AD-4712

Moisture Balance

Maintenance Manual Supplement

AD-4712 Maintenance Supplement June 1989

* Heater Unit Replacement
* Temperature Sensor Replacement
* Drawings

A&D Company, Limited

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Heater Unit Replacement Procedure

❑ Before Starting

There are two versions of the AD-4712, those with the heat sensor positioned at 9 o'clock, and those with it positioned at 7 o'clock (See Figs. 1 &2). After opening the heater cover, please note the position of the temperature sensor. The internal microprocessor of the unit is set to work with one particular version of sensor, so it is important to replace the unit with the same kind of sensor.

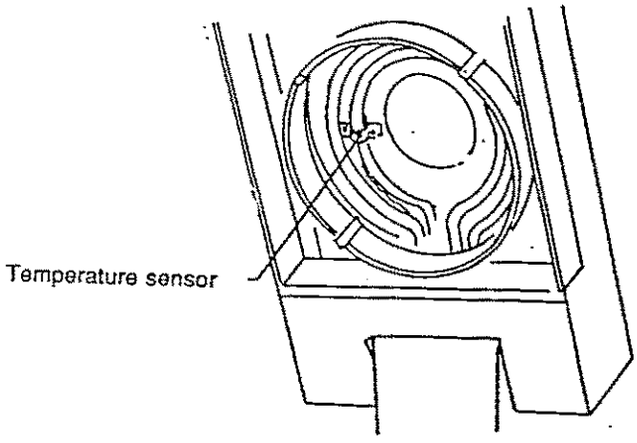


Fig. 1

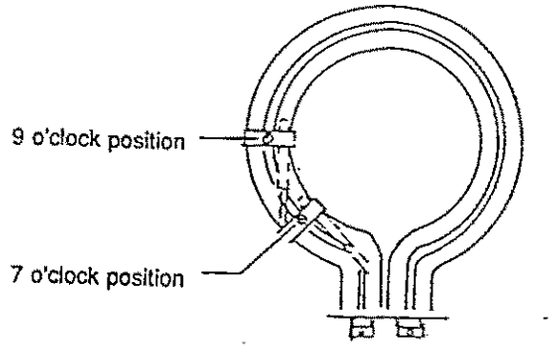


Fig. 2

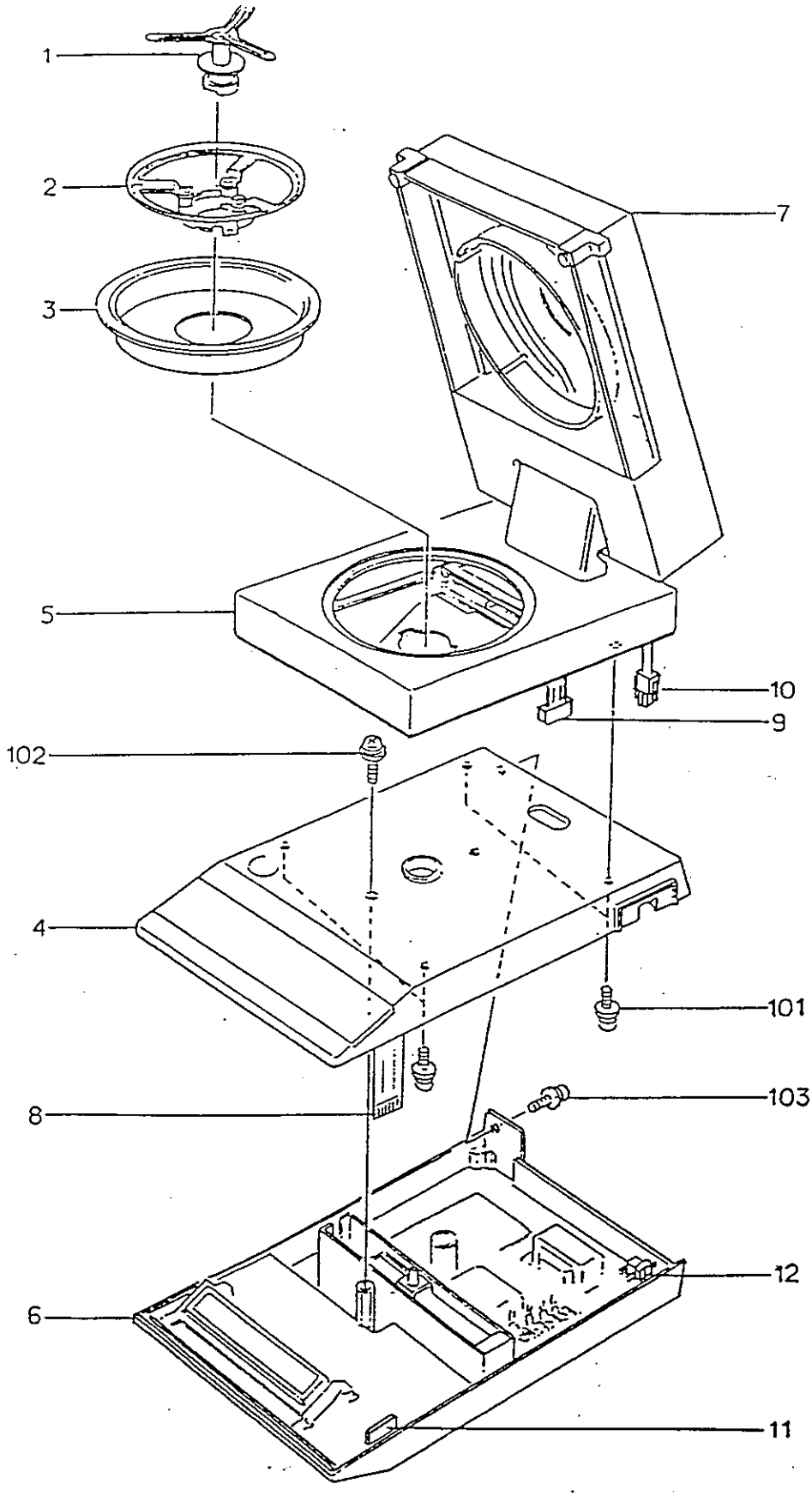


Fig. 3

❑ Changing the Heater Unit

1. Turn off the main power switch and unplug the unit.
2. Remove the weighing pan support **(1)**.
3. Remove the weighing pan support holder **(2)**.
4. Remove the weighing pan cover **(3)**.
5. Unscrew screw **102** (M4 x 12).
6. Unscrew screws **103** from the back panel of the unit (See Fig. 4).
7. Affix a piece of tape to the front of the heater unit as shown in Fig. 5 so that the heater cover will not open accidentally.
8. Holding down the power switch, gently lift the upper case of the balance **(4)**.
9. Disconnect the key switch connecter **(8)** at the front right side of the balance from the J2 connector **(11)**.
10. Disconnect the heater cable **(10)** at the rear left side of the balance by pressing the levers and pulling gently (See Fig. 6).
11. Remove cable **(9)** at the rear left side of the balance.
12. Turn over heater cover **(7)**, and remove the four screws **(101)** (M4 x 12). Separate the heater unit from the upper case of the balance.
13. Take the two cables **(9)(10)** from the new heater unit and pass them through the hole at the rear of the upper case of the balance.
14. Reassemble the unit by carrying out steps 2 through 12 in reverse order.

> **Caution!** Ensure that the connectors are properly connected; ie. not in backwards or half inserted. (See Fig. 7)

15. Check that the unit is operating correctly. A sample is not required.

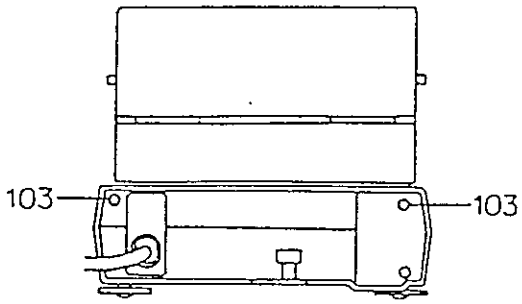


Fig. 4

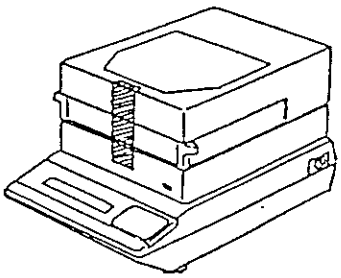


Fig. 5

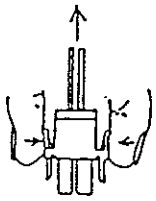


Fig. 6

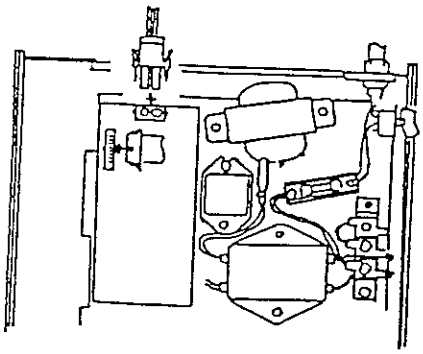


Fig. 7

Temperature Sensor Replacement Procedure

❑ Before Starting

There are two versions of the AD-4712, those with the heat sensor positioned at 9 o'clock, and those with it positioned at 7 o'clock (See Figs. 8&9). After opening the heater cover, please note the position of the temperature sensor. The internal microprocessor of the unit is set to work with one particular version of sensor, so it is important to replace the unit with the same kind of sensor.

Please ensure that the following new parts are available.

1.	Temperature sensor	SS-37-G-100	1 piece
2.	Temperature sensor connector assembly	#112346,#112347	1 set
3.	Temperature sensor connector assembly screws	M3 x 6	2 pieces
4.	Heat shrink tube	ø3 x L20	2 pieces
5.	Tie wrap	L80	1 piece
6.	Rubber feet	#850189	2 pieces

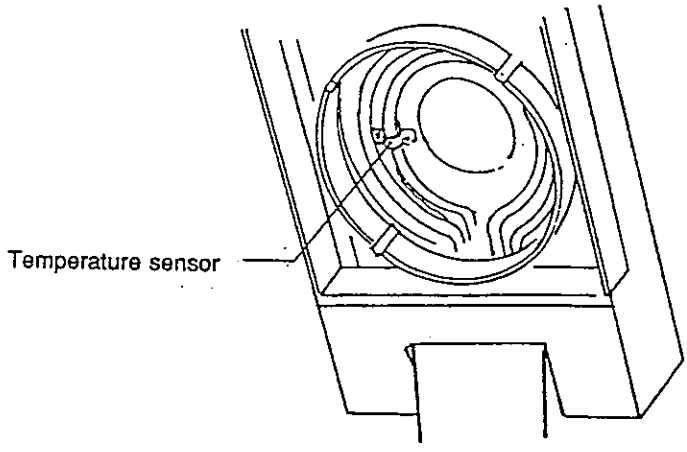


Fig. 8

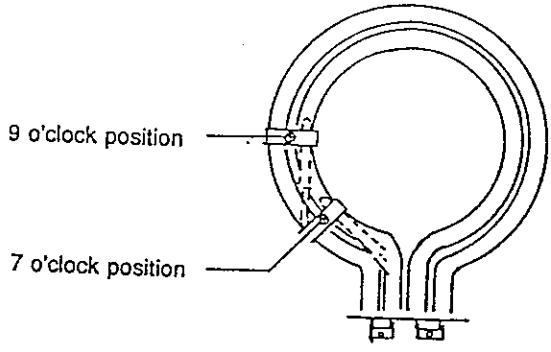


Fig. 9

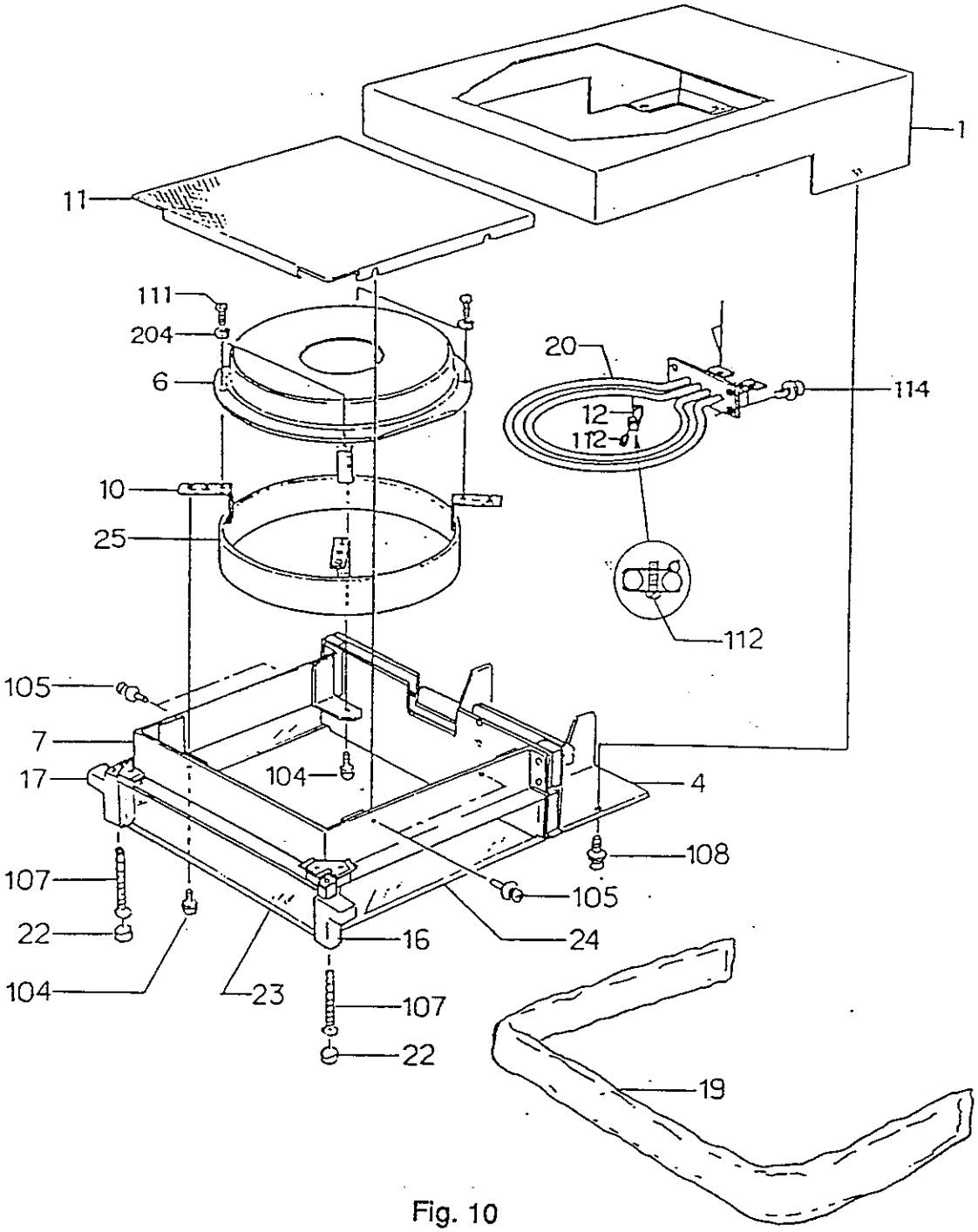

1
11
111
204
6
10
25
20
114
12
112
112
105
7
17
104
4
108
107
105
22
16
24
104
23
107
22
19

Fig. 10

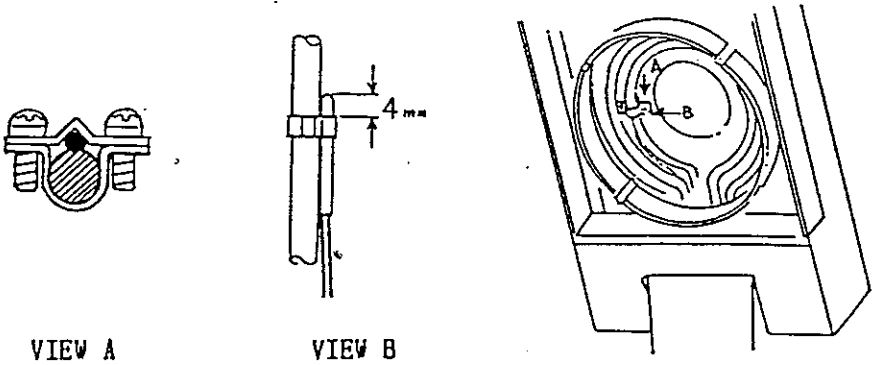

4 mm
A
B
VIEW A
VIEW B

Fig. 11

❑ Changing the Sensor

1. Turn off the main power switch and unplug the unit.
2. Use your fingernail to remove the two rubber feet **(22)** from the heater cover **(1)**.
3. Unscrew the two screws **(107)** (M3 x 40)
4. Unscrew the two screws **(108)** (M3 x 6)
5. Lift heater cover **(1)**.
6. Unscrew the four screws **(105)** (M3 x 6).
7. Remove the heat radiation plate **(11)**.
8. Remove the the four screws **(111)** (M2 x 4) together with the four spring washers **(204)** (ø2).
9. Remove the reflector **(6)**.
10. Loosen the screw **(112)** (M3 x 10).
    a)Remove the temperature sensor connector assembly **(12)** using needle-nosed pliers.
    b)If the screw **(112)** does not come out, you may cut it.
11. Separate the temperature sensor from the connector.
12. Cut the tie wrap on the wire clamp.
13. Cut the lead connecting the temperature sensor to the heat shrink tube, and discard the temperature sensor.
14. Attach the new temperature sensor to the upper part of the heater unit **(20)** (See Fig. 11).
    a) Connect the new sensor is the same way the old one was connected.
    b) Use the new connector assembly and screws.
15. Remove the insulation from the leads of the temperature sensor and the brown cable of the connector assembly (which was cut in step 13). (Refer to Fig. 5 for steps 15 through 20.)
16. Slide the heat shrink tube onto one of the leads as shown in Fig. 12.
17. Bend both of the leads as shown in Fig. 12.
18. Connect the temperature sensor and the brown cable of the connector assembly as shown in Fig. 12. Pinch the connection using needle-nosed pliers. (There is no plus/minus.)
19. Solder the connection.
20. Slide the heat shrink tube over the connection, and apply heat to seal the connection.
21. Use the tie wrap to hold the wires together (See Fig. 13).
22. Reassemble the unit by carrying out steps 1 through 9 in reverse order.
23. Reassemble is completed. There is no need to adjust the unit.

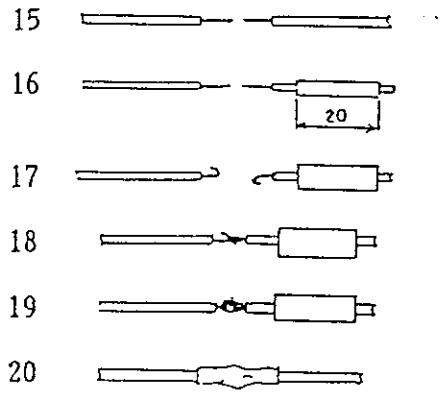


Fig. 12

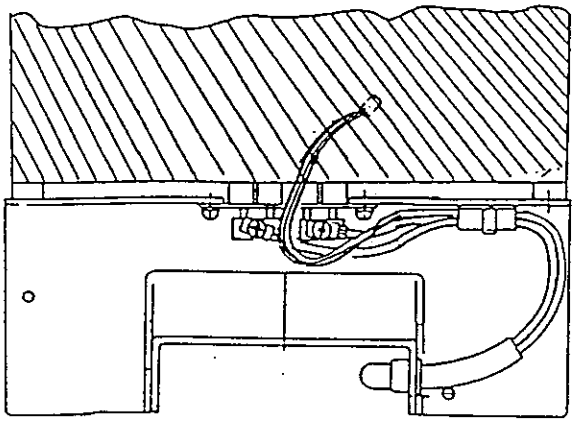
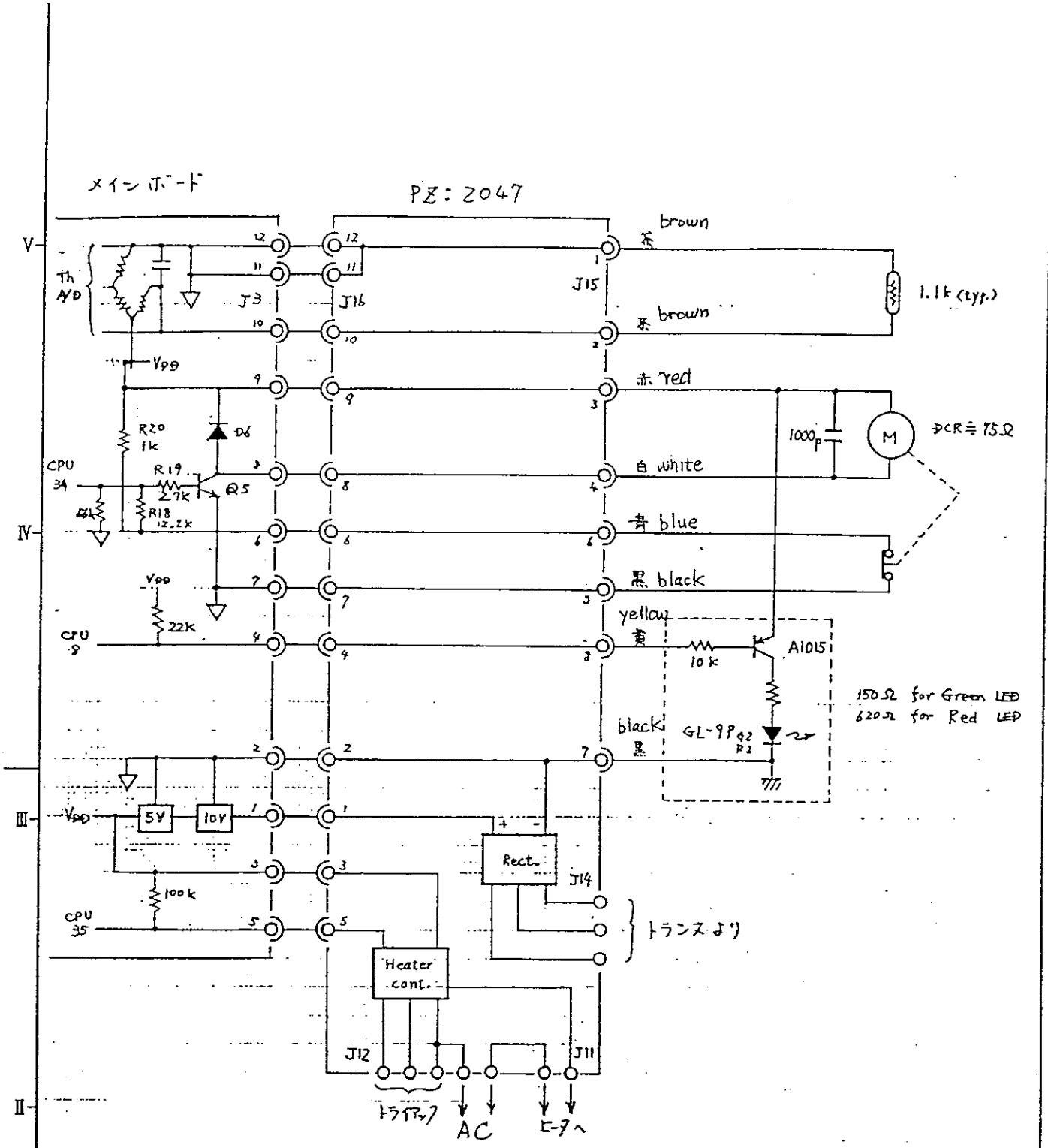


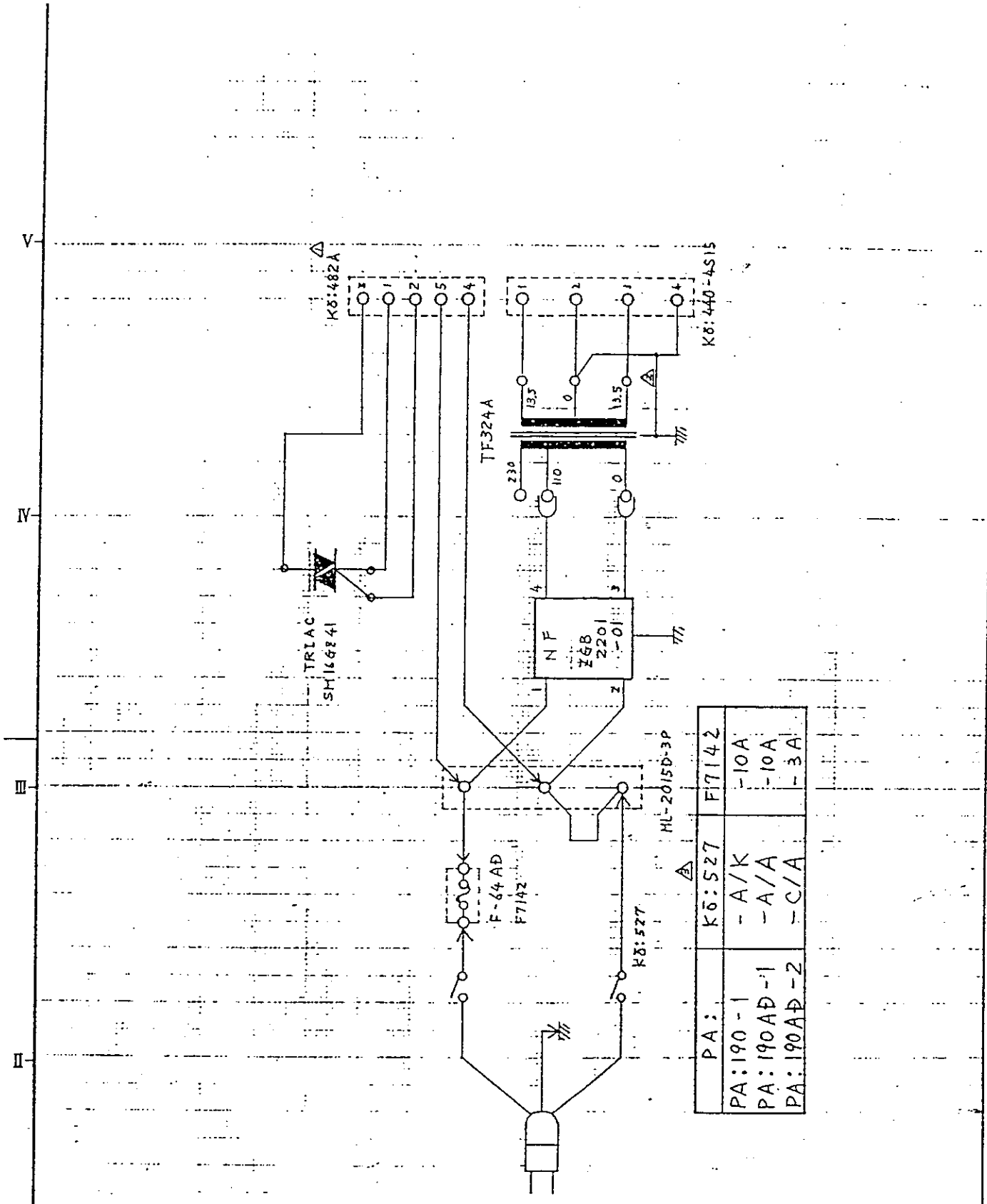
Fig. 13



記号	月日	担当	改連No.
設置			

/					機種名 AD-4712
尺度	公差%	材質		処理	部品表
製図	設計	検図	承認	入庫	名称 加熱部 接続図
二ツ橋 17 Jan. '88					ストックNo.
					図番
A&D CO., LTD.					適用ロット

3007



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⚠2	870612	ミハシ	308824
⚠1	870508	ミハシ	308611
設置			

1/					機種名 AD-4712
尺度	公差%	材質		処理	部品表
製図	設計	検図	承認	入庫	名称 サブシャーシ
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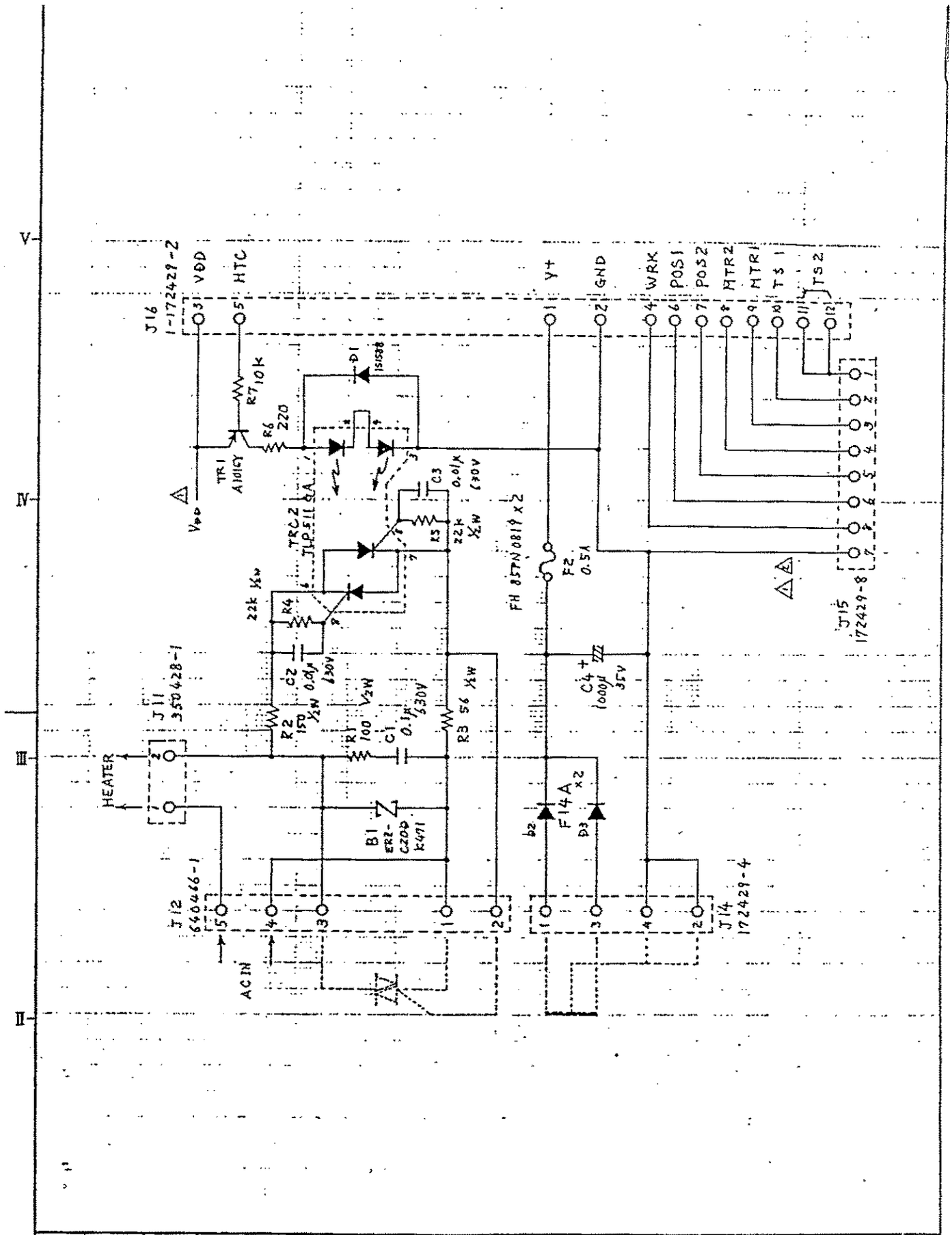
					図番 EC0-00151
					適用ロット

A&D CO., LTD.

3007



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設置			

尺度	公差%	材質	処理
1/			

製図	設計	検図	承認	入庫
三橋	5, Feb '87			

機種名	AD-4712
部品表	
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適用ロット	

A&D CO., LTD.

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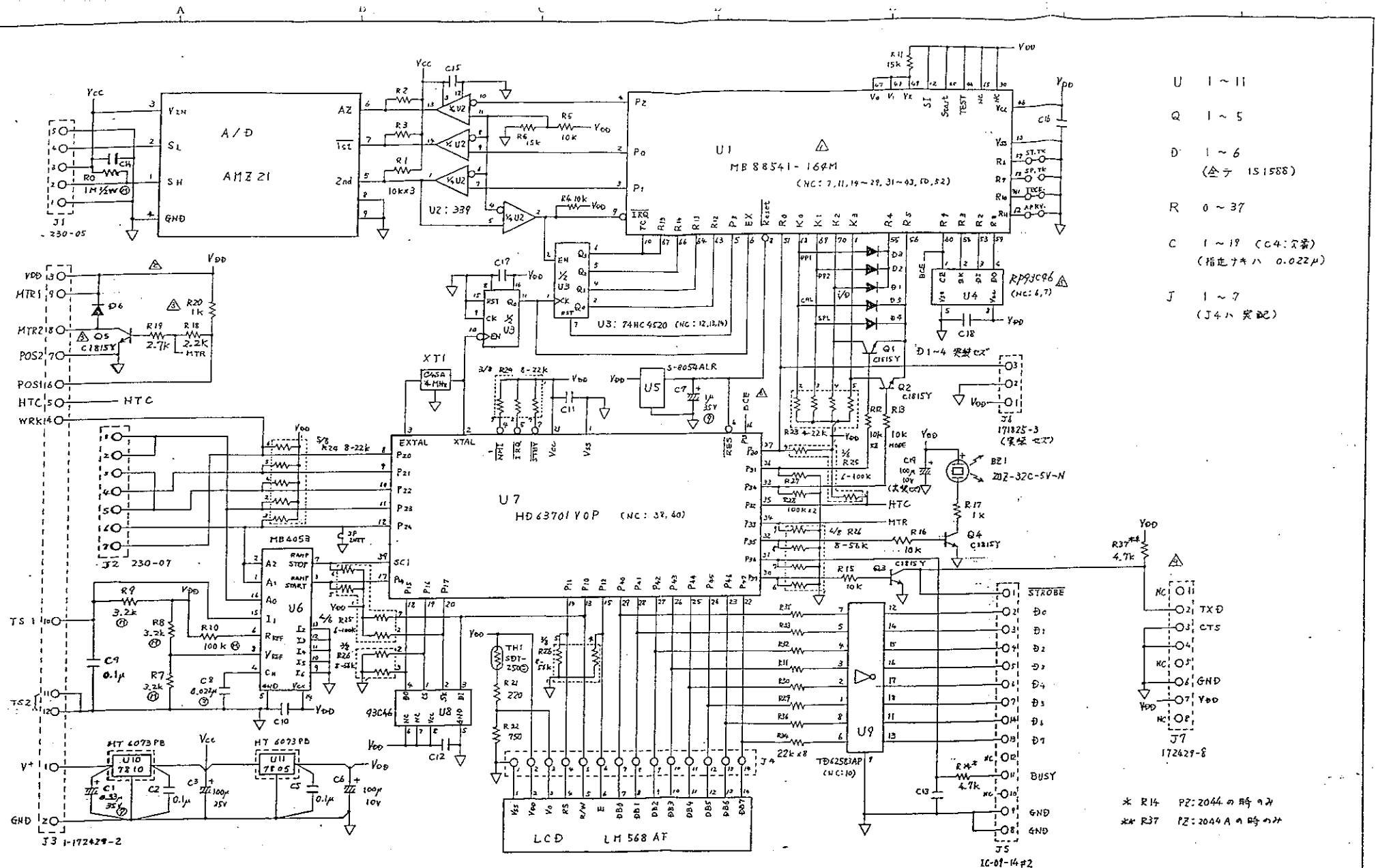

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A	870603	ミハシ	308773
A	870516	ミハシ	308703
A	870407	ヤマ	308664
設通			

尺度	公差	材質	処理
製図	設計	検図	承認	入庫
三	27, Apr. '87 橋			
	10. Feb '87			

3001

機種名	AD-4712
部品表	
名称	メインボード
ストックNo	PZ : 2044 (A)
図番	EC_3 - 01163
適用ロット	

A&D CO., LTD.