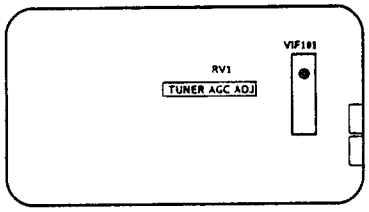
Specifications

[KV-A2112U/A2512U]	
Television system	I
Color system	PAL, SECAM, NTSC3.58, NTSC4.43
Stereo system	NICAM stereo
Channel coverage	UHF: E21-E69
Picture tube	Black Trinitron tube Approx. 54.5 cm (21 inches) (Approx. 51 cm picture measured diagonally) 110 °-degree deflection Approx. 63.5 cm (25 inches) (Approx. 69 cm picture measured diagonally) 110 °-degree deflection
Inputs	1 21-pin connector: CENELEC standard including RGB input. 2 21-pin connector: including S video input Front : 3 Audio and video input jacks: phono jack. Y: 1Vp-p±3dB 75ohm C: 0.3Vp-p±3dB 75ohm
Outputs	21-pin connector: CENELEC standard Headphones jack: stereo minijack External speaker terminals: 2-pin DIN Audio output jacks: phono jack (output dependent upon TV settings)
Sound output	30 W + 30 W
Power consumption	126W (KV-A2112U) 127W (KV-A2512U)
Dimensions incl.speakers	Approx. 615x439x488 mm (w/h/d) (KV-A2112U) Approx. 677x501x481 mm (w/h/d) (KV-A2512U)
Weight incl.speakers	Approx. 28.0kg (KV-A2112U) Approx. 40.0kg (KV-A2512U)
[RM-816]	
Remote control system	infrared control
Power requirements	3V dc 2 batteries IEC designation R6 (size AA)
Dimentions	Approx. 75×221×23mm(w/h/d)
Weight	Approx. 194g IEC designation R6 batteries (2)

1. A BOARD ADJUSTMENTS

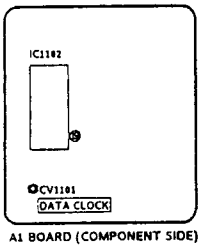


A BOARD (COMPONENT SIDE)

TUNER AGC ADJUSTMENT (VIF101, RV1)

1. Align with an appropriate signal between stations.
2. Adjust RV1 so that snow noise and cross modulation just disappear from the picture.

2. A1 BOARD ADJUSTMENT

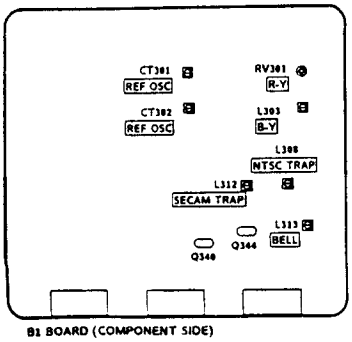


A1 BOARD (COMPONENT SIDE)

DATA CLOCK Adjustment (CV1101)

1. Tune in a no signal.
2. Connect a frequency counter to pin ⑱ of IC1102 (PCLK) through a probe of 10:1.
3. Adjust CV1101 (DATA CLOCK) so that frequency becomes 728.022KHz±1Hz.

3. B1 BOARD ADJUSTMENTS



B1 BOARD (COMPONENT SIDE)

Electrical Adjustments

REFERENCE OSCILLATOR ADJUSTMENT (CT302 8.8MHz)

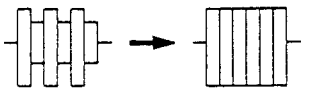
1. Input a PAL color bar signal.
2. Ground pin ⑰ of the IC304.
3. Adjust CT302 to obtain synchronization.

REFERENCE OSCILLATOR ADJUSTMENT (CT301 7.16MHz)

1. Input an NTSC color bar signal.
2. Ground pin ⑰ of IC304.
3. Adjust the CT301 to obtain synchronization.
4. Remove the jumper grounding pin ⑰ of IC304.

BELL FILTER ADJUSTMENT (L313)

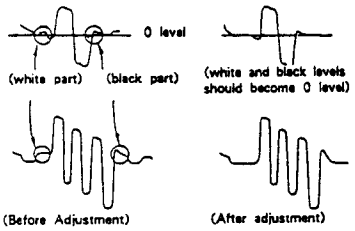
1. Input a SECAM color bar signal.
2. Connect the oscilloscope to the emitter of Q344.
3. Adjust L313 so that the waveform is flat.



<Before Adjustment> <After Adjustment>

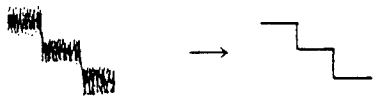
DISCRIMINATION ADJUSTMENT (RV301 and L303)

1. Input a SECAM color bar signal.
2. Connect the oscilloscope to pin ① of IC304.
3. Adjust RV301 until the white and black sections of the waveform at pin ① are at the 0 level. Connect the oscilloscope to pin ③ of IC304.
4. Adjust L303 until the white and black sections of the waveform at pin ③ are at the 0 level.



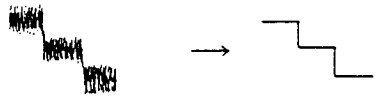
SECAM TRAP (L312)

1. Input a SECAM color bar signal.
2. Connect oscilloscope to Q340 emitter and adjust L312 to minimize color carrier on the Y-signal.

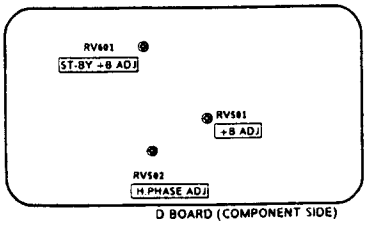


NTSC TRAP (L308)

1. Input a NTSC (3.58) color bar signal.
2. Connect oscilloscope to Q340 emitter and adjust L308 to minimize color carrier on the Y-signal.



4. D BOARD ADJUSTMENTS



D BOARD (COMPONENT SIDE)

+B ADJUSTMENT (RV501)

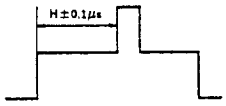
1. Connect the digital multimeter to TP91.
2. Adjust RV501 to obtain 135±0.2V.

ST-BY +B ADJUSTMENT (RV601)

1. Put the system into ⏻ standby mode (remote commander).
2. Connect the digital multimeter to TP91.
3. Adjust RV601 to obtain 135±3V.
4. Take the system out of ⏻ standby mode (remote commander).

H.PHASE ADJUSTMENT (RV502)

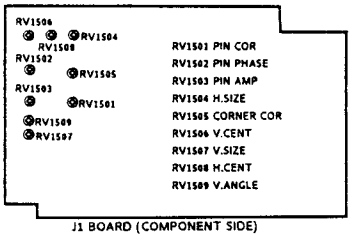
1. Input a PAL color bar signal.
2. Set the picture and brightness controls to their normal levels.
3. Set RV1508 (H.CENT) to its mechanical center.
4. Connect the oscilloscope to pin ⑪ (SCP) of IC 501.
5. Rotate RV502 to adjust to H±0.1μs.



Standard of H. PHASE

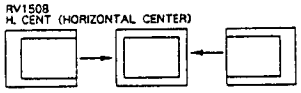
Model Size	H
21″	5.6μs
25″	5.1μs

5. J1 BOARD ADJUSTMENTS

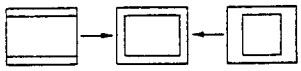


J1 BOARD (COMPONENT SIDE)

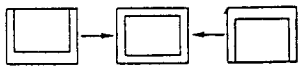
RV1508
H. CENT (HORIZONTAL CENTER)



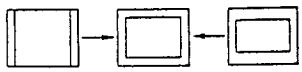
RV1504
H. SIZE (HORIZONTAL SIZE)



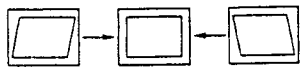
RV1506
V. CENT (VERTICAL CENTER)



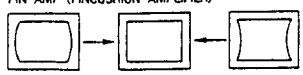
RV1507
V. SIZE (VERTICAL SIZE)



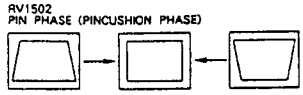
RV1509
V. ANGLE (VERTICAL ANGLE)



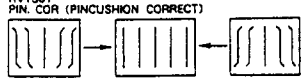
RV1503
PIN AMP (PINCUSHION AMPLIFIER)



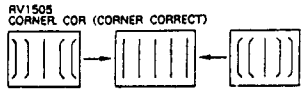
RV1502
PIN PHASE (PINCUSHION PHASE)



RV1501
PIN. COR (PINCUSHION CORRECT)



RV1505
CORNER COR (CORNER CORRECT)



Electrical Adjustments

+B ADJUSTMENT (RV501)

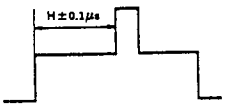
1. Connect the digital multimeter to TP91.
2. Adjust RV501 to obtain 135±0.2V.

ST-BY +B ADJUSTMENT (RV601)

1. Put the system into ⏻ standby mode (remote commander).
2. Connect the digital multimeter to TP91.
3. Adjust RV601 to obtain 135±3V.
4. Take the system out of ⏻ standby mode (remote commander).

H.PHASE ADJUSTMENT (RV502)

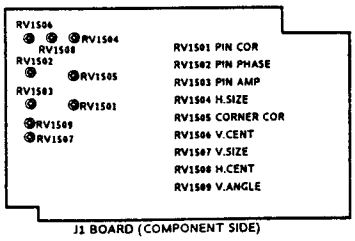
1. Input a PAL color bar signal.
2. Set the picture and brightness controls to their normal levels.
3. Set RV1508 (H.CENT) to its mechanical center.
4. Connect the oscilloscope to pin ⑪ (SCP) of IC 501.
5. Rotate RV502 to adjust to H±0.1μs.



Standard of H. PHASE

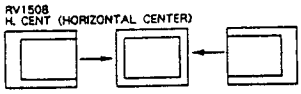
Model Size	H
21 "	5.6μs
25 "	5.1μs

5. J1 BOARD ADJUSTMENTS

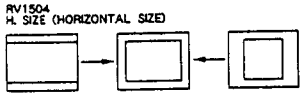


J1 BOARD (COMPONENT SIDE)

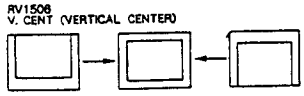
RV1508
H. CENT (HORIZONTAL CENTER)



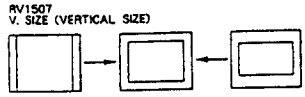
RV1504
H. SIZE (HORIZONTAL SIZE)



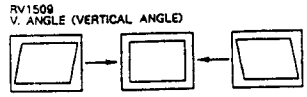
RV1506
V. CENT (VERTICAL CENTER)



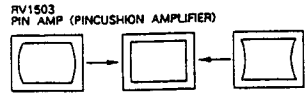
RV1507
V. SIZE (VERTICAL SIZE)



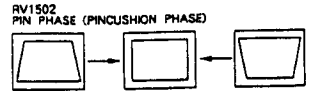
RV1509
V. ANGLE (VERTICAL ANGLE)



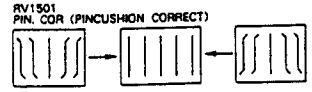
RV1503
PIN AMP (PINCUSHION AMPLIFIER)



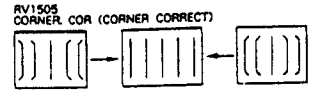
RV1502
PIN PHASE (PINCUSHION PHASE)



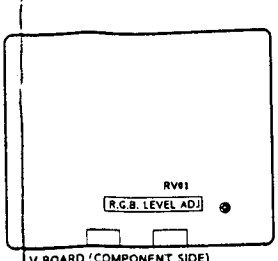
RV1501
PIN. COR (PINCUSHION CORRECT)



RV1505
CORNER COR (CORNER CORRECT)



6. V BOARD ADJUSTMENTS



V BOARD (COMPONENT SIDE)

RGB LEVEL ADJUSTMENT (RV01)

1. Maximize the picture setting.
2. Adjust RV01 so that the RGB output is 0.75V.

7. SECONDARY ADJUSTMENTS

SUB BRIGHTNESS ADJUSTMENT

1. Set the system to receive a test pattern.
2. Press → • ← on the remote commander to put the system into normal mode.
3. Switch off the power.
4. While depressing the adjusting buttons + and − simultaneusly, turn on the power. (SUB mode is obtained)
5. Minimize the ◑ contrast setting.
6. Adjust the ☼ brightness control so that the gray scale 0 IRE section is cut off completely and the 2) IRE section is barely glowing.
7. Depress the ◇ (store) button of the remote commander.
   (SUB mode is released)

If there is no test color pattern

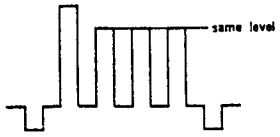
1. Set the system to receive a color pattern.
2. Press → • ← on the remote commander to put the system into normal mode.
   Set the ◑ color to its normal state.

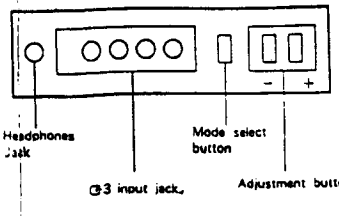
3-5. Steps are the same as above.

6. Since 20 IRE is nearly blue, adjust the ☼ brightness control so that the blue barely glows.
7. Same as step 7 above.
8. Press → • ← on the remote commander to put the system into normal mode.

SUB COLOR ADJUSTMENT

1. Set the system to receive color bars.
2. Press → • ← on the remote commander to put the system into normal mode.
3. Cut off the power.
4. While depressing the adjustment buttons + and − simultaneusly, turn on the power. (SUB mode is obtained).
5. Adjust the color control so that the B out waveform (pin ⑤ of C board connector CNC72) is as shown in the figure below.
6. Depress the ◇ (store) button of the remote commander. (SUB mode is released)

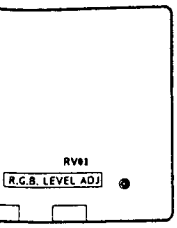




Transistors

REF.NO.	PART NO.	DESCRIPTION
Q1	8-729-900-53	TRANSISTOR DTC114EK
Q2	8-729-920-92	TRANSISTOR 2SD2096-EF
Q3	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q4	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q5	8-729-807-87	TRANSISTOR 2SB1295-UL6
Q6	8-729-807-87	TRANSISTOR 2SB1295-UL6
Q7	8-729-807-87	TRANSISTOR 2SB1295-UL6
Q8	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q001	8-729-901-01	TRANSISTOR DTC144EK
Q002	8-729-901-01	TRANSISTOR DTC144EK
Q003	8-729-216-22	TRANSISTOR 2SA1162-G
Q004	8-729-216-22	TRANSISTOR 2SA1162-G
Q005	8-729-901-01	TRANSISTOR DTC144EK
Q006	8-729-901-01	TRANSISTOR DTC144EK
Q007	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q008	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q009	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q010	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q113	8-729-230-49	TRANSISTOR 2SC2712-YG
Q114	8-729-230-49	TRANSISTOR 2SC2712-YG
Q115	8-729-230-49	TRANSISTOR 2SC2712-YG
Q116	8-729-230-49	TRANSISTOR 2SC2712-YG
Q125	8-729-900-89	TRANSISTOR DTC144ES
Q126	8-729-901-06	TRANSISTOR DTA144EK
Q181	8-729-230-49	TRANSISTOR 2SC2712-YG
Q182	8-729-901-01	TRANSISTOR DTC144EK
Q201	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q202	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q251	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q261	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q271	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q301	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q302	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q303	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q304	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q305	8-729-901-06	TRANSISTOR DTA144EK
Q306	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q307	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q308	8-729-901-00	TRANSISTOR DTC124EK
Q310	8-729-901-00	TRANSISTOR DTC124EK
Q311	8-729-901-00	TRANSISTOR DTC124EK
Q320	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q321	8-729-216-22	TRANSISTOR 2SA1162-G
Q322	8-729-216-22	TRANSISTOR 2SA1162-G
Q323	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q324	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q327	8-729-216-22	TRANSISTOR 2SA1162-G
Q328	8-729-216-22	TRANSISTOR 2SA1162-G
Q329	8-729-216-22	TRANSISTOR 2SA1162-G
Q330	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q331	8-729-216-22	TRANSISTOR 2SA1162-G
Q332	8-729-216-22	TRANSISTOR 2SA1162-G
Q333	8-729-901-00	TRANSISTOR DTC124EK
Q334	8-729-901-00	TRANSISTOR DTC124EK
Q335	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q336	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q337	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q338	8-729-216-22	TRANSISTOR 2SA1162-G
Q339	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q340	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q341	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q342	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q343	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q344	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q345	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q346	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q347	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q348	8-729-901-00	TRANSISTOR DTC124EK
Q350	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q352	8-729-216-22	TRANSISTOR 2SA1162-G
Q353	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q354	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q355	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q356	8-729-216-22	TRANSISTOR 2SA1162-G
Q357	8-729-216-22	TRANSISTOR 2SA1162-G
Q358	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q359	8-729-216-22	TRANSISTOR 2SA1162-G
Q360	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q361	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q362	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q363	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q364	8-729-216-22	TRANSISTOR 2SA1162-G
Q365	8-729-216-22	TRANSISTOR 2SA1162-G
Q366	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q367	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q368	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q369	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q370	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q371	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q372	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q373	8-729-901-00	TRANSISTOR DTC124EK
Q502	8-729-216-22	TRANSISTOR 2SA1162-G
Q505	8-729-140-96	TRANSISTOR 2SD774-34
Q506	8-729-140-97	TRANSISTOR 2SB734-34
Q507	8-729-216-22	TRANSISTOR 2SA1162-G
Q508	8-729-216-22	TRANSISTOR 2SA1162-G
Q601	8-729-122-03	TRANSISTOR 2SA1220A-P
Q602	8-729-209-02	TRANSISTOR 2SD1548-LB
Q603	8-729-122-03	TRANSISTOR 2SA1220A-P
Q604	8-729-216-22	TRANSISTOR 2SA1162-G
Q605	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q606	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q607	8-729-920-92	TRANSISTOR 2SD2096-EF
Q608	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q609	8-729-320-62	TRANSISTOR 2SD789-34
Q702	8-729-119-78	TRANSISTOR 2SC2785 HFE
Q703	8-729-906-70	TRANSISTOR HRM71
Q704	8-729-200-17	TRANSISTOR 2SA1091 O
Q705	8-729-119-78	TRANSISTOR 2SC2785 HFE
Q706	8-729-906-70	TRANSISTOR HRM71
Q707	8-729-200-17	TRANSISTOR 2SA1091 O
Q708	8-729-119-78	TRANSISTOR 2SC2785 HFE
Q709	8-729-906-70	TRANSISTOR HRM71
Q710	8-729-200-17	TRANSISTOR 2SA1091 O
Q801	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q804	8-729-304-50	TRANSISTOR 2SD1941-06
Q805	8-729-119-80	TRANSISTOR 2SC2068-LK
Q1101	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q1102	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q1103	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q1105	8-729-177-32	TRANSISTOR 2SD773-3
Q1106	8-729-901-01	TRANSISTOR DTC144EK
Q1107	8-729-901-01	TRANSISTOR DTC144EK
Q1108	8-729-901-01	TRANSISTOR DTC144EK
Q1109	8-729-901-01	TRANSISTOR DTC144EK
Q1110	8-729-901-01	TRANSISTOR DTC144EK
Q1301	8-729-901-00	TRANSISTOR DTC124EK
Q1302	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q1303	8-729-901-00	TRANSISTOR DTC124EK
Q1401	8-729-216-22	TRANSISTOR 2SA1162-G
Q1402	8-729-120-28	TRANSISTOR 2SC1623-L5L6

D ADJUSTMENTS



DJUSTMENT (RV01)

the picture setting.

701 so that the RGB output is 0.75V.

ARY ADJUSTMENTS

SS ADJUSTMENT

em to receive a test pattern.

— on the remote commander to put

into normal mode.

he power.

essing the adjusting buttons + and

neusly, turn on the power. (SUB

ained)

ne ◑ contrast setting.

☼ brightness control so that the

0 IRE section is cut off completely

IRE section is barely glowing.

e ◇ (store) button of the remote

.

is released)

o test color pattern

tem to receive a color pattern.

— on the remote commander to put

into normal mode.

color to its normal state.

he same as above.

IRE is nearly blue, adjust the ☼

control so that the blue barely glows.

p 7 above.

— on the remote commander to put

into normal mode.

DJUSTMENT

tem to receive color bars.

— on the remote commander to put

into normal mode.

power.

essing the adjustment buttons + and

neusly, turn on the power. (SUB mode

).

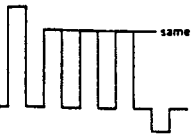
e color control so that the B out

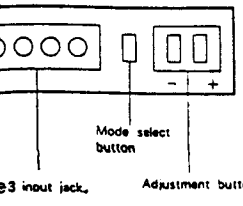
pin ⑤ of C board connector CNC72)

in the figure below.

ne ◇ (store) button of the remote

. (SUB mode is released)





e3 input jack.

Transistors

REF.NO.	PART NO.	DESCRIPTION
Q1	8-729-900-53	TRANSISTOR DTC114EK
Q2	8-729-920-92	TRANSISTOR 2SD2096-EF
Q3	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q4	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q5	8-729-807-87	TRANSISTOR 2SB1295-UL6
Q6	8-729-807-87	TRANSISTOR 2SB1295-UL6
Q7	8-729-807-87	TRANSISTOR 2SB1295-UL6
Q8	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q001	8-729-901-01	TRANSISTOR DTC144EK
Q002	8-729-901-01	TRANSISTOR DTC144EK
Q003	8-729-216-22	TRANSISTOR 2SA1162-G
Q004	8-729-216-22	TRANSISTOR 2SA1162-G
Q005	8-729-901-01	TRANSISTOR DTC144EK
Q006	8-729-901-01	TRANSISTOR DTC144EK
Q007	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q008	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q009	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q010	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q113	8-729-230-49	TRANSISTOR 2SC2712-YG
Q114	8-729-230-49	TRANSISTOR 2SC2712-YG
Q115	8-729-230-49	TRANSISTOR 2SC2712-YG
Q116	8-729-230-49	TRANSISTOR 2SC2712-YG
Q125	8-729-900-89	TRANSISTOR DTC144ES
Q126	8-729-901-06	TRANSISTOR DTA144EK
Q181	8-729-230-49	TRANSISTOR 2SC2712-YG
Q182	8-729-901-01	TRANSISTOR DTC144EK
Q201	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q202	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q251	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q261	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q271	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q301	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q302	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q303	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q304	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q305	8-729-901-06	TRANSISTOR DTA144EK
Q306	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q307	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q308	8-729-901-00	TRANSISTOR DTC124EK
Q310	8-729-901-00	TRANSISTOR DTC124EK
Q311	8-729-901-00	TRANSISTOR DTC124EK
Q320	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q321	8-729-216-22	TRANSISTOR 2SA1162-G
Q322	8-729-216-22	TRANSISTOR 2SA1162-G
Q323	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q324	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q327	8-729-216-22	TRANSISTOR 2SA1162-G
Q328	8-729-216-22	TRANSISTOR 2SA1162-G
Q329	8-729-216-22	TRANSISTOR 2SA1162-G
Q330	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q331	8-729-216-22	TRANSISTOR 2SA1162-G
Q332	8-729-216-22	TRANSISTOR 2SA1162-G
Q333	8-729-901-00	TRANSISTOR DTC124EK
Q334	8-729-901-00	TRANSISTOR DTC124EK
Q335	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q336	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q337	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q338	8-729-216-22	TRANSISTOR 2SA1162-G
Q339	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q340	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q341	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q342	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q343	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q344	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q345	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q346	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q347	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q348	8-729-901-00	TRANSISTOR DTC124EK
Q350	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q352	8-729-216-22	TRANSISTOR 2SA1162-G
Q353	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q354	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q355	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q356	8-729-216-22	TRANSISTOR 2SA1162-G
Q357	8-729-216-22	TRANSISTOR 2SA1162-G
Q358	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q359	8-729-216-22	TRANSISTOR 2SA1162-G
Q360	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q361	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q362	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q363	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q364	8-729-216-22	TRANSISTOR 2SA1162-G
Q365	8-729-216-22	TRANSISTOR 2SA1162-G
Q366	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q367	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q368	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q369	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q370	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q371	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q372	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q373	8-729-901-00	TRANSISTOR DTC124EK
Q502	8-729-216-22	TRANSISTOR 2SA1162-G
Q505	8-729-140-96	TRANSISTOR 2SD774-34
Q506	8-729-140-97	TRANSISTOR 2SD734-34
Q507	8-729-216-22	TRANSISTOR 2SA1162-G
Q598	8-729-216-22	TRANSISTOR 2SA1162-G
Q601	8-729-122-03	TRANSISTOR 2SA1220A-P
Q602	8-729-309-02	TRANSISTOR 2SD1548-LB
Q603	8-729-122-03	TRANSISTOR 2SA1220A-P
Q604	8-729-216-22	TRANSISTOR 2SA1162-G
Q605	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q606	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q607	8-729-920-92	TRANSISTOR 2SD2096-EF
Q608	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q609	8-729-320-62	TRANSISTOR 2SB789-34
Q702	8-729-119-78	TRANSISTOR 2SC2785 HFE
Q703	8-729-906-70	TRANSISTOR HFR71
Q704	8-729-200-17	TRANSISTOR 2SA1091 O
Q705	8-729-119-78	TRANSISTOR 2SC2785 HFE
Q706	8-729-906-70	TRANSISTOR HFR71
Q707	8-729-200-17	TRANSISTOR 2SA1091 O
Q708	8-729-119-78	TRANSISTOR 2SC2785 HFE
Q709	8-729-906-70	TRANSISTOR HFR71
Q710	8-729-200-17	TRANSISTOR 2SA1091 O
Q801	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q804	8-729-304-50	TRANSISTOR 2SD1941-06
Q805	8-729-119-80	TRANSISTOR 2SC2688-LK
Q1101	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q1102	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q1103	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q1105	8-729-177-32	TRANSISTOR 2SD773-3
Q1106	8-729-901-01	TRANSISTOR DTC144EK
Q1107	8-729-901-01	TRANSISTOR DTC144EK
Q1108	8-729-901-01	TRANSISTOR DTC144EK
Q1109	8-729-901-01	TRANSISTOR DTC144EK
Q1110	8-729-901-01	TRANSISTOR DTC144EK
Q1301	8-729-901-00	TRANSISTOR DTC124EK
Q1302	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q1303	8-729-901-00	TRANSISTOR DTC124EK
Q1401	8-729-216-22	TRANSISTOR 2SA1162-G
Q1402	8-729-120-28	TRANSISTOR 2SC1623-L5L6

General Information

April 1991

AE-1C Chassis KV-A2112U

CRT A51JXH60X KV-A2112U

CRT A59JWC60X KV-A2512U

ICs

Electrical Parts List

REF.NO.	PART NO.	DESCRIPTION
IC1	8-759-513-27	IC MAB4613P-W208
IC2	8-759-510-46	IC SAA5246P/E
IC3	8-759-510-49	IC PCB61C65-70P
IC001	8-759-515-80	IC SDA2056D A008
IC002	8-759-208-06	IC TC4051BPNB
IC003	8-759-945-58	IC BC4558P
IC005	8-759-748-56	IC SDA2546
IC006	8-759-979-62	IC PCF8574
IC105	8-759-003-90	IC TBA129
IC201	8-759-013-17	IC TDA6200
IC251	8-759-988-94	IC TDA2050
	4-812-134-00	RIVET NYLON, 3.5; IC251
IC261	8-759-988-94	IC TDA2050
	4-812-134-00	RIVET NYLON, 3.5; IC261
IC301	8-759-503-41	IC TDA4580-V6
IC302	8-759-980-60	IC TDA8442N3
IC303	8-759-510-48	IC TDA4660T
IC304	8-759-510-47	IC TDA4650WP
IC305	8-759-144-84	IC UPC24N05HF
IC306	8-759-510-50	IC HCF40528M
IC308	8-752-006-12	IC CXD2006Q
IC310	8-752-337-07	IC CXD2011Q
IC311	8-759-996-49	IC MB4096APF
IC312	8-752-338-45	IC CXK1202Q
IC313	8-752-338-45	IC CXK1202Q
IC315	8-752-334-55	IC CXD1175AM
IC501	8-759-970-73	IC TEA2028B
IC502	8-759-944-57	IC TDA8170
IC601	8-759-988-95	IC TEA2260
IC604	8-759-510-52	IC TEA7605
IC608	8-759-087-26	IC TYA7812CT
IC1101	8-759-511-88	IC TDA8732
IC1102	8-759-511-89	IC SAA7280
IC1103	8-759-900-02	IC SN74LS02N
IC1104	8-759-900-72	IC NE5532P
IC1105	8-759-900-72	IC NE5532P
IC1106	8-759-040-53	IC MC14053BCP
IC1107	8-759-504-22	IC TDA1543
IC1401	8-752-053-17	IC CXA1114P
IC1402	8-759-946-32	IC TEA2014A
IC1403	8-759-040-53	IC MC14053BCP
IC1501	8-759-942-16	IC TEA2031A
IC1651	8-741-101-75	IC S8X1610-11

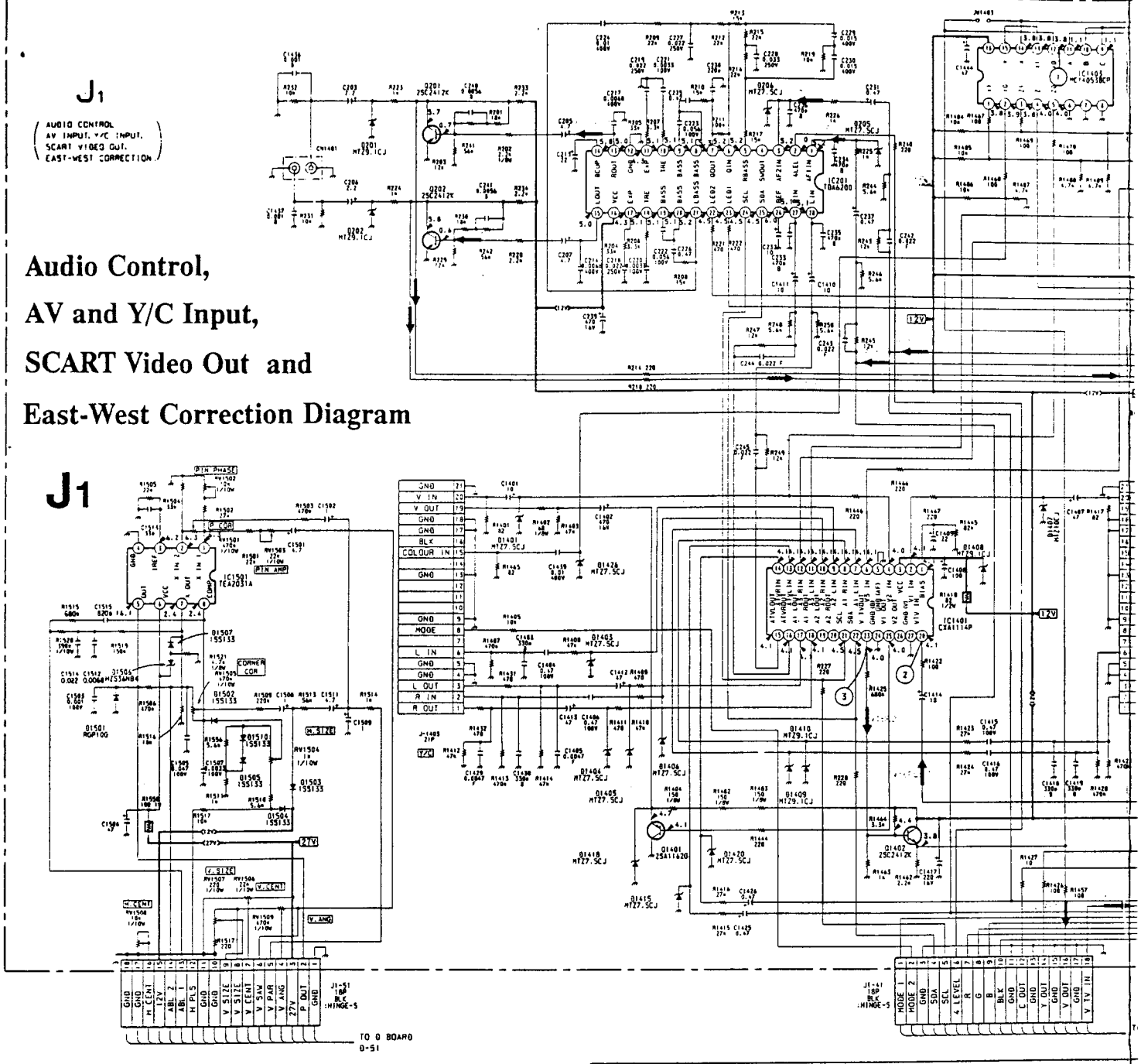
Recommended Safety Parts

ITEM	PART NO.	DESCRIPTION
C601	1-161-964-61	CERAMIC 0.0047MF 250V
C602	1-161-964-61	CERAMIC 0.0047MF 250V
C603	1-161-964-61	CERAMIC 0.0047MF 250V
C604	1-125-318-11	ELECT(BLOCK) 220MF 20% 400V
C814	1-161-731-51	CERAMIC 0.001MF 10% 2KV
C817	1-136-549-11	FILM 0.0106MF 3% 1.4KV (KV-A2112U ONLY)
C817	1-136-565-11	FILM 0.015MF 3% 1.4KV (KV-A2512U ONLY)
C818	1-129-721-51	FILM 0.039MF 10% 630V
C819	1-161-731-51	CERAMIC 0.001MF 10% 2KV
C821	1-162-116-51	CERAMIC 680PF 10% 2KV
C1602	1-136-516-11	FILM 0.1MF 20% 300V
C1605	1-164-246-51	CERAMIC 0.0022MF 20% 400V
C1607	1-161-964-61	CERAMIC 0.0047MF 250V
F1601	1-532-504-31	FUSE, 4A/250V
L810	1-459-390-11	COIL (WITH CORE) (KV-A2112U ONLY)
	1-421-982-12	PMC (KV-A2512U ONLY)
LF1601	1-421-862-11	LFT
PSI	1-532-679-91	LINK IC (ICP-N15) 0.6A
PS301	1-532-91	LINK, IC (ICP-N10) 0.4A
PS601	1-532-984-91	LINK, IC (ICP-N50) 2A
PS602	1-532-984-91	LINK, IC (ICP-N50) 2A
PS603	1-532-679-91	LINK, IC (ICP-N15) 0.6A
PS604	1-532-984-91	LINK, IC (ICP-N50) 2A
R1602	1-244-945-91	CARBON 1M 5% 1/2W
R1603	1-217-328-11	WIREWOUND 2.7 10% 7W F
R1605	1-218-265-91	GLAZE 8.2M 5% 1W
S1701	1-571-433-11	SWITCH, PUSH (AC POWER)
T601	1-450-038-11	S.R.T
T602	1-424-277-11	TRANS., TRIGGER PULSE
T801	1-437-090-21	HDT
T802	1-439-416-51	TRANS. ASSY. FLYBACK (UX-1650)
TU101	1-465-515-11	TUNER

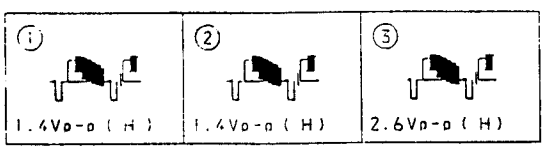
J1

(AUDIO CONTROL
AV INPUT, Y/C INPUT,
SCART VIDEO OUT,
EAST-WEST CORRECTION)

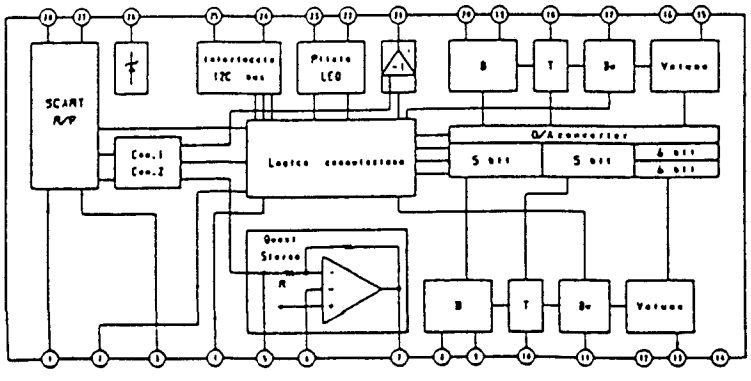
Audio Control, AV and Y/C Input, SCART Video Out and East-West Correction Diagram



J1 Board Waveforms



J1 Board IC201 TDA6200

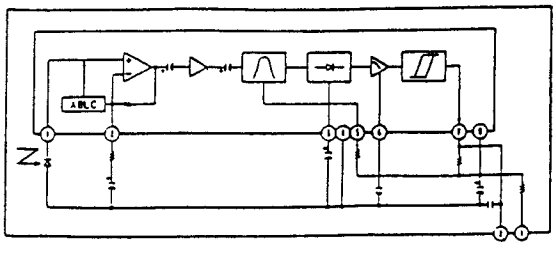


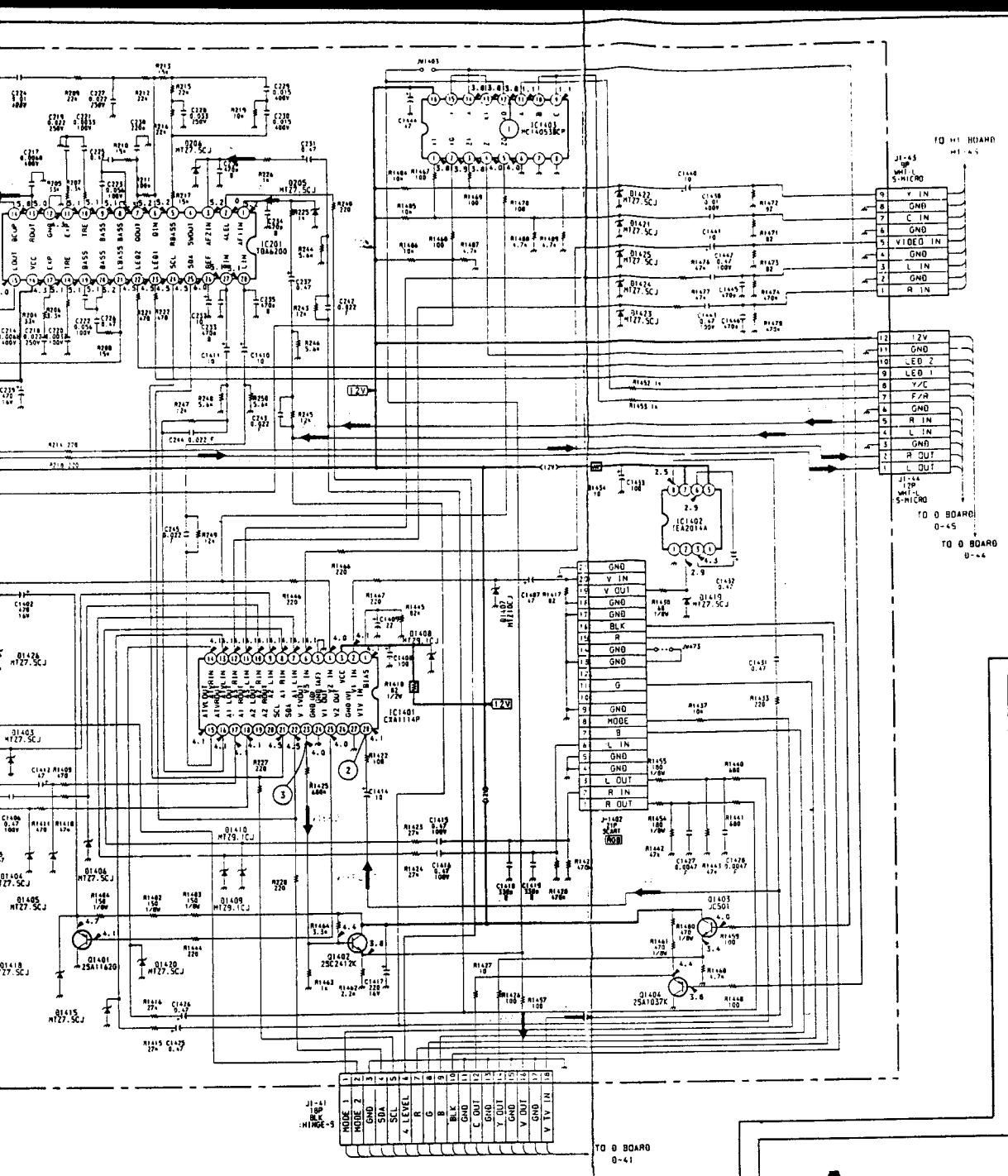
SIRCS, Receiver and Indicator Diag

H2 Board Semiconductor D

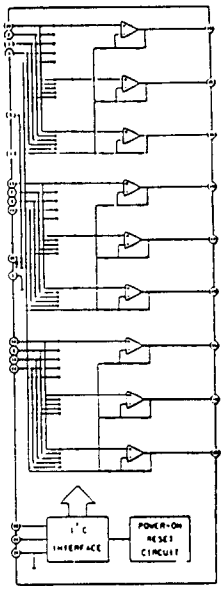
IC1651	SBX1610-11	INFRARED REC.
01651	LO-201VR	AUDIO CHANNE. A
01652	LO-201VR	AUDIO CHANNE. B
01654	LO-201VR	RESET

H2 Board IC1651 SBX1610-11

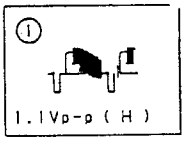




J1 Board IC1401 CXA1114P



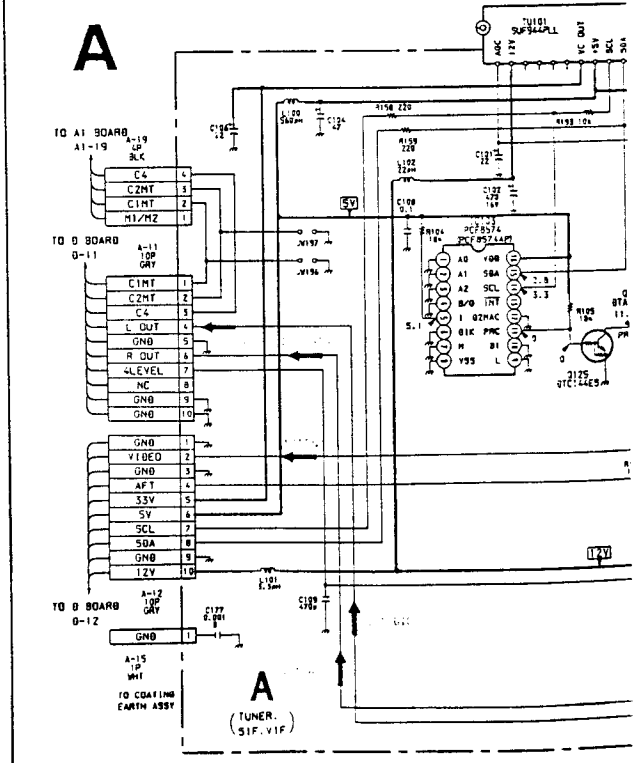
A Board Waveforms



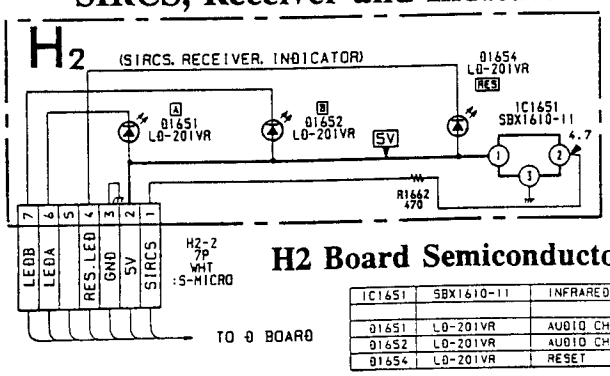
A Board Semiconductor Descri

IC103	PCF8574	EXPANDE
IC105	TBA129	FM SIF
Q113	2SC2412K	AUDIO AM
Q114	2SC2412K	AUDIO AM
Q115	2SC2412K	AUDIO AM
Q116	2SC2412K	AUDIO AM
Q125	DTC144ES	MUTE SW
Q126	DTC114ES	MUTE SW
Q181	2SC2412K	NICAM BL
Q182	DTS144EK	MUTE SW

VIF, SIF and Tun



SIRCS, Receiver and Indicator Diagram

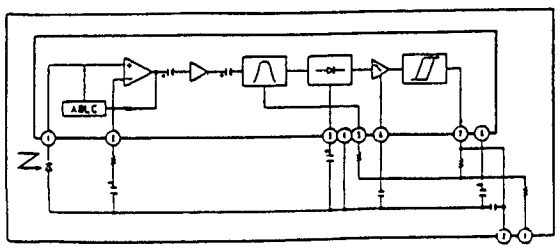


H2

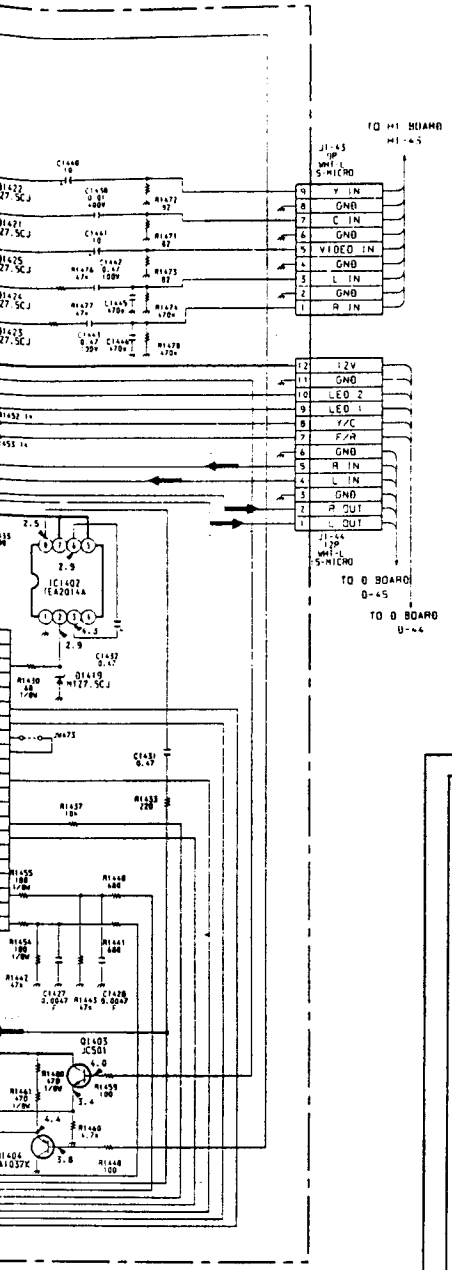
H2 Board Semiconductor Description

IC1651	SBX1610-11	INFRARED REC ER
Q1651	LO-201VR	AUDIO CHANNE A INDICATOR
Q1652	LO-201VR	AUDIO CHANNEL B INDICATOR
Q1654	LO-201VR	RESET

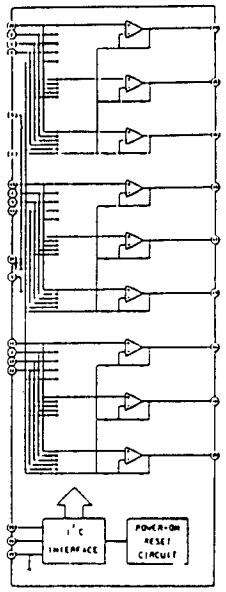
H2 Board IC1651 SBX1610-11



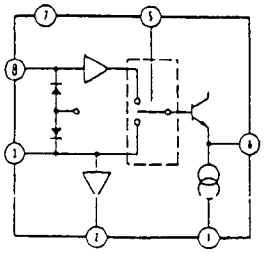
J1 Board Semiconductor Description



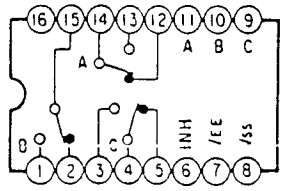
J1 Board IC1401 CXA1114P



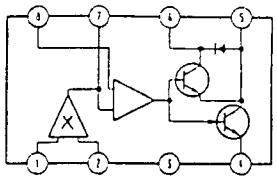
J1 Board IC402 TEA2014A



J1 Board IC1403 MC14053BCP

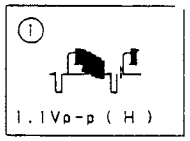


J1 Board IC1501 TEA2031A



IC201	TDA6200	AUDIO CONTROL
IC1401	CXA1114P	AV SW
IC1402	TEA2014A	SCART VIDEO OUT
IC1403	MC14053BCP	COMPOSITE Y/C SW
IC1501	TEA2031A	EAST/WEST CORRECTION
Q201	2SC2412K	AUDIO R BUFF
Q202	2SC2412K	AUDIO L BUFF
Q1401	2SA1162G	VIDEO OUT
Q1402	2SC2412K	VIDEO OUT BUFF
Q1403	JC501	Y OUT BUFF
Q1404	2SA1037K	C OUT BUFF
D201	MTZ9.1CJ	PROTECT
D202	MTZ9.1CJ	PROTECT
D205	MTZ7.5CJ	PROTECT
D206	MTZ7.5CJ	PROTECT
D1401	MTZ7.5CJ	PROTECT
D1403	MTZ7.5CJ	PROTECT
D1404	MTZ7.5CJ	PROTECT
D1405	MTZ7.5CJ	PROTECT
D1406	MTZ7.5CJ	PROTECT
D1407	MTZ10CJ	PROTECT
D1408	MTZ9.1CJ	REG
D1409	MTZ9.1CJ	PROTECT
D1410	MTZ9.1CJ	PROTECT
D1415	MTZ7.5CJ	PROTECT
D1418	MTZ7.5CJ	PROTECT
D1419	MTZ7.5CJ	PROTECT
D1420	MTZ7.5CJ	PROTECT
D1421	MTZ7.5CJ	PROTECT
D1422	MTZ7.5CJ	PROTECT
D1423	MTZ7.5CJ	PROTECT
D1424	MTZ7.5CJ	PROTECT
D1425	MTZ7.5CJ	PROTECT
D1426	MTZ7.5CJ	PROTECT
D1501	RGP10G	PROTECT
D1502	1SS133	DE COUPLING + SIZE
D1503	1SS133	CLIPPING V PARABORA
D1504	1SS133	CLIPPING H PULSE
D1505	1SS133	REG
D1506	HZS36NB4	PROTECT
D1507	1SS133	PROTECT
D1510	1SS133	REG

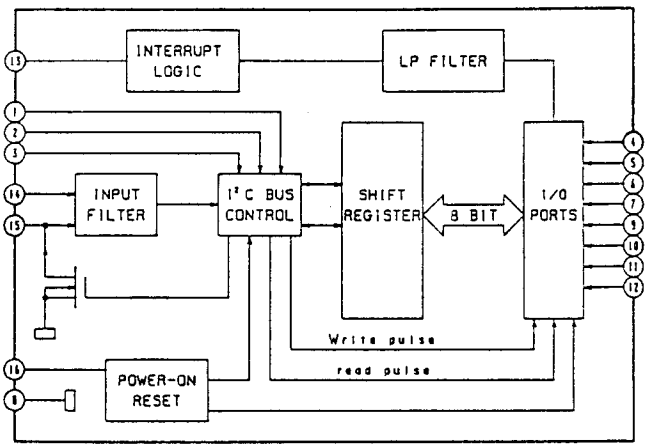
A Board Waveforms



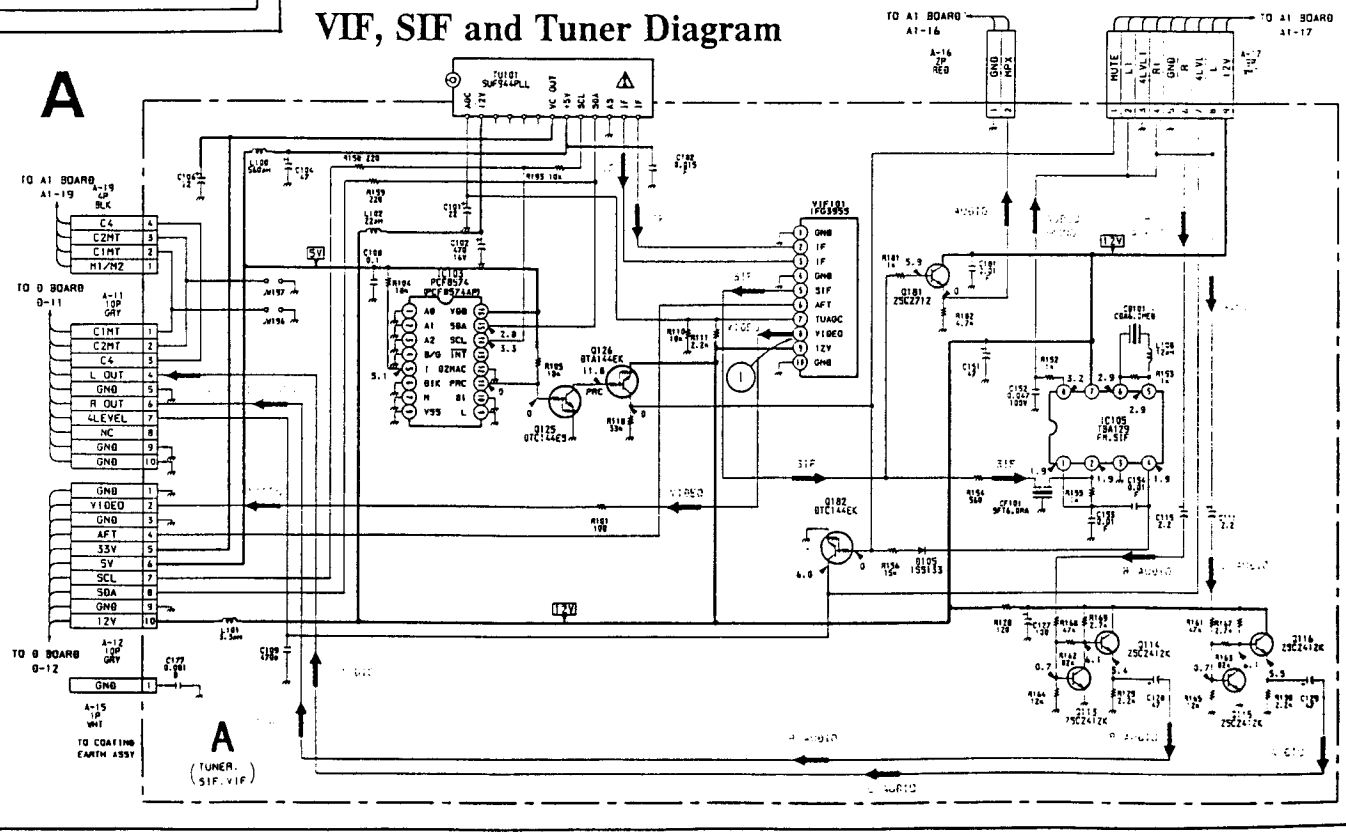
A Board Semiconductor Description

IC103	PCF8574	EXPANDER
IC105	T8A129	FM SIF
Q113	2SC2412K	AUDIO AMP
Q114	2SC2412K	AUDIO AMP
Q115	2SC2412K	AUDIO AMP
Q116	2SC2412K	AUDIO AMP
Q125	DTC144ES	MUTE SW
Q126	DTC114ES	MUTE SW
Q181	2SC2412K	NICAM BUFFER
Q182	DTS144EK	MUTE SW

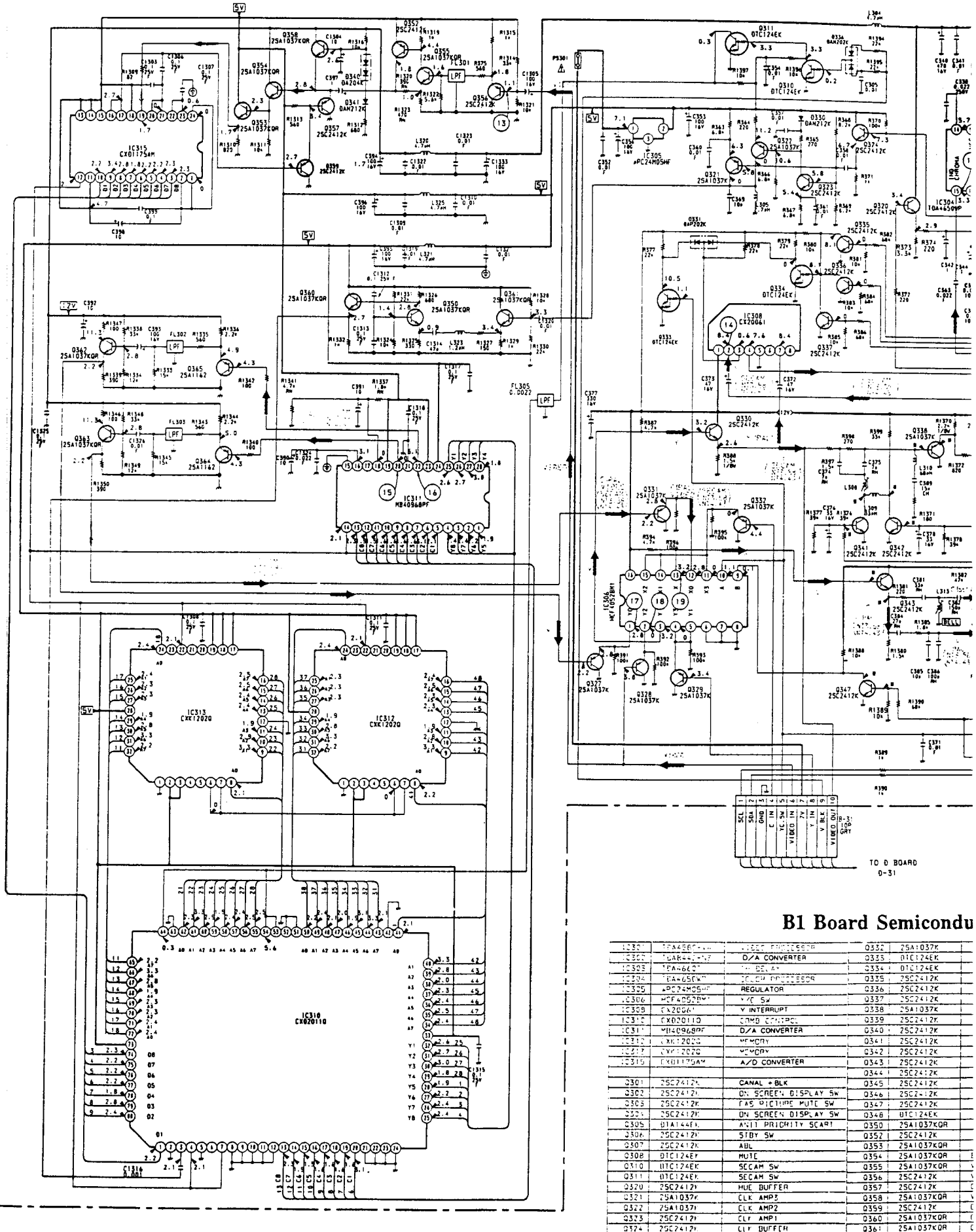
A Board IC103 PCF8574



VIF, SIF and Tuner Diagram

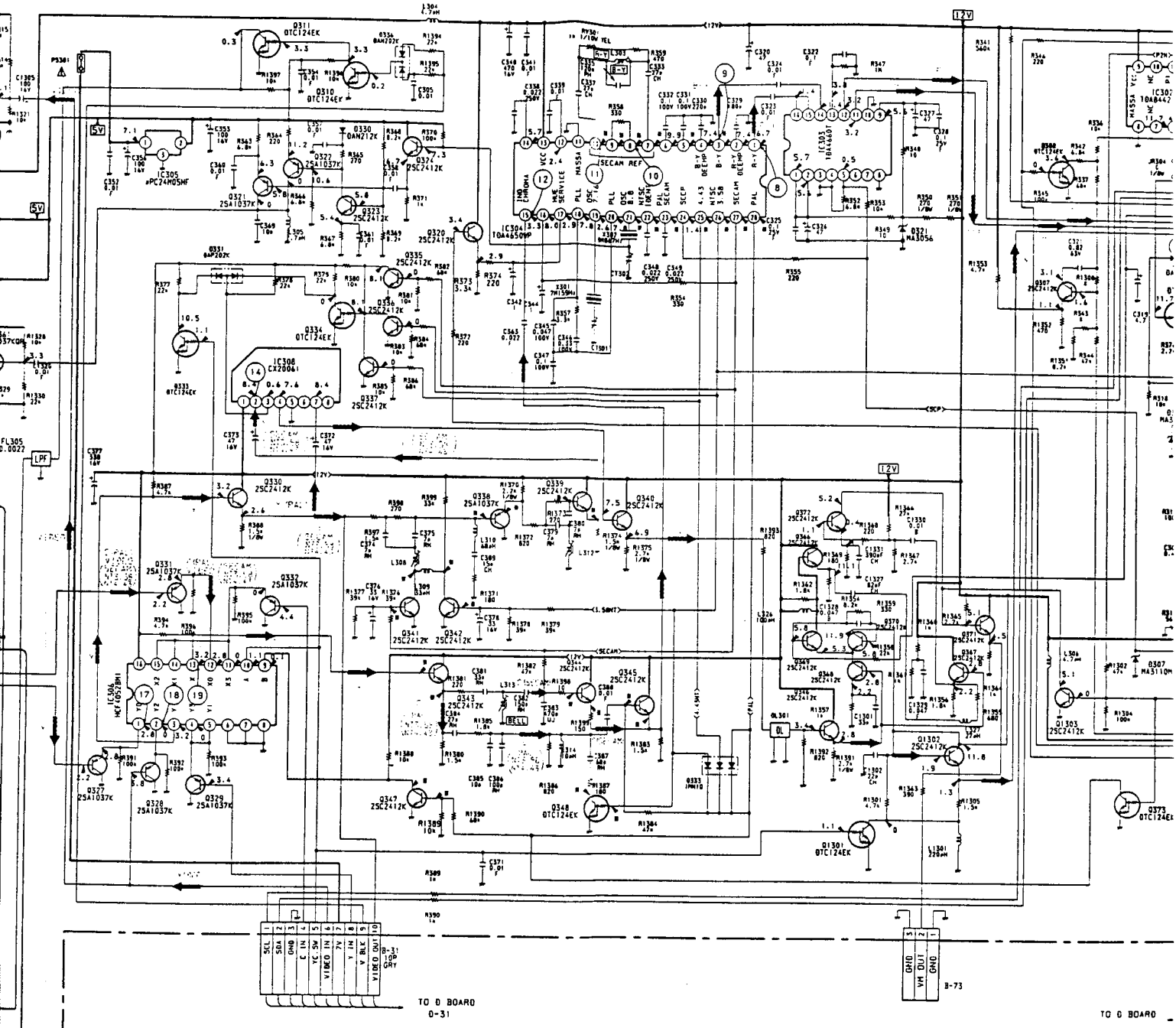


Video and Colour Processor, Y/C Switch, D/A and A/D Converter and Mei



B1 Board Semicondu

IC302	TDA4665	VIDEO PROCESSOR	Q332	2SA1037K
IC303	TDA8444N/N2	D/A CONVERTER	Q333	DTC124EK
IC304	TDA4665	TV DELAY	Q334	DTC124EK
IC304	TDA4650Q	COLOR PROCESSOR	Q335	2SC2412K
IC305	μPC24M05HF	REGULATOR	Q336	2SC2412K
IC306	HCF40528M1	Y/C SW	Q337	2SC2412K
IC308	CX20061	Y INTERRUPT	Q338	2SA1037K
IC310	CXD2011Q	COMB CONTROL	Q339	2SC2412K
IC311	MB40968PF	D/A CONVERTER	Q340	2SC2412K
IC312	CXK1202Q	MEMORY	Q341	2SC2412K
IC313	CXK1202Q	MEMORY	Q342	2SC2412K
IC315	CXD1175AM	A/D CONVERTER	Q343	2SC2412K
			Q344	2SC2412K
Q301	2SC2412K	CANAL + BLK	Q345	2SC2412K
Q302	2SC2412K	ON SCREEN DISPLAY SW	Q346	2SC2412K
Q303	2SC2412K	GAS PICTURE MUTE SW	Q347	2SC2412K
Q304	2SC2412K	ON SCREEN DISPLAY SW	Q348	DTC124EK
Q305	DTA144EK	ANTI PRIORITY SCART	Q350	2SA1037KQR
Q306	2SC2412K	STBY SW	Q352	2SC2412K
Q307	2SC2412K	ABL	Q353	2SA1037KQR
Q308	DTC124EK	MUTE	Q354	2SA1037KQR
Q310	DTC124EK	SECAM SW	Q355	2SA1037KQR
Q311	DTC124EK	SECAM SW	Q356	2SC2412K
Q320	2SC2412K	HUE BUFFER	Q357	2SC2412K
Q321	2SA1037K	CLK AMP3	Q358	2SA1037KQR
Q322	2SA1037K	CLK AMP2	Q359	2SC2412K
Q323	2SC2412K	CLK AMP1	Q360	2SA1037KQR
Q324	2SC2412K	CLK BUFFER	Q361	2SA1037KQR
Q327	2SA1037K	Y OUT	Q362	2SA1037KQR
Q328	2SA1037K	VIDEO IN	Q363	2SA1037KQR
Q329	2SA1037K	Y IN	Q364	2SA1162
Q330	2SC2412K	VIDEO BUFFER	Q365	2SA1162
Q331	2SA1037K	C OUT	Q366	2SC2412K



B1 Board Semiconductor Descriptions

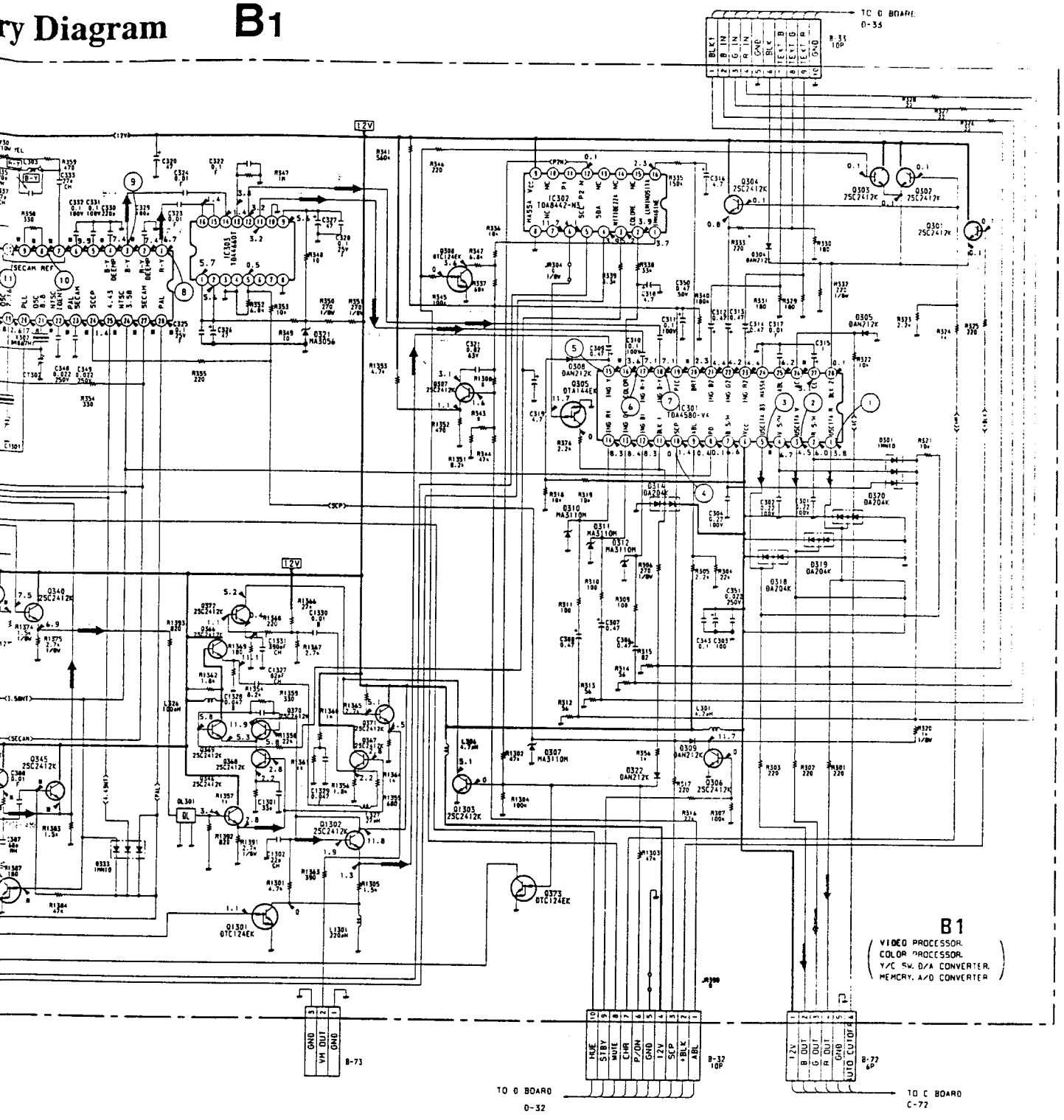
IC301	CXA4582M	VIDEO PROCESSOR
IC302	CXA1645P	D/A CONVERTER
IC303	TDA4640	V DELAY
IC304	TDA4650WP	COLOR PROCESSOR
IC305	μPC24M05HF	REGULATOR
IC306	MCF4052BM	Y/C SW
IC308	CX20061	Y INTERRUPT
IC309	CX020110	COMB CONTROL
IC311	MN4096BPF	D/A CONVERTER
IC312	LHM2828	MEMORY
IC313	LHM2828	MEMORY
IC315	CX011754M	A/D CONVERTER
Q301	2SC2412K	CANAL + BLK
Q302	2SC2412K	ON SCREEN DISPLAY SW
Q303	2SC2412K	GAS PICTURE MUTE SW
Q304	2SC2412K	ON SCREEN DISPLAY SW
Q305	DTA144EK	AUTO PRIORITY SCART
Q306	2SC2412K	STBY SW
Q307	2SC2412K	ABL
Q308	DTC124EK	MUTE
Q310	DTC124EK	SECAM SW
Q311	DTC124EK	SECAM SW
Q320	2SC2412K	HUE BUFFER
Q321	2SA1037K	CLK AMP2
Q322	2SA1037K	CLK AMP2
Q323	2SC2412K	CLK AMP1
Q324	2SC2412K	CLK BUFFER
Q327	2SA1037K	Y OUT
Q328	2SA1037K	VIDEO IN
Q329	2SA1037K	Y IN
Q330	2SC2412K	VIDEO BUFFER
Q331	2SA1037K	C OUT
Q332	2SA1037K	C IN
Q333	DTC124EK	Y/C SW
Q334	DTC124EK	Y SW
Q335	2SC2412K	SECAM SW
Q336	2SC2412K	NTSC (2.59) SW
Q337	2SC2412K	NTSC (4.43) SW
Q338	2SA1037K	Y BUFFER
Q339	2SC2412K	Y BUFFER
Q340	2SC2412K	Y BUFFER
Q341	2SC2412K	SECAM TRAP SW
Q342	2SC2412K	NTSC TRAP SW
Q343	2SC2412K	C OUT
Q344	2SC2412K	SECAM SW
Q345	2SC2412K	PAL/SECAM SW
Q346	2SC2412K	Y IN
Q347	2SC2412K	PAL SW
Q348	DTC124EK	NTSC (3.58) SW
Q350	2SA1037KQR	CLK AMP
Q352	2SC2412K	VIDEO AMP
Q353	2SA1037KQR	BUFFER
Q354	2SA1037KQR	BUFFER
Q355	2SA1037KQR	VIDEO AMP
Q356	2SC2412K	VIDEO BUFFER
Q357	2SC2412K	CLAMP BIAS
Q358	2SA1037KQR	VIDEO CLAMP
Q359	2SC2412K	CLAMP BIAS
Q360	2SA1037KQR	CLK BUFFER
Q361	2SA1037KQR	CLK AMP
Q362	2SA1037KQR	Y BUFFER
Q363	2SA1037KQR	C BUFFER
Q364	2SA1162	C BUFFER
Q365	2SA1162	Y BUFFER
Q366	2SC2412K	SHP BUFFER
Q367	2SC2412K	Y BUFFER
Q368	2SC2412K	SHP AMP
Q369	2SC2412K	SHP AMP
Q370	2SC2412K	SHP AMP
Q371	2SC2412K	VM BUFFER
Q372	2SC2412K	VM AMP
Q373	DTC124EK	SYSTEM SW
Q1301	DTC124EK	Y BUFFER
Q1302	2SC2412K	Y BUFFER
Q1303	2SC2412K	VM MUTE
D301	1MN10	ACC AT STBY
D304	DAN212K	PROTECT
D305	DAN212K	PROTECT
D307	MA3110M	PROTECT
D308	DAN212K	PROTECT
D309	DAN212K	PROTECT
D310	MA3110M	PROTECT
D311	MA3110M	PROTECT
D312	MA3110M	PROTECT
D314	DA204K	PROTECT
D318	DA204K	PROTECT
D319	DA204K	PROTECT
D320	DA204K	PROTECT
D321	MA3056	REG
D322	DAN212K	PROTECT
D330	DAN212K	BIAS
D331	DAP202K	Y/C SW
D333	1MN10	SYSTEM SW
D336	DAN202K	CORRECT SW
D340	DA204K	VIDEO AMP
D341	DAN212K	VIDEO AMP

IC Volt

IC-NO	PIN-NO	PAL
IC301	(5)	5.1
	(15)	7.3
	(19)	3.1
	(24)	6.6
IC304	(3)	6.8
	(5)	9.9
	(7)	4.3
	(8)	3.4
	(9)	3.4
	(18)	4.3
	(21)	2.3
	(22)	5.6
	(23)	7.5
	(25)	0
	(26)	0
	(27)	0
	(28)	5.9

For Waveforı

ry Diagram B1



Descriptions

	Q367	2SC2412K	Y BUFFER
	Q368	2SC2412K	SHP AMP
	Q369	2SC2412K	SHP AMP
	Q370	2SC2412K	SHP AMP
SW	Q371	2SC2412K	VM BUFFER
SW	Q372	2SC2412K	VM AMP
	Q373	DTC124EK	SYSTEM SW
	Q1301	DTC124EK	Y BUFFER
	Q1302	2SC2412K	Y BUFFER
SW	Q1303	2SC2412K	VM MUTE
SW			
	0301	1MN10	ACO AT STBY
	0304	DAN212K	PROTECT
SW	0305	DAN212K	PROTECT
	0307	MA3110M	PROTECT
	0308	DAN212K	PROTECT
SW	0309	DAN212K	PROTECT
	0310	MA3110M	PROTECT
	0311	MA3110M	PROTECT
	0312	MA3110M	PROTECT
	0314	DA204K	PROTECT
FER	0318	DA204K	PROTECT
S	0319	DA204K	PROTECT
NP	0320	DA204K	PROTECT
S	0321	MA3056	REG
R	0322	DAN212K	PROTECT
	0330	DAN212K	BIAS
	0331	DAP202K	Y/C SW
	0333	1MN10	SYSTEM SW
	0336	DAN202K	CORRECT SW
	0340	DA204K	VIDEO AMP
	034	DAN212K	VIDEO AMP

IC Voltage Table

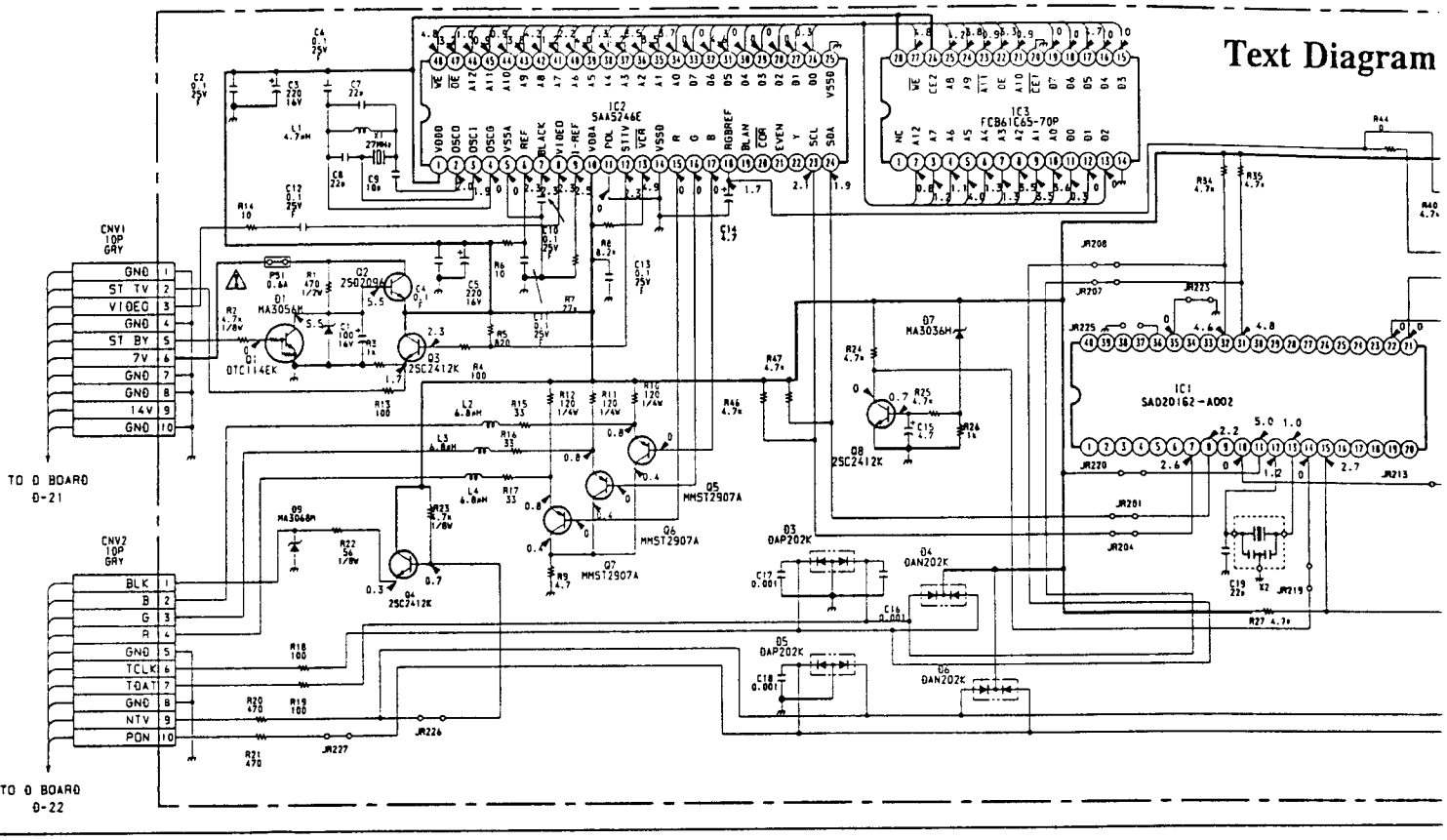
IC·NO	PIN·NO	PAL	SECAM	NTSC 3.38	NTSC 4.43
IC301	(5)	5.1	4.8	4.8	4.8
	(15)	7.3	7.0	7.0	7.0
	(19)	3.1	3.4	3.8	3.4
	(24)	6.6	6.6	6.0	6.3
IC304	(1)	6.8	6.8	6.9	6.8
	(5)	9.9	10.1	9.9	9.9
	(7)	4.3	3.5	4.6	4.6
	(8)	3.4	3.0	3.4	3.4
	(9)	3.4	3.0	3.4	3.4
	(10)	4.3	3.4	4.6	4.6
	(21)	2.3	3.1	3.1	2.3
	(22)	5.6	5.6	5.6	7.4
	(23)	7.5	7.5	5.7	5.7
	(25)	0	1.4	5.9	5.9
	(26)	0	0	0	0
	(27)	0	5.9	0	0
	(28)	5.9	0	0	0

Transistor Voltage Table

Q·NO		PAL	SECAM	NTSC 3.38	NTSC 4.43
Q338	B	2.6	3.9	3.9	3.9
	E	3.3	4.6	4.6	4.6
Q339	B	3.2	4.6	4.6	4.6
	C	3.6	3.9	3.9	3.9
Q341	B	0	0.6	0.4	0.1
	C	11.8	0	11.6	11.6
Q342	B	0	0	0.4	0
	C	11.7	0	11.7	11.7
Q343	B	3.2	5.3	5.3	5.3
	E	2.6	4.6	4.7	4.7
Q344	B	0	5.4	1.0	0.1
	E	4.0	4.8	1.5	4.5
Q345	B	4.6	0.1	1.9	5.0
	E	4.0	4.4	1.4	4.4
Q347	B	0.6	0	0	0
	C	0.1	11.9	11.9	11.9
Q348	B	0.1	0.1	1.0	0.1
	C	0.4	0.2	0.7	0.4

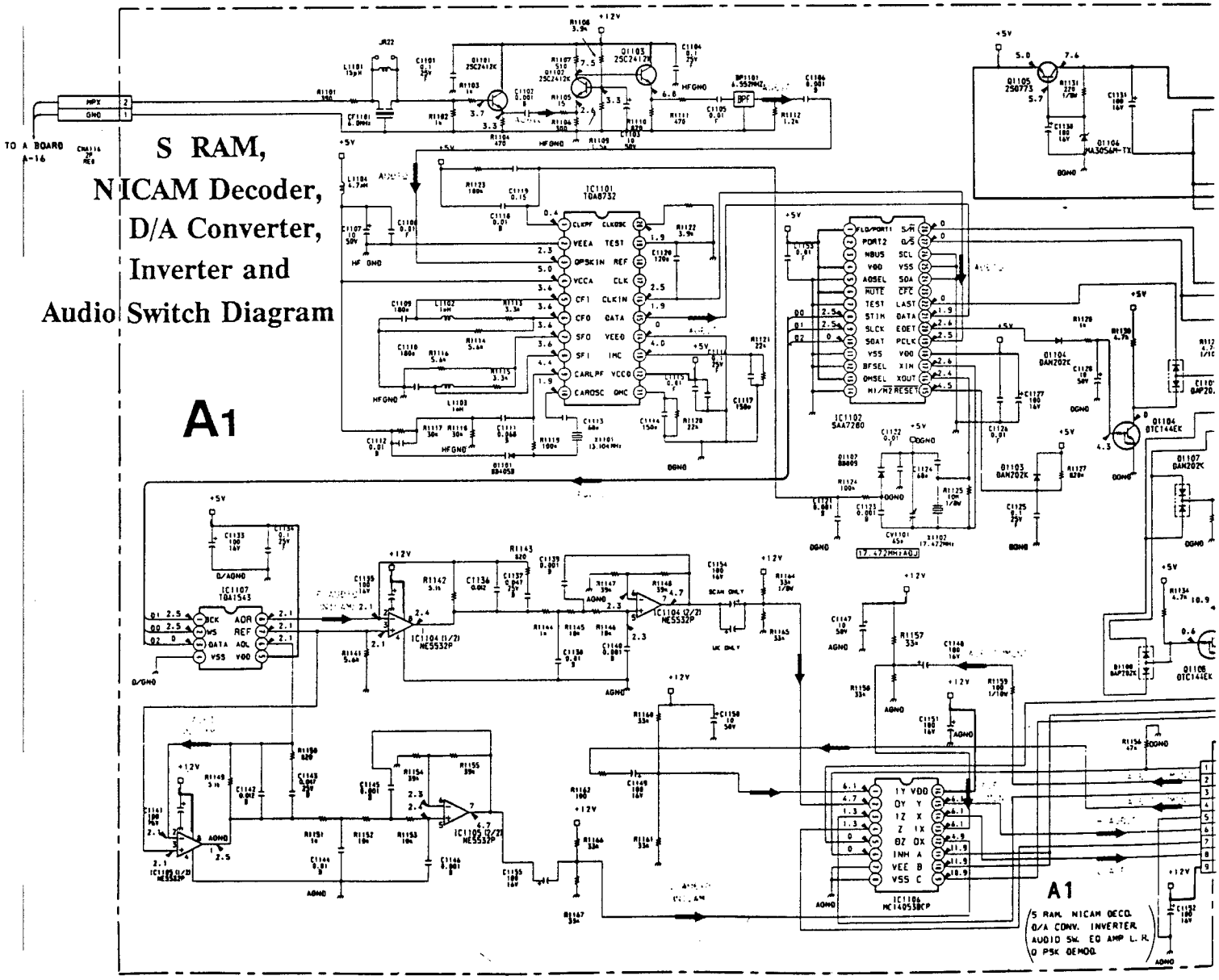
For Waveforms and IC BLock Diagrams see page 305

Text Diagram

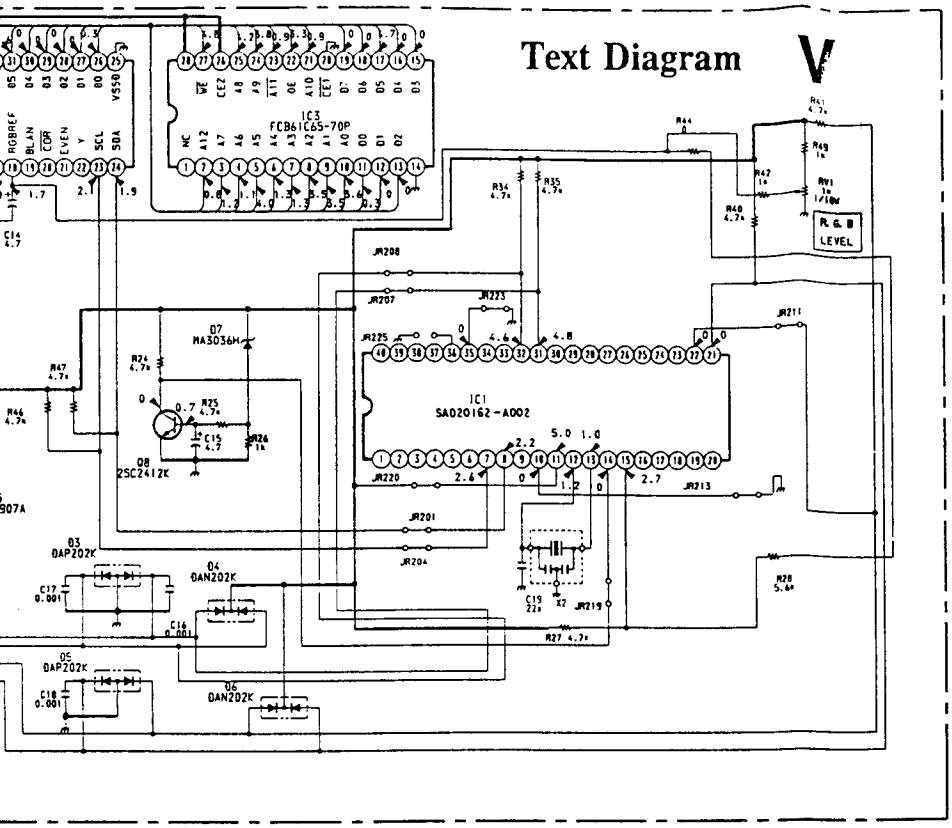


S RAM, NICAM Decoder, D/A Converter, Inverter and Audio Switch Diagram

A1

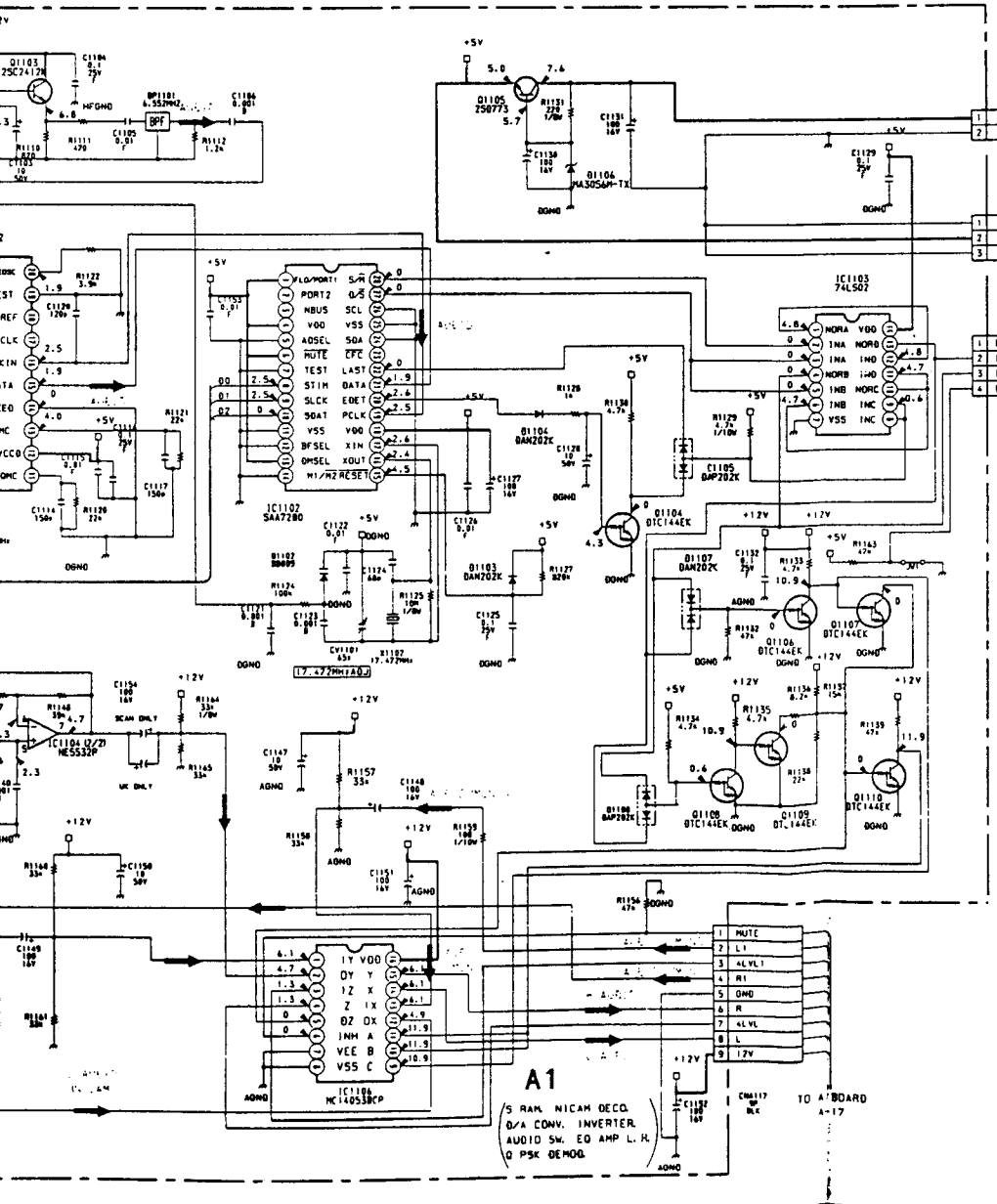


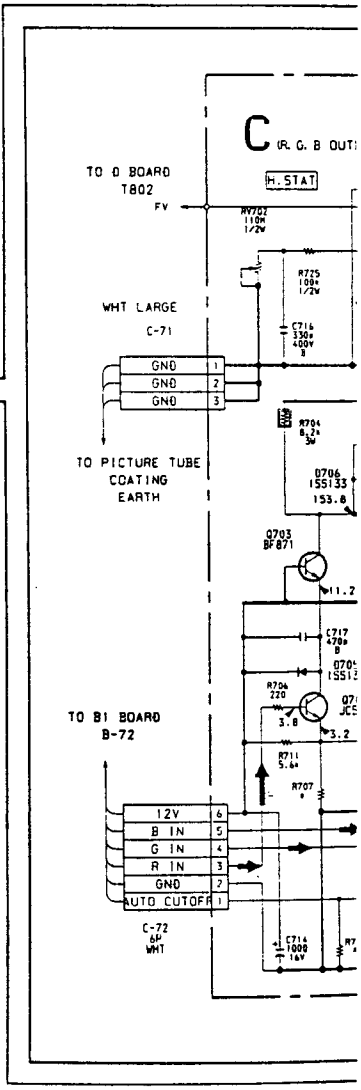
Text Diagram V



V Board Semiconductor Description

IC1	SOA20162-A002	MICRO-CONT
IC2	SAA5246E	IVT
IC3	FCB61C65-70P	STATIC-RAM
Q1	DTC114EK	STAND BY
Q2	2S02096	5V REG
Q3	2SC2412K	SYNC BUFFER
Q4	2SC2412K	BLK OUT
Q5	MMST2907A	B OUT
Q6	MMST2907A	G OUT
Q7	MMST2907A	R OUT
Q8	2SC2412K	PON SW
D1	MA3056M	5V REG
D3	DAP202K	PROTEC
D4	DAN202K	PROTEC
D5	DAP202K	PROTEC
D6	DAN202K	PROTEC
D7	MA3036H	PROTEC
D9	MA3068M	PROTEC





A1 Board Semiconductor Description

IC1101	TDA8732	DEMOD
IC1102	SAA7280	NICAM DECO
IC1103	SN74LS02N	INVERTER
IC1104	NE5532P	EQ AMP R
IC1105	NE5532P	EQ AMP L
IC1106	MC14053BCP	AUDIO SW
IC1107	TDA1543	D/A CONV
Q1101	2SC2412K	SIF BUFF-1
Q1102	2SC2412K	SIF AMP
Q1103	2SC2412K	SIF BUFF-2
Q1104	DTC144EK	LOGIC
Q1105	2S0773	5V REG
Q1106	DTC144EK	4LEVEL
Q1107	DTC144EK	4LEVEL
Q1108	DTC144EK	4LEVEL
Q1109	DTC144EK	4LEVEL
Q1110	DTC144EK	AUDIO SW
D1101	BB405B	—
D1102	BB809	—
D1103	DAN202K	RESET
D1104	DAN202K	EOET
D1105	DAP202K	LOGIC
D1106	MA3056M-TX	5V ZENER
D1107	DAN202K	LOGIC
D1108	DAP202K	LOGIC

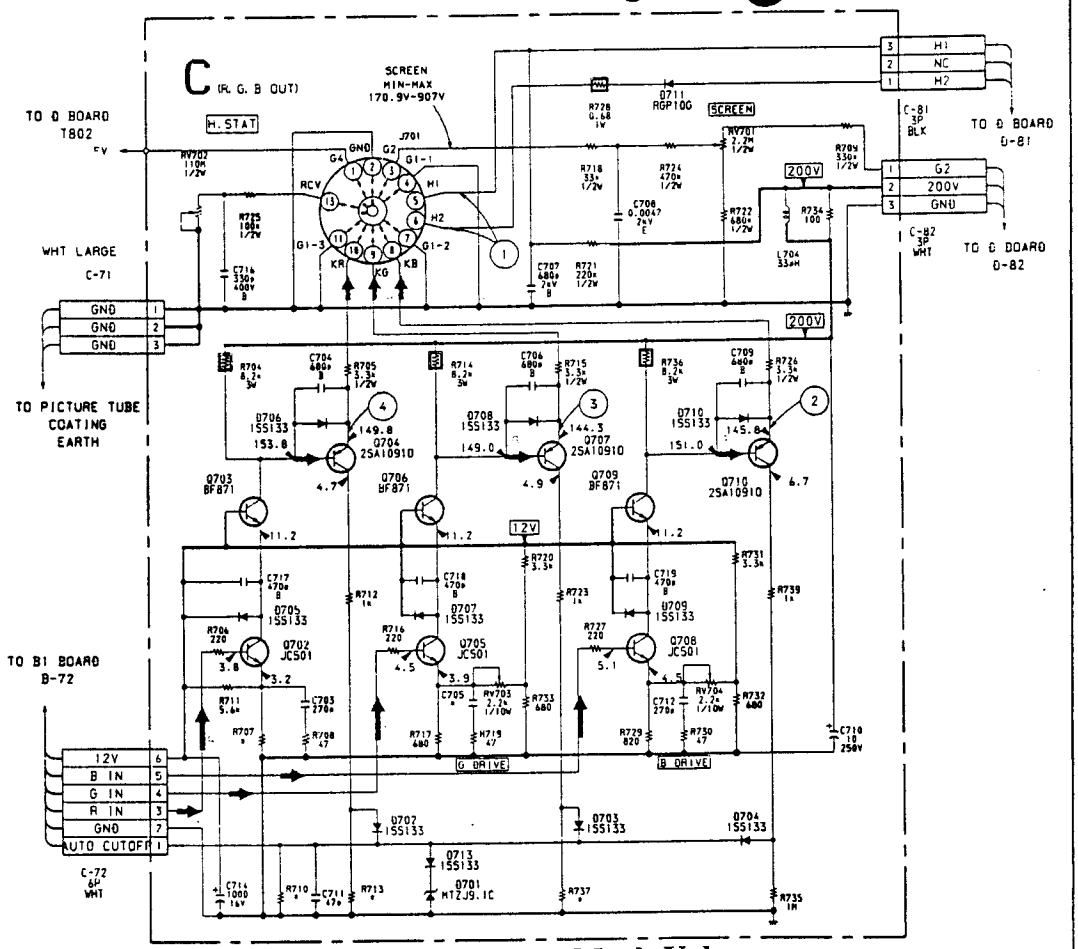
V Board Semiconductor Description

IC1	S0A20162-A002	MICRO-CONT
IC2	SAA5246E	IVT
IC3	FCB61C65-70P	STATIC-RAM
Q1	DTC114EK	STAND BY
Q2	2S02096	5V REG
Q3	2SC2412K	SYNC BUFFER
Q4	2SC2412K	BLK OUT
Q5	MMST2907A	B OUT
Q6	MMST2907A	G OUT
Q7	MMST2907A	R OUT
Q8	2SC2412K	PON SW
01	MA3056M	5V REG
03	DAP202K	PROTEC
04	DAN202K	PROTEC
05	DAP202K	PROTEC
06	DAN202K	PROTEC
07	MA3036H	PROTEC
09	MA3068M	PROTEC

C Board Semiconductor Description

Q702	JC501	R DRIVE
Q703	BF871	R OUT
Q704	2SA10910	ACO MEASURING
Q705	JC501	G DRIVE
Q706	BF871	G OUT
Q707	2SA10910	ACO MEASURING
Q708	JC501	B DRIVE
Q709	BF871	B OUT
Q710	2SA10910	ACO MEASURING
D701	MTZJ9.1C	PROTECT
D702	1SS133	PROTECT
D703	1SS133	PROTECT
D704	1SS133	PROTECT
D705	1SS133	PROTECT
D706	1SS133	PROTECT
D707	1SS133	PROTECT
D708	1SS133	PROTECT
D709	1SS133	PROTECT
D710	1SS133	PROTECT
D711	RGP10G	HEATING VOLTAGE REC
D713	1SS133	PROTECT

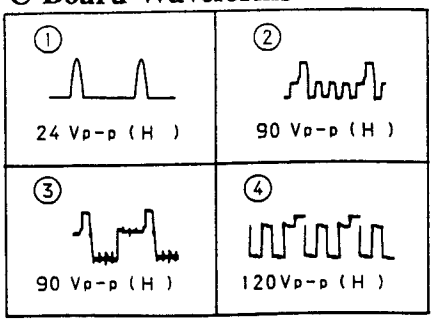
RGB Out Diagram C



C Board * Mark Values

* MARK	KV-A2112U	KV-A2512U	KV-X2932U
C705	180pF	220pF	220pF
R707	430	390	390
R710	100k	68k	68k
R713	160k	120k	120k
R737	390k	820k	470k

C Board Waveforms

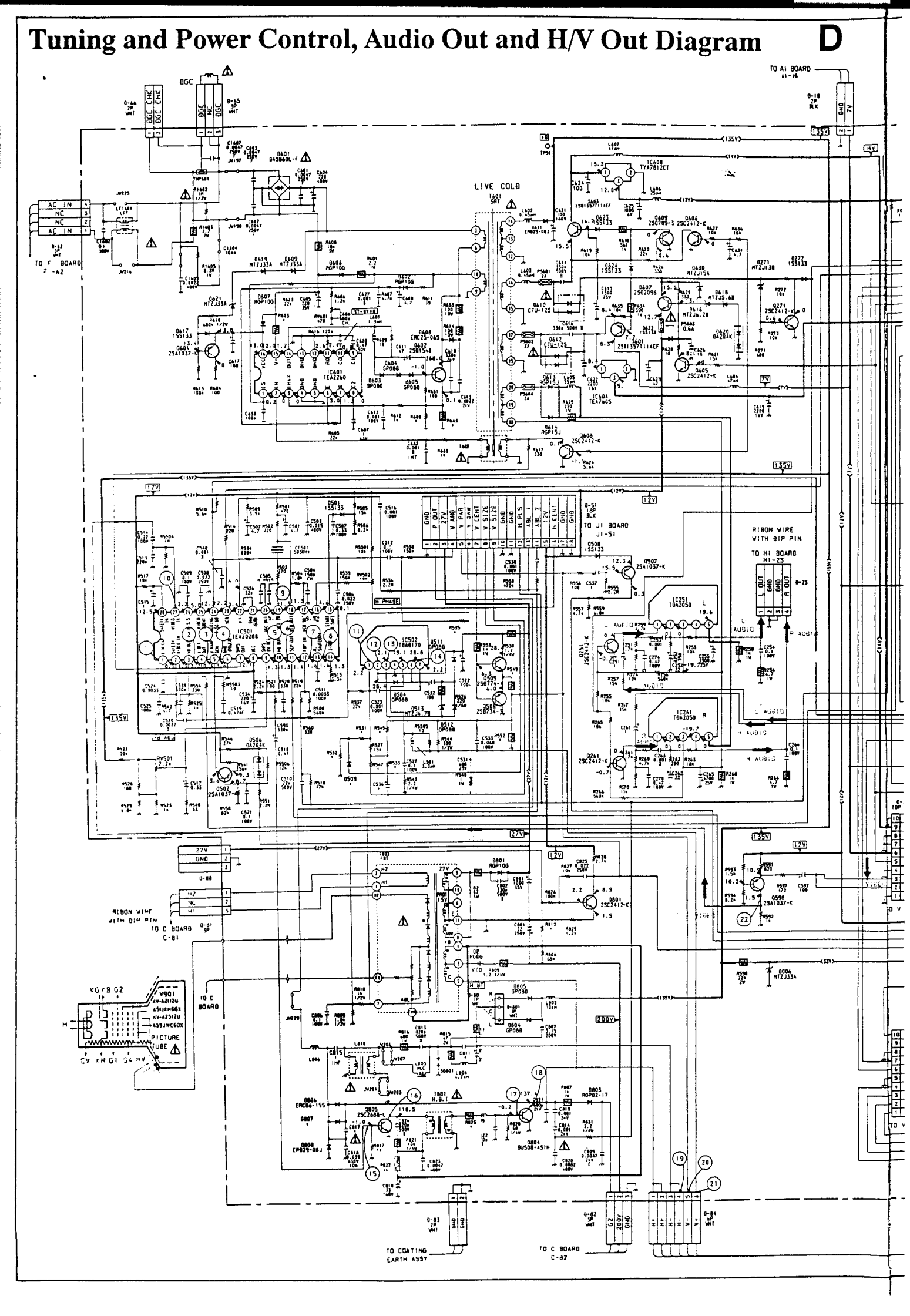


A1 Board Semiconductor Description

IC1101	TDA8732	DEMOD
IC1102	SAA7280	NICAM DECO
IC1103	SN74LS02N	INVERTER
IC1104	NE5532P	EQ AMP R
IC1105	NE5532P	EQ AMP L
IC1106	MC14053BCP	AUDIO SW
IC1107	TDA1543	D/A CONV
Q1101	2SC2412K	SIF BUFF-1
Q1102	2SC2412K	SIF AMP
Q1103	2SC2412K	SIF BUFF-2
Q1104	DTC144EK	LOGIC
Q1105	2SD773	5V REG
Q1106	DTC144EK	4LEVEL
Q1107	DTC144EK	4LEVEL
Q1108	DTC144EK	4LEVEL
Q1109	DTC144EK	4LEVEL
Q1110	DTC144EK	AUDIO SW
D1101	BB405B	—
D1102	BB809	—
D1103	DAN202K	RESET
D1104	DAN202K	EDET
D1105	DAP202K	LOGIC
D1106	MA3056M-TX	5V ZENER
D1107	DAN202K	LOGIC
D1108	DAP202K	LOGIC

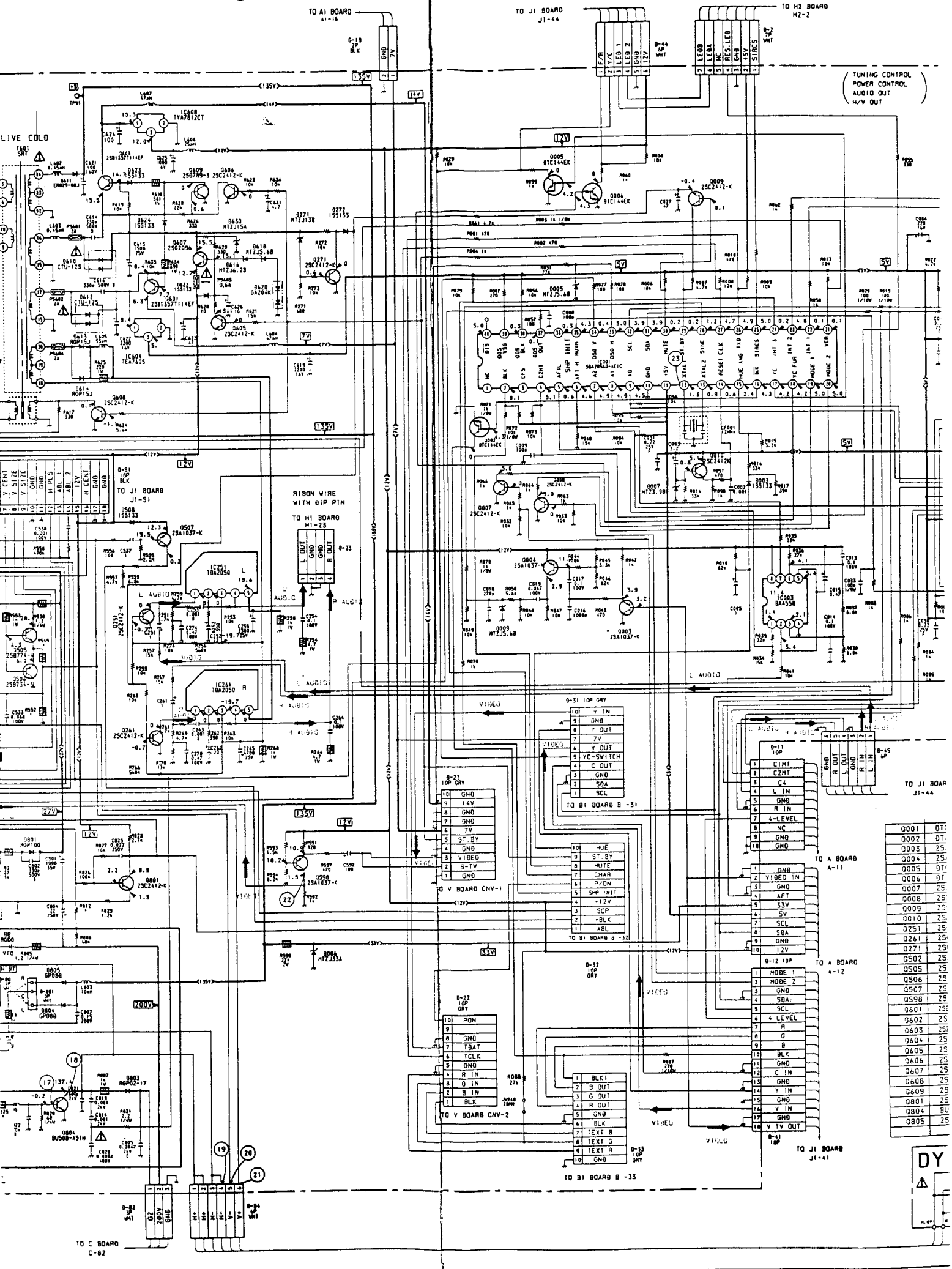
Tuning and Power Control, Audio Out and H/V Out Diagram

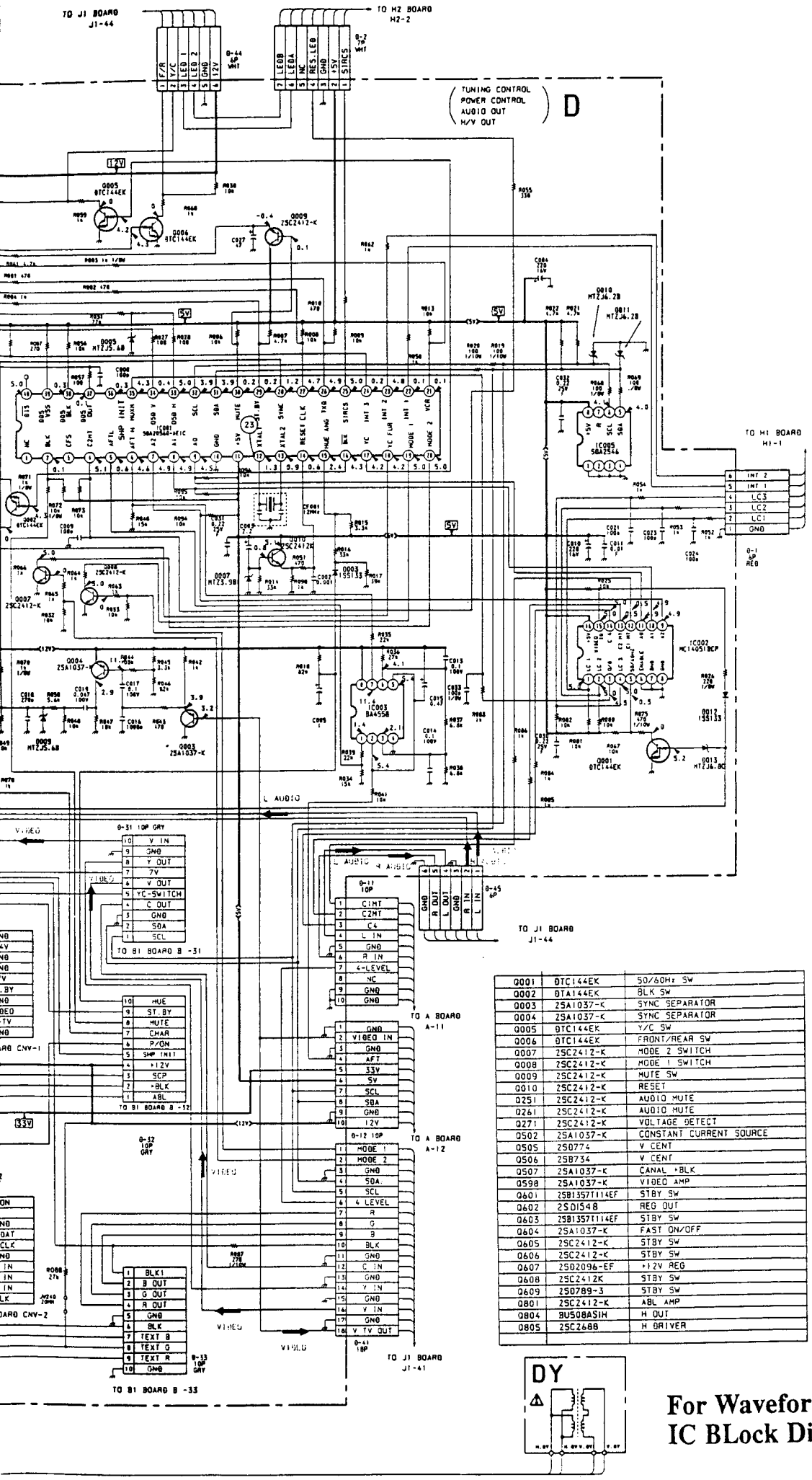
D



t and H/V Out Diagram

D





D Board * Mark Values

Ref. No.	KV-A2112U	KV-A2512U
C536	4.7MF	10MF
C811	1MF	2MF
C817	0.0106MF	0.015MF
D509	———	1SS133T-77
D807	———	ERC06-15S
D808	ERD28-08S	ERD29-08J
R531	———	120K
R532	———	1K
R533	180	0
R535	4.7M	2.2M
R545	39K	22K
R547	5.6K	3.3K
R548	1.2	1
R549	470	390
R552	1.2K	———
R600	———	1
R603	15	12
R643	0.15	0.12
R811	100 1W	22 2W
R812	75K	68K
R825	1	0.47

D Board Semiconductor Descriptions

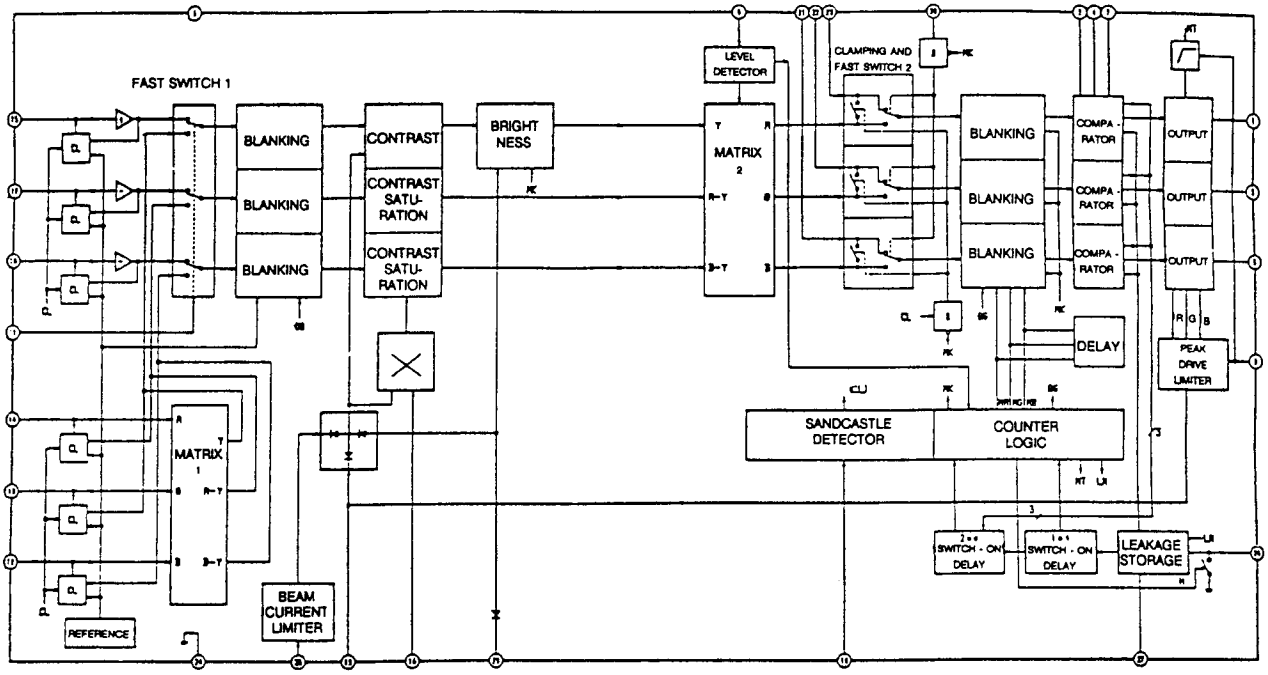
0003	1SS133	HUE CTL
0005	MTZJ5.6B	PROT
0006	MTZJ33A	VC VOLTAGE REGULATION
0007	MTZJ3.9B	PLOT RESET
0009	MTZJ5.6B	CLIPPING SYNC LEVEL
0010	MTZJ6.2B	PROT
0011	MTZJ6.2B	PROT
0012	1SS133	PROT
0013	MTZJ6.8C	PROT
0271	MTZJ13B	VOLTAGE DETECT
0272	1SS133	DECOUPLING MUTE AUDIO
0501	1SS133	START
0504	GP080	V PULSE OUT
0506	DA204K	CURRENT
0508	1SS133	CANAL +BLK LEVEL
0509	1SS133	V LIN
0511	GP080	PROT
0512	GP080	PROT
0513	MTZJ4.7B	PROT
0601	04SB60L-F	AC RECT
0602	RGP10G	REF RECT
0603	GP080	SMPS DRIVE 1
0604	GP080	SMPS DRIVE 2
0605	GP080	SMPS DRIVE 3
0606	RGP10G	+12V RECT
0607	RGP10G	REF RECT
0608	ERC25-06S	PLUSE CLIPPER
0609	MTZJ33A	FAST ON/OFF
0610	CTU-12S	+14V RECT
0611	ERD29-08J	+135VRECT
0612	CTU-12S	+7V RECT
0613	RGP15J	AF V RECT-1
0614	RGP15J	AF V RECT-2
0616	MTZJ6.2B	+12V REG
0617	1SS133	PROT
0618	MTZJ5.6B	+12V REF
0619	MTZJ33A	FAST ON/OFF-2
0620	DA204K	+12V REF
0621	MTZJ33A	FAST ON/OFF-3
0622	1SS133	PROT
0623	1SS133	DECOUPLING STBY
0624	1SS133	DECOUPLING STBY
0630	MTZJ15A	+12V RECT
0801	RGP10G	+27V RECT
0802	RGP10G	+200V RECT
0803	RGP02-17	G2 RECT
0804	GP080	H CENTER-1
0805	GP080	H CENTER-2
0806	ERC06-15S	H DAMPER-1
0807	ERC06-15S	H DAMPER-2
0808	ERD29-08J	PIN DAMPER

Q001	DTC144EK	50/60Hz SW
Q002	DTA144EK	BLK SW
Q003	2SA1037-K	SYNC SEPARATOR
Q004	2SA1037-K	SYNC SEPARATOR
Q005	DTC144EK	Y/C SW
Q006	DTC144EK	FRONT/REAR SW
Q007	2SC2412-K	MODE 2 SWITCH
Q008	2SC2412-K	MODE 1 SWITCH
Q009	2SC2412-K	MUTE SW
Q010	2SC2412-K	RESET
Q251	2SC2412-K	AUDIO MUTE
Q261	2SC2412-K	AUDIO MUTE
Q271	2SC2412-K	VOLTAGE DETECT
Q502	2SA1037-K	CONSTANT CURRENT SOURCE
Q505	2SD774	V CENT
Q506	2SB734	V CENT
Q507	2SA1037-K	CANAL +BLK
Q598	2SA1037-K	VIDEO AMP
Q601	2SB1357T114EF	STBY SW
Q602	2SD1548	REG OUT
Q603	2SB1357T114EF	STBY SW
Q604	2SA1037-K	FAST ON/OFF
Q605	2SC2412-K	STBY SW
Q606	2SC2412-K	STBY SW
Q607	2SD2096-EF	+12V REG
Q608	2SC2412K	STBY SW
Q609	2SD789-3	STBY SW
Q801	2SC2412-K	ABL AMP
Q804	BU508ASIH	H OUT
Q805	2SC2688	H DRIVER

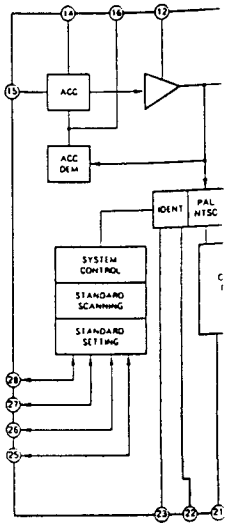
IC001	SDA20560-AEIC	TUNING CTL
IC002	MC14051BCP	ON SCREEN DISPLAY
IC003	BA4558	AFT COMPARATOR
IC005	S0A2546	MY MEMORY
IC251	TDA2050	AUDIO OUT (L)
IC261	TDA2050	AUDIO OUT (R)
IC501	TEA2028B	DEFLECTION PROCESSOR
IC502	TDA8170	V OUT
IC601	TEA2260	PRIMARY SMPS CTL
IC604	TEA7605	+5V REG
IC608	TYA7812CT	+12V REG

For Waveforms and IC BLock Diagrams see page 305

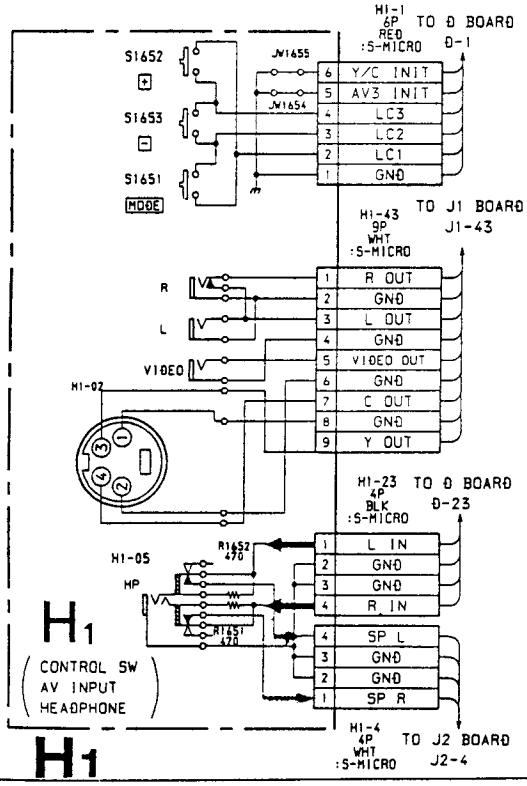
B1 Board IC301 TDA4580-V4



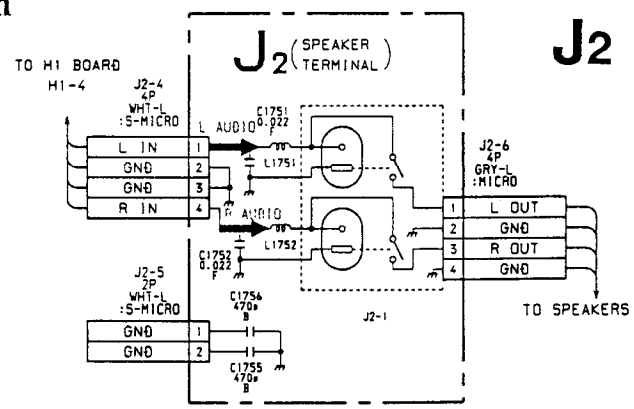
B1 Board IC304 TDA4E



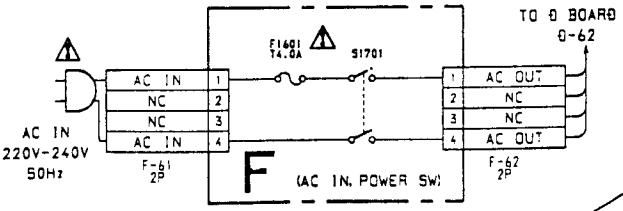
Control Switch, AV Input and Headphone Diagram



Speaker Terminal Diagram

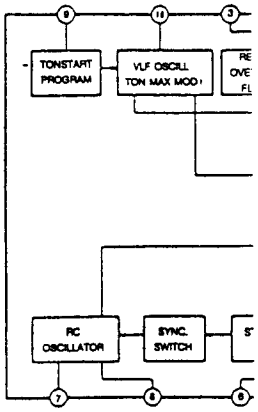


AC In and Power Switch Diagram

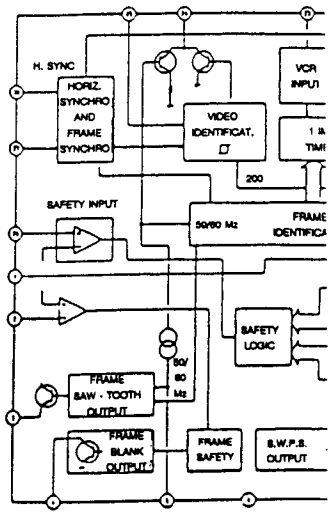


F

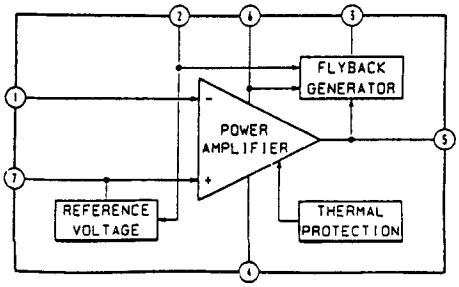
D Board IC601 TEA



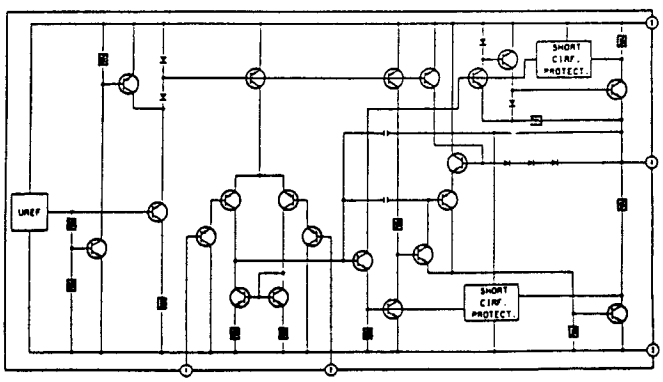
D Board IC501 TEA2028



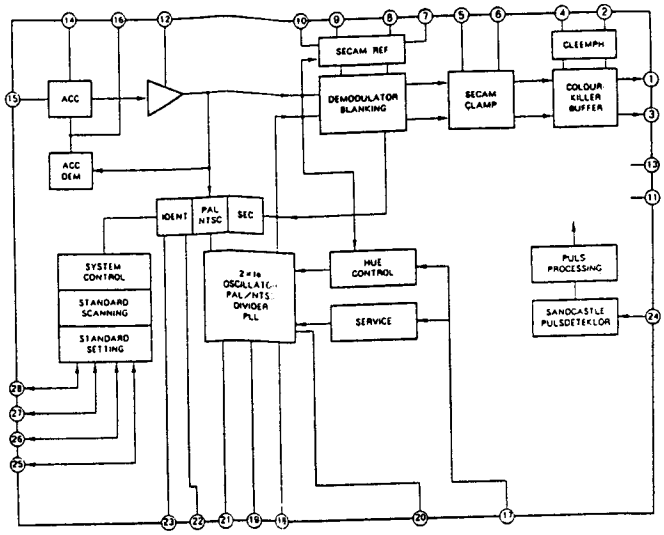
D Board IC502 TDA8170



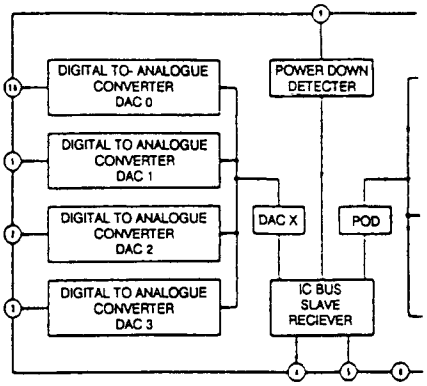
D Board IC251/261TDA2050



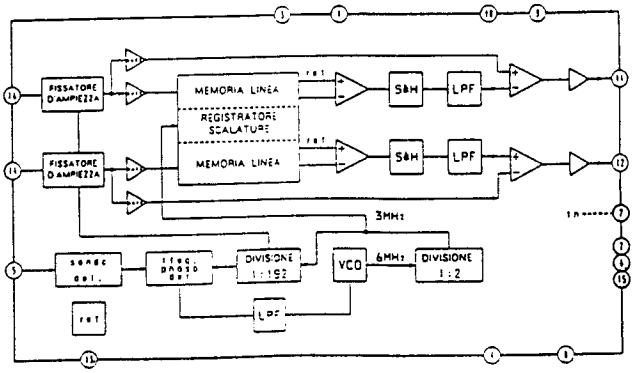
B1 Board IC304 TDA4650WP

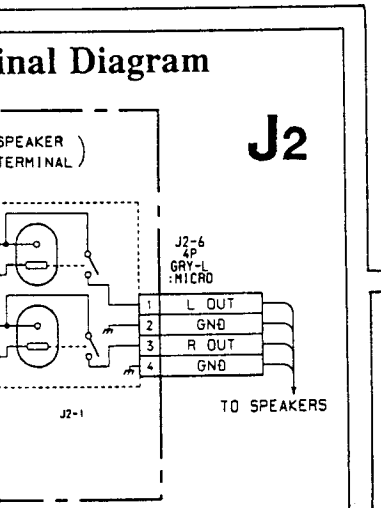


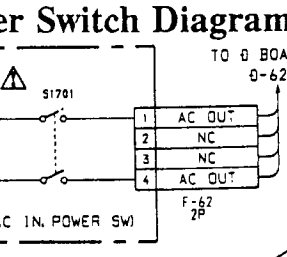
B1 Board IC302 TDA8442-N3



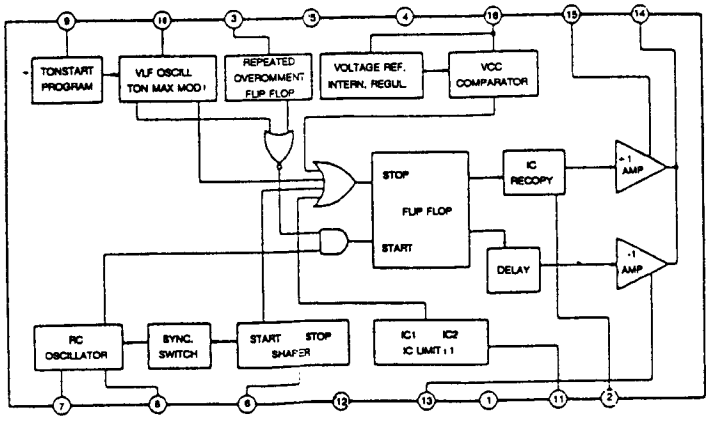
B1 Board IC303 TDA4660T



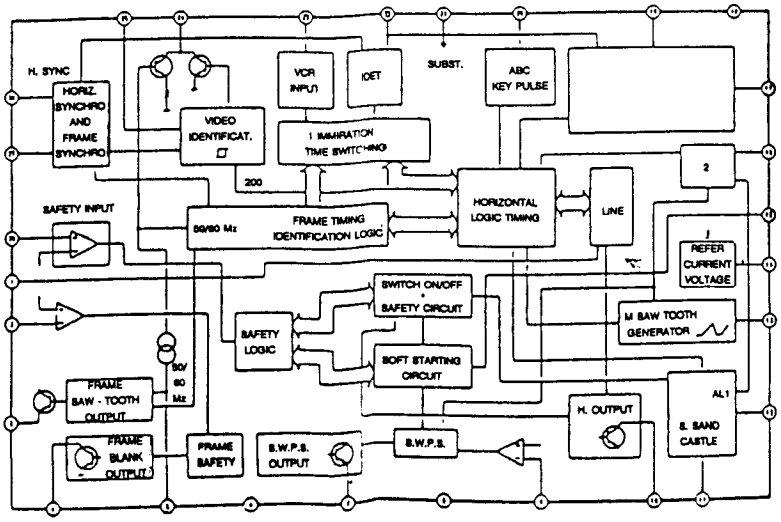


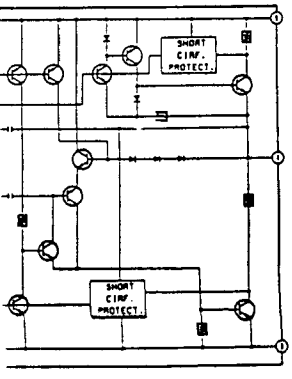


D Board IC601 TEA2260

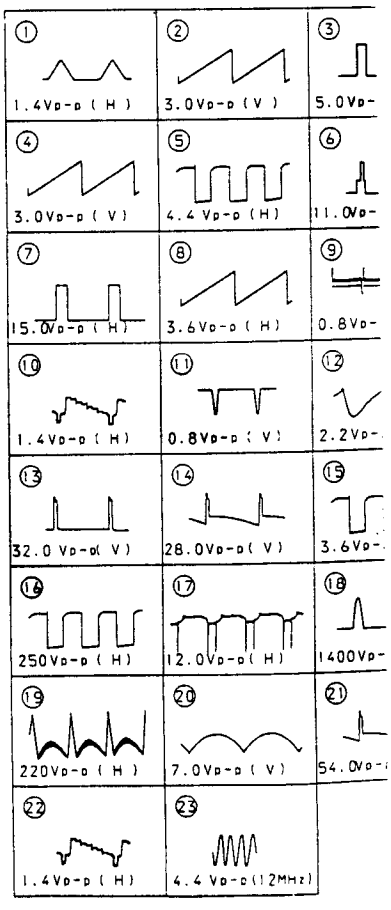


D Board IC501 TEA2028B

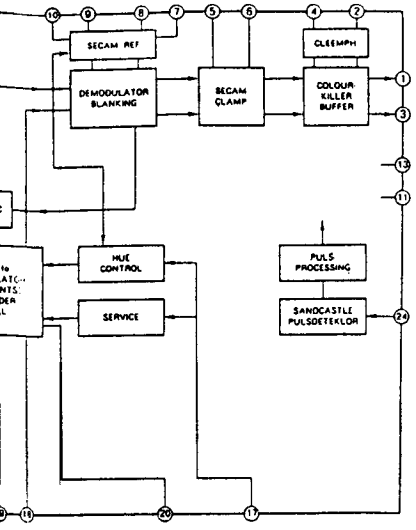




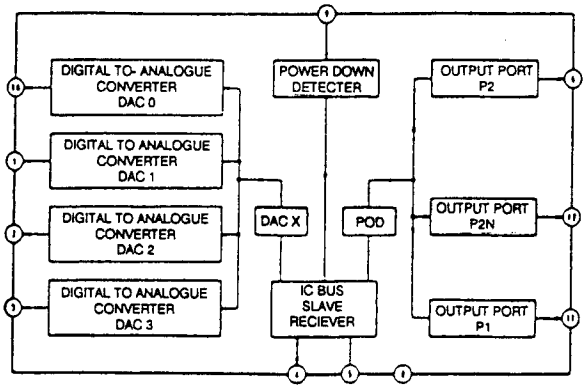
- D Board - Waveforms



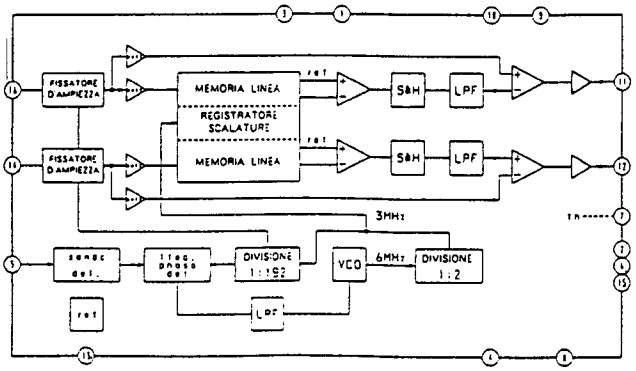
WP



B1 Board IC302 TDA8442-N3



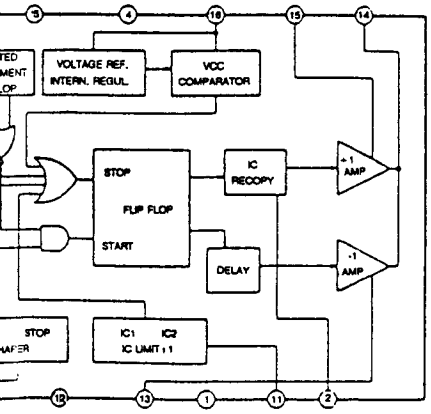
B1 Board IC303 TDA4660T

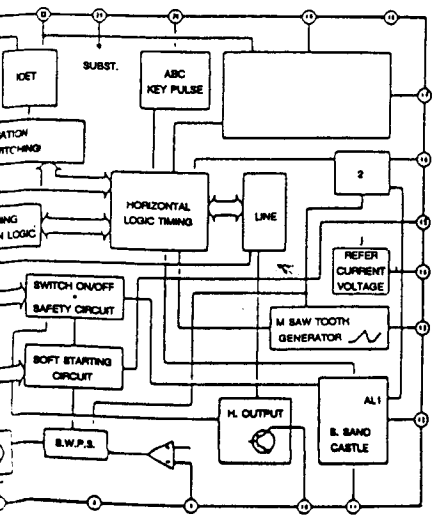


B1 Board Waveforms

① PAL 4.8Vp-p (H)	① SECAM 4.8Vp-p (H)	① NTSC3.58/NTSC4.43 5.0Vp-p (H)
② PAL 4.8Vp-p (H)	② SECAM 4.8 Vp-p (H)	② NTSC3.58/NTSC4.43 5.0Vp-p (H)
③ PAL 4.8Vp-p (H)	③ SECAM 4.6Vp-p (H)	③ NTSC3.58/NTSC4.43 5.4Vp-p (H)
④ 11.0Vp-p (H)	⑤ PAL 0.4Vp-p (H)	⑤ SECAM 0.4Vp-p (H)
⑤ NTSC3.58/NTSC4.43 0.4Vp-p (H)	⑥ PAL/SECAM 1.1Vp-p (H)	⑥ NTSC3.58/NTSC4.43 0.9Vp-p (H)
⑦ PAL/SECAM 1.4Vp-p (H)	⑦ NTSC3.58/NTSC4.43 1.2Vp-p (H)	⑧ PAL 0.6Vp-p (H)
⑧ SECAM 1.3Vp-p (H)	⑧ NTSC3.58/NTSC4.43 0.5Vp-p (H)	⑨ PAL 0.8Vp-p (H)
⑨ SECAM 1.5Vp-p (H)	⑨ NTSC3.58/NTSC4.43 0.6 Vp-p (H)	⑩ SECAM 0.3Vp-p (H)
⑪ SECAM 0.9Vp-p (H)	⑫ PAL 0.24Vp-p (H)	⑫ SECAM 0.2Vp-p (H)
⑫ NTSC3.58/NTSC4.43 0.3Vp-p (H)	⑬ PAL 1.0Vp-p (H)	⑬ SECAM 0.8Vp-p (H)
⑬ NTSC3.58 0.9Vp-p (H)	⑬ NTSC4.43 1.2Vp-p (H)	⑭ PAL 0.8Vp-p (H)
⑭ SECAM 0.7Vp-p (H)	⑭ NTSC3.58 0.6Vp-p (H)	⑭ NTSC4.43 0.8Vp-p (H)
⑮ PAL 0.7Vp-p (H)	⑮ SECAM 0.9Vp-p (H)	⑮ NTSC3.58 0.5Vp-p (H)
⑮ NTSC4.43 0.5Vp-p (H)	⑯ PAL/SECAM 1.1 Vp-p (H)	⑯ NTSC3.58 0.7Vp-p (H)
⑯ NTSC4.43 1.0Vp-p (H)	⑰ PAL 0.9Vp-p (H)	⑰ NTSC3.58 0.4Vp-p (H)
⑰ NTSC4.43 0.3Vp-p (H)	⑱ PAL 0.3Vp-p (H)	⑱ SECAM 0.8Vp-p (H)
⑲ PAL 0.6Vp-p (H)	⑲ SECAM 0.8Vp-p (H)	⑲ NTSC3.58/NTSC4.43 1.1Vp-p (H)

60





- D Board - Waveforms

① 1.4Vp-p (H)	② 3.0Vp-p (V)	③ 5.0Vp-p (V)
④ 3.0Vp-p (V)	⑤ 4.4 Vp-p (H)	⑥ 11.0Vp-p (H)
⑦ 15.0Vp-p (H)	⑧ 3.6Vp-p (H)	⑨ 0.8Vp-p 503KHz)
⑩ 1.4Vp-p (H)	⑪ 0.8Vp-p (V)	⑫ 2.2Vp-p (V)
⑬ 32.0 Vp-p(V)	⑭ 28.0Vp-p(V)	⑮ 3.6Vp-p (H)
⑯ 250Vp-p (H)	⑰ 12.0Vp-p(H)	⑱ 1400Vp-p(H)
⑲ 220Vp-p (H)	⑳ 7.0Vp-p (V)	㉑ 54.0Vp-p (V)
㉒ 1.4Vp-p (H)	㉓ 4.4 Vp-p(12MHz)	