer on its rear panel and replace the five 1" sheet metal screws toward the rear, three 7/8" machine screws along the front, and two 1" machine screws in the remaining positions.
25. *Don't forget to put on the authorized Radio Shack seal to maintain the warranty.*

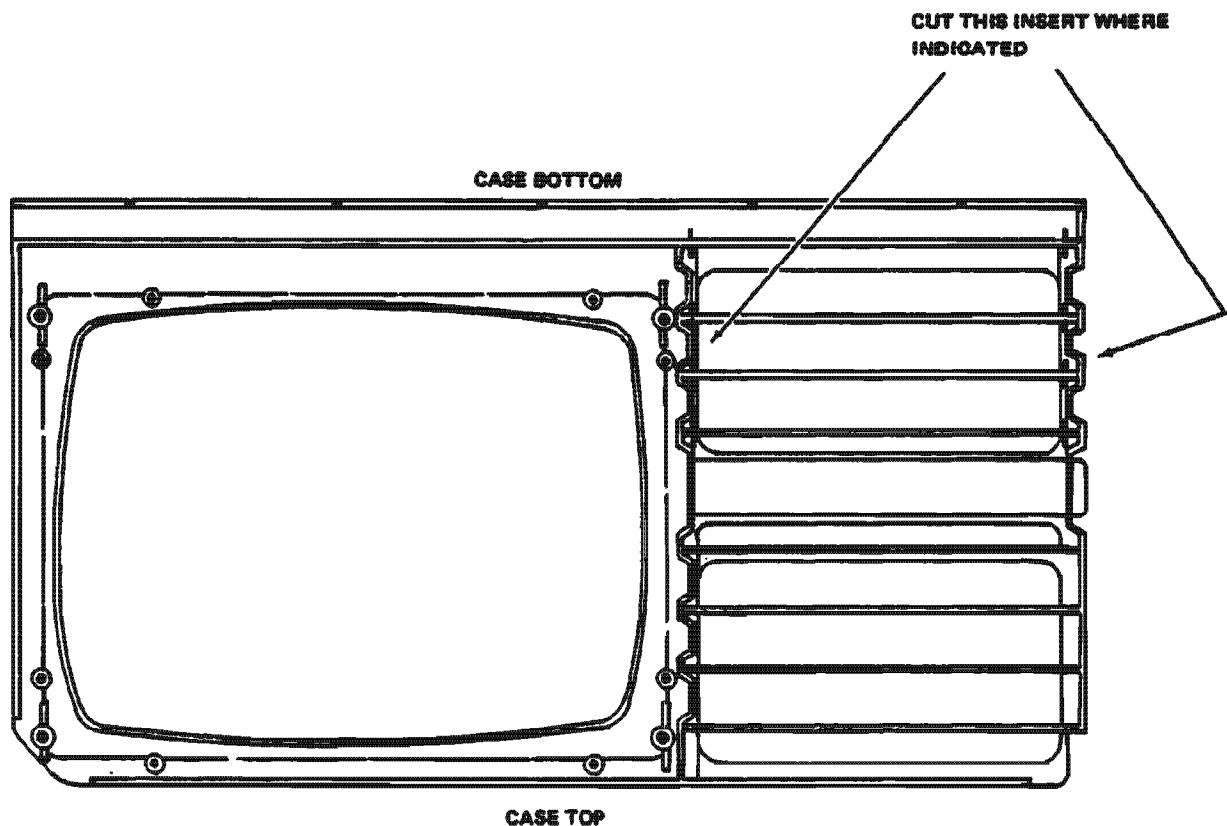



FIGURE 6. CASE BEZEL (shown looking inside Case with Case Top upside down)

**RADIO SHACK**  **A DIVISION OF TANDY CORPORATION**  
**U.S.A.: FORT WORTH, TEXAS 76102**  
**CANADA: BARRIE, ONTARIO L4M 4W5**

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**TANDY CORPORATION**

<b>AUSTRALIA</b>	<b>BELGIUM</b>	<b>U. K.</b>
280-316 VICTORIA ROAD RYDALMERE, N.S.W. 2116	PARC INDUSTRIEL DE NANINNE 5140 NANINNE	BILSTON ROAD WEDNESBURY WEST MIDLANDS WS10 7JN