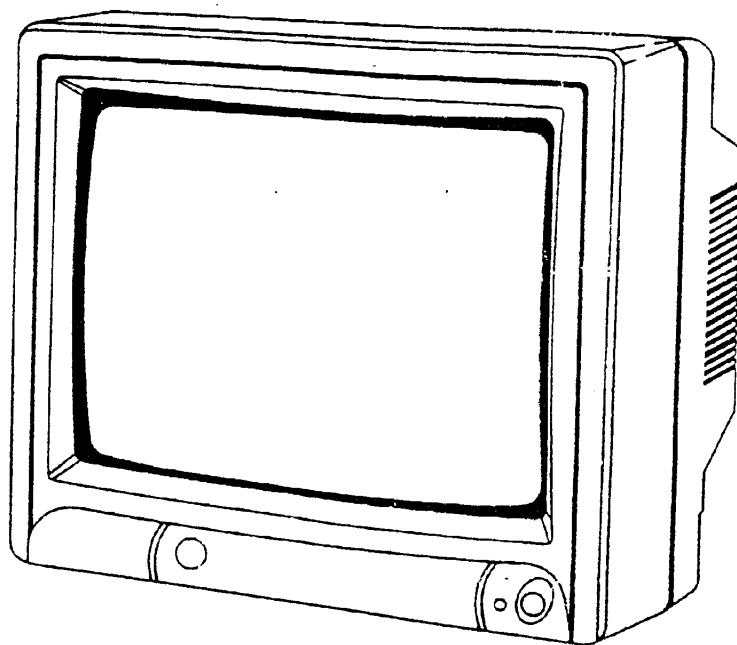


Service Manual

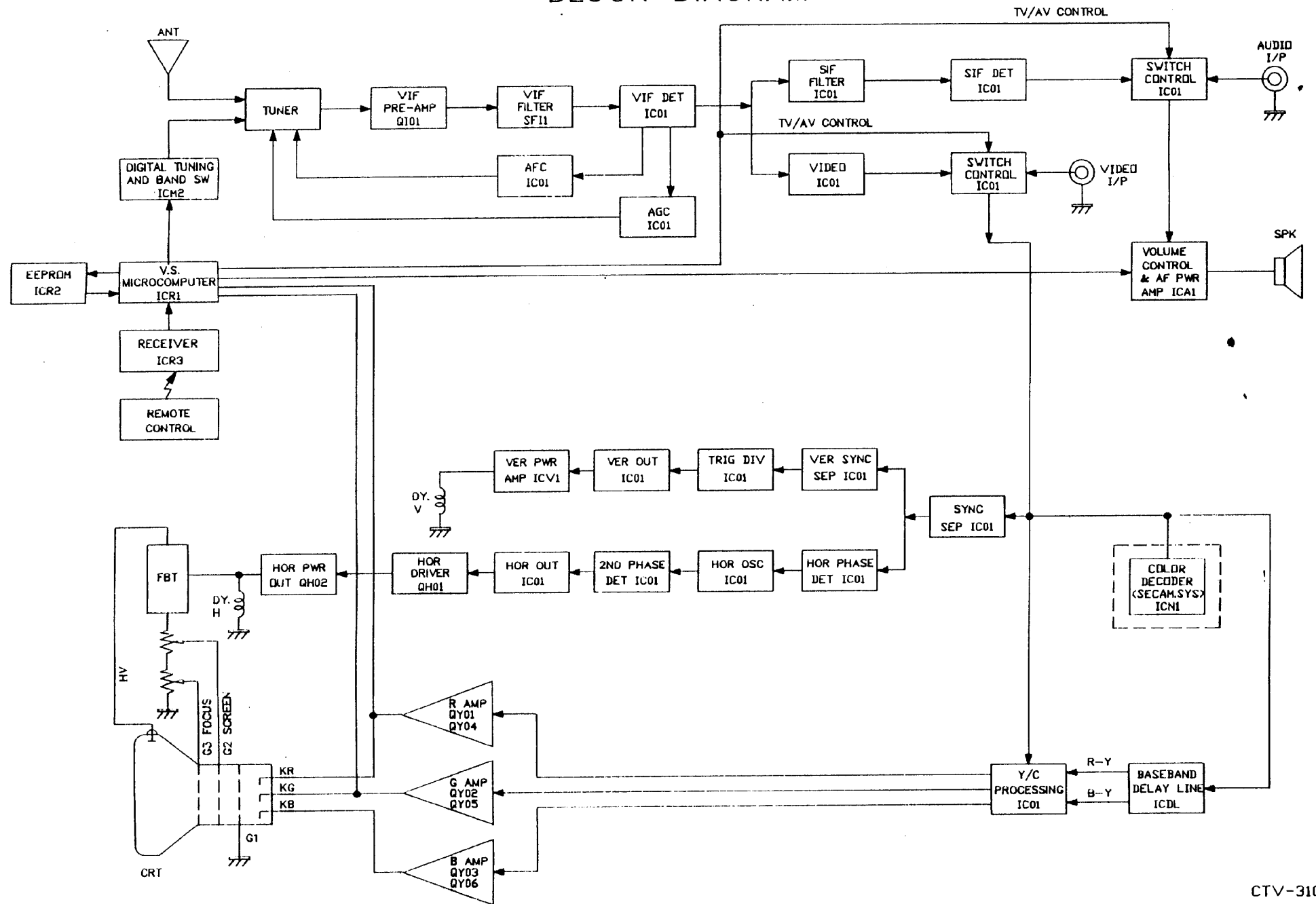
10 INCH COLOUR TV + MONITOR

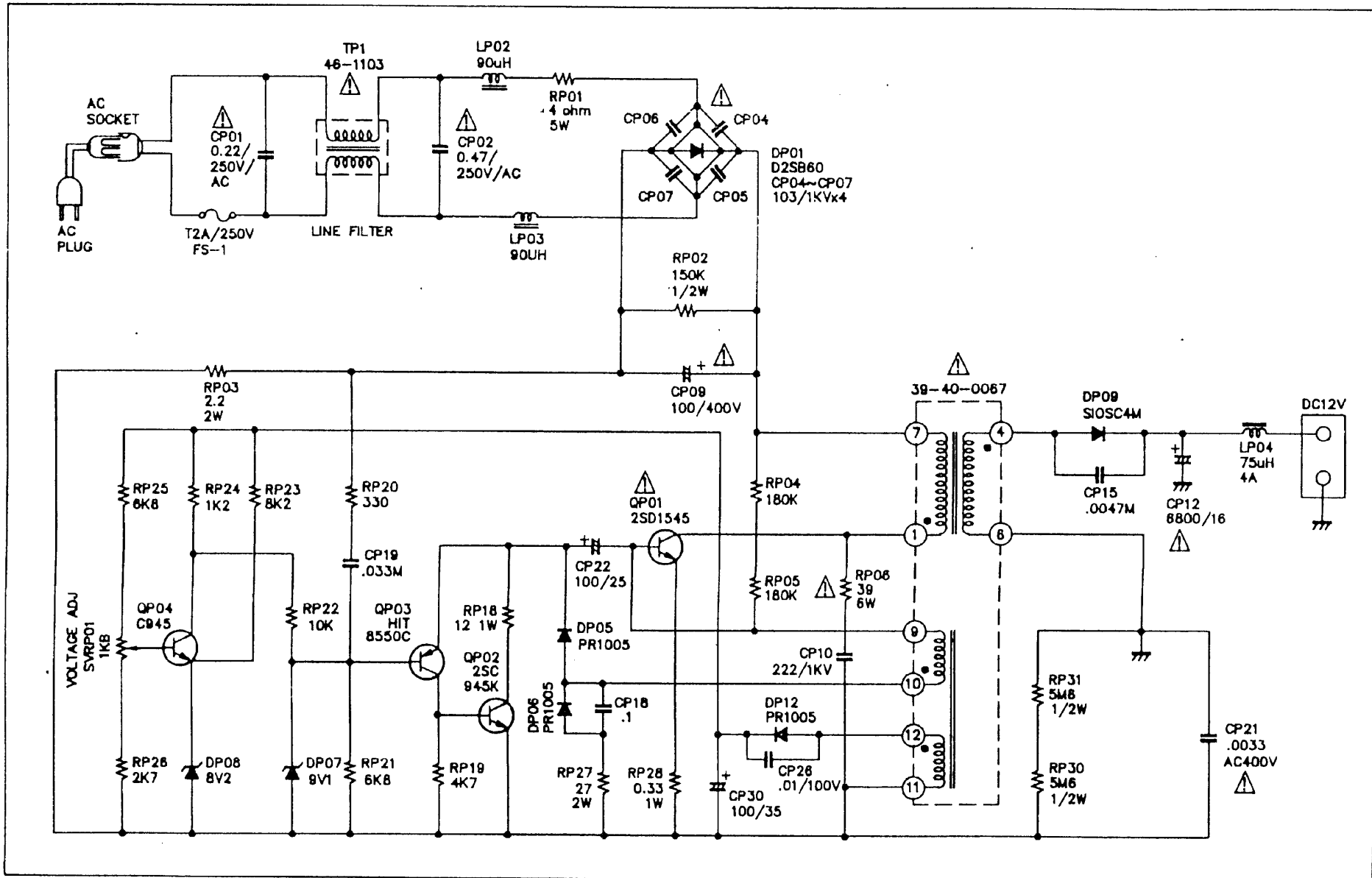
MODEL NO: TC-9112



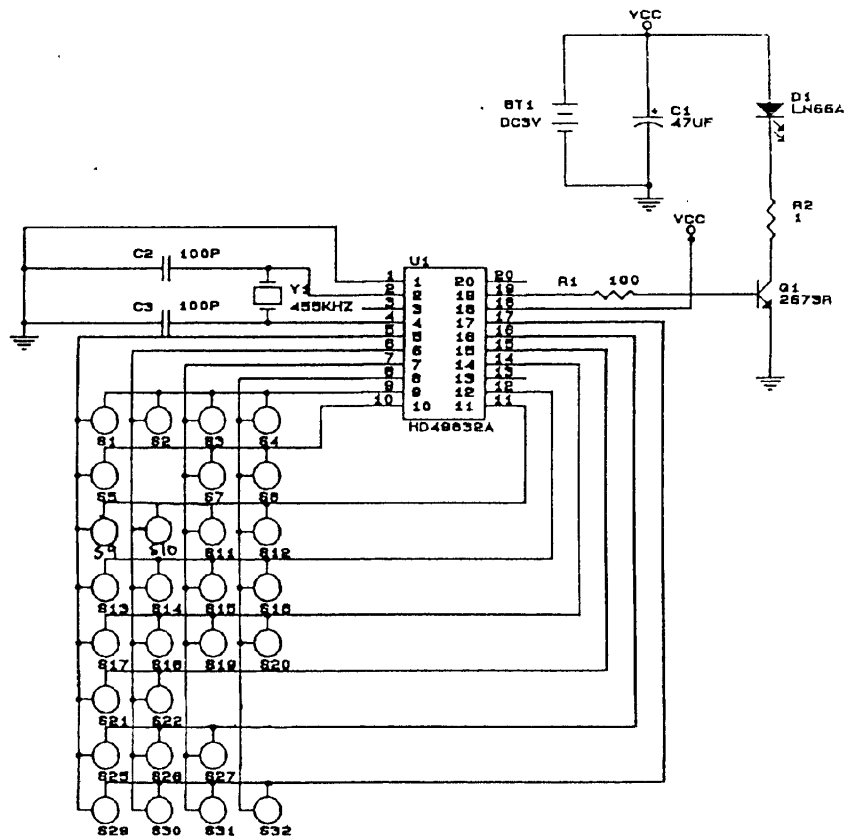
Lenco®

BLOCK DIAGRAM





REMOTE CONTROL SCHEMATIC DIAGRAM



5	8	10	9
14	13	12	11
18	17	16	15
22	21	20	19
7	27	26	25
31	30	29	32
4	3	2	1

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).

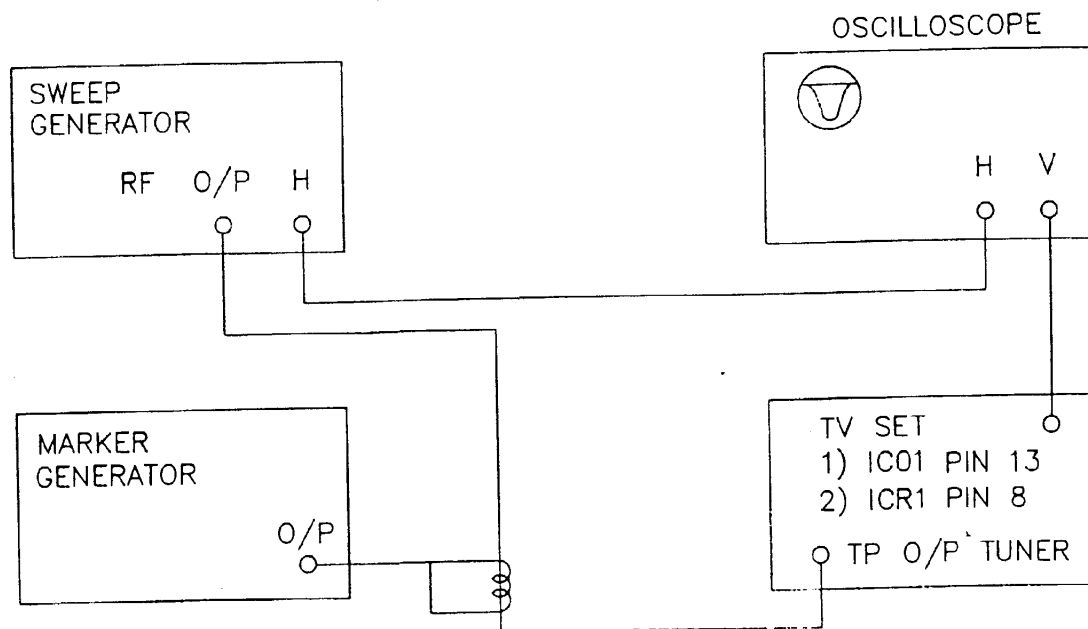
OSCILLOSCOPE: CONNECT TO THE (1). IC01 PIN 13.

(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

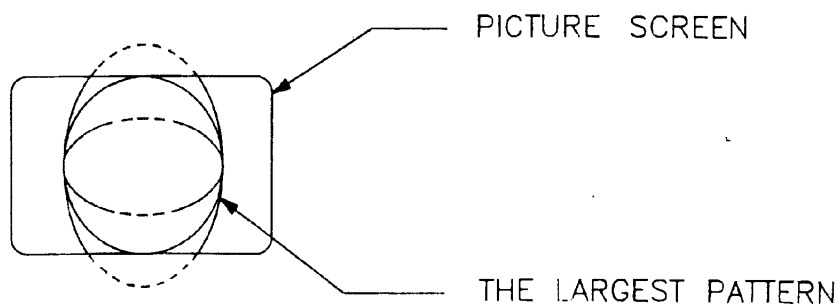
3. VERTICAL DEFLECTION ALIGNMENT

(1) TUNE THE RECEIVER IN A TEST PATTERN.

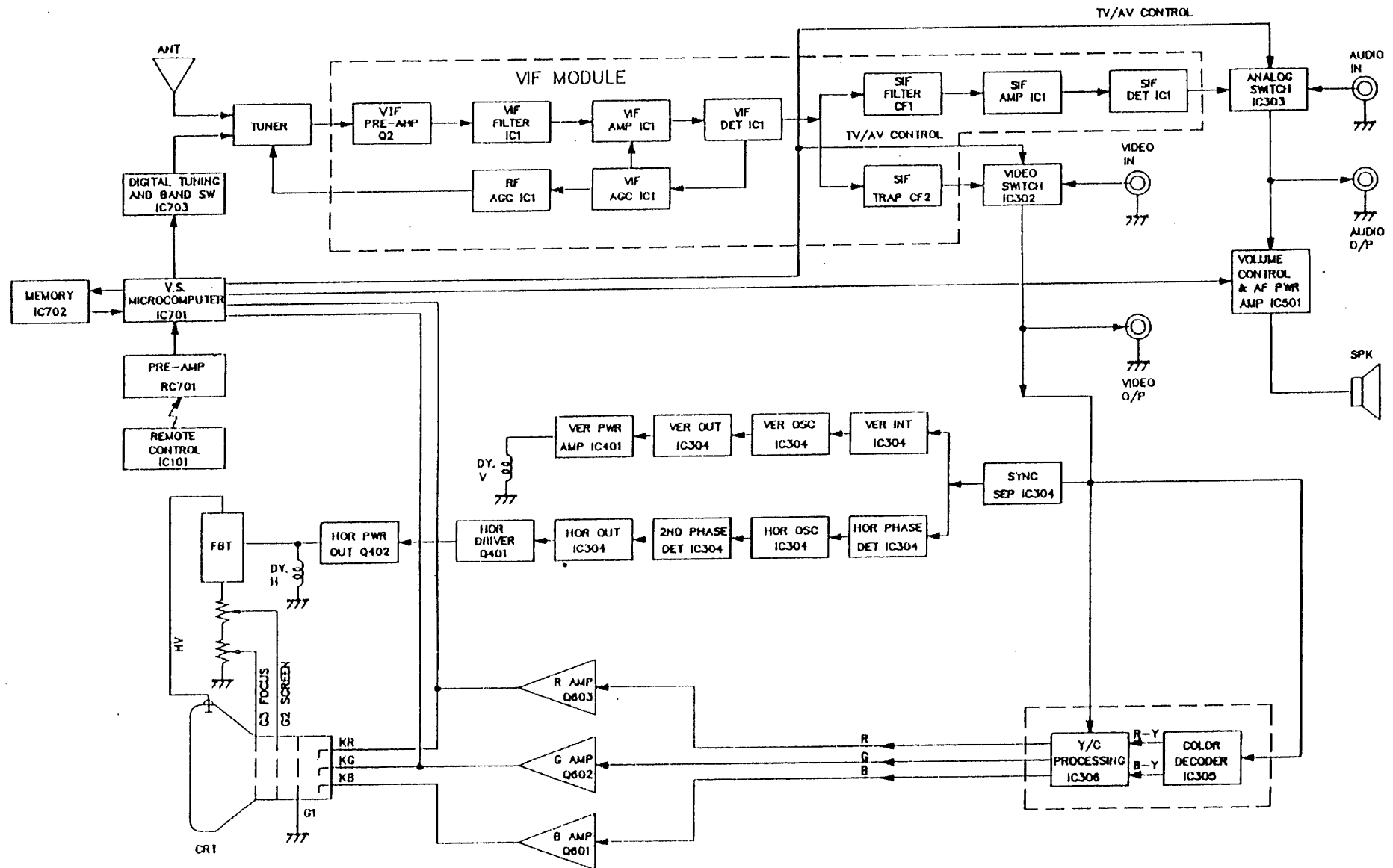
(2) ADJUST V-SIZE CONTROL VRV1 (300 ohm).

WHEN THE INSIDE OF THE LARGEST CIRCLE OF TEST PATTERN REACHES NEAR ROUND PATTERN. (SEE THE FIGURE)

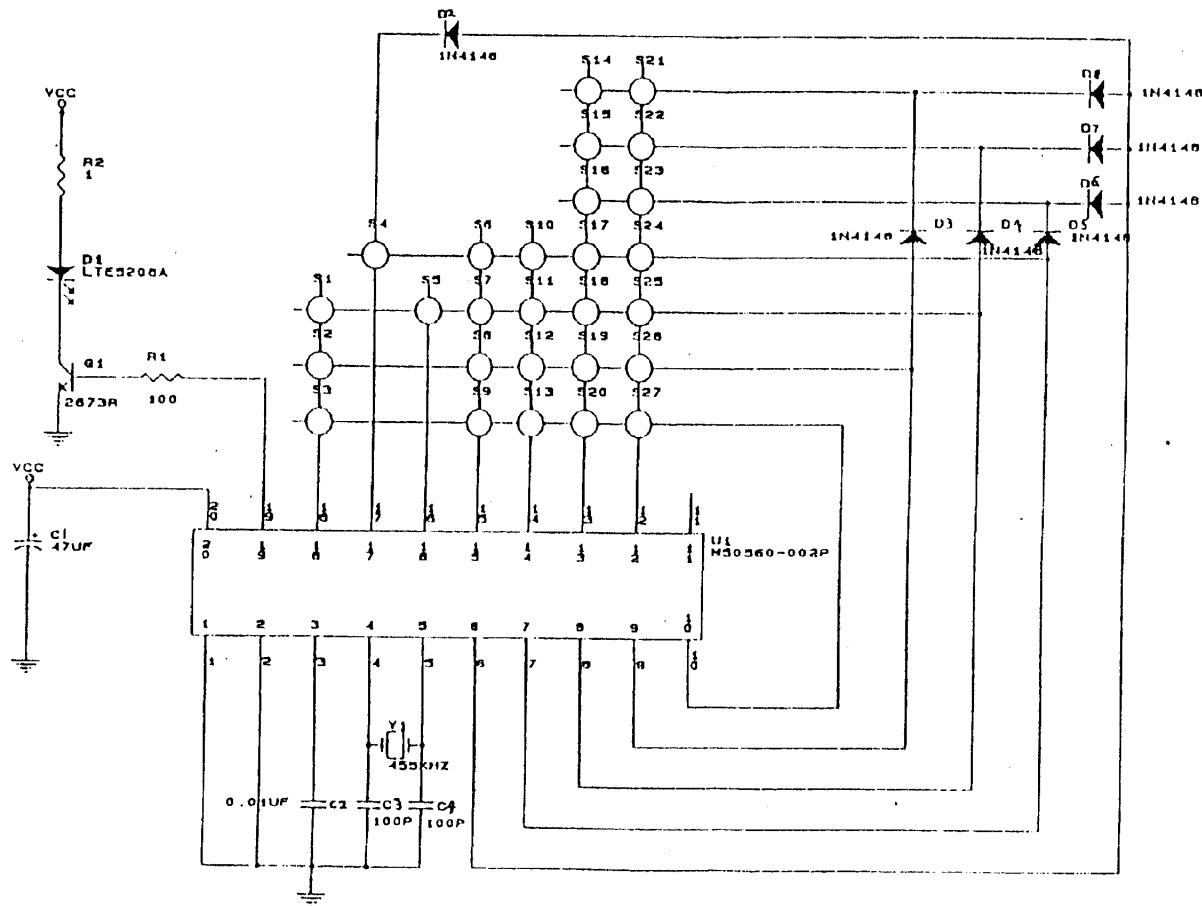
(3) IF THE PATTERN NOT AT CENTER POSITION, ADJUST V-POSITION CONTROL VRV2 (5K OHM).



BLOCK DIAGRAM



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	HEAT
15	MOON
16	AUTO 70H
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 REGULATOR 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. HORIZONTAL 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)

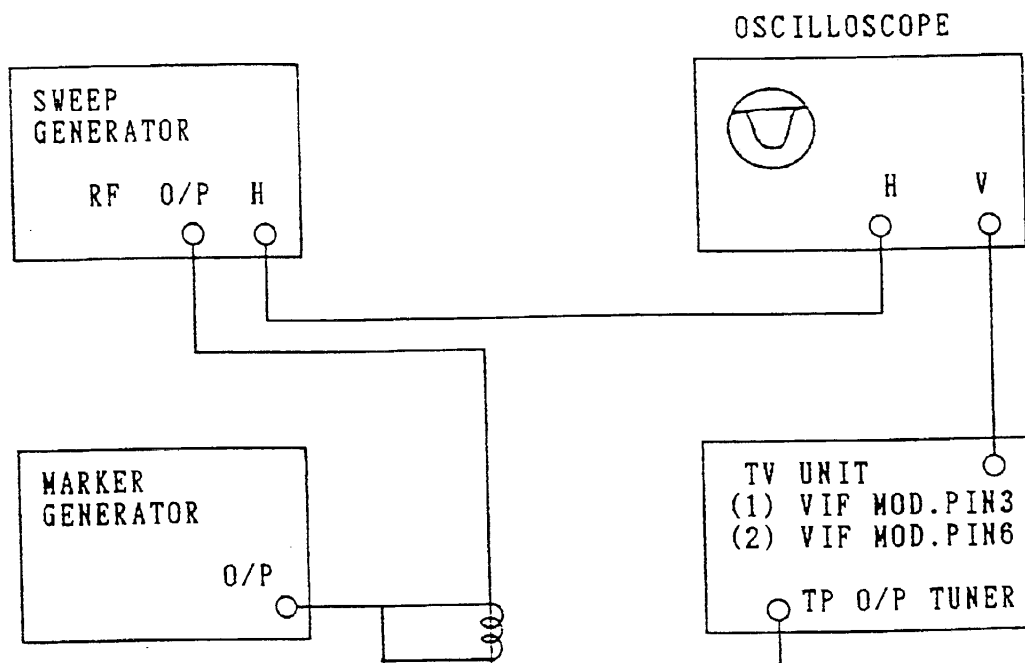
OSCILLOSCOPE: CONNECT TO (1) VIF MOD. PIN3
(2) VIF MOD. PIN6

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.

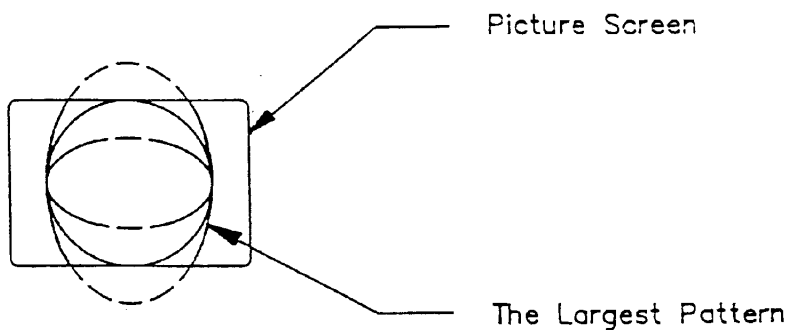
OSCILLOSCOPE: CONNECT TO THE VIF MOD. PIN2.

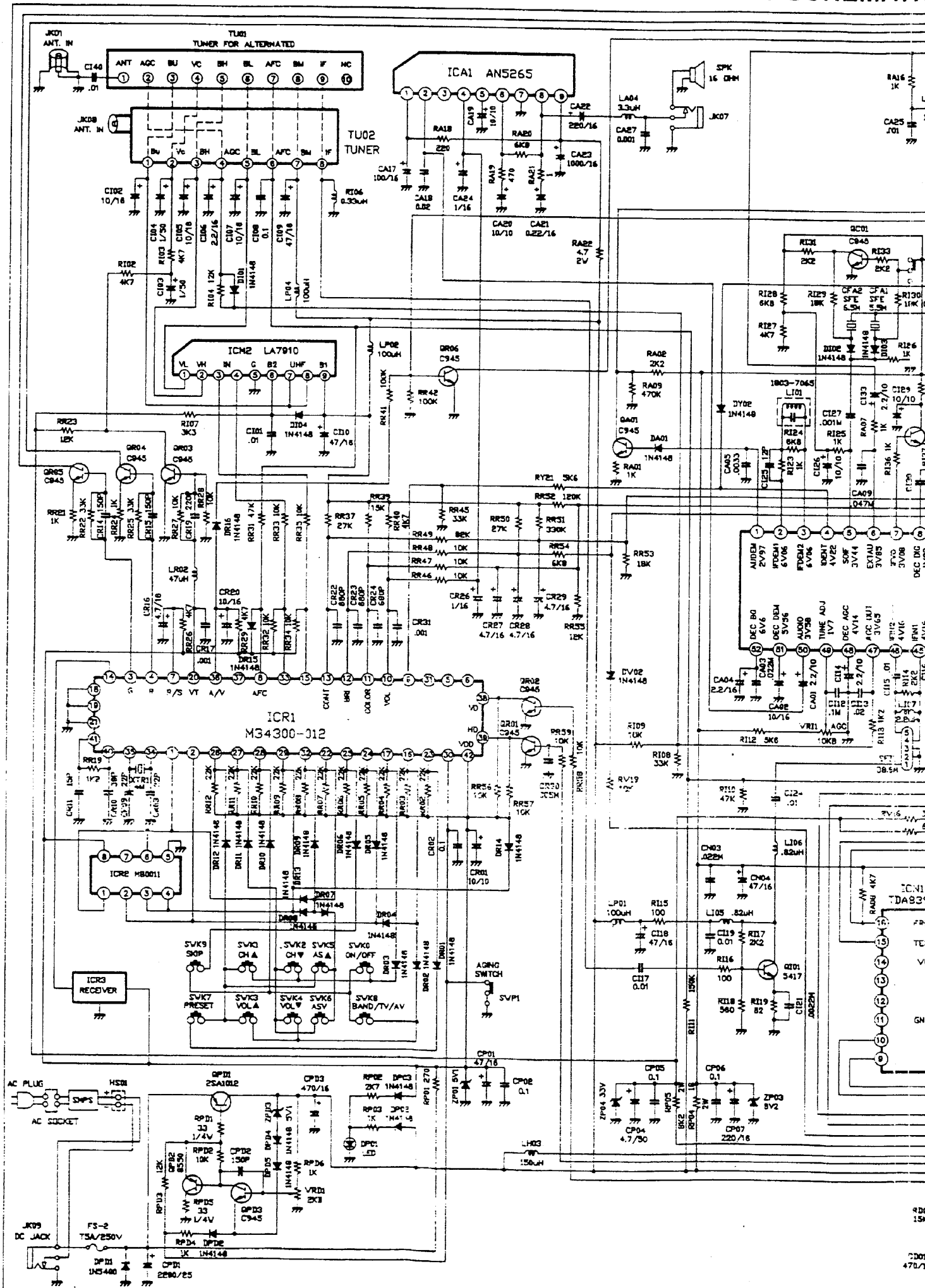
ALIGNMENT PROCEDURE

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.

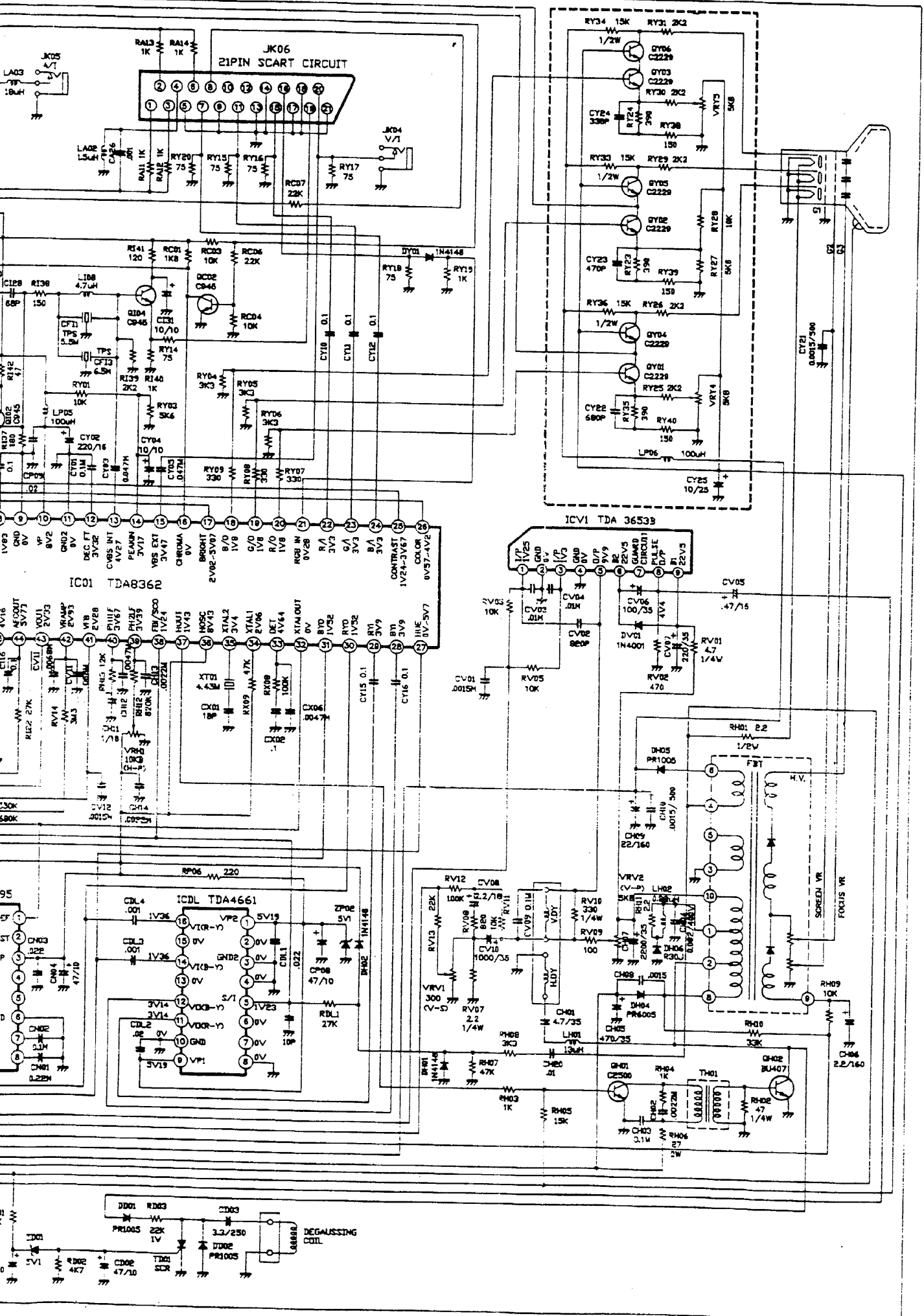
VERTICAL DEFLECTION ALIGNMENT

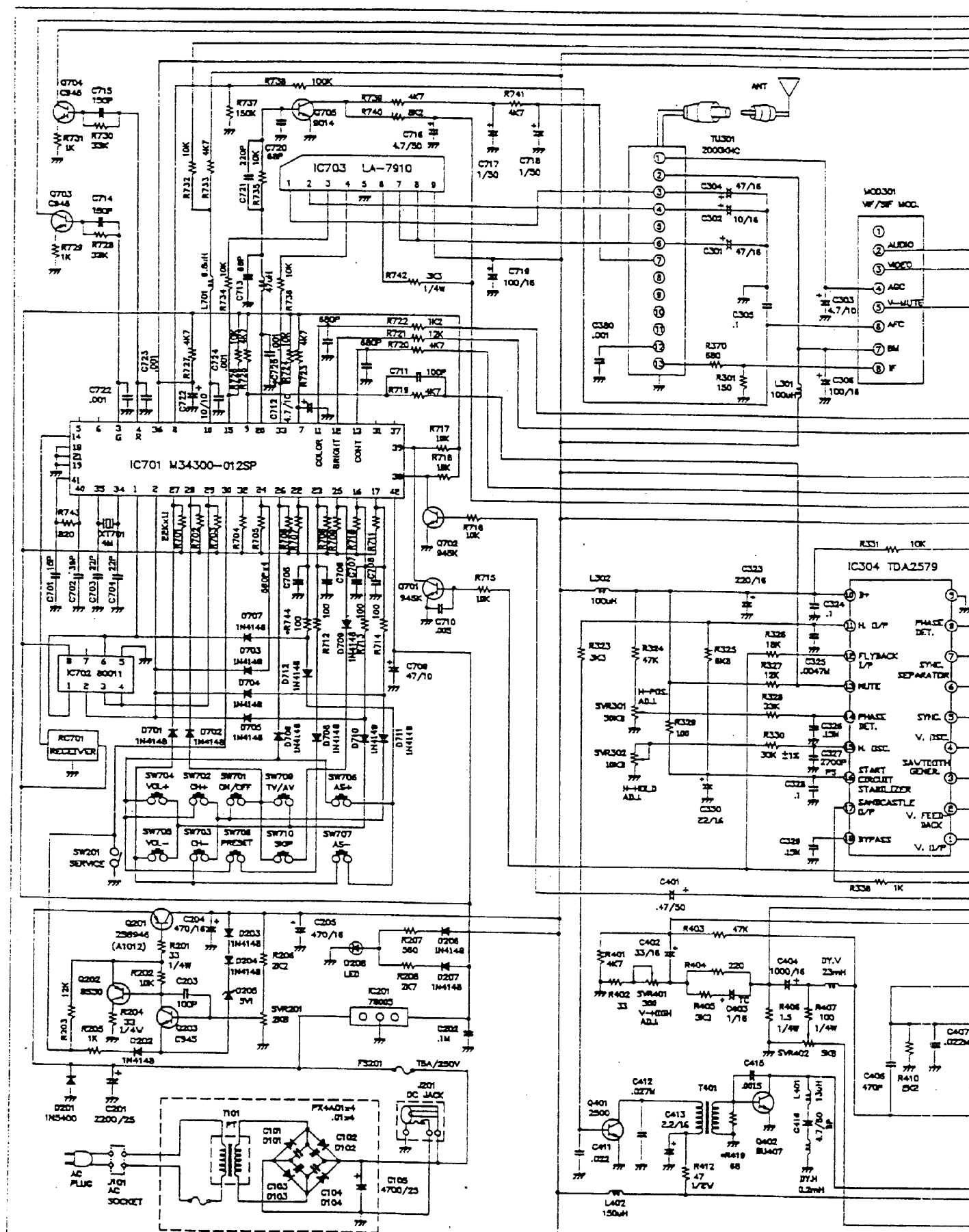
- (1) TUNE THE RECEIVER IN A TEST PATTERN.
- (2) ADJUST V-SIZE CONTROL SV401 TO MAKE THE INSIDE OF THE LARGEST CIRCLE OF TEST PATTERN REACHES NEAR ROUND PATTERN. (SEE THE FIGURE)

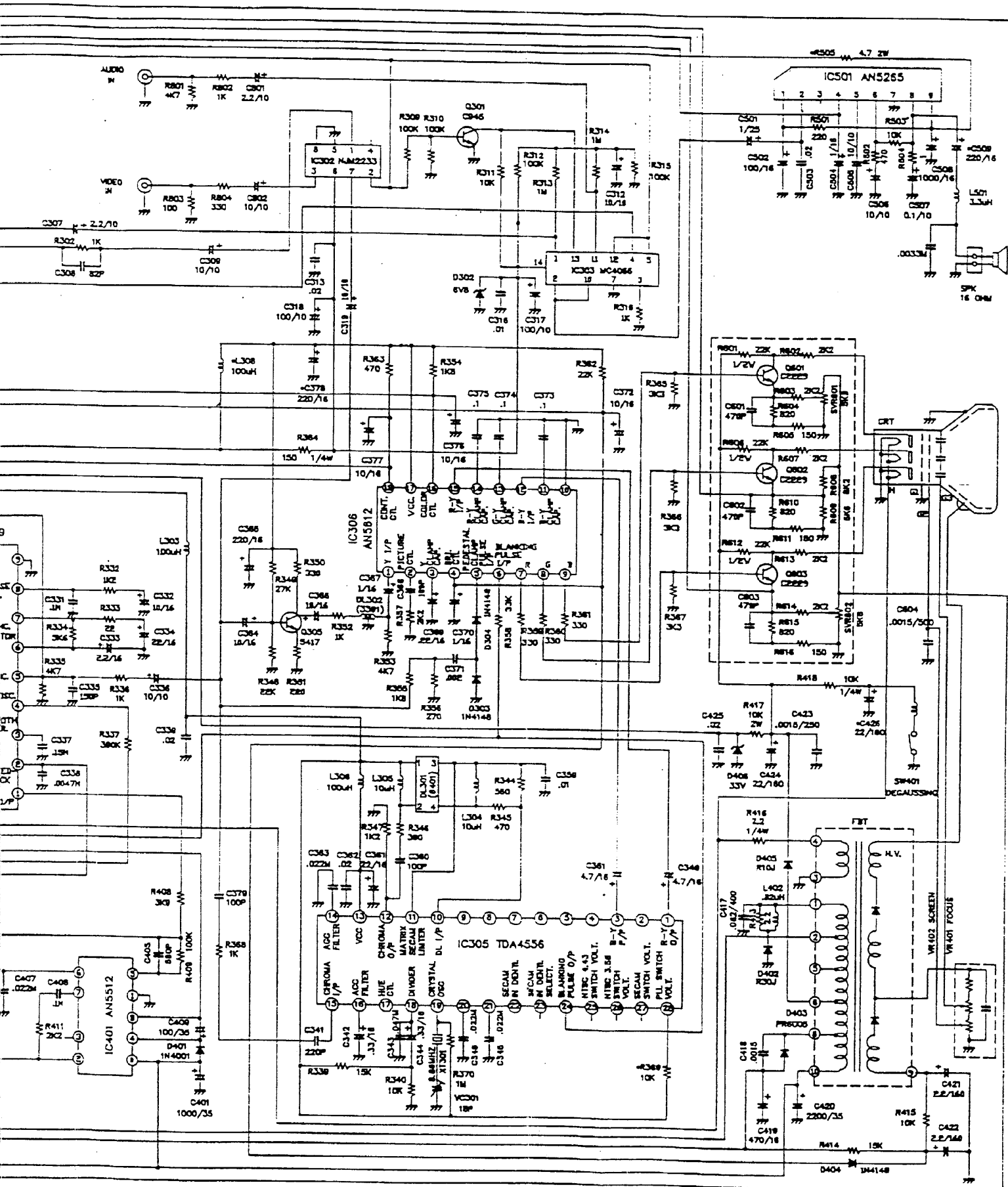




C DIAGRAM







SUBFIX	MOD	RECD	ACTION ELECTRONICS CO. LTD			
AA	1993/11/26		電聲電子股份有限公司			
AB			TITLE: CTV-3108 SCHEMATIC DIAGRAM			
AC			(7/2)			
AD			DESIGN	CHECK	APPROVED	DRAWING NO.
AE			P. L. L.	王	文王	05-G1-1322
						REV
						0