AR2500 SERVICE
INFORMATION

AR-2500 感度 S/N

受信周波数	SINAD 12dB	30dBIN S/N	受信周波数	SINAD 12dB	30dBIN S/N
N/FM 5.0MHz	+7dB	34dB	N/FM 515 MHz	-1dB	31dB
〃 10 〃	+4 〃	35 〃	〃 525 〃	-	
〃 15 〃	+1 〃	36 〃	〃 535 〃	0 〃	31 〃
〃 25 〃	-4 〃	35 〃	〃 545 〃	+2 〃	31 〃
AM 25 〃	+1 〃	42 〃	〃 550 〃	+4 〃	31 〃
〃 〃 AGC	SINAD12dBPOINT 107dB	ATT.ON 120dB	〃 555 〃	+6 〃	31 〃
N/FM 35 MHz	-5dB	35dB	〃 800 〃	-1 〃	33 〃
〃 45 〃	-5 〃	35 〃	〃 850 〃	-4 〃	33 〃
〃 55 〃	-5 〃	35 〃	〃 950 〃	-4 〃	33 〃
〃 65 〃	-6 〃	34 〃	〃 1040 〃	-1 〃	33 〃
〃 75 〃	-5.5 〃	33 〃			
〃 85 〃	-5 〃	33 〃			
W/FM 85 〃	+4 〃	50 〃			
N/FM 95 〃	-5 〃	33 〃			
〃 105 〃	-5.5 〃	33 〃			
AM 105 〃	-1 〃	41 〃			
N/FM 115 〃	-5 〃	33 〃			
A.. 〃 〃	-1 〃	41 〃			
N/FM 125 〃	-5 〃	33 〃			
AM 〃 〃	-1 〃	41 〃			
N/FM 135 〃	-5 〃	33 〃			
〃 145 〃	-5 〃	33 〃			
〃 155 〃	-5 〃	33 〃			
〃 165 〃	-5 〃	33 〃			
〃 175 〃	-5 〃	33 〃			
〃 185 〃	-5 〃	33 〃			
〃 195 〃	-5 〃	33 〃			
〃 205 〃	-5 〃	33 〃			
〃 215 〃	-4.5 〃	33 〃			
〃 225 〃	-5 〃	33 〃			
〃 235 〃	-5 〃	32.5 〃			
〃 245 〃	-5 〃	32 〃			
〃 255 〃	-5 〃	32 〃			
〃 265 〃	-4 〃	32 〃			
〃 275 〃	-4 〃	32 〃			
〃 285 〃	-4.5 〃	32 〃			
〃 295 〃	-4.5 〃	32 〃			
〃 305 〃	-4 〃	32 〃			
〃 315 〃	-4 〃	32 〃			
〃 325 〃	-4 〃	32 〃			
〃 335 〃	-4 〃	32 〃			
〃 345 〃	-4 〃	32 〃			
〃 355 〃	-4 〃	32 〃			
〃 365 〃	-4 〃	32 〃			
〃 375 〃	-3 〃	32 〃			
〃 385 〃	-3 〃	31 〃			
〃 395 〃	-3 〃	32 〃			
〃 405 〃	-3 〃	32 〃			
〃 415 〃	-3 〃	32 〃			
〃 425 〃	-3 〃	32 〃			
〃 435 〃	-3 〃	32 〃			
〃 445 〃	-3 〃	31 〃			
〃 455 〃	-3 〃	31 〃			
〃 465 〃	-3 〃	31 〃			
〃 475 〃	-3 〃	31 〃			
〃 485 〃	-2 〃	31 〃			
〃 495 〃	-2 〃	31 〃			
〃 505 〃	-1 〃	31 〃			

DSB. TUNE Δf

メインシフト Main Shift	+4.74KHz
	-2.35
ファインシフト Fine Shift	+300Hz
	-380Hz

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AR2500

1. Select 900.000MHz, N/FM, 5KHz step.
   Set SSG frequency to 45.03MHz, 3KHz Dev.
   Adjust T3, T15, T16, T17, VC-5 for best SINAD point.

2. Select 900.005MHz, N/FM, 5KHz step.
   Set SSG frequency to 45.025MHz, 3KHz Dev.
   Adjust VC-4 for best SINAD point.

3. SINAD value should be the same on the both of above
   freq. selected.

4. Select 1040MHz, N/FM, 5KHz step.
   Set SSG frequency to 1040.000MHz, 3KHz Dev.
   Adjust VC-1 for best SINAD point.

5. Select 550.000MHz AM 25KHz step.
   Set SSG frequency to 550.000MHz, AM 60% mod.
   Adjust T4, T11, T12, VC2, 6, 7, 8, 9, 10, 11, 12, 13,
   14, 15, T18 for maximum AF output.

6. Select 540.000MHz AM 12.5KHz step. DSB switch on.
   Set SSG frequency 540.000MHz. No modulation.
   Adjust T600 coil on DSB PCB for 0 output of AF.
   (VR MIN.FIN are to be set as mid.)

7. Select 530.000MHz, W/FM, 5KHz step.
   Set SSG frequency 530.000, 30KHz Dev.
   Adjust T10, 13, 14, 6, 7, 8, 9 for best SINAD point.

8. Select 95.000MHz, N/FM. Turn SSG output off and adjust
   VR4 for one LED emitting.

9. Select 95.000MHz, N/FM, 5KHz step.
   Set SSG frequency 95.000MHz, 3KHz Dev. +6dB output.
   Adjust VR1 for 3 of these LED emitting.

10. Select 85.000MHz, 12.5KHz step, AM.
    Set SSG for 85.000MHz, 60% modulation, AM output +80dB
    and observe all LEDs are on, no distorted output wave.
    If distorted, adjust the VR1.

11. Select 75.000MHz, 25Khz step. W/FM.
    Set SSG Freq. for 75.000MHz 30KHz Dev. +16dB.
    Adjust VR2 for three of these LEDs are on.

1A

AR-2500

1) RS-232Cのコネクター結線は、下記の通りです。   RS232C Connections

    7 PIN CTS ~~(GREEN)~~

    8 〃 RTS ~~(ORANGE)~~

    5 〃 GND (BROWN)

    2 〃 RXD ~~(BLUE)~~

    3 〃 TXD ~~(YELLOW)~~

    PIN, NO1, 4, 6は. NO WORKです.   PIN No. 1, 4, 6 not used.

2) 200～400MHzのサーチスピード   Typical search spped 200-400MHz

5KHz STEEP時	16分30秒	16m 30sec
12.5KHz 〃	7分10秒	7m 10sec
25KHz 〃	3分35秒	3m 35sec

3) 感度の測定データ   Sensitivity Data

    別紙参照   See the last page

4) イメージ比   Image Ratio

① 860MHz帯	1ST (45.0125MHz)	3dB
	2nd (455KHz)	68dB
② VHF帯	1ST (750MHz)	測定不能
	2nd (45.0125MHz)	58dB
	3rd (455KHz)	83dB
③ VHF／W.FM	1ST (750MHz)	測定不能
	2nd (45.0125MHz)	63dB
	3rd (10.7MHz)	74dB

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A couple of points worth noting on the AR2500 are:

1. The operating manual gives quite a lot of detail about computer control but does NOT show the connections

Pin 2 CTS
Pin 3 RTS
Pin 5 GND
Pin 7 RXD
Pin 8 TXD

We are currently working with a UK software author with the aim of producing a high-performance IBM-PC based program within the next 2 months or so. The target price is £49.00 pounds.

At this time the only software available in the world is from the USA priced at $399.

We are looking at ways of improving the operating manual and may consider a re-write.

2. The visibility of the display is poor from certain angles, an improvement can be made by lifting the front of the set. We have received a 'sample bail' from Japan similar in design to that supplied with the Kenwood TR9130. We hope this will be included with future shipments.

3. The lamp is very low intensity and will only be visible during night-time operation.

4. There is NO MANUAL MODE as such, instead you must use the program search facility as described in the operating manual. Program memory 63 and above with upper limit, lower limit, mode and step.
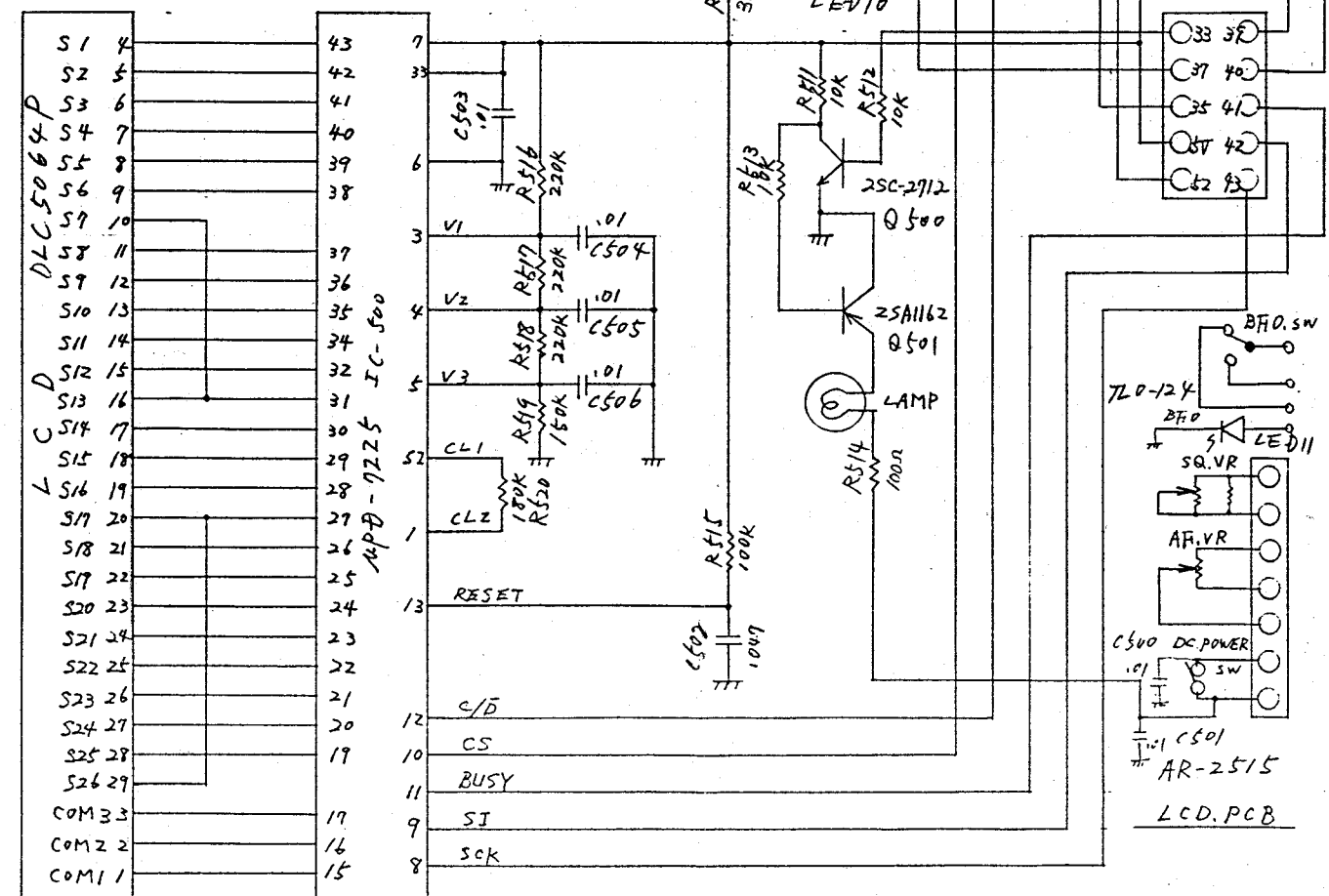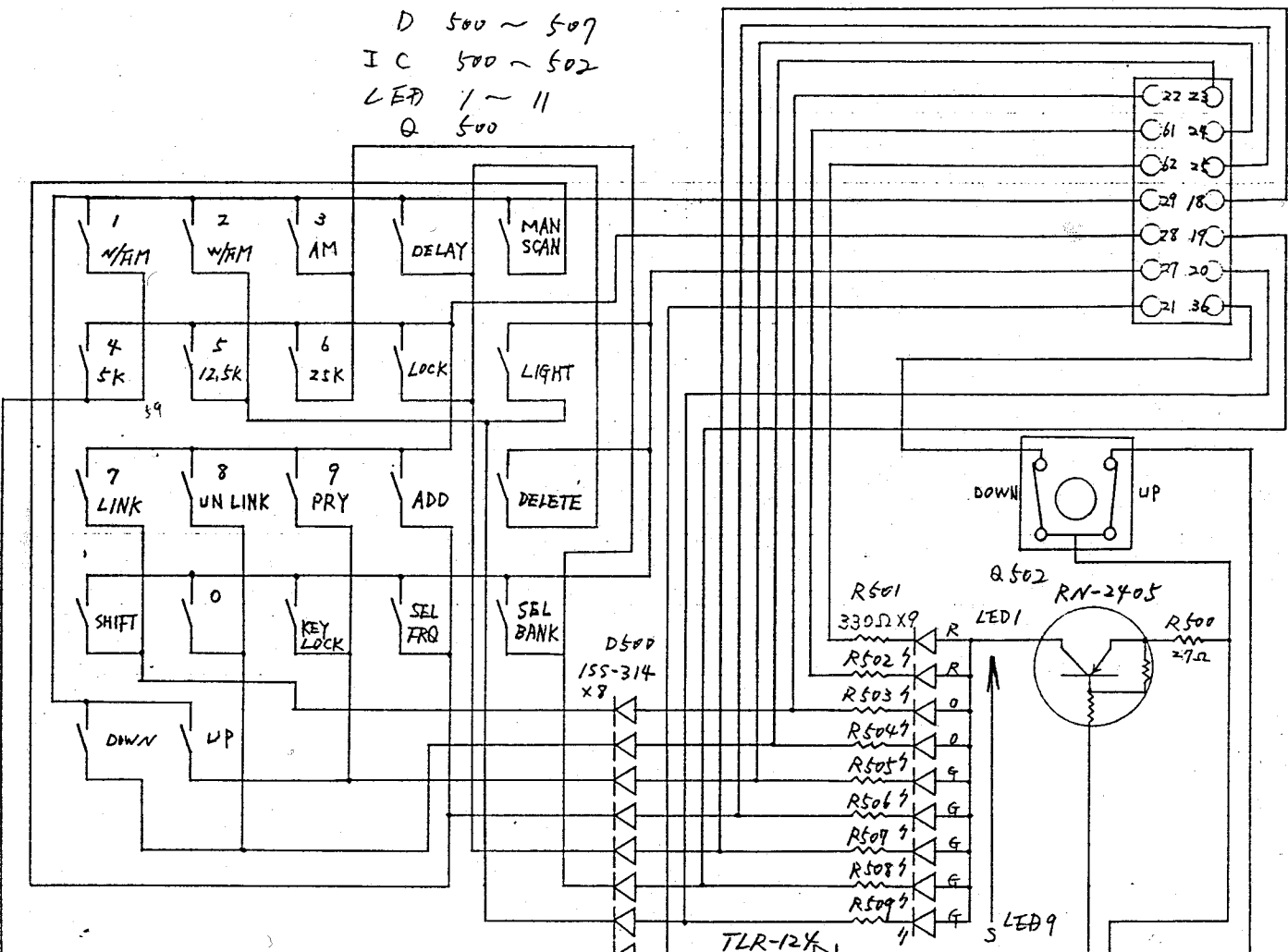
Due to the RESORTING procedure used by the microprocessor to ensure high search speed, the operating of the rotary tuning control is compromised in the anti-clockwise (downward) direction. This is normal for this model and does not constitute a fault.

5. As you will already be aware, the AR2500 has a specification change since our pre-production model on which our advertising was based. The coverage is now stated as 5 MHz to 550 MHz plus 800 MHz to 1300 MHz, and not as stated earlier (500 kHz - 1500 MHz).

6. Often a thin plastic film is placed across the keypad and/or display to add protection (it varies from set to set). This should if possible be pointed out to the customer. Often the set is thought to be scratched where in reality it has marks in the plastic protective film.
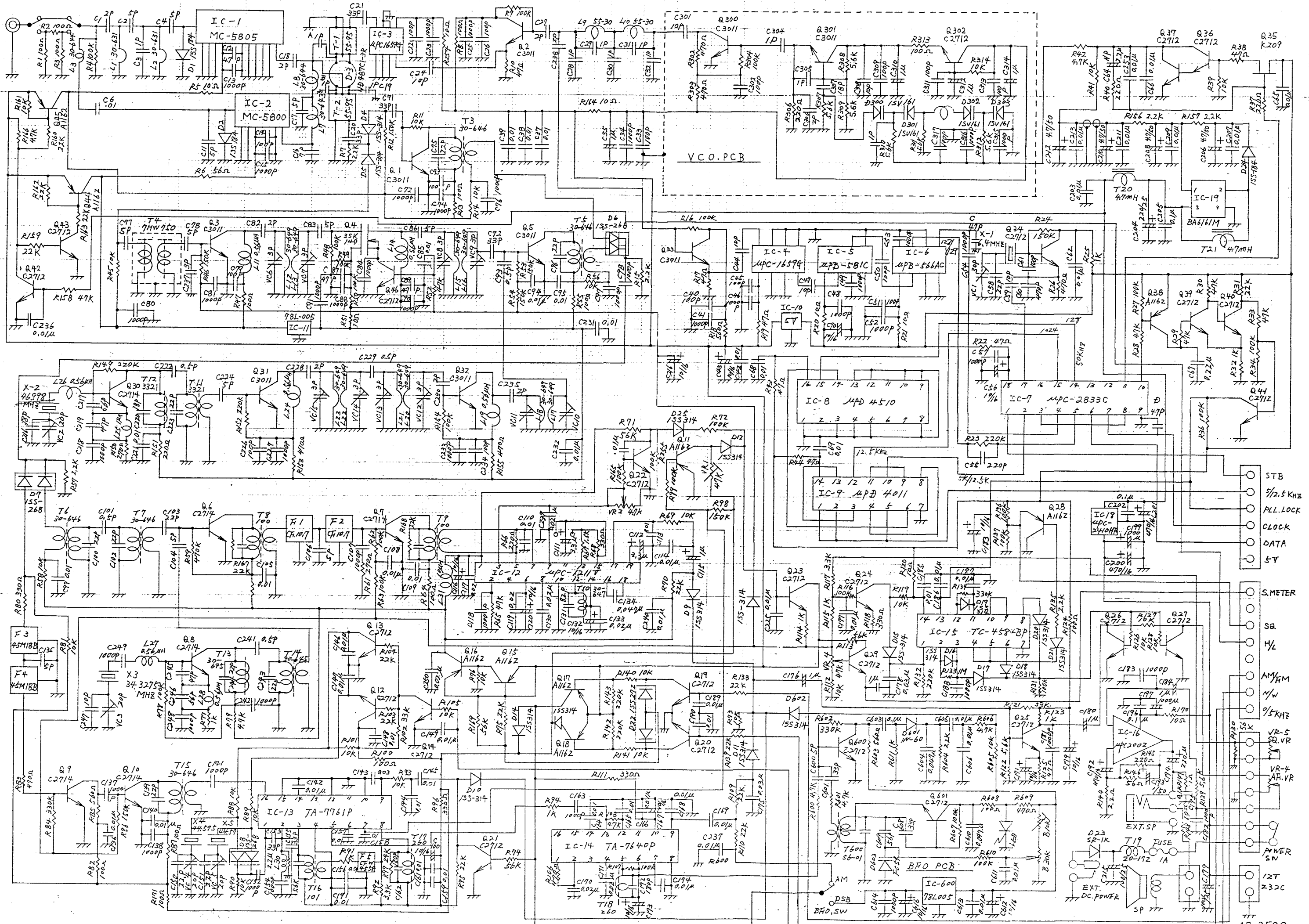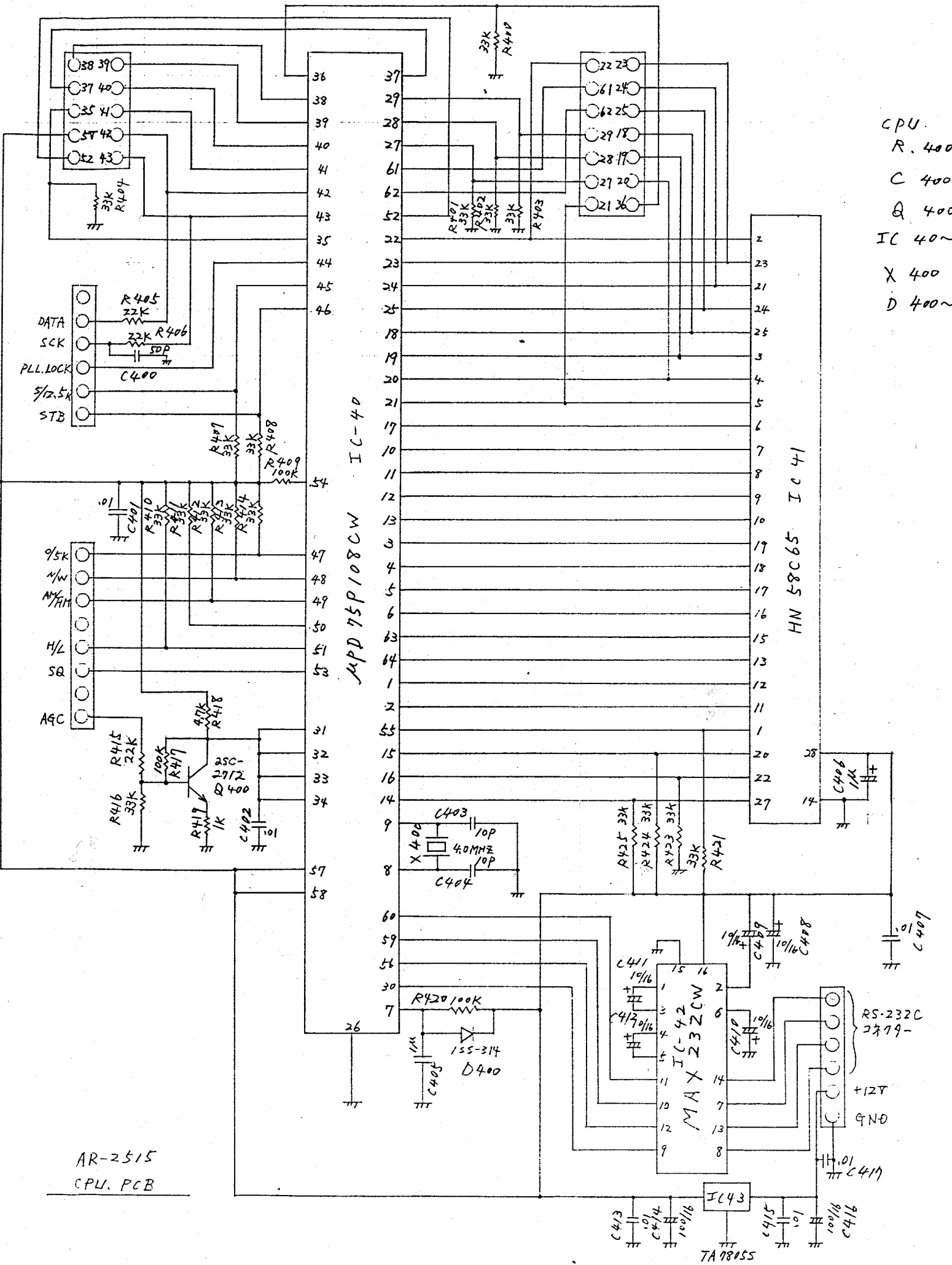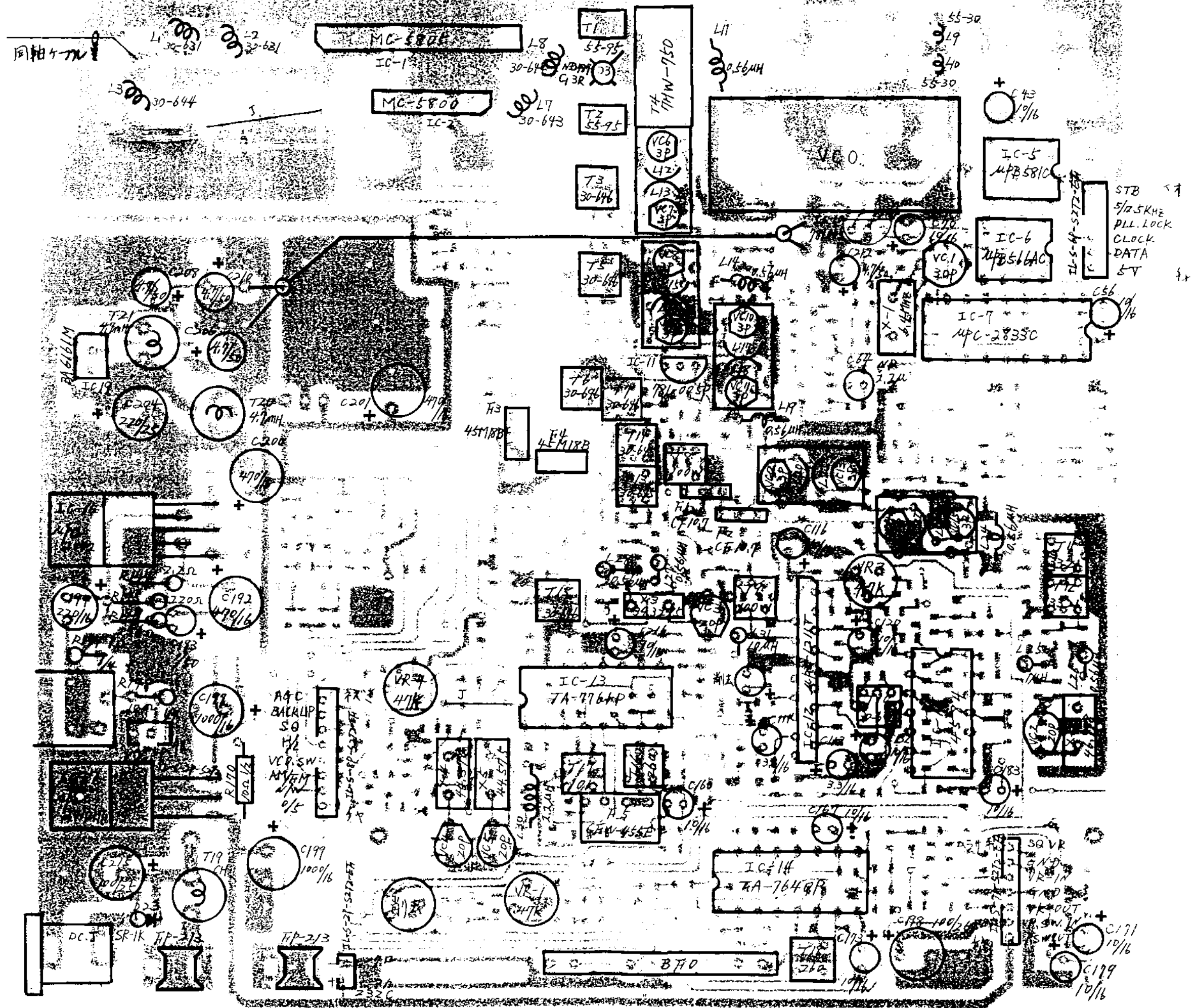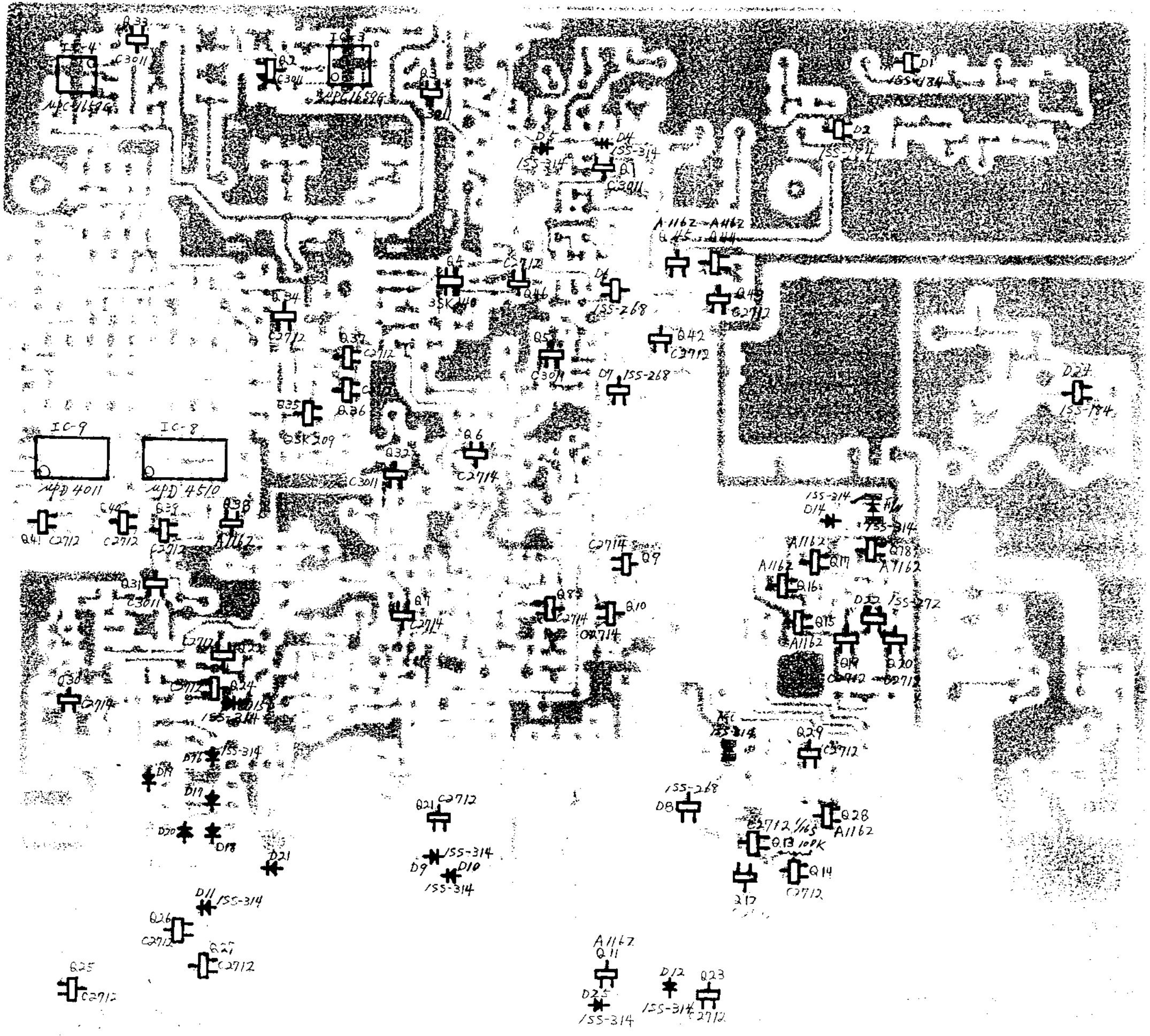
3

AR-2500

AR-2515
LCD. PCB

AR-2515
CPU. PCB

IC-4
C3011
μPC1163G

Q33

IC-3
C3011
μPC1163G

D1
155-184

D2
155-314

D4 155-314
155-314
C3011
A1162-A1162
Q45-D44

Q5
C2712
Q46
3SK140

D5
155-268

Q43
C2712

D24
155-184

C2712
Q37
C2712

Q51
C3011

Q42
C2712

D7 155-268
C3011

IC-9
μPD4011

IC-8
μPD4510

Q35
3SK209
Q36

Q32
Q6
C2714

D14 155-314
155-314

Q40
C40
C2712
Q39
A1162
Q41 C2712
C2712

C2714
Q9

A1162
A1162
Q17
Q16
D13 155-272
Q18
A1162

Q31
C3011

Q7
C2714

Q8
C2714
Q10
C2714

Q15
A1162

Q14
Q20
C2712 C2712

Q30
C2712
Q24

D16
155-314

IC
155-314

Q29
C2712

D15 155-314

D19
D17

155-268
D8

C2712 1165
Q28
A1162

Q13 10PK

Q14
C2712
Q12

D20 D18

Q21

D21

Q21 C2712

D9 155-314
D10
155-314

D11 155-314
Q26
C2712

A1162
Q11

Q27
C2712
Q25
C2712

D25
155-314

D12 Q23
155-314 C2712

7

8
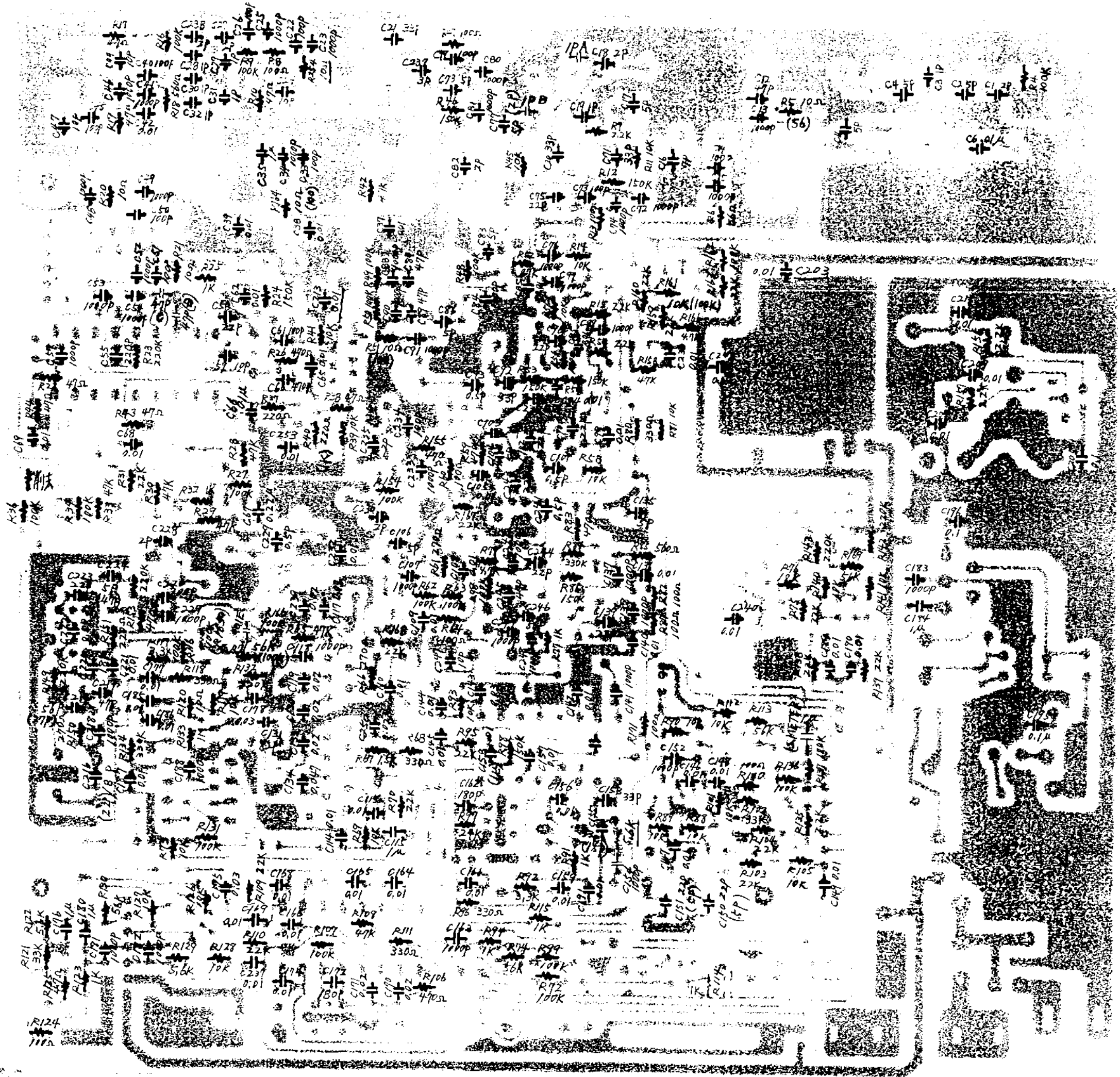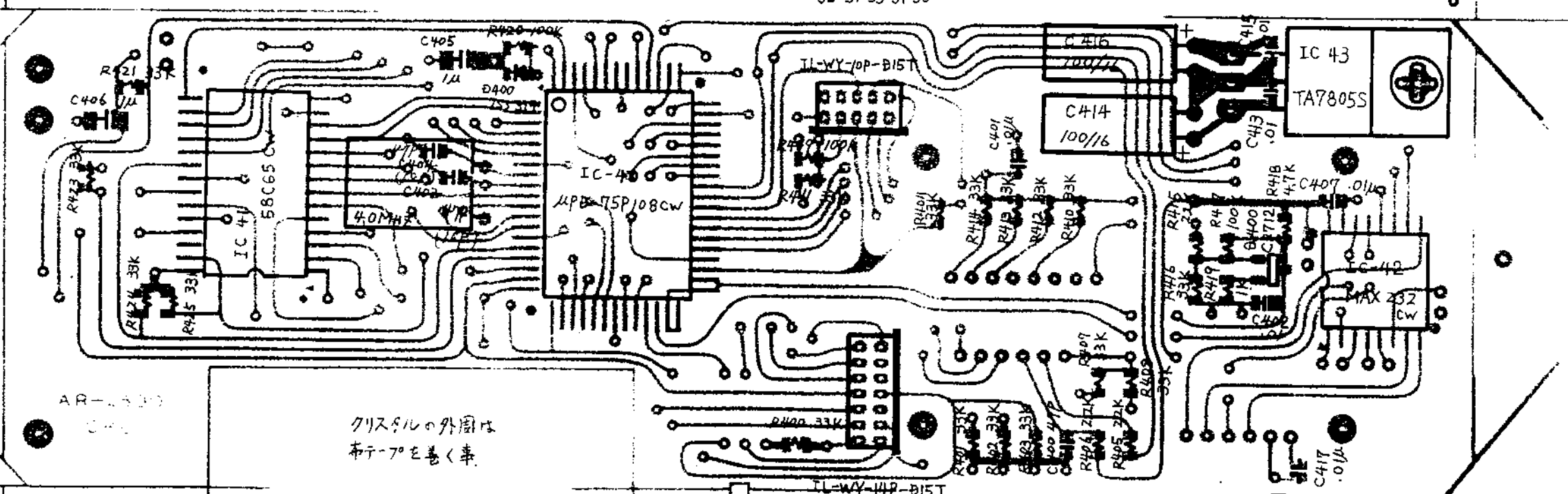
AR-2500
CPU. PCB
ハンダ面 配置図
H2.4.11
日生技研(株)

C410
10/16

C409
10/16

C412
10/16

C411
10/16

IL-T6P(230%m)

G 12 R T R C
N T X X C
D T S D T
   S   S

SMET N S W WW % %
T   C Q L C TM Zw /5

IL-T8P (200%m)

IL-T6P (100%m)
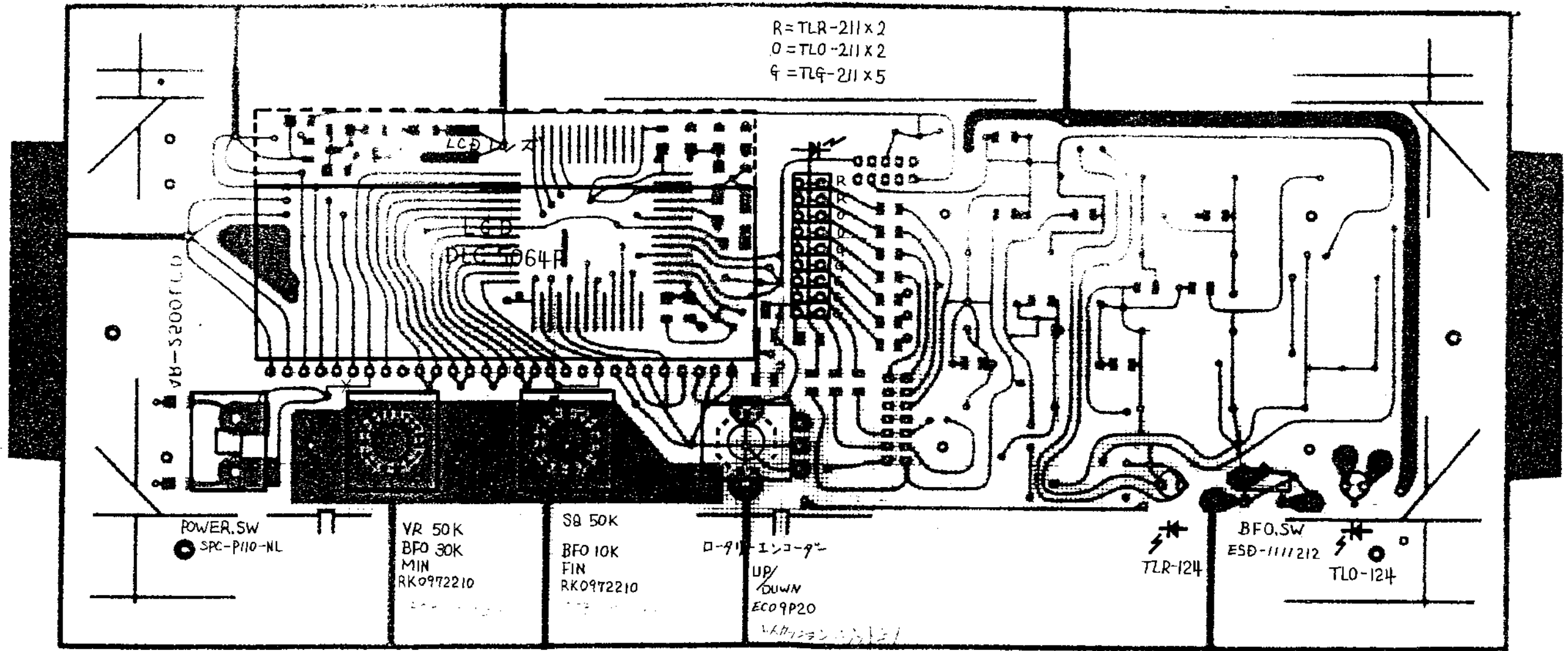
N D S L T
C A C L S
T A K C T
  T   K B
  A   25

(C415は削除です)
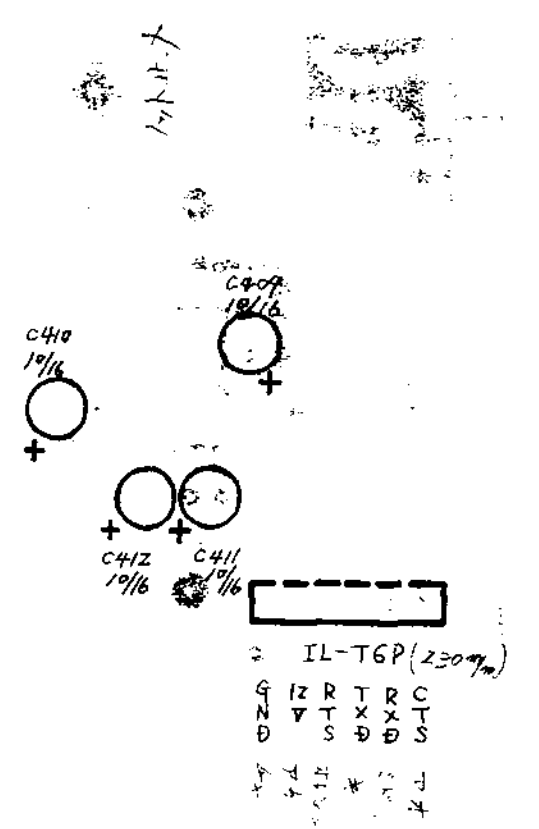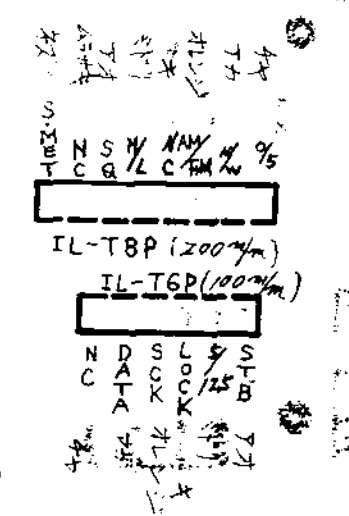
IPS-1032
EDP No 19619004

IPS-1032
EDP No 19619004

AR-2500
C P U. PCB
部品面 配置図
H 2.4.11 H2.12.28
日生技研(株)

10

R = TLR-211 x 2
O = TLO-211 x 2
G = TLG-211 x 5

POWER.SW
SPC-P110-NL

VR 50K
BFO 30K
MIN
RK0972210

SB 50K
BFO 10K
FIN
RK0972210

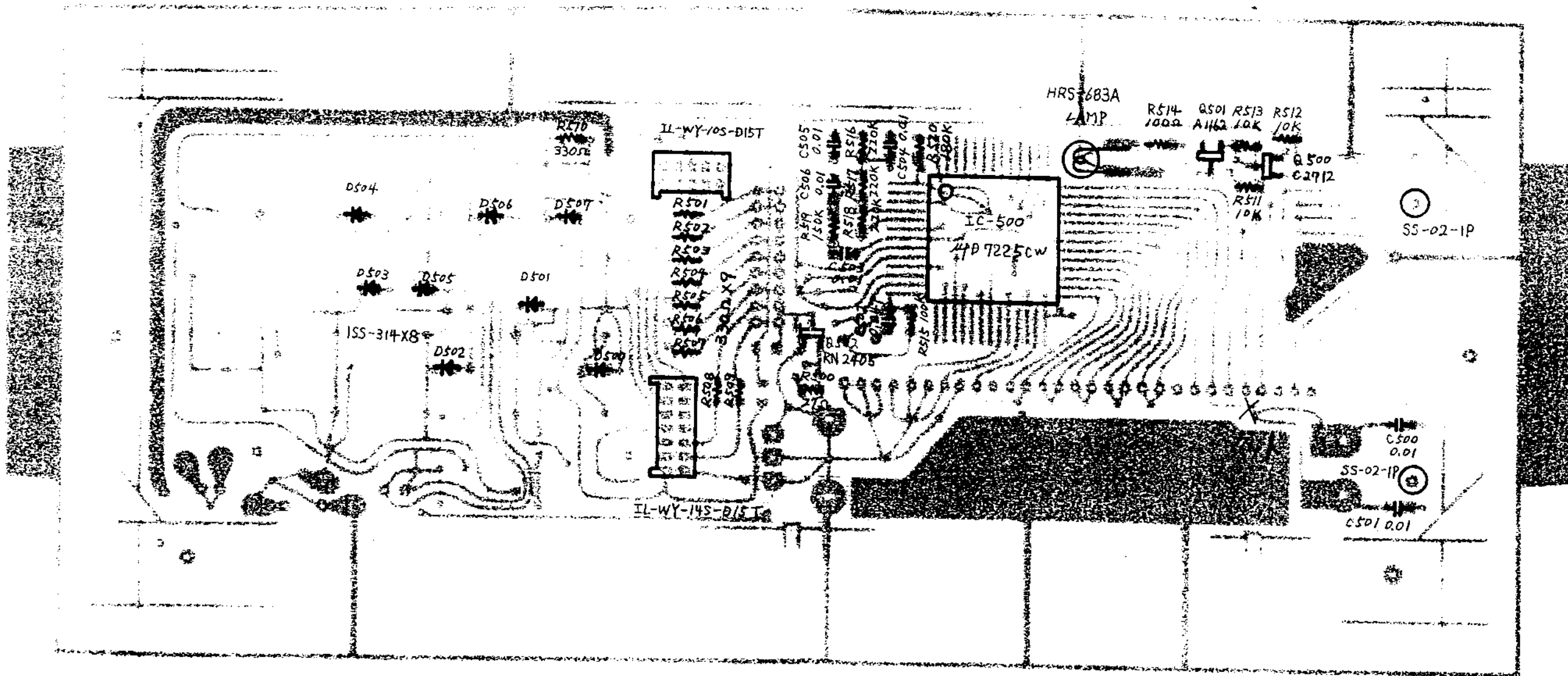ロータリーエンコーダー
UP/
DOWN
EC09P20

TLR-124

BFO.SW
ESD-1111212

TLO-124

注. TLR-124 TLO-124は イラックス
チューブを入れ 高さに注意する事
H2.12.28

AR-2500
LCD.PCB
部品面
H2.4.11
日生技研(株)

11

AR-2500
LCD.PCB
ハンダ面
H 2. 4. 11
日生技研(株)

AR-2500LCD
ハンダ面

12

VCO.OUT

+B

GND

VCV

D300~303 止至て
1SV-151

C311 1M

C310 1M
1000p
C315

1000p
C316

AM

BFO

1/16
10/16
C616

78L05
IC600

10/16
C612

0.01
C613

BTO.OUT

GND

+B

455.INPUT

AM.SW

BFO.OUT

GND

DELC-J9SAF10L6

Dサブ9P ジャック

面.パネ1

II-S-1P-S2T2-ペア

II-S-2P-S2T2-ペア

パネ
MIN PCB
チャ
+12V
GND
TXD4
RXD2 CPU.PCB
GND3
CTS5
アオ

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