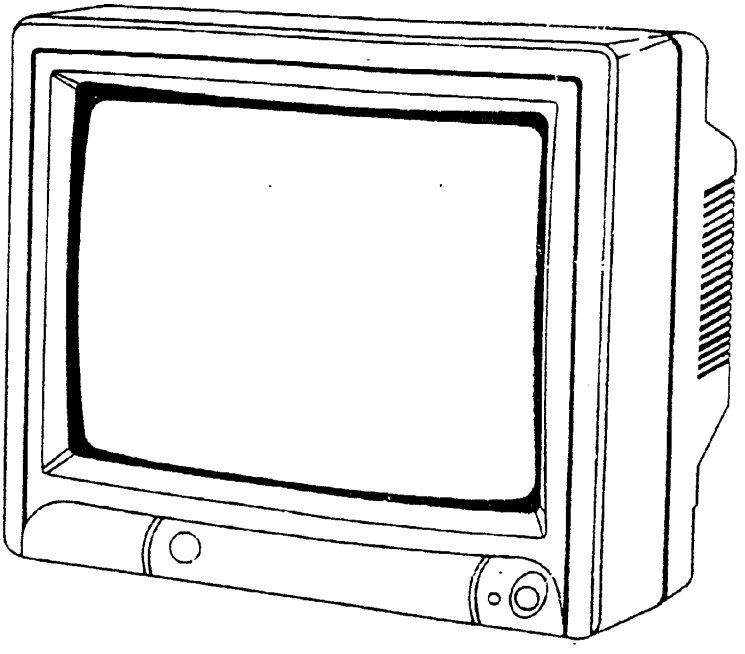
Service Manual

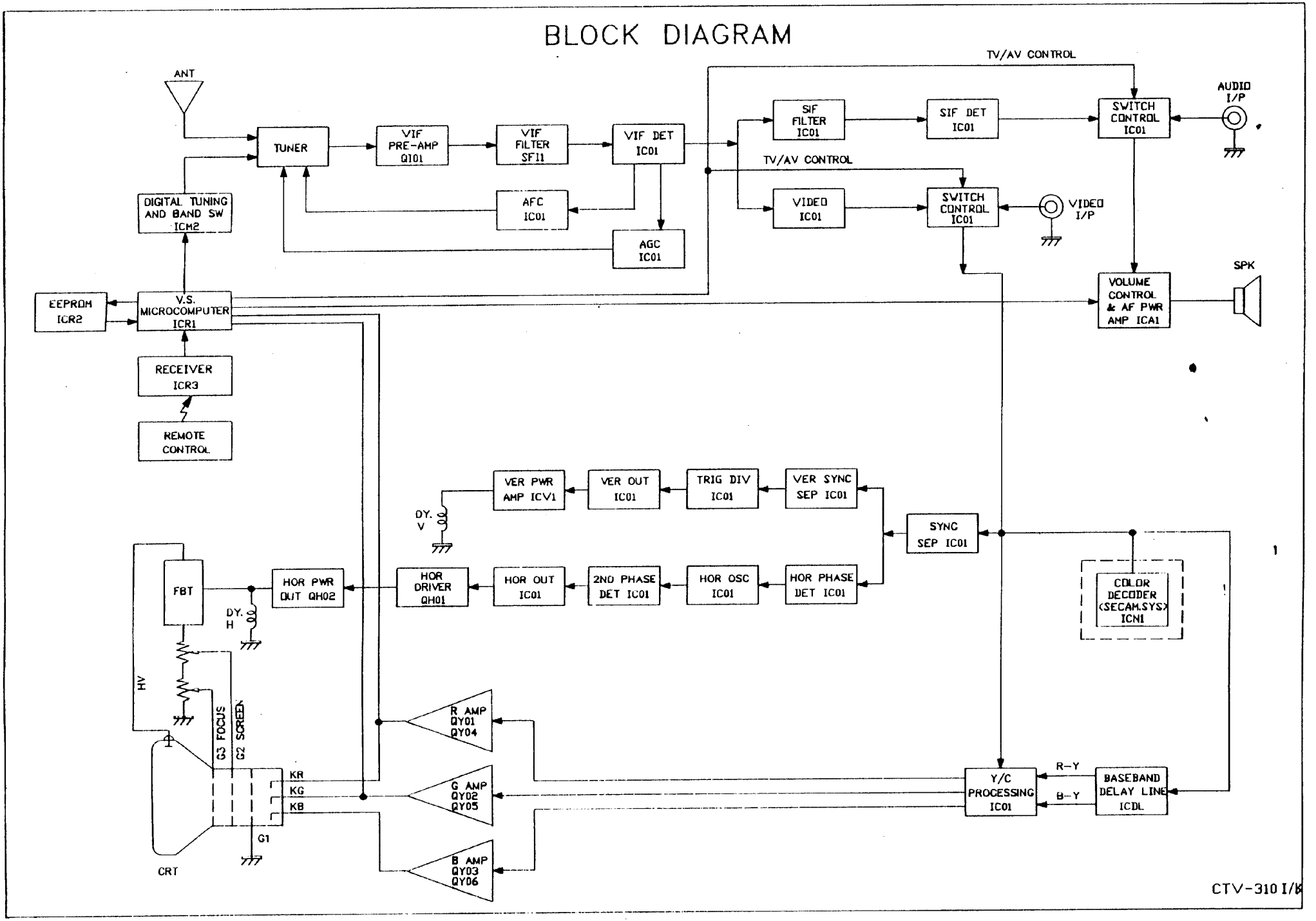
10 INCH COLOUR TV + MONITOR

MODEL NO: TC-9112



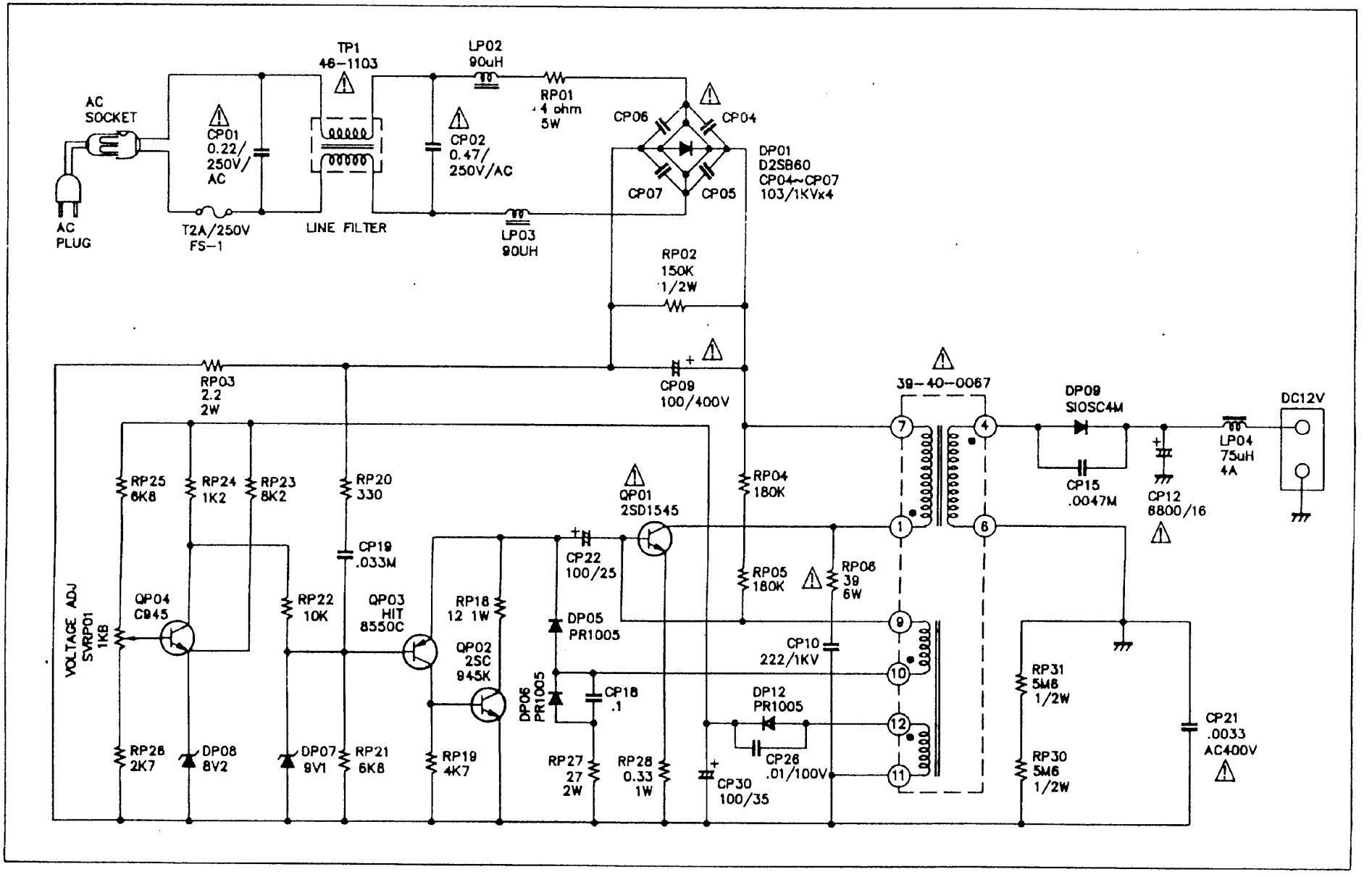
Lenco®

BLOCK DIAGRAM

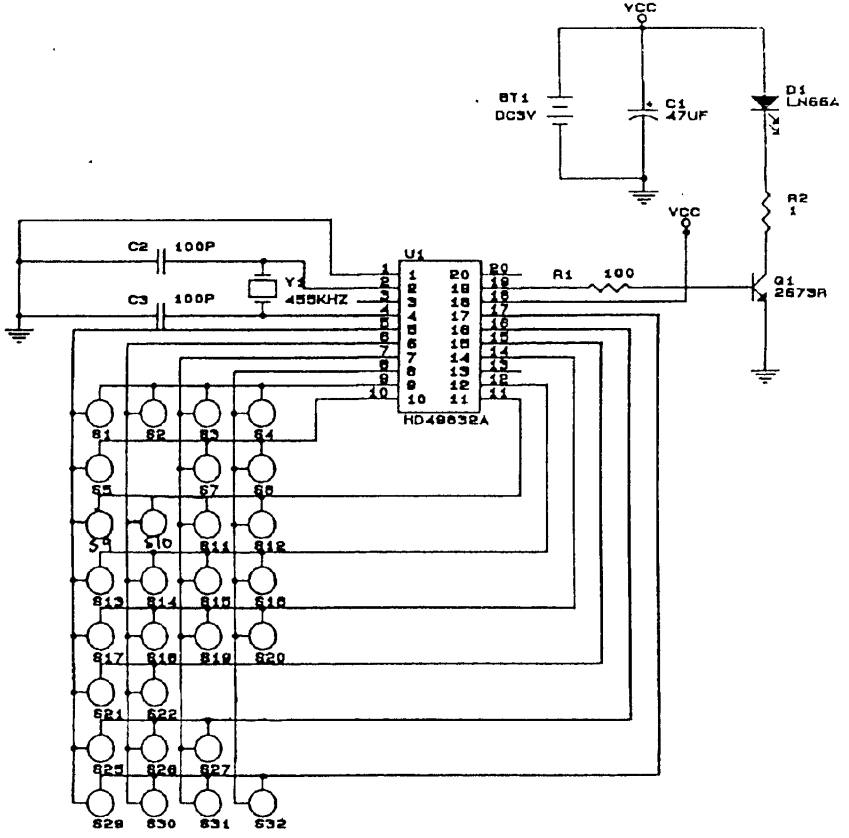


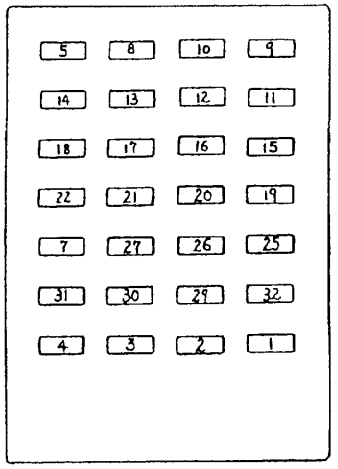
CTV-310 I/B

SWITCH POWER SCHEMATIC DIAGRAM



REMOTE CONTROL SCHEMATIC DIAGRAM





ALIGNMENT PROCEDURE

REGULATOR ADJUSTMENT

NOTE: MALADJUSTMENT OF THE LOW VOLTAGE REGULATOR OR THE HORIZONTAL OSCILLATOR MAY RESULT IN DAMAGE TO THE HORIZONTAL OUTPUT TRANSISTOR OR PULSE LIMITER DIODE.
THE FOLLOWING PROCEDURES ARE RECOMMENDED TO INSURE SAFE OPERATION.

1. CONNECT THE TV TO AC 110~240V THEN ADJUST THE AC SWITCHING MODE POWER REGULATOR SVR1 TO DC 12V.
2. CONNECT A DC DIGITAL VOLTMETER OR OTHER PRECISION ACCURACY VOLTMETER TO THE COLLECTOR OF THE REGULATOR OUTPUT TRANSISTOR QPD1. (T.P1)

HORIZONTAL OSCILLATOR ADJUSTMENT

1. POWER ADJUSTMENT
   ADJUST THE REGULATOR VRD1 TO DC 10.8V.
2. VERTICAL HIGHTNESS ALIGNMENT
   ADJUST THE VERTICAL HIGHTNESS VRV1 & VRV2, ENABLE THE CIRCLE OF PICTURE APPROACH TO CIRCLE.
3. HORIZONTAL POSITION ALIGNMENT
   ADJUST HORIZONTAL POSITION VRH1, LET THE SQUARE SIGNAL IN THE CENTER OF THE SCREEN.
4. RF AGC ALIGNMENT
   ADJUST VIF PROCESS AGC CONTROL VRI1 AT INPUT SIGNAL INTENSITY 50dB, THE SCREEN COULD LOOKING CLEAR AND 80dB, THE SCREEN DON'T INFLECT.
5. WHITE BALANCE ALIGNMENT
   ADJUST THE VRY4, VRY5, AT CENTER POSITION. ADJUST SCREEN VR, LET THE SCREEN WILL BE LITTLE BRIGHTNESS. ADJUST VRY4 LET THE SCREEN TO BE YELLOW, AND THEN ADJUST VRY5 LET THE SCREEN APPROACH TO WHITE.
6. FOCUS ADJUSTMENT
   ADJUST FOCUS VR, LET THE STRIP IN THE SCREEN TO BE CLEAR.
7. SCREEN ADJUSTMENT
   ADJUST SCREEN VR LET THE BRIGHTNESS SUIT AS DESIRED.

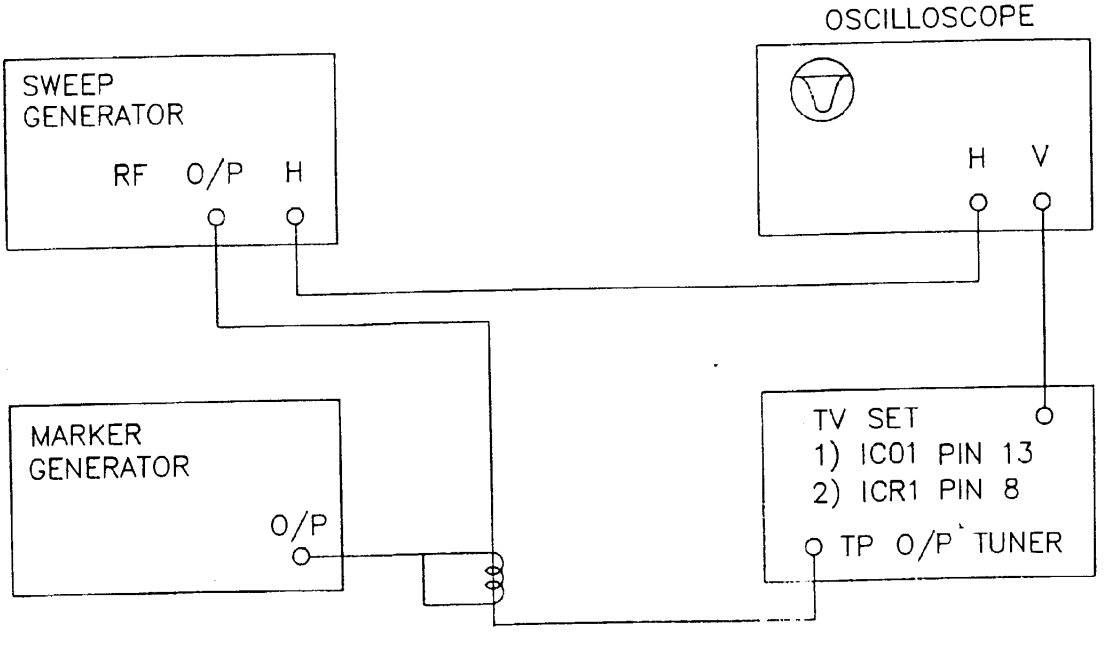
ALIGNMENT PROCEDURE

GENERAL ALIGNMENT INSTRUCTIONS

1. VIDEO IF ALIGNMENT

TEST EQUIPMENT CONNECTION (SEE FIGURE).
OSCILLOSCOPE: CONNECT TO THE (1). IC01 PIN 13.
(2). ICR1 PIN 8.
SWEEP GENERATOR: CONNECT THROUGH A MATCHING PAD TO THE TEST POINT (T.P) OF THE TUNER.
MARKER GENERATOR: COUPLE LOOSELY TO THE OUTPUT CABLE OF SWEEP GENERATOR.

ADJUST SWEEP GENERATOR TO LOWEST SIGNAL LEVEL CONSISTENT WITH USABLE			
STEP	SWEEP FREQUENCY	MARKER FREQUENCY	REMARK
1) ADJUST VIF DETECTOR LI01 FOR MARKER POINT MAX.	25~45 MHz (45~65 MHz FOR JAPAN). 30~50 MHz FOR CCIR.	SYSTEM B, G, H, 38.9 MHz SYSTEM I 36.9 MHz SYSTEM M, N 45.75 MHz (58.75 MHz FOR JAPAN) (34.7 MHz FOR AUSTRARIA SYSTEM)	IN THE PARENTHESIS FOR AFC CORRECTION.
2) ADJUST VIF DETECTOR LI01 FOR MARKER POINT MAX.	25~45 MHz (45~65 MHz FOR JAPAN). 30~50 MHz FOR CCIR.	SYSTEM B, G, H, 38.9 MHz SYSTEM I 36.9 MHz SYSTEM M, N 45.75 MHz (58.75 MHz FOR JAPAN) (34.7 MHz FOR AUSTRARIA SYSTEM)	IN THE PARENTHESIS FOR AFC CORRECTION.



VIDEO IF ALIGNMENT CONNECTING FIGURE

ALIGNMENT PROCEDURE

2. SOUND IF ALIGNMENT

TEST EQUIPMENT CONNECTION

SIGNAL GENERATOR: CONNECT TO TEST POINT (T.P) OF THE TUNER THROUGH A MATCHING PAD.

OSCILLOSCOPE: CONNECT TO THE ICA1 PIN 2.

ALIGNMENT PROCEDURE

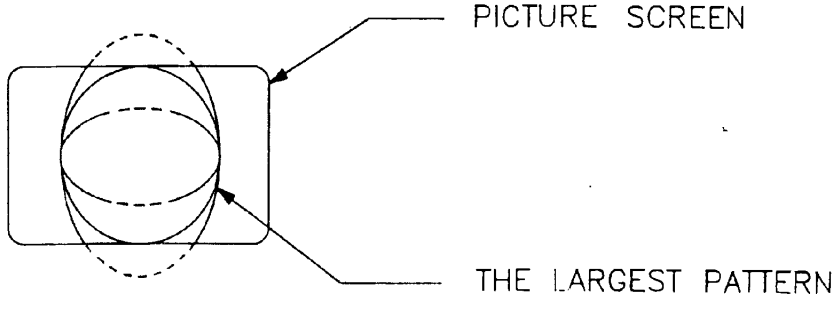
STEP	GENERATOR	SCOPE
DON'T ADJUST (PLEASE CHECK)	SYSTEM B,G,H, 33.4 MHz SYSTEM M,N 41.25 MHz (54.25 MHz FOR JAPAN) SYSTEM I 33.5 MHz. SYSTEM D,K, 32.4 MHz, 1 KHz FM MOD DEVIATION 25 KHz 80 dB OUTPUT.	CONNECT TO THE ICA1 PIN 2

3. VERTICAL DEFLECTION ALIGNMENT

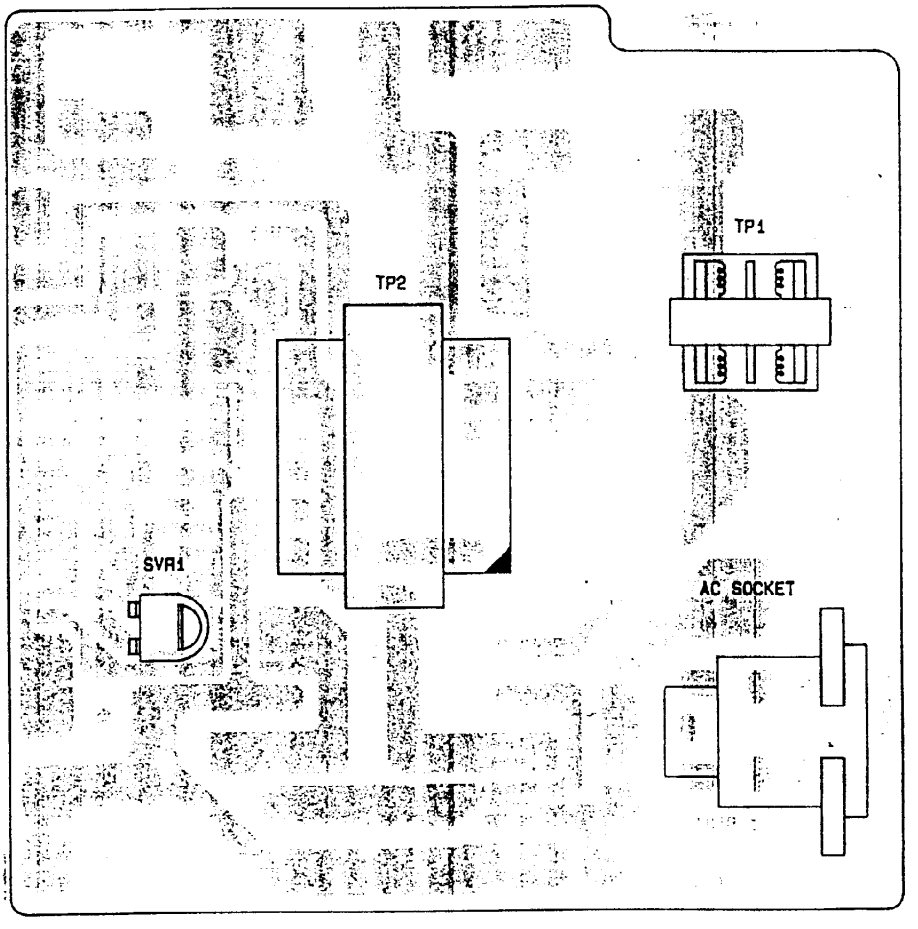
(1) TUNE THE RECEIVER IN A TEST PATTERN.

(2) ADJUST V-SIZE CONTROL VRV1 (300 ohm). WHEN THE INSIDE OF THE LARGEST CIRCLE OF TEST PATTERN REACHES NEAR ROUND PATTERN. (SEE THE FIGURE)

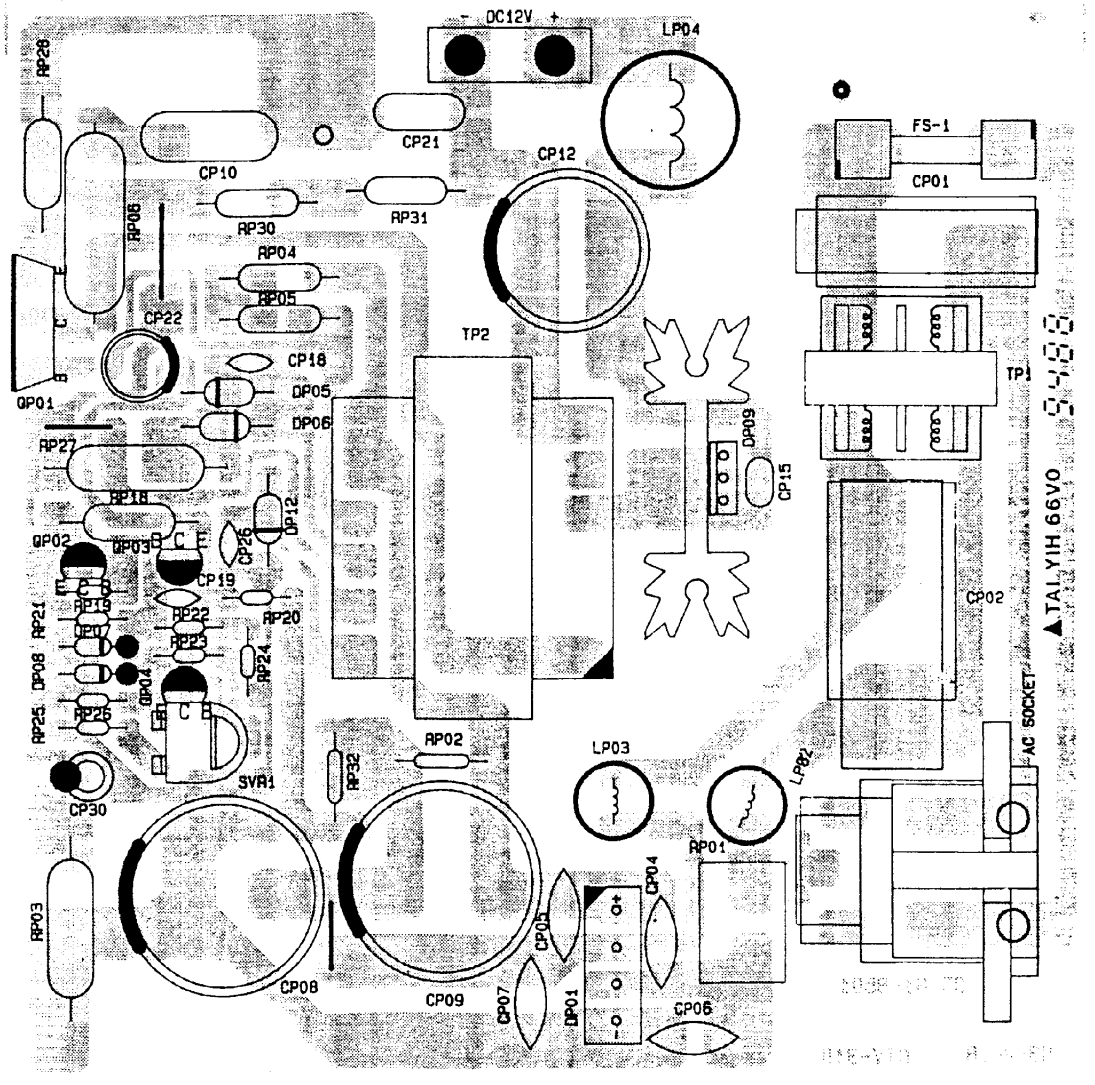
(3) IF THE PATTERN NOT AT CENTER POSITION, ADJUST V-POSITION CONTROL VRV2 (5K OHM).



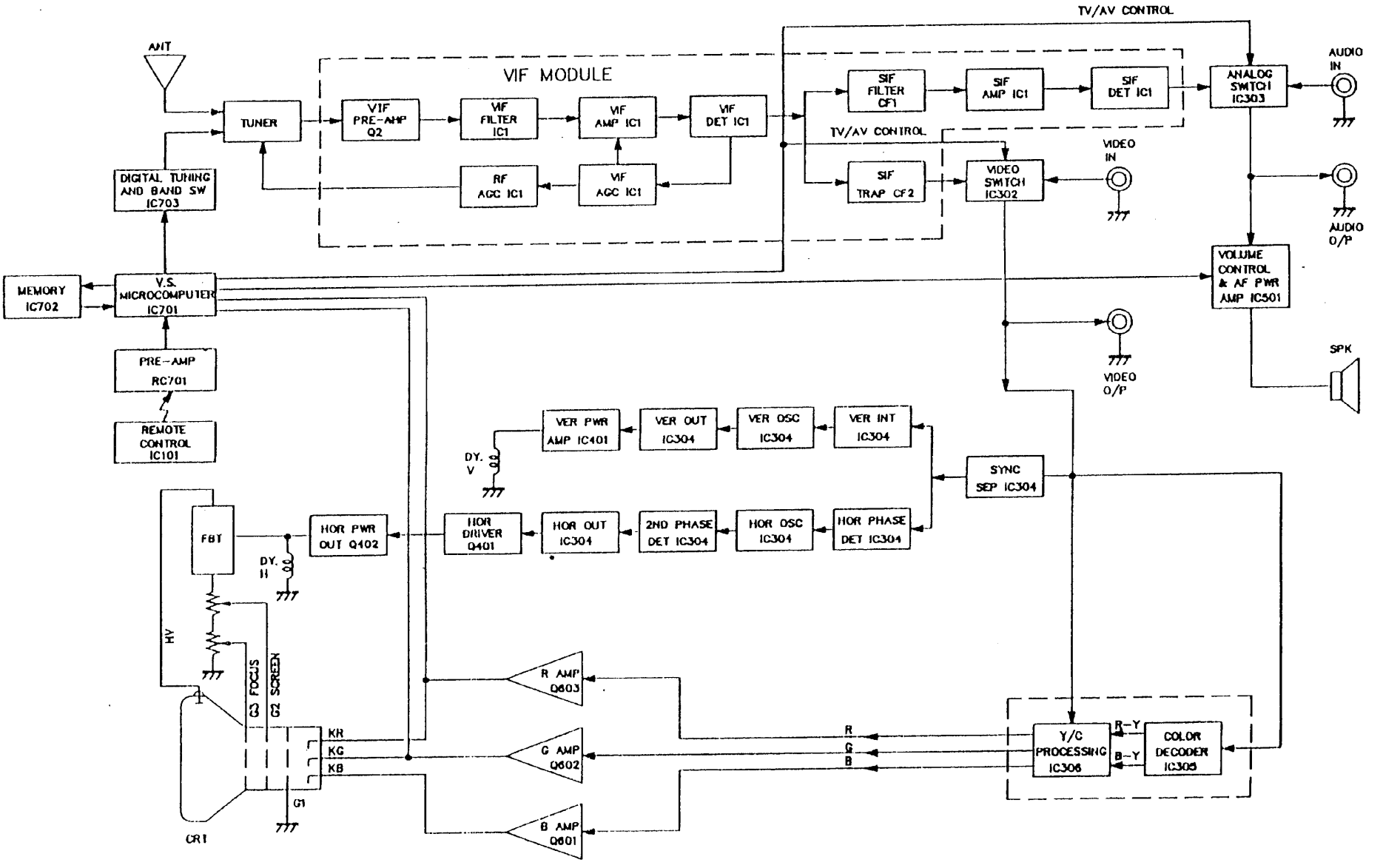
CHASSIS ALIGNMENT POINTS

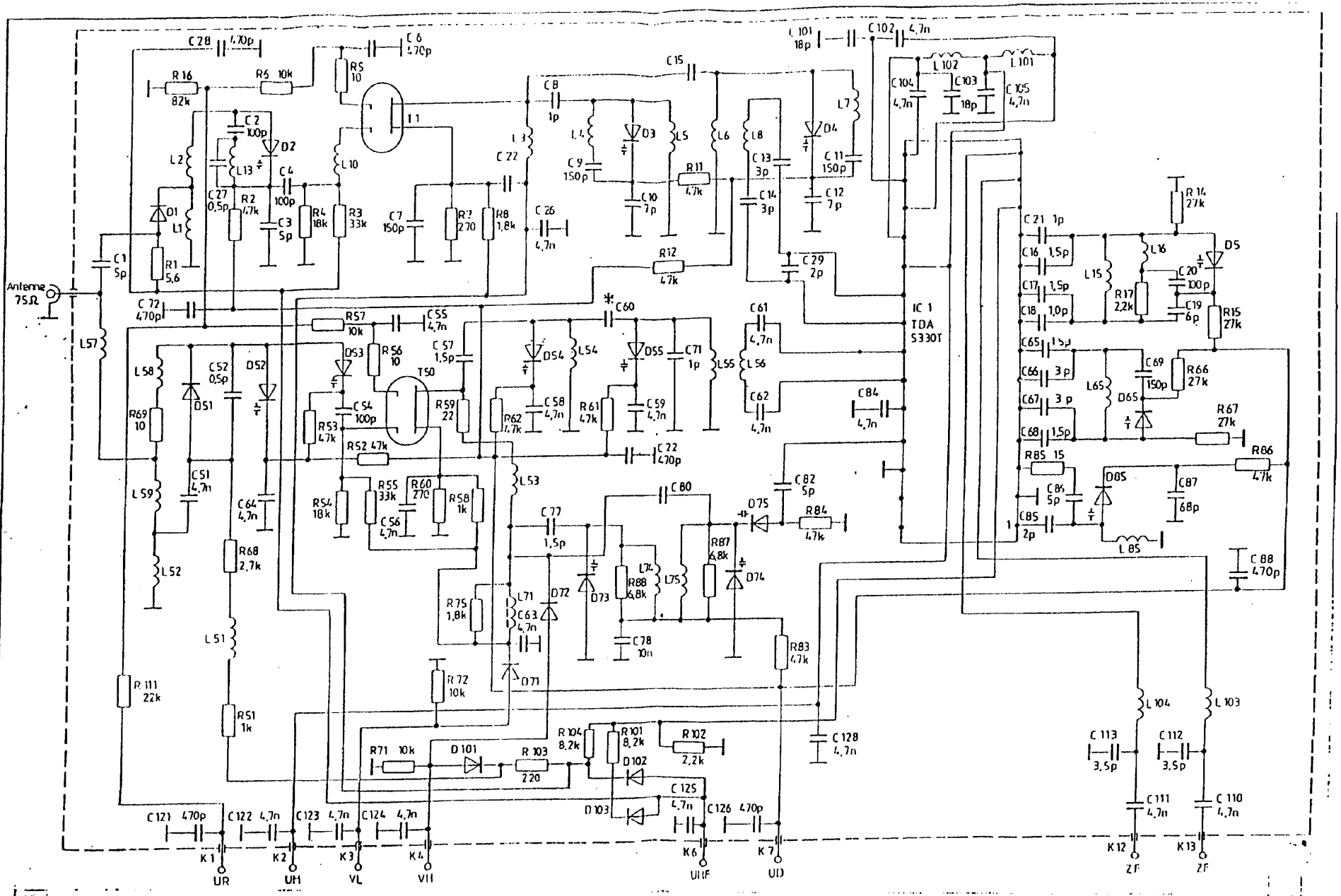


SWITCH POWER P.C.B. TOP VIEW

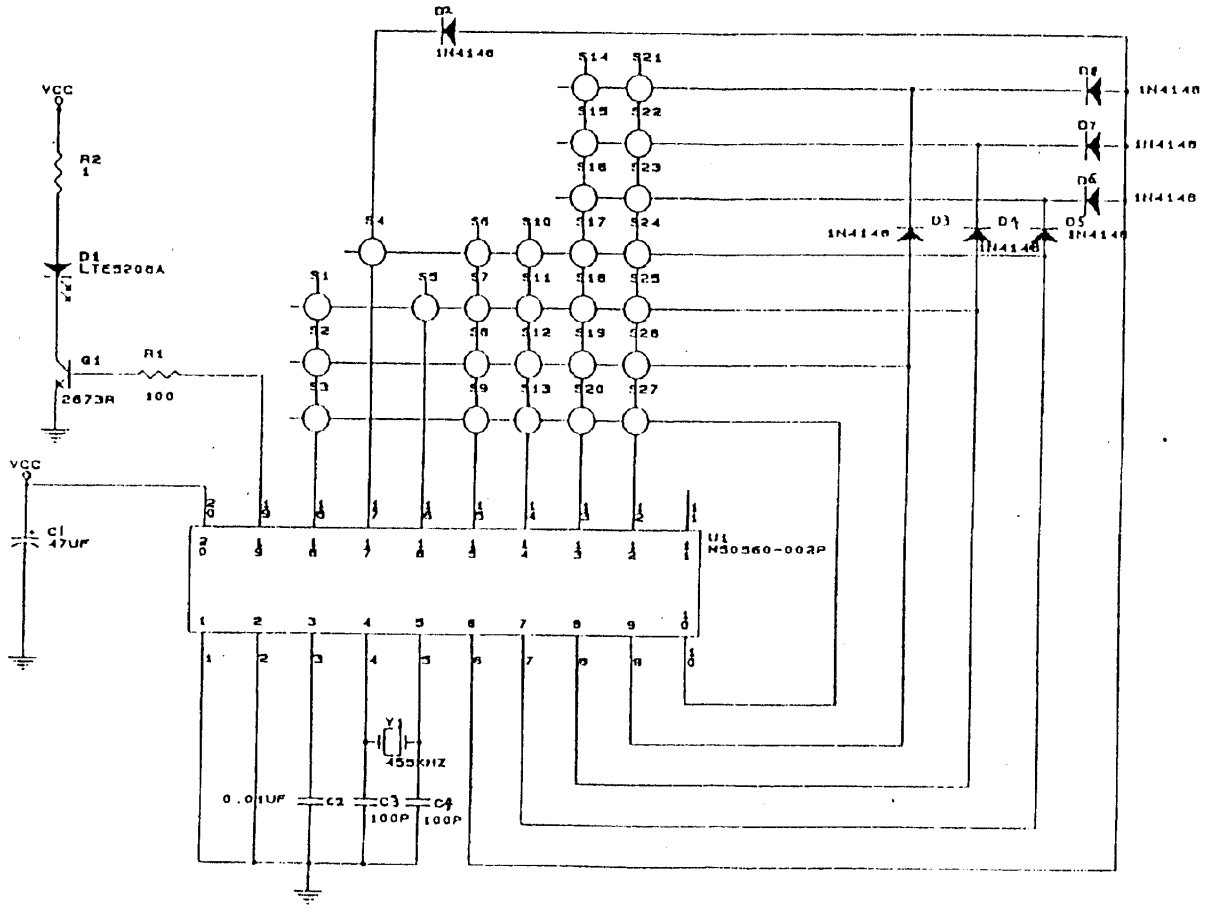


BLOCK DIAGRAM




Antenne 75Ω
IC 1 TDA 5330T
T1
T50
UR
UM
VL
VH
UHF
UD
ZF
ZF

REMOTE CONTROL SCHEMATIC DIAGRAM



NO	FUNCTION
1	CH UP
2	CH DOWN
3	VOL UP
4	VOL DOWN
5	MUTE
6	SLEEP
7	TV/AV
8	ON/OFF
9	RECALL
10	1
11	2
12	3
13	4
14	MIN
15	HOUR
16	AUTO/ON
17	5
18	6
19	7
20	8
21	ANA (-)
22	ANA (+)
23	ANA SEL
24	9
25	10
26	11
27	12

ALIGNMENT PROCEDURE

REGULATOR ADJUSTMENT

1. CONNECT TV UNIT TO DC 12V-14V POWER SUPPLY & TEST PATTERN GENERATOR.

2. CONNECT A DC DIGITAL VOLTMETER OR OTHER PRECISION ACCURARY VOLTMETER TO THE COLLECTOR OF THE REQULATOR OUTPUT TRANSISTOR Q201 (OR ANY 10.8 VOLT POINT OR TP1).

3. ADJUST HORIZONTAL HOLD SVR302 UNTIL THE PICTURE HOLD IN SYNC.

4. VERTICAL HIGHTNESS ALIGNMENT
   ADJUST THE VERTICAL HIGHTNESS SVR401 ENABLE THE CIRCLE OF PICTURE APPROACH TO CIRCLE.

5. HORIZONTALL POSITION ALIGNMENT
   ADJUST HORIZONTAL POSITION SVR301, LET THE SQUARE SIGNAL IN THE CENTER OF THE SCREEN.

6. RF AGC ALIGNMENT
   ADJUST VIF MODULE AGC CONTROL VR1 AT INPUT SIGNAL INTENSITY 50dB, THE SCREEN COULD LOOKING CLEAR AND 80dB THE SCREEN DON'T INFLECT.

7. WHITE BALANCE ALIGNMENT
   ADJUST THE SVR602, SVR601, AT CENTER POSITION, ADJUST SCREEN VR402, LET THE SCREEN WILL BE LITTLE BRIGHTNESS. ADJUST SVR602 LET THE SCREEN TO BE YELLOW, AND THEN ADJUST SVR601 LET THE SCREEN APPROACH TO WHITE.

8. FOCUS ADJUSTMENT
   ADJUST FOCUS VR401, LET THE STRIP LINE ON THE SCREEN TO BE CLEAR.

GENERAL ALIGNMENT INSTRUCTIONS

1. VIDEO IF ALIGNMENT

TEST EQUIPMENT CONNECTION (SEE FIGURE)

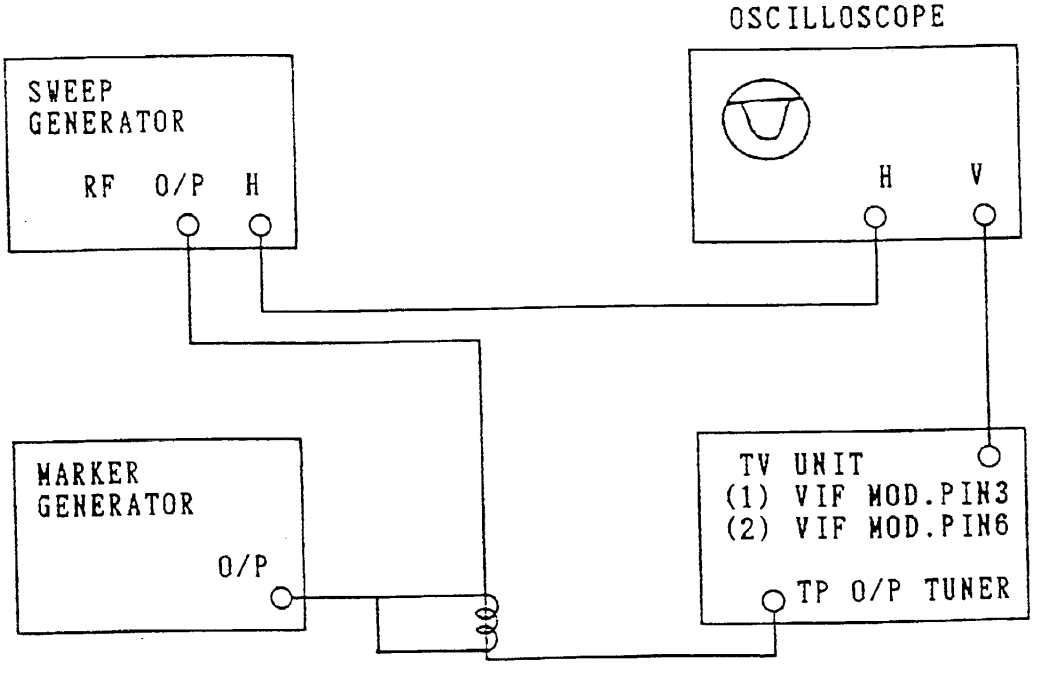
OSCILLOSCOPE: CONNECT TO (1) VIF MOD. PIN3
(2) VIF MOD. PIN6

SWEEP GENERATOR: CONNECT THROUGH A MATCHING PAD TO TEST POINT (T.P) OF THE TUNER.

MARKER GENERATOR: COUPLE LOOSELY TO THE OUTPUT CABLE OF SWEEP GENERATOR.

DC SUPPLY: ADD DC +12V AT DC JACK.

ADJUST SWEEP GENERATOR TO LOWEST SIGNAL LEVEL CONSISTENT WITH USABLE			
STEP	SWEEP FREQUENCY	MARKER FREQUENCY	REMARK
(1) ADJUST VIF MOD. T2 FOR MARKER POINT MAXIMUM.	30-50 MHZ FOR NTSC 65MHZ FOR JAPAN). 25-45MHZ FOR CCIR.	SYSTEM B,G,H, 36.7MHZ SYSTEM I 37.3 MHZ, SYSTEM M,N 44MHZ (57MHZ FOR JAPAN) (34.7MHZ FOR AUSTRARIA SYSTEM)	PARENTHESIS FOR EXCE-PTION.
(2) ADJUST VIF MOD. T3 FOR MARKER POINT CENTER	30-50 MHZ FOR NTSC 65HZ FOR JAPAN). 25-45MHZ FOR CCIR.	SYSTEM B,C,G,H, 36.7MHZ SYSTEM I 37.3 MHZ, SYSTEM M,N 44MHZ (57MHZ FOR JAPAN) (34.7MHZ FOR AUSTRARIA SYSTEM)	IN THE PARENTHESIS FOR AFC CORRECTION



VIDEO IF ALIGNMENT CONNECTING FIGURE

2. SOUND IF ALIGNMENT

TEST EQUIPMENT CONNECTION

SIGNAL GENERATOR: CONNECT TO TEST POINT (T.P) OF THE TUNER THROUGH A MATCHING PAD.

OSCILLOSCOPE: CONNECT TO THE VIF MOD. PIN2.

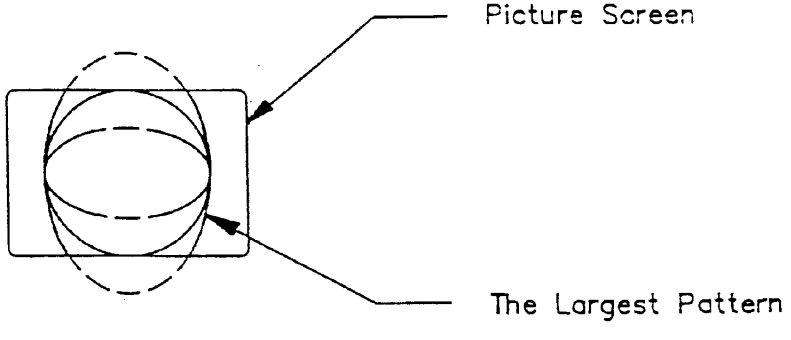
ALIGNMENT PROCEDURE

STEP	GENERATOR	SCOPE	ADJUST	REMARKS
ADJUST VIF MOD. T1	SYSTEM B,G,H 33.4MHZ,SYSTEM M,N 41.25MHZ, SYSTEM I 33.5MHZ SYSTEM D,K, 32.4MHZ @1KHZ FM MOD DEVIATION 25KHZ 80DB OUTPUT.	CONNECT TO THE VIF MOD. PIN2	T1	ADJUST T1 SO THE SIGNAL OF 1 KHZ ON SCOPE TO BE MAX.

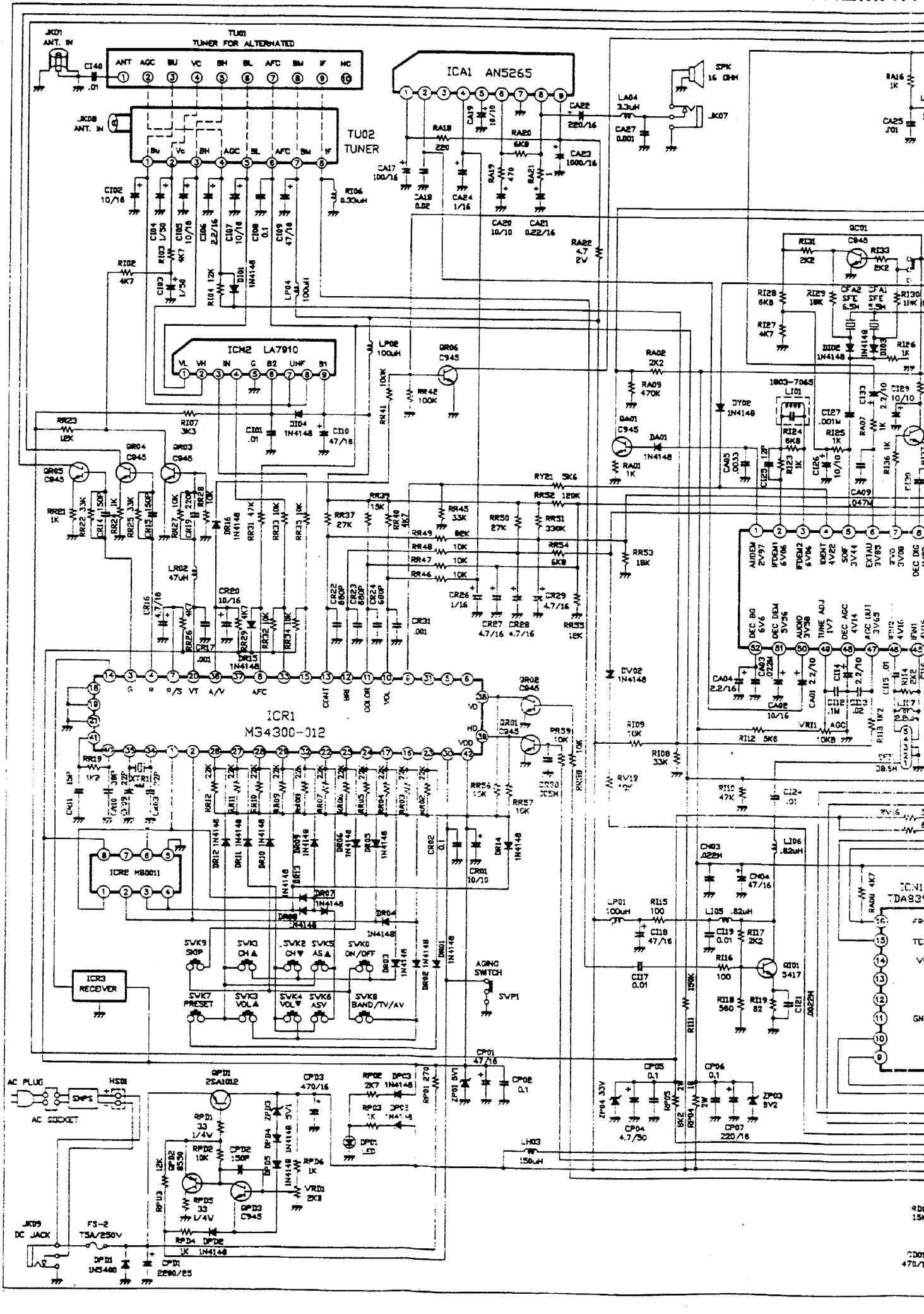
VERTICAL DEFLECTION ALIGNMENT

(1) TUNE THE RECEIVER IN A TEST PATTERN.

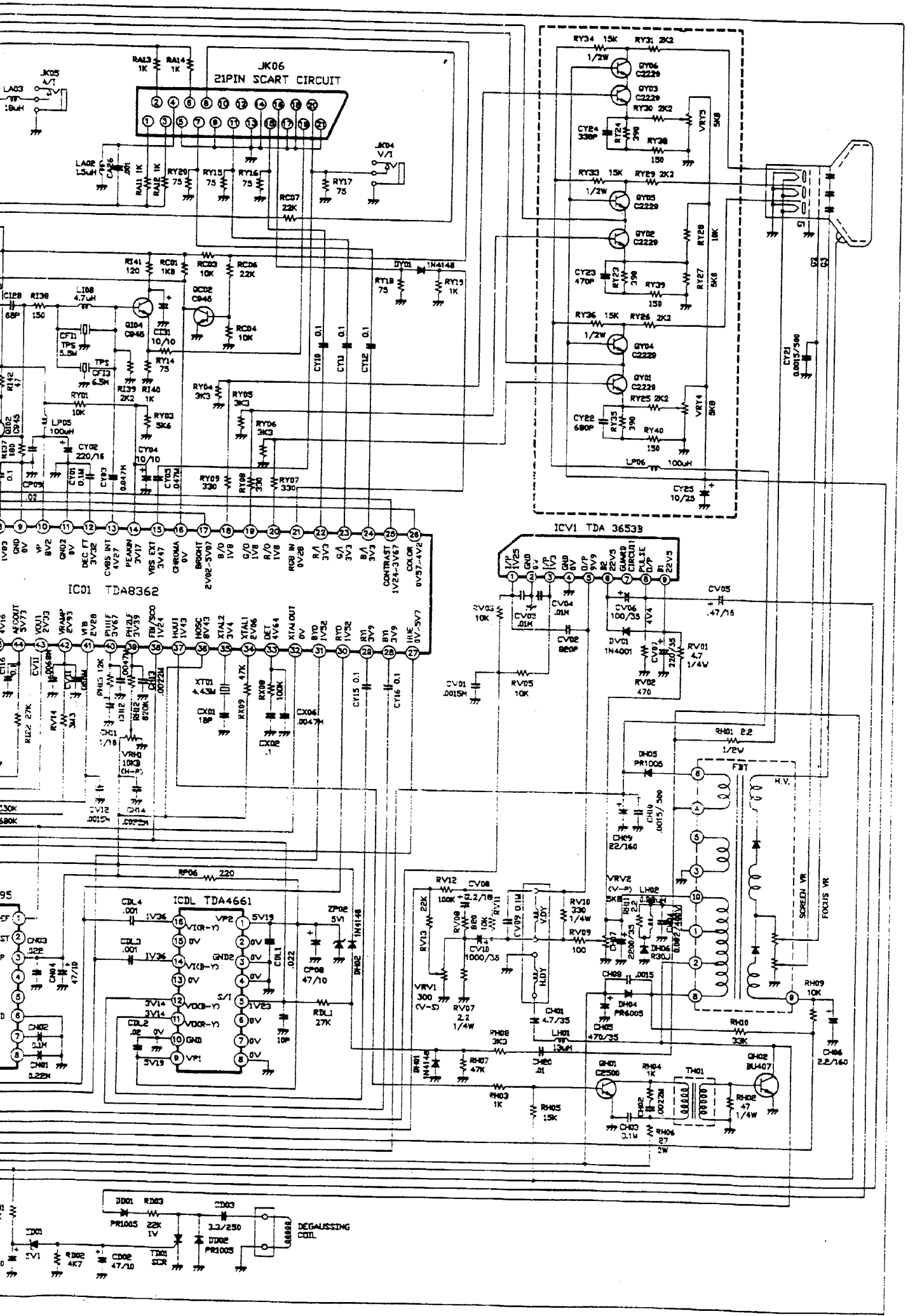
(2) ADJUST V-SIZE CONTROL SV401 TO MAKE THE INSIDE OF THE LARGEST CIRCLE OF TEST PATTERN REACHES NEAR ROUND PATTERN. (SEE THE FIGURE)

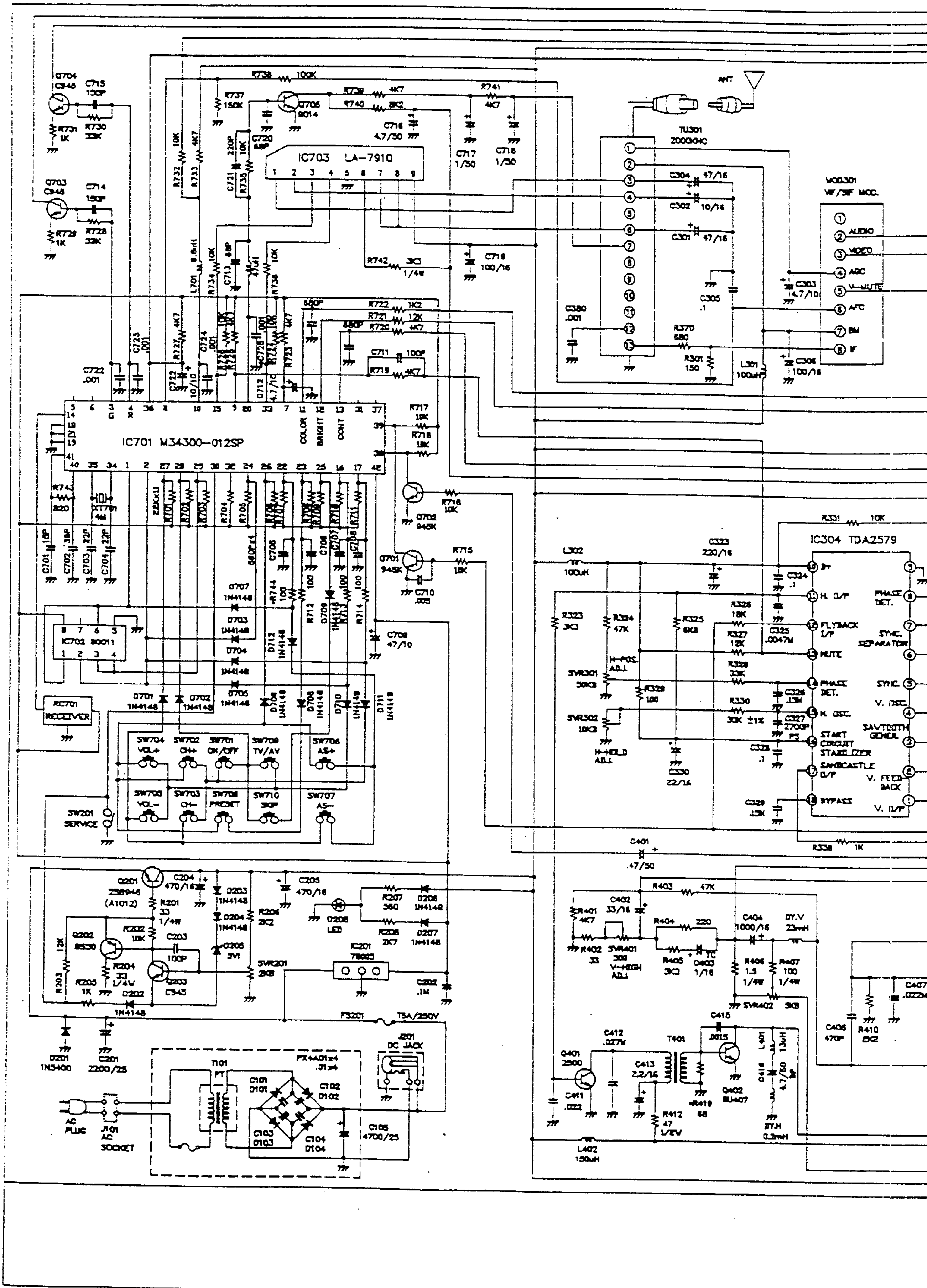


TV SCHEMATI

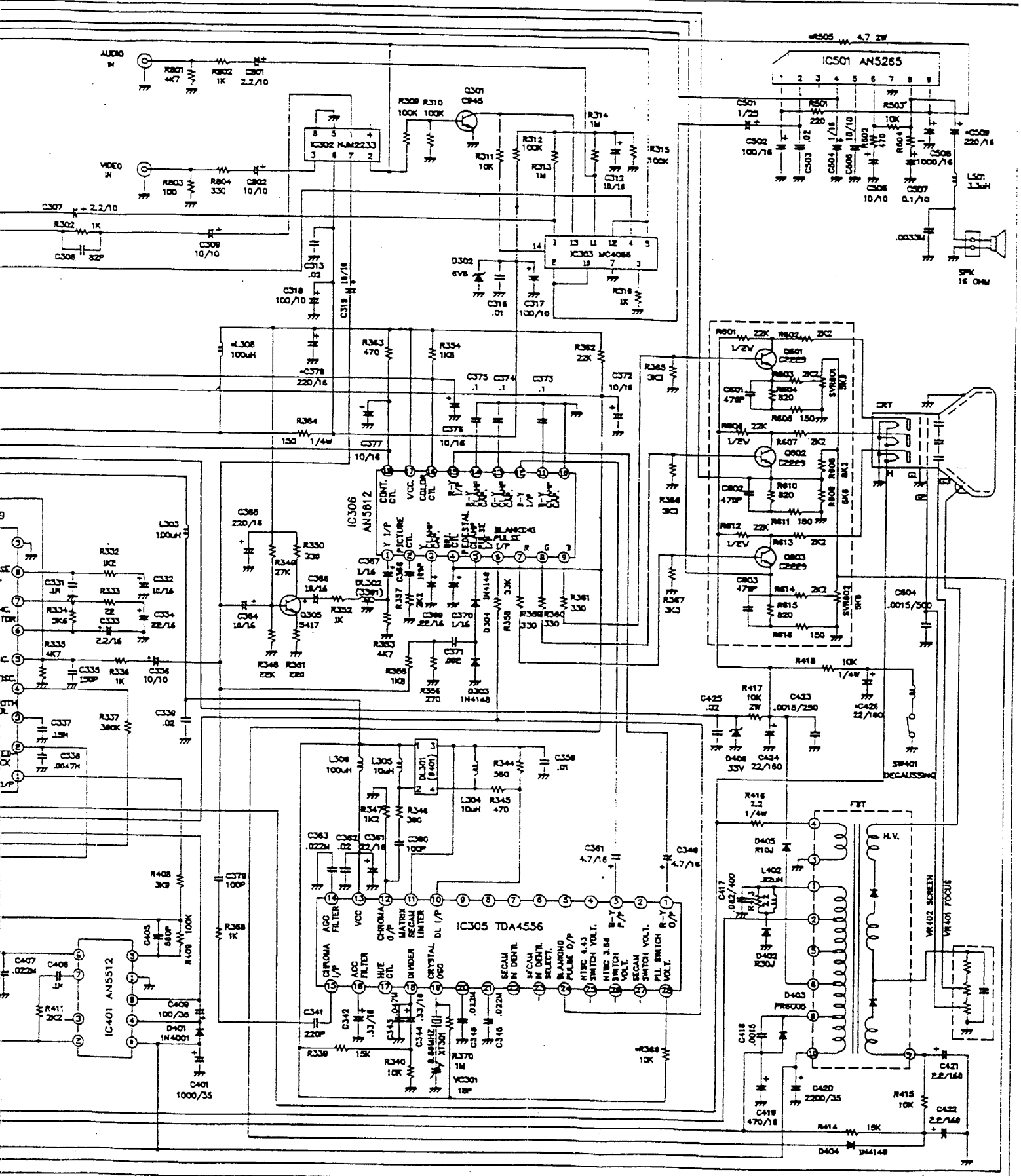

TU01
TUNER FOR ALTERNATED
ANT AGC BU VC BH BL AFC BM IF NC
TU02
TUNER
ICA1 AN5265
ICM2 LA7910
ICR1
M34300-312
ICR2 M80011
ICR3
RECEIVER
SVK9 SKIP
SVK1 CH▲
SVK2 CH▼
SVK5 AS▲
SVK0 ON/OFF
SVK7 PRESET
SVK3 VOL▲
SVK4 VOL▼
SVK6 ASV
SVK8 BAND/TV/AV
AGING SWITCH
SVP1
AC PLUG
AC SOCKET
SMPS
JK09
DC JACK
FS-2
T5A/250V
SPK
16 OHM
JK07

IC DIAGRAM •


JK06
21PIN SCART CIRCUIT
IC01 TDA8362
ICV1 TDA 36533
ICDL TDA4661
FBT
H.V.
SCREEN VR
FOCUS VR
DEGAUSSING COIL



IC701 M34300-012SP
IC703 LA-7910
IC702 80011
IC304 TDA2579
TU301 2000K4C
MOD301 VIF/SIF MOD.
AUDIO
VIDEO
AGC
V-MUTE
AFC
BM
IF
ANT
RC701 RECEIVER
SW704 VOL+
SW702 CH+
SW701 ON/OFF
SW709 TV/AV
SW706 AS+
SW705 VOL-
SW703 CH-
SW708 PRESET
SW710 SKIP
SW707 AS-
SW201 SERVICE
COLOR
BRIGHT
CONT
Q704 C945
Q703 C945
Q705 9014
Q702 945K
Q701 945K
Q201 2SB946 (A1012)
Q202 8530
Q203 C945
Q401 2500
Q402 BU407
IC201 7805
D206 LED
D205 3V1
FS201 T5A/250V
J201 DC JACK
T101
PX4A01x4
AC PLUG
J101 AC SOCKET
C105 4700/25
C201 2200/25
D201 1N5400
H-POS. ADJ.
SVR301 30KB
SVR302 10KB
H-HOLD ADJ.
SVR401 300 V-HIGH ADJ.
SVR402 5KB
T401
DY.V 23mH
DY.H 0.2mH
L402 150uH
L302 100uH
L301 100uH
3+
H. O/P
FLYBACK I/P
MUTE
PHASE DET.
H. OSC.
START CIRCUIT STABILIZER
SANDCASTLE O/P
BYPASS
PHASE DET.
SYNC. SEPARATOR
SYNC.
V. OSC.
SAWTOOTH GENER.
V. FEEDBACK
V. I/P



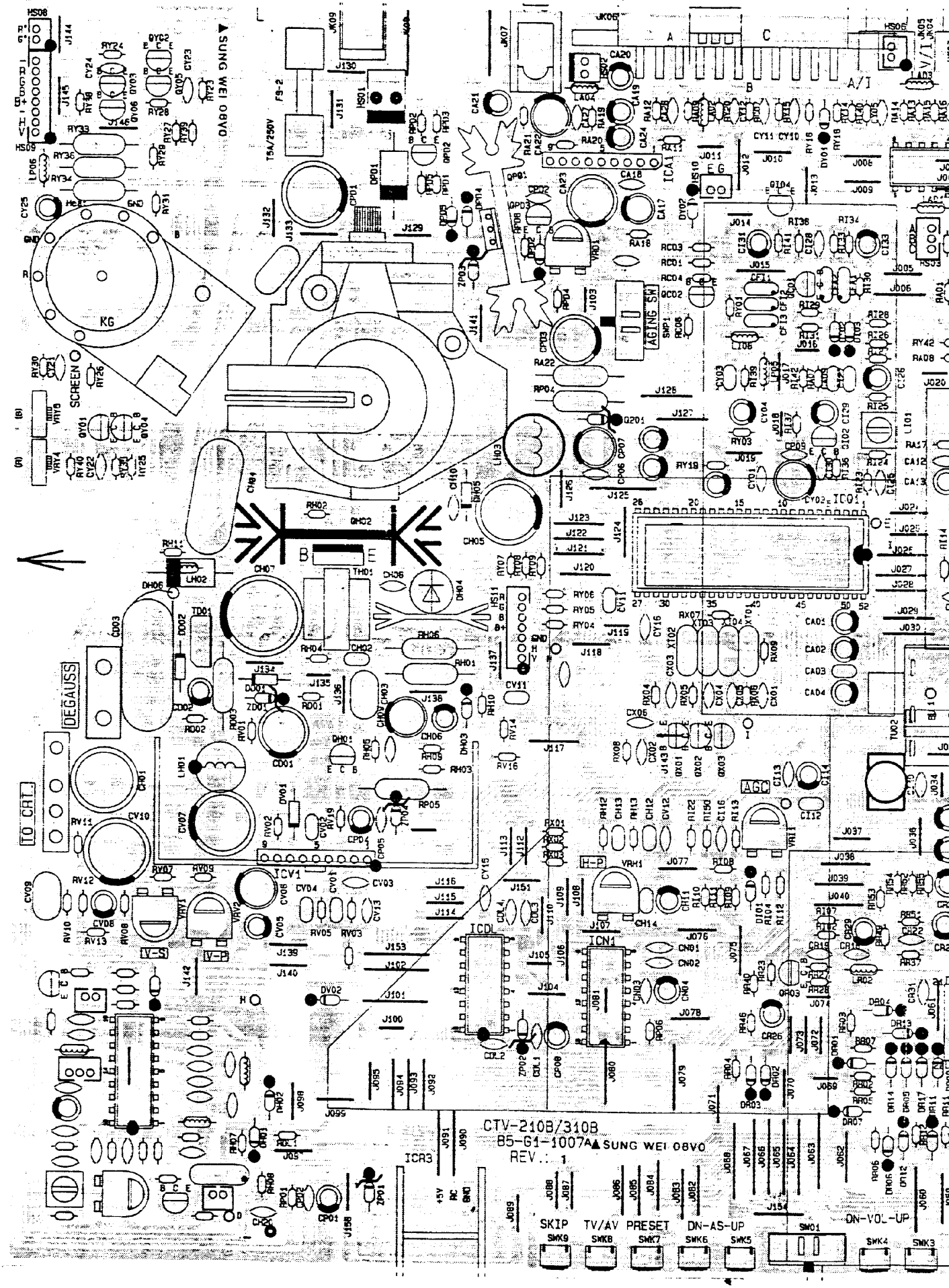
SUBFIX	MOD RECRD
AA	1993/11/26
AB	
AC	
AD	
AE	

ACTION ELECTRONIS CO., LTD
偉聲電子股份有限公司

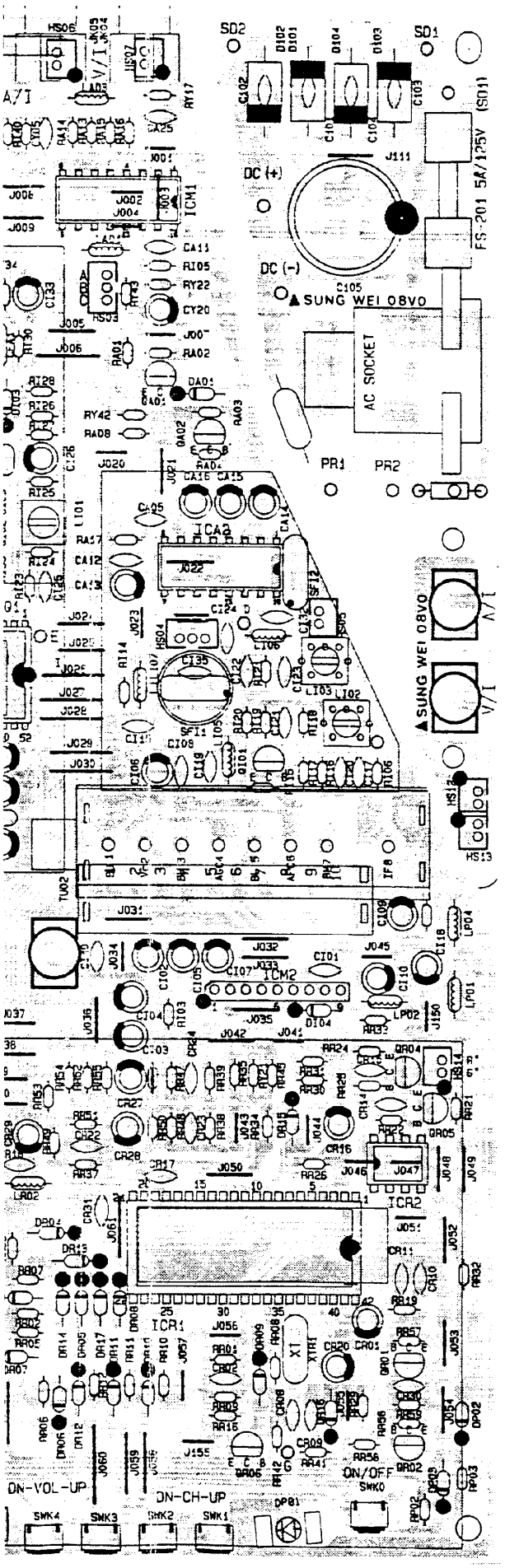
TITLE: CTV-3108 SCHEMATIC DIAGRAM (FTZ)

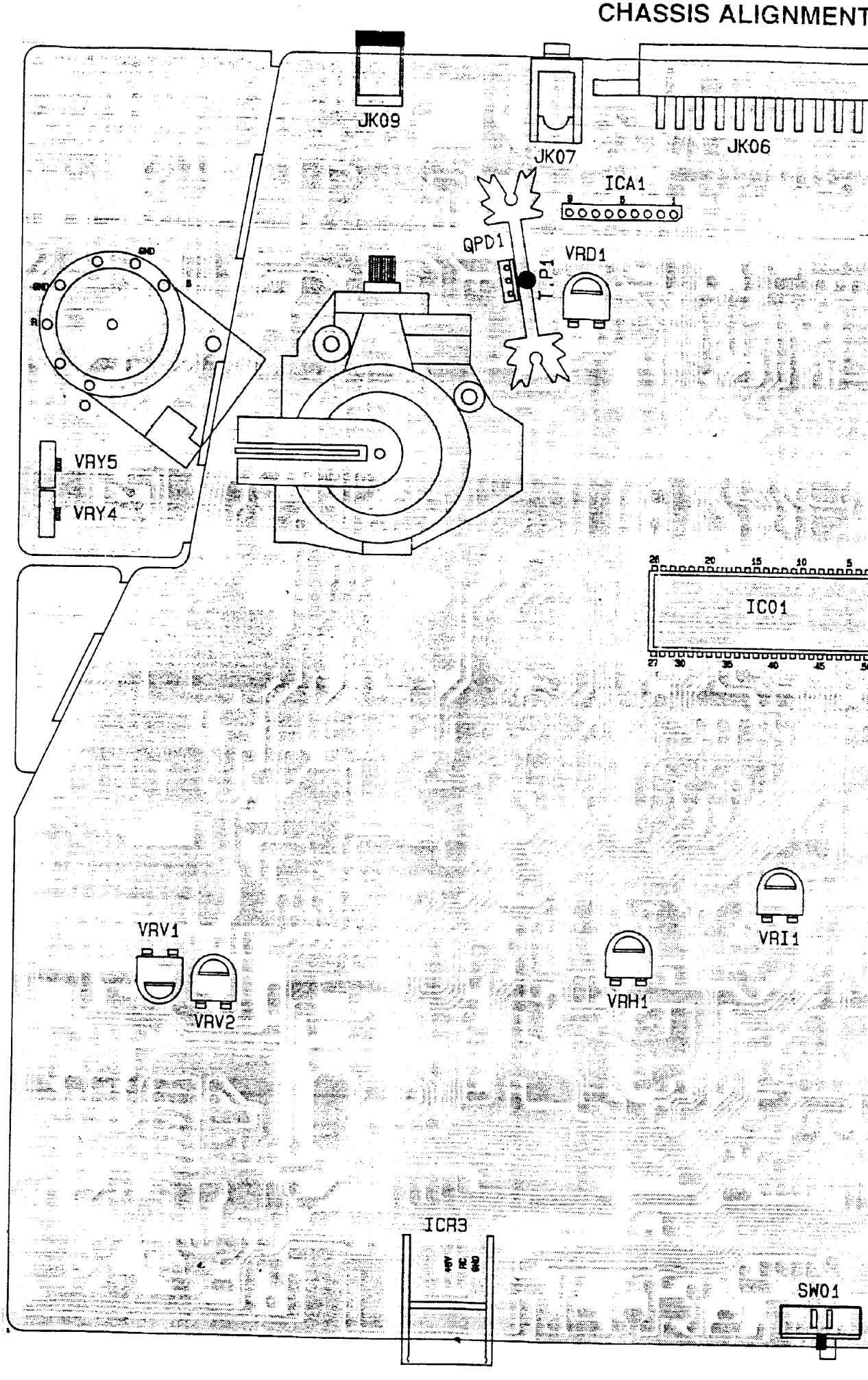
DESIGN	CHECK	APPROVED	DRAWING NO.	REV
P. L. Lau			05-G1-1322	0

MAIN P.C.B. TOP VIEW



N


SD2
SD1
DC (+)
DC (-)
SUNG WEI 08V0
AC SOCKET
FS-201 5A/125V (SD1)
PR1
PR2
ICM1
ICA2
ICM2
ICR2
ICR1
X1
A/I
V/I
DN-VOL-UP
DN-CH-UP
ON/OFF
SWK4
SWK3
SWK2
SWK1
SWK0


JK09
JK07
JK06
ICA1
QPD1
T.P1
VRD1
VRY5
VRY4
IC01
VRV1
VRV2
VRH1
VRI1
ICR3
SW01

IENT POINTS