General Information

1994
Video: 2 Heads Rotary
Audio: Fixed Head 1 CH
Covers Models:
Akai VS-G204/VS-G205
Akai VS-G206/VS-G211
Akai VS-G212/VS-G217
Bush VCR 820VP

Matrix

Item	See Model
VIF Units	Akai VS-F260

Recommended Safety Parts

Item	Part No.	Description
C1/2	EC-422101J	C MMY V CUT MKTR40 104M 275AC
C3-C9	EC-418706J	C CE V CUT CS11 E222M 400AC
C11A	EC-422103J	CEC V CUT TWSS 470M400.0DC
C12	EC-418760J	C CE V TO5 FK22 Y5R103K 500DC
C13	EC-418759J	C CE V TO5 CC45 SL121K1000DC
C15	EC-418841J	C MMY V TO5 ECQ-VL2 333J 50DC
D1-D5	ED-422125J	D Silicon 1N4006 T26 800/1.0A
D25/27	ED-422420J	D Zener G MTZJ20C T26
D201	ED-396363J	D Zener H HZS11B3 (EA,ES,EM,EDG,EK)
D202	ED-397233J	D Zener H HZS5C3
D415-D418	ED-511907	D Silicon 1N4002 100/1.0A
FR1-A	ER-410380J	R Fuse V TO5 RF25SCVTP1/4WR91k (except EM)
FR1-B	ER-408829J	R Fuse V TO5 RF25SCVTP1/4WR11K (EM)
FR201	ER-397385J	R Fuse V TO5 RF255CVTP1/4WR20K
FR202	ER-410380J	R Fuse V TO5 RF25SCVTP1/4WR91K (EO,EOH,EOG)
FR204	ER-408829J	R Fuse V TO5 RF25SCVTP1/4WR11K
FR401	ER-400729J	R Fuse V TO5 RF25SCVTP1/4WR47K
FR402	ER-418648J	R Fuse V TO5 RF25SCVTP1/4WR24K
IC201	EI-418723J	IC NJM4558DX
IC203	EI-416620J	IC NJM7809FA (EO,EOH.EOG)
L1	EO-339907	Coil IF FKOB160MH16 1000.0UH (EOG)
L2	EO-418689J	Coil LF LF-4DA 333
L201	EO-418689J	Coil FIX 2 PC7-330K 330K
L202	EO-422134J	Coil FIX 2 PC7-330K 330K
R1	ER-418739J	R C T P RGG3 3W 4R7K
R2	ER-422181J	R OMF H S20 FS ERG3SH 3W 823J
R6-A	ER-422186J	R OMF H S15 FS PRO2 2W 151J (Ecept EM)
R6-B	ER-425232J	R OMF H S15 FS PRO2 2W 431J (EM)
R7-A	ER-411836J	R OMF H S15 FS 2W 1ROJ (Except EM)
R7-B	ER-418808J	R OMF H S15 FS RSSX 2W R68J (EM)
R23	ER-425232J	R OMF H S15 FS PRO2 2W 431J (EM)
R25	ER-425231J	R OMF H S20 FS ERG3SH 3W 431J (EM)
R27-A	ER-386215J	R OMF H S12 FS 1W 220J (except EM)
R27-B	ER-397193J	R OMF V TO5FS ERG1SE 1W 100J (EM)
T1-A	BT-425397N	Trans Pow V1182EK (EM)
T1-B	BT-422116N	Trans Pow V1184 EM (except EM)
TH201	EX-412421J	Thermistor 911P83E101NH07 TO5
TR1	ET-422118J	TR2SC4304.0Y
TR2	ET-422129J	TR2SD2132U,V TO5
TR203	ET-422464J	TR C.2SD2118 Q,R,S FPTLT16E
TR210	ET-422154J	TR 2SB1426 Q,R TO5
TR211	ET-404498J	TR 2SB1306 Q,R TO5

Service Adjustments

Disassembly of the Main Components

Removal of the Mechanism Block

Note:
Some parts in the mechanism block require complete removal of the mechanism block from the chassis when performing servicing. Set the Loading mechanism to the "EJECT" position by pressing the "EJECT" button,then
disconnect the AC power plug from the AC socket before proceeding. This sets the loading mechanism to the "reference position".

Removal of the Pre Amp PCB

1: Disconnect the two flat cables from the P2 and P4 connectors respectively.
2: Disconnect the connectors on the AC/HEAD and FULL TRACK ERASE HEAD.
3: Remove one of the (A) screws and remove the EARTH BRUSH.
4: Remove the other (A) screw, then press the lower side of the shield case in the direction of the arrow as shown in Fig 1
5: Proceed in the reverse order for installation.
Carefully align the connectors between the one on the DRUM MOTOR PCB, the one on the LOWER DRUM and P1, P3 on the PRE AMP PCB.

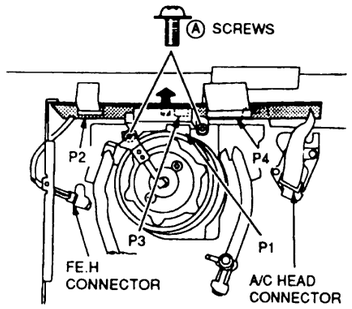


Fig 1.

Removal of the TR (A) PCB

1: Remove the (B) transistor retaining screw, then remove the TR (A) PCB from the MECHANISM BLOCK.

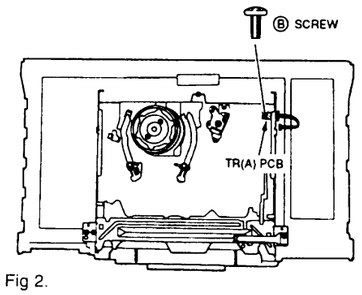


Fig 2.

Removal of the Mechanism Block

1: Remove the three retaining screws on the bottom
2: Remove the two (D) screws and the (E) screw which retain the MECHANISM BLOCK and the EARTH PLATE as shown in Fig 3.
3: Pull up the MECHANISM BLOCK carefully for detaching it from the chassis and the MAIN PCB.

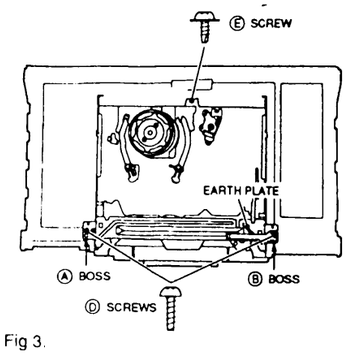


Fig 3.

Installation of the Mechanism Block

1: Carefully align the (A) and (B) bosses on the chassis with there corresponding holes on the MECHANISM BLOCK and then tighten the three screws as shown in Fig 3.
2: Proceed in the reverse order for installation.

Removal of the Ejector Block

Removal of the Cassette Load Block

1: Remove the two (A) screws on the UPPER PLATE, as shown in Fig 4, then remove the UPPER PLATE.
2: Unhook the spring and remove it as shown in Fig 4.
3. While pressing the right STOPPER in the direction of the arrow (refer to Fig 4.), gently remove the right side pin of the CASSETTE LOAD BLOCK from the rail by pulling it in the forward direction. Next, remove the left side pin in the same manner, then remove the CASSETTE LOAD BLOCK.
To avoid damaging the pins of the CASSETTE LOAD BLK and the rail of the MECHA. FRAME, do not use excessive force when removing the CASSETTE LOAD BLK.

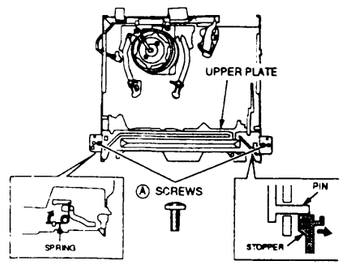


Fig 4.

Head Motors and Miscellaneous

Part No.	Description
HR-416732J	Head Combo HVMZA1161A
HE-422168J	Head E HVFHF0032A
BV-V1182A410A	Lower Drum BLK G204EA
BM-421746N	Motor Part
BM-419269N	Motor SCV-0602A
BM-419324N1	Motor SDV-0302A
BV-V1182A420A	Upper Drum BLK G215EK (EK)
BV-V1182A420A	Upper Drum BLK X400EGN (Except EK)

Removal of the Loading Arm Block

1: Release the stopper on the right side end of the LOADING ARM BLK's shaft as shown in Fig 5. by pressing the stopper tab with a flat head (-) screw driver. Then remove the shaft's right end from the bracket.
2: Hold the LOADING ARM (T) and then pull out the shaft's left end from the bracket.
Take special care when removing it to avoid damaging the pins (refer to Fig 5).

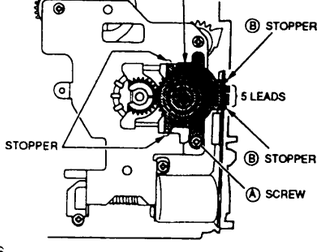


Fig 5.

Re-assembling

1: Proceed in the reverse order.

Removal of the Mode Select Switch

Before proceeding with removal of the MODE SELECT SWITCH, the loading mechanism must be set to the "reference" position.
If it has not already been set, use the following procedure to set the reference position.

* Connect a 6V battery to the loading motor until both the cam slider gear and mode select switch reach the reference position (refer to Fig 7).

Removal of the Mode Select Switch

1: Unsolder the 5 leads of the mode select switch.
2: Remove the (A) screw.
3: While releasing the two (A) stoppers and two (B) stoppers, carefully remove the mode select switch by pulling it up and to the left.

Fig 6.

Installation of the Mode Select Switch

1: Install the mode select switch in the reverse order. When mounting the mode select switch, align the mode select switch's (A) mark with the (B) mark on the cam slider gear as shown in Fig 7.

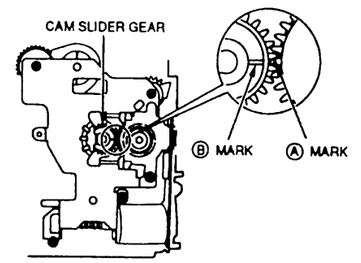


Fig 7.

Disassembly of the Loading Drive Block

* Set the loading mechanism to the "reference" position.
Refer to "REMOVAL OF THE MODE SELECT SWITCH" before proceeding.

Removal of the Loading Drive Block

1: Remove the MODE SELECT SWITCH (refer to "REMOVAL OF THE MODE SELECT SWITCH") if necessary.
2: Remove the (A),(B), and (D) screws then remove the LOADING DRIVE BLOCK as shown in Fig 8.

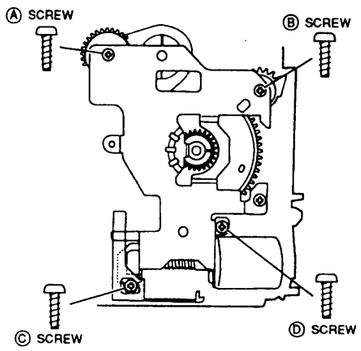


Fig 8.

Replacement of the Loading Motor

1: Remove the LOADING DRIVE BLOCK
2: Unsolder the two leads of the LOADING MOTOR.
3: Remove the two installation screws.
4: Reassemble in the reverse order for installation.

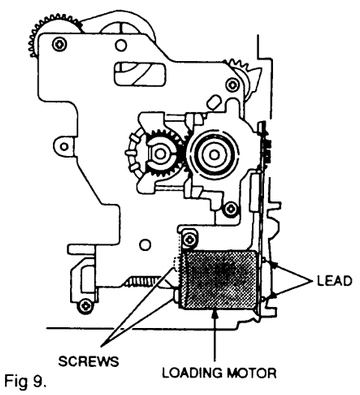


Fig 9.

Service Adjustments Cont'd.

Re-assembly of the Loading Mechanism Block

Position of the TOGGLE GEARs (T) and (S)

1: Set the TOGGLE GEARs (T) and (S) to the unloaded position with your fingers. Align the (A) mark on the TOGGLE GEAR (S) with the (A) hole of the TOGGLE GEAR (T) as shown in Fig 10.

Note:
When positioning the TOGGLE GEAR (S), the TENSION ARM's pin should be moved in the direction of the arrow before placing the TOGGLE GEAR (S) onto its shaft.

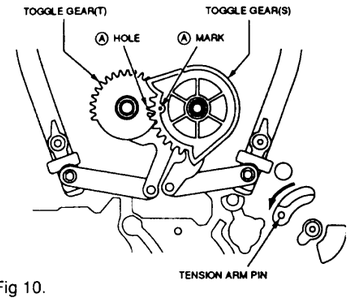


Fig 10.

Installation of the Cam Slider Gear & Front Loading Gear

1: Attach the WORM WHEEL GEAR as shown in Fig 11.

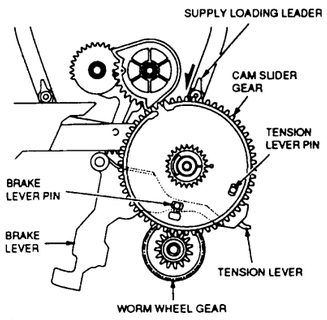


Fig 11.

2: Place the CAM SLIDER GEAR on the shaft and adjust the position of the BRAKE LEVER and TENSION LEVER so that both pins appear through the holes on the CAM SLIDER GEAR as shown in Fig 11.
When inserting the CAM SLIDER GEAR onto its shaft, press the SUPPLY LOADING GEAR slightly in the direction of the arrow to make installation easy.
3: Attach the FRONT LOADING GEAR so that the (A) mark on the FRONT LOADING GEAR aligns with the (B) mark on the FRONT LOADING SLIDER and that the (C) mark on the FRONT LOADING GEAR aligns with the (D) mark on the CAM SLIDER GEAR as shown in Fig 12.

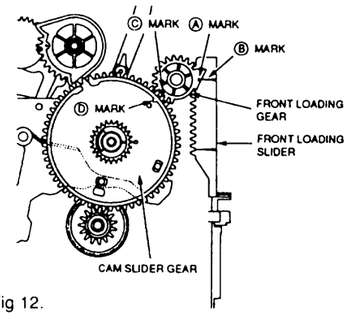


Fig 12.

Installation of the Loading Block & Mode Select Switch

1: Install the LOADING DRIVE BLOCK as shown in Fig 13. Align the (A) mark on the MODE SELECT SWITCH's gear with the (B) mark on the CAM SLIDER GEAR when installing. (Refer to "Installation of the MODE SELECT SWITCH".)

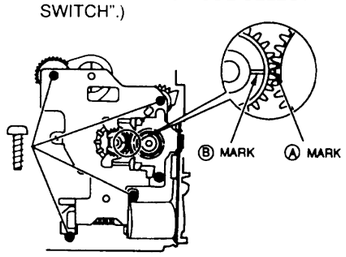


Fig 13.

Replacement of the Disc Clutch Block & Gear Coupling Block

1: Remove the SLIT WASHER as shown in Fig 14.
2: Release the two (A) stoppers of the COUPLING ARM and pull up the CLUTCH DISK BLOCK and COUPLING GEAR BLOCK at the same time.
3: Reassemble in the reverse order for installation.

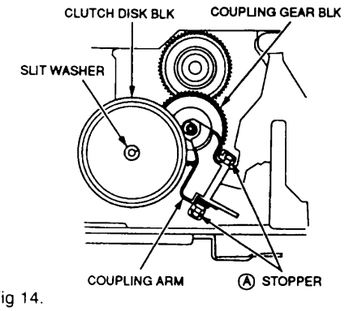


Fig 14.

Replacement of the Review Brake Part & Idler Part

1: Un hook the (A) spring, then release the stopper of the REVIEW BRAKE PART and remove it.
2: Reassemble in the reverse order for installation.

Replacemnt of the Idler Part

1: Remove the CASSETTE LOAD BLOCK & LOADING ARM BLOCK. (Refer to "Removal of the EJECTOR BLOCK")
2: Release the stopper of the IDLER PART and remove it as shown in Fig 15.
3: Reassemble in the reverse order for installation.

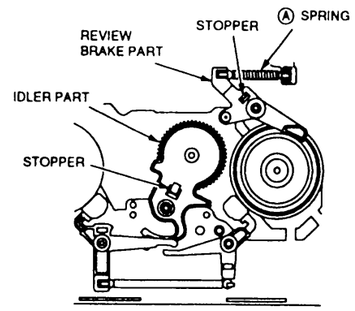


Fig 15.

Replacement of the Pinch Roller Block

1: Remove the (A) spring, then remove the PINCH ROLLER ARM BLOCK by turning it in the direction of the arrow and pulling it upward as shown in Fig 16.
2: Reassemble in the reverse order for installation.

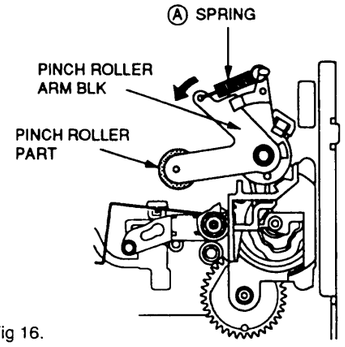


Fig 16.

Disassembly of the Pinch Lever & Pinch Holder

Removal of the Pinch Lever and Pinch Holder

1: Remove the two (A) screws then remove the PINCH LEVER and PINCH HOLDER

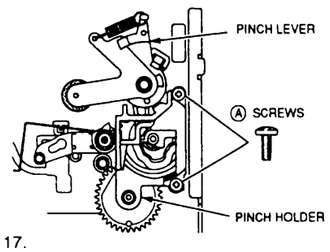


Fig 17.

Installation of the Pinch Lever & Pinch Holder

1: Align the (A) hole on the PINCH SLIDER with the (A) mark on the PINCH GEAR through the hole on the chassis as shown in Fig 18
2: Align the (B) mark on the PINCH GEAR with the (C) mark on the PINCH CAM GEAR and the (D) mark on the PINCH CAM GEAR with the (E) mark on the HELICAL CAM GEAR as shown in Fig 18.
3: Install the PINCH LEVER and PINCH HOLDER in the reverse order.

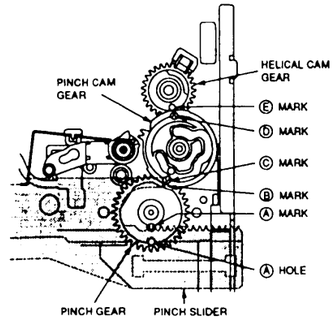


Fig 18.

Replacement of the Capstan Motor Block

1: Remove the three (A) screws as shown in Fig 19.

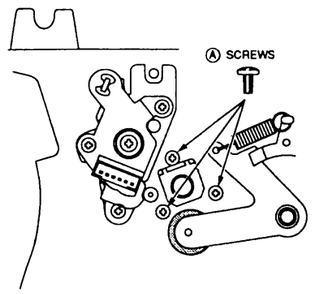


Fig 19.

2: Remove the CAPSTAN BELT.
3: Remove the (B) screw and then remove the CAPSTAN MOTOR HOLDER.
4: Release the two (A) stoppers and remove the CAPSTAN BRAKE PART.
5: Remove the CAPSTAN MOTOR BLOCK while releasing the (B) and (C) stoppers.
6: Proceed in the reverse order for installation.

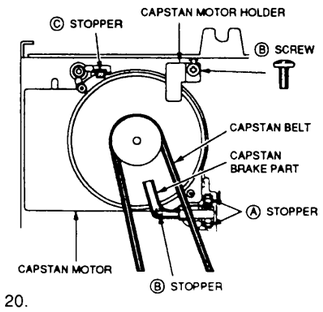


Fig 20.

Drum Motor PC Board Replacement

1: Remove the two (A) screws on the ROTARY PLATE and then remove it. (If the PRE AMP PCB is not removed yet, remove it first before removing the (A) screws.(Refer to "Removal of the PRE AMP PCB".)

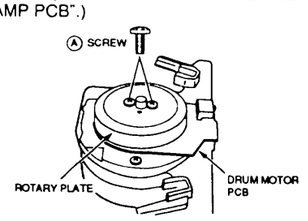
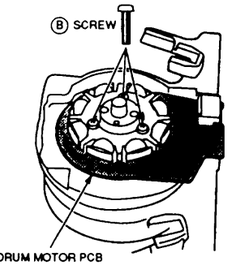


Fig 21.

2: Remove the three (B) screws which retain the DRUM MOTOR PCB and replace it.
3: Attach the ROTARY PLATE to the collar preload so that the rotary place (c) hole and collar preload (D) hole line up.
4: After replacement, PB switching point adjustment (INFORMATION, PRESET IN THE TEST MODE,#2) is absolutely necessary for the proper performance.



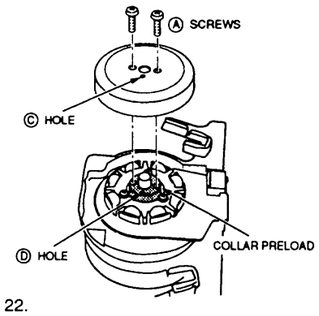


Fig 22.

Replacement of the Upper Drum

Removal of the Upper Drum

1: Unsolder the four relay leads and remove the two upper drum fixing screws as n in Fig 23.
2: Gently lift and remove the UPPER DRUM.

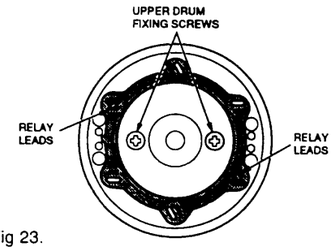


Fig 23.

Installation of the Upper Drum

1: Attach the UPPER DRUM to the LOWER DRUM ROTOR, so that the upper drum convex (A) and lower drum rotor's white PCB line up, as shown in Fig 24.

Note:
Because height precision is required for proper performance, and because head tips are fragile, the following points should be noted when replacing the UPPER DRUM BLOCK.

a: Do not loosen the set screw on the collar preload.
b: Before fixing, use alcohol to clean both surfaces where the upper drum and the rotary transformer meet.
c: If the UPPER DRUM can not be inserted on to the shaft easily during installation, clean the hole in the UPPER DRUM with alcohol and put a little oil on the shaft.
d: Make sure that the upper drum fixing screw holes, on the rotary transformer part, and the upper drum fixing screw penetration holes match exactly before inserting the fixing screws.
e: Tighten the two upper drum fixing screws alternately and gradually.

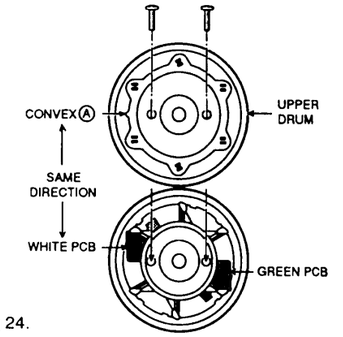


Fig 24.

After Replacement

After replacement the following adjustments are necessary for the proper performance.

1: Control head phase adjustment. (MECHANICAL ADJUSTMENT)
2: PB switching point adjustment (INFORMATION, PRESET IN TEST MODE #2)
3: ENV.DET (I-HQ) adjustment. (INFORMATION, PRESET IN THE TEST MODE #3)
4: Video head REC current adjustment.(VI.ELECTRICAL ADJUSTMENT Step 4)

Mechanical Adjustments

Back Tension Adjustment

1: Prepare a video cassette which you no longer need. Remove tape reels and the tape protection co from the cassette tape. Next, cover e video cassette's left and right detection holes with black adhesive tape.
2: Engage the playback mode using with a tapeless tape.
3: Confirm the distance between the three marks (lines) on the TENSION ARM and the (A) mark on the MECHA. CHASSIS so that the (A) mark aligns with the right edge of the centre line on the TENSION ARM as shown in Fig 25.
4: If the result is not satisfactory, eject the tape and adjust the TENSION ADJUST repeatedly until a satisfactory result is achieved.

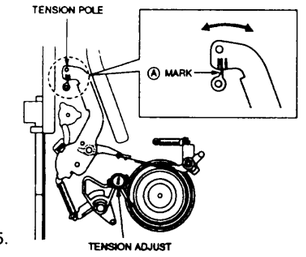


Fig 25.

Service Adjustments Cont'd.

Tape Transport Adjustments

Note:
The following adjustments are required only when an irregularity is found, since these adjustments are precisely set at the factory.

Tape Curl Adjustment at the Take-Up Tape Guide

1: Play back a recorded tape which is no longer needed.
2: Turn the (A) screw on the A/C HEAD BLK, until the edge of the tape barely touches the lower part of the TAKE UP TAPE GUIDE, without any curl or wrinkle.
3: Once the (A) screw is adjusted, A/C HEAD height and azimuth adjustment is required. (Refer to A/C HEAD POSITION ADJUSTMENT.)

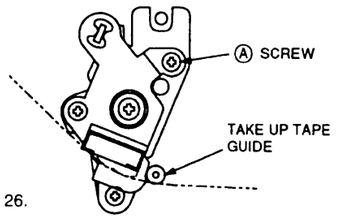


Fig 26.

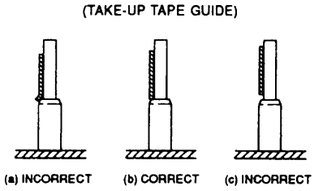
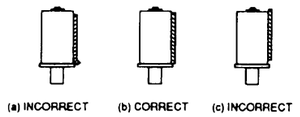


Fig 27.

Tape Curl Adjustment at the Supply Tape Guide

Confirm that the lower edge of the tape barely touches the lower part of the SUPPLY TAPE GUIDE, without any curl or wrinkle as shown in Fig 28. If necessary, bend the neck part of the TENSION ARM in the (A) or (B) direction slightly until a satisfactory result is achieved.



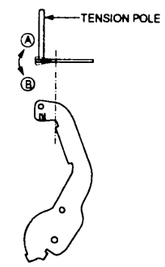


Fig 28.

Review Arm Height Adjustment

1: Play back the begining part of an E-240 (T-160) tape and set the unit to the REVIEW mode by pressing the REW utton. (Remove the tape protection cover to make the adjustment easier.)

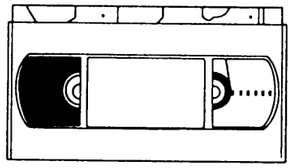


Fig 29.

2: Turn the REVIEW ARM height (A) nut so that the edge of the tape barely touches the lower part of the TAKE- UP TAPE GUIDE, without any curl or wrinkle between the TAKE-UP TAPE GUIDE and the CAPSTAN SHAFT as shown in Fig 30.

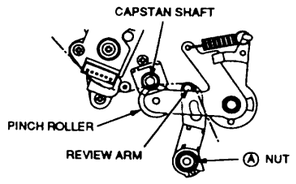


Fig. 5-6

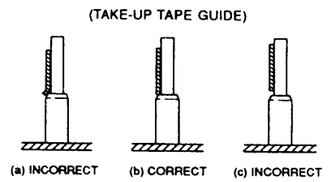


Fig. 5-7

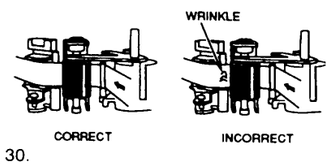


Fig 30.

3: Play back the beginning part of an E-240 (T-160) tape and this time set the unit to the CUE mode by pressing the F.FWD button.
4: Confirm there is no curl or wrinkle near the REVIEW ARM's guide. If curl or wrinkle of the tape occurs, slightly turn the (A) nut (Shown in Fig 30.) until it disappears.

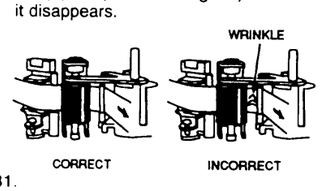


Fig 31.

5: Set the unit to the REVIEW mode again. Then confirm that there is no curl or wrinkle near the TAKE-UP TAPE GUIDE.
(A small gap may appear after this adjustment, but this is allowable.)

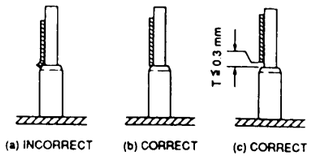


Fig 32.

Note:
If the results are not satisfactory, repeat steps 2 -5.
Always play an undamaged tape to obtain satisfactory adjustment.
Because an E-240 (T-160) tape can be damaged easily, due to its thinness, a pre-adjustment with an E-180 (T- 120) tape is recommended.

Loading Leader Height Adjustment

1: Slightly loosen the set screw at the lower part of the LOADING LEADERs (L), (R) so that the LOADING LEADER can be adjusted with reasonable tightness. (Refer to Fig 33.)

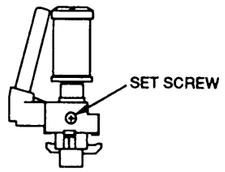


Fig 33.

2: Play back the reference tape TF-530RFS (AT-751775).
3: Connect an oscilloscope's CH-1 to the TP2 (ENVE) on the PRE AMP PCB and CH-2 to the TP1 (V-SWP) for triggering.

A/C Head Position Adjustment

Azimuth Adjustment

1: Connect an AC voltmeter or an oscilloscope to the AUDIO OUT terminal on the rear panel.
2: Play back the reference tape TF-530RFS(AT-751775)
3: Adjust the (B) screw to obtain the maximum audio output.
4: Turn the LOADING LEADER heads with a flat head (-) screw driver to obtain a flat RF envelope as the ideal envelope, as shown in Fig 34.
5: After adjustment is completed, tighten the loading leader set screws.

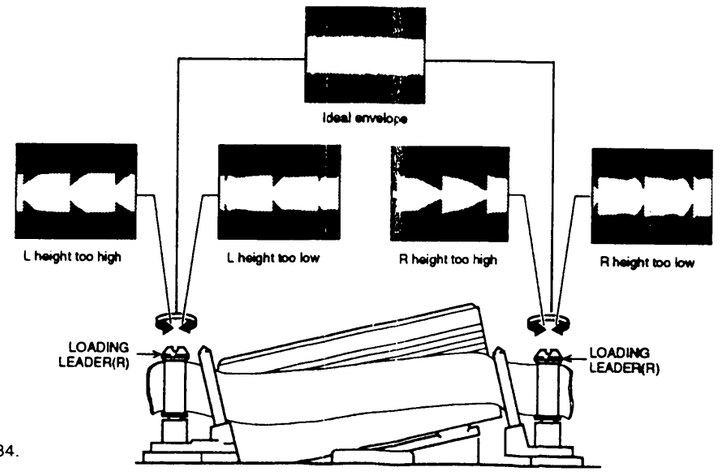


Fig 34.

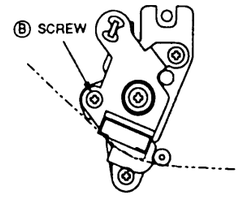


Fig 35.

Height Adjustment

1: Play back test tape TF-526HH (AT-751788).
2: Connect an oscilloscope's CH-1 to the AUDIO OUT terminal on the rear panel and CH-2 to TP401 (CTL OUT) on the MAIN PCB.
3: Turn the (C) screw to obtain 1/2 of the output level of either CH-1 or CH-2 whichever has an output signal as shown in Fig 36. and 37.
Next,set both of the oscilloscope's channels to 100 mV/div and finely adjust the (C) screw until both signals of CH-1 and CH-2 are nearly the same level as shown in Fig 37.
4: Slightly turn the (A) screw until the tape edge barely touches the lower part of the TAKE-UP TAPE GUIDE without any curl or wrinkle as shown in Fig 27.
5: Adjust the head axiumuth again.(Turning the (C) screw, or (A) screw, will cause head aximuth mis-alignment. (Refer to Axiumuth adjustment.)
6: Confirm that both signals of CH-1 and CH-2 are nearly the same level.
(Confirm that neither of the CH-1 or CH-2 output levels exceed 100 mVp-p).
If the result is not satisfactory, repeat steps (3 to 5).

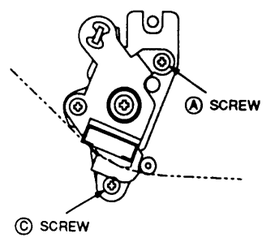


Fig 36.

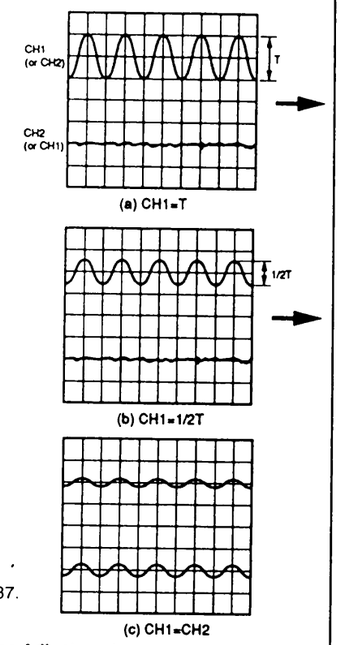
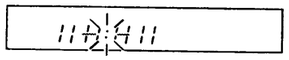


Fig 37.

Phase Adjustment

1: Connect an oscilloscope's CH-1 to the TP2 (ENVE) on the PRE AMP PCB and CH-2 to the TP1 (V-SWP) for triggering.
2: Play back reference tape TF-530RFS (AT-751775).
3: Press one of the TRACKING buttons on the remote control unit until the flashing point reaches the centre position of the tracking range (colon) on the FL display as shown in Fig 38.



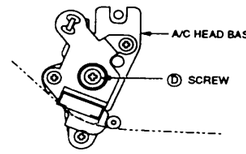


Fig 38.

4: Loosen the (D) screw slightly so that the A/C HEAD BASE can be moved with reasonable tightness.
5: nsert a philips type screwdriver into the A/C HEAD BASE and (A) hole as shown in Fig 39.
6: Move the A/C HEAD BASE by moving a screwdriver in the direction of the arrow as shown in Fig 39 to obtain the maximum RF output, then tighten the (D) screw.
7: Eject the tape and then re-insert it and play it back again. Confirm that the RF output is maximum after the auto tracking control has been activated. Next, press the "< " or ">" cursor button on the remote control unit alternately and confirm that the RF output is maximum at the tracking centre position.
If the result is not satisfactory, repeat the adjustment steps 2) to 6). (This adjustment is very important as this affects the interchangeability of the recorded tapes.)

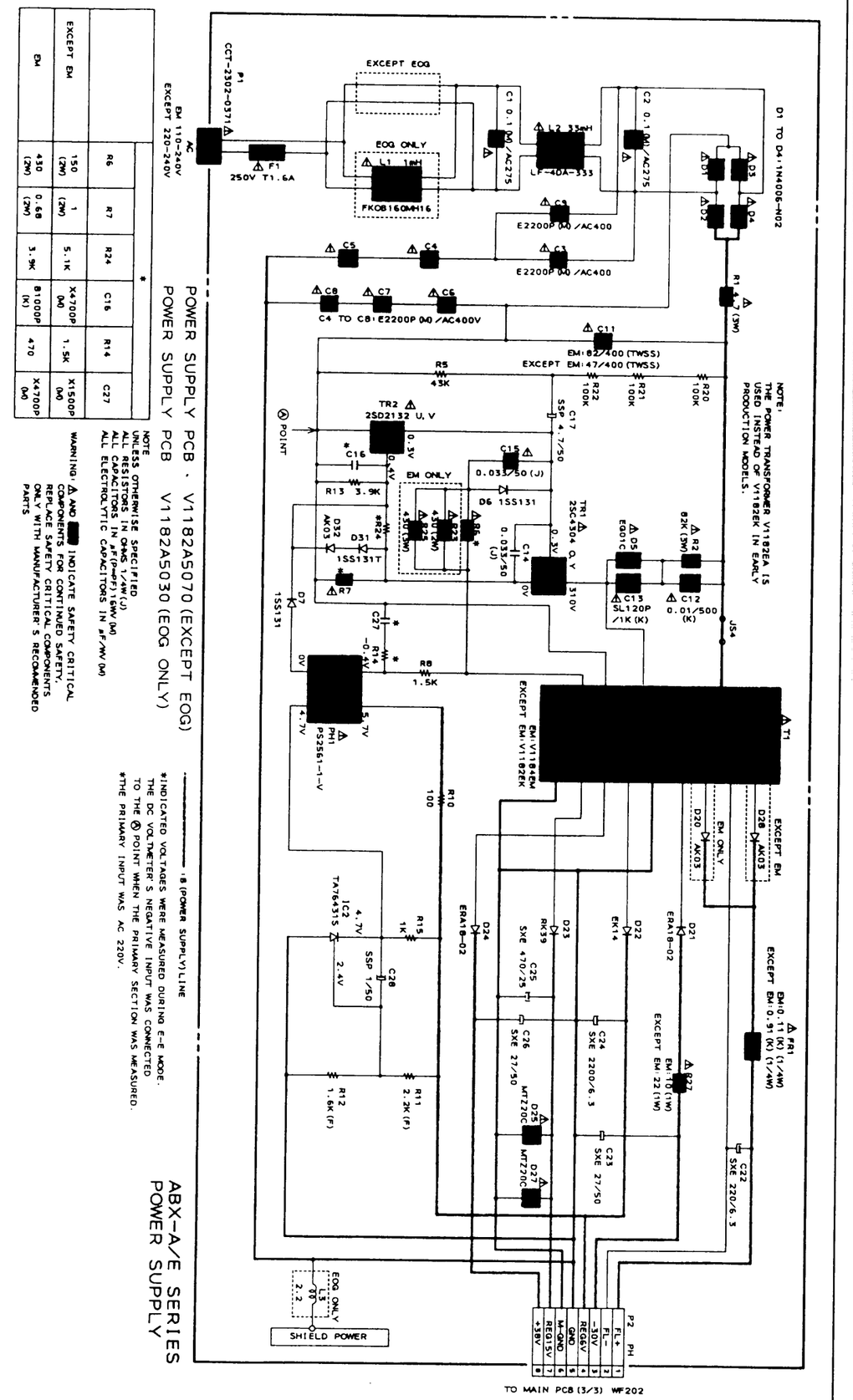
Mechanical Parts List

Description	Part No.
Head Drum Block	
BID30X08STL CMT	ZS-321298
BID26X08STL CMT	ZS-563444
Chassis Drum	MA-42019J1
Earth Brush Part AG	VT-401282J
Lower Drum BLK G204EA	BV-V1182A410A
Motor SDV-0302A	BM-419324N1
PAN26X12STL CMT	ZS-467796
PAN30X06STL CMT S-GRIP	ZS-425694J
ST BID30X12STL CMT	ZS-336714
ST BID30X06STL CMT	ZS-358936
Upper Drum BLK X400EGN (Except EK)	BV-V1123A420A
Upper Drum BLK G215EK (EK)	BV-V1182A420A
Mechanism Block (1)	
Arm Loading BLK G204EA	BL-424913N
Arm Loading Brake	ML-420097N
Arm Lid Opener	ML-420170N
Arm Idler Part	MI-420023N
Arm Pinch Roller Part	BL-420054N
Arm Review Part	ML-420068N
Arm T.U Brake	ML-420102N
Arm Tension Part	ML-420006N
Cassette Load BLK G204EA	BV-424919N
Disk(2) Part	MT-424632N
Gear Cam Helical	MZ-420064N
Gear Cam Pinch	MZ-420066N
Gear Pinch	MZ-420067N
Guide Roller D8 Part	VT-387394J1
Head Combo HVMZA1161A	HR-416732J
Head E HVFHF0032A	HE-422168J
Holder Pinch	MZ-420065N
Leader (T) BLK G204EA	BV-424915N
Leader (S) BLK G204EA	BV-424914N
Lever Pinch	ML-420061N
Lever Tension(1)Part	ML-420416N
Main Brake (T) Part	ML-420089N
Main Brake (S) Part	ML-420086N
Mecha Deck G204EA	BB-421843N
N30 Nylon	ZW-350839
PAN20X2.8STL CMT PS1 Leader	ZS-418616J
PAN26X08STL N13	ZS-550708
PAN26X07STL CMT CP	ZS-422170J
PAN20X2.2STL BZN PS1	ZS-418480J
Plate Upper	MZ-420172N
PRISM LED	MZ-420132N
PT BID26X12STL CMT	ZS-403887J
PW31X060X050PSL	ZW-324417
Reveiw Brake Part	ML-420092N
Reel Washer (SG)	ZW-424667N
Roller Impedance	MR-420022N
ST BID26X06STL CMT	ZS-38761J
SP Plate Upper	ZG-420162N
SP Pull Dumper(S)	ZG-420166N
SP Pull Dumper(T)	ZG-420167N
SP Pull Review Brake	ZG-420095N
SP Pull T.U Brake	ZG-420103N
SP Pull Loading Brake	ZG-420098N
SP Pull Main Brake	ZG-420091N

Mechanical Parts List Cont'd.

Description	Part No.
Mechanism Block (1) Cont'd.	
SP Pull Pinch	ZG-420062N
SP Pull Tension(1)	ZG-420015N
SP Push A/C	ZG-420075N
SP Torsion Review	ZG-420071N
SP Torsion Slider	ZG-420169N
Slider Front Loading	ML-420168N
SLITW16X035X025 PSL	ZW-395919J
ST BID30X06STL CMT	ZS-358936
ST PAN30X05STL CMT C080	ZS-362533
Tension Band Part	MZ-420016N
Mechanism Block (2)	
Arm Coupling	ML-420033N
Belt Capstan	MB-420053N
BID30X03STL CMT	ZS-425981
Capstan Brake Part	ML-420126N
Disk Clutch Part	NI-420038N
Disk Coupling	MI-420037N
Gear Cam Main	MZ-420122N
Gear Coupling	MZ-420035N
Gear Toggle(S) BLK G204EA	MZ-424917N
Gear Toggle(T) BLK G204EA	MZ-424916N
Gear Front Loading	MZ-420124N
Gear Worm Wheel	MZ-420123N
Holder Thrust Worm	MR-420109N
Lever M Brake	ML-420099N
Lever REC-S	ML-420133N
Motor Part	BM-421746N
Motor SCV-0602A	BM-419269N
PAN26X04STL CMT	ZS-432843
PT BID26X10STL CMT	ZS-389950J
Pulley Trigger	MR-420106N
PW21X040X050PSL	ZW-321317
PW26X060X050PSL	ZW-389923J
Socket TKC-MO7X-A1 7P	EJ-422169J
Slide S-SW	MZ-420135N
Slider Pinch	ML-420110N
Slider Trigger	ML-420100N
SLIT W21X050X050PSL	ZW-418816J
SP Pull Toggle	ZG-420117N
SP Pull Trigger	ZG-420101N
SP Push Coupling	ZG-420036N
SP Torsion C.B	ZG-420129N
SP Trigger	ZG-420105N
SP Torsion Coupling	ZG-420034N
SP Torsion REC-S	ZG-420134N
SW Mode Select MMS00201ZMBO	ES-419326J
ST BID30X06STL CMT	ZS-358936

Power Supply Diagram



Electrical Adjustments

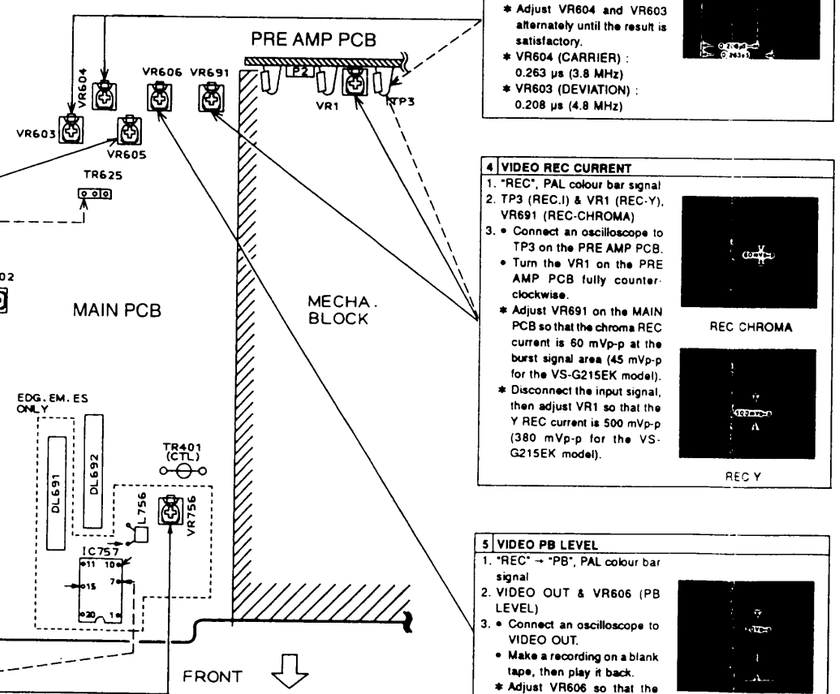
Precautionary items prior to adjustments
1. The colour bar generator output should be 1.0 Vp-p.
2. The video output terminal should be terminated with 75 ohms (connect dummy load or 75 ohms input TV).

The following test tape is required.

Test tape	Parts No.
TF-542CBS	AT-751365

STEP	ADJUSTMENT ITEM
1.	MODE and INPUT SIGNAL/TEST TAPE
2.	TEST POINT and ADJ part
3.	REMARKS (•) & RESULT (✱)

ADJ. part → Test point



1 VIDEO E-E LEVEL
1. "E-E" (STOP mode), PAL colour bar signal
2. VIDEO OUT & VR602 (E-E LEVEL)
3. • Connect an oscilloscope to VIDEO OUT.
   ✱ 1.0 Vp-p

2 WHITE CLIP
1. "E-E", PAL colour bar signal
2. TR625 (EMITTER) & VR605 (WHITE CLIP)
3. • Connect an oscilloscope to the emitter of TR625.
   ✱ Adjust VR605 so that the white clip level is 195 % of the video level (the level from sync tip to white 100%).

3 CARRIER SET & DEVIATION
1. "REC", Stair step signal
2. TP3 (REC.I) & VR604 (CARRIER), VR603 (DEVIATION)
3. • Connect an oscilloscope to the TP3 on the PRE AMP PCB.
   ✱ Adjust VR604 and VR603 alternately until the result is satisfactory.
   ✱ VR604 (CARRIER) : 0.263 µs (3.8 MHz)
   ✱ VR603 (DEVIATION) : 0.208 µs (4.8 MHz)

4 VIDEO REC CURRENT
1. "REC", PAL colour bar signal
2. TP3 (REC.I) & VR1 (REC-Y), VR691 (REC-CHROMA)
3. • Connect an oscilloscope to TP3 on the PRE AMP PCB.
   • Turn the VR1 on the PRE AMP PCB fully counter-clockwise.
   ✱ Adjust VR691 on the MAIN PCB so that the chroma REC current is 60 mVp-p at the burst signal area (45 mVp-p for the VS-G215EK model).
   ✱ Disconnect the input signal, then adjust VR1 so that the Y REC current is 500 mVp-p (380 mVp-p for the VS-G215EK model).

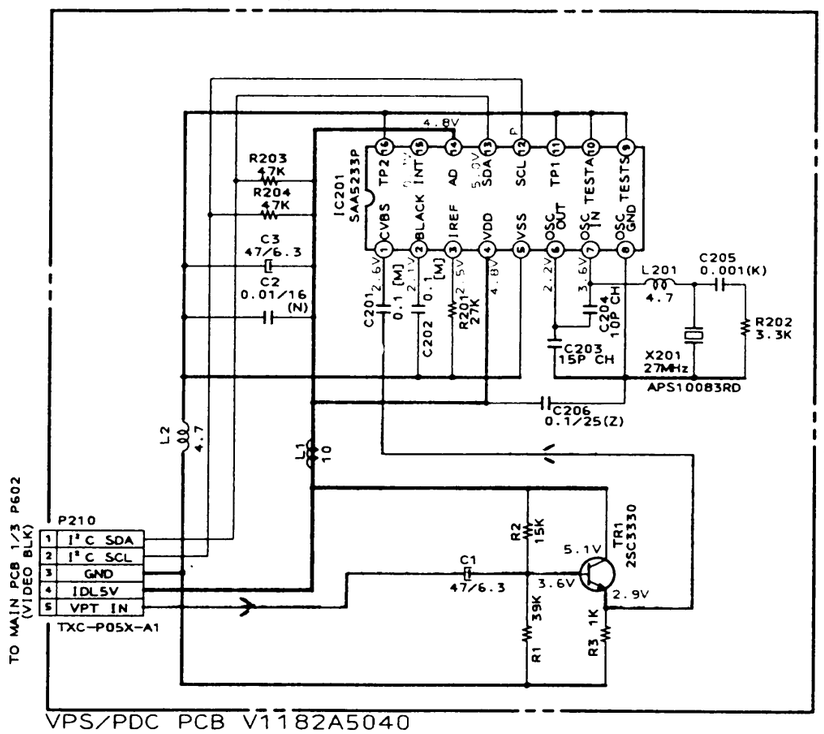
REC CHROMA

REC Y

5 VIDEO PB LEVEL
1. "REC" → "PB", PAL colour bar signal
2. VIDEO OUT & VR606 (PB LEVEL)
3. • Connect an oscilloscope to VIDEO OUT.
   • Make a recording on a blank tape, then play it back.
   ✱ Adjust VR606 so that the PB level is 1.0 Vp-p.

6 AFC FREQUENCY (EDG/EM/ES only)
1. "PB", test tape TF-542CBS
2. IC757 ⑦ pin & VR756
3. • Play back the test tape TF-542CBS.
   • Connect a frequency counter to the IC757 ⑦ pin and apply 5 V to the ⑮ pin (connect ⑯ pin or lead of the L756 to the ⑮ pin) while adjusting.
   ✱ Adjust VR756 so that the frequency counter reads 15.74 ± 0.05 kHz.

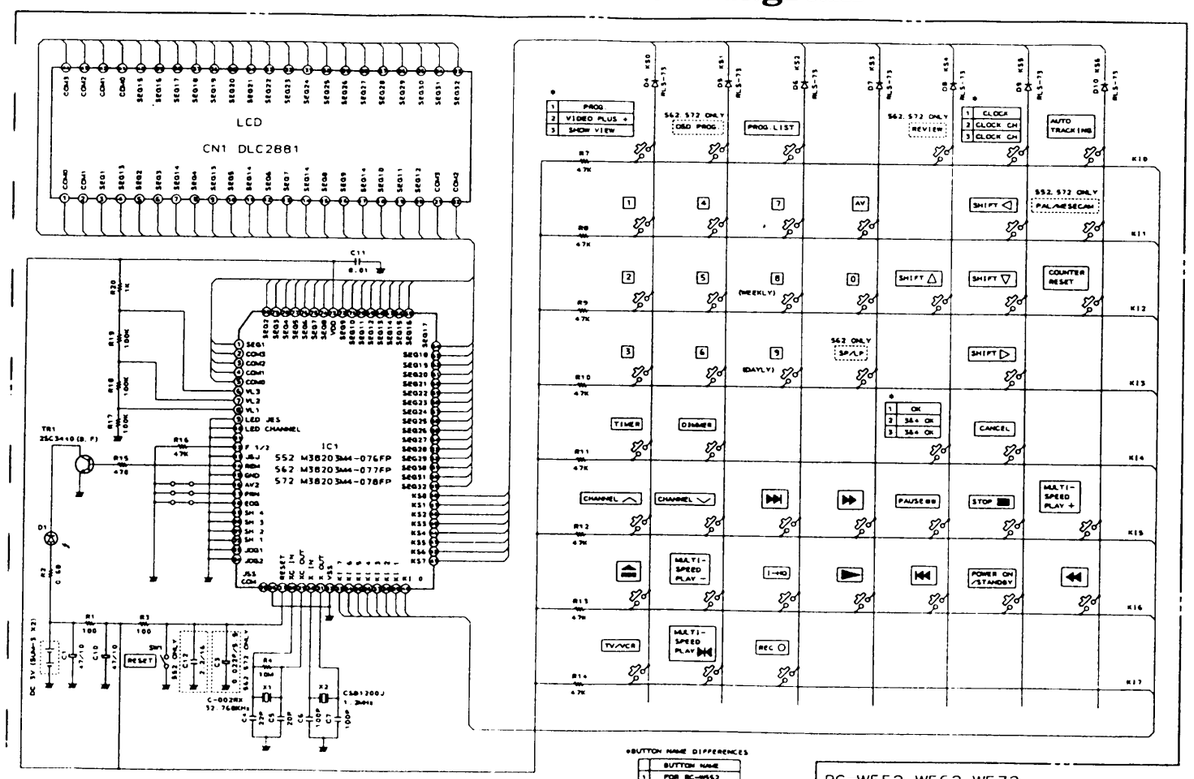
VPS / PDC Diagram



VS-G215EK
VS-G212EOG
VS-G217EOG
VS-G215EOH(Y,)
VPS/PDC

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W(J)
ALL CAPACITORS IN μF (P=PF) 50WV (J)
ALL ELECTROLYTIC CAPACITORS IN μF/WV(M)
ALL INDUCTORS IN μH(J)
[M] IS MYLAR CAPACITOR

Remote Control Diagram



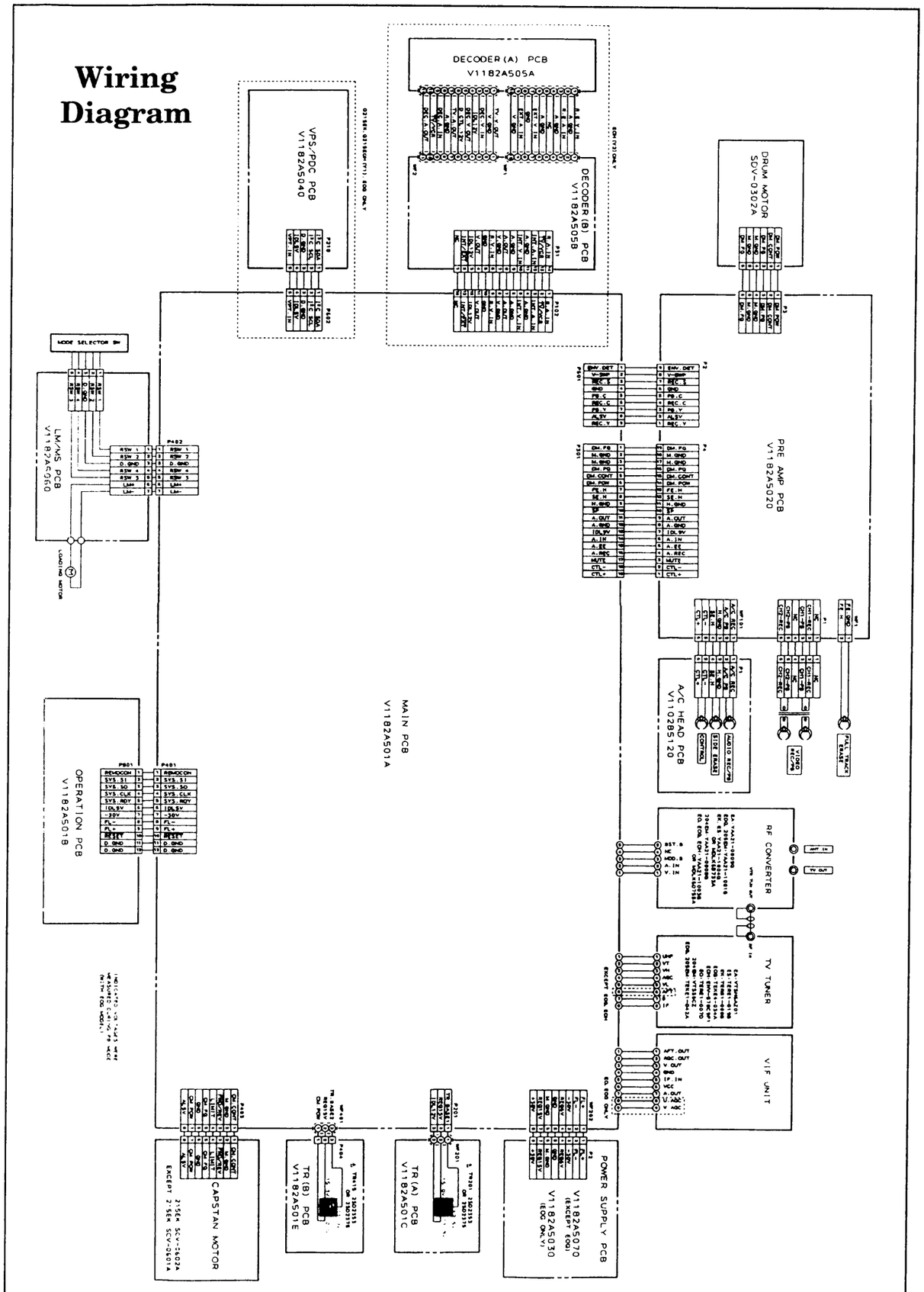
	BUTTON NAME
1	FOR RC-W552
2	FOR RC-W562
3	FOR RC-W572

※ THIS SCHEMATIC DIAGRAM IS ONLY FOR REFERENCE TO AVOID REPLACING INDIVIDUAL PARTS REPLACE THE ENTIRE UNIT ONLY.

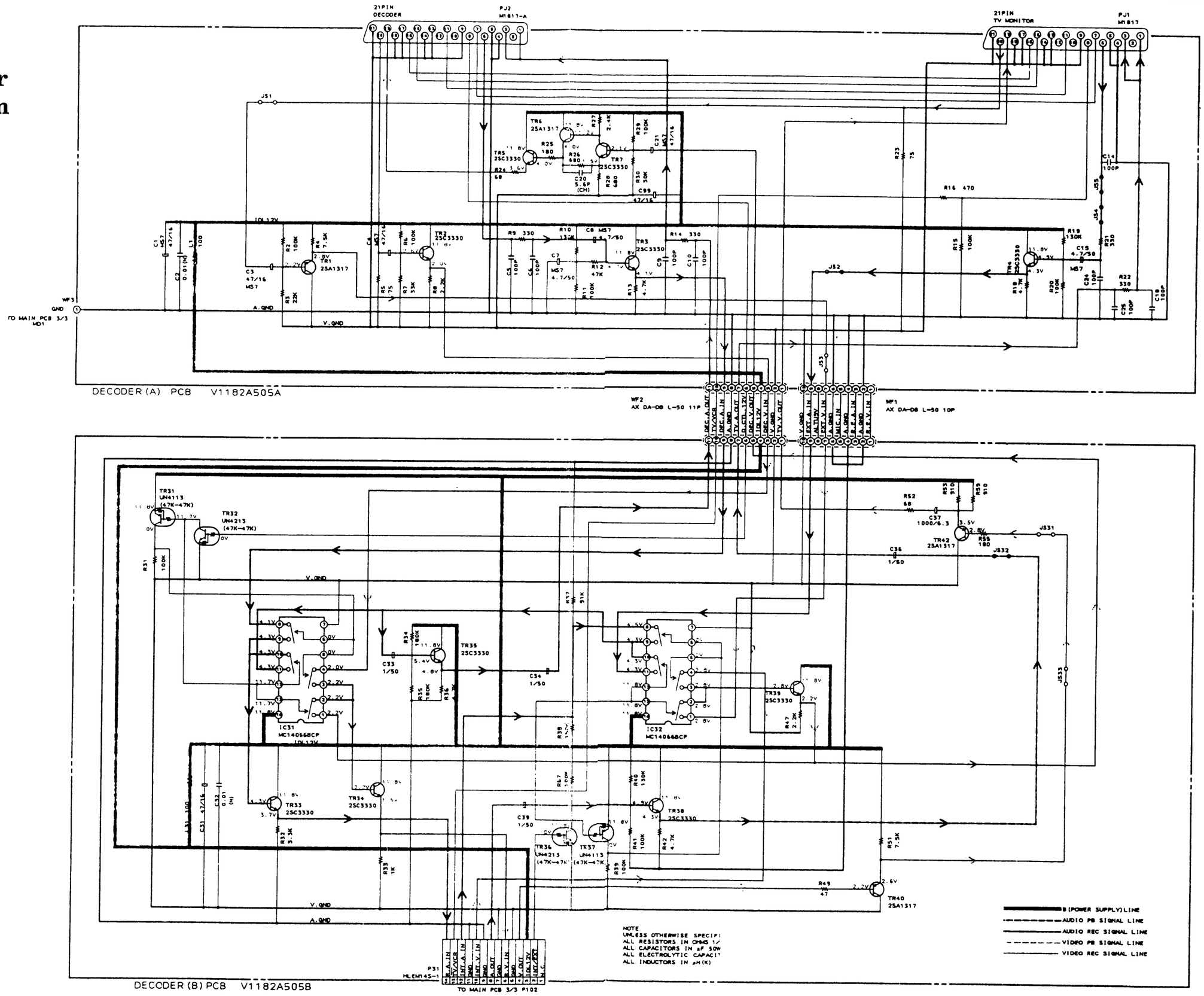
NOTE:
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN μF (P=PF)
ALL ELECTROLYTIC CAPACITORS IN μF/WV

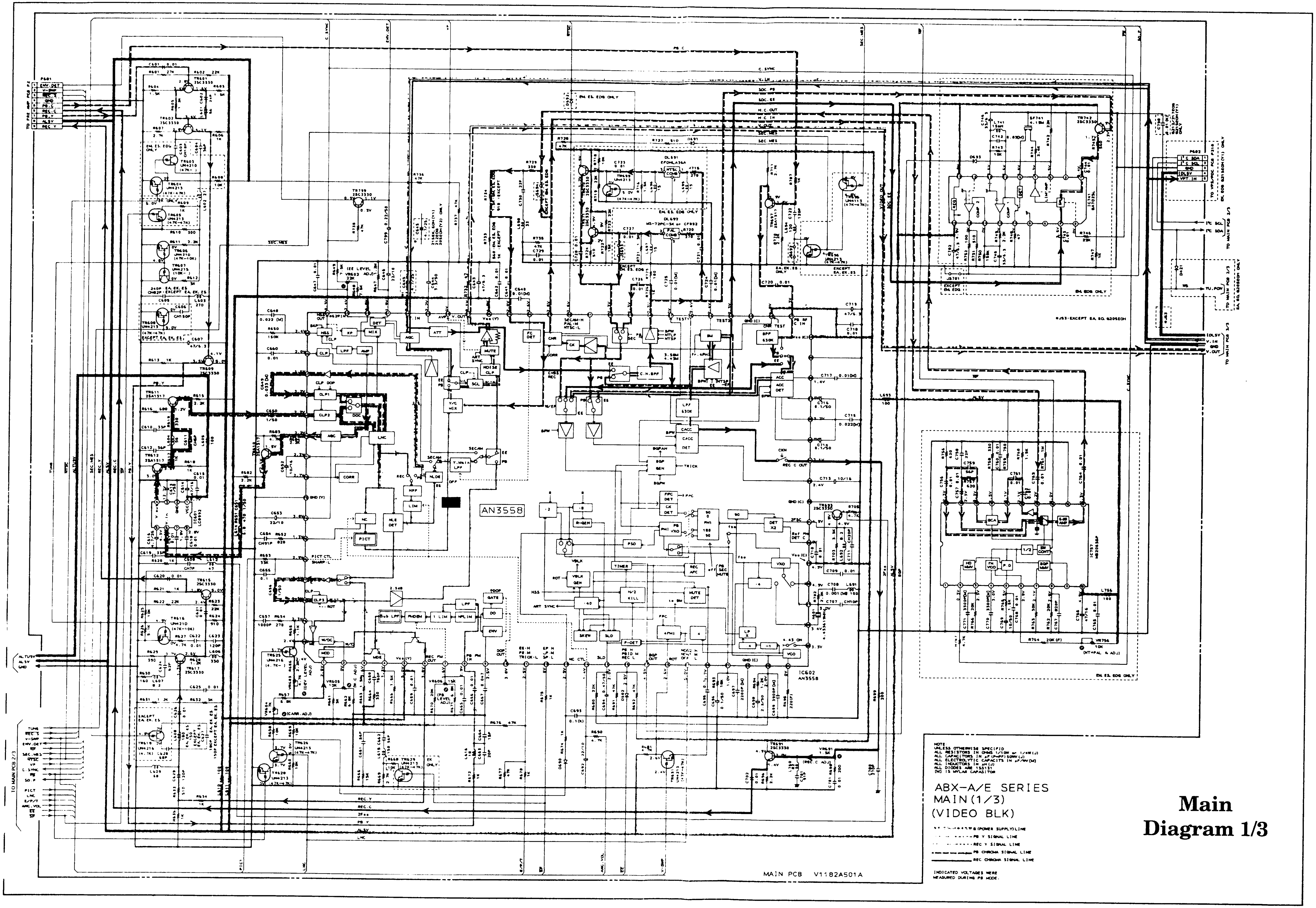
RC-W552, W562, W572
REMOTE CONTROL UNIT

Wiring Diagram

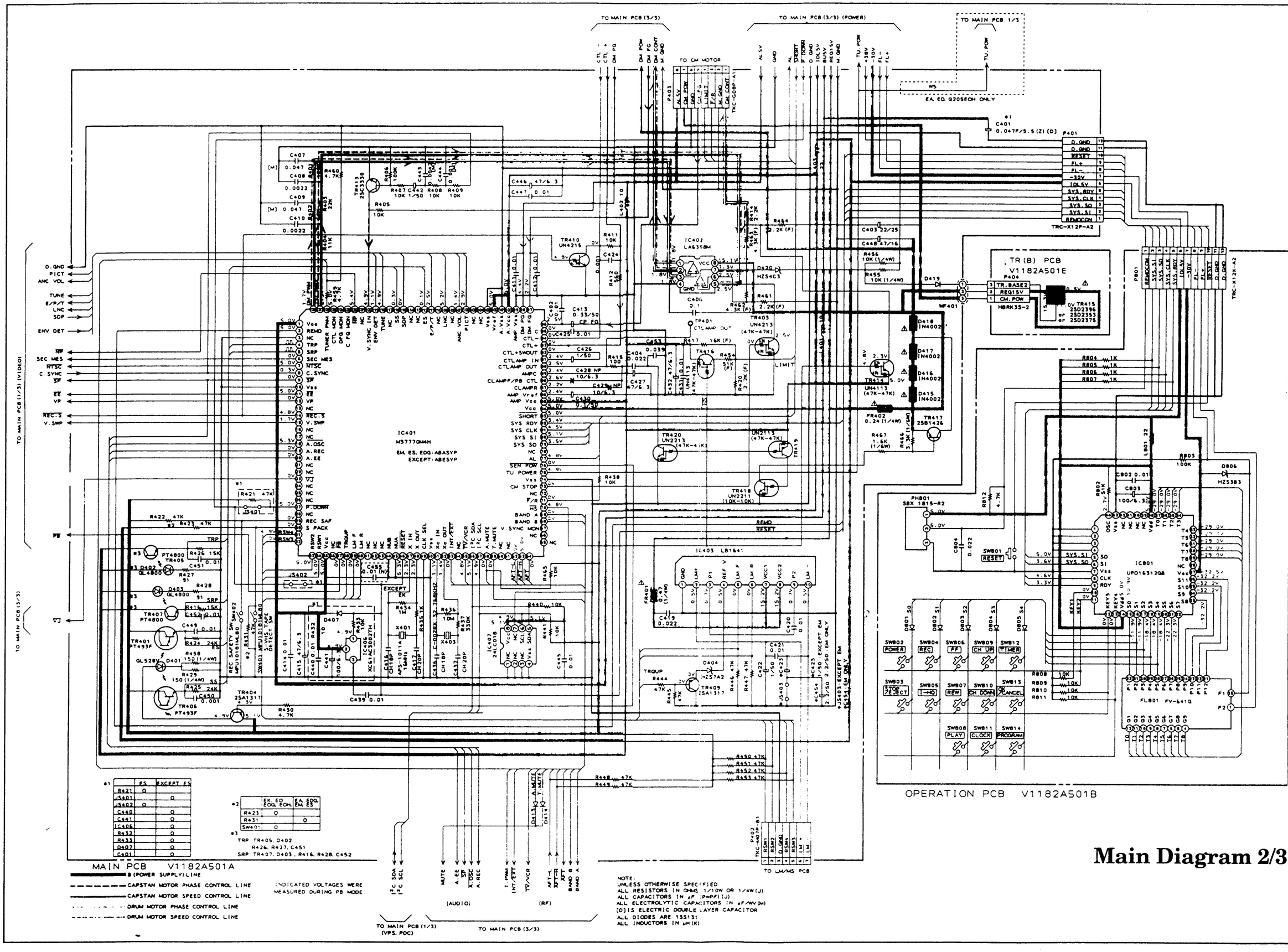


Decoder Diagram



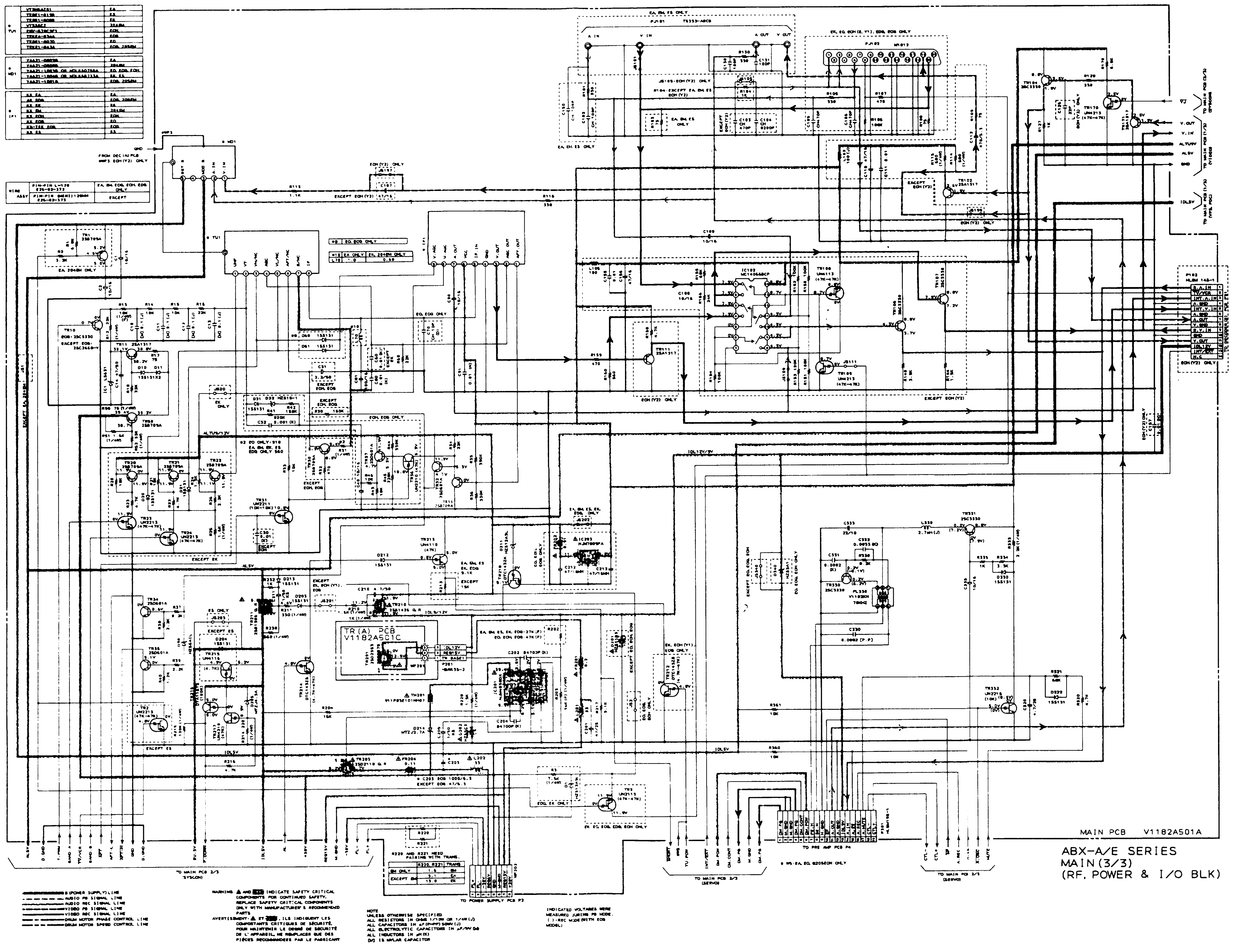


Main Diagram 1/3



Main Diagram 2/3

Main Diagram 3/3



Pre Amp Diagram