

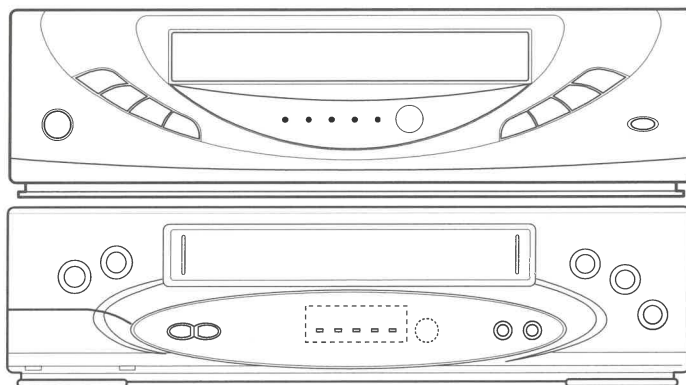


SERVICE MANUAL

Product Type: Video Cassette Recorder
Chassis: D-33
Manual Series: VR154
Manual Part #: 923-3398
Model Line: B
Product Year: 1999

Model Series:

ALGB201
ALGB401
ALGB402
VRB210
VRB410
VRB420



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Zenith Electronics Corporation
201 James Record Road - Huntsville, Alabama 35824-1513

PRODUCT SAFETY SERVICING GUIDELINES FOR AUDIO-VIDEO PRODUCTS

IMPORTANT SAFETY NOTICE

When servicing this product, under no circumstances should the original design be modified or altered without permission from Zenith Electronics Corporation. All components should be replaced only with types identical to those in the original circuit and their physical location, wiring and lead dress must conform to original layout upon completion of repairs.

Special components are also used to prevent x-radiation, shock and fire hazard. These components are indicated by the letter "X" included in their component designators and are required to maintain safe performance. No deviations are allowed without prior approval by Zenith Electronics Corporation.

Circuit diagrams may occasionally differ from the actual circuit used. This way, implementation of the latest safety and performance improvement changes into the set is not delayed until the new service literature is printed.

Caution: Do not attempt to modify this product in any way. Never perform customized installations without manufacturer's approval. Unauthorized modifications will not only void the warranty, but may lead to property damage or user injury.

Service work should be performed only after you are thoroughly familiar with these safety checks and servicing guidelines.

Graphic symbols



The exclamation point within an equilateral triangle is intended to alert the service personnel to important safety information in the service literature.



The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the service personnel to the presence of noninsulated "dangerous voltage" that may be of sufficient magnitude to constitute a risk of electric shock.



The pictorial representation of a fuse and its rating within an equilateral triangle is intended to convey to the service personnel the following fuse replacement caution notice:

**CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE,
REPLACE ALL FUSES WITH THE SAME TYPE AND RATING
AS MARKED NEAR EACH FUSE.**

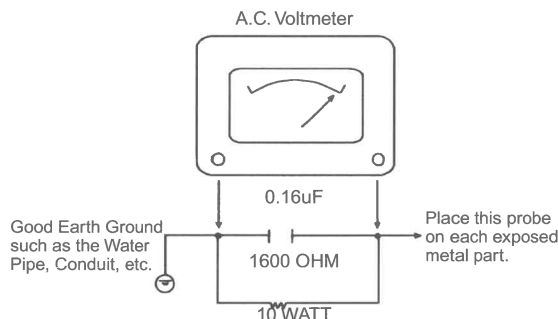
SERVICE INFORMATION

While servicing, use an isolation transformer for protection from AC line shock.

After the original service problem has been corrected, make a check of the following:

FIRE AND SHOCK HAZARD

1. Be sure that all components are positioned to avoid a possibility of adjacent component shorts. This is especially important on items transported to and from the repair shop.
2. Verify that all protective devices such as insulators, barriers, covers, shields, strain reliefs, power supply cords, and other hardware have been reinstalled per the original design. Be sure that the safety purpose of the polarized line plug has not been defeated.
3. Soldering must be inspected to discover possible cold solder joints, solder splashes, or sharp solder points. Be certain to remove all loose foreign particles.
4. Check for physical evidence of damage or deterioration to parts and components, for frayed leads or damaged insulation (including the AC cord), and replace if necessary.
5. No lead or component should touch a receiving tube or a resistor rated at 1 watt or more. Lead tension around protruding metal surfaces must be avoided.
6. After re-assembly of the set, always perform an AC leakage test on all exposed metallic parts of the cabinet (the channel selector knobs, antenna terminals, handle and screws) to be sure that set is safe to operate without danger of electrical shock. **DO NOT USE A LINE ISOLATION TRANSFORMER DURING THIS TEST.** Use an AC voltmeter having 5000 ohms per volt or more sensitivity in the following manner: Connect a 1500 ohm, 10 watt resistor, paralleled by a .15 mfd 150V AC type capacitor between a known good earth ground (water pipe, conduit, etc.) and the exposed metallic parts, one at a time. Measure the AC voltage across the combination of 1500 ohm resistor and .15 mfd capacitor. Reverse the AC plug by using a non-polarized adaptor and repeat AC voltage measurements for each exposed metallic part. Voltage measured must not exceed 0.75 volts RMS. This corresponds to 0.5 milliamp AC. Any value exceeding this limit constitutes a potential shock hazard and must be corrected immediately.



X-RADIATION

1. Be sure procedures and instructions to all service personnel cover the subject of x-radiation. The only potential source of x-rays in current TV receivers is the picture tube. However, this tube does not emit x-rays when the HV is at the factory-specified level. The proper value is given in the applicable schematic. Operation at higher voltages may cause a failure of the picture tube or high-voltage supply and, under certain circumstances, may produce radiation in excess of desirable levels.
2. Only factory-specified CRT anode connectors must be used.
3. It is essential that the service personnel have available an accurate and reliable high-voltage meter.
4. When the high-voltage circuitry is operating properly, there is no possibility of an x-radiation problem. Every time a color chassis is serviced, the brightness should be run up and down while monitoring the high voltage with a meter, to be certain that the high voltage does not exceed the specified value and that it is regulating correctly.
5. When troubleshooting and making test measurements in a product with a problem of excessively high voltage, avoid being unnecessarily close to the picture tube and the high voltage power supply. Do not operate the product longer than necessary to locate the cause of excessive voltage.
6. Refer to HV, B+, and shutdown adjustment procedures described in the appropriate schematics and diagrams (where used).

IMPLOSION

1. All direct view picture tubes are equipped with an integral implosion protection system; take care to avoid damage during installation.
2. Use only the recommended factory replacement tubes.

TIPS ON PROPER INSTALLATION

1. Never install any receiver in a closed-in recess, cubbyhole, or closely fitting shelf space over, or close to, a heat duct, or in the path of heated air flow.
2. Avoid conditions of high humidity such as: outdoor patio installations where dew is a factor, near steam radiators where steam leakage is a factor, etc.
3. Avoid placement where draperies may obstruct venting. The customer should also avoid the use of decorative scarves or other coverings that might obstruct ventilation.
4. Wall- and shelf-mounted installations using a commercial mounting kit must follow the factory-approved mounting instructions. A product mounted to a shelf or platform must retain its original feet (or the equivalent thickness in spacers) to provide adequate air flow across the bottom. Bolts or screws used for fasteners must not touch any parts or wiring. Perform leakage tests on customized installations.
5. Caution customers against mounting a product on a sloping shelf or in a tilted position, unless the receiver is properly secured.
6. A product on a roll-about cart should be stable in its mounting to the cart. Caution the customer on the hazards of trying to roll a cart with small casters across thresholds or deep pile carpets.
7. Caution customers against using a cart or stand that has not been listed by Underwriters Laboratories, Inc. for use with its specific model of television receiver or generically approved for use with TVs of the same or larger screen size.
8. Caution customers against using extension cords. Explain that a forest of extensions, sprouting from a single outlet, can lead to disastrous consequences to home and family.

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SECTION 1

SUMMARY

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KEY TO ABBREVIATIONS

A	AC	:Alternating Current
	ACC	:Automatic Color Control
	ADJ	:Adjust
	A/E	:Audio Erase
	AFC	:Automatic Frequency Control
	AFT	:Automatic Fine Tuning
	AGC	:Automatic Gain Control
	ALC	:Automatic Level Control
	AM	:Amplitude Modulation
	AMP	:Amplifier
	ANT	:Antenna
	APC	:Automatic Phase Control
	ASS'Y	:Assembly
	AUD	:Audio
	AUTO	:Automatic
	AUX	:Auxiliary
B	B	:Base
	BPF	:Bandpass Filter
	BW or B/W	:Black and White
C	C	:Capacitor, Chroma, Collector
	CAN	:Cancel
	CAP	:Capstan
	CATV	:Cable Television
	CBA	:Circuit Board Assembly
	CCD	:Charge Coupled Device
	CFG	:Capstan Frequency Generator
	CH	:Channel
	CHROMA	:Chrominance
	CLK	:Clock
	CNR	:Chroma Noise Reduction
	COMB	:Combination
		:Comb Filter
	COMP	:Comparator
		:Composite
		:Compensation
	CONV	:Converter
	CS	:Chip Select
	CST	:Cassette
	CTL	:Control
	CUR	:Current
	CYL	:Cylinder
D	D	:Drum, Digital, Diode, Drain
	dB	:Decibel
	DC	:Direct Current
	DEMODO	:Demodulator
	DET	:Detector
	DEV	:Deviation
	DHP	:Double High Pass
	DIGITRON	:Digital Display Tube
	DL	:Delay line
	DOC	:Drop Out Compensator
	D/V	:Dummy Vertical
E	E	:Emitter
	EE	:Electric to Electric
	EMP	:Emphasis
	EP	:Extended Play
	EQ	:Equalizer
	ES	:Electrostatically Sensitive
F	F	:Fuse
	FB	:Feed Back
	FBC	:Feed Back Clamp
	FE	:Full Erase
	FF	:Fast Forward
	FG	:Frequency Generator
	FL	:Filter
	FM	:Frequency Modulation
	F/R	:Front/Rear
	FS	:Frequency Synthesizer
	FSC	:Subcarrier Frequency
	F/V	:Frequency Voltage
	FWD	:Forward
G	GEN	:Generator
	GND	:Ground
H	H	:High, Horizontal
	Hz	:Hertz
I	IC	:Integrated Circuit
	IF	:Intermediate Frequency
	INS	:Insert
	I/O	:Input/Output
L	L	:Low, Left, Coil
	LD	:LED
	LECHA	:Letter Character
	LP	:Long Play
	LPF	:Low Pass Filter

M	MAX	:Maximum
	MD	:Modulator
	MIC	:Microphone
	MIN	:Minimum
	MIX	:Mixer, Mixing
	MM	:Monostable, Multivibrator
	MMV	:Mono Multi Vibrator
	MOD	:Modulation, Modulator
	MODEM	:Modulator-Demodulator
N	NR	:Noise Reduction
O	OSC	:Oscillator
	OSD	:On Screen Display
P	PB	:Playback
	PCB	:Printed Circuit Board
	PG	:Pulse Generator
	PLL	:Phase Locked Loop
	P.P	:Peak-to-Peak
	PRE-AMP	:Preamplifier
	PS	:Phase Shift
	PWM	:Pulse Width Modulation
Q	Q	:Transistor
	QH	:Quasi Horizontal
	QSR	:Quick Setting Record
	QTR	:Quick Timer Record
	QV	:Quasi Vertical
R	R	:Resistor, Right
	RE(or RC)	:Remocon, Receiver
	REC	:Recording
	REF	:Reference
	REG	:Regulated, Regulator
	REMOCON	:Remote Control(unit)
	REV	:Reverse
	REW	:Rewind
	RF	:Radio Frequency
	R/P	:Record/Playback
	RTC	:Reel Time Counter
S	S	:Serial
	SH	:Shift
	SHARP	:Sharpness
	SIF	:Sound Intermediate Frequency
	SLD	:Side Locking
	S/N	:Signal to Noise Ratio
	SP	:Standard Play
	SUB	:Subtract, Subcarrier
	SW or S/W	:Switch
	SYNC	:Synchronization
	SYSCON	:System Control
T	T	:Coil
	TP	:Test Point
	TR	:Transistor
	TRK	:Tracking
	TRANS	:Transformer
	TU	:Tuner, Take-up
U	UHF	:Ultra High Frequency
	UNREG	:Unregulated
V	V	:Volt, Vertical
	VA	:Always Voltage
	VCO	:Voltage Controlled Oscillator
	VGC	:Voltage Gain Control
	VHF	:Very High Frequency
	VISS	:VHS Index Search
	VR	:Variable Resistor or Volume
	V-SYNC	:Vertical Synchronization
	VTG	:Voltage
	VV	:Voltage to Voltage
	VXO	:Voltage X-tal Oscillator
W	W	:Watt
	WHT	:White
	W.O	:With out
X	X-TAL	:Crystal
Y	Y/C	:Luminance/Chrominance
	YNR	:Luminance Noise Reduction
Z	ZD	:Zener Diode

SERVICING PRECAUTIONS

CAUTION : Before servicing the VCR covered by this service data and its supplements and addends, read and follow the **SAFETY PRECAUTIONS**. **NOTE :** if unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions in this publications, always follow the safety precautions.

Remembers Safety First:

General Servicing Precautions

1. Always unplug the VCR AC power cord from the AC power source before:
 - (1) Removing or reinstalling any component, circuit board, module, or any other assembly.
 - (2) Disconnection or reconnecting any internal electrical plug or other electrical connection.
 - (3) Connecting a test substitute in parallel with an electrolytic capacitor.

Caution : A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.

2. Do not spray chemicals on or near this VCR or any of its assemblies.
3. Unless specified otherwise in this service data, clean electrical contacts by applying an appropriate contact cleaning solution to the contacts with a pipe cleaner, cotton-tipped swab, or comparable soft applicator. Unless specified otherwise in this service data, lubrication of contacts is not required.
4. Do not defeat any plug/socket B+ voltage interlocks with which instruments covered by this service manual might be equipped.
5. Do not apply AC power to this VCR and/or any of its electrical assemblies unless all solid-state device heat sinks are correctly installed.
6. Always connect test instrument ground lead to the appropriate ground before connection the test instrument positive lead. Always remove the test instrument ground lead last.

Insulation Checking Procedure

Disconnect the attachment plug from the AC outlet and turn the power on. Connect an insulation resistance meter(500V) to the blades of the attachment plug. The insulation resistance between each blade of the attachment plug and accessible conductive parts (Note 1) should be more than 1M-ohm.

Note 1 : Accessible Conductive Parts including Metal panels, Input terminals, Earphone jacks, etc.

Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field effect transistors and semiconductor chip components.

The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified a "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charge sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil, or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

Caution : Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Normally harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

SPECIFICATIONS

GENERAL

Head System		Two head (ALGB201, VRB210). Four head (ALGB401, ALGB402, VRB410, VRB420).
Power Source		AC 120V, 60Hz
Power Consumption		Approx. 17 Watts (ALGB402, VRB420). Approx. 15 Watts (ALGB201, ALGB401, VRB210, VRB410)
Dimensions	(WxHxD)	360 x 94 x 270 mm (14.2m x 3.7m x 10.6m)
Operating Temperature		5°C~35°C (41°F~95°F)
Operating Humidity		Less than 80% RH
Timer		12-hour display type with AM, PM
Weight		Approx. 3.4 kg (7.5 lbs)
Tape Speed	(SP)	33.35 mm/sec
	(LP)	16.67 mm/sec
	(EP)	11.12 mm/sec
Tape Width		12.7 mm
Maximum Recording Time	(SP)	2 HOURS (T-120)
	(EP)	6 HOURS (T-120) 8 HOURS (T-160)
Rewind Time		Less than 210 seconds (T-120)

TUNER

Antenna	(UHF)	75 ohms
	(VHF)	75 ohms
VHF Output Signal		Channel 3 or 4
Channel Coverage	(VHF)	2-13
	(UHF)	14-69
	(CATV)	1-125 (4A, A-W, W+1~W+84, A-5~A-1)

VIDEO

Video Signal System		EIA Standard (525 lines, 60 fields) NTSC type color signal
Input		1.0 Vp-p 75 ohms unbalanced
Output		1.0 Vp-p 75 ohms unbalanced
Signal to Noise Ratio		More than 43 dB (SP mode)

AUDIO

FM audio

Frequency Range	20Hz to 20KHz
Dynamic Range	More than 83 dB
Channel Separation	More than 55 dB

← *OPTION : ALGB402, VRB420 ONLY

Conventional audio

Input	(LINE)	-6.0 dBm more than 47 kohms
Output	(LINE)	-6.0 dBm less than 1.5 kohms
S/N Ratio		More than 43 dB (SP mode)
Frequency Range		200 Hz to 10KHz (SP mode)

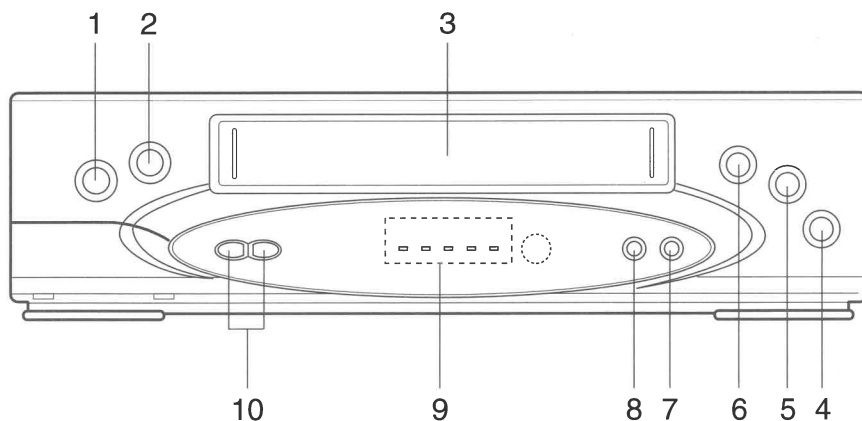
Supplied Accessory

Hook-up Cable (VCR to TV) (1)
Batteries (2)
Remote Control (1)

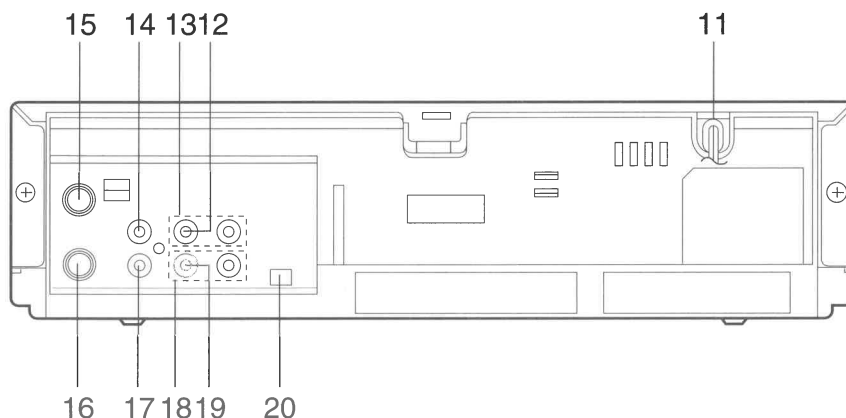
LOCATION OF CUSTOMER CONTROLS

ALGB201/ ALGB401/ ALGB402

FRONT



REAR



FRONT

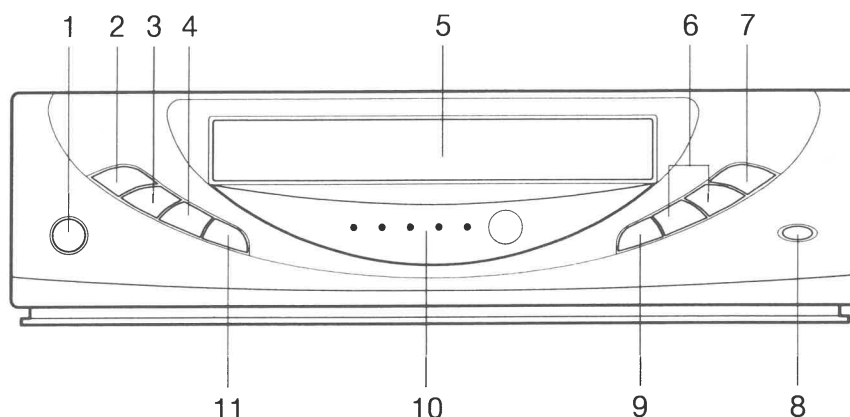
1. POWER ON/OFF BUTTON
2. STOP/EJECT BUTTON
3. CASSETTE COMPARTMENT
4. FF BUTTON
5. PLAY BUTTON
6. REW BUTTON
7. REC/SPEED SELECTOR
8. REC/ITR SELECTOR
9. LED FRONT PANEL INDICATORS
10. CHANNEL UP/DOWN BUTTONS

REAR

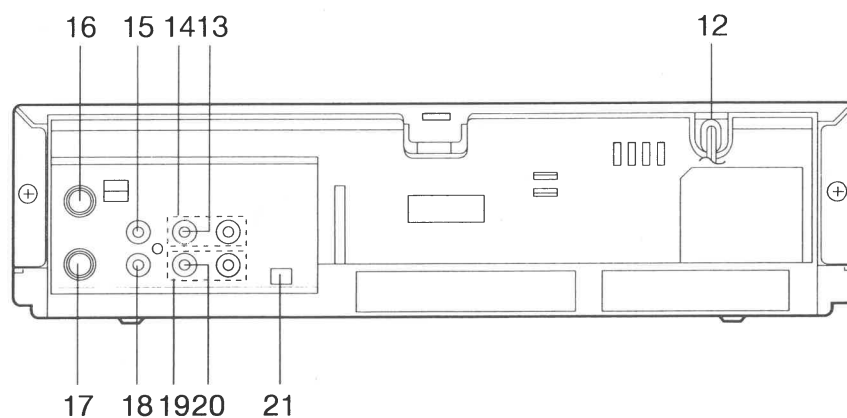
11. POWER CORD
12. AUDIO-OUT JACK (ALGB201/401)
13. AUDIO-OUT JACK(L/R) (ALGB402)
14. VIDEO-OUT JACK
15. VHF/UHF ANTENNA INPUT CONNECTOR
16. VHF-UHF ANTENNA OUTPUT CONNECTOR
17. VIDEO-IN JACK
18. AUDIO-IN JACK (L/R)(ALGB402)
19. AUDIO-IN JACK (ALGB201/401)
20. RF CHANNEL SELECT SWITCH

LOCATION OF CUSTOMER CONTROLS (VRB210/VRB410/VRB420)

FRONT



REAR



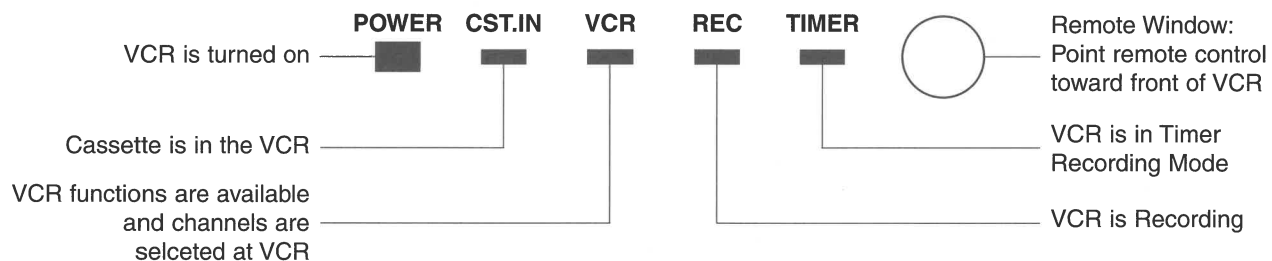
FRONT

1. POWER ON/OFF BUTTON
2. PLAY BUTTON
3. REW BUTTON
4. FF BUTTON
5. CASSETTE COMPARTMENT
6. CHANNEL UP/DOWN BUTTONS
7. STOP/EJECT BUTTON
8. REC/ITR BUTTON
9. SP/EP BUTTON
10. LED FRONT PANEL INDICATORS
11. PAUSE BUTTON

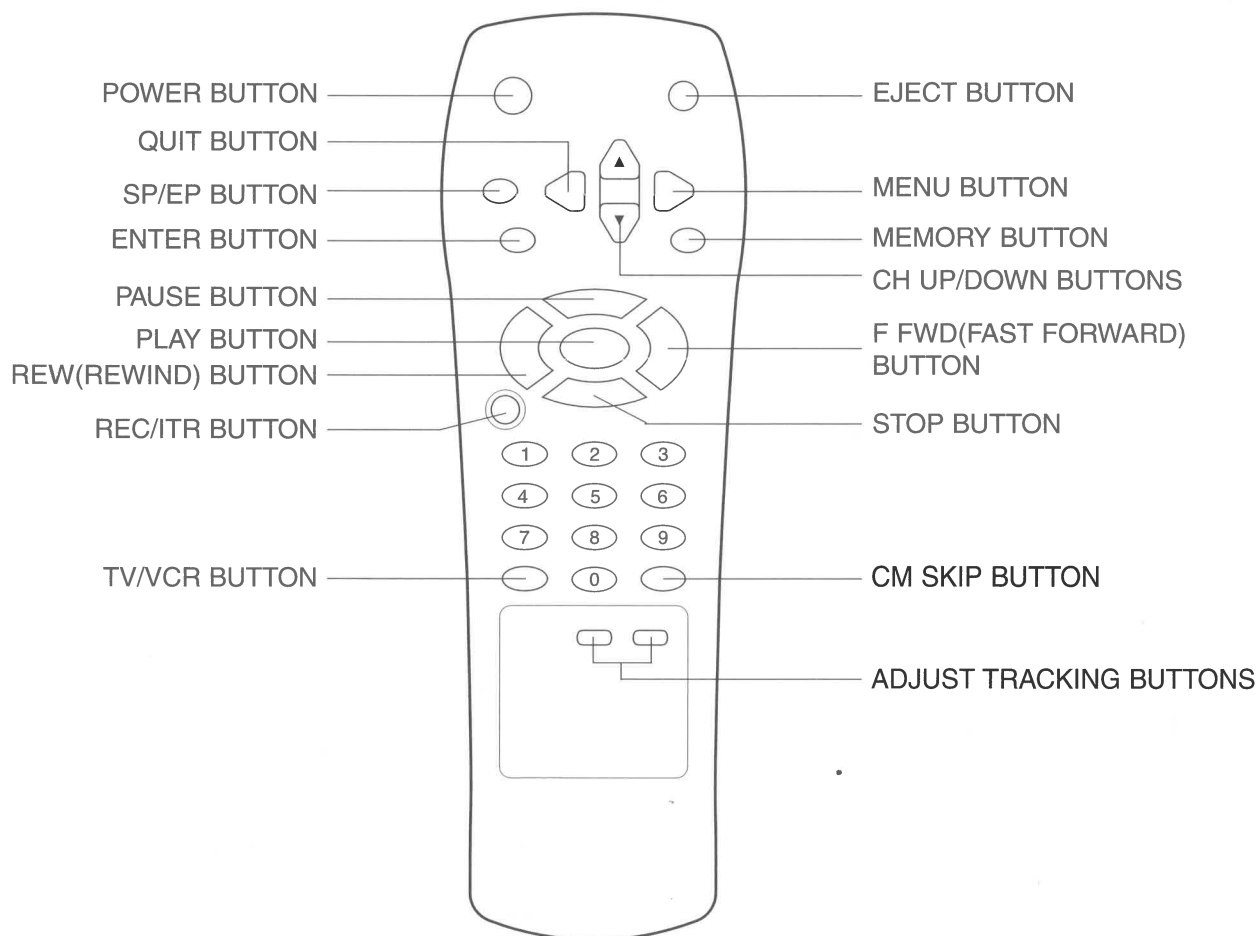
REAR

12. POWER CORD
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14. AUDIO-OUT JACK (L/R) (VRB420)
15. VIDEO-OUT JACK
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INDICATOR PANEL



REMOTE CONTROL



SECTION 2

CABINET & MAIN CHASSIS

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SELF DIAGNOSTIC

1.SELF DIAGNOSTIC OVERVIEW

Provides service personnel a convenient service aid by a visual display of error codes generated by the u-com and displayed on the digitron.

2.OPERATIONAL PROCEDURE :

With the remote control, press and hold the "MENU" key until the word MENU appears in the fluorescent display ; Then press 4, 3, 2, 1 and then "ENTER". Self diagnostic procedure will sequence through the 8 step procedure. If an error is detected, a code number will flash approx 5 times then will return to it's initial mode of operation.

3.NOTES :

1. Error codes will not be stored, program must be re-initialized as described in the preceding step.
2. Pin numbers refer to IC501 u-com, unless otherwise stated.

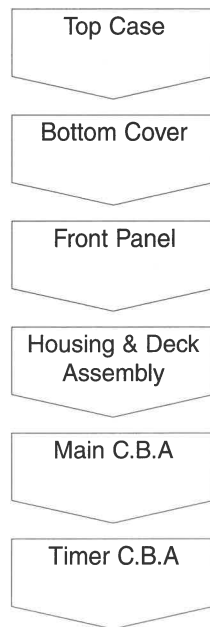
DISPLAY	DESCRIPTION	INPUT SIGNAL	CIRCUIT STATUS	SERVICE POINTS
"D1"	•Tape Loading Error	•Mode SW Pos. S1, S2, S3, S4 Pins:77, 76, 75, 74 •Load Motor Pins : 20 (+) Pins : 19 (-)	•Mode SW Position not changed within 6 seconds after cassette loading attempt.	•Loading motor, mech. problems gears, timing •Mode SW Position
"D2"	•Tape Loading Error	•Mode SW Pos. S1, S2, S3, S4 Pins:77, 76, 75, 74 •Load Motor Pins : 20 (+) Pins : 19 (-)	•Mode SW Position not changed within 6 seconds after cassette loading attempt.	•Mode SW Contacts
"D3"	•CST Loading Error	•Mode SW Pos. S1, S2, S3, S4 Pins:77, 76, 75, 74 •Load Motor Pins : 20 (+) Pins : 19 (-)	•Mode SW Position not changed within 6 seconds after cassette loading attempt.	•Mode SW Contacts
"D4"	•CST Loading Error	•Mode SW Pos. S1, S2, S3, S4 Pins:77, 76, 75, 74 •Load Motor Pins : 20 (+) Pins : 19 (-)	•CST SW must be activated with-in 3 seconds, otherwise unit shut down will occur.	•CST SW or Connector Contacts
"D5"	•DRUM Motor Error	•Head SW(30Hz) Pulses Pin24	•Drum Motor(Slow Start) •Motor must be up to speed with-in 3 seconds of operation	•Drum Motor and Control Circuits
"D6"	•Reel Rotational Error	•Supply Take-up Reel Pulses, Pins 4,5	•CFG Signal present, but take-up pulses are missing. (Capstan motor running)	•Capstan belt •Idler and reel gears damaged •ST/U Sensors
"D7"	•Capstan Motor Error	•Capstan FG Pulses	•No CFG Signal	•Capstan control ckt. •Moto assm. •IC501 Ckt.
"F1"	•Tuner Signal Input	•C-Sync Pin 87	•Composite Sync not detected, RF or Video Signal loss.	•Loss of C-sync Tuner Line Video Path

VCR should be in PB mode for D5, D6 and D7. Stop mode for F1, cassette loading D3, D4 and tape loading D1 and D2.

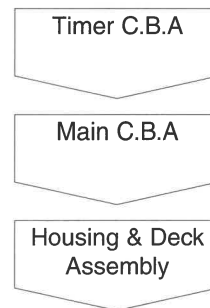
SERVICE METHOD

Electrical Part

(1) Disassembly Flow



(2) Re-assembly Flow for service like Fig. 2-1



(3) To check and replace Electrical parts

- ① Disassemble the unit according to No.1) Disassembly Flow.
- ② Re-assemble the unit according to No.2) Re-assembly Flow.
- ③ Place the unit like Fig. 2-1
- ④ Check and replace Electrical parts.

NOTE :

- ① Insert Video Cassette Tape inversely like Fig. 2-1 to check and replace defective parts.
- ② In disassembling and reassembling, be careful not to damaged CST switch.

(Positioned Upside Down)

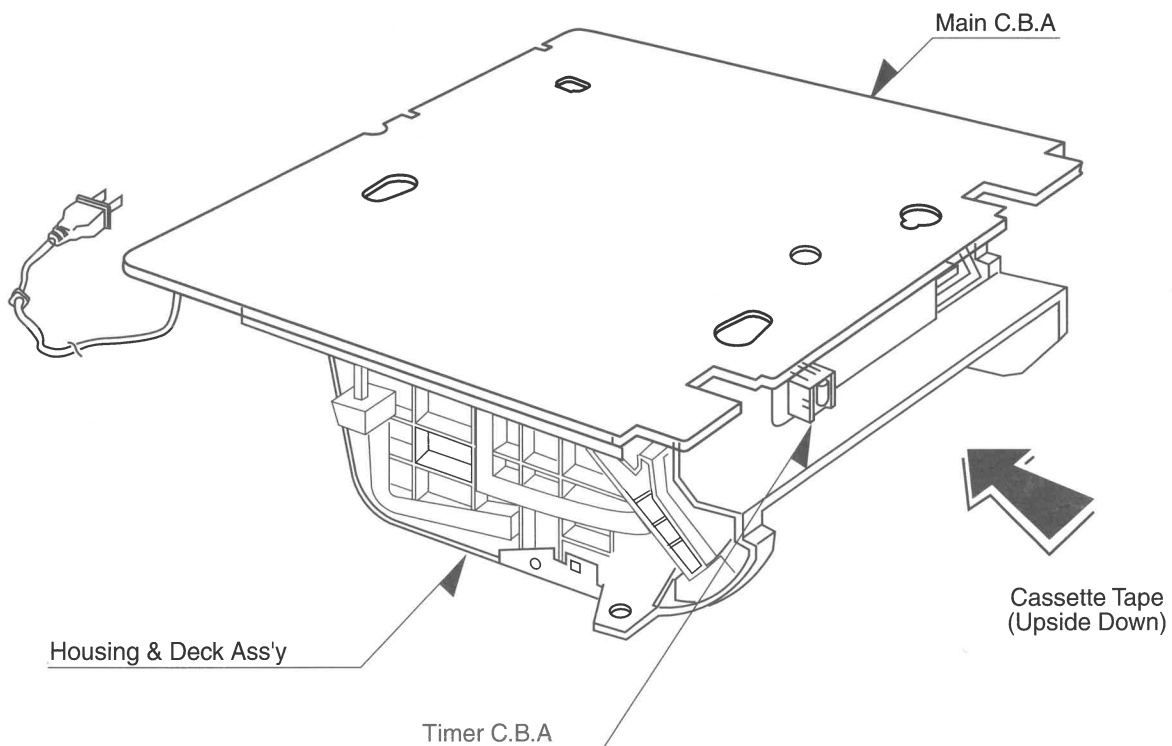


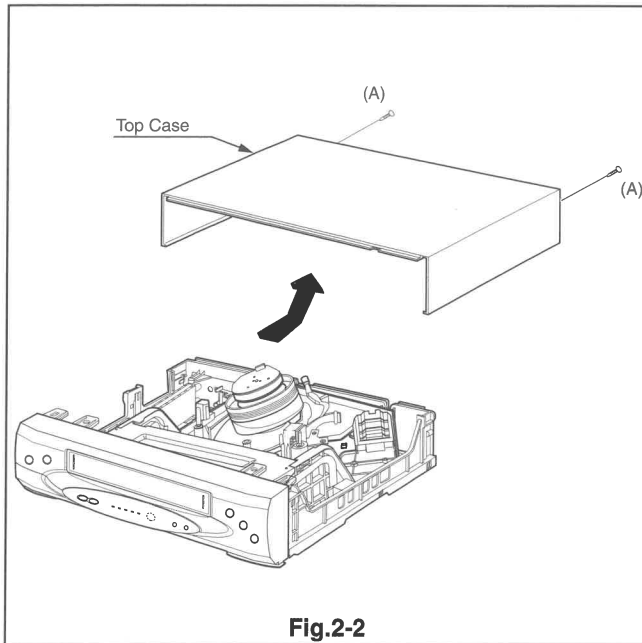
Fig.2-1

CABINET DISASSEMBLY

ALGB201/ ALGB401/ ALGB402

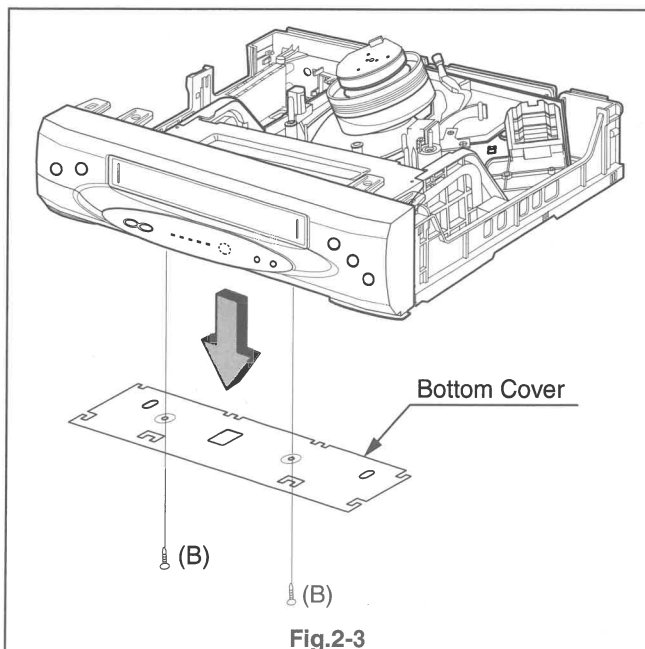
1.Top Case (Fig.2-2)

- (1) Remove 2 screws(A)
- (2) Lift the Top case while holding the back of it and remove it in the direction of the arrow.



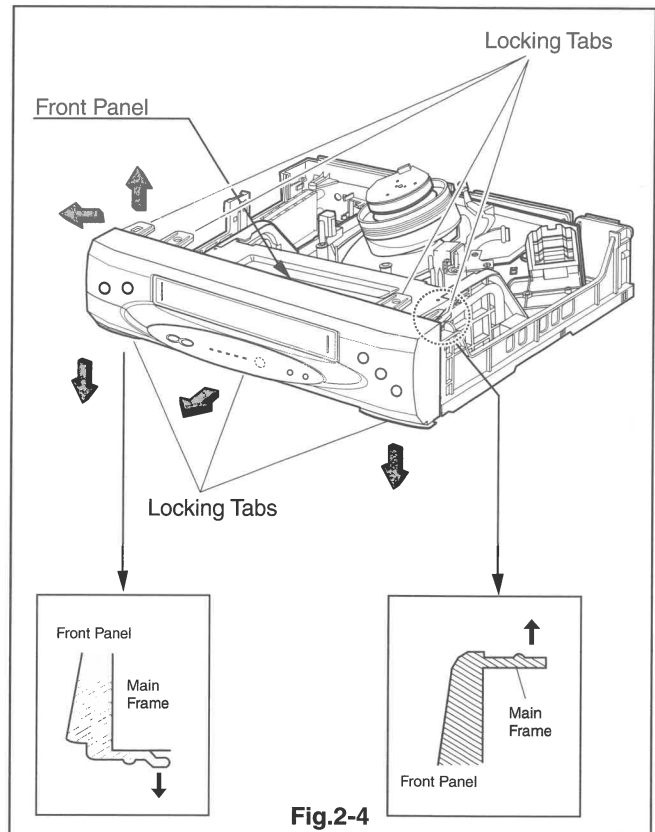
2. Bottom cover(Fig. 2-3)

- (1) Remove 2 screws(B)
- (2) Remove the Bottom Cover in the direction of the arrow.



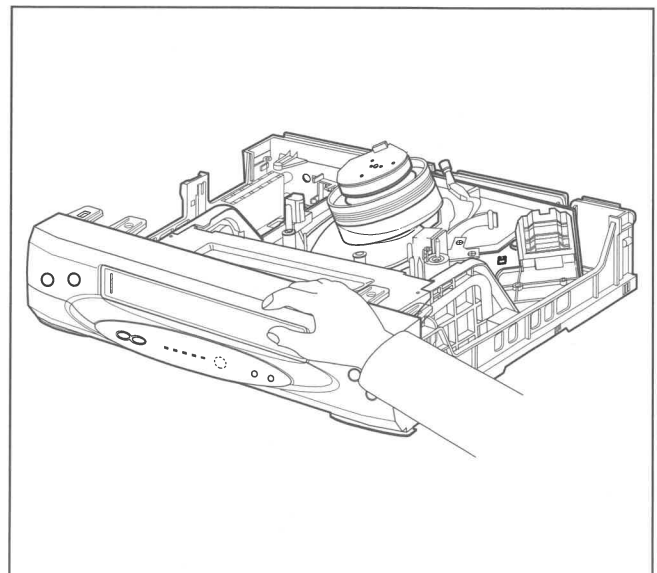
3.Front Panel (Fig. 2-4)

- (1) Release 7 Locking tabs of the Top, Bottom and Side of the Front Panel.
- (2) Remove the Front Panel in the direction of the arrows.



* Caution

When reassembling the Front Panel, assemble it in direction of inserting the Cassette inside.

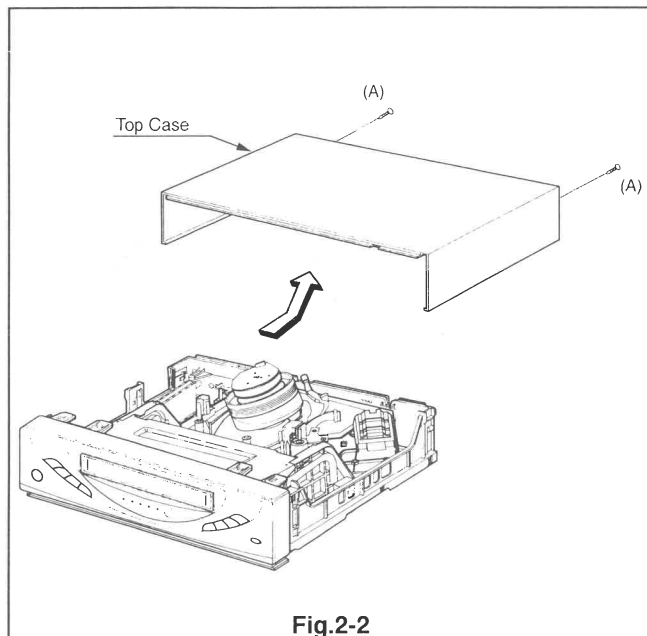


CABINET DISASSEMBLY

(VRB210/VRB410/VRB420)

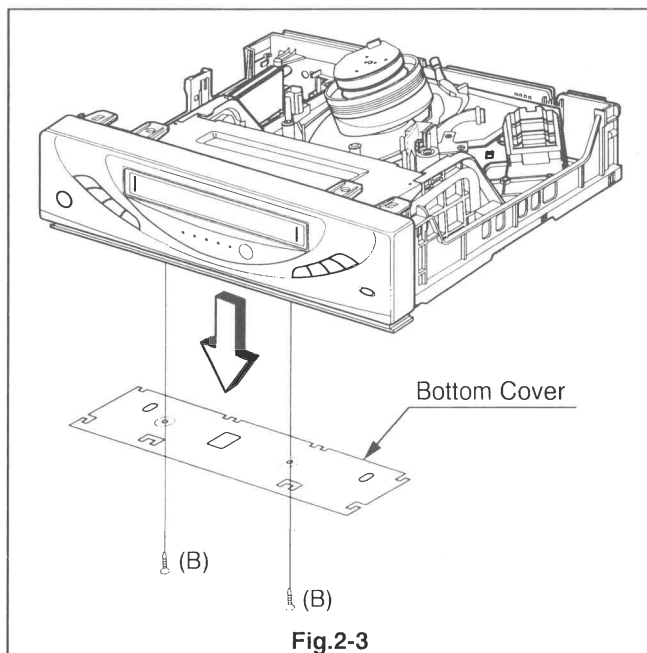
1. Top Case (Fig.2-2)

- (1) Remove 2 screws(A)
- (2) Lift the Top case while holding the back of it and remove it in the direction of the arrow.



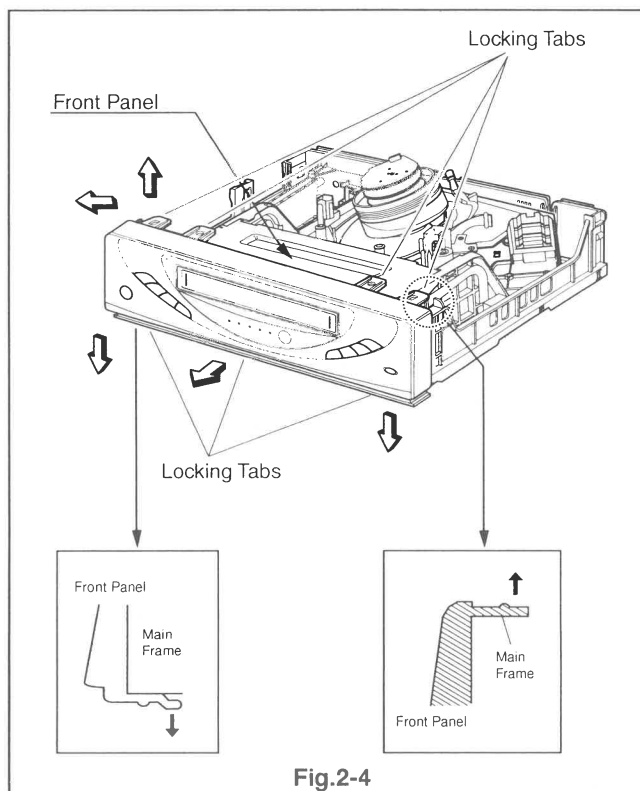
2. Bottom cover(Fig. 2-3)

- (1) Remove 2 screws(B)
- (2) Remove the Bottom Cover in the direction of the arrow.



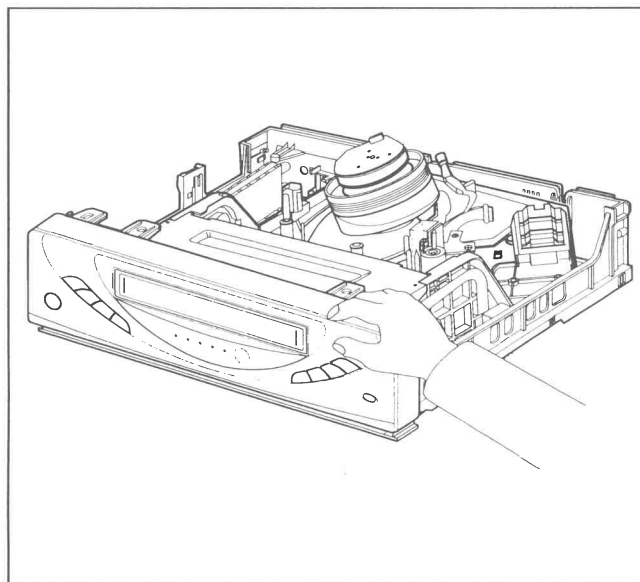
3. Front Panel (Fig. 2-4)

- (1) Release 7 Locking tabs of the Top, Bottom and Side of the Front Panel.
- (2) Remove the Front Panel in the direction of the arrows.



* Caution

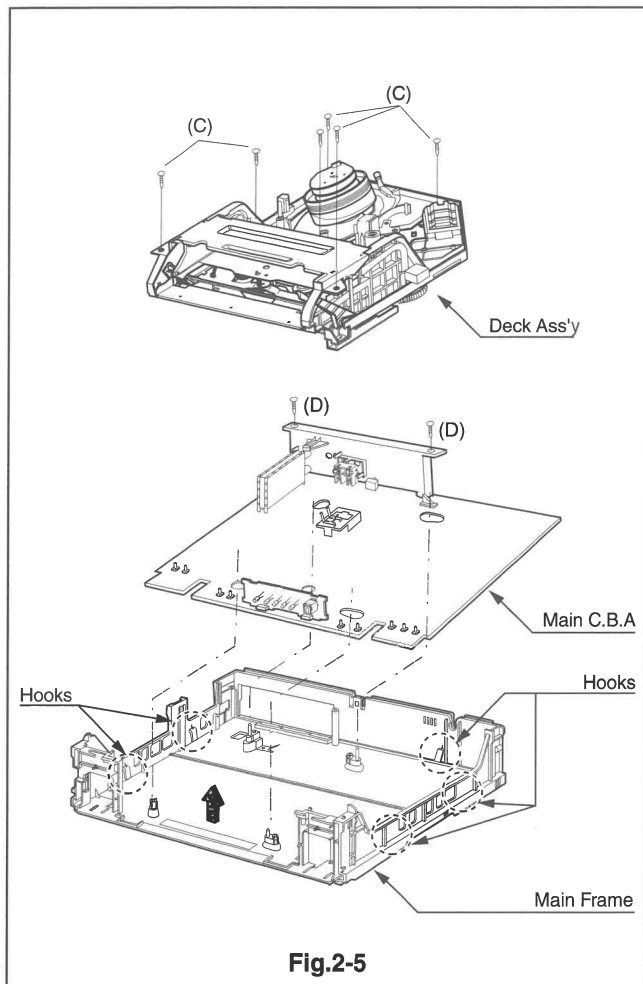
When reassembling the Front Panel, assemble it in direction of inserting the Cassette inside.



PRINTED CIRCUIT BOARD REMOVAL

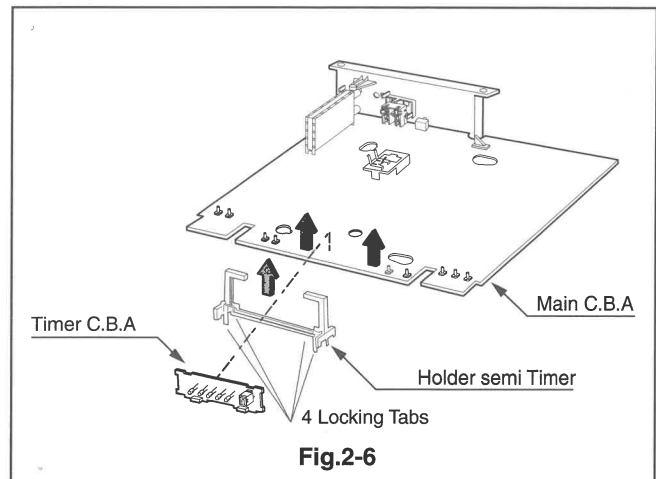
1. Main Circuit Board (Fig. 2-5)

- (1) Remove 6 screws (C) and disassemble the Deck Ass'y.
- (2) Remove 2 screws (D) and unlock 5 Hooks that are left and right of Main Frame.
- (3) Disassemble the Main C.B.A from the Main Frame.



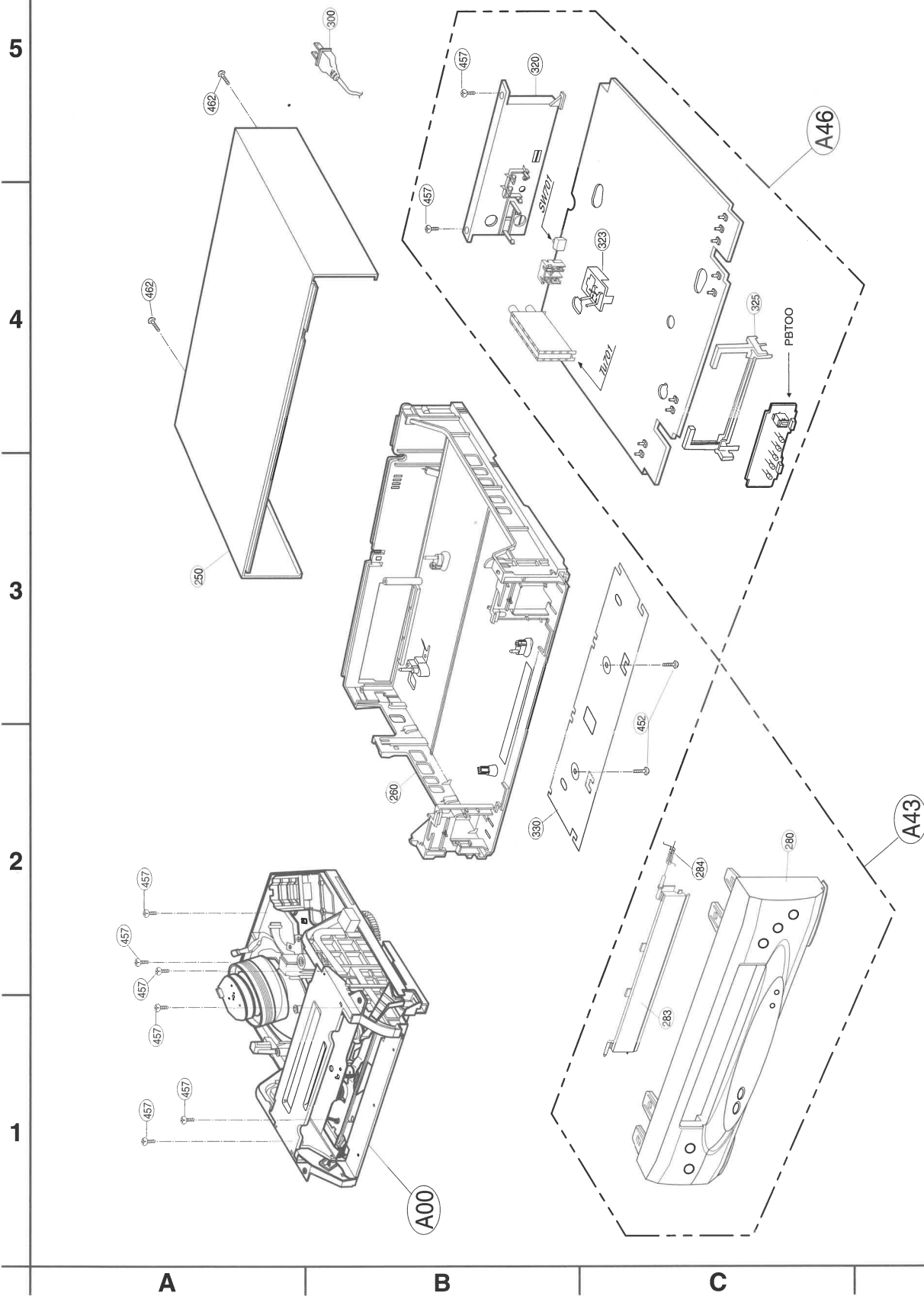
2. Timer Circuit Board (Fig. 2-6)

- (1) Pull 4 Locking Tabs of Holder semi Timer in the direction of small arrows.
- (2) Disconnect two connectors (C).
- (3) Pull the Timer C.B.A in the direction of small arrow.



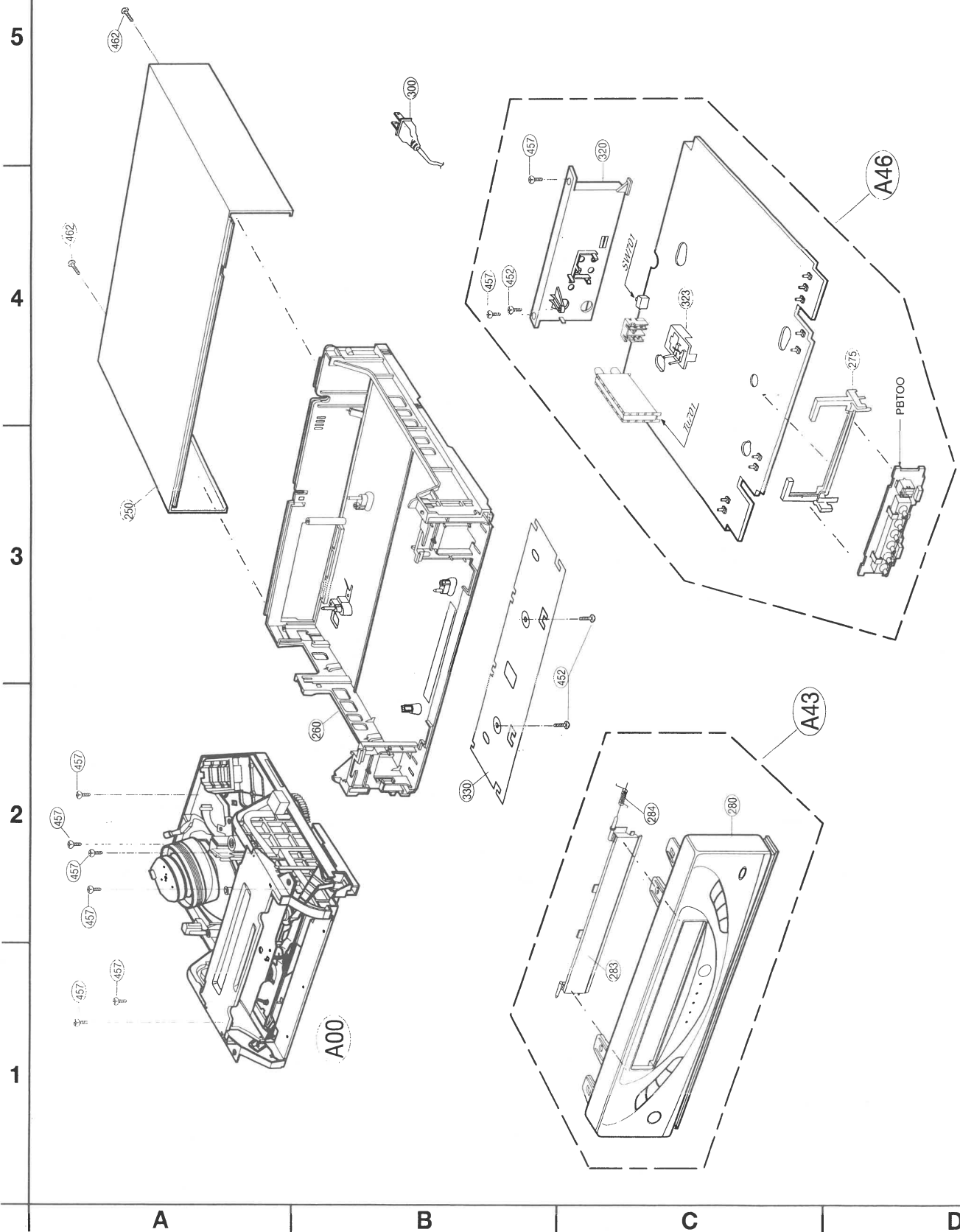
EXPLODED VIEWS

1. Cabinet and Main Frame Section (ALGB201/ ALGB401/ ALGB402)

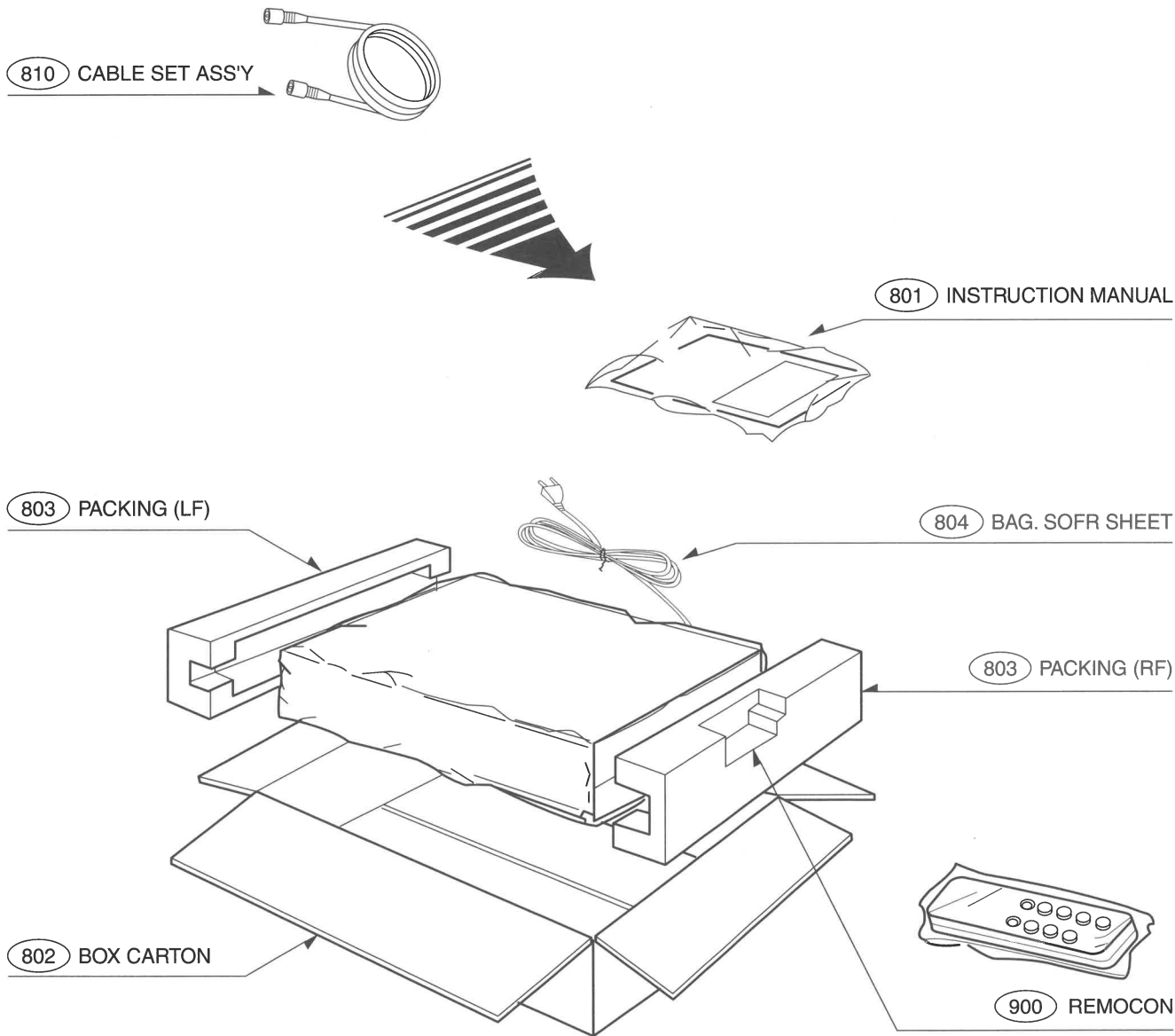


EXPLODED VIEWS

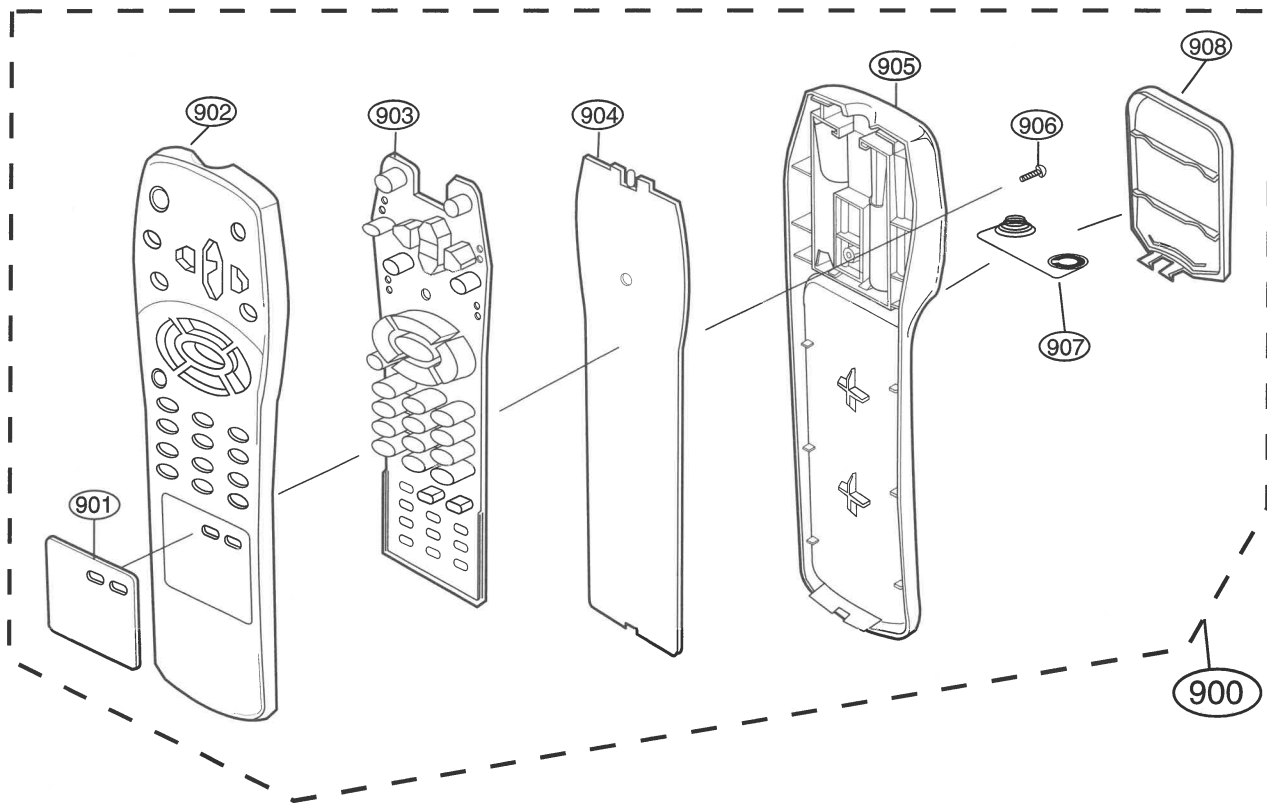
1. Cabinet and Main Frame Section (VRB210/VRB410/VRB420)



2.Packing Accessory Section



3.Remote Control Section





SECTION 3

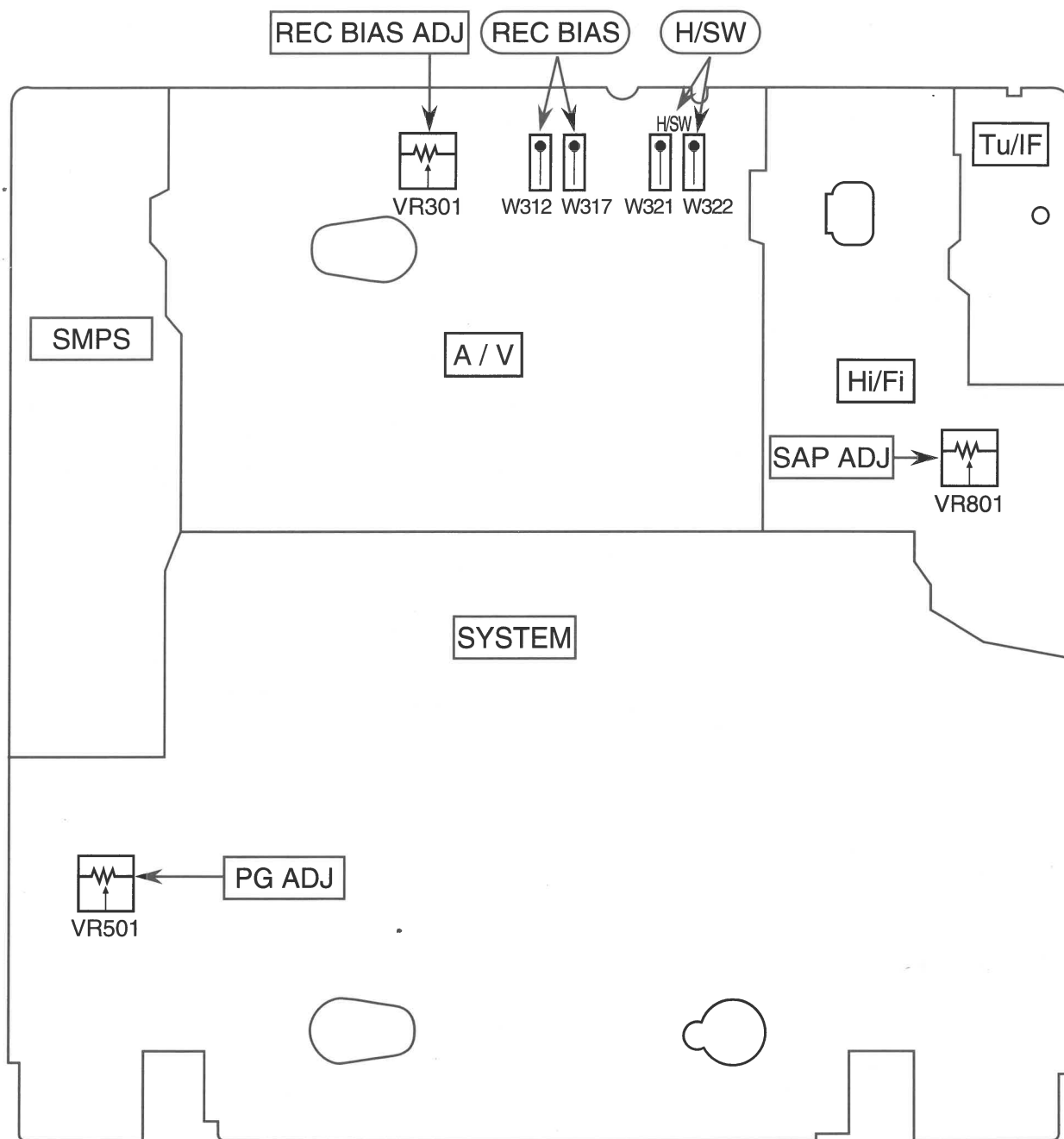
ELECTRICAL

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ELECTRICAL ADJUSTMENT POINTS ARRANGEMENT

 : Measurement point
 : Adjustment point



MAIN P.C.B

(Component Side)

ELECTRICAL ADJUSTMENT PROCEDURES

1. Servo Adjustment

- 1) PG Adjustment
 - Test Equipment

- a) OSCILLOSCOPE
- b) NTSC TEST TAPE (VHS SP)

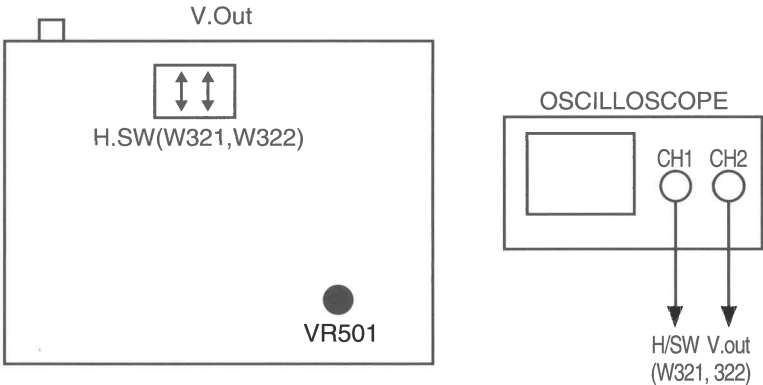
- Adjustment And Specification

MODE	MEASUREMENT POINT	ADJUSTMENT POINT	SPECIFICATION
PLAY	V.Out H/SW(W321, W322)	VR501	6.5 ! 0.5H

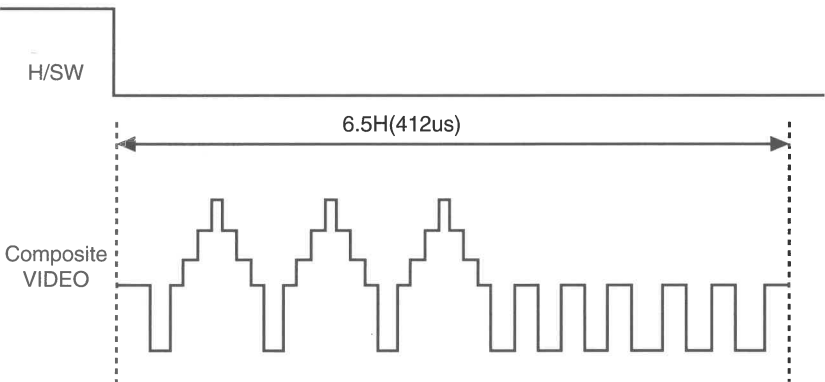
• Adjustment Procedure

- a) Insert the NTSC SP Test Tape and play.
 Note - Adjust the distance of X, pressing the Tracking(+) or Tracking(-) when the "ATR" is blink after the NTSC SP Test Tape is inserted.
- b) Connect the CH1 of the oscilloscope to the H/SW(W321, 322) and CH2 to the Video Out for the VCR.
- c) Trigger the mixed Video Signal of CH2 to the CH1 H.SW(W321, W322), and then check the distance (time difference), which is from the selected A(B) Head point of the H.SW(W321, W322) signal to the starting point of the vertical synchronized signal, to 6.5H ! 0.5H (412µs, 1H=63.5µs).

• CONNECTION



• WAVEFORM



ELECTRICAL ADJUSTMENT PROCEDURES

2. Audio Adjustment

1) Normal Audio Rec Bias Adjustment

- Test Equipment

a) LEVEL METER

b) RECORD TAPE

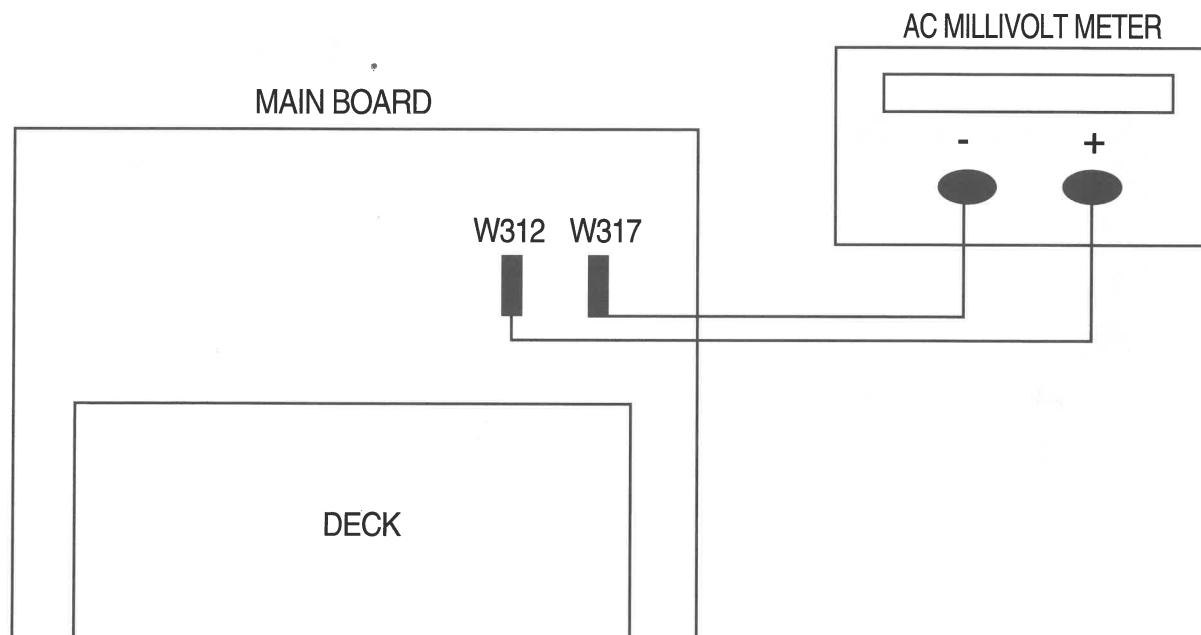
- Adjustment or Specification

MODE	MEASUREMENT POINT	ADJUSTMENT POINT	SPECIFICATION
REC	W312(+) W317(-)	VR301	3.0mV ! 0.2mV

• ADJUSTMENT PROCEDURE

- Connect the AC Millivolt Meter to the W312 and W317 in the record mode without signal.
- Adjust the voltage to 3.0 ! 0.2mVrms with VR301 at this time.

• CONNECTION



ELECTRICAL ADJUSTMENT PROCEDURES

3. Stereo Separation Adjustment (ALGB402 ONLY)

1) Normal Audio Bias Adjustment

- Test Equipment

a) OSCILLOSCOPE

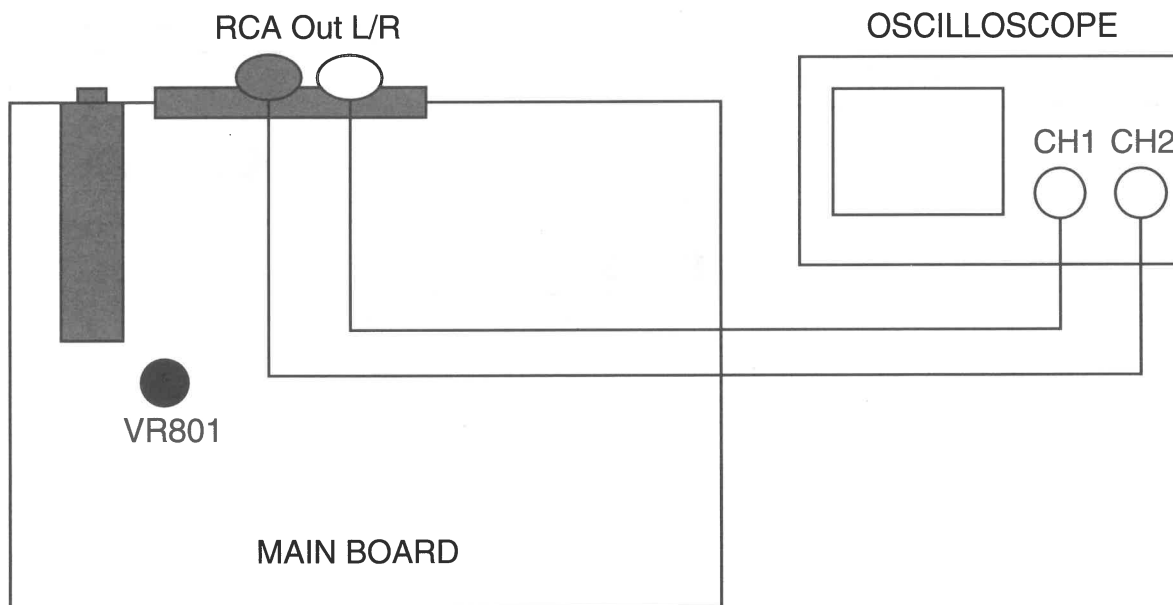
- Adjustment And Specification

MODE	MEASUREMENT POINT	ADJUSTMENT POINT	SPECIFICATION
CH11 Central Signal Stereo Mode	RCA Out L/R	VR801	Adjust the 3KHz Audio output Level for RCA Out L CH to the VR801

• ADJUSTMENT PROCEDURE

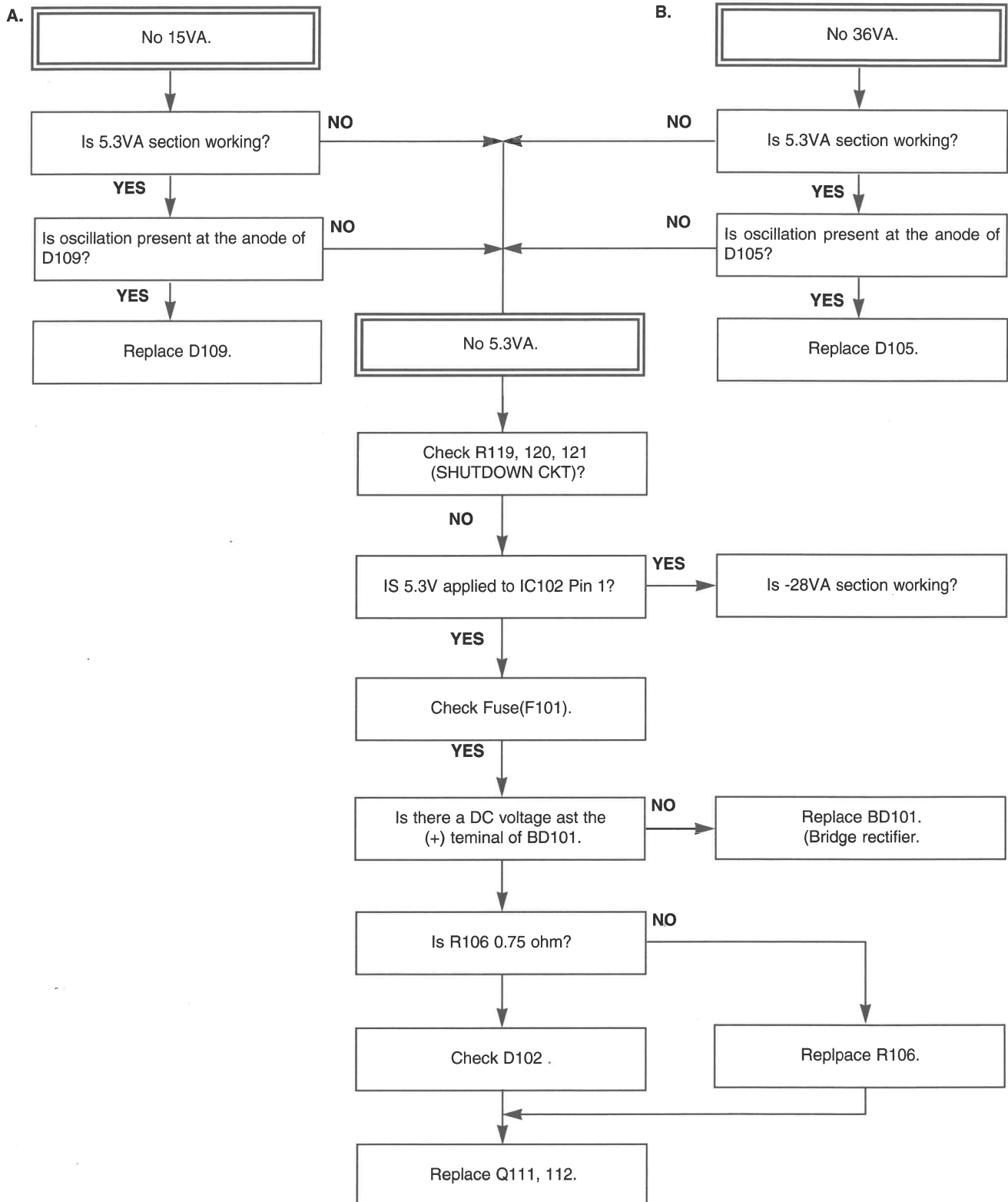
- Receive the Stereo Mode from the CH11 central signal.
- Connect the RCA Out L/R to the oscilloscope.
- Adjust the Audio output level of L CH (RCA Out) to the minimum with the VR801.

• CONNECTION



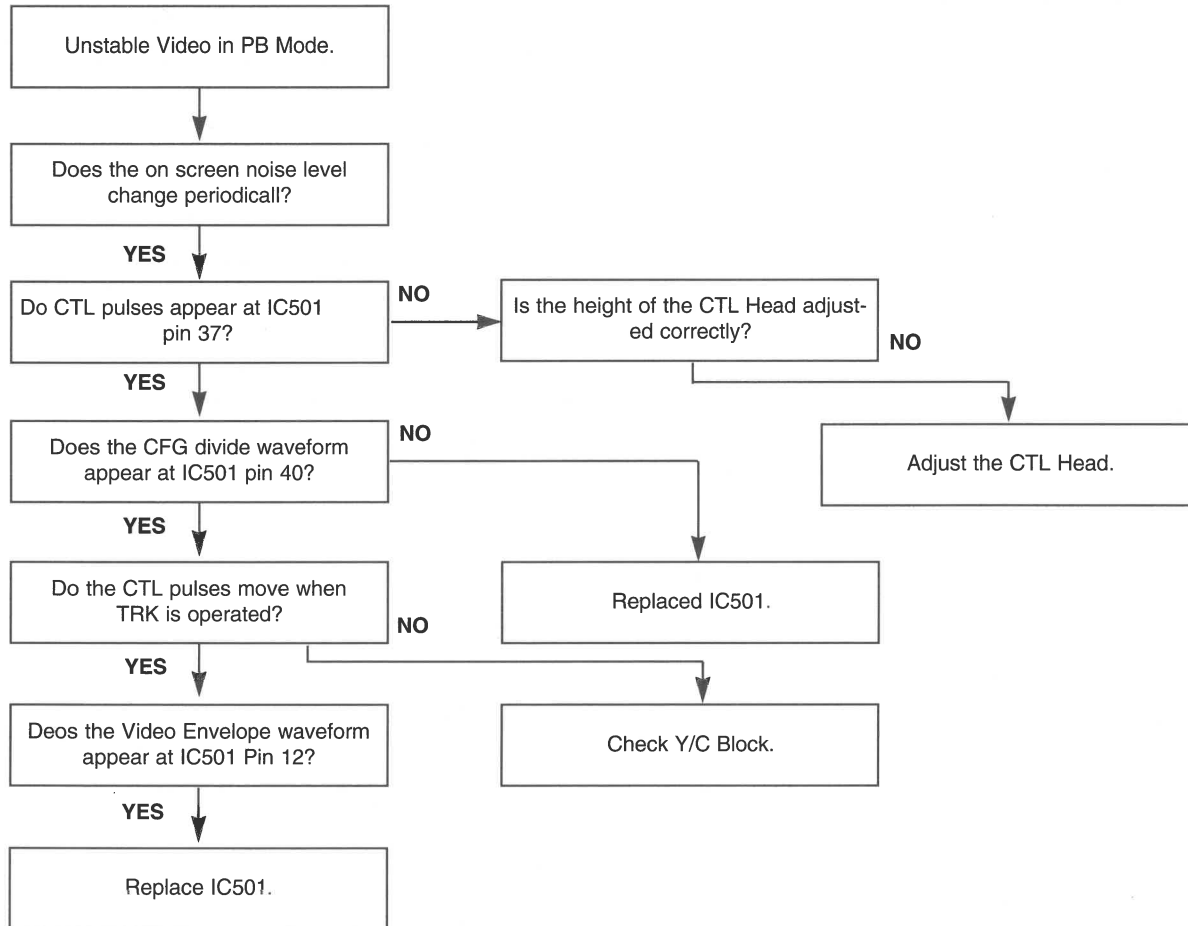
ELECTRICAL TROUBLESHOOTING GUIDE

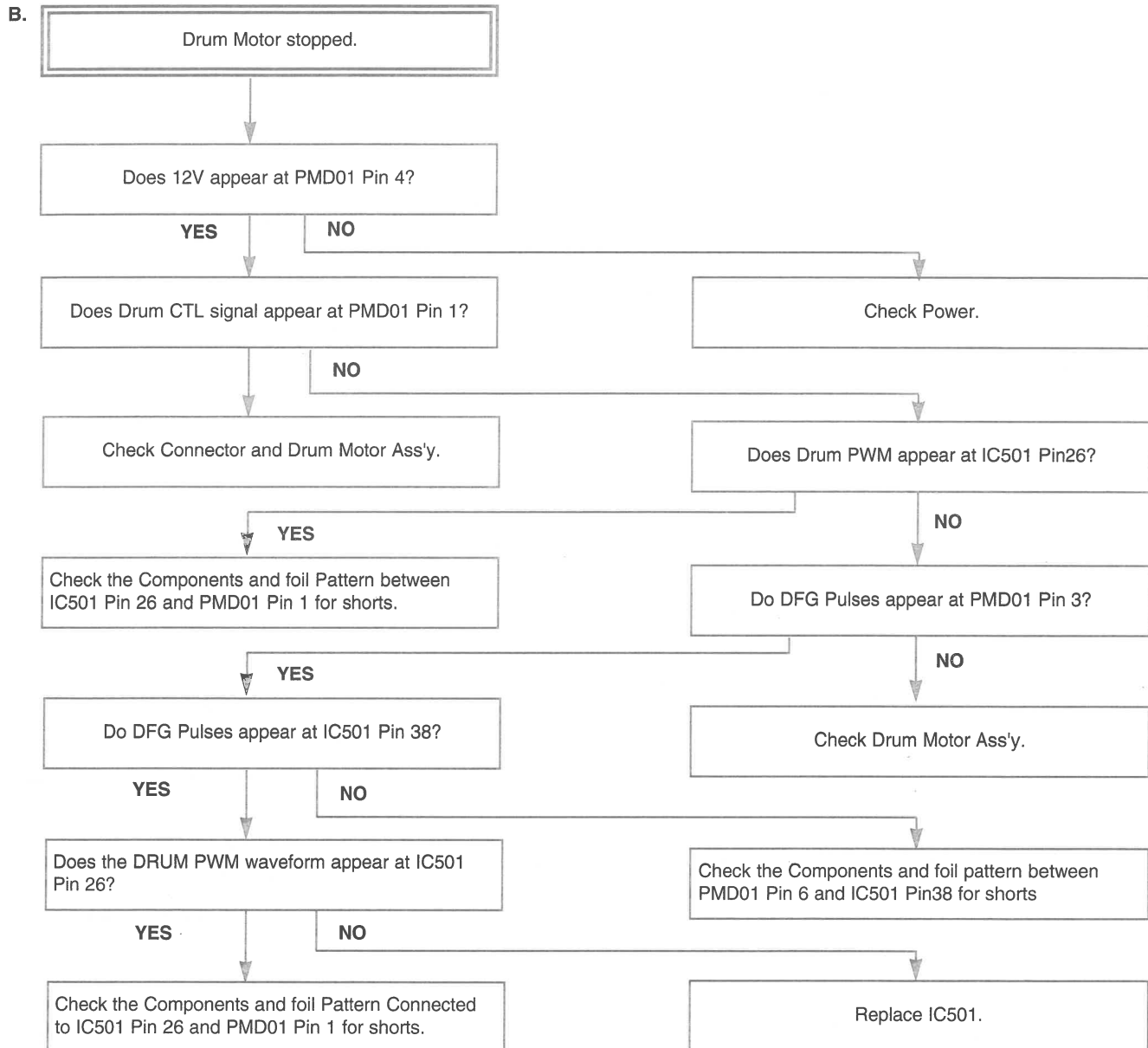
1. SMPS Circuit



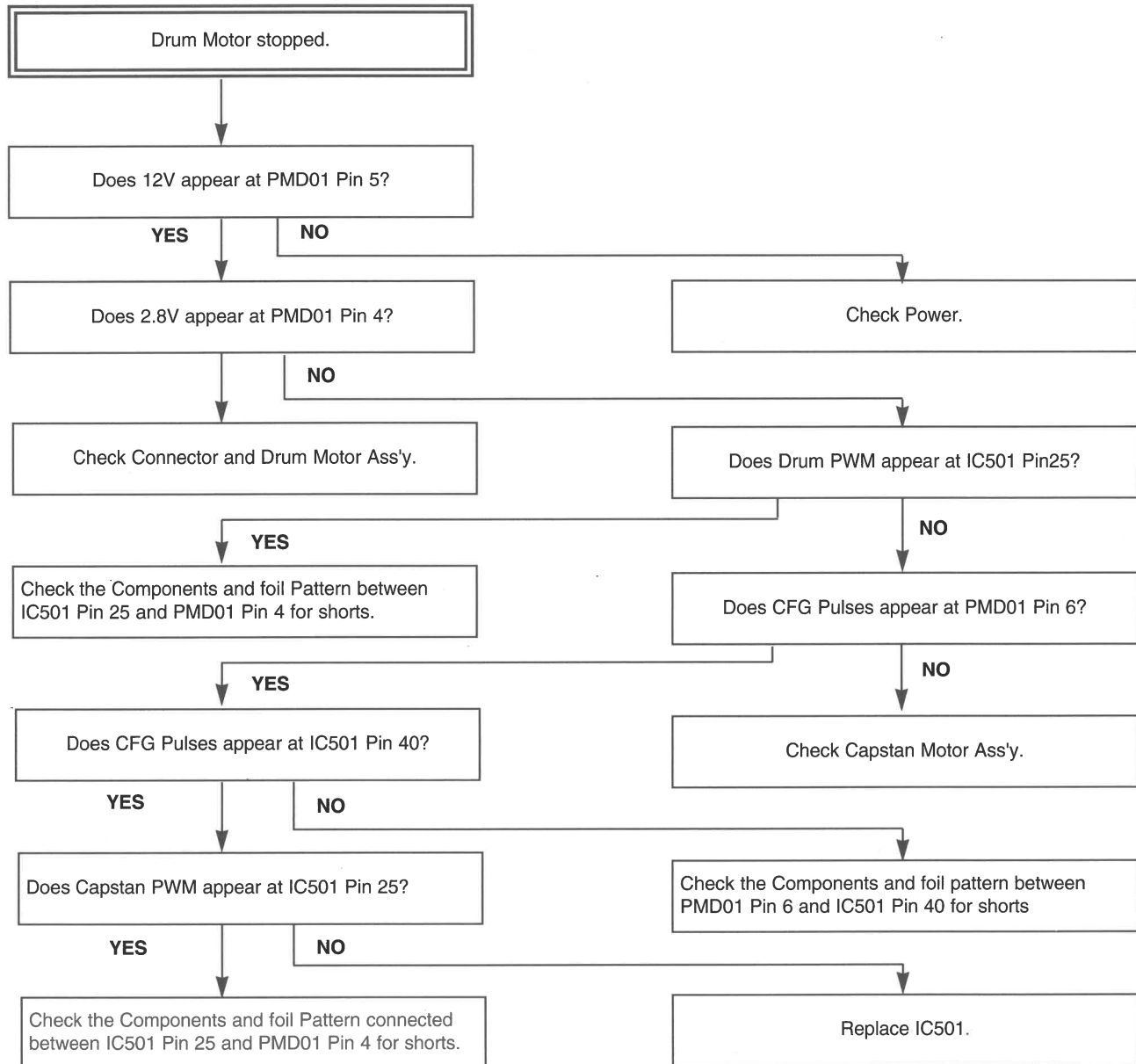
2. Servo Circuit

A.



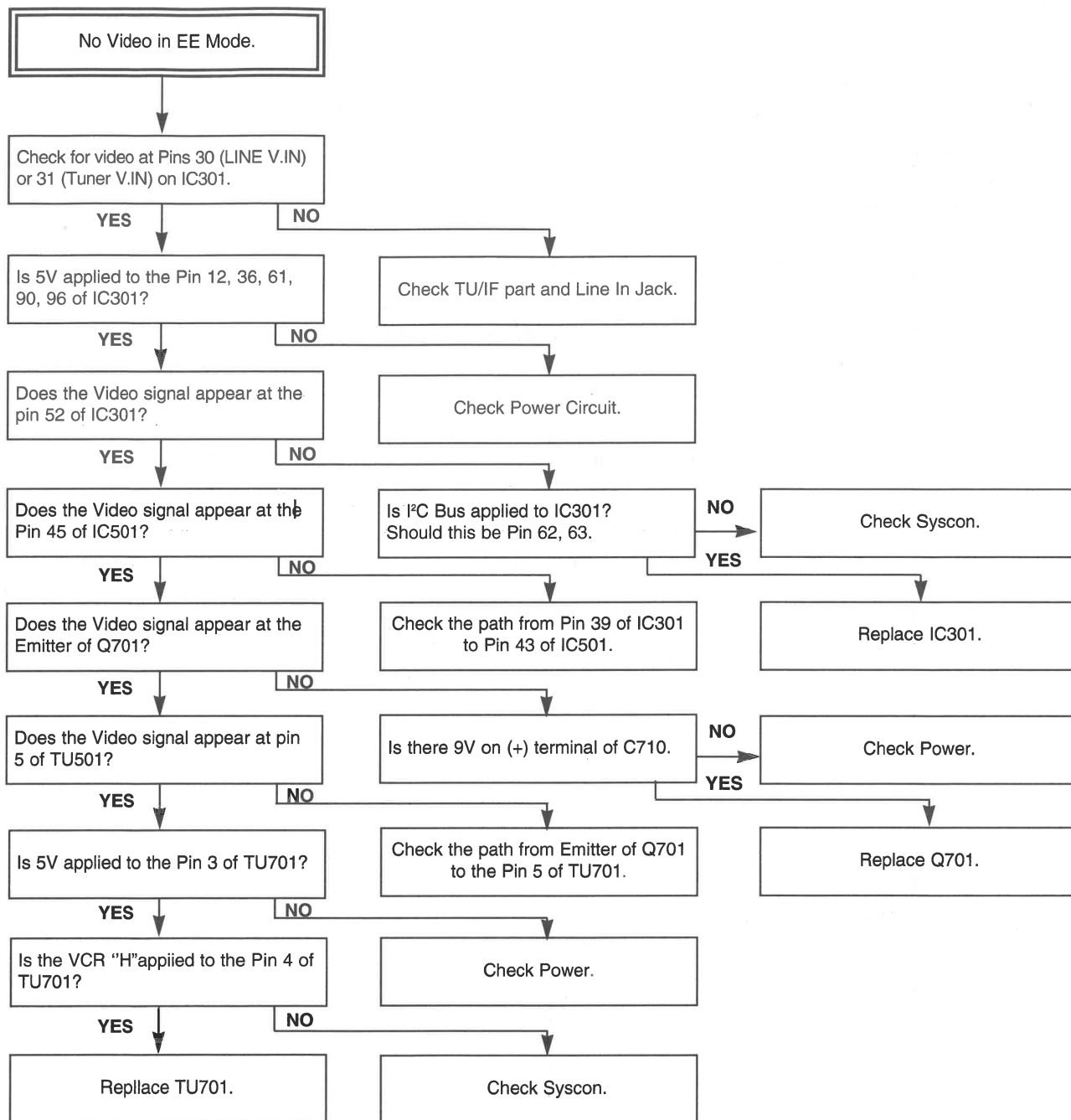


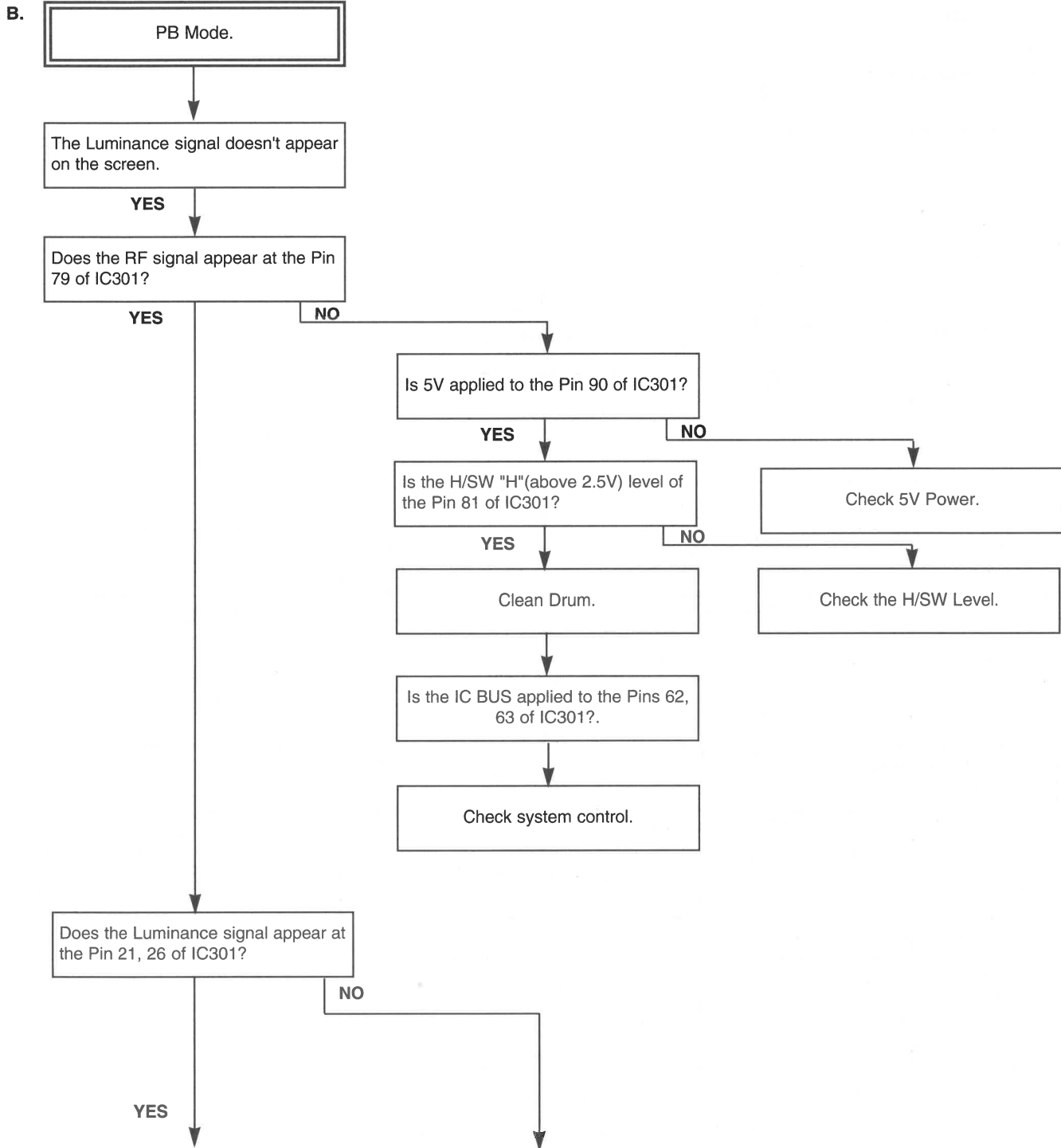
B.

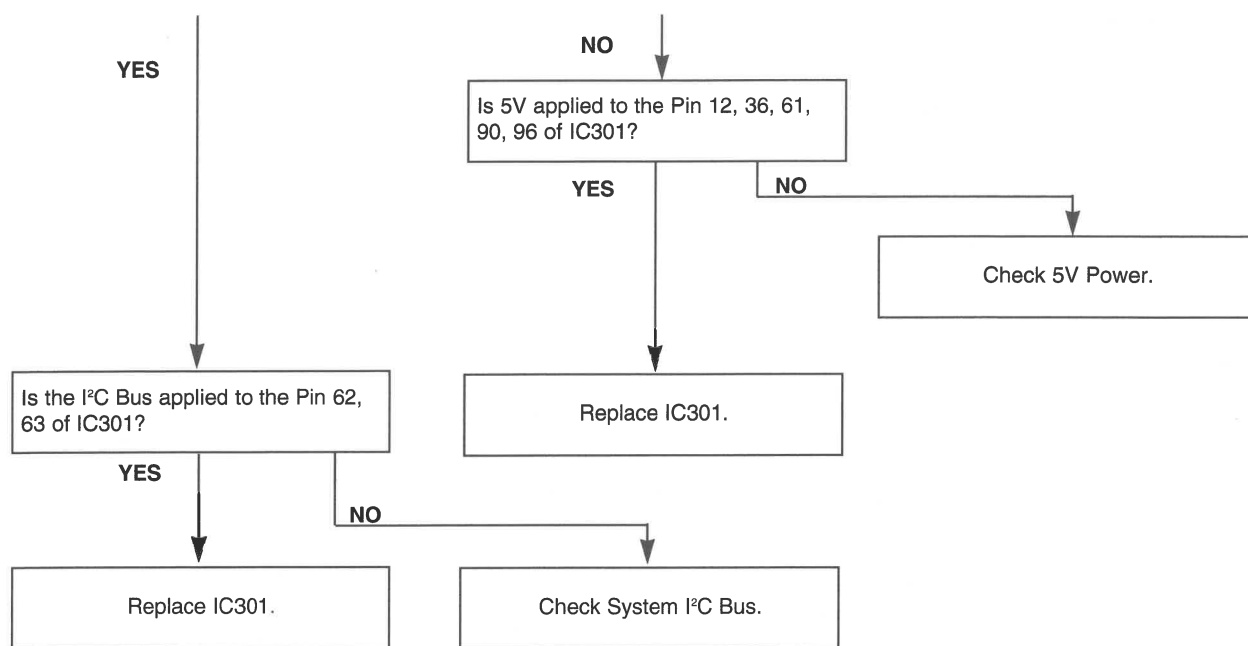


3. Y/C Circuit

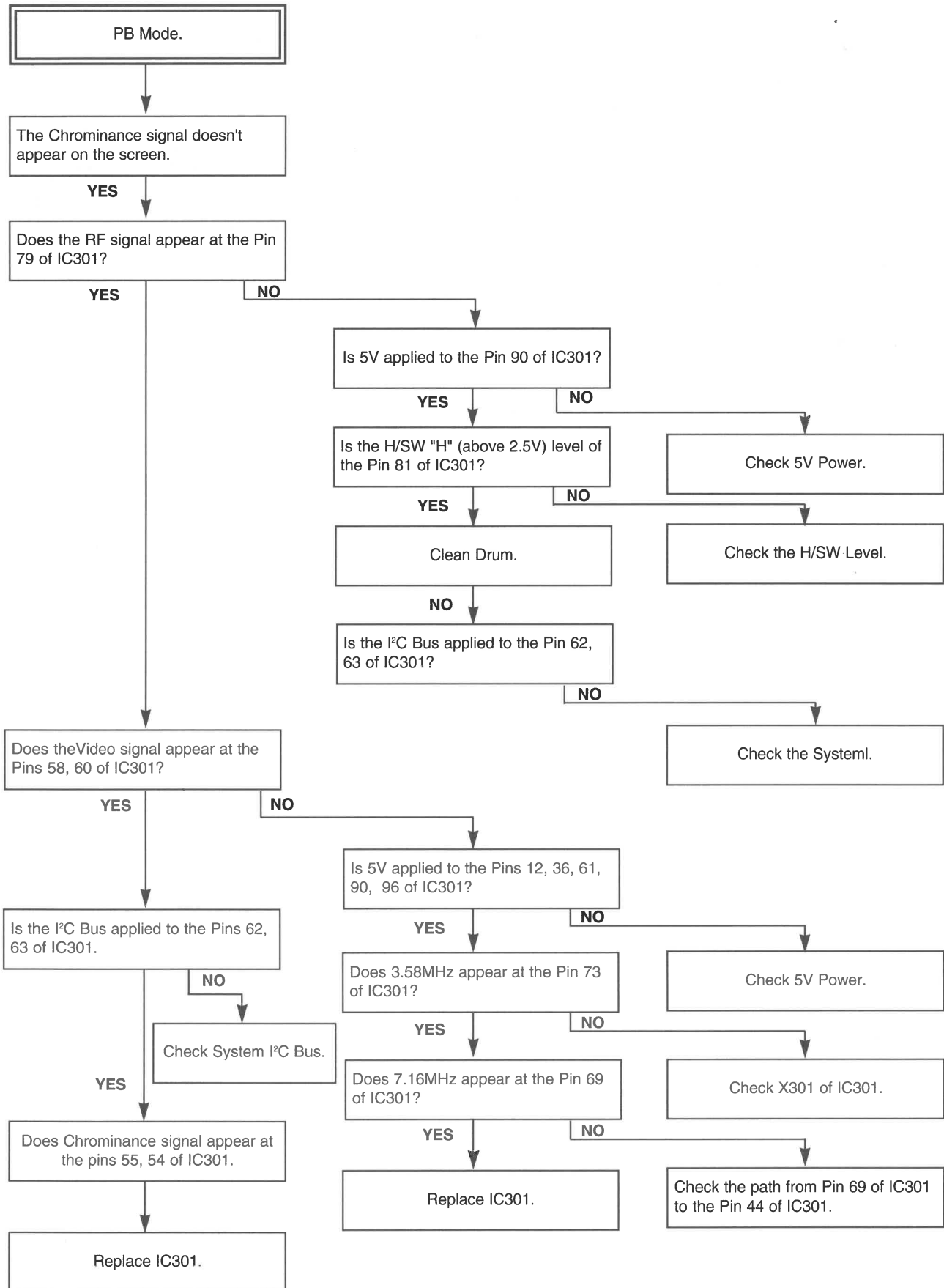
A.



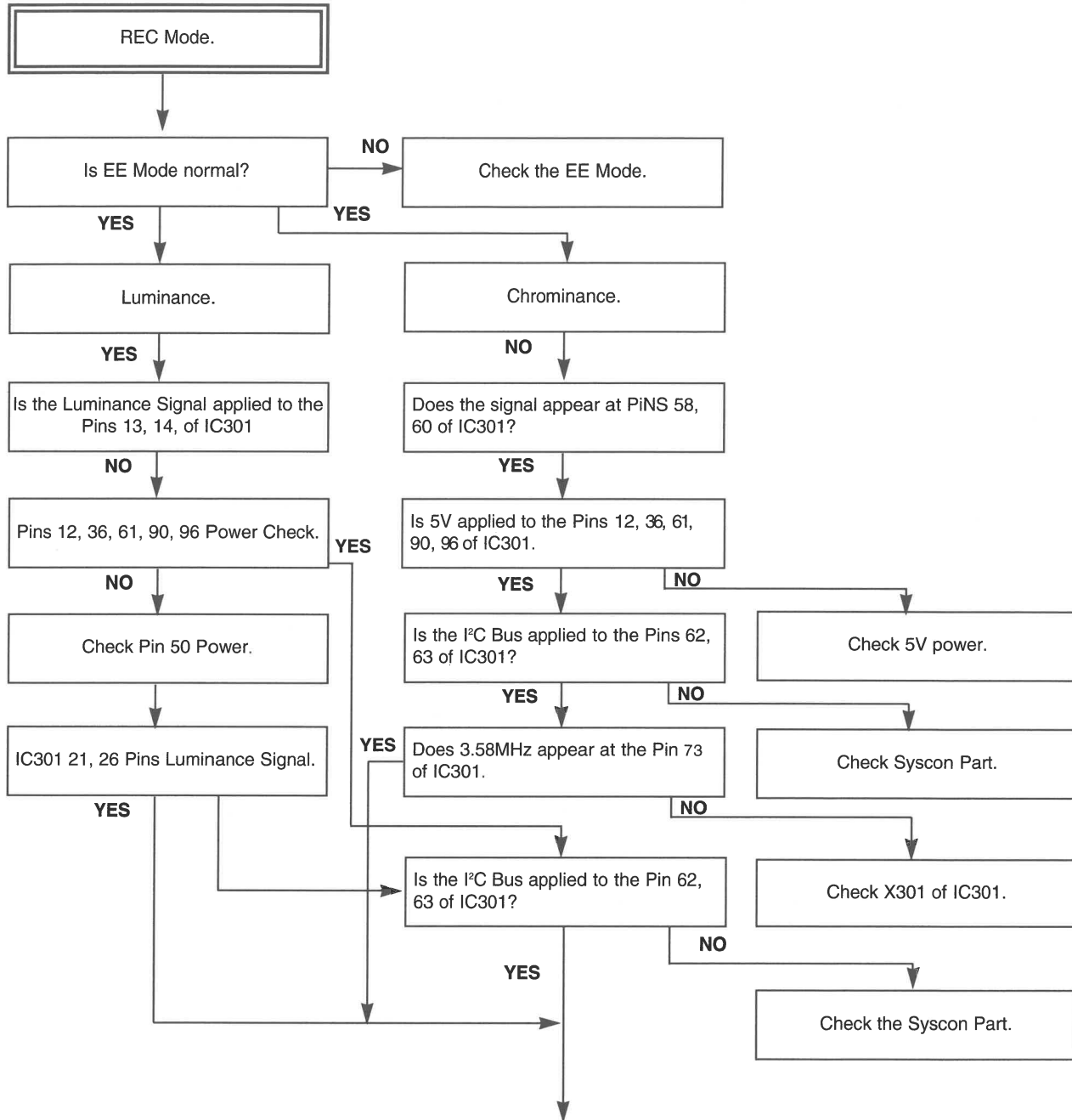


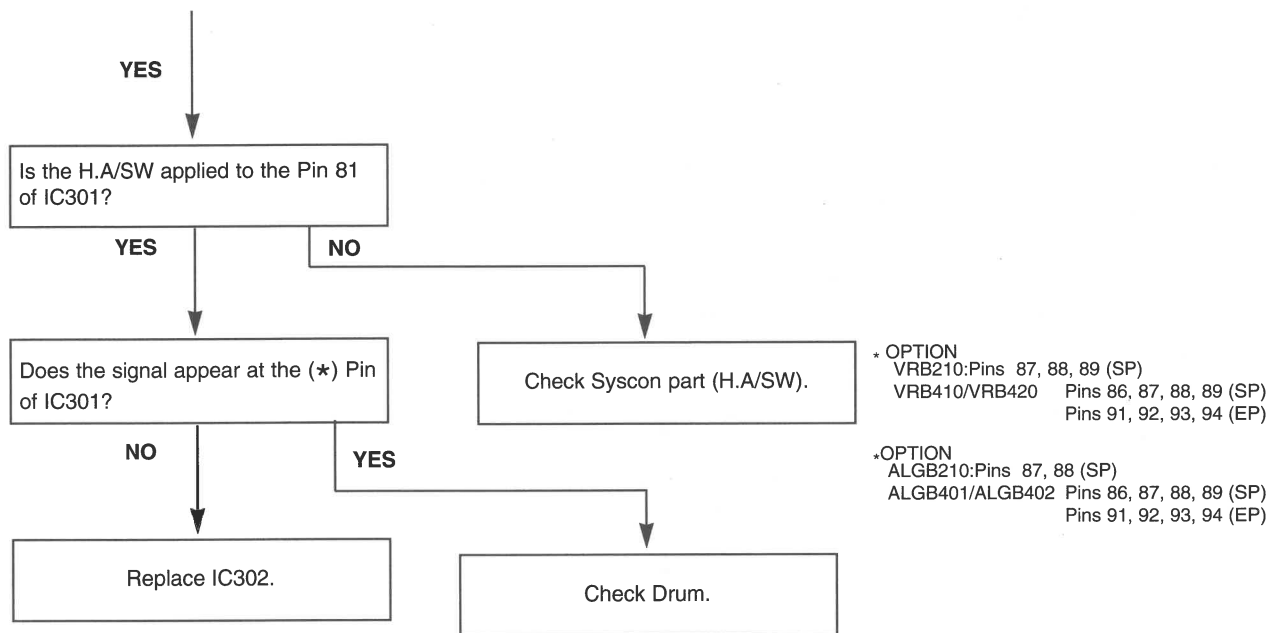


C.

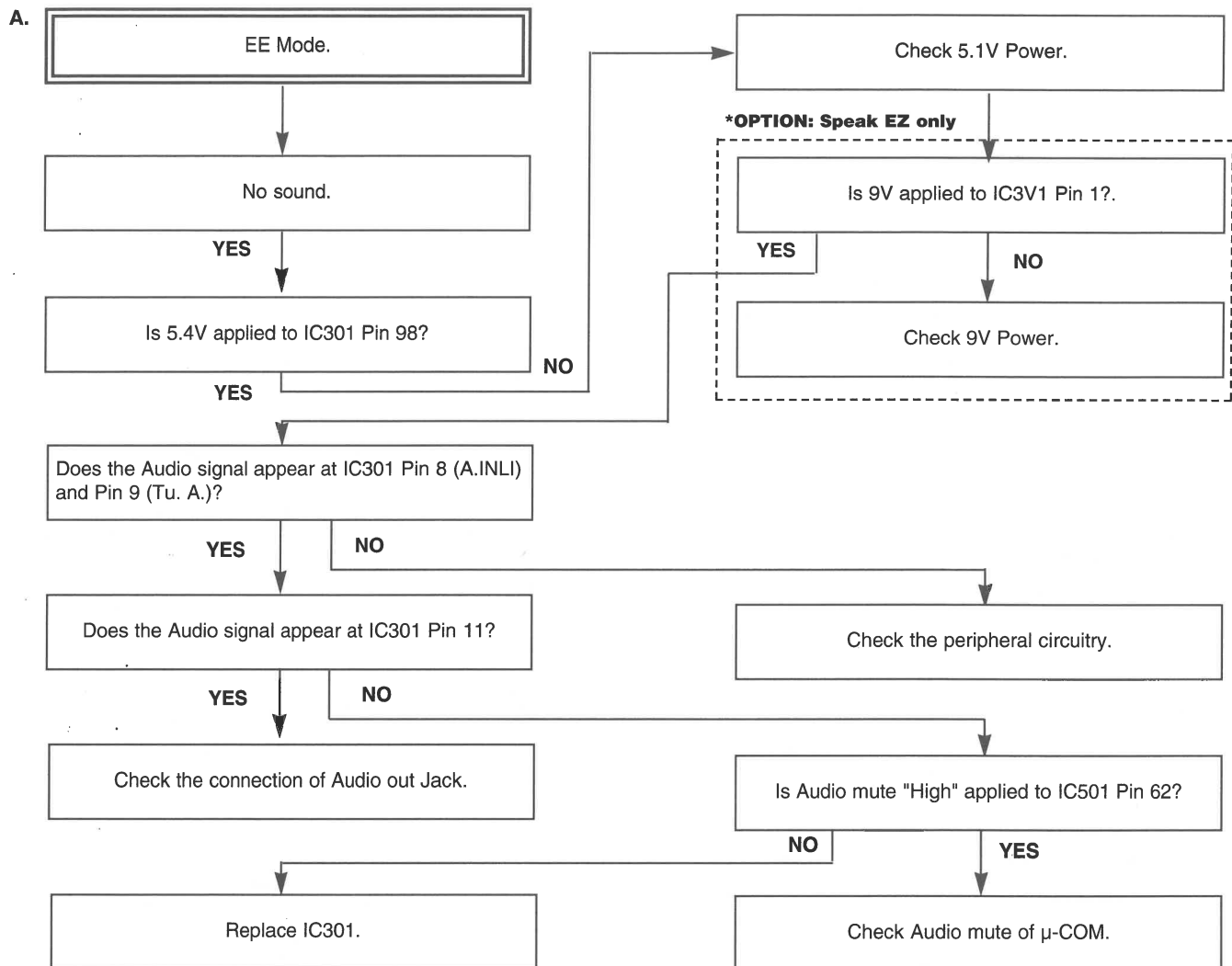


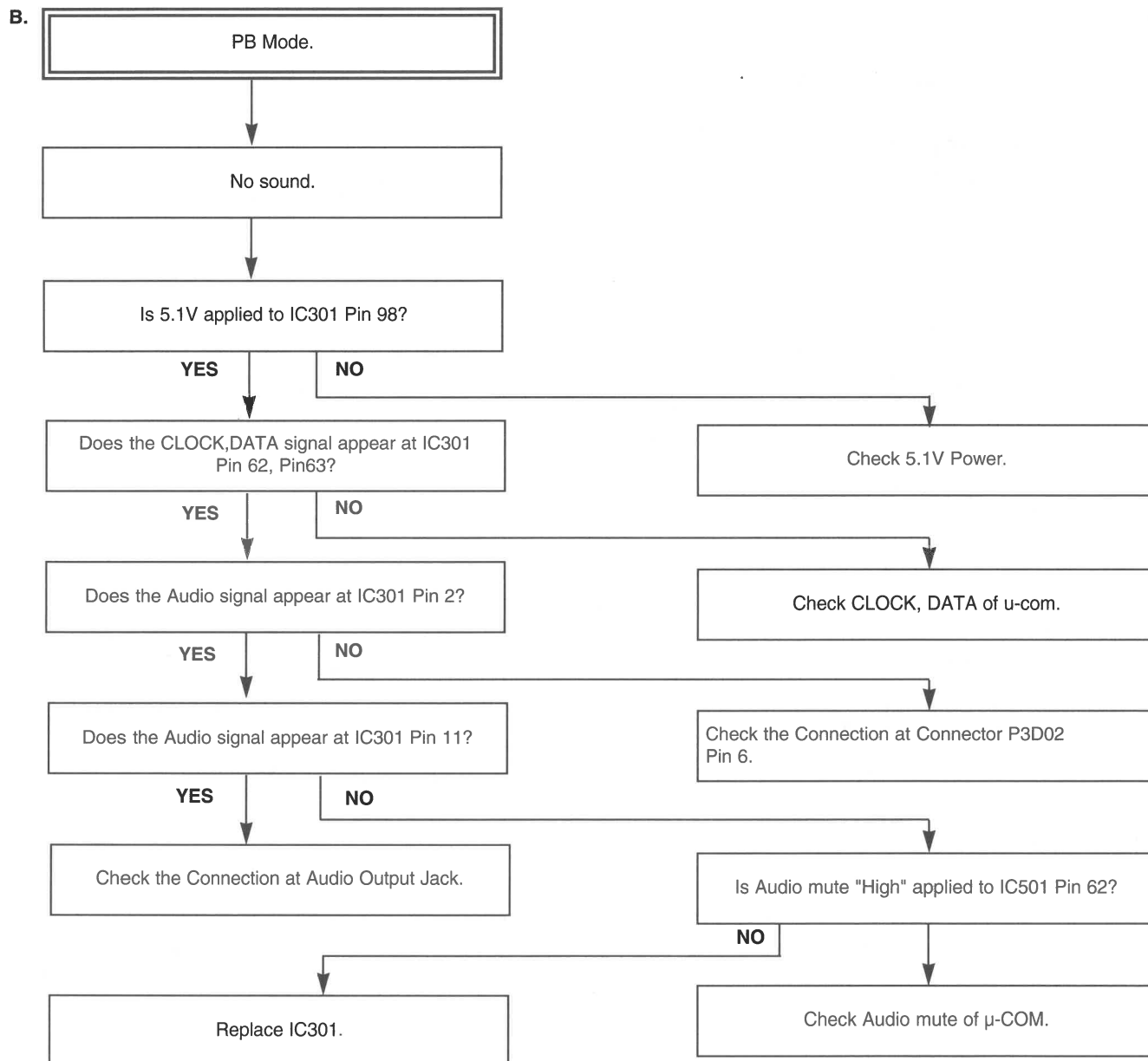
D.

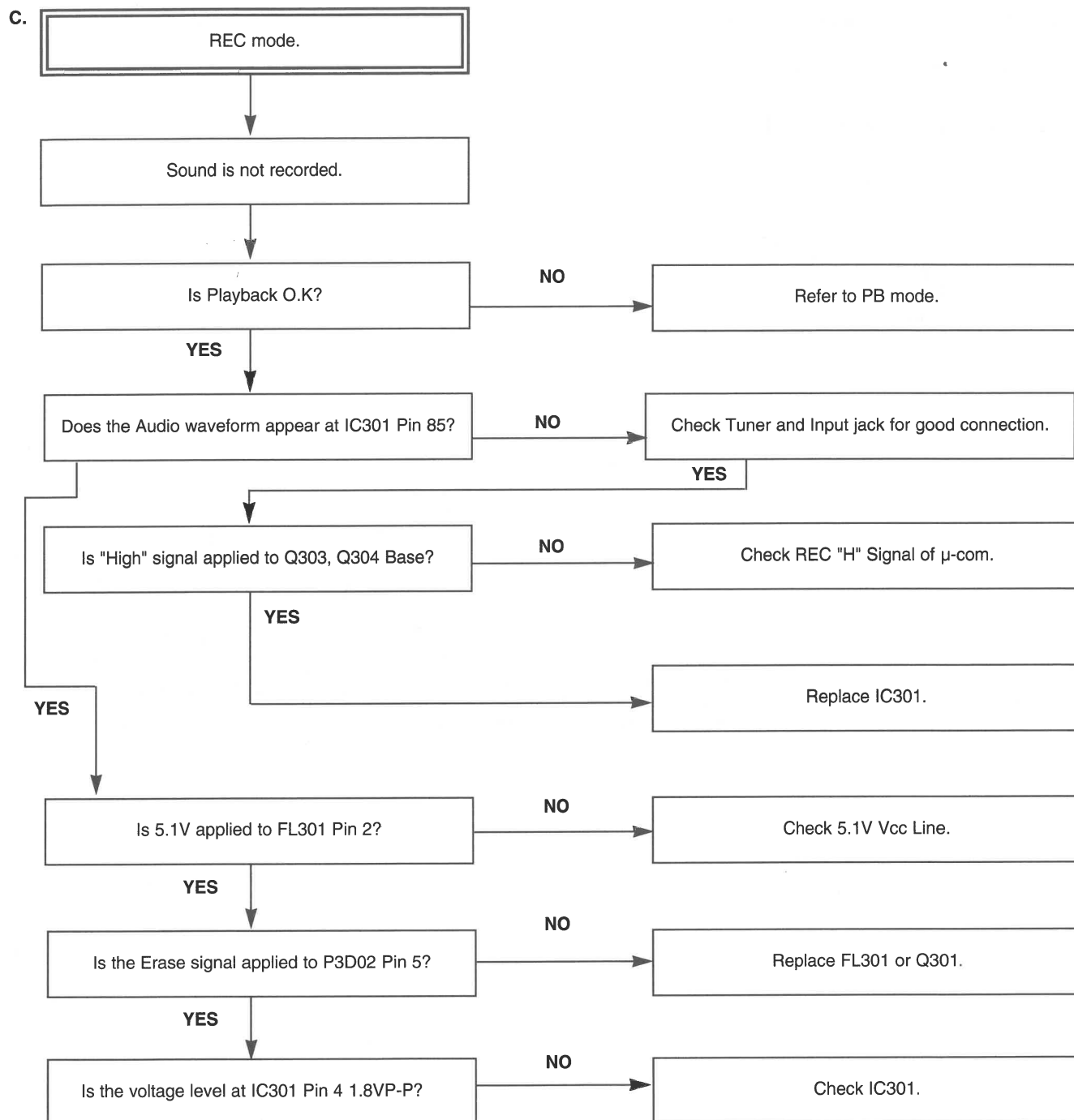




4. Audio Circuit

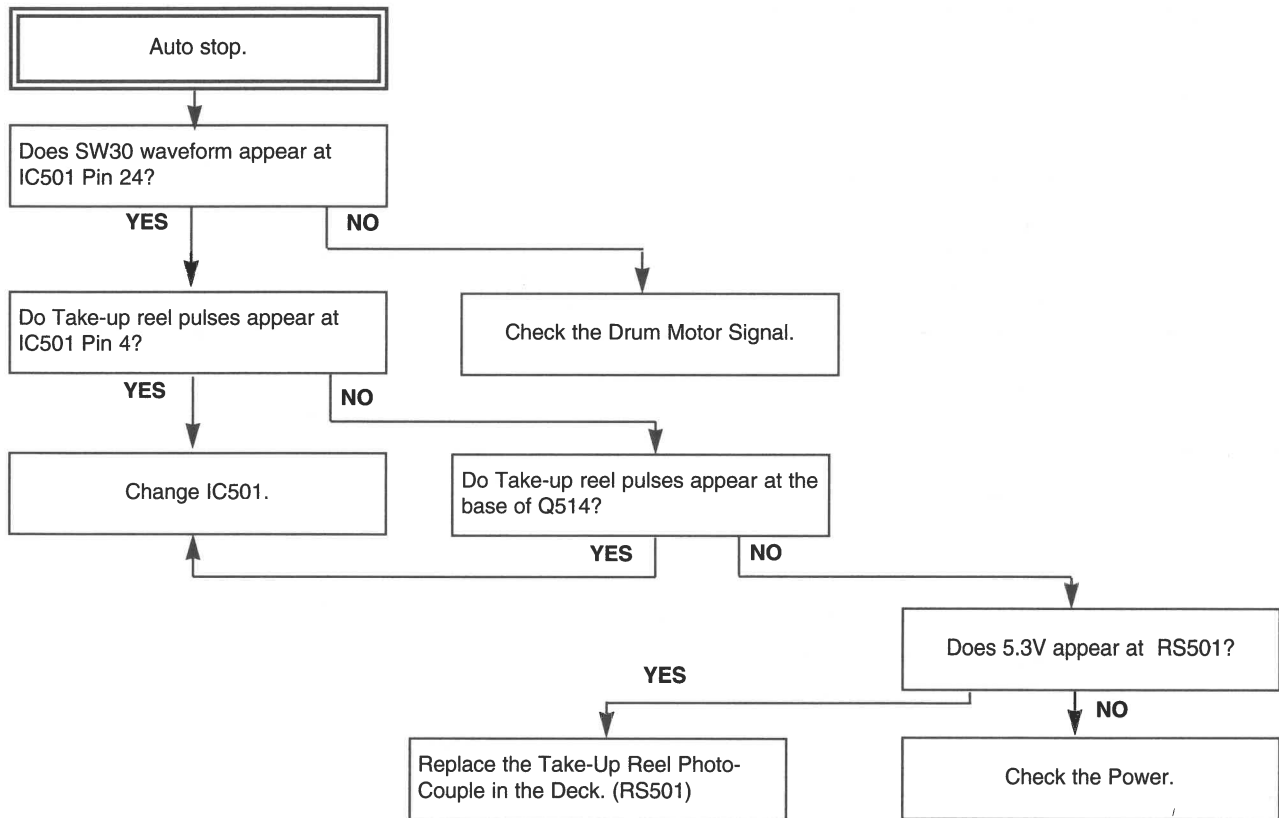


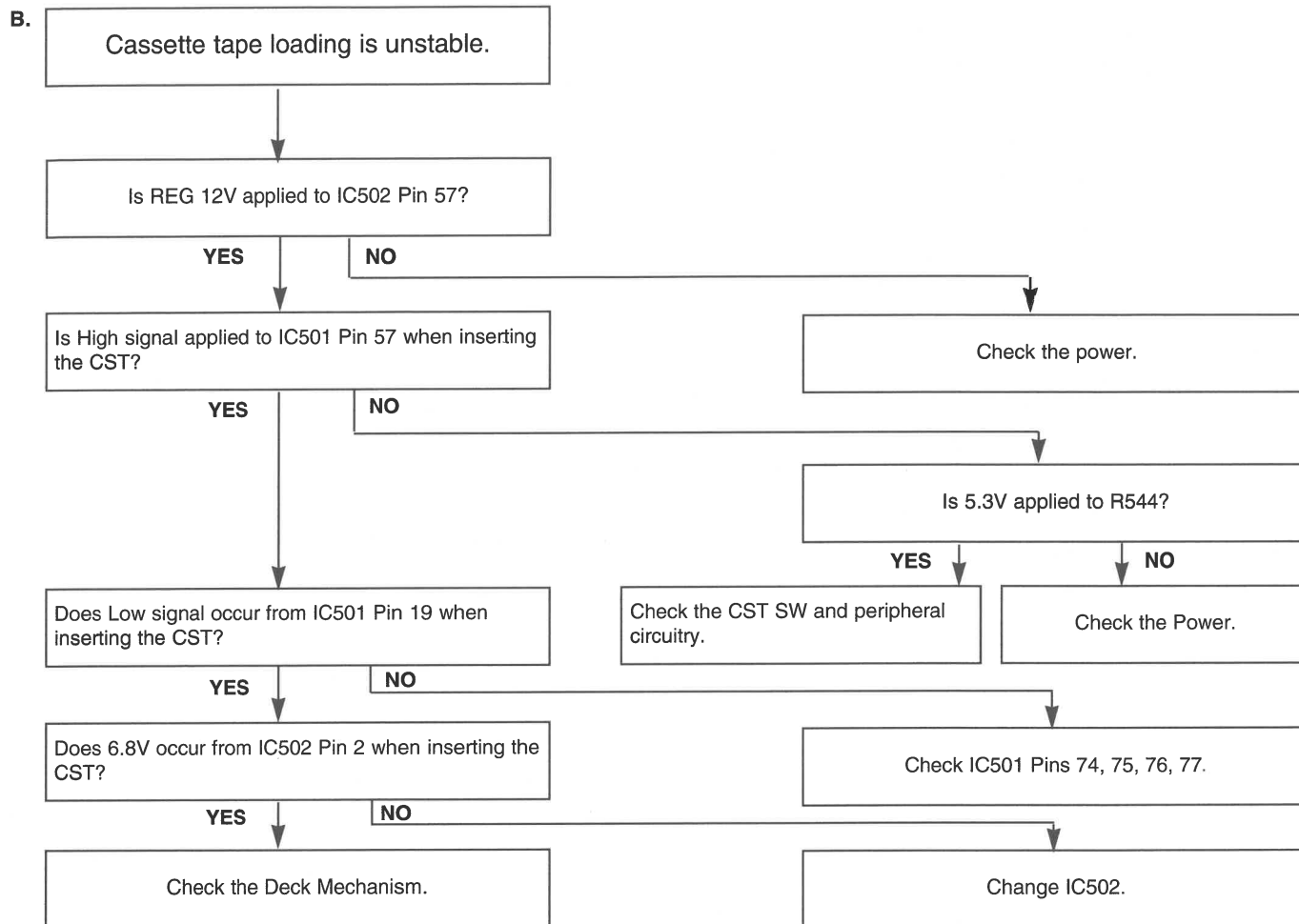




5. System & Front Panel Circuit

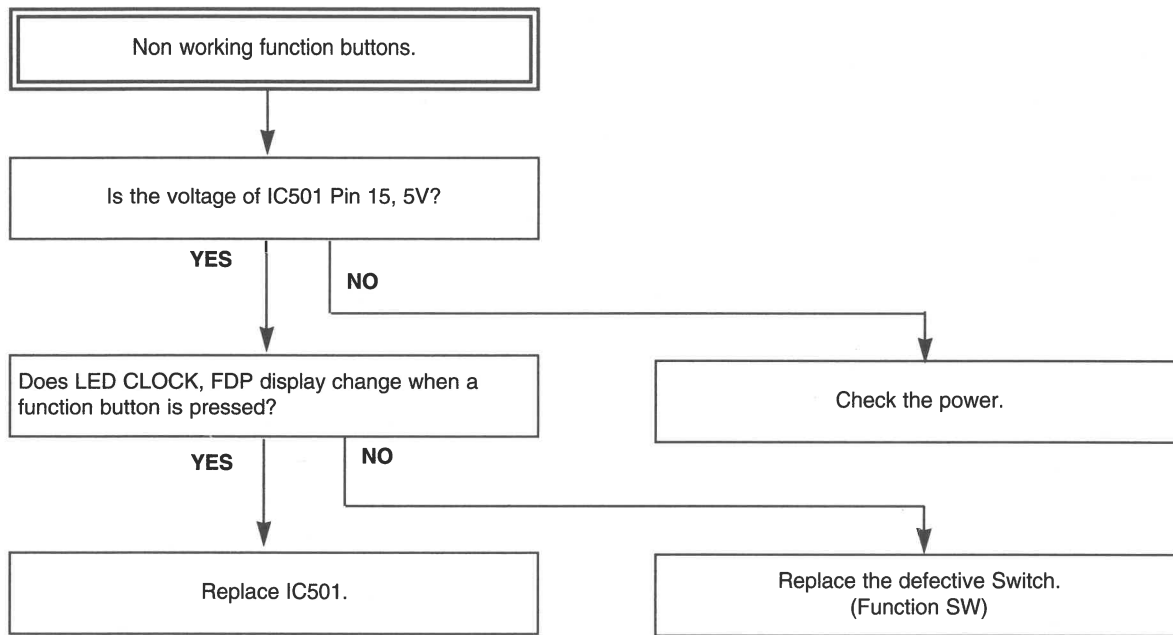
A.



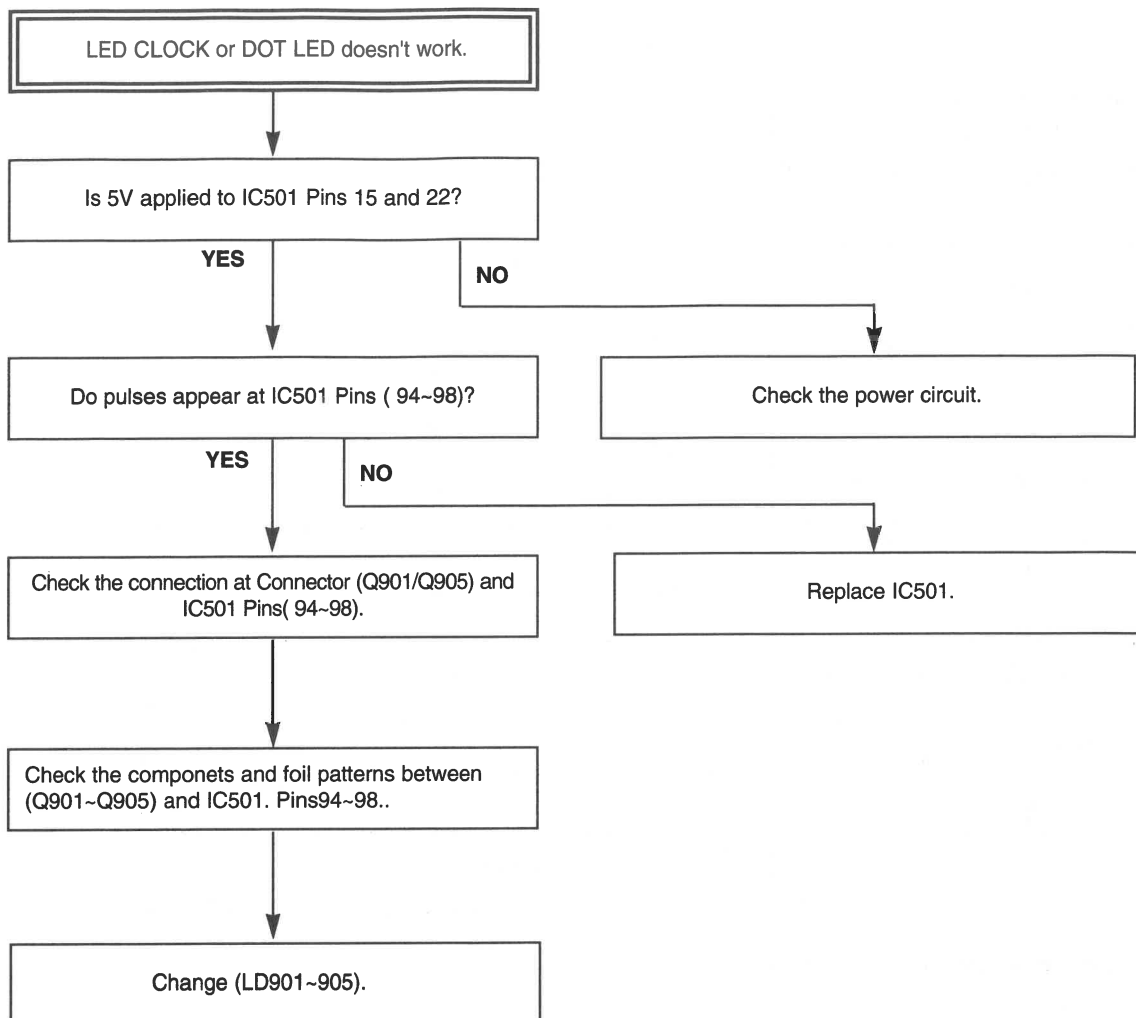


NOTE : Auto stop may also be caused by lack of lubrication, due to dried grease or oil.

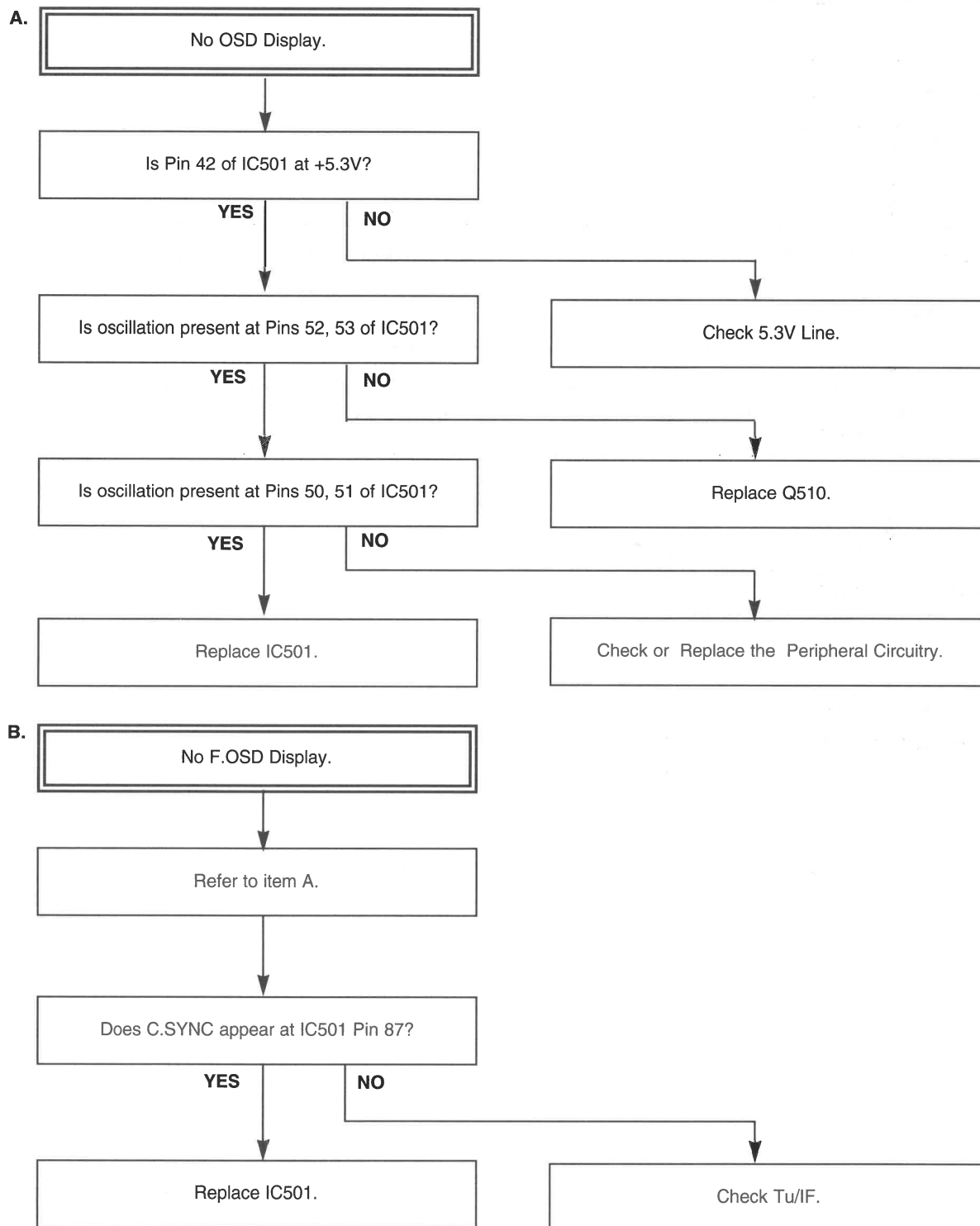
C.



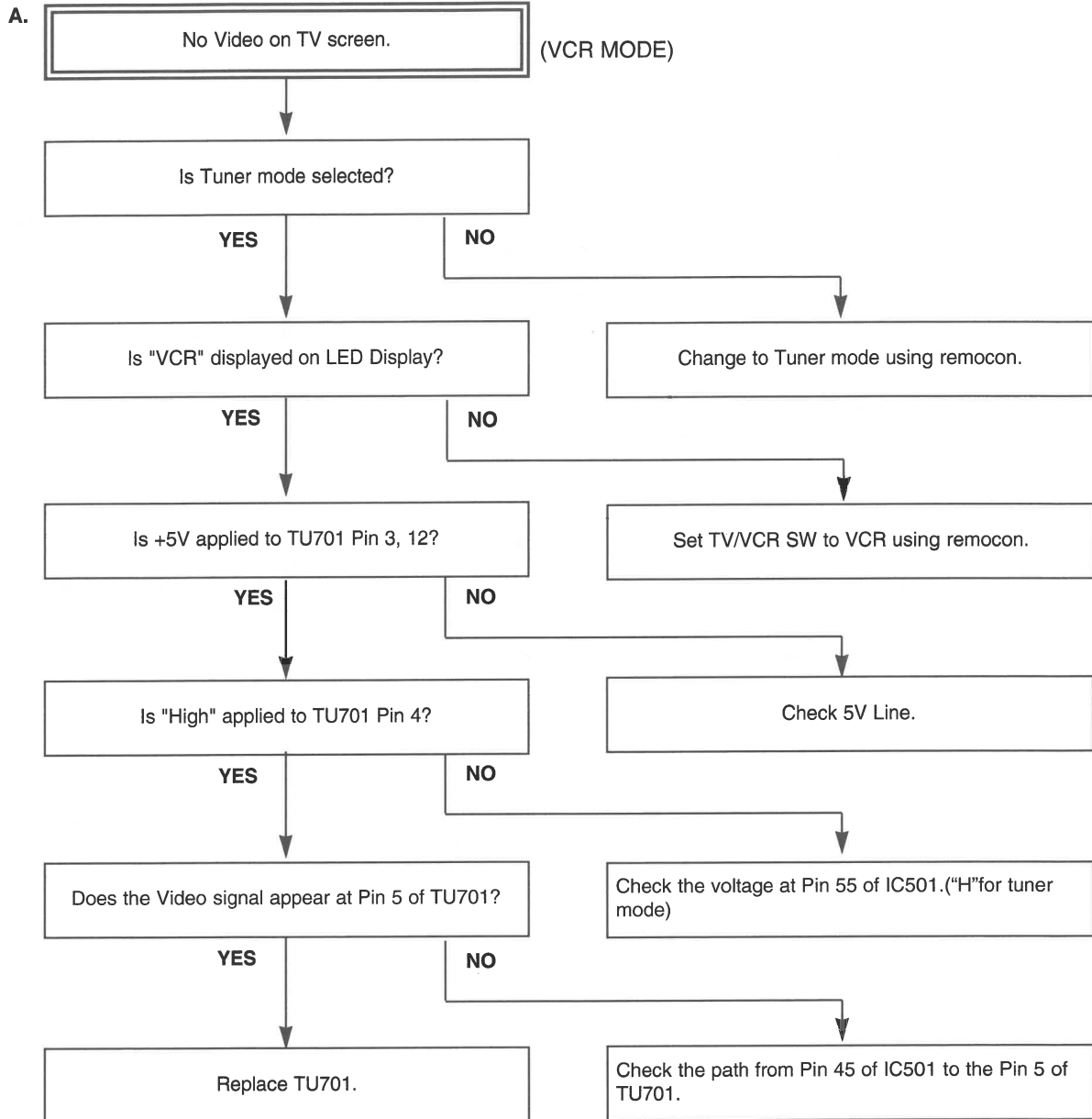
D.



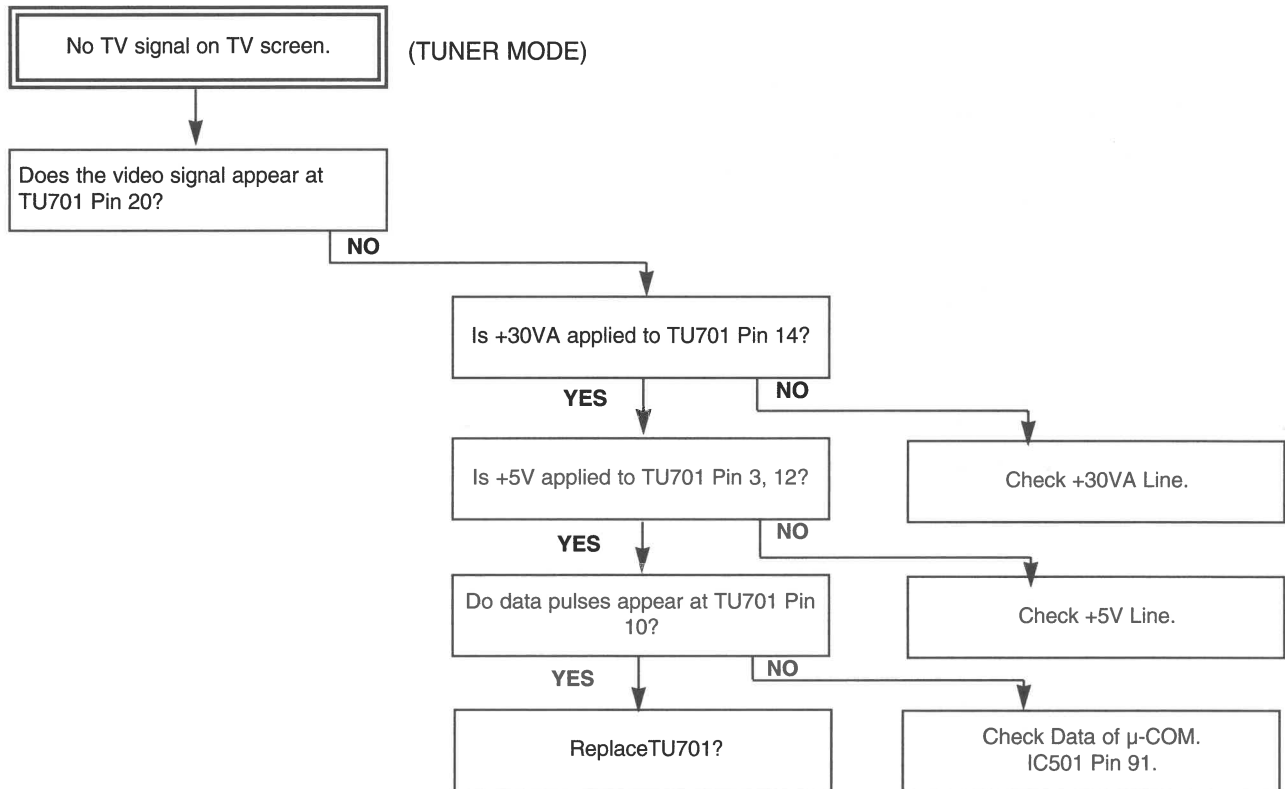
6. OSD Circuit



7. Tuner/IF Circuit

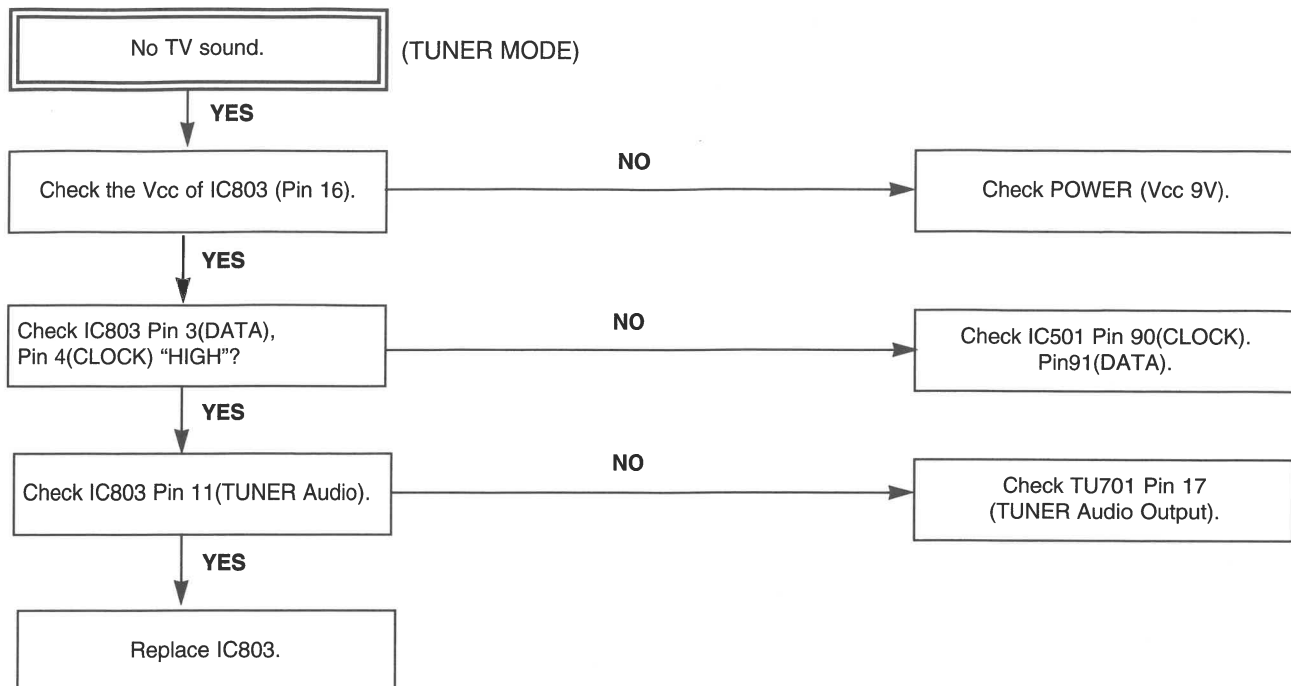


B.

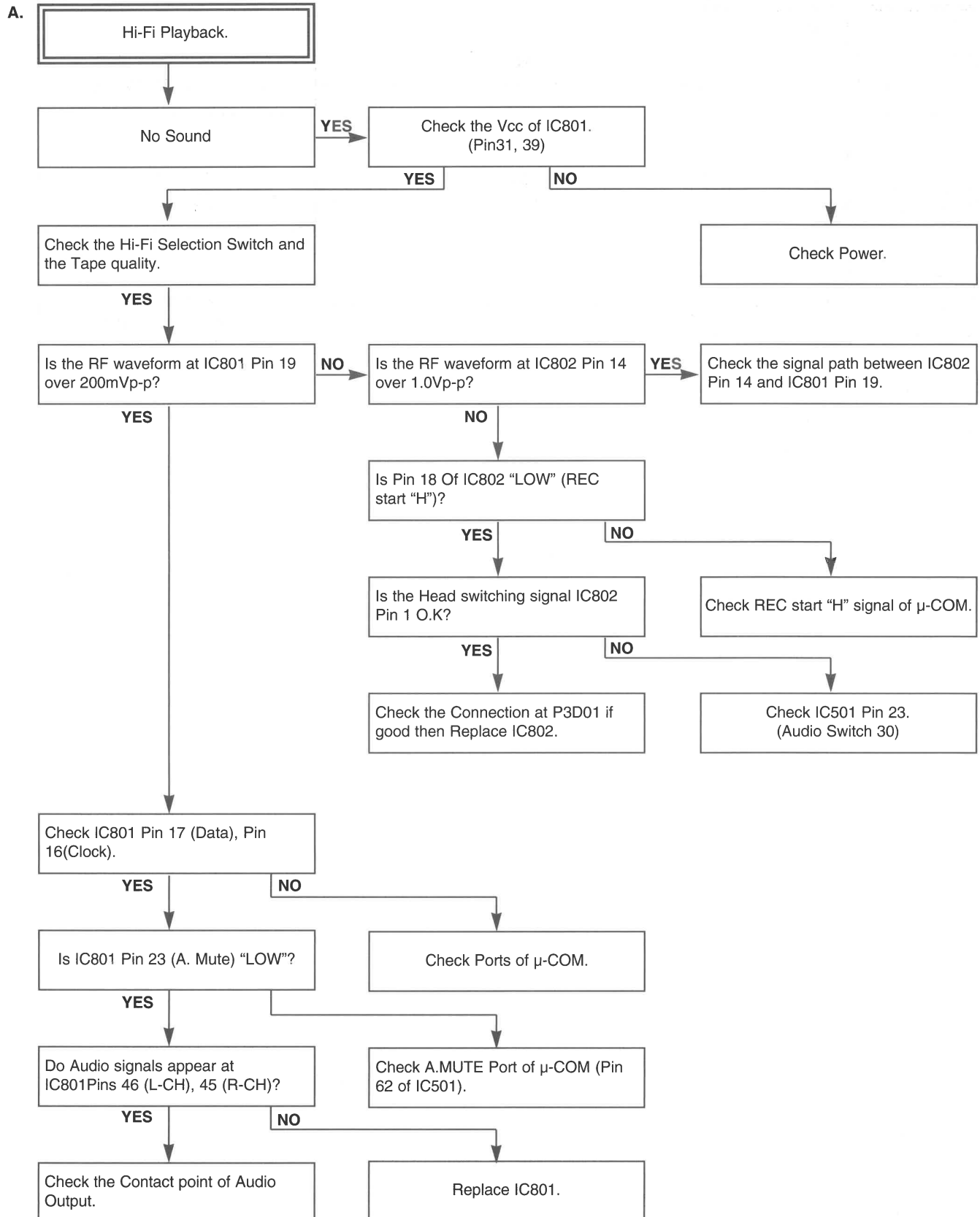


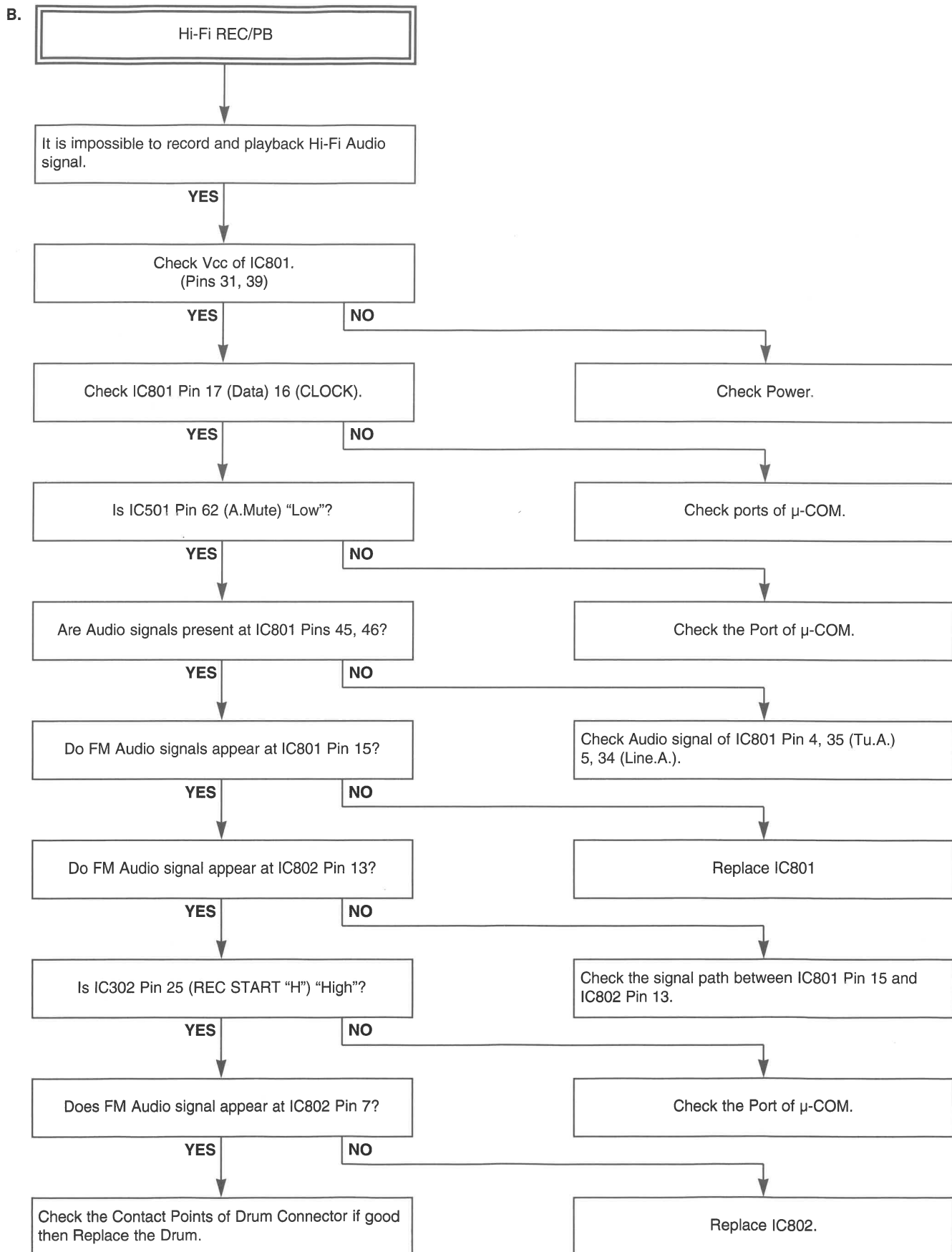
(Hi-Fi ALGB402 / VRB420 ONLY)

C.



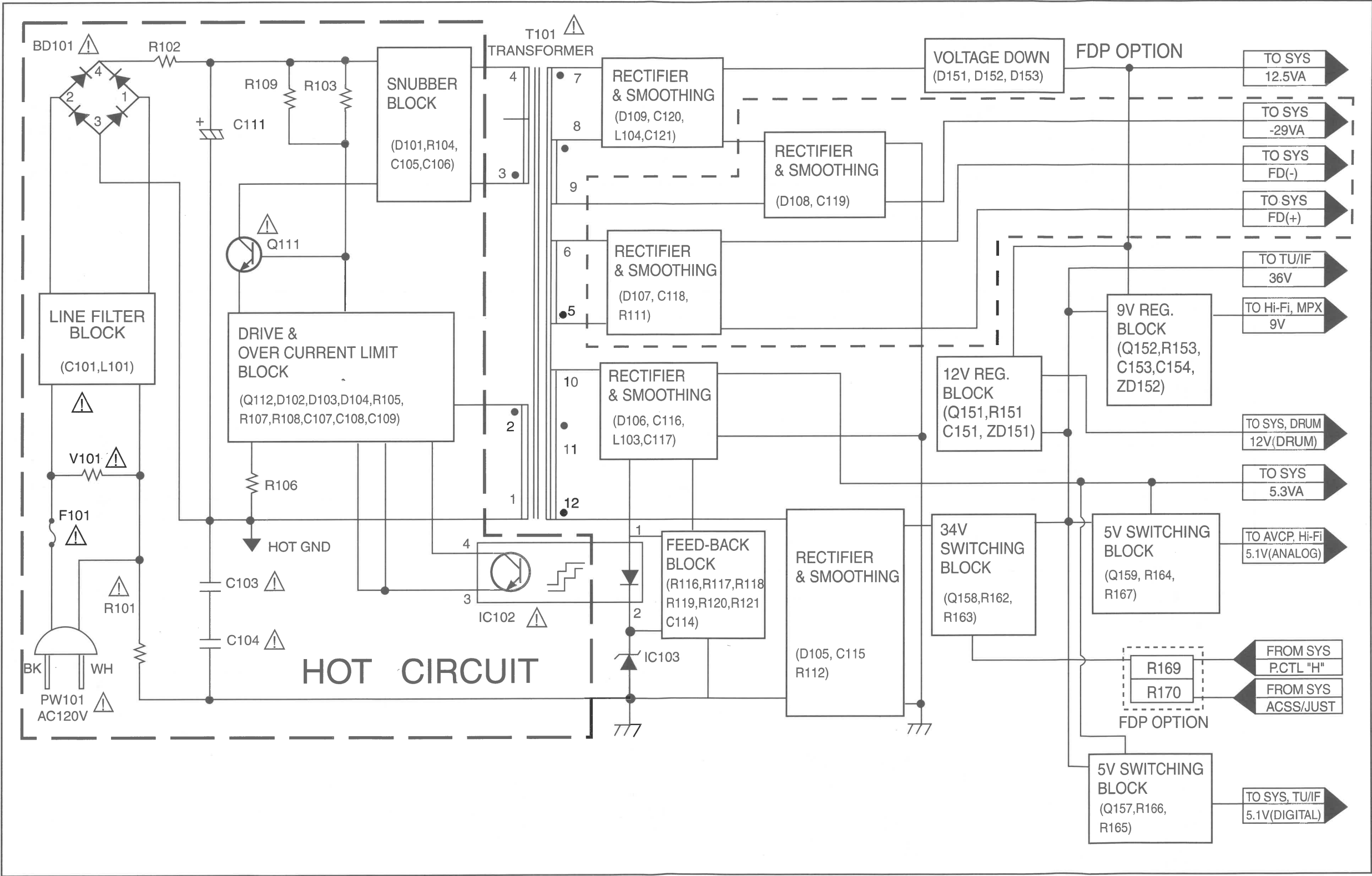
8. Hi-Fi Circuit (Hi-Fi MODEL ONLY)







BLOCK DIAGRAMS

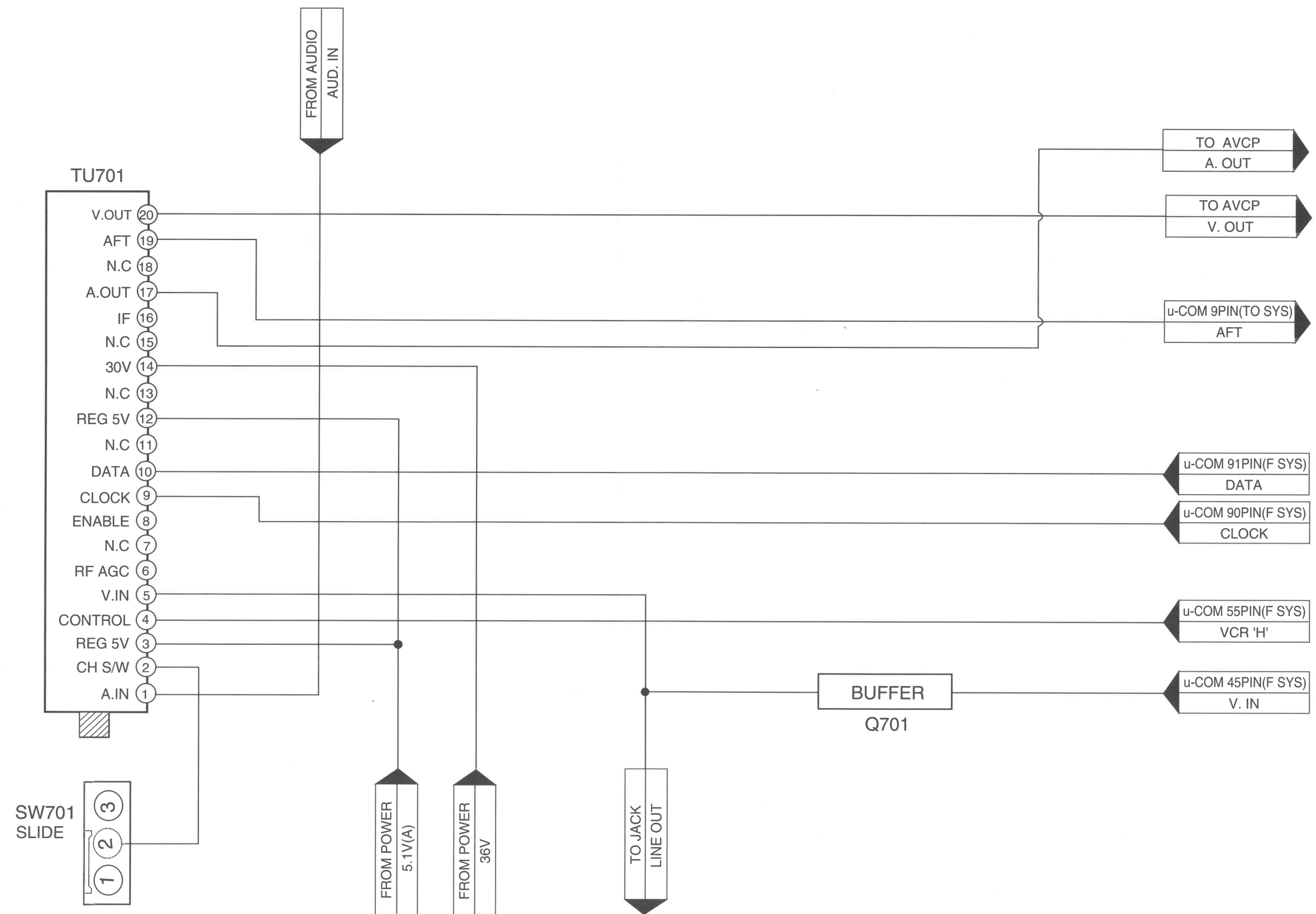
1.SMPS Block Diagram



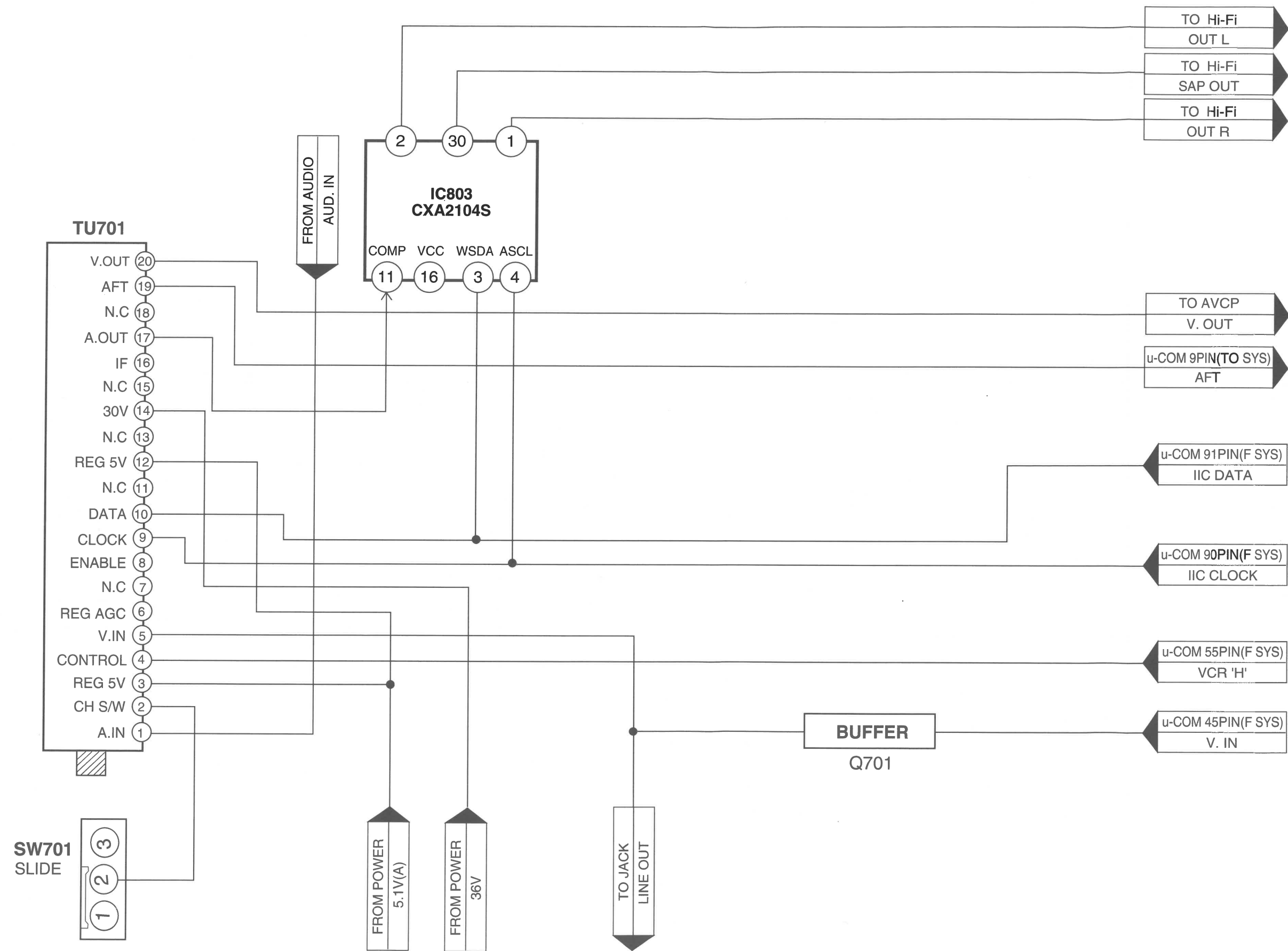
NOTES :  Symbol denotes AC ground.
 Symbol denotes DC chassis ground.

'99. 1. 15 R10378BA

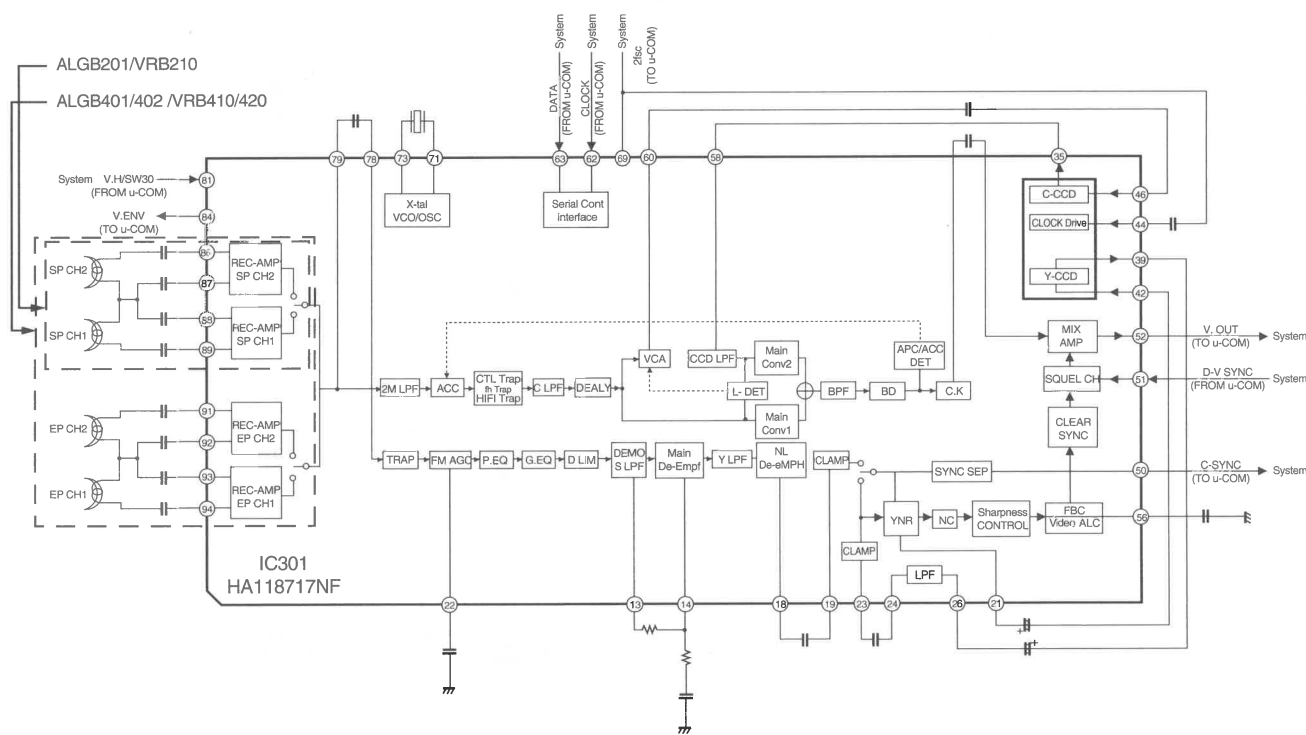
2a. Tuner/IF Block Diagram (ALGB201/ 401, VRB210/ 410)



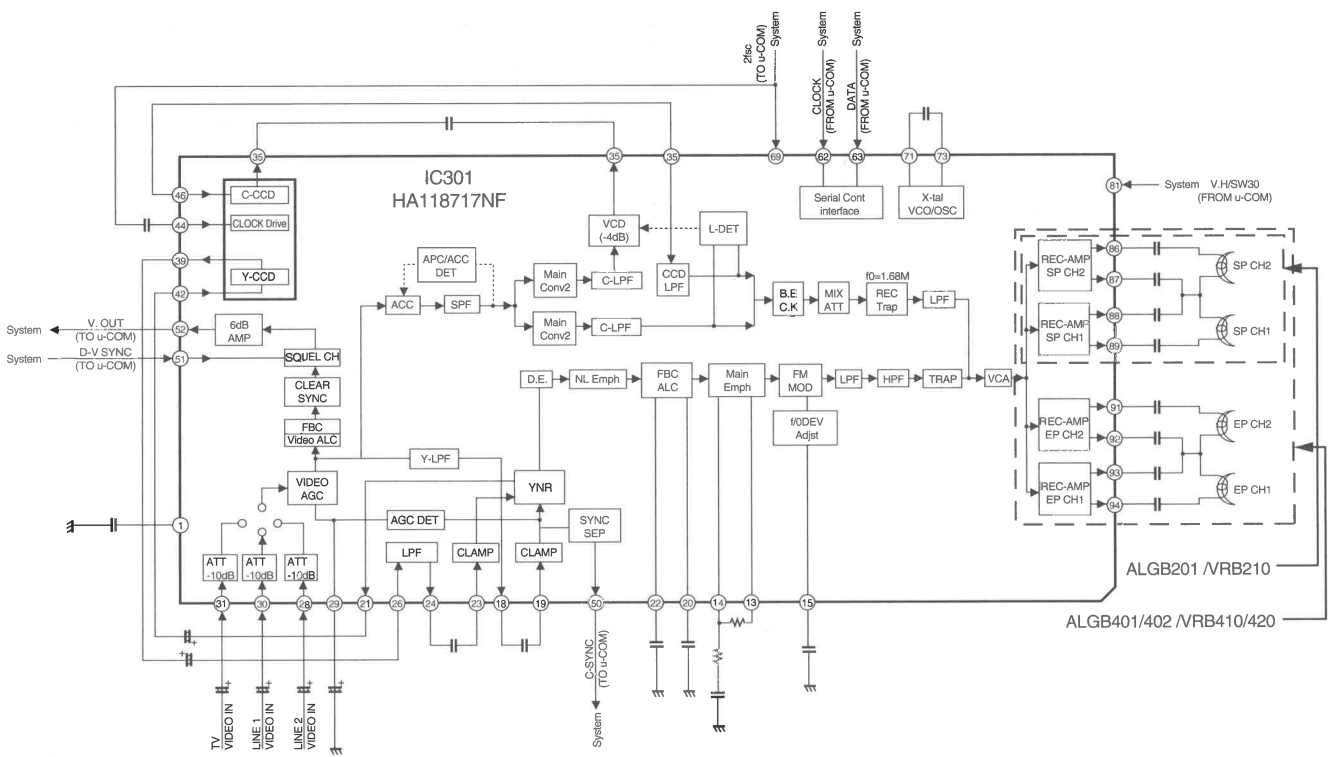
2b. Tuner/IF Block Diagram (ALGB402, VRB420)



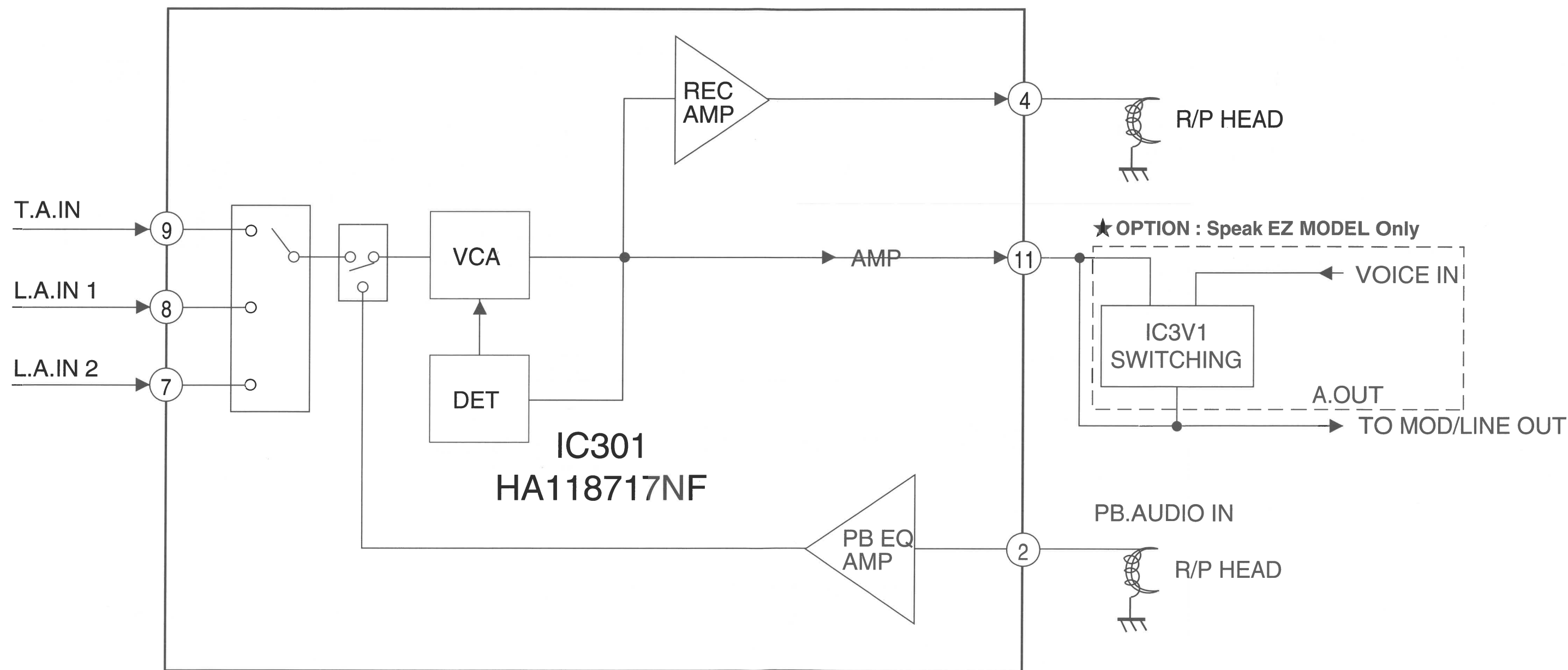
3. AVCP Block Diagram
1) PB Mode



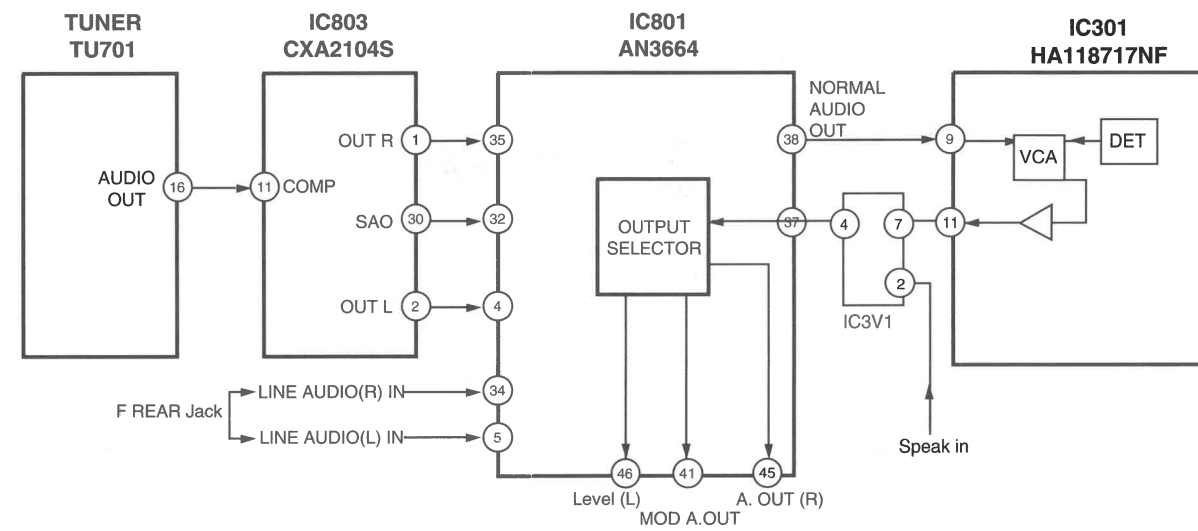
2) REC Mode



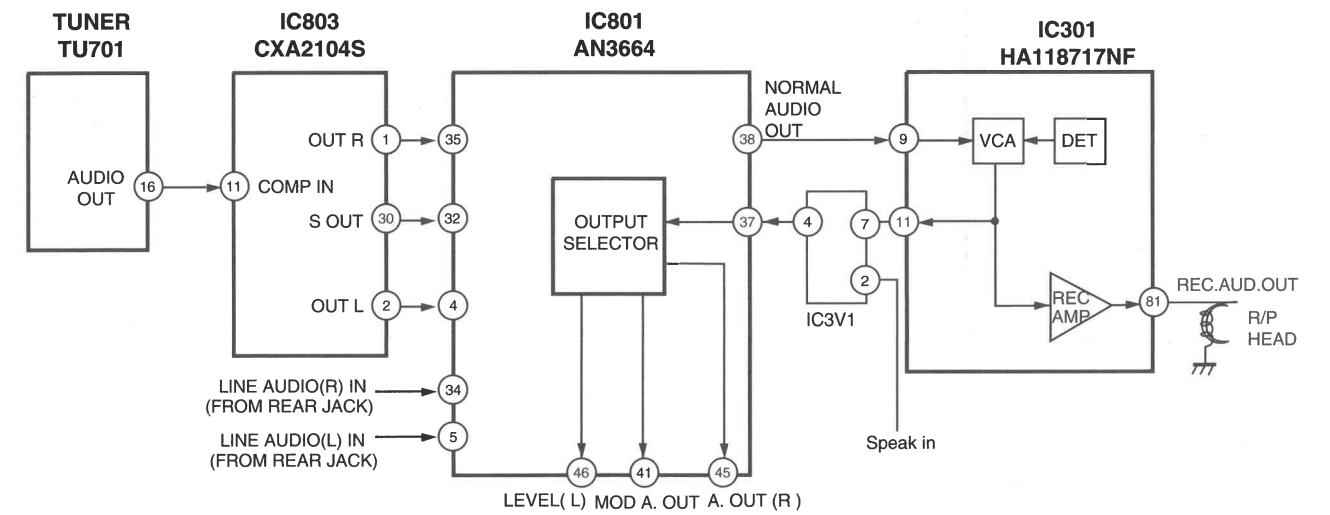
4. Audio Block Diagram (ALGB201/401/ VRB210/410)



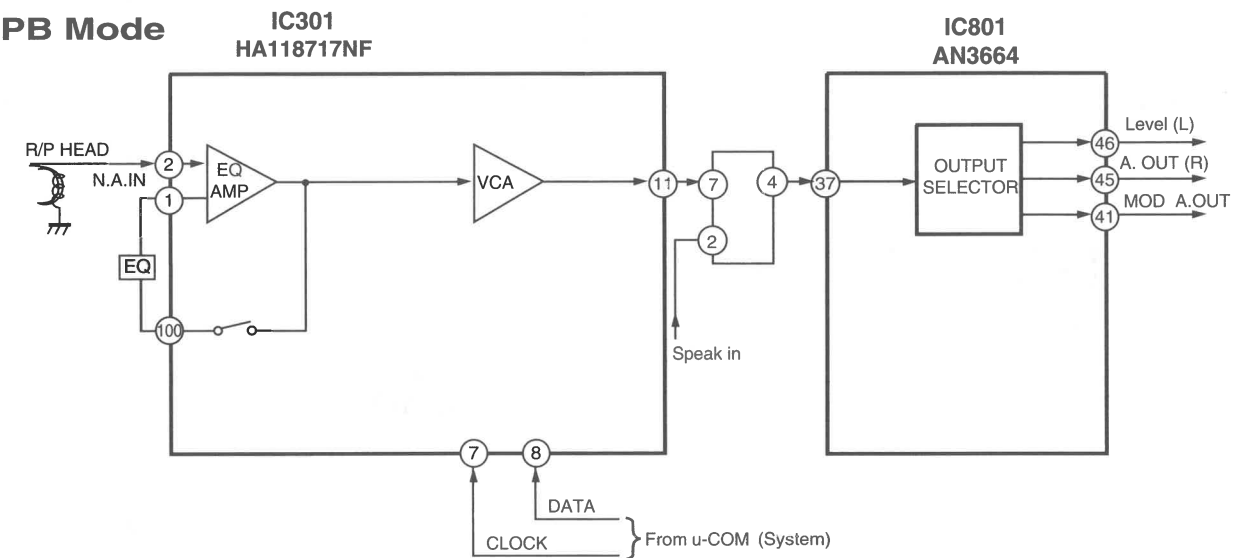
1) EE Mode



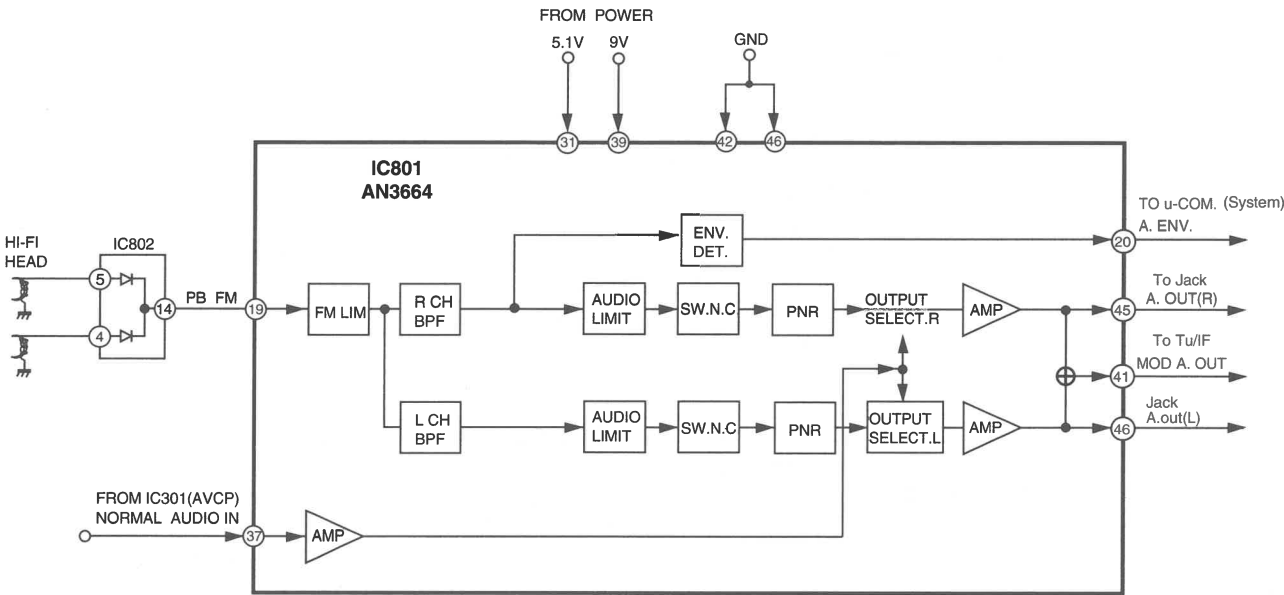
3) REC Mode



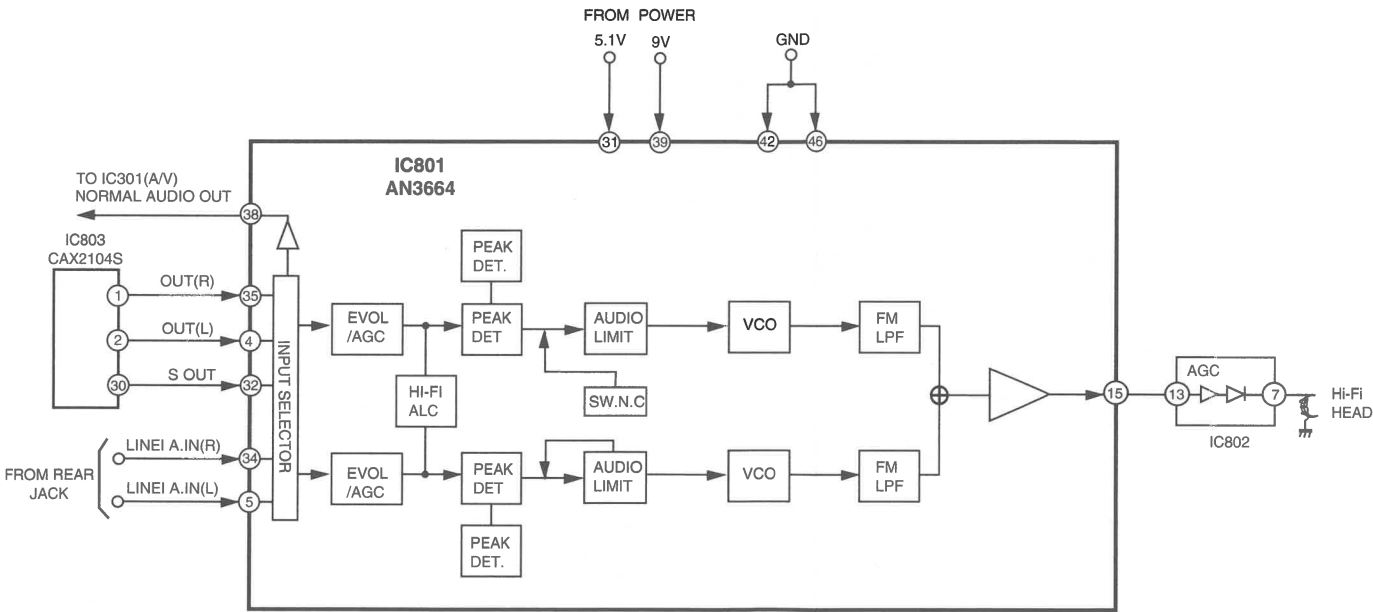
2) PB Mode



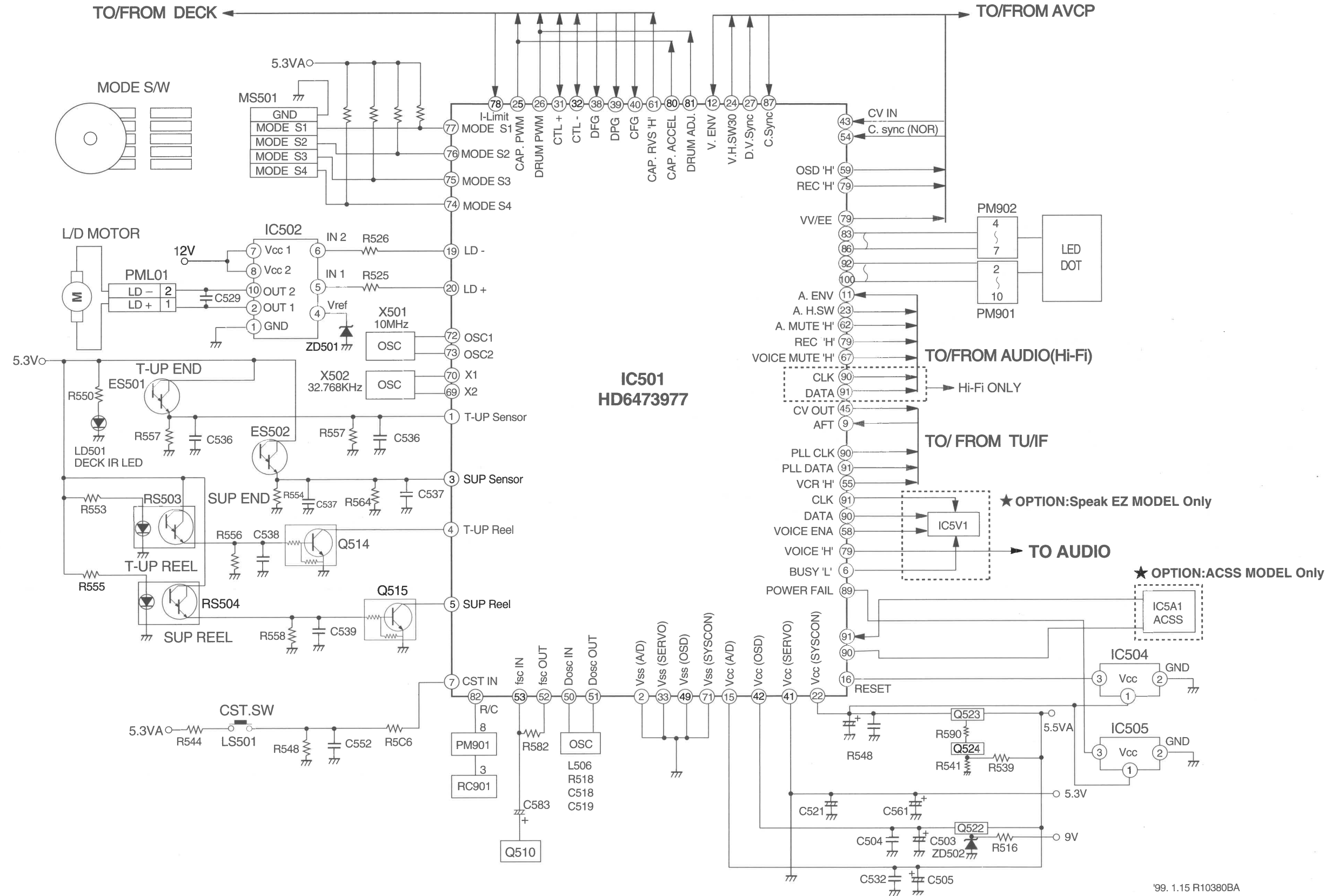
5. Hi-Fi Block Diagram (ALGB402/ VRB420)
2) PB Mode



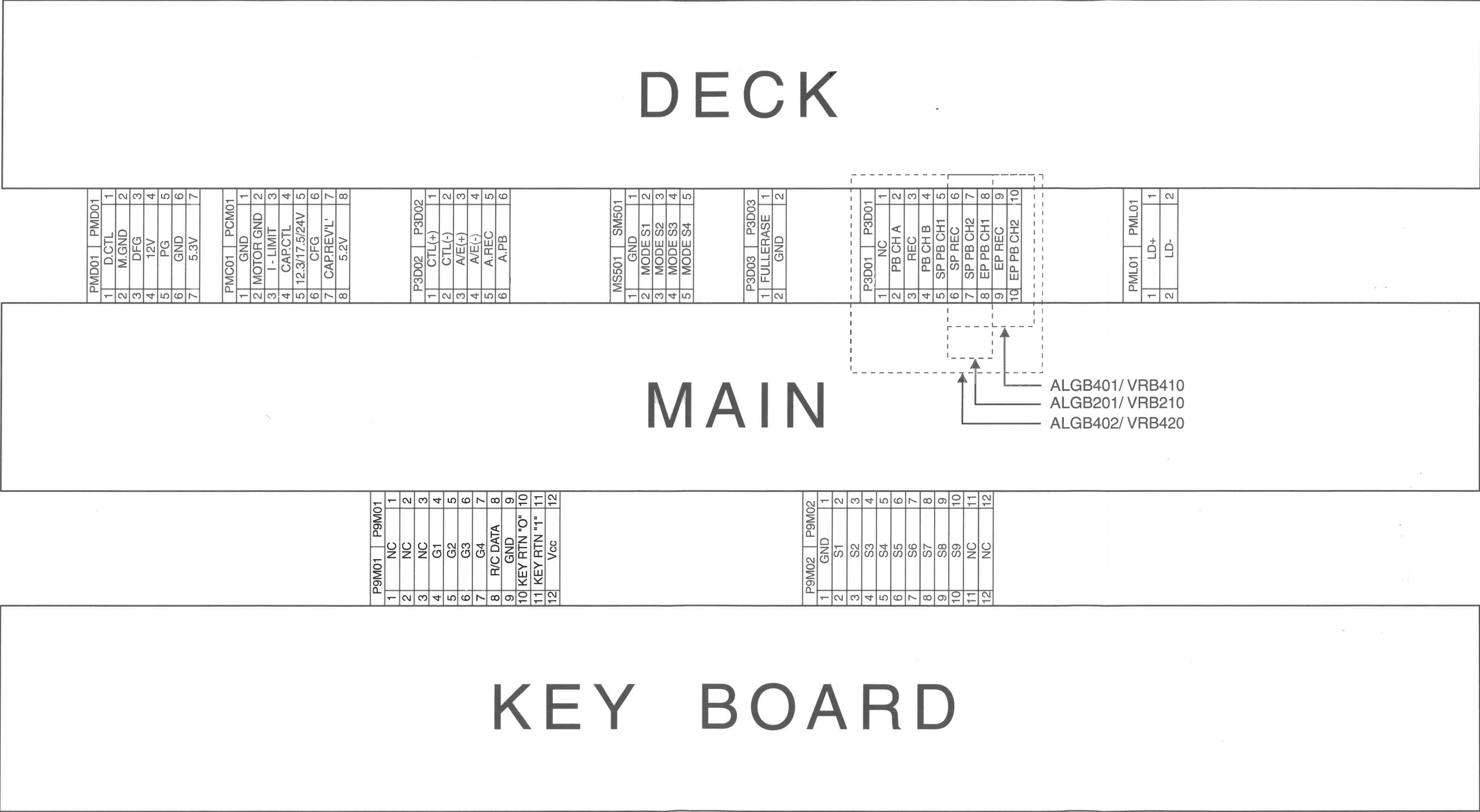
3) REC Mode



6. System Block Diagram

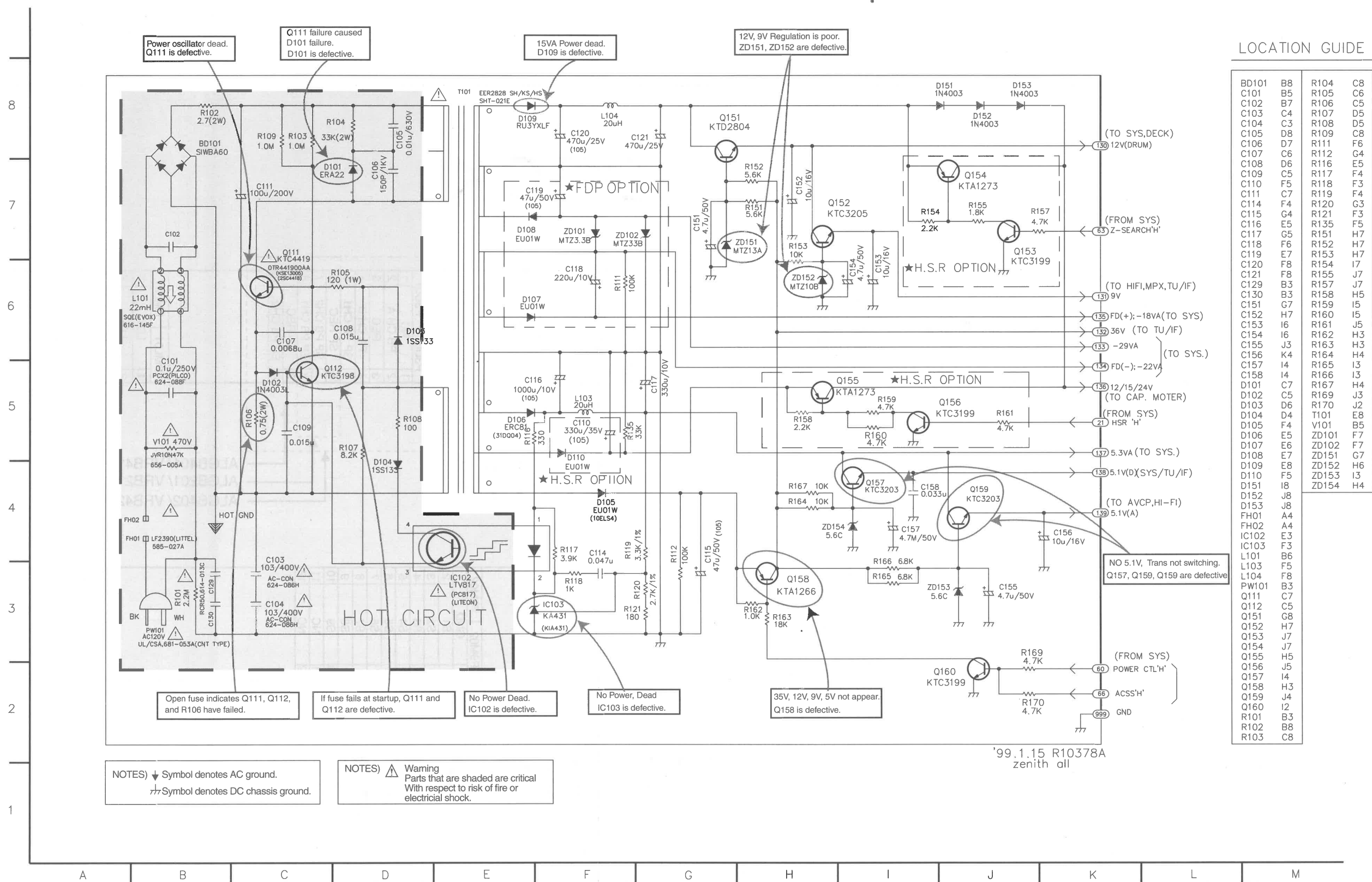


1. Overall Wiring Diagram

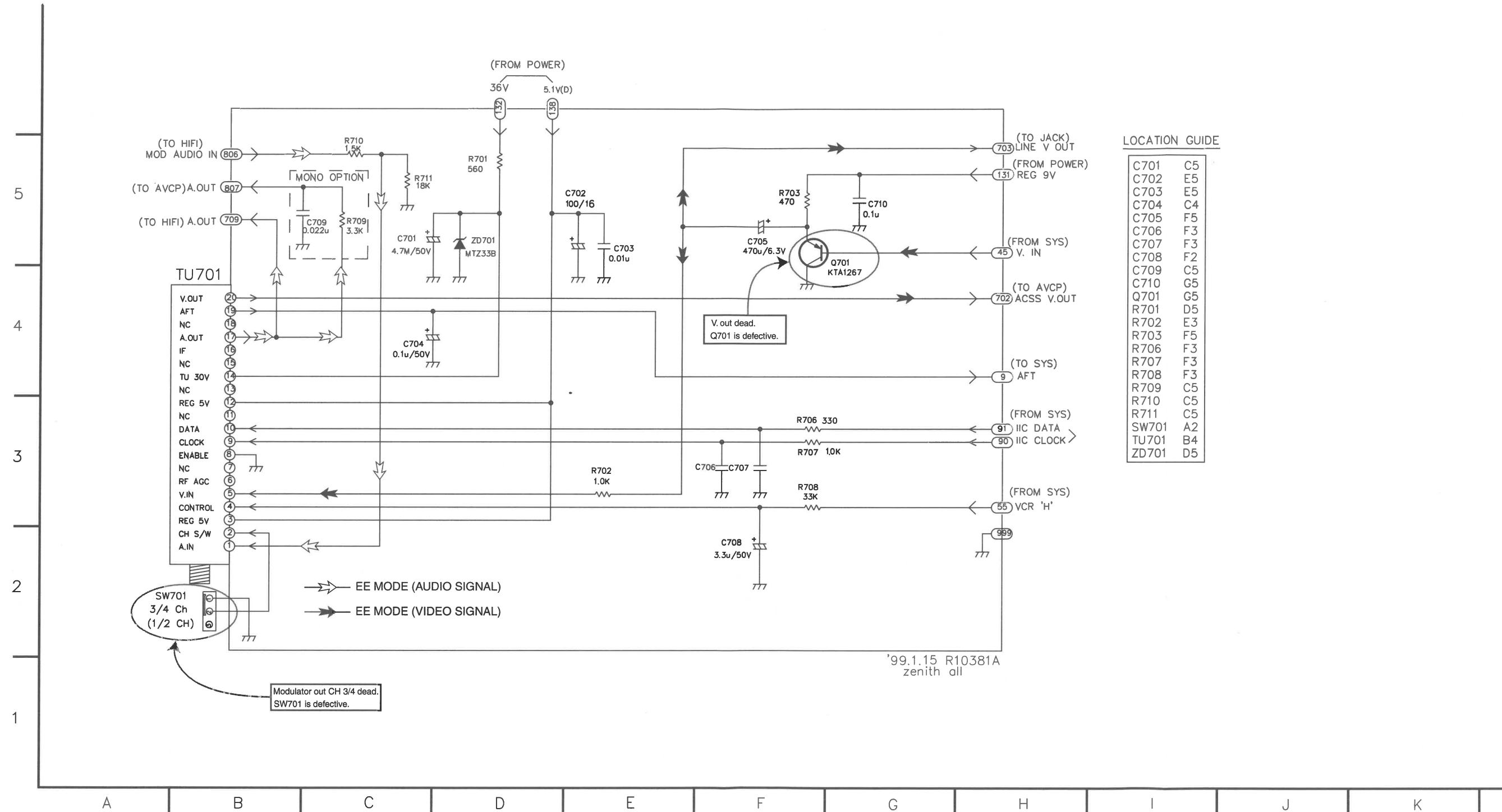


2. Power (SMPS) Circuit Diagram

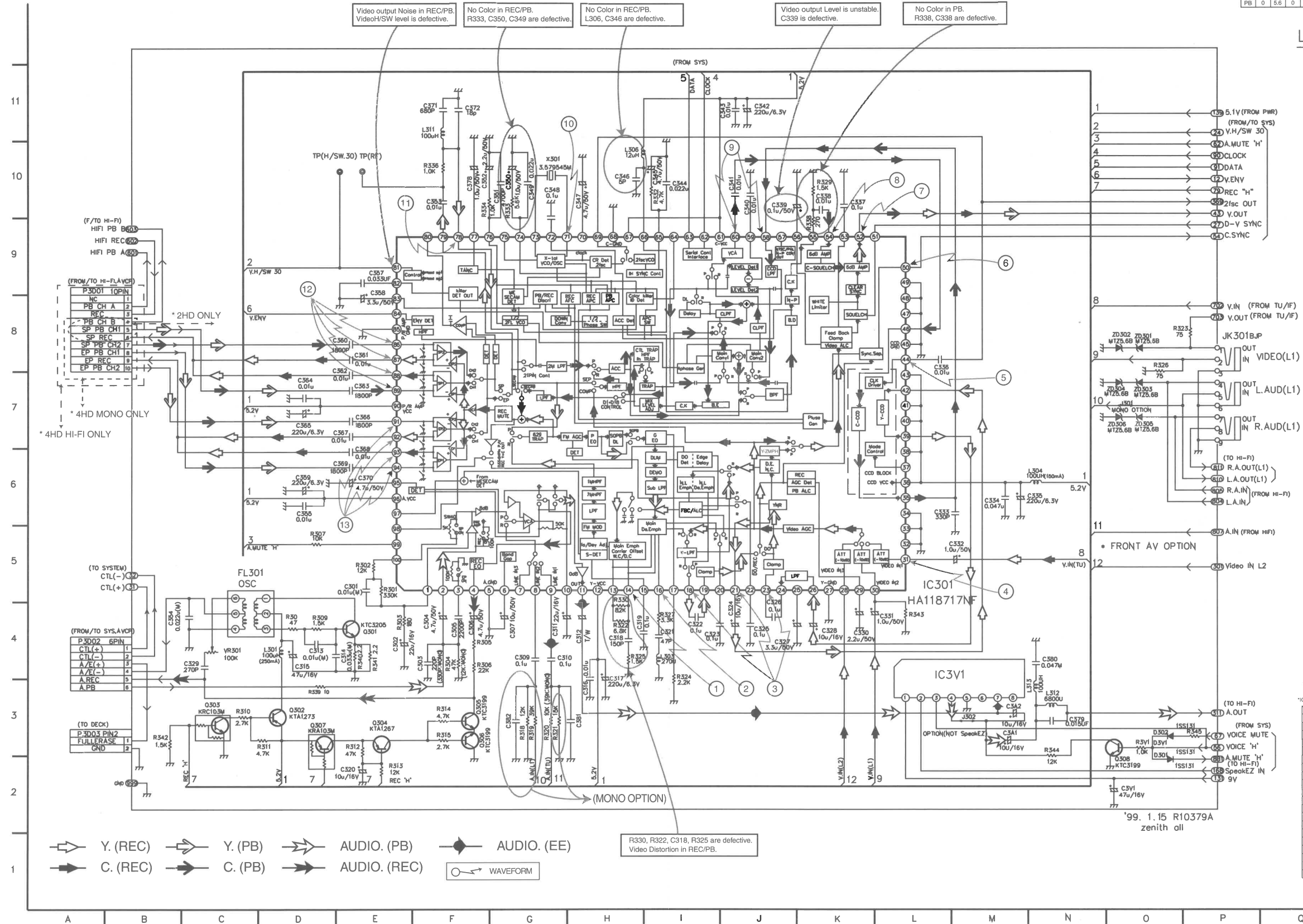
3) REC Mode



3. Tu/IF Curcuit Diagram



4.AVCP Circuit Diagram



REC	0	2.5	0	0
PB	0	0	0	0
5				
IC3V1				
1				
REC	0	5.6	0	2
PB	0	5.6	0	2

*AVCP 1H Voltage Sheet

	Base		Emitter		Collector	
	REC	PB	REC	PB	REC	PB
Q301	0.5	0.3	0.1	0	4.5	0.3
Q302	4	4.9	4.8	5.0	4.8	0.3
Q303	4.8	0	0	0	0	4.9
Q304	4.8	4.2	4.8	4.9	12.8	4.9
Q305	-13	0.7	-6.3	0	0	0
Q306	-13	0.7	-6.3	0	0	0
Q307	4.8	0	4.8	5	4.8	4.9
Q308	0.7	0	0	0	0	0

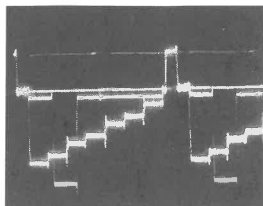
LOCATION GUIDE

C301	E5	D3V1	O3
C302	E4	F1301	O3
C303	F4	I0301	L5
C304	F4	IC3V1	L4
C305	F4	J301	O7
C306	F4	J302	M3
C307	G4	J3A1	M3
C308	G4	J301	P3
C310	G4	L301	D4
C311	G4	L303	I4
C312	H4	L304	N6
C313	D4	L306	H10
C314	E4	L311	F11
C315	D4	L312	N3
C316	H3	L313	N3
C317	H3	P3001	A9
C318	H4	P3002	A4
C319	H4	P3003	A5
C320	I2	Q301	E2
C321	I4	Q302	D3
C322	I4	Q303	C3
C323	I4	Q304	E3
C324	J4	Q305	F3
C325	J4	Q306	F3
C326	J4	Q307	D3
C327	J4	Q308	O2
C328	K4	R301	E5
C329	C4	R302	E5
C330	K4	R303	E4
C331	L4	R304	F4
C332	L5	R305	F4
C333	L6	R306	F4
C334	M6	R307	D5
C335	N6	R308	D4
C336	L6	R309	D4
C337	K10	R310	C3
C338	K10	R311	D3
C339	J10	R312	E3
C340	J10	R313	E2
C341	J10	R314	F3
C342	J11	R315	F3
C343	I10	R316	C3
C344	I10	R319	G3
C345	I10	R320	G3
C346	H10	R321	G3
C347	H10	R322	H4
C348	G10	R323	H8
C349	G10	R324	I4
C350	G10	R325	H4
C351	G10	R326	H8
C352	F10	R327	I4
C353	F10	R329	H10
B4		R330	K5
C355	D6	R332	I10
C357	E9	R333	G10
C358	E8	R334	F10
C359	D8	R336	F10
C360	E8	R338	K9
C361	E8	R339	D3
C362	D7	R340	E4
C363	E7	R341	E4
C364	D7	R342	B3
C365	D7	R343	L4
C366	D7	R344	N3
C367	D7	R345	P3
C368	E6	R3V1	O3
C369	D6	VR301	C4
C370	E6	X301	G10
C371	F11	X301	G10
C372	F11	ZD302	O8
C376	F10	ZD303	O7
C379	N3	ZD304	O7
C380	N4	ZD305	O7
C381	H3	ZD306	O7
C382	G3		
C3A1	M3		
C3V1	O2		
D301	O2		
D302	O3		

IC301(NA18717NP)														
	REC	PB	REC	PB	REC	PB	REC	PB	REC	PB	REC	PB		
1	2.5	2.5	21	2.1	2.1	5.1	5.21	6.1	5	8.1	-	-		
2	2.5	2.5	22	2.2	2.2	4.2	4.17	1.7	6.2	-	8.2	1.1	1.1	
3	0	0	23	2.8	2.8	4.3	5.1	5.1	6.3	-	8.3	-	-	
4	2.5	2.5	24	2.1	2.1	4.4	2.5	2.5	6.4	-	8.4	0	-	
5	0	0	25	1.4	1.4	4.5	0	0	6.5	-	2.3	8.5	0	
6	2.8	2.8	26	1.5	1.5	4.6	1.9	1.9	6.6	5.0	8.6	2.3	2.1	
7	2.5	2.5	27	0	0	4.7	0	0	6.7	5	8.7	2.3	2.1	
8	2.5	2.5	28	2.8	2.8	4.8	0	0	6.8	0	8.8	2.1	2.1	
9	2.5	2.5	29	1.9	1.9	4.9	0	0	6.9	2.5	8.9	2.3	2.1	
10	2.5	2.5	30	2.8	2.8	5.0	-	-	7.0	2.5	2.5	9.1	5.1	
11	2.5	2.5	31	-	-	5.1	-	-	7.1	2.1	2.1	9.1	5.1	
12	5	5	32	-	-	5.2	-	-	7.2	2.2	2.2	9.2	2.3	
13	2.1	1.6	33	-	-	5.3	2.8	2.8	7.3	2.1	2.1	9.3	2.3	
14	2.1	1.6	34	-	-	5.4	1.9	1.9	7.4	2.7	9.4	2.3	2.1	
15	2.3	2.3	35	2.7	2.7	5.5	2.1	2.1	7.5	2.1	2.1	9.5	4.1	
16	0	0	36	5.1	5.1	5.6	2.8	2.8	7.6	-	9.6	5	5	
17	1.8	1.8	37	1.7	1.7	5.7	0	0	7.7	-	9.7	-	-	
18	2.1	2.1	38	5.1	5.1	5.8	2.8	2.8	7.8	2.8	2.8	9.8	-	
19	2.8	2.8	39	2.7	2.7	5.9	2.8	2.8	7.9	-	2.1	9.9	-	
20	2.8	2.8	40	5.1	5.1	6.0	2.8	2.8	8.0	-	-	10.0	2.5	2.5

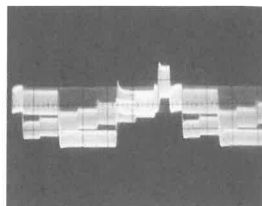
* IC301 Waveform

①



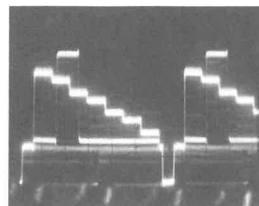
IC301 ⑭ Pin
100mV/10msec DIV
VV/EE
(Main De-Emphasis out)

②



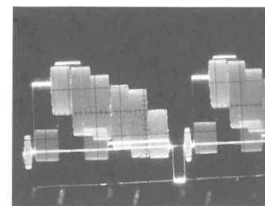
IC301 ⑯ Pin
100mV/10msec DIV
PB
(Main De-Emphasis Peacking)

③



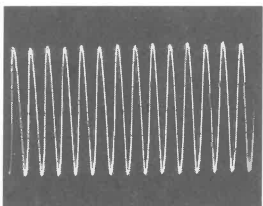
IC301 ⑱, ㉑, ㉓ Pin
100mV/10msec DIV
VV/EE
(Clamp Drive IN ⑱ Pin
Y-out(to 1H CCD) ㉑ Pin
Y-out(from 1H CCD) ㉓ Pin)

④



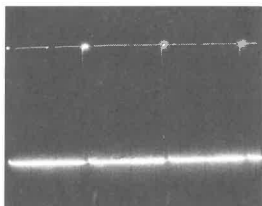
IC301 ㉓ Pin
200mV/10msec DIV
EE
(VIDEO IN)

⑤



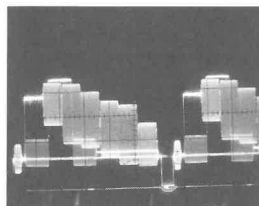
IC301 ④④ Pin
100mV/0.2msec DIV
REC/PB
(2fsc)

⑥



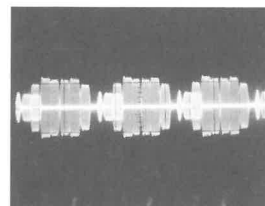
IC301 ⑤① Pin
1.0V/20msec DIV
VV/EE
(C-SYNC OUT)

⑦



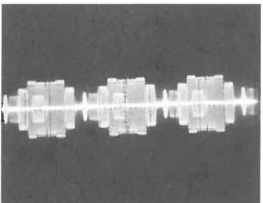
IC301 ⑤② Pin
500mV/10msec DIV
VV/EE
(VIDEO OUT)

⑧



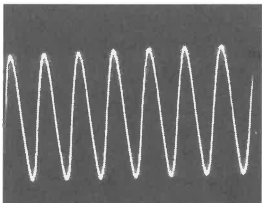
IC301 ⑤④ Pin
200mV/20msec DIV
PB
(C.OUT)

⑨



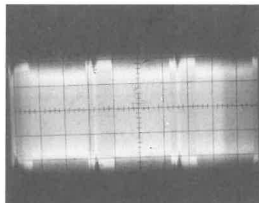
IC301 ⑤⑧, ⑥① Pin
200mV/20msec DIV
VV/EE
(from 1H CCD ⑤⑧ Pin
to 1H CCD ⑥① Pin)

⑩



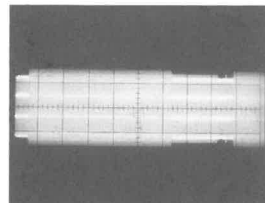
IC301 ⑦① Pin
100mV/0.2msec DIV
PB/REC
(3.58MHz X-TAL IN)

⑪



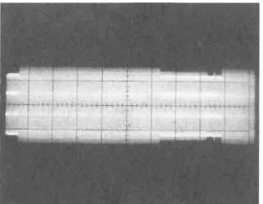
IC301 ⑦⑧ Pin
100mV/5msec DIV
PB
(PB RF out)

⑫



IC301 ⑧⑥, ⑧⑦, ⑧⑧, ⑧⑨ Pin
500mV/2msec DIV
SP REC
(REC RF)

⑬



IC301 ⑨①, ⑨②, ⑨③, ⑨④ Pin
500mV/2msec DIV
EP REC
(REC RF)

5. Hi-Fi Circuit Diagram(ALGB402/ VRB420)

*IC Voltage Chart

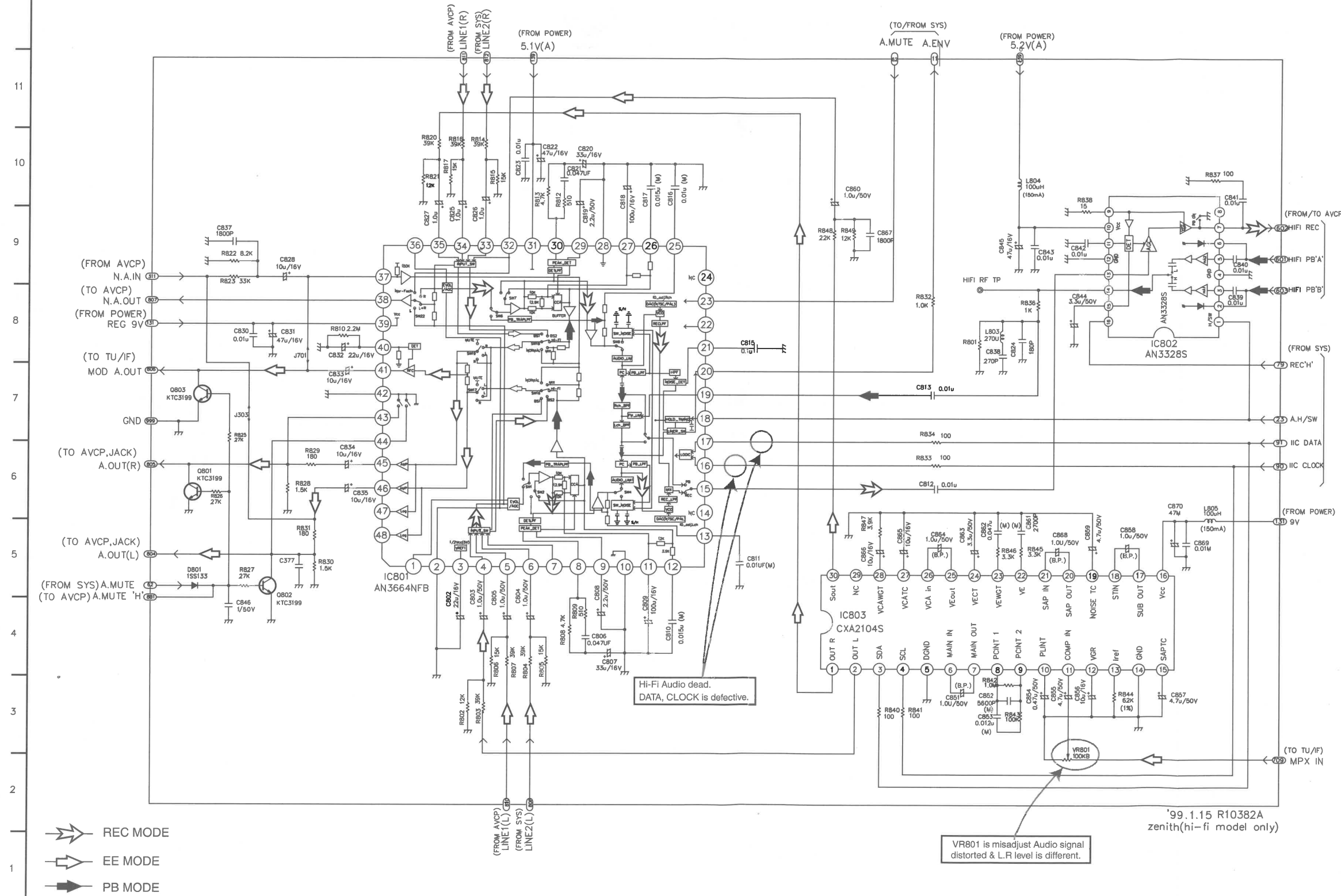
PB	1.34	1.55	4.71	4.54	0	0	0	0	4.55	2.5	9.37	7.82	2.60	0.4	2.61	2.61	2.60	2.80	5.50	2.61	1.66	0	2.60	2.61	
REC	1.15	1.21	4.65	4.54	0	0	0	0	4.50	1.04	9.37	7.82	2.60	0.59	2.59	2.59	2.59	2.59	2.59	2.59	2.72	1.53	0	2.60	2.61
	45								40								35								
ICB0 (AN3864)																									
PB	0.45	0	2.62	2.6	2.6	2.6	2.6	2.6	2.6	1.63	0	2.6	2.6	0	0	0	0	4.9	4.9	2.55	2.63	1.96	0.09	0.07	0.07
REC	1.05	0	2.56	2.59	2.59	2.59	2.59	2.59	2.68	1.58	0	2.57	2.57	2.57	0	2.63	4.8	4.7	2.56	2.63	1.96	0.09	0.07	0.07	0.07
	5								10								15								
ICB1 (AN3865)																									
PB	0.45	0	2.62	2.6	2.6	2.6	2.6	2.6	2.6	1.63	0	2.6	2.6	0	0	0	0	4.9	4.9	2.55	2.63	1.96	0.09	0.07	0.07
REC	1.05	0	2.56	2.59	2.59	2.59	2.59	2.59	2.68	1.58	0	2.57	2.57	2.57	0	2.63	4.8	4.7	2.56	2.63	1.96	0.09	0.07	0.07	0.07
	5								10								15								

Timing diagram for IC803 (CXA2104S) showing REC, 30, 0, 3.99, 1.72, 4.04, 4.03, 1.72, 4.04, 3.95, 4.04, 3.95, 3.75, 4.04, 40.3, 9.2, 5, 10, and REC, 4.05, 4.05, 4.82, 4.84, 0, 4, 0.03, 3.78, 4.05, 3.88, 5.2, 4.03, 1.25, 1.25, 0, 4.3.

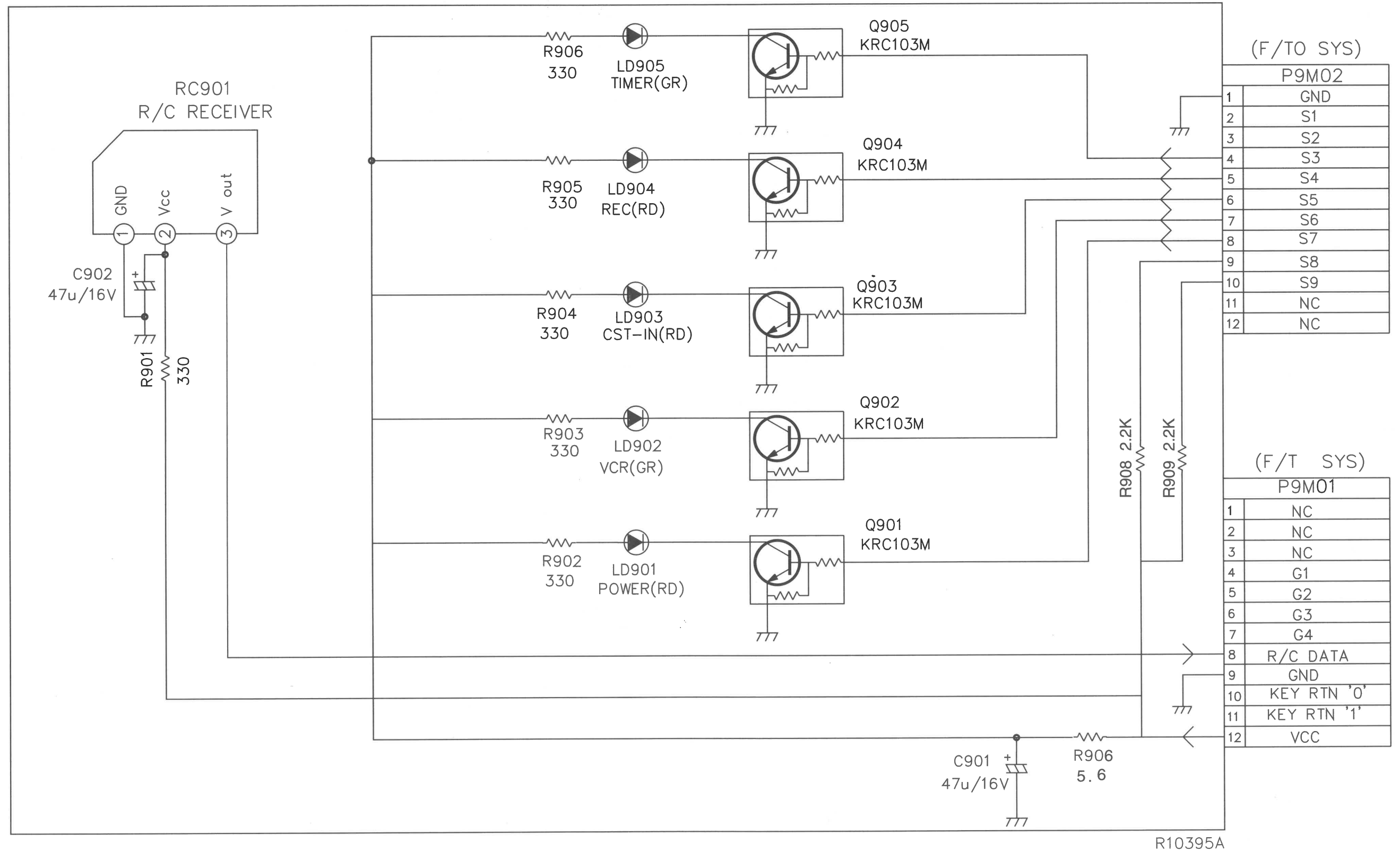
PB	0	0	2	1	0	3.4	5.2	0
REC	5	0.8	1.8	1.8	0	3	5	0
15					10			
IC802(AN3328S)								
5								
PB	0.5	0	0.6	0	0.6	0	0	2.7
REC	0.5	4	0.6	0	0.6	4	4	2.5

LOCATION GUIDE

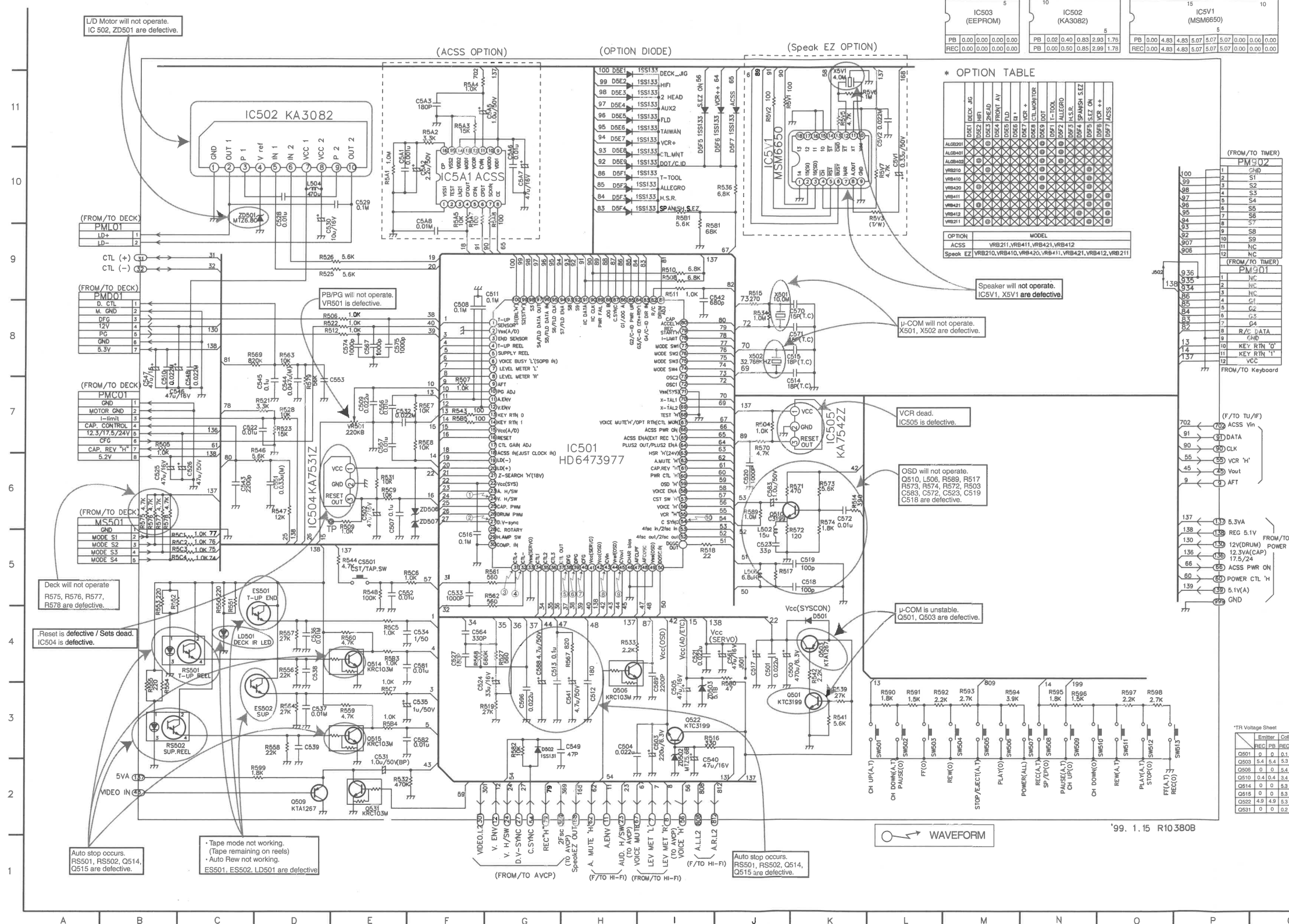
C377	D5	R816	F10
C803	F4	R817	F10
C804	G4	R820	E10
C805	F4	R821	E10
C806	H4	R822	C9
C807	H4	R823	C8
C808	H4	R826	C6
C809	H4	R826	C6
C810	I4	R827	C5
C811	J5	R828	D6
C812	L6	R829	D5
C813	L7	R830	D5
C815	J8	R831	D5
C816	I9	R832	L8
C817	H9	R833	L6
C818	H9	R834	L6
C819	H9	R836	M6
C820	G10	R837	O10
C821	G10	R838	N9
C822	G10	R840	K3
C823	G10	R841	L3
C824	M8	R842	M3
C825	M9	R843	M3
C826	F9	R844	N3
C827	F9	R845	M5
C828	D9	R846	M5
C830	C8	R847	K5
C831	C8	R848	J9
C832	D7	R849	K9
C833	D7	R850	E4
C834	D6	R851	D4
C835	E6	VR801	N2
C836	C9		
C838	M8		
C839	P8		
C840	P9		
C841	P10		
C842	N9		
C843	M9		
C844	N8		
C845	M9		
C846	C4		
C848	E4		
C850	D4		
C851	L3		
C852	M3		
C853	M3		
C854	M3		
C855	N3		
C856	N3		
C857	O3		
C858	N5		
C859	N5		
C860	K10		
C861	M5		
C862	M5		
C863	L5		
C864	L5		
C865	L5		
C866	K5		
C867	K9		
C868	M5		
C869	O5		
C870	O6		
C801	B5		
IC801	E5		
IC802	O8		
IC803	K4		
J303	C7		
J701	D7		
L803	M8		
L804	M10		
L805	O6		
R801	C6		
R802	D4		
R803	B7		
R801	L8		
R802	F3		
R803	F3		
R804	G3		
R805	G3		
R806	F3		
R807	G3		
R808	G4		
R809	G4		
R810	L8		
R812	G9		
R813	G9		
R814	F10		



6.Display Circuit Diagram



System Circuit Diagram



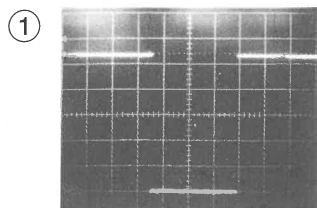
LOCATION GUIDE

C500	K4	D5E8	H10	R5E7	H4
C501	J4	D5E9	H10	R5E8	F4
C502	E6	D5F1	H10	R5E9	C8
C503	I3	D5F2	H10	R570	J7
C504	H3	D5F3	H10	R571	J6
C505	I3	D5F4	H10	R572	J5
C507	E5	D5F5	I10	R573	K6
C508	F8	D5F6	J10	R574	K6
C509	F7	D5F7	J10	R575	K6
C510	B7	D5E0	C5	R576	B6
C511	G9	D5E02	C3	R577	B6
C512	H3	IC501	H7	R578	B6
C513	G4	IC502	C11	R579	D7
C514	J7	IC503	D8	R580	J3
C515	J8	IC505	F7	R581	J9
C516	F5	IC5A1	F10	R582	G3
C517	J4	IC5V1	J10	R589	J6
C518	J4	J501	J4	R590	L3
C519	K5	J502	O9	R591	L3
C520	J6	L506	J5	R592	L3
C521	L4	L501	C4	R593	M3
C522	C7	M5501	A6	R594	M3
C523	P01	PM001	P10	R595	M3
C524	F3	PM902	P10	R596	N3
C525	B6	PMC01	A7	R597	O3
C526	C6	PMD01	A9	R598	O3
C527	J4	PM01	A9	R599	O2
C528	D10	O501	J3	R5A1	E10
C529	D10	O503	K4	R5A2	F11
C530	E9	O505	H3	R5A3	F11
C531	E3	O505	D2	R5A4	F11
C532	E7	O510	J6	R5A5	F9
C533	F5	O514	E4	R5A7	F9
C534	F4	O515	E3	R5A8	G9
C535	F3	O522	I3	R5B1	I10
C536	F4	O523	E2	R5C1	B5
C537	D3	R503	J5	R5B4	E3
C538	D4	R504	J7	R5B5	F7
C539	D3	R505	B7	R5C1	B5
C540	D2	R506	D8	R5C2	B5
C541	D3	R507	F7	R5C3	B5
C542	J9	R508	J9	R5C4	B5
C543	C6	R509	E6	R5C5	E4
C544	D7	R510	J9	R5C6	E5
C545	B7	R511	D3	R5C7	E3
C546	B7	R512	D8	R5C9	E6
C547	B7	R515	J9	R5E7	F7
C548	C7	R516	I3	R5E8	F7
C549	J5	R517	J5	R5E9	J11
C551	D6	R518	I5	R5V2	J11
C552	E5	R519	F3	R5V3	L10
C553	D7	R521	O7	R5V5	K10
C556	E7	R522	D8	R5V6	K11
C557	E7	R523	D7	R5V7	L11
C561	J4	R524	D10	R5S01	C4
C564	F4	R525	O9	R5S02	B3
C567	E8	R526	O9	R5W01	L3
C568	J7	R527	D4	R5W02	L3
C571	J8	R528	O7	R5W03	L3
C572	K6	R531	E6	R5W04	M3
C574	E8	R532	E2	R5W05	M3
C575	E4	R533	H4	R5W06	M3
C581	F4	R534	J8	R5W07	N3
C582	F3	R536	J10	R5W08	N3
C583	J6	R539	K3	R5W09	N3
C588	G4	R541	K3	R5W10	O3
C589	I3	R542	K3	R5W11	O3
C596	G3	R543	F7	R5W12	O3
C5A1	E10	R544	E5	R5W13	P3
C5A2	F10	R546	O7	R5V01	E7
C5A3	I1	R547	O6	R5V02	J9
C5A5	G11	R548	E5	X502	J8
C5A6	G10	R550	C4	X5V1	K11
C5A7	G10	R551	C4	ZD501	C10
C5A8	F10	R552	B4	ZD502	I2
C5A9	L10	R553	B4	ZD503	I3
C5V2	L11	R554	B3	ZD506	F6
C5S01	E5	R555	B3	ZD507	F6
D501	K4	R556	D4	C3	
D502	C3	R557	D4	C3	
D5E1	H11	R558	D3		
D5E2	H11	R559	E3		
D5E3	H11	R560	E4		
D5E4	H11	R561	E5		
D5E5	H11	R562	E5		
D5E6	H11	R563	D8		
D5E7	H11	R564	D3		

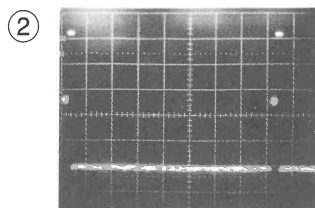
	Emitter		Collector		Base	
	REC	PB	REC	PB	REC	PB
Q501	0	0	0.1	0.1	£7	0.7
Q503	5.4	5.4	5.3	5.3	3.6	3.6
Q506	0	0	5.4	5.4	4.6	4.6
Q510	0.4	0.4	3.4	3.4	0	1.0
Q514	0	0	5.3	5.3	5.1	5.1
Q515	0	0	5.3	5.3	£1	5.1
Q522	4.9	4.9	5.3	5.3	5.6	5.6
Q531	0	0	0.2	0.2	5.0	5.0

[illegible]

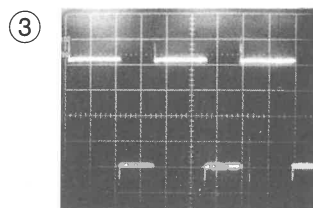
* IC501 Waveform photographs



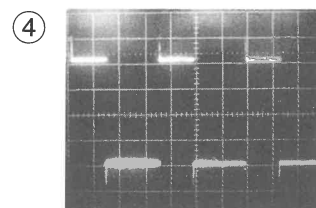
IC501 Pin ⑭
1V/5mS
REC/PB modes
(V.H/SW)



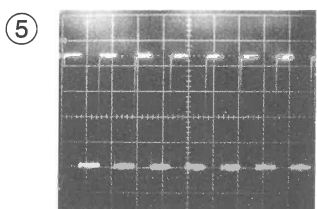
IC501 Pin ⑳
1V/2mS
QUE/REV modes
(D.V-SYNC)



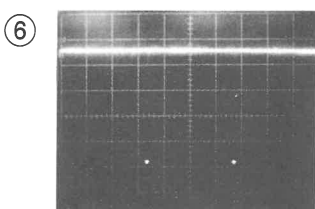
IC501 Pin ㉑
1V/10mS
REC mode
(CTL+)



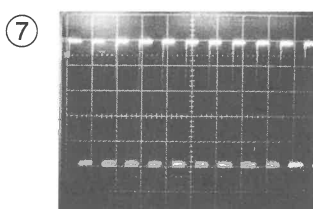
IC501 Pin ㉒
1V/10mS
REC mode
(CTL-)



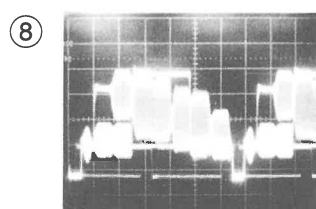
IC501 Pin ㉘
1V/1mS
REC/PB mode
(DFG)



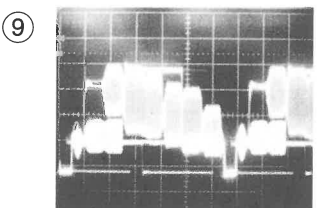
IC501 Pin ㉙
1V/10uS
REC/PB modes
(DPG)



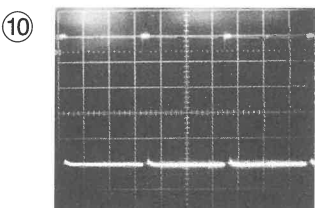
IC501 Pin ㉚
1V/1mS
REC/PB modes
(CFG)



IC501 Pin ㉛
100mV/10uS
EE/PB modes
(V-IN)



IC501 Pin ㉝
500MV/10uS
EE/PB modes
(V-OUT)



IC501 Pin ㉞
1V/20uS
EE/PB modes
(C-SYNC)

1. Main P.C.Board



B0101	A6	C361	F5	C966	F7	C061	H3	L701	H5	R770	B7	R059	F7	R710	H6	Z0306	G7
A001	A6	C362	F5	C541	F5	C062	H3	L803	G03	R201	E6	R560	D7	R711	H6	Z031	G7
A002	A6	C363	F5	C542	F5	C063	H3	L804	G03	R202	E6	R561	D7	R712	H6	Z032	G7
A003	A6	C364	F5	C543	F5	C064	H3	L805	G03	R303	E6	R562	D7	A002	G5	Z033	G7
A004	A6	C365	F5	C544	F5	C065	H3	L806	G03	R304	E6	R563	D7	A003	G5	Z034	G7
A005	B5	C366	F5	C545	F5	C066	H3	L807	G03	R305	E6	R564	D7	A004	G5	Z035	G7
A006	B5	C367	F5	C546	F5	C067	H3	L808	G03	R306	E6	R565	D7	A005	G5	Z036	G7
A007	B5	C368	F5	C547	F5	C068	H3	L809	G03	R307	E6	R566	D7	A006	G5	Z037	G7
A008	B5	C369	F5	C548	F5	C069	H3	L810	G03	R308	E6	R567	D7	A007	G5	Z038	G7
A009	B5	C370	F5	C549	F5	C070	H3	L811	G03	R309	E6	R568	D7	A008	G5	Z039	G7
A010	B5	C371	F5	C550	F5	C071	H3	L812	G03	R310	E6	R569	D7	A009	G5	Z040	G7
A011	B5	C372	F5	C551	F5	C072	H3	L813	G03	R311	E6	R570	D7	A010	G5	Z041	G7
A012	B5	C373	F5	C552	F5	C073	H3	L814	G03	R312	E6	R571	D7	A011	G5	Z042	G7
A013	B5	C374	F5	C553	F5	C074	H3	L815	G03	R313	E6	R572	D7	A012	G5	Z043	G7
A014	B5	C375	F5	C554	F5	C075	H3	L816	G03	R314	E6	R573	D7	A013	G5	Z044	G7
A015	B5	C376	F5	C555	F5	C076	H3	L817	G03	R315	E6	R574	D7	A014	G5	Z045	G7
A016	B5	C377	F5	C556	F5	C077	H3	L818	G03	R316	E6	R575	D7	A015	G5	Z046	G7
A017	B5	C378	F5	C557	F5	C078	H3	L819	G03	R317	E6	R576	D7	A016	G5	Z047	G7
A018	B5	C379	F5	C558	F5	C079	H3	L820	G03	R318	E6	R577	D7	A017	G5	Z048	G7
A019	B5	C380	F5	C559	F5	C080	H3	L821	G03	R319	E6	R578	D7	A018	G5	Z049	G7
A020	B5	C381	F5	C560	F5	C081	H3	L822	G03	R320	E6	R579	D7	A019	G5	Z050	G7
A021	B5	C382	F5	C561	F5	C082	H3	L823	G03	R321	E6	R580	D7	A020	G5	Z051	G7
A022	B5	C383	F5	C562	F5	C083	H3	L824	G03	R322	E6	R581	D7	A021	G5	Z052	G7
A023	B5	C384	F5	C563	F5	C084	H3	L825	G03	R323	E6	R582	D7	A022	G5	Z053	G7
A024	B5	C385	F5	C564	F5	C085	H3	L826	G03	R324	E6	R583	D7	A023	G5	Z054	G7
A025	B5	C386	F5	C565	F5	C086	H3	L827	G03	R325	E6	R584	D7	A024	G5	Z055	G7
A026	B5	C387	F5	C566	F5	C087	H3	L828	G03	R326	E6	R585	D7	A025	G5	Z056	G7
A027	B5	C388	F5	C567	F5	C088	H3	L829	G03	R327	E6	R586	D7	A026	G5	Z057	G7
A028	B5	C389	F5	C568	F5	C089	H3	L830	G03	R328	E6	R587	D7	A027	G5	Z058	G7
A029	B5	C390	F5	C569	F5	C090	H3	L831	G03	R329	E6	R588	D7	A028	G5	Z059	G7
A030	B5	C391	F5	C570	F5	C091	H3	L832	G03	R330	E6	R589	D7	A029	G5	Z060	G7

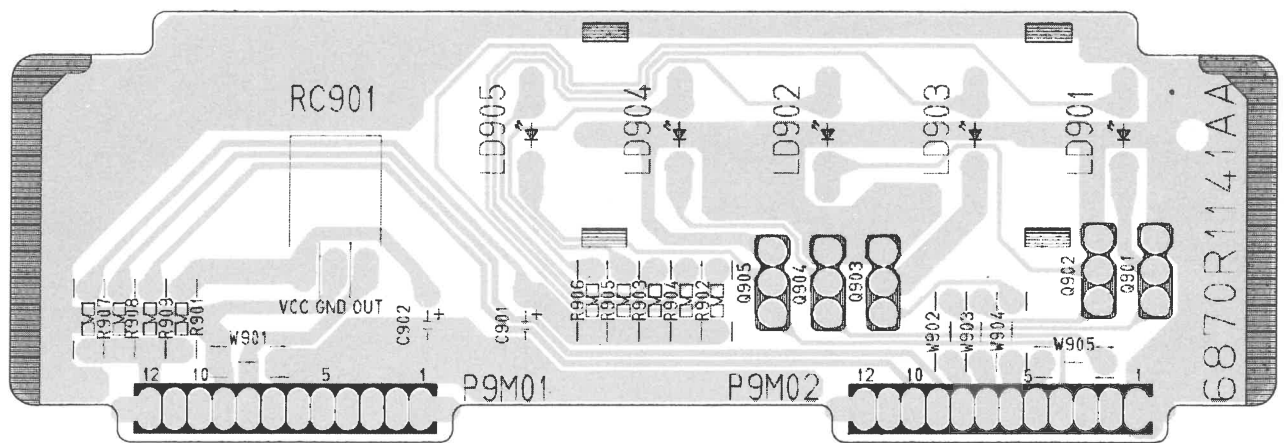
ABBREVIATIONS

- A. (Audio)
- ADJ. (Adjustment)
- AFT. (Automatic Fine Tuning)
- AGC. (Automatic Gain Control)
- CAP. BRK. (Capstan Break)
- CCD. (Charge Coupled Devices)
- CFG. (Cylinder Frequency Generator)
- CLK. (Clock)
- C.SYNC. (Composite Synchronization)
- DEV. (Deviation)
- EE. (Electronic to Electronic)
- ENV. (Envelope)
- MPX. (Multiplex)
- PB. (Playback)
- PG. (Pulse Generator)
- REC. BIAS (Record Bias)
- VCO. (Voltage Controlled Oscillator)

NOTE :

- Measurement Point
- : Adjustment Point
- Emitter : TRANSISTOR
- Collector
- Base

2. Timer P.C.Board



(Solder Side)

SECTION 4 MECHANISM

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MECHANISM TROUBLESHOOTING GUIDE

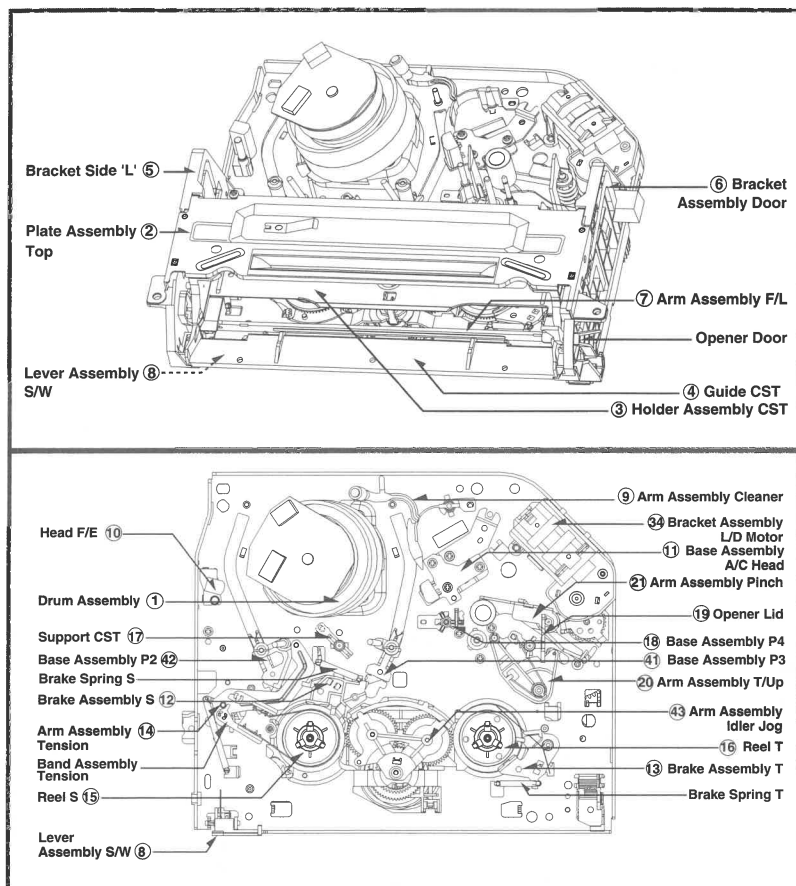
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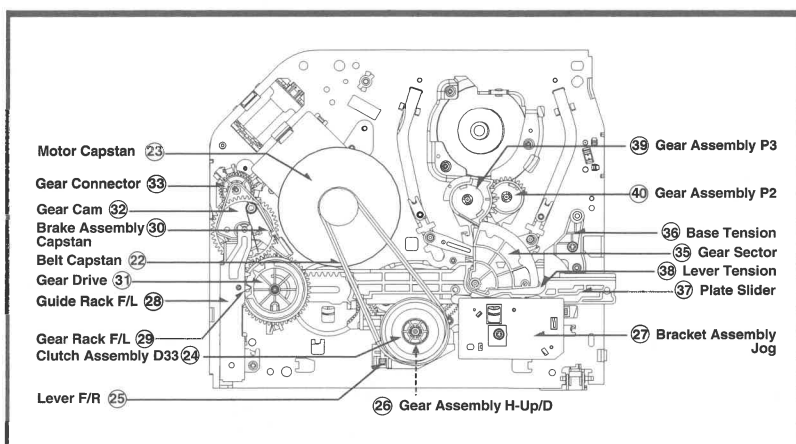
DECK MECHANISM PARTS LOCATIONS

• Top View



Procedure		Part	Fixing Type	Figure
Starting No.				
	1	Drum Assembly	3 Screws , Cap FPC	A-1
	2	Plate Assembly Top	Two Hooks	A-2
2	3	Holder Assembly CST	Chassis Hole	A-2
	4	Guide CST	2 Hooks	A-2
2,3,4	5	Bracket Side (L)	1 Screw	A-2
2,3,4	6	Bracket Assembly Door	1 Screw	A-2
2,3,4,5,6	7	Arm Assembly F/L	Chassis Hole	A-2
2,3,4,5	8	Lever Assembly S/W	Chassis Hole	A-2
	9	Arm Assembly Cleaner	Chassis Embossing	A-3
	10	Head F/E	2 Hooks	A-3
	11	Base Assembly A/C Head	1 Screw	A-3
	12	Brake Assembly S	Chassis Hole	A-4
2,3	13	Brake Assembly T	Chassis Hole	A-4
2,3,12,	14	Arm Assembly Tension	Chassis Hole	A-4
2,3,12,14	15	Reel S	Chassis Shaft	A-4
2,3,13	16	Reel T	Chassis Shaft	A-4
	17	Support CST	Chassis Embossing	A-5
	18	Base Assembly P4	Chassis Embossing	A-5
	19	Opener Lid	Chassis Embossing	A-5
19	20	Arm Assembly T/Up	Chassis Embossing	A-5
19	21	Arm Assembly Pinch	Chassis Shaft	A-5

• Bottom View



NOTE : When reassembly perform the procedure in the reverse order.

- 1) When reassembling, confirm Mechanism and Mode Switch Alignment Position (Refer to Page 4-14)
- 2) When disassembling, the Parts for Starting No. Should be removed first.

Procedure		Part	Fixing Type	Figure
Starting No.				
	22	Belt Capstan	3 Screws	A-6
	23	Motor Capstan	1 Washer	A-6
	24	Clutch Assembly D33	1 Hook	A-6
22,24	25	Lever F/R	2 Washers	A-6
22,24	26	Gear Assembly H-Up/D	1 Screw	A-7
	27	Bracket Assembly Jog	1 Screw	A-7
	28	Guide Rack F/L	1 Screw	A-7
	29	Gear Rack F/L	Chassis Shaft	A-7
28, 29	30	Brake Assembly Capstan	1 Washer	A-8
28, 29	31	Gear Drive	Chassis Shaft	A-8
28, 29, 30	32	Gear Cam	Chassis Shaft	A-8
28, 29, 30, 31	33	Gear Connector	Chassis Shaft	A-8
	34	Bracket Assembly L/D Motor	3 Hooks	A-8
	35	Gear Sector	3 Washers	A-9
	36	Base Tension	1 Screw	A-9
22, 24, 25, 27	37	Plate Slider	Chassis Shaft	A-9
28, 29, 31, 35				
22, 24, 25, 27				
28, 29, 31, 35	38	Lever Tension	Chassis Hole	A-9
36				
35	39	Gear Assembly P3	2 Hooks	A-10
35, 39	40	Gear Assembly P2	2 Hooks	A-10
35, 39, 40	41	Base Assembly P3	Chassis Hole	A-10
35, 39, 40, 41	42	Base Assembly P2	Chassis Hole	A-10
1, 2	43	Arm Assembly Idler Jog	1 Hook	A-10

DECK MECHANISM DISASSEMBLY

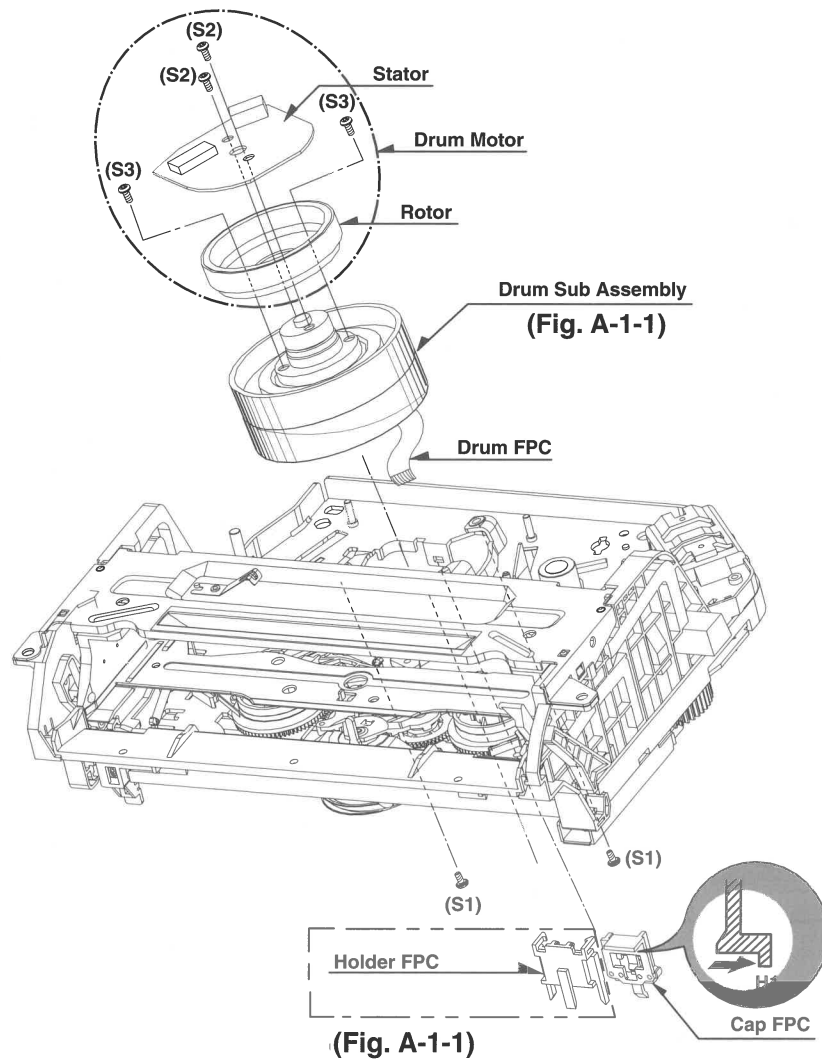


Fig. A-1

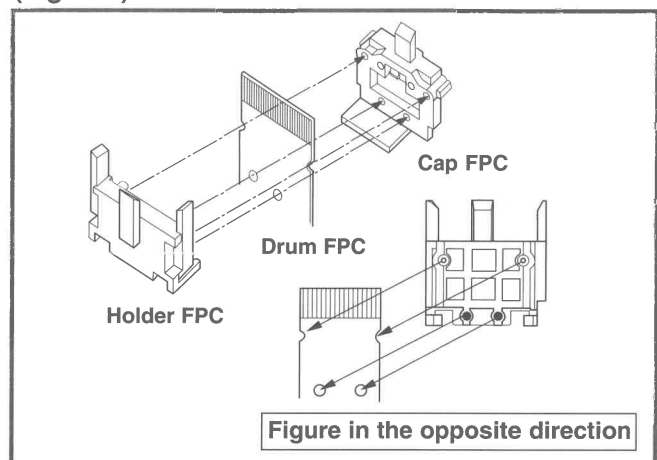
1. Drum Assembly (Fig. A-1-1)

- 1) Unhook the (H1) on the back side of the Chassis and separate the Cap FPC.
- 2) Remove three Screws (S1) and lift up the Drum Assembly.
- 3) Remove two Screws (S2) and Separate the Stator of Drum Motor.
- 4) Remove two Screws (S3) and Separate the Rotor of Drum Motor from the Drum Sub Assembly.

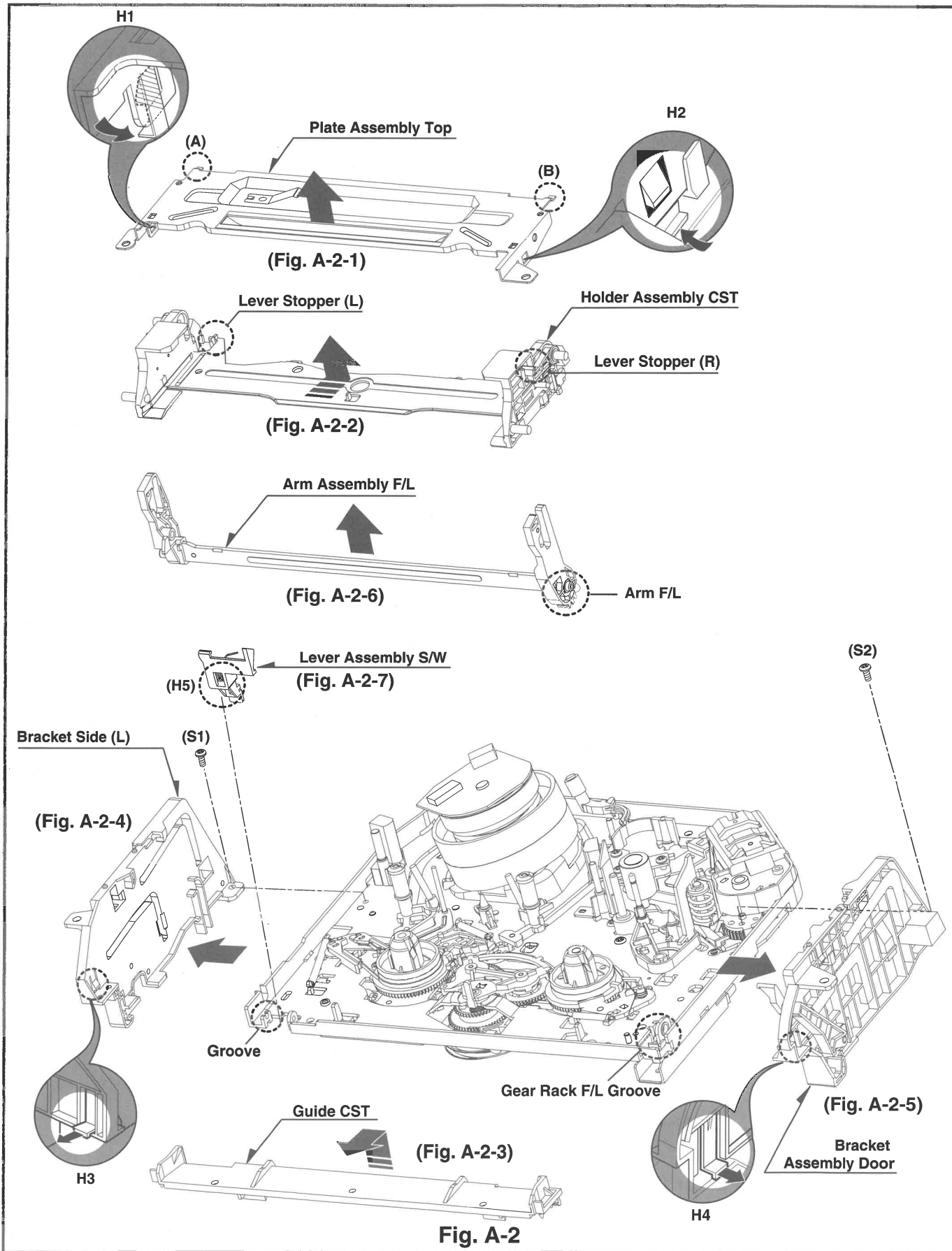
NOTE

- (1) When reassembling Cap FPC, two Holes of Drum FPC are inserted to the two Bosses of Holder FPC correctly. (Refer to Fig. B-1)

(Fig. B-1)



DECK MECHANISM DISASSEMBLY



DECK MECHANISM DISASSEMBLY

2. Plate Assembly Top (Fig. A-2-1)

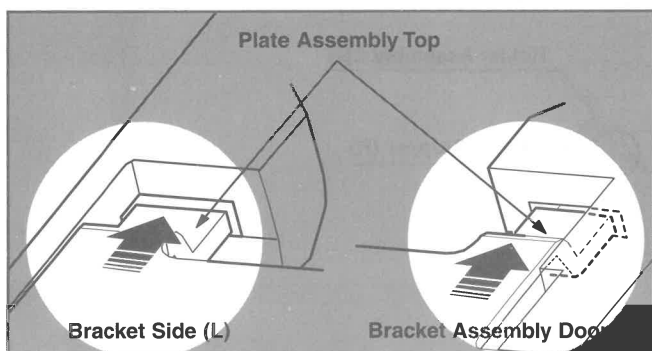
- 1) Unhook the (H1) and separate the Left Side.
- 2) Unhook the (H2) and lift up the Plate Assembly Top.

NOTE

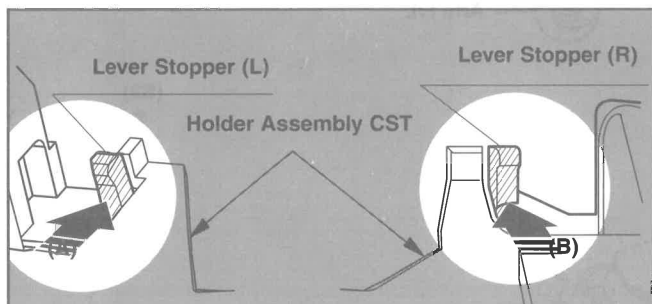
- (1) When reassembling, confirm (A),(B) Part of the Plate Assembly Top is inserted to the (L),(R) Grooves of the Bracket Side(L) and Bracket Assembly Door.

3. Holder Assembly CST (Fig.A-2-2)

- 1) Push the Lever Stopper(L),(R) in the direction of the arrows (A), (B), and move the Holder Assembly CST.

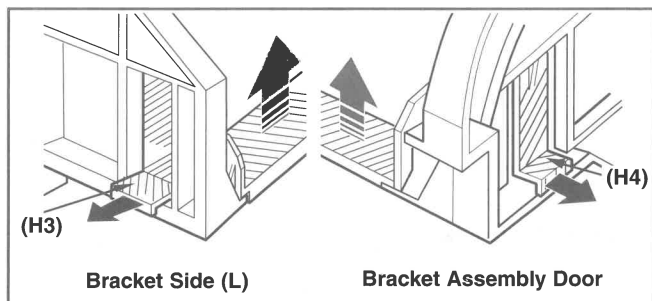


- 2) Push the Bracket Assembly Door to the right and lift up the Holder Assembly CST along the Guide Groove of the Bracket Assembly Door.



4. Guide CST (Fig.A-2-3)

- 1) Push two Hooks(H3),(H4) in the direction of the arrow and separate the left side.
- 2) Unhook (H5),(H6) as above No.1) and disassemble the Guide CST in the direction of the arrow.



5. Bracket Side(L) (Fig. A-2-4)/ Bracket Assembly Door (Fig.A-2-5)

- 1) Remove the Screw (S1) and disassemble the Bracket Side(L) in the front.

- 2) Remove the Screw (S2) and disassemble the Bracket Assembly Door in the front.

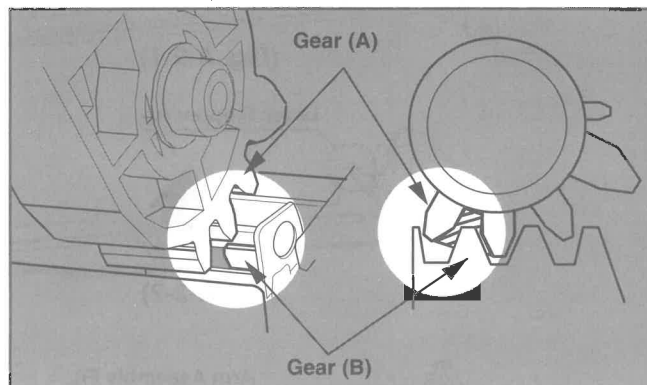
6. Arm Assembly F/L (Fig. A-2-6)

- 1) Push the Arm Assembly F/L to the left and lift up it.

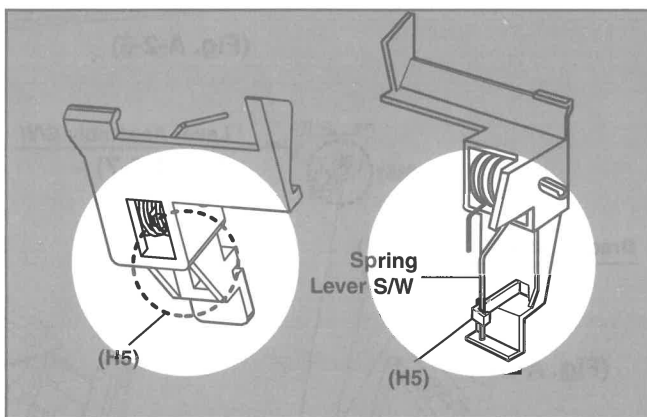
NOTE

- (1) When reassembling, confirm that the Gear(A) of the Arm F/L and the Gear(B) of the Gear Rack F/L are assembled as below.

7. Lever Assembly S/W (Fig. A-2-7)

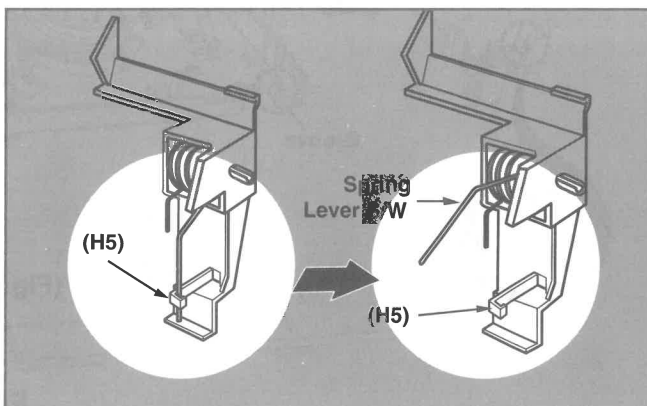


- 1) Hook the Spring Lever S/W on (H5).
- 2) Lift up the left side of the Lever S/W from the Groove(A) of the Chassis.



NOTE

- (1) Place the Spring Lever S/W of the above (No.1) as original position.



DECK MECHANISM DISASSEMBLY

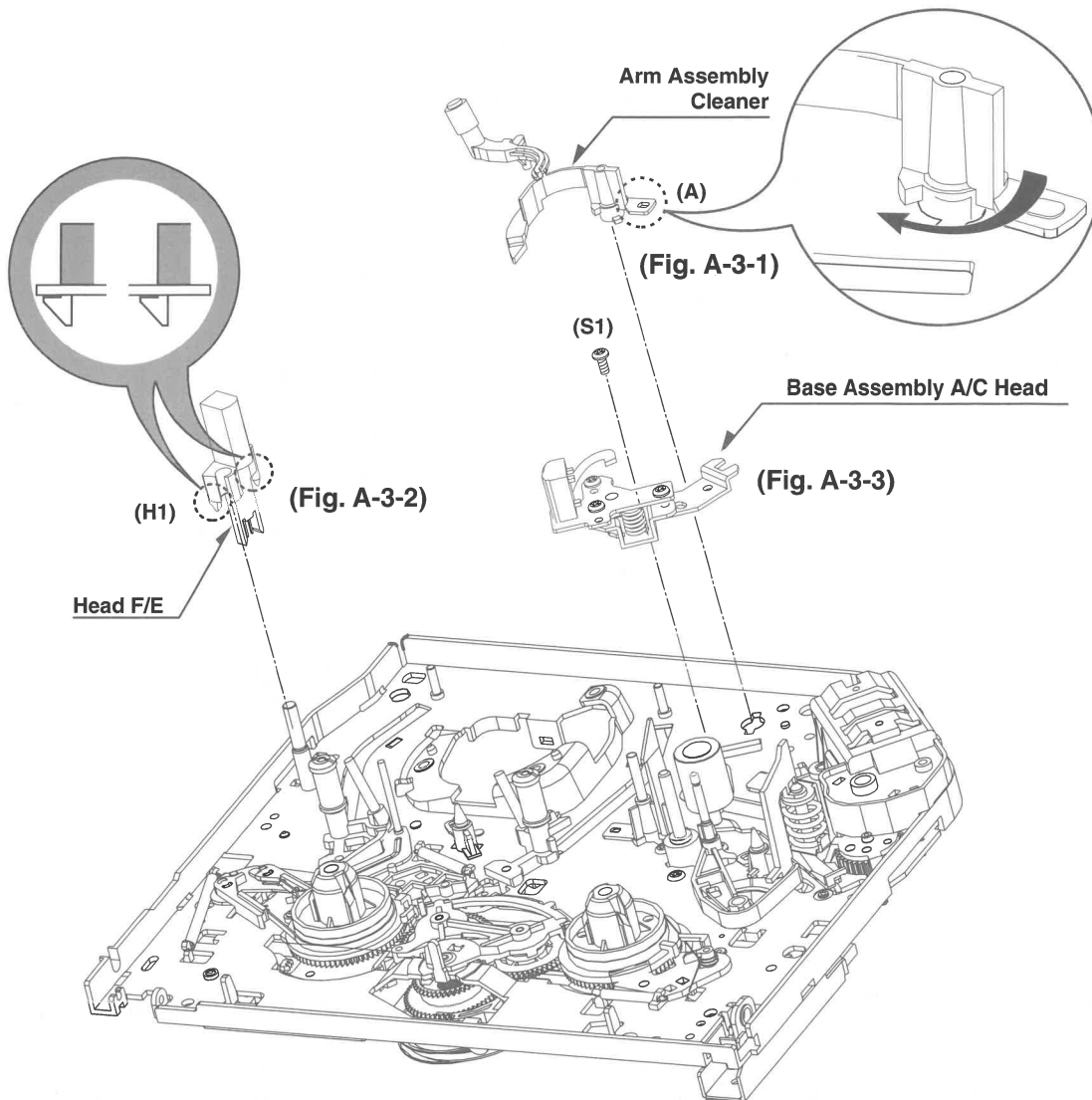


Fig. A-3

8. Arm Assembly Cleaner(Fig. A-3-1)

- 1) Break away the (A) part shown above Fig. A-3-1 from the Embossing of the Chassis in the clockwise direction and lift up the Arm Assembly Cleaner.

9. Head F/E (Fig. A-3-2)

- 1) Unhook the two Hooks (H1) on the back side of the Chassis and lift up the Head F/E.

10. Base Assembly A/C Head (Fig. A-3-3)

- 1) Remove the Screw (S1) and lift up the Base Assembly A/C Head.

DECK MECHANISM DISASSEMBLY

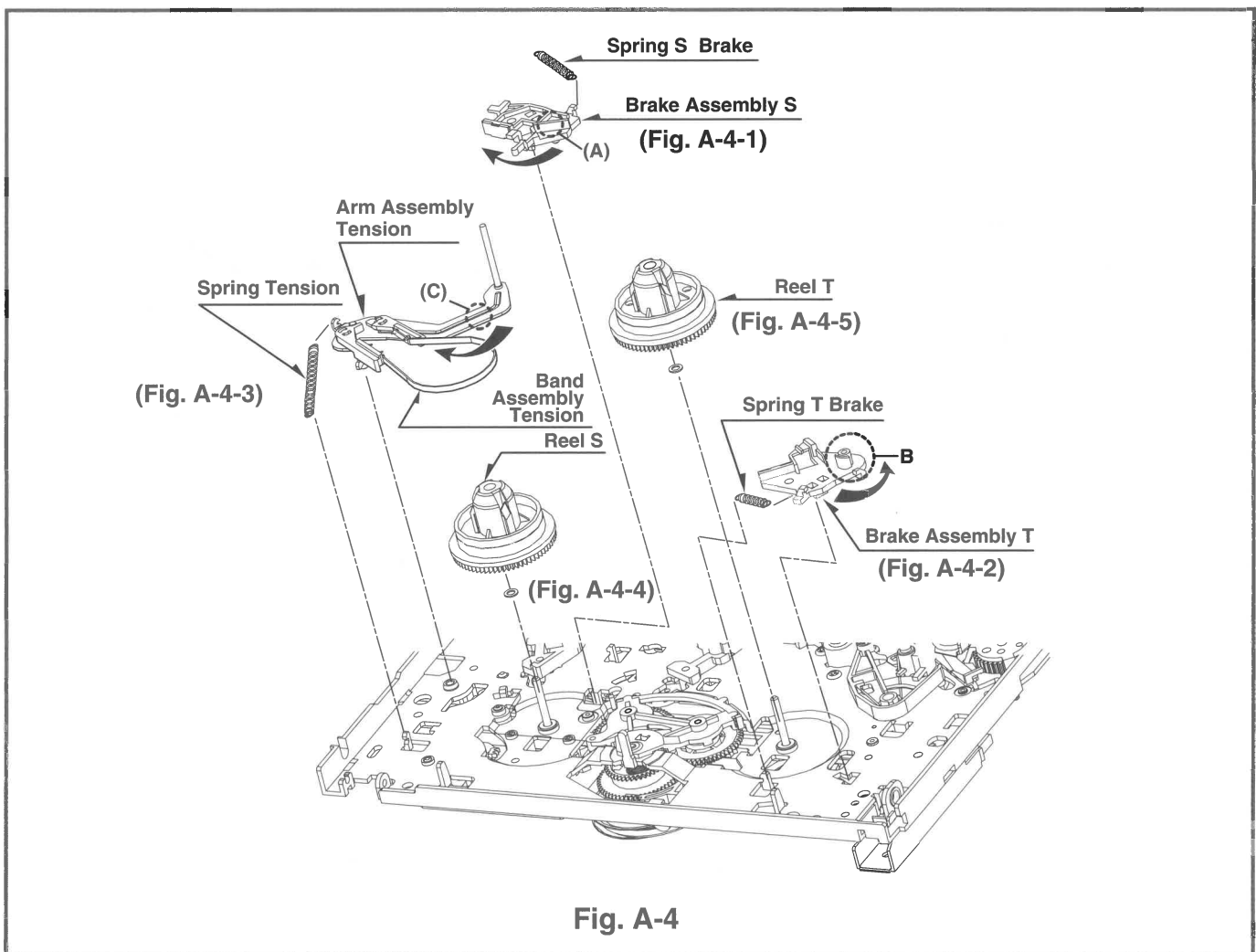


Fig. A-4

11. Brake Assembly S (Fig. A-4-1)

- 1) Remove the Spring S Brake.
- 2) Hold the (A) part shown above Fig. A-4-1 and turn to the clockwise direction, and then lift up the Brake Assembly S.

NOTE

- (1) When reassembling, be careful not to change the Spring with below No.12.(Refer to Fig. B-2).

12. Brake Assembly T (Fig. A-4-2)

- 1) Remove the Spring T Brake.
- 2) Hold the (B) part shown above Fig. A-4-2 and turn to the counterclockwise direction, and then lift up the Brake Assembly T.

NOTE

- (1) When reassembling, be careful not to change the Spring with above No.11.(Refer to Fig. B-2).

(Difference for Springs)

(Fig. B-2)

	Spring T Brake Color (Black)
	Spring S Brake
	Spring Tension

13. Arm Assembly Tension (Fig. A-4-3)

- 1) Remove the Spring Tension.
- 2) Hold the (C) part shown above Fig. A-4-3 and turn to the clockwise direction, and then lift up the Arm Assembly Tension.

NOTE

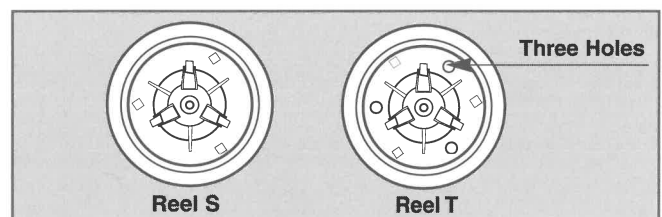
- (1) When reassembling, be careful not to change the Spring with above No.11,12.(Refer to Fig. B-2).

14. Reel S (Fig. A-4-4) & Reel T (Fig. A-4-5)

- 1) Lift up the Reel S and Reel T.

NOTE

- (1) When reassembling, be careful not to change the Reel S and Reel T each other.



- (2) Confirm two Slide Washers under the Reel S and Reel T.

DECK MECHANISM DISASSEMBLY

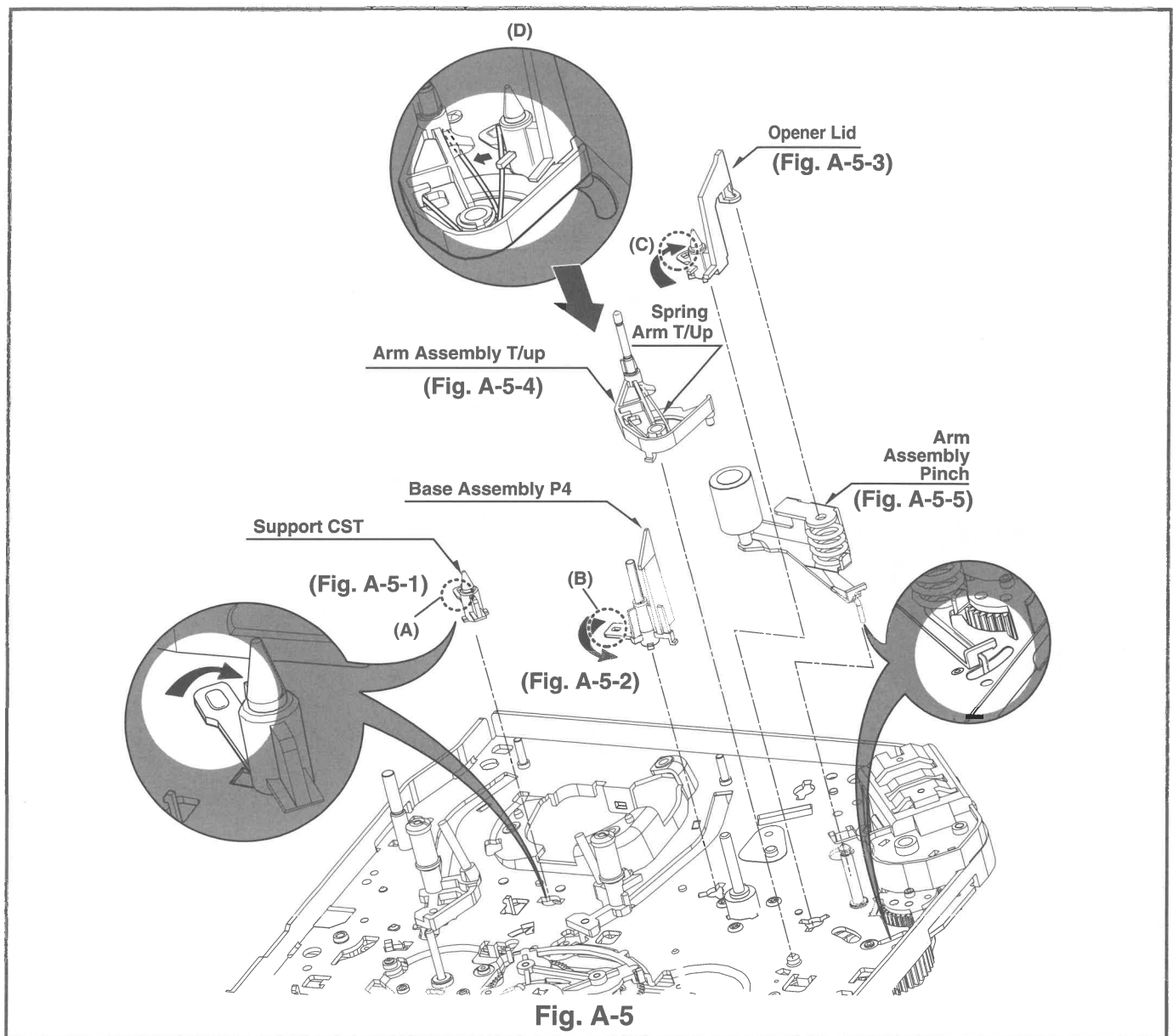


Fig. A-5

15. Support CST (Fig. A-5-1)

- 1) Break away the (A) part shown above Fig. A-5-1 from the Embossing of the Chassis in the clockwise direction, and lift up the Support CST.

16. Base Assembly P4 (Fig. A-5-2)

- 1) Break away the (B) part shown above Fig. A-5-2 from the Embossing of the Chassis in the counterclockwise direction and lift up the Base Assembly P4.

17. Opener Lid (Fig. A-5-3)

- 1) Hook the Spring Arm T/up on the Split digged under the Arm Assembly T/up. (Refer to Fig. A-5-4(D)).
- 2) Break away the (C) Part of the Opener Lid from the Embossing of the Chassis in the Clockwise direction and lift up the Opener Lid.

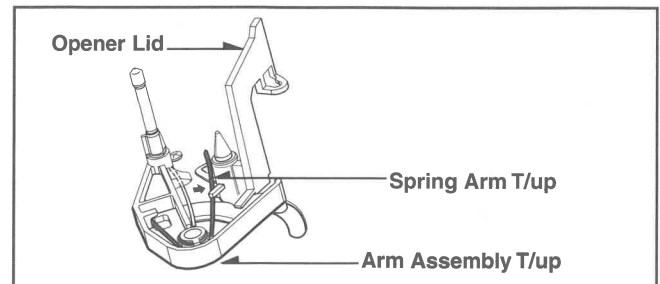
18. Arm Assembly T/up (Fig. A-5-4)

- 1) Confirm that the Spring Arm T/up is placed as above (No.17.1).

- 2) Lift up the Arm Assembly T/up.

NOTE

- (1) When reassembling, unhook the Spring Arm T/up Shown above (No.17.1) to the original position.



19. Arm Assembly Pinch (Fig. A-5-5)

- 1) Lift up the Arm Assembly Pinch.

DECK MECHANISM DISASSEMBLY

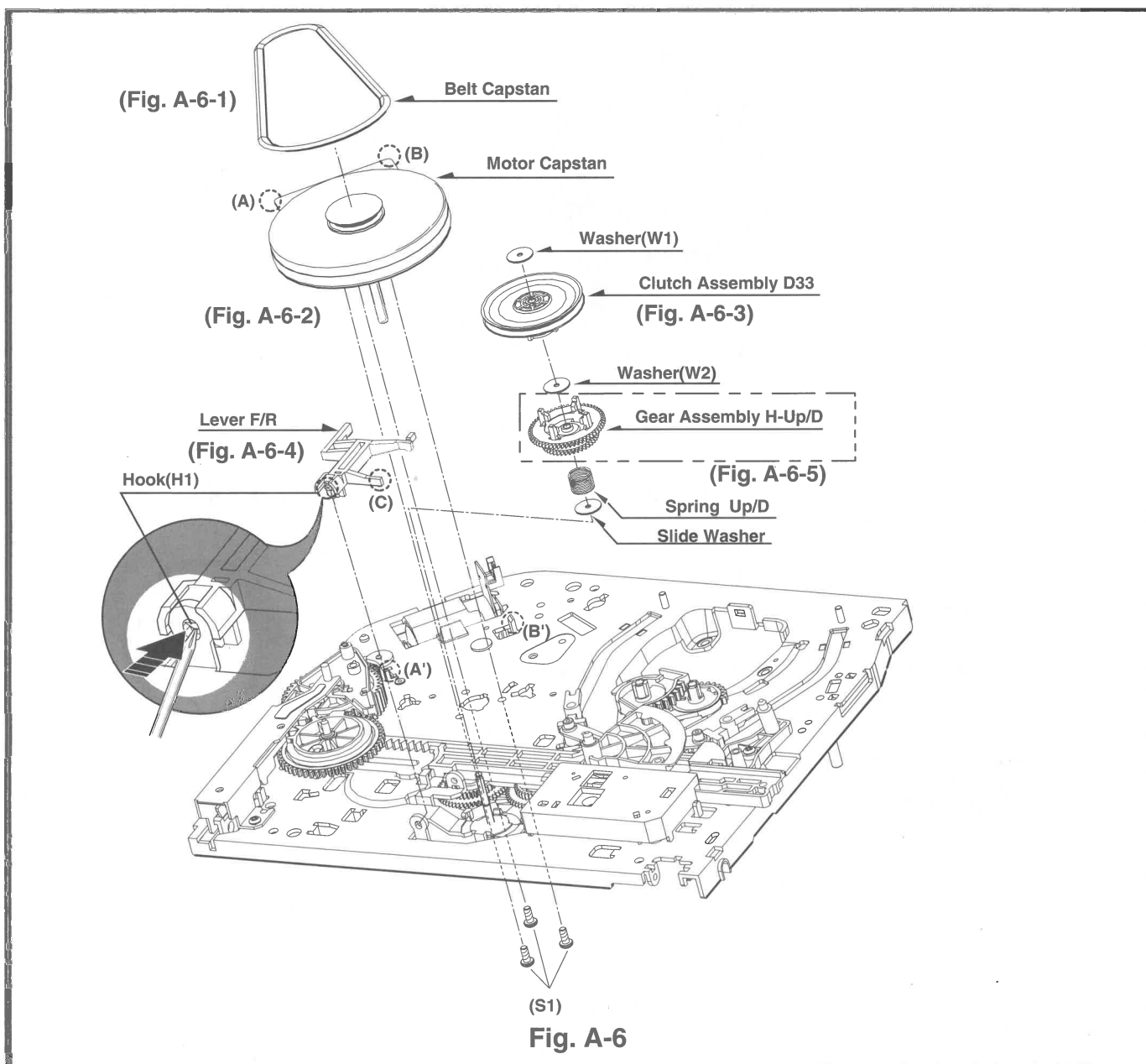


Fig. A-6

20. Belt Capstan (Fig. A-6-1)/ Motor Capstan (Fig. A-6-2)

- 1) Remove the Belt Capstan.
- 2) Remove three Screws(S1) on the back side of the Chassis and lift up the Motor Capstan.

NOTE

- (1) When reassembling, Confirm the (A), (B) parts of Motor Capstan is located to the (A'), (B') of the Chassis.

21. Clutch Assembly D33 (Fig. A-6-3)

- 1) Remove the Washer(W1) and lift up the Clutch Assembly D33.

22. Lever F/R (Fig. A-6-4)

- 1) Unhook the (H1) shown above Fig. A-6-4 and lift up the Lever F/R.

NOTE

- (1) When reassembling, move the (C) part of the Lever F/R up and down, then confirm if it is returned to original position.

23. Gear Assembly H-Up/D or Gear Assembly Up/D (Fig. A-6-5)

- 1) Remove the Washer(W2) and lift up the Gear Assembly H-up/D.
- 2) Remove the Spring Up/D.
- 3) Remove the Slide Washer.

NOTE

- (1) Gear Assembly H-Up/D is for Hi-Rewind Models.
- (2) Gear Assembly Up/D is for Normal Models except Hi-Rewind Models.

DECK MECHANISM DISASSEMBLY

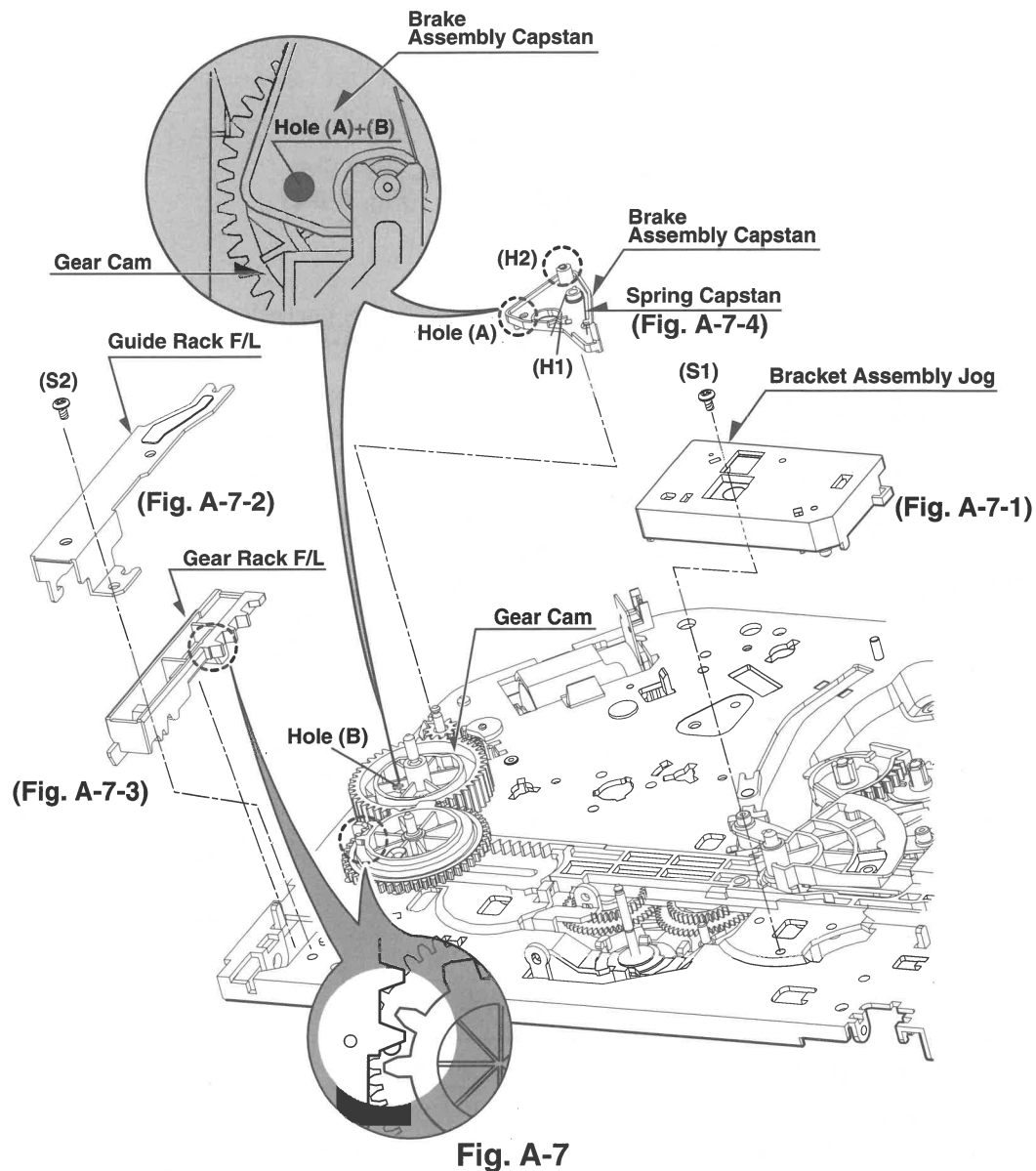


Fig. A-7

24. Bracket Assembly Jog (Fig. A-7-1)

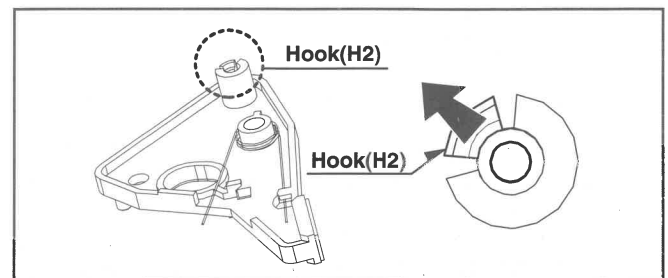
- 1) Remove the Screw(S1) and lift up the Bracket Assembly Jog.

25. Guide Rack F/L (Fig. A-7-2)/ Gear Rack F/L (Fig. A-7-3)

- 1) Remove the Screw(S2) and lift up the Guide Rack F/L.
- 2) Lift up the Gear Rack F/L.

26. Brake Assembly Capstan (Fig. A-7-4)

- 1) Hook the Spring Capstan on the Hook(H1).
- 2) Unhook the Hook(H2) and lift up the Brake Assembly Capstan.(Refer to Fig. to the right)



NOTE

- (1) When reassembling, confirm that the Hole(A) of the Brake Assembly Capstan is aligned to the Hole(B) of the Gear Cam.
(Refer to above Fig. A-7-4).

DECK MECHANISM DISASSEMBLY

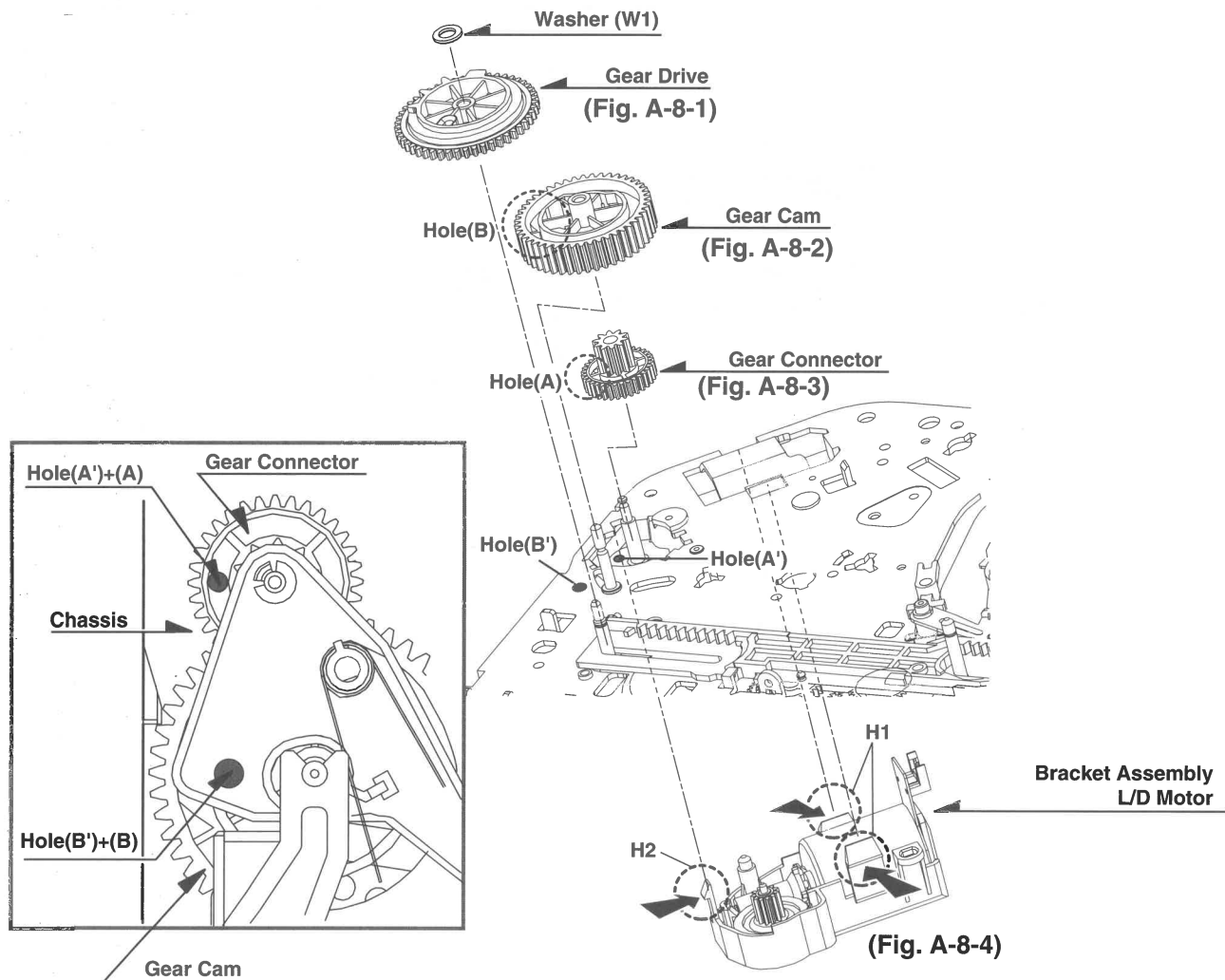


Fig. A-8

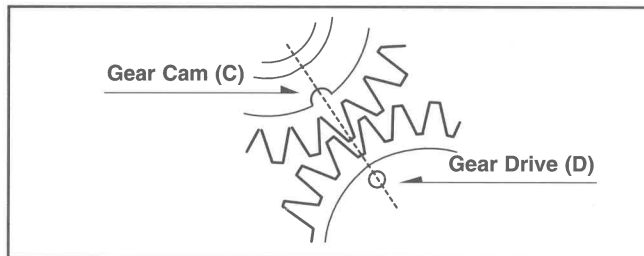
27. Gear Drive (Fig. A-8-1)/ Gear Cam (Fig. A-8-2)/ Gear Connector (Fig. A-8-3)

- 1) Remove the Washer(W1) and lift up the Gear Drive.
- 2) Lift up the Gear Cam.
- 3) Lift up the Gear Connector.

NOTE

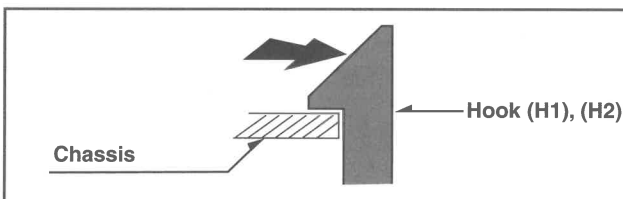
- (1) When reassembling, confirm that the Hole (A) of the Gear Connector is aligned to the Hole (A') of the Chassis (Fig. A-8-3).
- (2) When reassembling, confirm that the Hole (B) of the Gear Cam is aligned to the Hole (B') of the Chassis (Fig. A-8-2).
- (3) When reassembling, confirm that the (C) part of the Gear Cam is aligned to the (D) part of the Gear Drive as shown Fig. B-3

(Fig. B-3)



28. Bracket Assembly L/D Motor (Fig. A-8-4)

- 1) Unhook the three Hooks(H1),(H2) and push down the Bracket Assembly L/D Motor.



DECK MECHANISM DISASSEMBLY

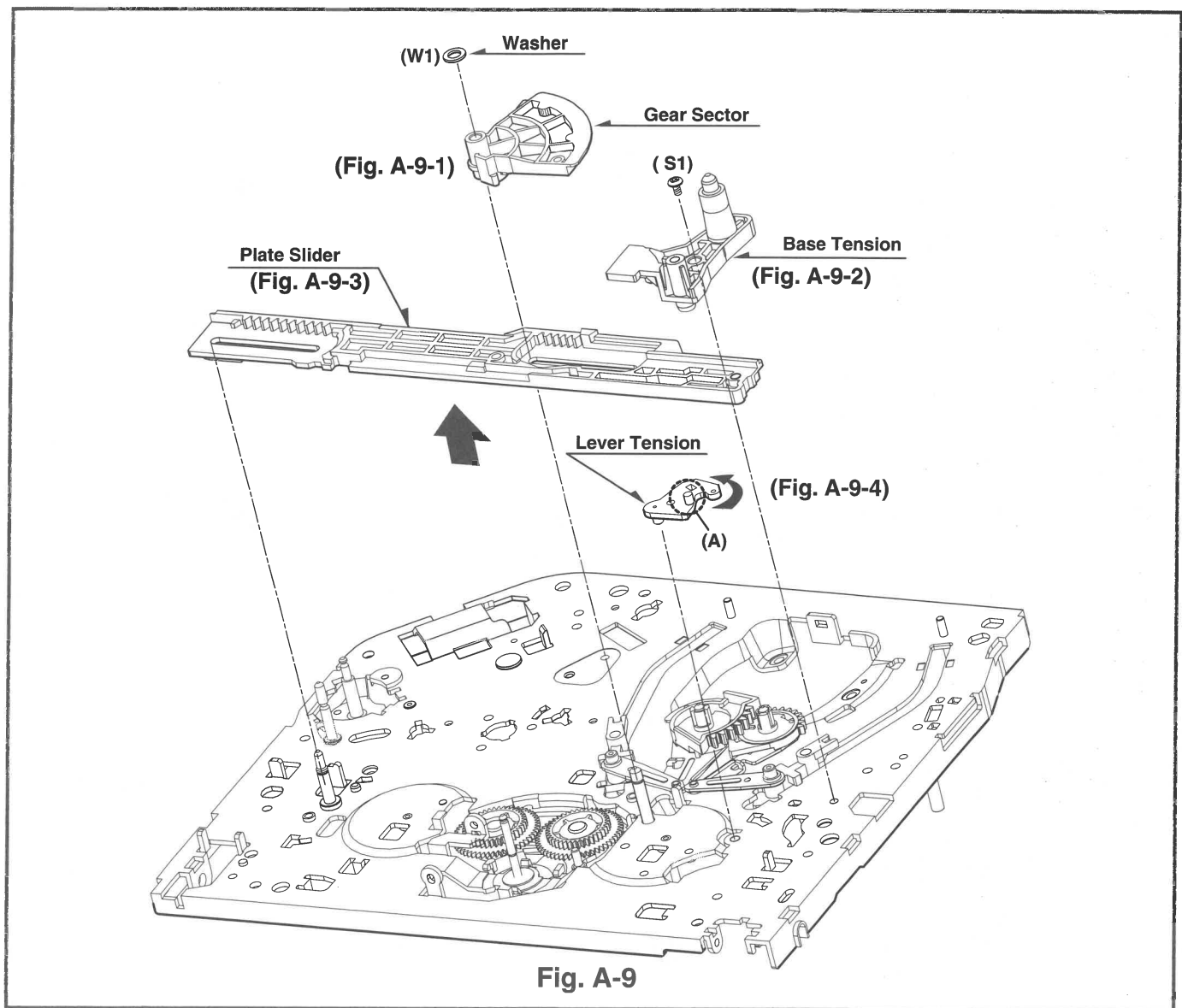


Fig. A-9

29. Gear Sector (Fig. A-9-1)

- 1) Remove the Washer(W1) and lift up the Gear Sector.

30. Base Tension (Fig. A-9-2)/

Plate Slider (Fig. A-9-3)/

Lever Tension (Fig. A-9-4)

- 1) Remove the Screw(S1) and lift up the Base Tension.
- 2) Lift up the Plate Slider.
- 3) Hold the (A) Part of the Lever Tension and turn to the counterclockwise direction, and then lift up the Lever Tension.

NOTE

- (1) When reassembling, turn the Lever Tension to the clockwise direction in maximum.

DECK MECHANISM DISASSEMBLY

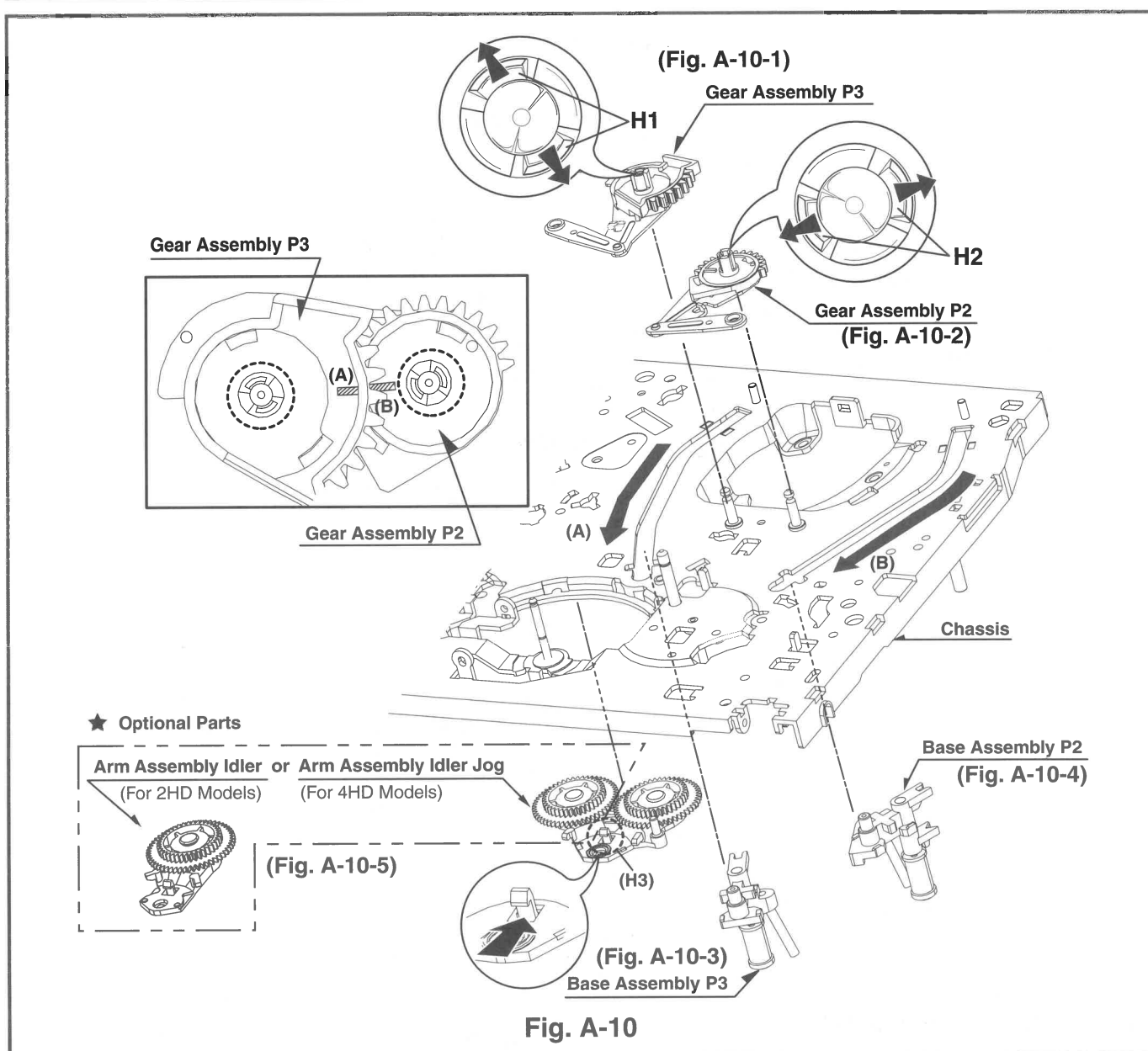


Fig. A-10

31. Gear Assembly P3 (Fig. A-10-1)/ Gear Assembly P2 (Fig. A-10-2)

- 1) Unhook the two Hooks(H1) and lift up the Gear Assembly P3.
- 2) Unhook the two Hooks(H2) and lift up the Gear Assembly P2.

32. Base Assembly P3 (Fig. A-10-3)/ Base Assembly P2 (Fig. A-10-4)

- 1) Move the Base Assembly P3 in the direction of the arrow of the Chassis Hole(A) and push down the Base Assembly P3.
- 2) Move the Base Assembly P2 in the direction of the arrow of the Chassis Hole(B) and push down the Base Assembly P2.

33. Arm Assembly Idler Jog or Arm Assembly Idler (Fig. A-10-5)

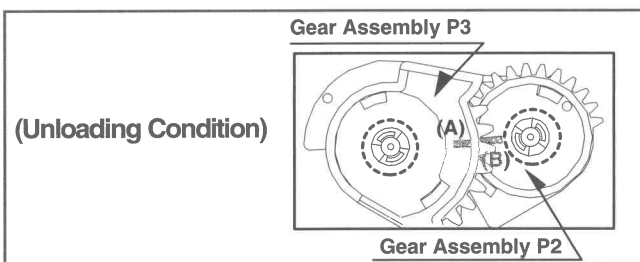
- 1) Unhook the Hook(H3) and push down the Arm Assembly Idler Jog.

NOTE

- 1) Arm Assembly Idler Jog is for 4HD Models.
- 2) Arm Assembly Idler is for 2HD Models.

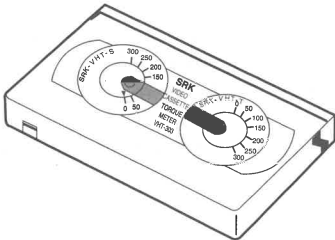
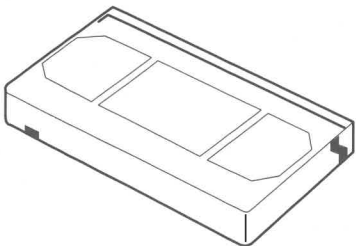

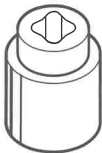
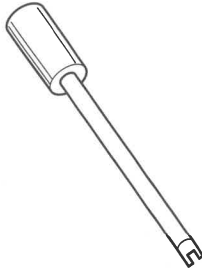
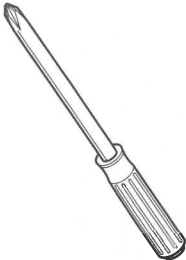
NOTE

- 1) When reassembling, confirm that the (A) Part of the Gear Assembly P3 is aligned to the (B) Part of the Gear Assembly P2 as shown below.



DECK MECHANISM ADJUSTMENT

• Tools and Fixfures for Service

<p>1. Cassette Torque meter SRK-VHT-303(Not SVC part) Parts No: D00-D006</p> 	<p>2. Alignment tape Parts No NTSC: DTN-001 PAL:DTN-0002</p> 	<p>3. Torque gauge 600g.Cm ATG Parts No:D00-D002</p> 
<p>4. Torque gauge adaptor Parts No:D09-R001</p> 	<p>5. Post height adjusting driver Parts No:DTL-0005</p> 	<p>6. + Type driver (ø 5)</p> 

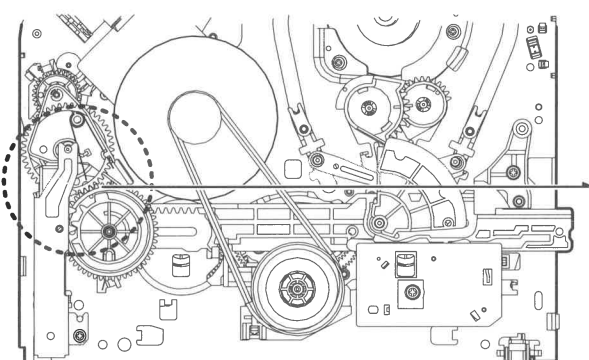
DECK MECHANISM ADJUSTMENT

1.Mechanism Alignment Position Check

Purpose:To determine if the Mechanism is in the correct position, when a Tape is ejected.

Test Equipment/ Fixture	Test Conditions (Mechanism Condition)	Check Point
• Blank tape	• Eject Mode (with Cassette ejected)	• Mechanism and Mode Switch Position
<div>1) Turn the Power S/W on and eject the Cassette by pressing the Eject Button.</div> <div>2) Remove the Top Cover and Plate Assembly Top, visually check if the Gear Cam Hole is aligned with the Chassis Hole as below Fig. C-2.</div> <div>3) IF not, rotate the Shaft of the Loading Motor to either Clockwise or Counterclockwise until the Alignment is as below Fig. C-2.</div> <div>4) Remove the Screw which fixes the Deck Mechanism and Main Frame and confirm if the Gear Cam is aligned with the Gear Drive as below Fig. C-1(A).</div> <div>5) Confirm if the Mode S/W on the Main P.C.Board is aligned as below Fig. C-1(B).</div> <div>6) Remount the Deck Mechanism on the Main P.C.Board and check each operation.</div>		

CHECK DIAGRAM



BOTTOM VIEW

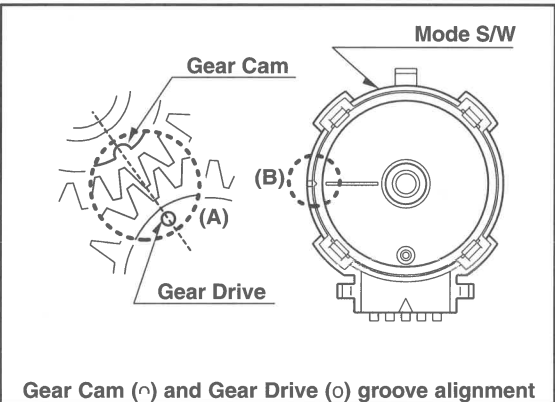
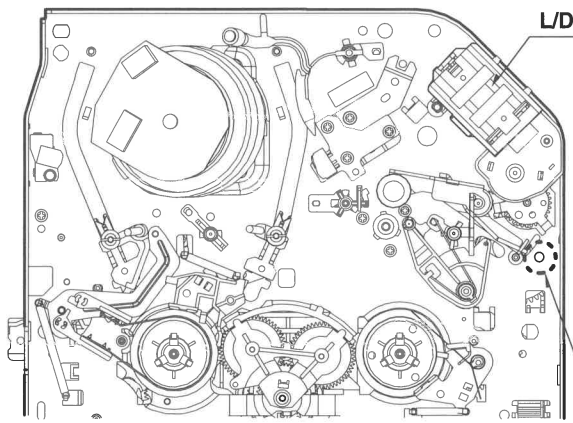


Fig. C-1



TOP VIEW

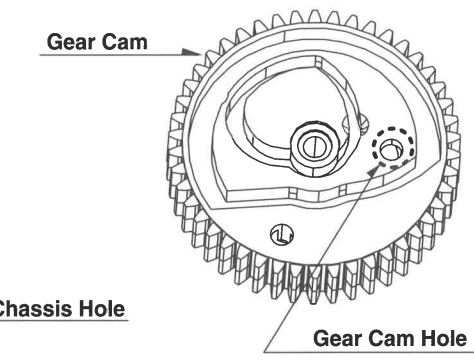


Fig. C-2

DECK MECHANISM ADJUSTMENT

2. Preparation for Adjustment (To set the Deck Mechanism to the Loading state without inserting a Cassette Tape).

- 1) Unplug the Power Cord from the AC Outlet.
- 2) Disassemble the Top Cover and Plate Assembly Top.
- 3) Plug the Power Cord into the AC Outlet.
- 4) Turn the Power SW on and push the Lever Stopper (L),(R) of the Holder Assembly CST to the back for Loading the Cassette without

Tape.

Cover the Holes of the End Sensors at the both sides of the Bracket Side(L) and Bracket Assembly Door to prevent a light leak.

Then The Deck Mechanism drives to the Stop Mode.

In this case, The Deck Mechanism can accept inputs of each mode, however the Rewind and Review Operation can not be performed for more than a few seconds because the Take-up Reel Table is in the Stop State and can not be detected the Reel Pulses.

3. Checking Torque

Purpose: To insure smooth Transport of the Tape during each Mode of Operation.

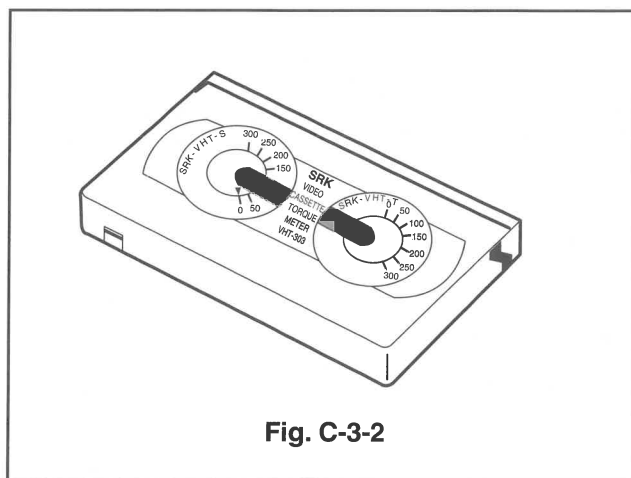
If the Tape Transport is abnormal, then check the Torque as indicated by the chart below.

Test Equipment/ Fixture		Test Conditions (Mechanism Condition)	Checking Method	
<ul style="list-style-type: none"> • Torque Gauge(600g/cm ATG) • Torque Gauge Adaptor • Cassette Torque Meter SRK-VHT-303 		• Play (FF) or Review (REW) Mode	<ul style="list-style-type: none"> • Perform each Deck Mechanism Mode without inserting a Cassette Tape(Refer to above No.2 Preparation for Adjustment). • Read the Measurement of the Take-up or Supply Reels on the Cassette Torque Meter(Fig. C-3-2). • Attach the Torque Gauge Adaptor to the Torque Gauge and then read the Value of it(Fig. C-3-1). 	
Item	Mode	Test Equipment	Measurement Reel	Measurement Values
Fast Forward Torque	Fast Forward	Cassette Torque Gauge	Take-Up Reel	More than 400g/cm
Rewind Torque	Rewind	Cassette Torque Gauge	Supply Reel	More than 400g/cm
Play Take-Up Torque	Play	Cassette Torque Meter	Take-Up Reel	75~115g/cm
Review Torque	Review	Cassette Torque Meter	Supply Reel	130~200g/m

NOTE:

The Values are measured by using a Torque Gauge and Torque Gauge Adaptor with the Torque Gauge affixed.

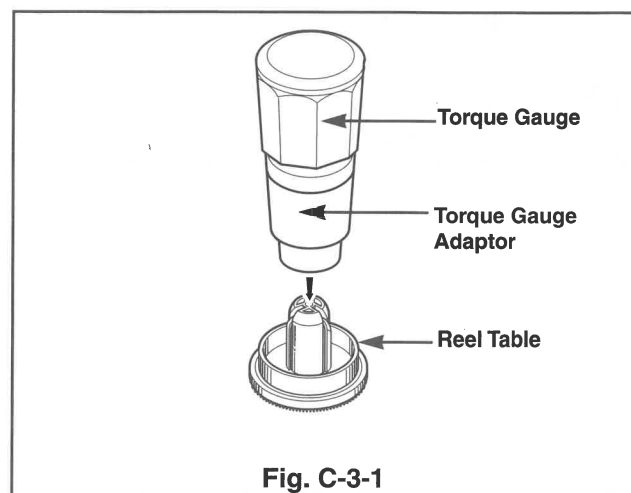
• Cassette Torque Meter (SRK-VHT-303)



NOTE:

The Torque reading to measure occurs when the Tape abruptly changes direction from Fast Forward of Rewind Mode, when quick braking is applied to both Reels.

• Torque Gauge (600g.cm ATG)



DECK MECHANISM ADJUSTMENT

4. Guide Roller Height Adjustment

Purpose: To regulate the Height of the Tape so that the Bottom of the Tape runs along the Tape Guide Line on the Lower Drum.

4-1. Preliminary Adjustment

Test Equipment/ Fixture	Test Conditions (Mechanism Condition)	Adjustment Point
• Post Height Adjusting Driver	• Play or Review Mode	• Guide Roller Height Adjustment screws on the Supply and Take-Up Guide Rollers.

Adjustment Procedure

- 1) Confirm if the Tape runs along the Tape Guide Line of the Lower Drum.
- 2) If the Tape runs the Bottom of the Guide Line, turn the Guide Roller Height Adjustment Screw to Clockwise direction.
- 3) If it runs the Top, turn to Counterclockwise direction.
- 4) Adjust the Height of the Guide Roller to be guided to the Guide Line of the Lower Drum from the Starting and Ending Point of the Drum.

ADJUSTMENT DIAGRAM

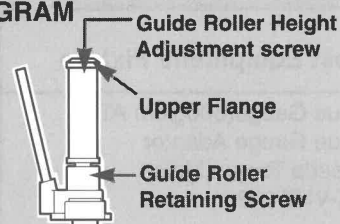


Fig. C-4-1

4-2. Precise Adjustment

Test Equipment/Fixture	Test Equipment Connection Points	Test Conditions VCR(VCP) State	Adjustment Point
• Oscilloscope • Alignment Tape • Post Height Adjusting Driver	• CH-1:PB RF Envelope • CH-2:NTSC: SW 30Hz PAL: SW 25Hz • Head Switching Output Point • RF Envelope Output Point	• Play an Alignment Tape	• Guide Roller Height Adjustment Screws
Adjustment Procedure <ol style="list-style-type: none"> 1) Play an Alignment Tape after connecting the Probe of the Oscilloscope to the RF Envelope Output Test Point and Head Switching Output Test Point. 2) Tracking Control(in PB Mode) : Center Position(When this Adjustment is performed after the Drum Assembly has been replaced, set the Tracking Control so that the RF Output is Maximum). 3) Height Adjustment Screw : Flatten the RF Waveform. (Fig. C-4-2) 4) Turn(Move) the Tracking Control(in PB Mode) Clockwise and Counterclockwise.(Fig. C-4-3) 5) Check that any Drop of RF Output is uniform at the Start and End of the Waveform. 		Waveform Diagrams <p>P2 POST ADJUSTMENT</p> <p>P3 POST ADJUSTMENT</p> <p>Turn the Roller Guide Height Adjustment Screw slightly to flatten the waveform.</p> <p>Fig. C-4-2</p> <p>Tracking control at center</p> <p>Turn(Move) the tracking control to both directions</p> <p>Fig. C-4-3</p> <p>Connection Diagram</p>	
NOTE <p>If the adjustment is excessive or insufficient the tape will jam or fold.</p>			

DECK MECHANISM ADJUSTMENT

5. Audio/Control (A/C) Head Adjustment

Purpose: To insure that the Tape passes accurately over the Audio and Control Tracks in exact Alignment in both the Record and Playback Modes.

5-1. Preliminary Adjustment (Height and Tilt Adjustment)

Perform the Preliminary Adjustment, when there is no Audio Output Signal with the Alignment Tape.

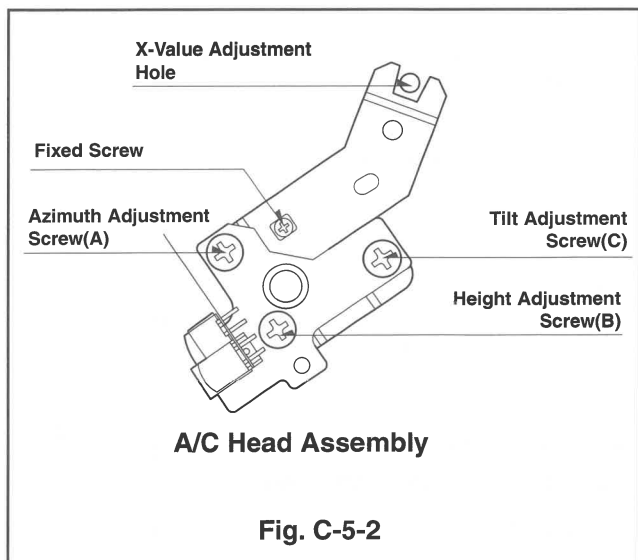
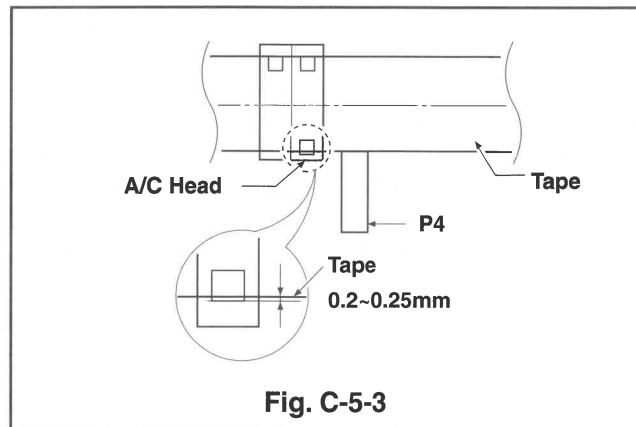
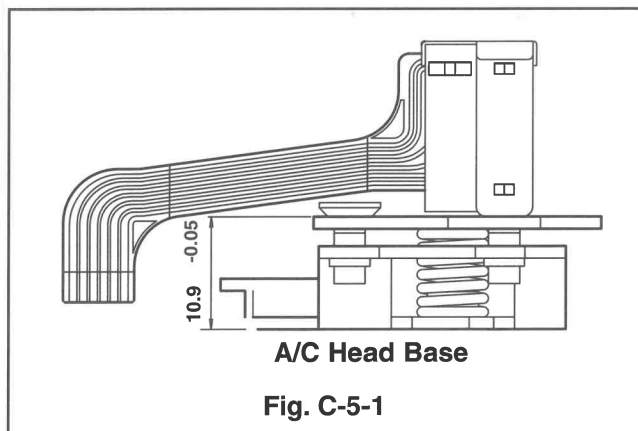
Test Equipment/ Fixture	Test Conditions (Mechanism Condition)	Adjustment Point
<ul style="list-style-type: none"> Blank Tape Screw Driver(+) Type 5mm 	<ul style="list-style-type: none"> Play the blank tape 	<ul style="list-style-type: none"> Tilt Adjustment Screw(C) Height Adjustment Screw(B) Azimuth Adjustment Screw(A)

Adjustment Procedure/Diagrams

- Initially adjust the Base Assembly A/C Head as shown Fig. C-5-1 by using the Height Adjustment Screw(B).
- Play a Blank Tape and observe if the Tape passes accurately over the A/C Head without Tape Curling or Folding.
- If Folding or Curling is occurred then adjust the Tilt Adjustment Screw(C) while the Tape is running to resemble Fig. C-5-3.
- Reconfirm the Tape Path after Playback about 4~5 seconds.

NOTE

Ideal A/C head height occurs, when the tape runs between 0.2~0.25mm above the bottom edge of the A/C head core.



DECK MECHANISM ADJUSTMENT

5-2. Confirm that the Tape passes smoothly between the Take-up Guide and Pinch Roller(using a Mirror or the naked eye).

- 1) After completing Step 5-1.(Preliminary Adjustment), check that the Tape passes around the Take-up Guide and Pinch Roller without Folding or Curling at the Top or Bottom.
 - (1) If Folding or Curling is observed at the Bottom of the Take-up Guide then slowly turn the Tilt Adjustment Screw(C) in the Clockwise direction.
 - (2) If Folding or Curling is observed at the Top of it then

slowly turn the Tilt Adjustment Screw(C) in the Counterclockwise direction.

NOTE:

Check the RF Envelope after adjusting the A/C Head, if the RF Waveform differs from Fig. C-5-4, performs Precise Adjustment to flat the RF Waveform.

5-3. Precise Adjustment (Azimuth adjustment)

Test Equipment/ Fixture	Connection Point	Test Conditions (Mechanism Condition)	Adjustment Point
<ul style="list-style-type: none"> Oscilloscope Alignment Tape(SP) Screw Driver(+) Type 5mm 	<ul style="list-style-type: none"> Audio output jack 	<ul style="list-style-type: none"> Play an Alignment Tape 1KHz, 7KHz Sections 	<ul style="list-style-type: none"> Azimuth Adjustment Screw(A) Height Adjustment Screw(B)
Adjustment Procedure <ol style="list-style-type: none"> 1) Connect the Probe of the Oscilloscope to Audio Output Jack. 2) Alternately adjust the Azimuth Adjustment Screw(A) and the Tilt Adjustment Screw(C) for Maximum Output of the 1Khz and 7Khz segments, while maintaining the flattest Envelope differential between the two Frequencies. 			

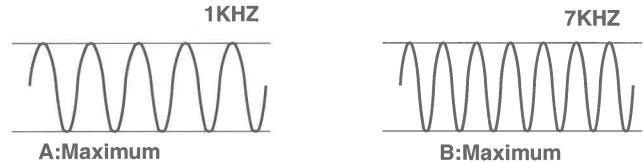
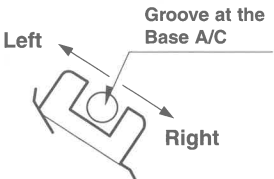
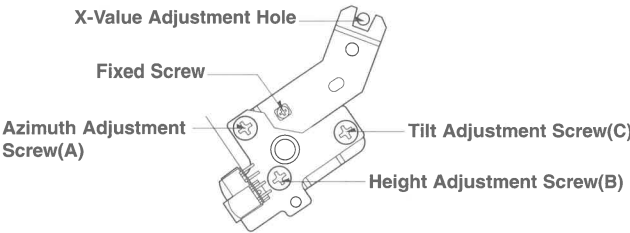
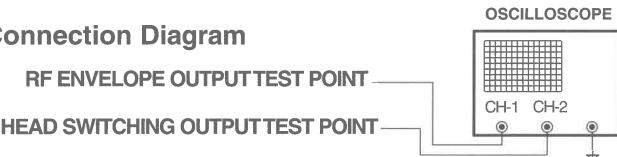


Fig. C-5-4

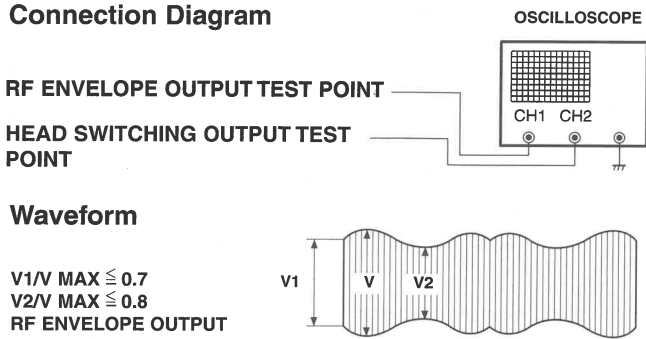
6. X-Value Adjustment

Purpose: To obtain compatibility with other VCR(VCP) Models.

Test Equipment/ Fixture	Connection Point	Test Conditions (Mechanism Condition)	Adjustment Point
<ul style="list-style-type: none">• Oscilloscope• Alignment tape(SP only)• Screw Driver(+) Type 5mm	<ul style="list-style-type: none">• CH-1: PB RF Envelope• CH-2: NTSC: SW 30Hz PAL: SW 25Hz• Head Switching Output Test Point• RF Envelope Output Test Point	<ul style="list-style-type: none">• Play an Alignment Tape	
Adjustment Procedure <ol style="list-style-type: none">1) Release the Automatic Tracking to run long enough for Tracking to complete it's Cycle.2) Loosen the Fixed Mounting Screw and move the Base Assembly A/C Head in the direction as shown in the Diagram to find the center of the peak that allows for the maximum Waveform Envelope. This method should allow the 31um Head to be centrally located over the 58um Tape Track.3) Tighten the Base Assembly A/C Head mounting Screw.		Adjustment Diagram 	
		Connection Diagram 	

DECK MECHANISM ADJUSTMENT

7. Adjustment after Replacing Drum Assembly (Video Heads)

Purpose: To correct for shift in the Roller Guide and X value after replacing the Drum.			
Test Equipment/ Fixture	Connection Point	Test Conditions (Mechanism Condition)	Adjustment Points
<ul style="list-style-type: none">• Oscilloscope• Alignment tapes• Blank Tape• Post Height Adjusting Driver• Screw Driver(+) Type 5mm	<ul style="list-style-type: none">• CH-1: PB RF Envelope• CH-2: NTSC: SW 30Hz PAL: SW 25Hz• Head Swithching Output Test Point• RF Envelope Output Test Point	<ul style="list-style-type: none">• Play the blank tape• Play an alignment tape	<ul style="list-style-type: none">• Guide Roller Precise Adjustment• Switching Point• Tracking Preset• X-Value
Checking/Adjustment Procedure Play a blank tape and check for tape curling or creasing around the roller guide. If there is a problem then follow the procedure 4. "Guide Roller Height" and 5. "Audio Control(A/C) Head Adjustment".		Connection Diagram 	
Fig. C-7			

8. Check the Tape Travel after Reassembling Deck Assembly.

8-1.Check Audio and RF Locking Time during playback and after CUE or REV (FF/REW)

Test Equipment/ Fixture	Specification	Connection Points	Test Conditions (Mecanism Condition)
<ul style="list-style-type: none"> Oscilloscope Alignment tapes(with 6H 3kHz Color Bar Signal) Stop Watch 	<ul style="list-style-type: none"> RF Locking Time: Less than 5 sec. Audio Locking Time:Less than 10sec 	<ul style="list-style-type: none"> CH-1: PB RF Envelope CH-2: Audio Output RF Envelope Output Point Audio Ouput Jack 	<ul style="list-style-type: none"> Play an alignment tape (with 6H 3kHz Color Bar Signal)
Checking Procedure Play an alignment tape then change the operating mode to CUE or REV and confirm if the unit meets the above listed specifications.		NOTES: <ol style="list-style-type: none"> CUE is fast forward mode (FF) REV is the rewind mode (REW) Referenced to the Play mode 	

8-2.Check for tape curling or jamming

Test Equipment/ Fixture	Specification	Test Conditions (Mecanism Condition)
<ul style="list-style-type: none"> T-160 Tape T-120 Tape 	<ul style="list-style-type: none"> Be sure there is no tape jamming or curling at the beginning, middle or end of the tape. 	<ul style="list-style-type: none"> Run the CUE, REV play mode at the beginning and the end of the tape.
Checking Procedure <ol style="list-style-type: none"> Confirm that the tape runs smoothly around the roller guides, drum and A/C head assemblies while abruptly changing operating modes from Play to CUE or REV. This is to be checked at the beginning, middle and end sections of the cassette. Confirm that the tape passes over the A/C head assembly as indicated by proper audio reproduction and proper tape counter performance. 		

MAINTENANCE/INSPECTION PROCEDURE

1 Check before starting repairs

The following faults can be remedied by cleaning and oiling. Check the needed lubrication and the conditions of cleanliness in the unit.

Check with the customer to find out how often the unit is used, and then determine that the unit is ready for inspection and maintenance. Check the following parts.

Phenomenon	Inspection	Replacement	
Color beats	Dirt on full-erase head	o	F/E Head
Poor S/N, no color	Dirt on video head	o	Video Head
Vertical or Horizontal jitter	Dirt on video head Dirt on tape transport system	o	
Low volume, Sound distorted	Dirt on Audio/control head	o	A/C Head
Tape does not run. Tape is slack	Dirt on pinch roller	o	Pinch Roller
			Belt Capston
In Review and Unloading (off mode), the Tape is rolled up loosely.	Clutch Ass'y S27 Torque reduced	o	Clutch Assembly D33
	Cleaning Drum and transport system	Fig. C-9-3	

NOTE

If locations marked with o do not operate normally after cleaning, check for wear and replace.

See the EXPLODED VIEWS at the end of this manual as well as the above illustrations See the Greasing (Page 4-22) for the sections to be lubricated and greased.

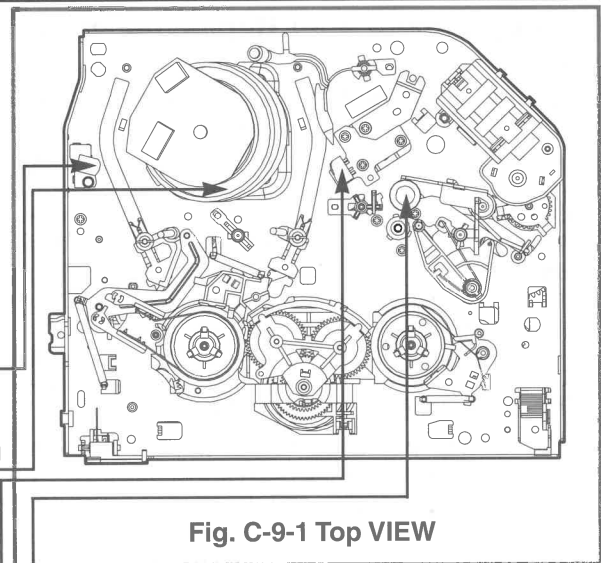


Fig. C-9-1 Top VIEW

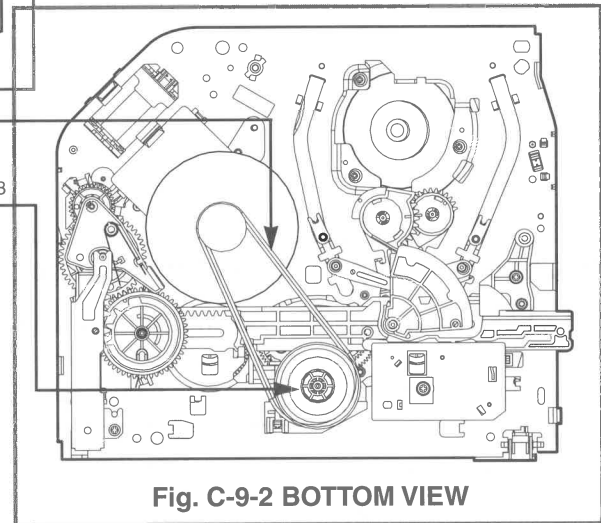


Fig. C-9-2 BOTTOM VIEW

* No. (1)~(13) Indicates the Tape Path to be traveled from Supply Reel to Take-up Reel.

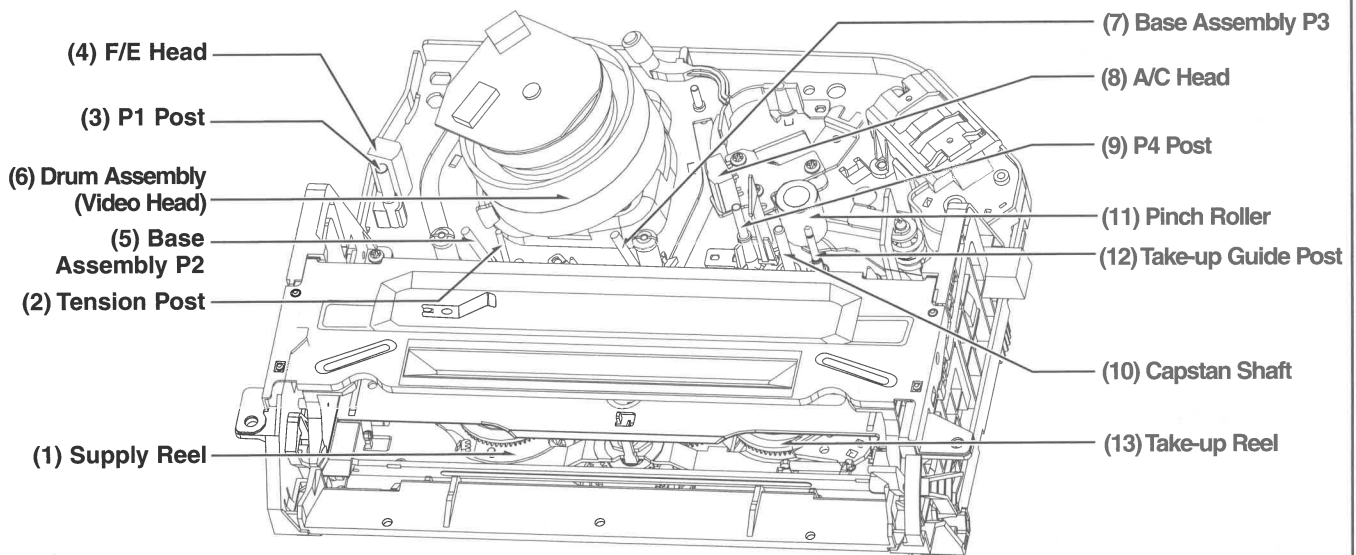


Fig. C-9-3 Tape Transport System

MAINTENANCE/INSPECTION PROCEDURE

2. Required Maintenance

The recording density of a VCR(VCP) is much higher than that of an audio tape recorder. VCR(VCP) components must be very precise, at tolerances of 1/1000mm, to ensure compatibility with other VCRs. If any of these components are worn or dirty, the symptoms will be the same as if the part is defective. To ensure a good picture, periodic inspection and maintenance, including replacement of worn out parts and lubrication, is necessary.

3. Scheduled Maintenance

Schedules for maintenance and inspection are not fixed because they vary greatly according to the way in which the customer uses the VCR(VCP), and the environment in which the VCR(VCP) is used.

But, in general home use, a good picture will be maintained if inspection and maintenance is made every 1,000 hours. The table below shows the relation between time used and inspection period.

Table 1

When inspection is necessary Average hours used per day	About 1 year	About 18 months	About 3 years
One hour			
Two hours			
Three hours			

4. Supplies Required for Inspection and Maintenance

- (1) Grease : Kanto G-311G (Blue) or equivalent
- (2) Isopropyl Alcohol or equivalent
- (3) Cleaning Patches
- (4) Grease : Kanto G-381 (Yellow) : Used only for Reel S and Reel T

5) Maintenance Procedure

5-1) Cleaning

- (1) Cleaning video head

First use a cleaning tape. If the dirt on the head is too stubborn to remove by tape, use the cleaning patch. Coat the cleaning patch with Isopropyl Alcohol. Touch the cleaning patch to the head tip and gently turn the head(rotating cylinder) right and left.

(Do not move the cleaning patch vertically. Make sure that only the buckskin on the cleaning patch comes into contact with the head. Otherwise, the head may be damaged.)

Thoroughly dry the head. Then run the test tape. If Isopropyl Alcohol remains on the video head, the tape may be damaged when it comes into contact with the head surface.

- (2) Clean the tape transport system and drive system, etc, by wiping with a cleaning patch wetted with Isopropyl Alcohol.

NOTES:

- ① It is the tape transport system which comes into contact with the running tape. The drive system consists of those parts which moves the tape.
- ② Make sure that during cleaning you do not touch the tape transport system with the tip of a screw driver and no that force is that would cause deforming or damage applied to the system.

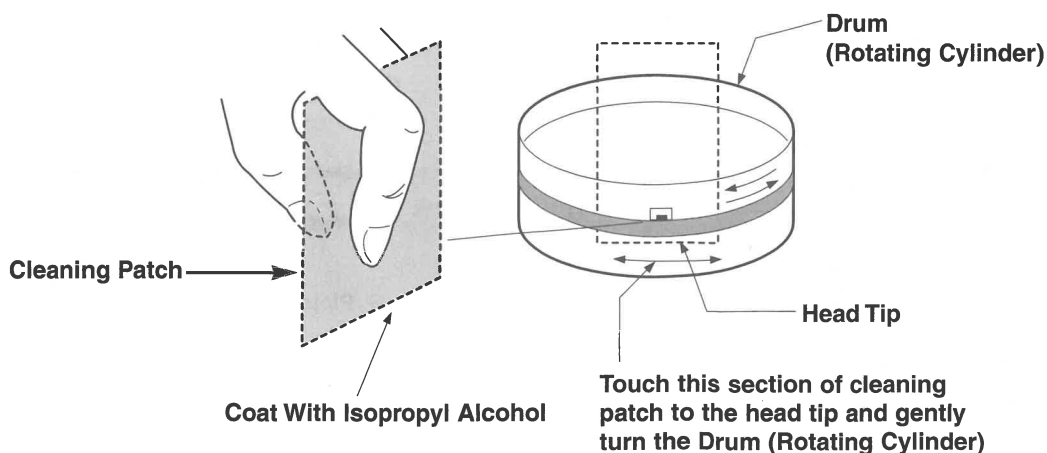


Fig. C-9-4

MAINTENANCE/INSPECTION PROCEDURE

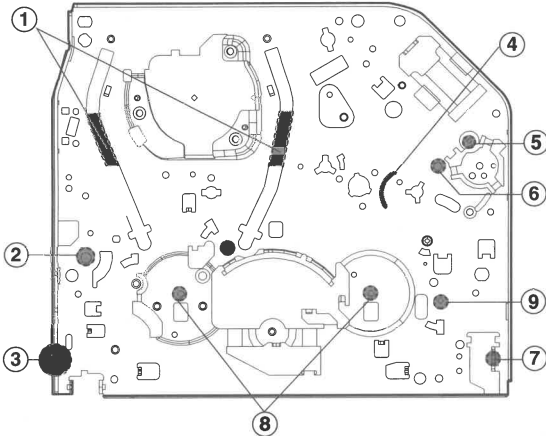
5-2) Greasing

(1) Greasing guidelines

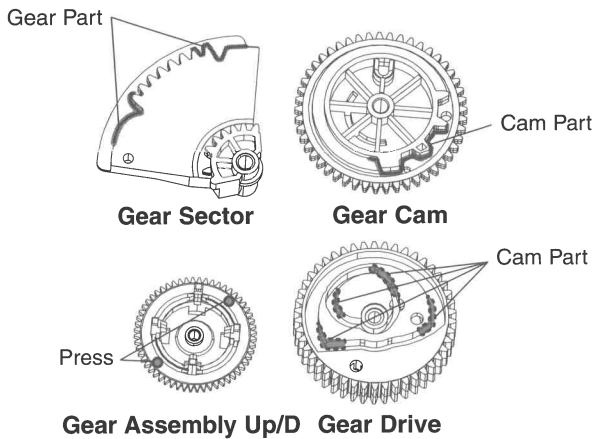
Apply grease, with a cleaning patch. Do not use excess grease. It may come into contact with the tape transport or drive system. Wipe any excess and clean with clean ing patch wetted in Isopropyl Alcohol.

NOTE:Greasing Points

- | | |
|-----------------------------------|--|
| 1) Loading Path Inside & Top side | 6) Shaft |
| 2) Base Tension Boss inside Hole | 7) Arm Assembly F/L of Burning Inside Hole |
| 3) Arm Assembly F/L "U" Groove | 8) Reel S, T Shaft (G381:Yellow) |
| 4) Arm Take-up Rubbing Section | 9) Brake T Groove |
| 5) L/D Motor Worm Wheel Part | |



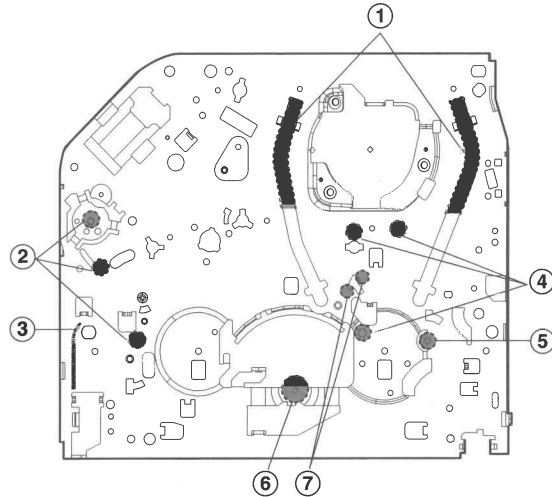
Chassis (Top)



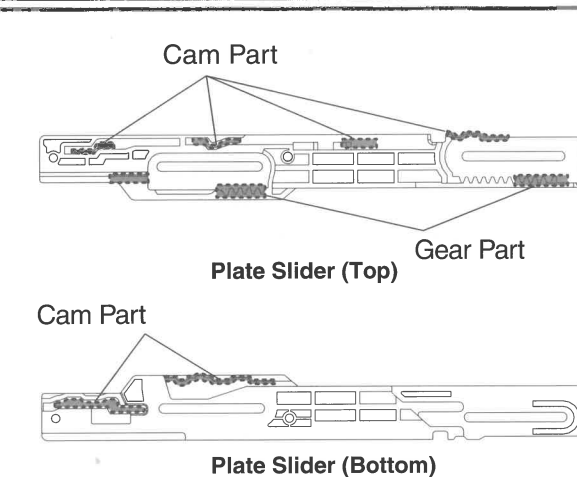
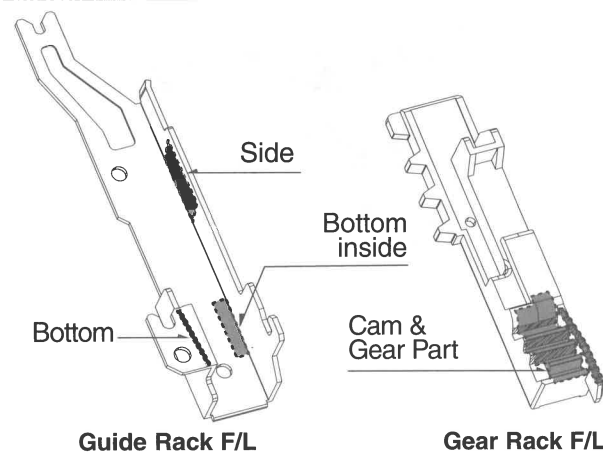
(2) Periodic greasing

Grease specified locations every 5,000 hours.

- | | |
|-----------------------------------|------------------------------|
| 1) Loading Path Inside & Top side | 5) Lever Tension Groove |
| 2) Shaft | 6) Clutch Assembly D33 Shaft |
| 3) Gear Rack F/L Moving Section | 7) Brake "S" Rubbing Section |
| 4) Shaft | |



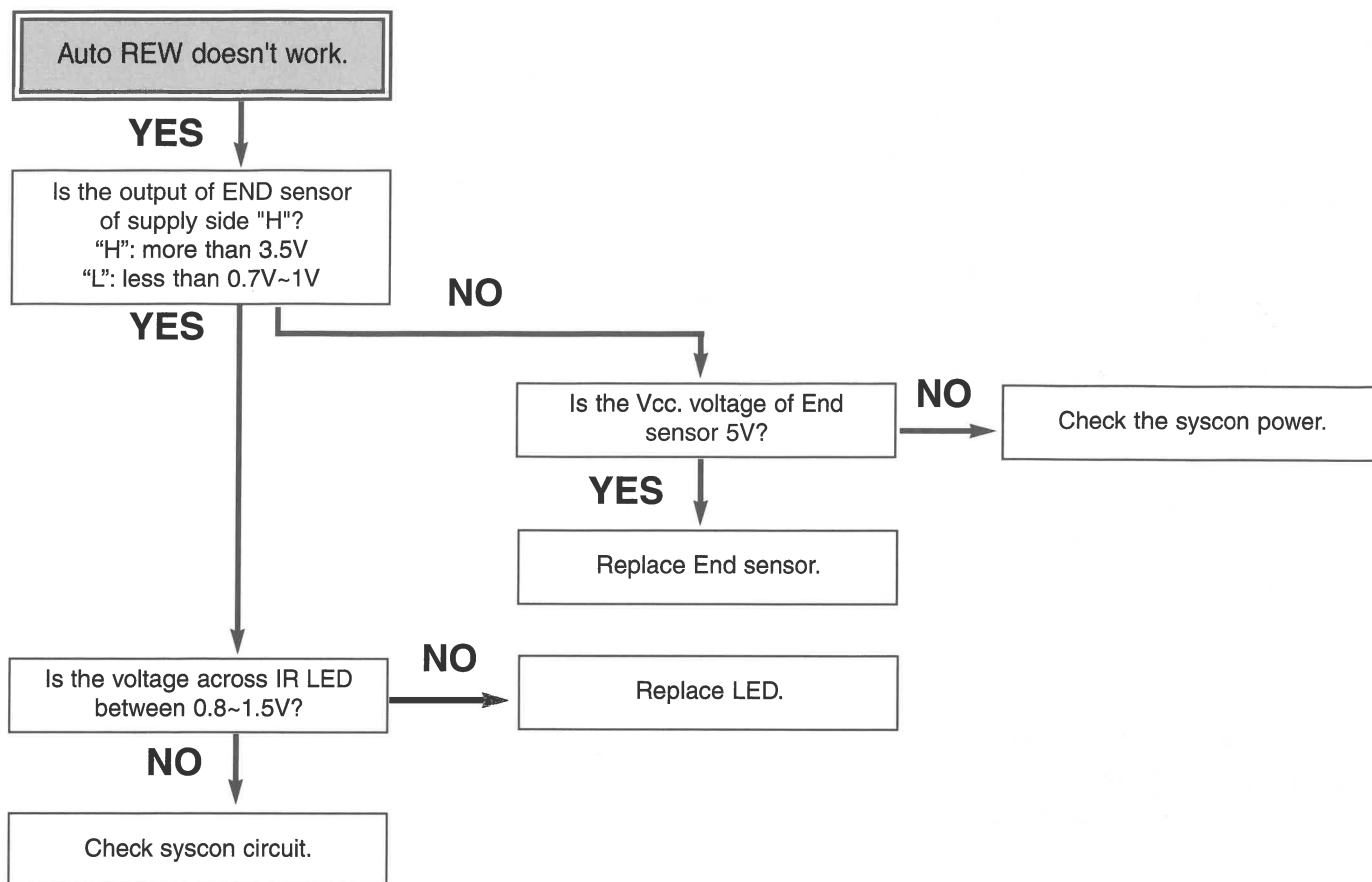
Chassis (Bottom)



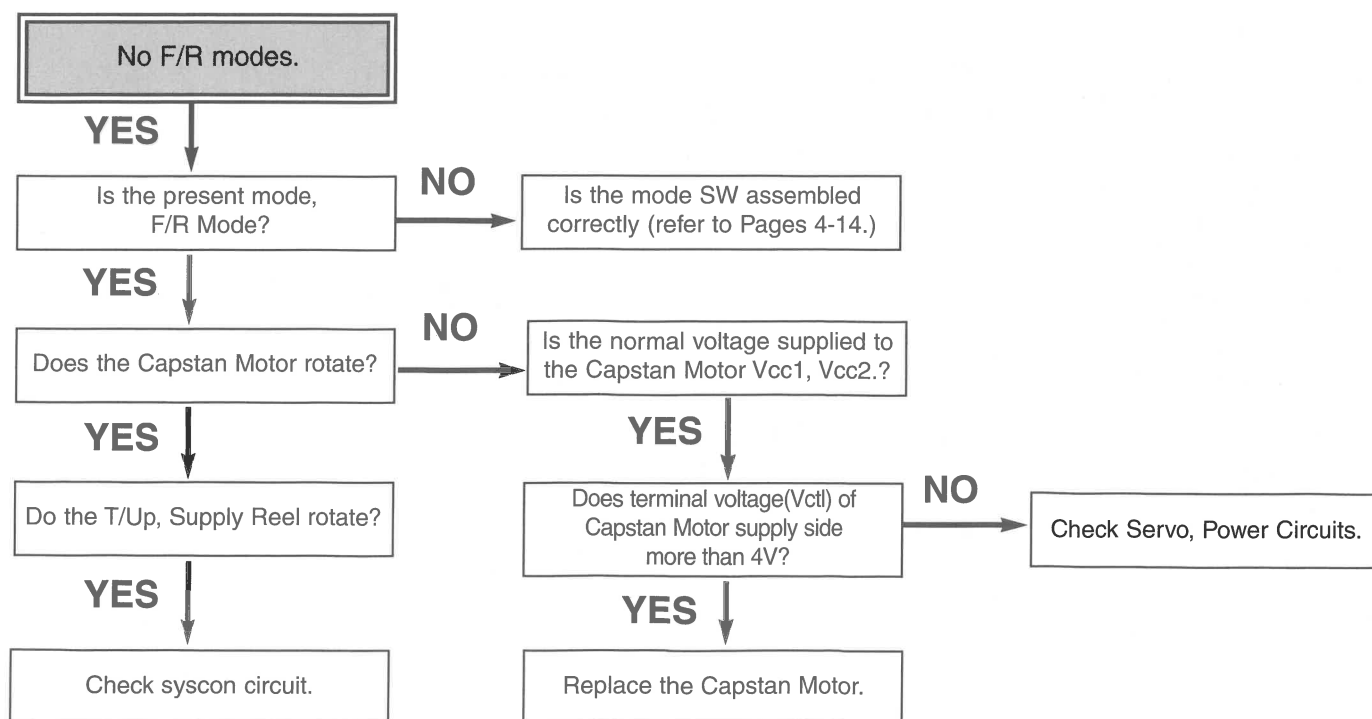
MECHANISM TROUBLESHOOTING GUIDE

1. Deck Mechanism

A.

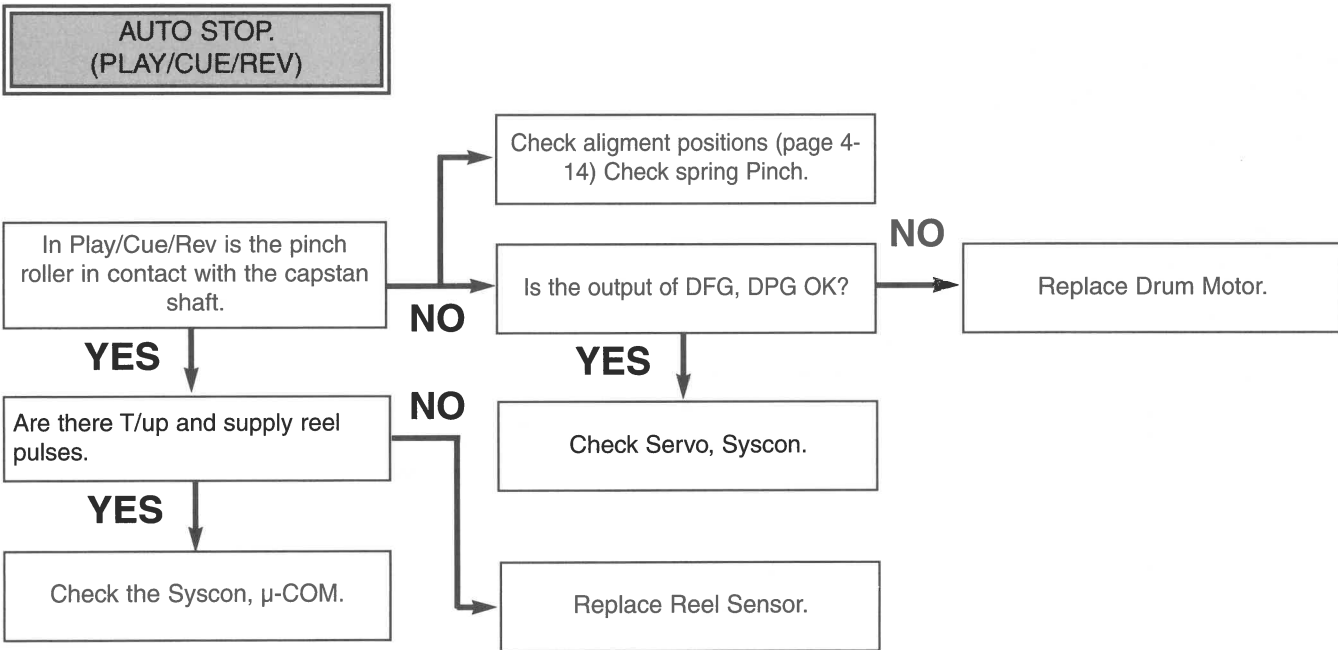


B.

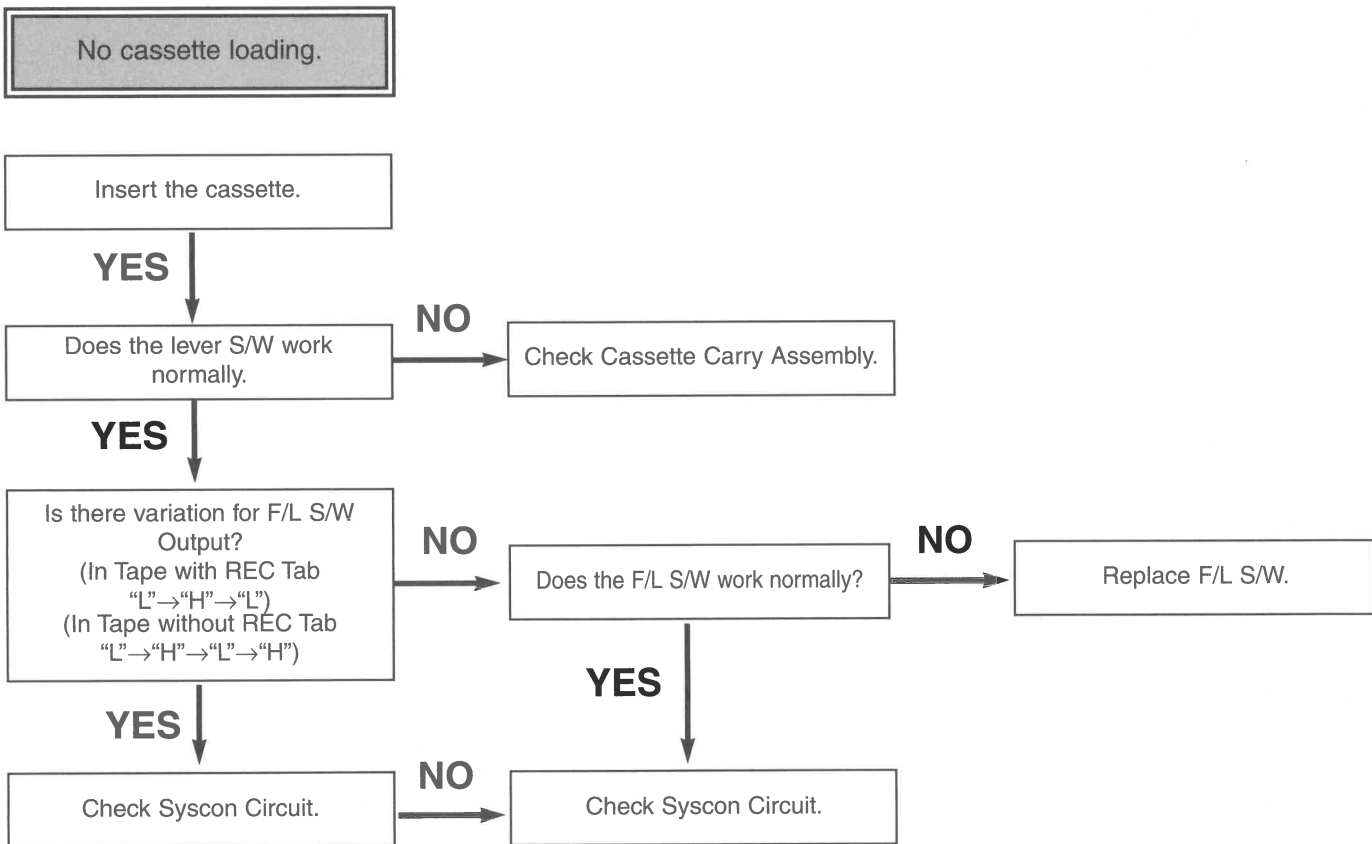


MECHANISM TROUBLESHOOTING GUIDE

C.

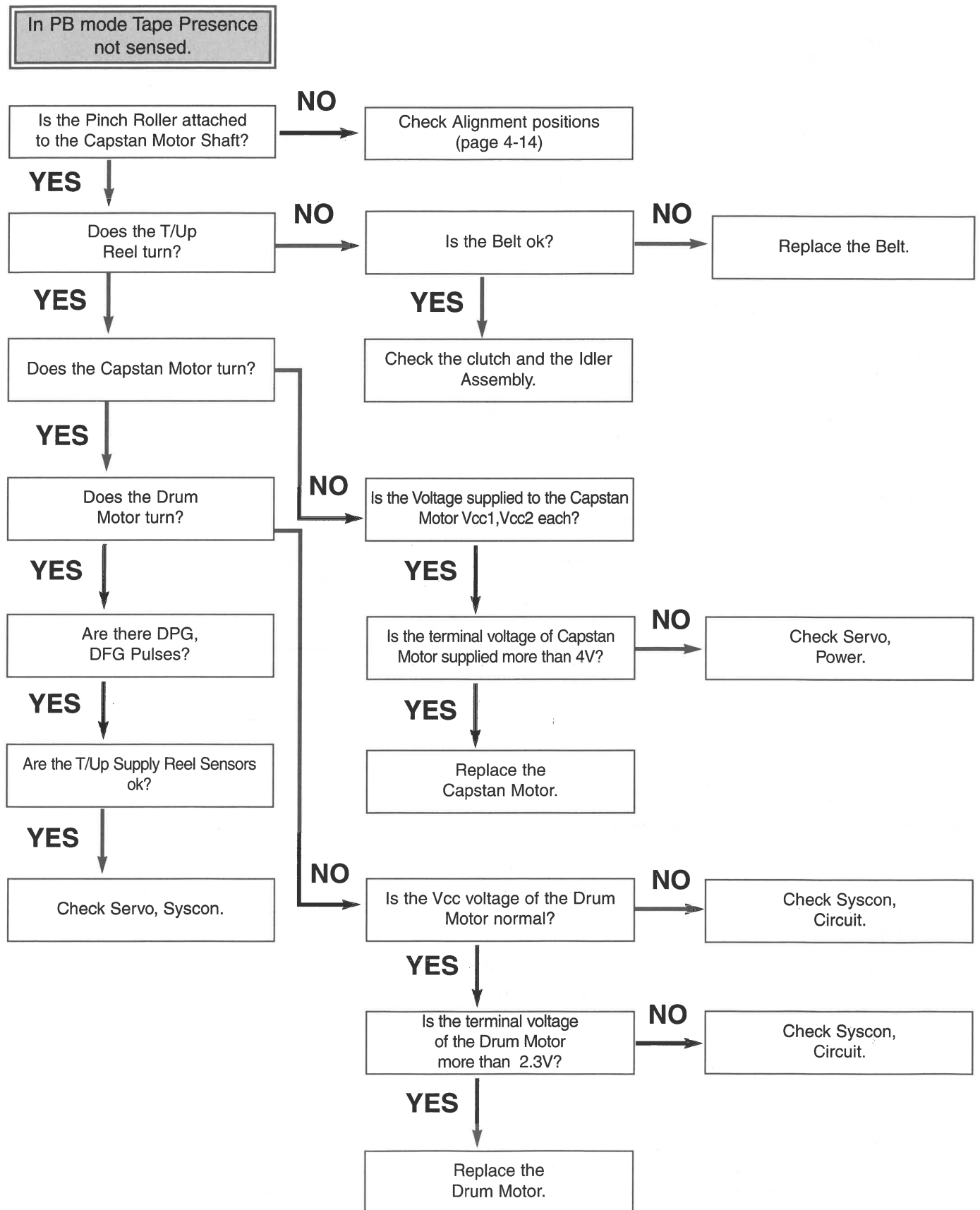


D.



MECHANISM TROUBLESHOOTING GUIDE

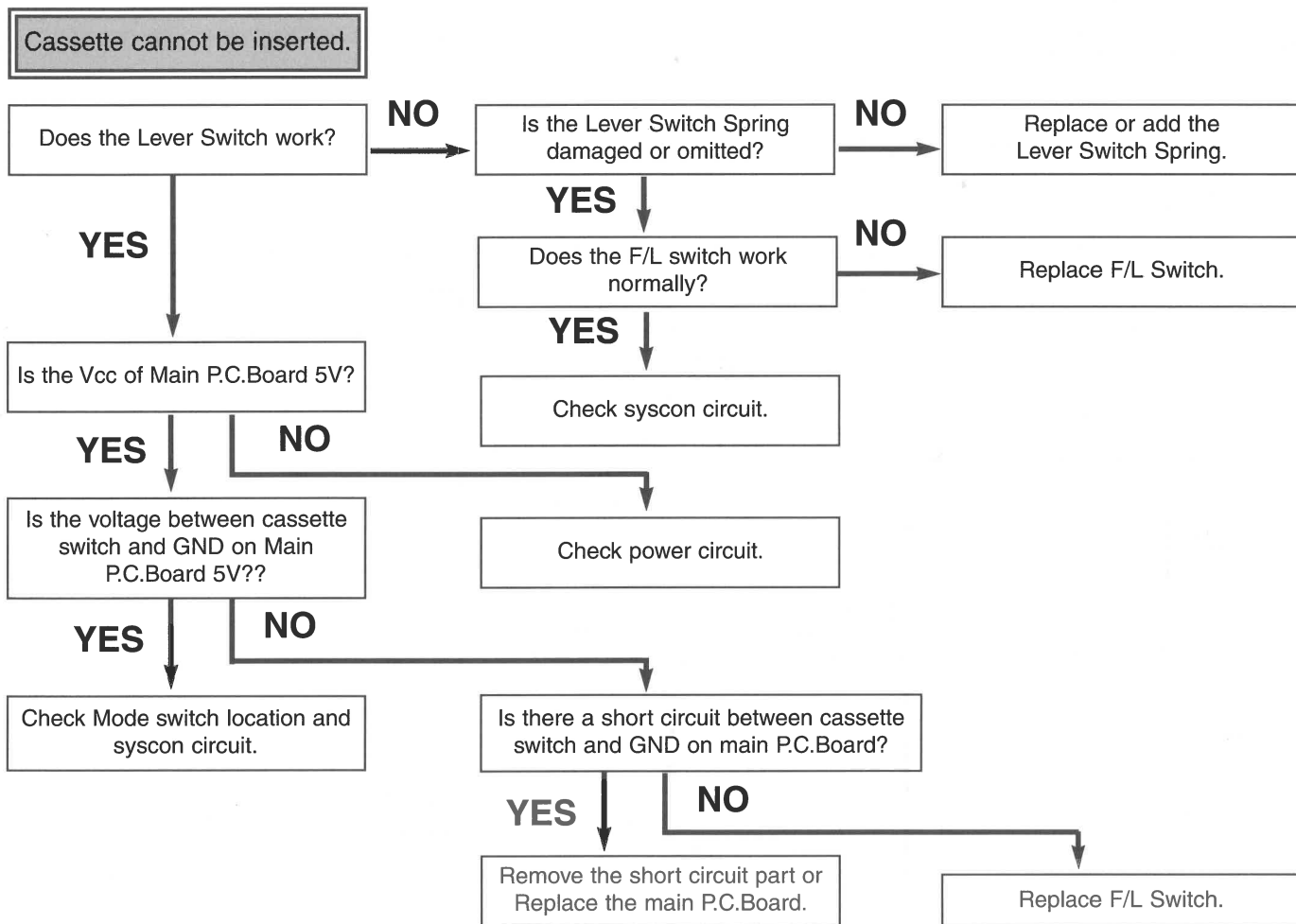
E.



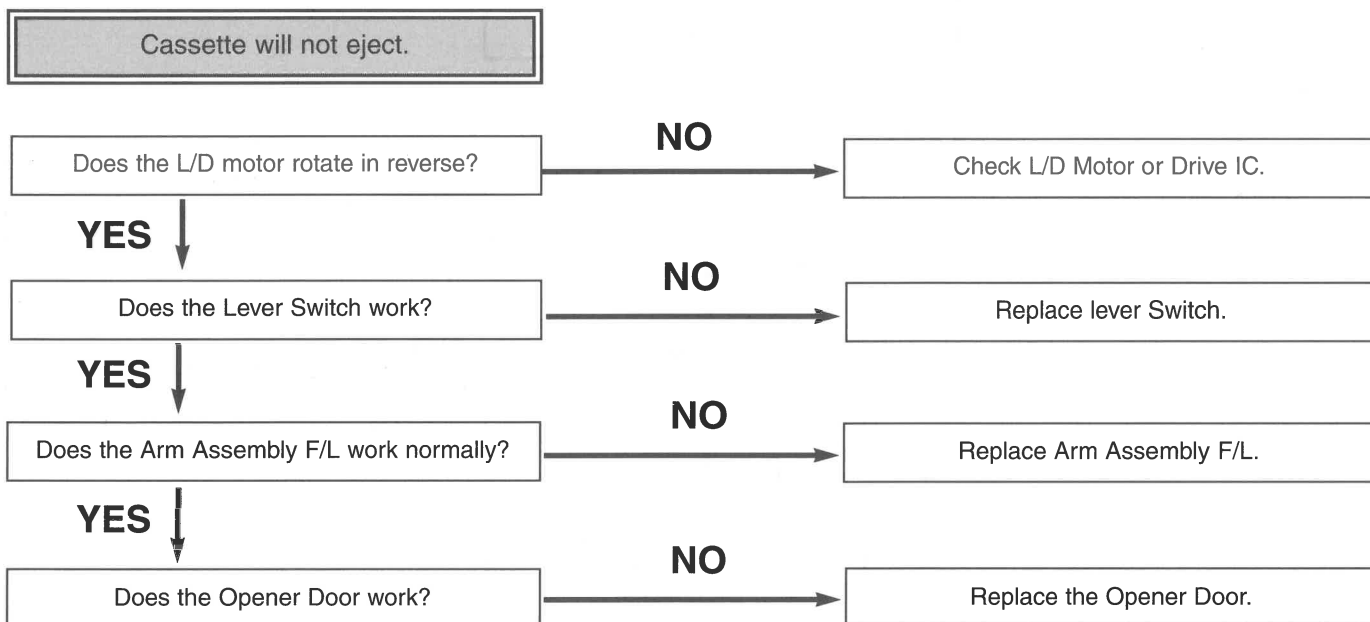
MECHANISM TROUBLESHOOTING GUIDE

2. Front Loading Mechanism

A.

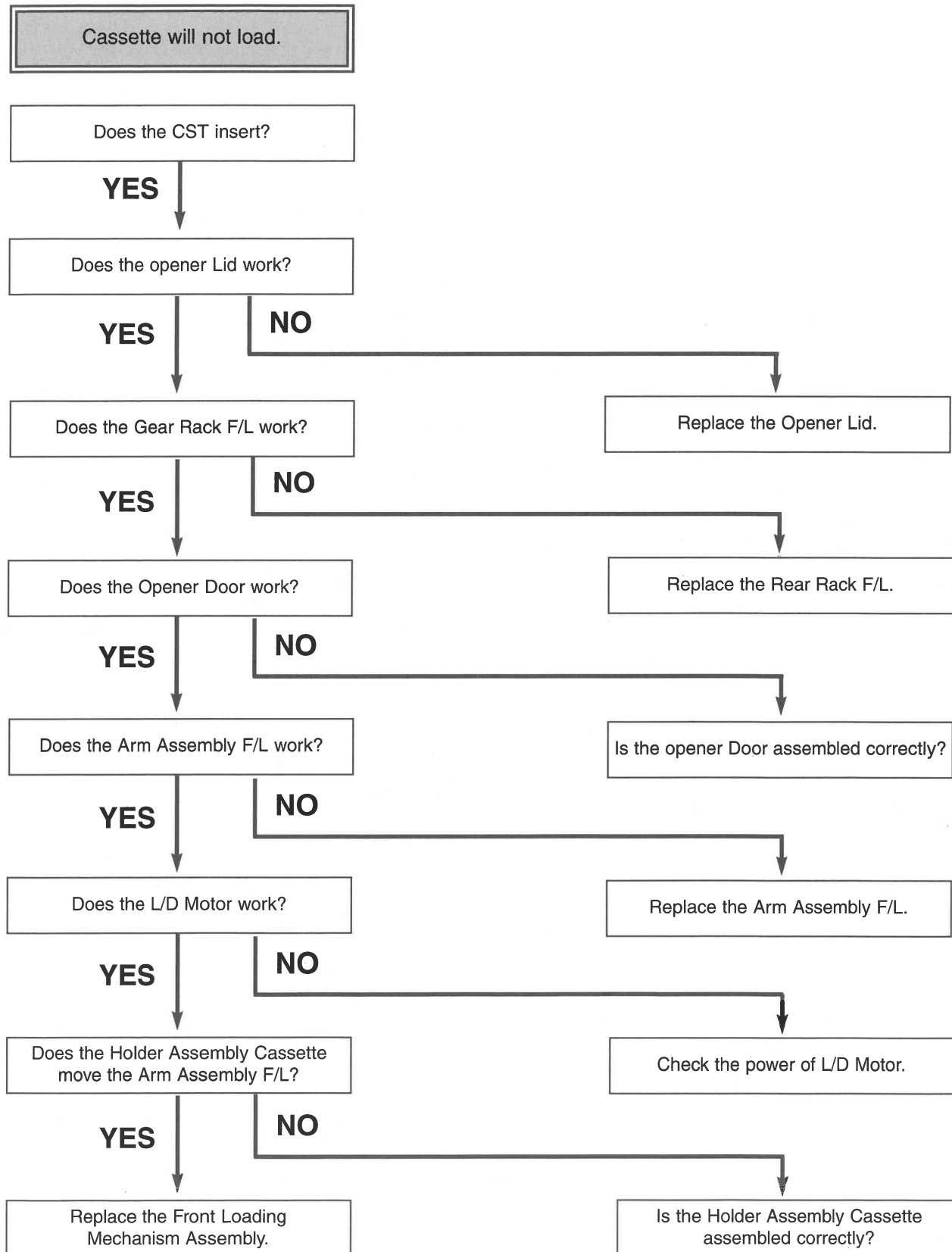


B.



MECHANISM TROUBLESHOOTING GUIDE

C.

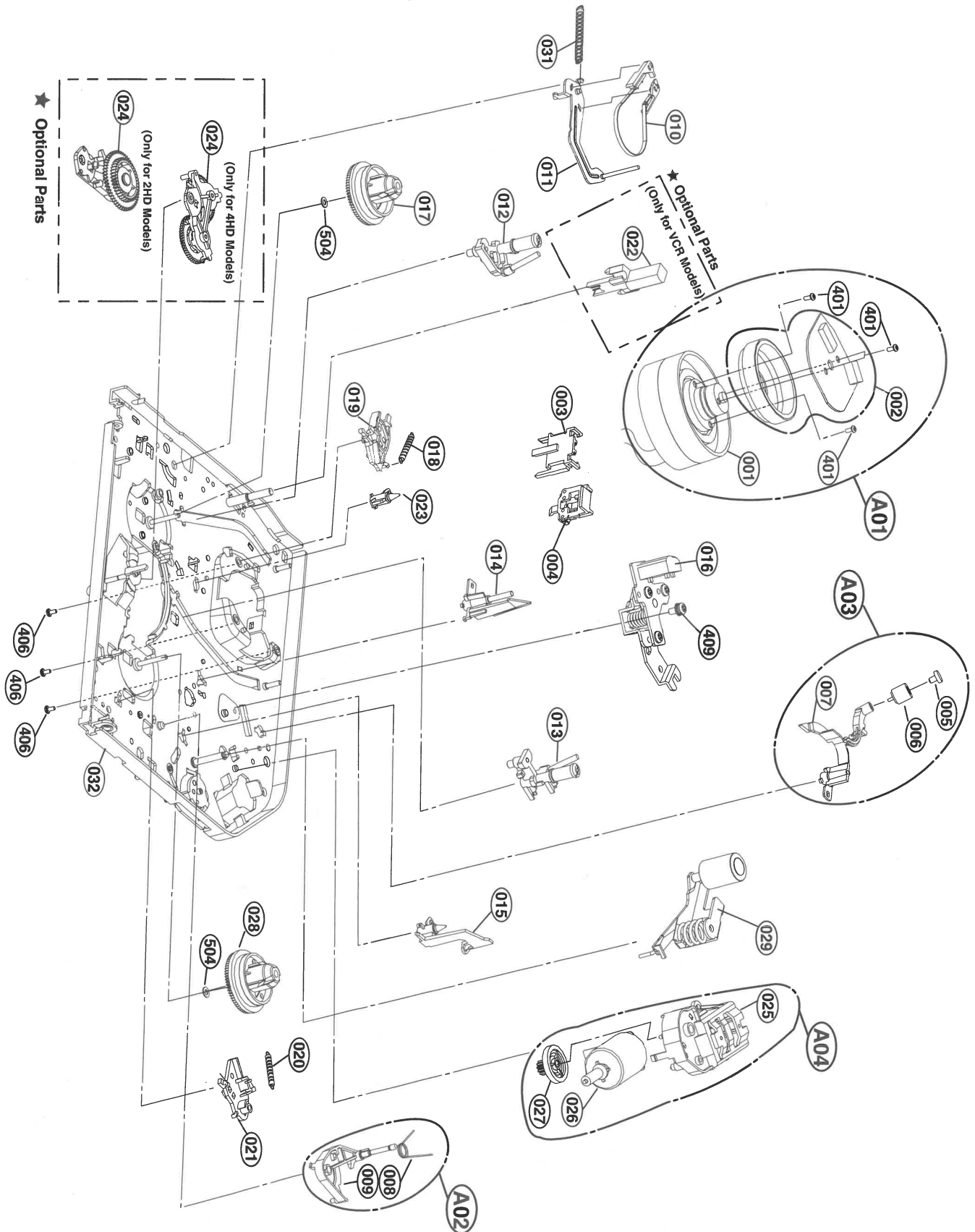


1. Front Loading Mechanism Section



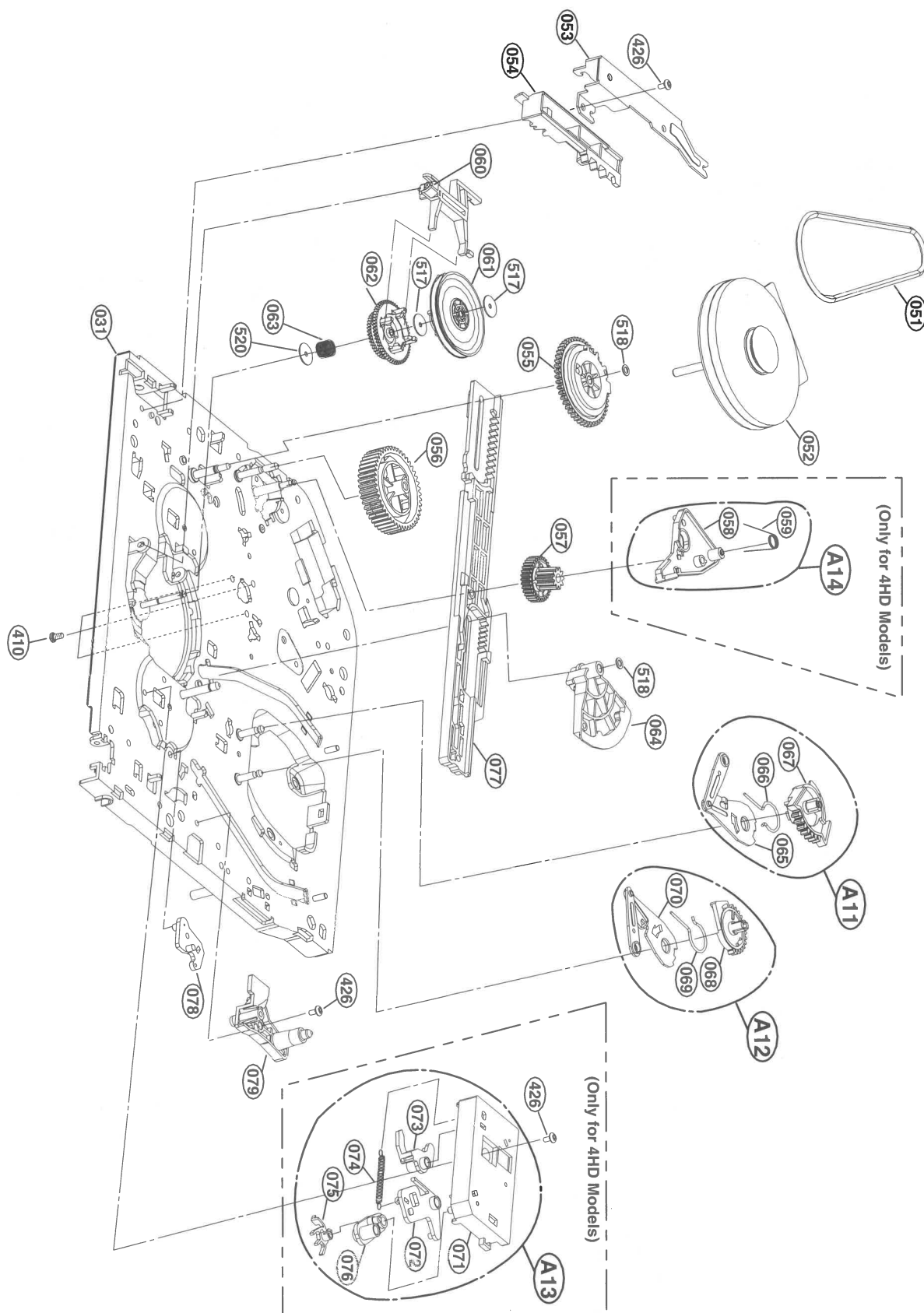
EXPLODED VIEWS

2. Moving Mechanism Section(1)



EXPLODED VIEWS

3. Moving Mechanism Section(2)



SECTION 5

CONTENTS

VCR PARTS LIST	5-1
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MODULE PARTS LIST

A = ALGB201 B = ALGB401 C = ALGB402 D= VRB210 E = VBR410 F = VBR420

NOTE: This list will enable you to easily determine the parts used on each Model, Chassis, or Assembly.

RC	REF	PART#	DESCRIPTION
AD	1	SEE A01	DRUM ASSY SUB D33-2CH SP,EP 5
BE	1	SEE A01	DRUM ASSY SUB D33-4CH NTSC 5C
C	1	SEE A01	DRUM ASSY D33-6CH NTSC 5C6W
F	1	SEE A01	DRUM ASSY SUB D33-6CH NTSC 5C
ABCDEF	2	SEE A01	MOTOR MECH DRUM F20EL-81 SANKYO
ABCDEF	2	SEE A01	MOTOR MECH DRUM GVD-033A LGEC D
ABDEF	5	SEE A03	CAP A CLEANER
ABCDEF	6	SEE A03	ROLLER CLEANER
ABCDEF	7	SEE A03	ARM CLEANER
ABCDEF	8	SEE A02	SPRING T,UP
ABCDEF	9	SEE A02	ARM T,UP
ABCDEF	10	832-10012	BAND MECH ASSY TENSION
ABCDEF	11	948-10028	ARM ASSY TENSION
ABCDEF	12	884-10007	BASE ASSY P2
ABCDEF	13	884-10008	BASE ASSY P3
ABCDEF	14	884-10009	BASE ASSY P4
ABCDEF	15	917-10038	OPENER LID
ABCDEF	16	884-10010	BASE ASSY A,C HEAD LGEC
ABCDEF	17	861-10016	REEL S
ABCDEF	19	818-10026	BRAKE ASSY S
ABCDEF	21	818-10027	BRAKE ASSY T
ABCDEF	22	948-10029	HEAD FE D33 . LG C&D,ST
ABCDEF	23	812-10059	SUPPORTER CST
AD	24	861-10019	ARM ASSY IDLER
BCEF	24	948-10030	ARM ASSY IDLER-J
ABCDEF	25	SEE A04	BRACKET L,D MOTOR
ABCDEF	26	SEE A04	MOTOR ASSY L,D
ABCDEF	27	SEE A04	GEAR WHEEL
ABCDEF	28	861-10017	REEL T
ABCDEF	29	948-10031	ARM ASSY PINCH MOLD BEARING
ABCDEF	31	804-10033	CHASSIS ASSY D33
ABCDEF	51	832-10013	BELT CAPSTAN
ABCDEF	52	941-10026	MOTOR MECH CAPSTAN F2QSB SANKYO
ABCDEF	53	843-10029	GUIDE RACK F,L
ABCDEF	54	834-10057	GEAR RACK F,L
ABCDEF	55	834-10058	GEAR DRIVE
ABCDEF	56	834-10059	GEAR CAM
ABCDEF	57	834-10060	GEAR CONNECT
BCEF	58	SEE A14	BRAKE CAPSTAN
BCEF	59	SEE A14	SPRING CAPSTAN
ABCDEF	60	917-10039	LEVER F,R
ABCDEF	61	861-10018	CLUTCH ASSY D33
ABCDEF	62	834-10061	GEAR ASSY UP,D
ABCDEF	64	834-10062	GEAR SECTOR
ABCDEF	65	SEE A11	LEVER P3
ABCDEF	66	SEE A11	SPRING L,D
ABCDEF	67	SEE A11	GEAR P3
ABCDEF	68	SEE A12	GEAR P2
ABCDEF	69	SEE A12	SPRING L,D
ABCDEF	70	SEE A12	LEVER P2
BCEF	71	SEE A13	BRACKET JOG
BCEF	72	SEE A13	LEVER JOG
BCEF	73	SEE A13	LEVER SLOW
BCEF	74	SEE A13	SPRING JOG
BCEF	75	SEE A13	GEAR JOG
BCEF	76	SEE A13	ARM JOG

RC	REF	PART#	DESCRIPTION
ABCDEF	77	857-10197	PLATE SLIDER
ABCDEF	78	917-10040	LEVER TENSION
ABCDEF	79	884-10011	BASE TENSION
ABCDEF	100	857-10198	PLATE ASSY TOP
ABDEF	101	812-10063	BRACKET SIDE L
ABCDEF	102	SEE A21	LEVER STOPPER L
ABCDEF	103	SEE A21	HOLDER SIDE L
ABCDEF	104	843-10030	GUIDE CST
ABCDEF	105	SEE A21	HOLDER CST
ABCDEF	106	SEE A21	HOLDER SIDE R
ABCDEF	107	SEE A21	LEVER STOPPER R
ABCDEF	108	SEE A22	BRACKET SIDE R
ABCDEF	109	SEE A22	OPENER DOOR
ABCDEF	110	SEE A23	ARM F,L L
ABCDEF	111	SEE A23	SPRING F,L L
ABCDEF	112	SEE A23	BODY F,L
ABCDEF	113	SEE A23	SPRING F,L R
ABCDEF	114	SEE A23	ARM F,L R
ABCDEF	115	SEE A24	LEVER SWITCH
ABCDEF	116	SEE A24	SPRING SWITCH
ABC	250	804-10034	CASE TOP Q280G:B,K BACK
DEF	250	804-10036	CASE TOP H606G D,GRAY BA
ABCDEF	260	833-10013	FRAME MAIN
ABDEF	275	841-10065	HOLDER SUB PCB AF S
C	275	841-10064	HOLDER D,LED 6P
C	276	841-10065	HOLDER SUB PCB AF S
ABC	280	857-10199	PANEL FRONT ALGB210 EVNT
DEF	280	857-10202	PANEL FRONT VRB420
ABC	283	828-10069	DOOR CST ALGB210 EVNT
DEF	283	828-10070	DOOR CST VRB410
ABCDEF	284	SEE A43	SPRING DOOR
ABCDEF	300	811-10017	POWER CORD SP-120P SPT-2 18AWG
ABCDE	320	857-10200	PANEL ASSY DISTRIBUT VRB410 ZEC. MONO
F	320	857-10203	PANEL ASSY DISTRIBUT VRB422 ZEC. HI-FI
ABCDEF	323	804-10035	CASE ASSY PRE-AMP
ABCDEF	330	824-10080	COVER BOTTOM
ABC	900	924-10046	REMOTE CONTROLLER AS N1:ALGB402 1UZ1
DEF	900	924-10048	REMOTE CONTROLLER AS N1:VRB410 1UZ1
AD	A00	SEE COMP	DECK ASSY D33 2HD NP VCR
BE	A00	SEE COMP	DECK ASSY D33 4HD NT JOG
CF	A00	SEE COMP	DECK ASSY D33 4HF NT JOG
AD	A01	835-10031	DRUM ASSY D33-2CH SP,EP 5M2
BE	A01	835-10032	DRUM ASSY D33-4CH NTSC 5C4W
CF	A01	835-10033	DRUM ASSY D33-6CH NTSC 5C6W
ABCDEF	A02	948-10032	ARM ASSY T,UP
ABCDEF	A03	948-10033	ARM ASSY CLEANER
ABCDEF	A04	812-10060	BRACKET ASSY L,D MOTOR
ABCDEF	A11	834-10063	GEAR ASSY P3
ABCDEF	A12	834-10064	GEAR ASSY P2
BCEF	A13	812-10061	BRACKET ASSY JOG
BEF	A14	818-10029	BRAKE ASSY CAPSTAN
C	A14	818-10028	BRAKE ASSY CAPSTAN
ABCDEF	A21	841-10066	HOLDER ASSY CST
ABCDEF	A22	812-10062	BRACKET ASSY DOOR
ABCDEF	A23	948-10034	ARM ASSY F,L
ABCDEF	A24	917-10041	LEVER ASSY SWITCH



Critical safety components are identified by shading. Replace only with part numbers specified.

MODULE PARTS LIST

A = ALGB201 B = ALGB401 C = ALGB402 D= VRB210 E = VBR410 F = VBR420

NOTE: This list will enable you to determine the parts used on each Model, Chassis, or Assembly.

RC	REF	PART#	DESCRIPTION
A	A43	857-10207	PANEL ASSY FRONT[NOR ALGB210 EVNT
B	A43	857-10208	PANEL ASSY FRONT[NOR ALGB401 1UZ1
C	A43	857-10201	PANEL ASSY FRONT[NOR ALGB402 1UZ1
D	A43	857-10206	PANEL ASSY FRONT[NOR VRB210 1UZ1
E	A43	857-10204	PANEL ASSY FRONT[NOR VRB410 1UZ1
F	A43	857-10205	PANEL ASSY FRONT[NOR VRB420 EVNT
A	A46	809-10284	BOARD ASSY ALGB210 MAIN
B	A46	809-10285	BOARD ASSY ALGB401 MAIN
C	A46	809-10280	BOARD ASSY ALGB402 MAIN
D	A46	809-10287	BOARD ASSY VRB210 MAIN
E	A46	809-10283	BOARD ASSY VRB410 MAIN
F	A46	809-10286	BOARD ASSY VRB420 MAIN
ABCDEF	BD101	903-10019	DIODE S1WBA60 1A 600V
ABCDEF	C101	822-10251	CAP, ECQU2A104MV 0.1UF,25
ABCDEF	C101	822-10380	CAP, PCX2 275V 0.1UF M P
ABCDEF	C103	822-10080	CAP, AC-CON 103,400V SMPS
ABCDEF	C104	822-10080	CAP, AC-CON 103,400V SMPS
ABCDEF	C105	822-10841	CAP, POLY 0.01UF D 630V K PE N
ABCDEF	C106	822-10247	CAP, HIGH-VOL 220PF,1KV C
ABCDEF	C107	822-10725	CAP, POLY 0.015UF S 50V J PE T
ABCDEF	C108	822-10725	CAP, POLY 0.015UF S 50V J PE T
ABCDEF	C109	822-10726	CAP, POLY 0.022UF S 50V J PE T
ABCDEF	C111	822-10361	CAP, ELECTRO 100UF SMS 200V M W B
ABCDEF	C114	822-10728	CAP, POLY 0.047UF S 50V J PE T
ABCDEF	C115	822-10376	CAP, CE 47UF,50V KME SMP
ABCDEF	C116	822-10375	CAP, 1000,10V KME SMPS
ABCDEF	C117	822-10722	CAP, ELECTRO 330UF SMS 10V M FM5
ABCDEF	C120	822-10378	CAP, ELECTRO 470UF KME 25V M FM5
ABCDEF	C121	822-10729	CAP, CE 470UF,25V SHL 10*
ABCDEF	C151	822-07410	CAP, ELECTRO 4.7M SRA 50V M FM5
ABCDEF	C152	822-05689	CAP, ELECTRO 10M SRA 16V M FM5
ABCDEF	C153	822-05689	CAP, ELECTRO 10M SRA 16V M FM5
ABCDEF	C154	822-07410	CAP, ELECTRO 4.7M SRA 50V M FM5
ABCDEF	C155	822-07410	CAP, ELECTRO 4.7M SRA 50V M FM5
ABCDEF	C156	822-05689	CAP, ELECTRO 10M SRA 16V M FM5
ABCDEF	C157	822-10072	CAP, ELECTRO 3.3M SRA 50V M FM5
ABCDEF	C158	822-10842	CAP, TUBULAR R HI 0.033UF 50V K B TA26
ABCDEF	C301	822-10379	CAP, POLY 0.01UF S 50V J PE TP
ABCDEF	C302	822-10099	CAP, ELECTRO 22M SRA 16V M FM5
ABDE	C303	822-07042	CAP, TUBULAR HIG 330P 50V K B
CF	C303	822-06708	CAP, TUBULAR HIG 220P 50V K B
ABCDEF	C304	822-07410	CAP, ELECTRO 4.7M SRA 50V M FM5
ABCDEF	C305	822-07039	CAP, TUBULAR HIG 2200P 16V M X
ABCDEF	C306	822-07410	CAP, ELECTRO 4.7M SRA 50V M FM5
ABCDEF	C307	822-05689	CAP, ELECTRO 10M SRA 16V M FM5
ABDE	C309	822-10011	CAP, TUBULAR HIG 0.1M 50V Z F
ABCDEF	C310	822-10011	CAP, TUBULAR HIG 0.1M 50V Z F
ABCDEF	C311	822-10099	CAP, ELECTRO 22M SRA 16V M FM5
C	C312	822-10169	CAP, ELECTRO 1.0U SRA 50V M FM5 B
DEF	C312	822-05689	CAP, ELECTRO 10M SRA 16V M FM5
ABCDEF	C313	822-10379	CAP, POLY 0.01UF S 50V J PE TP
ABCDEF	C314	822-10727	CAP, POLY 0.033UF S 50V J PE T
ABCDEF	C315	822-06624	CAP, ELECTRO 47M SRA,SS 16V M FM
ABCDEF	C316	822-07037	CAP, TUBULAR HIG 0.01M 16V M Y TA
ABCDEF	C317	822-10015	CAP, ELECTRO 220M SRA 6.3V M FM5
ABCDEF	C318	822-07144	CAP, TUBULAR HIG 150P 50V K B

RC	REF	PART#	DESCRIPTION
ABCDEF	C319	822-10011	CAP, TUBULAR HIG 0.1M 50V Z F
ABCDEF	C320	822-05689	CAP, ELECTRO 10M SRA 16V M FM5
ABCDEF	C321	822-06761	CAP, TUBULAR T.C 47P 50V J SL
ABCDEF	C322	822-10011	CAP, TUBULAR HIG 0.1M 50V Z F
ABCDEF	C323	822-10011	CAP, TUBULAR HIG 0.1M 50V Z F
ABCDEF	C324	822-05689	CAP, ELECTRO 10M SRA 16V M FM5
ABCDEF	C325	822-10011	CAP, TUBULAR HIG 0.1M 50V Z F
ABCDEF	C326	822-10011	CAP, TUBULAR HIG 0.1M 50V Z F
ABCDEF	C327	822-10072	CAP, ELECTRO 3.3M SRA 50V M FM5
ABCDEF	C328	822-05689	CAP, ELECTRO 10M SRA 16V M FM5
ABCDEF	C329	822-07138	CAP, TUBULAR HIG 270P 50V K B
ABCDEF	C330	822-06767	CAP, ELECTRO 2.2M SRA 50V M FM5
ABCDEF	C331	822-06707	CAP, ELECTRO 1.0M SRA,SS50V M FM
ABDEF	C332	822-10169	CAP, ELECTRO 1.0U SRA 50V M FM5 B
C	C332	822-06707	CAP, ELECTRO 1.0M SRA,SS50V M FM
ABCDEF	C333	822-07042	CAP, TUBULAR HIG 330P 50V K B
ABCDEF	C334	822-10036	CAP, TUBULAR HIG 0.047M 50V Z F T
ABCDEF	C335	822-10015	CAP, ELECTRO 220M SRA 6.3V M FM5
ABCDEF	C336	822-07037	CAP, TUBULAR HIG 0.01M 16V M Y TA
ABCDEF	C337	822-10011	CAP, TUBULAR HIG 0.1M 50V Z F
ABCDEF	C338	822-07037	CAP, TUBULAR HIG 0.01M 16V M Y TA
ABCDEF	C339	822-06643	CAP, ELECTRO 0.1M SRA 50V M FM5
ABCDEF	C340	822-07037	CAP, TUBULAR HIG 0.01M 16V M Y TA
ABCDEF	C341	822-07037	CAP, TUBULAR HIG 0.01M 16V M Y TA
ABCDEF	C342	822-10015	CAP, ELECTRO 220M SRA 6.3V M FM5
ABCDEF	C343	822-07037	CAP, TUBULAR HIG 0.01M 16V M Y TA
ABCDEF	C344	822-06590	CAP, TUBULAR HIG 0.022M 25V Z F TA
ABCDEF	C345	822-07410	CAP, ELECTRO 4.7M SRA 50V M FM5
ABCDEF	C346	822-06760	CAP, CERAMIC TE 5P 50V C NPO TR
ABCDEF	C347	822-07410	CAP, ELECTRO 4.7M SRA 50V M FM5
ABCDEF	C348	822-10011	CAP, TUBULAR HIG 0.1M 50V Z F
ABCDEF	C349	822-06590	CAP, TUBULAR HIG 0.022M 25V Z F TA
ABCDEF	C350	822-06707	CAP, ELECTRO 1.0M SRA,SS50V M FM
ABDEF	C351	822-10723	CAP, TUBULAR HIG 4700P 16V M X
C	C351	822-10843	CAP, TUBULAR HIG 4700P 16V M X TA52
ABCDEF	C352	822-06767	CAP, ELECTRO 2.2M SRA 50V M FM5
ABCDEF	C353	822-07037	CAP, TUBULAR HIG 0.01M 16V M Y TA
ABCDEF	C354	822-07058	CAP, POLY 0.022U 100V J POL
ABCDEF	C355	822-07037	CAP, TUBULAR HIG 0.01M 16V M Y TA
ABCDEF	C357	822-10842	CAP, TUBULAR R HI 0.033UF 50V K B TA26
ABCDEF	C358	822-10072	CAP, ELECTRO 3.3M SRA 50V M FM5
ABCDEF	C359	822-10015	CAP, ELECTRO 220M SRA 6.3V M FM5
AB	C360	822-10846	CAP, TUBULAR HIG 1800P 16V M X
CDEF	C360	822-06622	CAP, TUBULAR HIG 1000P 50V K B
ABCDEF	C361	822-07037	CAP, TUBULAR HIG 0.01M 16V M Y TA
ABCDEF	C362	822-07037	CAP, TUBULAR HIG 0.01M 16V M Y TA
AB	C363	822-10846	CAP, TUBULAR HIG 1800P 16V M X
CDEF	C363	822-06622	CAP, TUBULAR HIG 1000P 50V K B
ABCDEF	C364	822-07037	CAP, TUBULAR HIG 0.01M 16V M Y TA
ABCDEF	C365	822-10015	CAP, ELECTRO 220M SRA 6.3V M FM5
B	C366	822-10846	CAP, TUBULAR HIG 1800P 16V M X
CEF	C366	822-06622	CAP, TUBULAR HIG 1000P 50V K B
BCEF	C367	822-07037	CAP, TUBULAR HIG 0.01M 16V M Y TA
BCEF	C368	822-07037	CAP, TUBULAR HIG 0.01M 16V M Y TA
B	C369	822-10846	CAP, TUBULAR HIG 1800P 16V M X
CEF	C369	822-06622	CAP, TUBULAR HIG 1000P 50V K B



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MODULE PARTS LIST

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RC	REF	PART#	DESCRIPTION
ABDEF	C370	822-05689	CAP, ELECTRO 10M SRA 16V M FM5
C	C370	822-06767	CAP, ELECTRO 2.2M SRA 50V M FM5
ABCDEF	C371	822-10068	CAP, TUBULAR HIG 680P 50V K B
ABCDEF	C372	822-07041	CAP, TUBULAR T.C 18P 50V J SL
ABDE	C377	822-10723	CAP, TUBULAR HIG 4700P 16V M X
ABCDEF	C378	822-06707	CAP, ELECTRO 1.0M SRA,SS50V M FM
ABCDEF	C379	822-10371	CAP, POLY 0.018UF S 50V J PE T
ABCDEF	C380	822-10036	CAP, TUBULAR HIG 0.047M 50V Z F T
ABCDEF	C381	822-10014	CAP, TUBULAR HIG 120P 50V K B
ABDE	C382	822-10014	CAP, TUBULAR HIG 120P 50V K B
ABCDEF	C3A1	822-05689	CAP, ELECTRO 10M SRA 16V M FM5
AB	C3A2	822-05689	CAP, ELECTRO 10M SRA 16V M FM5
DEF	C3V1	822-06624	CAP, ELECTRO 47M SRA,SS 16V M FM
ABCDEF	C500	822-07211	CAP, ELECTRO 470M SR 6.3V M FM5
ABCDEF	C501	822-06590	CAP, TUBULAR HIG 0.022M 25V Z F TA
ABCDEF	C502	822-06624	CAP, ELECTRO 47M SRA,SS 16V M FM
ABCDEF	C503	822-10015	CAP, ELECTRO 220M SRA 6.3V M FM5
ABCDEF	C504	822-06590	CAP, TUBULAR HIG 0.022M 25V Z F TA
ABCDEF	C505	822-06624	CAP, ELECTRO 47M SRA,SS 16V M FM
ABCDEF	C507	822-10011	CAP, TUBULAR HIG 0.1M 50V Z F
F	C508	822-10011	CAP, TUBULAR HIG 0.1M 50V Z F
ABCDEF	C509	822-06590	CAP, TUBULAR HIG 0.022M 25V Z F TA
ABCDEF	C510	822-06590	CAP, TUBULAR HIG 0.022M 25V Z F TA
ABCDEF	C511	822-10011	CAP, TUBULAR HIG 0.1M 50V Z F
ABCDEF	C512	822-07040	CAP, TUBULAR HIG 180P 50V K B
ABCDEF	C513	822-10011	CAP, TUBULAR HIG 0.1M 50V Z F
ABCDEF	C514	822-06698	CAP, CERAMIC TE 18P 50V J NP
ABCDEF	C515	822-06698	CAP, CERAMIC TE 18P 50V J NP
ABCDEF	C516	822-10011	CAP, TUBULAR HIG 0.1M 50V Z F
ABCDEF	C518	822-06719	CAP, CERAMIC TE 100P 50V J NP
ABCDEF	C519	822-06719	CAP, CERAMIC TE 100P 50V J NP
ABCDEF	C520	822-06622	CAP, TUBULAR HIG 1000P 50V K B
ABCDEF	C521	822-06590	CAP, TUBULAR HIG 0.022M 25V Z F TA
ABCDEF	C522	822-07037	CAP, TUBULAR HIG 0.01M 16V M Y TA
ABDEF	C523	822-06713	CAP, CERAMIC TE 33P 50V J NP
C	C523	822-07039	CAP, TUBULAR HIG 2200P 16V M X
ABCDEF	C524	822-06584	CAP, ELECTRO 33M SRA 16V M FM5
ABCDEF	C525	822-06624	CAP, ELECTRO 47M SRA,SS 16V M FM
ABCDEF	C526	822-10844	CAP, ELECTRO 47M SR 50V M FM5
ABCDEF	C527	822-07040	CAP, TUBULAR HIG 180P 50V K B
ABCDEF	C528	822-07037	CAP, TUBULAR HIG 0.01M 16V M Y TA
ABCDEF	C529	822-10011	CAP, TUBULAR HIG 0.1M 50V Z F
ABCDEF	C530	822-05689	CAP, ELECTRO 10M SRA 16V M FM5
ABCDEF	C531	822-10169	CAP, ELECTRO 1.0U SRA 50V M FM5 B
ABCDEF	C532	822-06590	CAP, TUBULAR HIG 0.022M 25V Z F TA
ABCDEF	C533	822-06622	CAP, TUBULAR HIG 1000P 50V K B
ABCDEF	C534	822-10098	CAP, ELECTRO 1.0M SRE,SE50V M F
ABCDEF	C535	822-06707	CAP, ELECTRO 1.0M SRA,SS50V M FM
ABCDEF	C536	822-07037	CAP, TUBULAR HIG 0.01M 16V M Y TA
ABCDEF	C537	822-07037	CAP, TUBULAR HIG 0.01M 16V M Y TA
ABCDEF	C540	822-06624	CAP, ELECTRO 47M SRA,SS 16V M FM
ABCDEF	C541	822-07410	CAP, ELECTRO 4.7M SRA 50V M FM5
ABCDEF	C542	822-10068	CAP, TUBULAR HIG 680P 50V K B
ABCDEF	C543	822-07039	CAP, TUBULAR HIG 2200P 16V M X
ABCDEF	C544	822-10728	CAP, POLY 0.047UF S 50V J PE T
ABCDEF	C545	822-10011	CAP, TUBULAR HIG 0.1M 50V Z F

RC	REF	PART#	DESCRIPTION
ABCDEF	C546	822-06624	CAP, ELECTRO 47M SRA,SS 16V M FM
ABCDEF	C547	822-06624	CAP, ELECTRO 47M SRA,SS 16V M FM
ABCDEF	C548	822-06590	CAP, TUBULAR HIG 0.022M 25V Z F TA
C	C549	822-06771	CAP, CERAMIC TE 47P 50V J NP
ABCDEF	C551	822-10727	CAP, POLY 0.033UF S 50V J PE T
ABCDEF	C552	822-07037	CAP, TUBULAR HIG 0.01M 16V M Y TA
ABCDEF	C556	822-07037	CAP, TUBULAR HIG 0.01M 16V M Y TA
ABCDEF	C557	822-07037	CAP, TUBULAR HIG 0.01M 16V M Y TA
ABCDEF	C561	822-06624	CAP, ELECTRO 47M SRA,SS 16V M FM
ABCDEF	C564	822-07042	CAP, TUBULAR HIG 330P 50V K B
ABCDEF	C567	822-06622	CAP, TUBULAR HIG 1000P 50V K B
ABCDEF	C570	822-10025	CAP, CERAMIC TE 15P 50V J NP
ABCDEF	C571	822-10025	CAP, CERAMIC TE 15P 50V J NP
ABCDEF	C572	822-07037	CAP, TUBULAR HIG 0.01M 16V M Y TA
ABCDEF	C574	822-06622	CAP, TUBULAR HIG 1000P 50V K B
ABCDEF	C575	822-06622	CAP, TUBULAR HIG 1000P 50V K B
ABCDEF	C581	822-07037	CAP, TUBULAR HIG 0.01M 16V M Y TA
ABCDEF	C582	822-07037	CAP, TUBULAR HIG 0.01M 16V M Y TA
ABCDEF	C583	822-06707	CAP, ELECTRO 1.0M SRA,SS50V M FM
ABCDEF	C588	822-07410	CAP, ELECTRO 4.7M SRA 50V M FM5
ABCDEF	C596	822-06590	CAP, TUBULAR HIG 0.022M 25V Z F TA
DEF	C5V1	822-10721	CAP, ELECTRO 0.33M SRA 50V M FM5
DEF	C5V2	822-06590	CAP, TUBULAR HIG 0.022M 25V Z F TA
ABCDEF	C701	822-07410	CAP, ELECTRO 4.7M SRA 50V M FM5
ABCDEF	C702	822-06705	CAP, ELECTRO 100U SRA 16V M FM5
ABCDEF	C703	822-07037	CAP, TUBULAR HIG 0.01M 16V M Y TA
ABCDEF	C704	822-06643	CAP, ELECTRO 0.1M SRA 50V M FM5
ABCDEF	C705	822-07211	CAP, ELECTRO 470M SR 6.3V M FM5
ABCDEF	C708	822-10072	CAP, ELECTRO 3.3M SRA 50V M FM5
ABDE	C709	822-06590	CAP, TUBULAR HIG 0.022M 25V Z F TA
ABCDEF	C710	822-10011	CAP, TUBULAR HIG 0.1M 50V Z F
CF	C802	822-10099	CAP, ELECTRO 22M SRA 16V M FM5
CF	C803	822-06707	CAP, ELECTRO 1.0M SRA,SS50V M FM
CF	C805	822-06707	CAP, ELECTRO 1.0M SRA,SS50V M FM
C	C806	822-10036	CAP, TUBULAR HIG 0.047M 50V Z F T
F	C806	822-10728	CAP, POLY 0.047UF S 50V J PE T
CF	C807	822-06584	CAP, ELECTRO 33M SRA 16V M FM5
CF	C808	822-06767	CAP, ELECTRO 2.2M SRA 50V M FM5
CF	C809	822-06705	CAP, ELECTRO 100U SRA 16V M FM5
CF	C810	822-10725	CAP, POLY 0.015UF S 50V J PE T
CF	C811	822-10379	CAP, POLY 0.01UF S 50V J PE TP
CF	C812	822-07037	CAP, TUBULAR HIG 0.01M 16V M Y TA
CF	C813	822-07037	CAP, TUBULAR HIG 0.01M 16V M Y TA
CF	C815	822-10011	CAP, TUBULAR HIG 0.1M 50V Z F
CF	C816	822-10379	CAP, POLY 0.01UF S 50V J PE TP
CF	C817	822-10725	CAP, POLY 0.015UF S 50V J PE T
CF	C818	822-06705	CAP, ELECTRO 100U SRA 16V M FM5
CF	C819	822-06767	CAP, ELECTRO 2.2M SRA 50V M FM5
CF	C820	822-06584	CAP, ELECTRO 33M SRA 16V M FM5
C	C821	822-10036	CAP, TUBULAR HIG 0.047M 50V Z F T
F	C821	822-10728	CAP, POLY 0.047UF S 50V J PE T
C	C822	822-06624	CAP, ELECTRO 47M SRA,SS 16V M FM
F	C822	822-10015	CAP, ELECTRO 220M SRA 6.3V M FM5
CF	C823	822-07037	CAP, TUBULAR HIG 0.01M 16V M Y TA
C	C824	822-10845	CAP, TUBULAR HIG 180P 50V K B TA52
F	C824	822-07040	CAP, TUBULAR HIG 180P 50V K B



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RC	REF	PART#	DESCRIPTION
CF	C825	822-06707	CAP, ELECTRO 1.0M SRA,SS50V M FM
CF	C827	822-06707	CAP, ELECTRO 1.0M SRA,SS50V M FM
ABCDEF	C828	822-05689	CAP, ELECTRO 10M SRA 16V M FM5
CF	C830	822-07037	CAP, TUBULAR HIG 0.01M 16V M Y TA
CF	C831	822-06624	CAP, ELECTRO 47M SRA,SS 16V M FM
CF	C832	822-10099	CAP, ELECTRO 22M SRA 16V M FM5
CF	C833	822-05689	CAP, ELECTRO 10M SRA 16V M FM5
CF	C834	822-05689	CAP, ELECTRO 10M SRA 16V M FM5
CF	C835	822-05689	CAP, ELECTRO 10M SRA 16V M FM5
ABCDE	C837	822-10846	CAP, TUBULAR HIG 1800P 16V M X
F	C837	822-07039	CAP, TUBULAR HIG 2200P 16V M X
C	C838	822-10847	CAP, TUBULAR HIG 270P 50V K B TA52
F	C838	822-07138	CAP, TUBULAR HIG 270P 50V K B
CF	C839	822-07037	CAP, TUBULAR HIG 0.01M 16V M Y TA
CF	C840	822-07037	CAP, TUBULAR HIG 0.01M 16V M Y TA
CF	C841	822-07037	CAP, TUBULAR HIG 0.01M 16V M Y TA
CF	C842	822-07037	CAP, TUBULAR HIG 0.01M 16V M Y TA
CF	C843	822-07037	CAP, TUBULAR HIG 0.01M 16V M Y TA
CF	C844	822-10072	CAP, ELECTRO 3.3M SRA 50V M FM5
C	C845	822-06624	CAP, ELECTRO 47M SRA,SS 16V M FM
F	C845	822-10015	CAP, ELECTRO 220M SRA 6.3V M FM5
ABDE	C846	822-10011	CAP, TUBULAR HIG 0.1M 50V Z F
C	C846	822-10169	CAP, ELECTRO 1.0U SRA 50V M FM5 B
F	C846	822-06707	CAP, ELECTRO 1.0M SRA,SS50V M FM
CF	C851	822-10169	CAP, ELECTRO 1.0U SRA 50V M FM5 B
CF	C852	822-10373	CAP, POLY 5600 PF S 50V J PE T
CF	C853	822-10755	CAP, POLY 0.012U S 50V J TS
CF	C854	822-06766	CAP, ELECTRO 0.47M SRA 50V M FM5
CF	C855	822-07410	CAP, ELECTRO 4.7M SRA 50V M FM5
CF	C856	822-05689	CAP, ELECTRO 10M SRA 16V M FM5
CF	C857	822-07410	CAP, ELECTRO 4.7M SRA 50V M FM5
CF	C858	822-10169	CAP, ELECTRO 1.0U SRA 50V M FM5 B
CF	C859	822-07410	CAP, ELECTRO 4.7M SRA 50V M FM5
CF	C860	822-06707	CAP, ELECTRO 1.0M SRA,SS50V M FM
CF	C861	822-10848	CAP, POLY .0027UF S 50V J PE T
CF	C862	822-10728	CAP, POLY 0.047UF S 50V J PE T
CF	C863	822-10072	CAP, ELECTRO 3.3M SRA 50V M FM5
CF	C864	822-10169	CAP, ELECTRO 1.0U SRA 50V M FM5 B
CF	C865	822-05689	CAP, ELECTRO 10M SRA 16V M FM5
CF	C866	822-05689	CAP, ELECTRO 10M SRA 16V M FM5
CF	C867	822-10846	CAP, TUBULAR HIG 1800P 16V M X
CF	C868	822-10169	CAP, ELECTRO 1.0U SRA 50V M FM5 B
CF	C869	822-07037	CAP, TUBULAR HIG 0.01M 16V M Y TA
CF	C870	822-06624	CAP, ELECTRO 47M SRA,SS 16V M FM
ABCDEF	C901	822-06624	CAP, ELECTRO 47M SRA,SS 16V M FM
ABCDEF	C902	822-06624	CAP, ELECTRO 47M SRA,SS 16V M FM
ABCDEF	CS501	885-10061	SWITCH DETECTOR SPPB62042 ALPS UL 5V
ABCDEF	D101	903-10175	DIODE ERA22-06 KFLB V3 0.5
ABCDEF	D102	903-01623	DIODE IN4003A 1SR35-200A 5
ABCDEF	D103	903-10256	DIODE 1SS133 DETECT SW T
ABCDEF	D104	903-10256	DIODE 1SS133 DETECT SW T
ABCDEF	D105	903-10064	DIODE EU01W R-FORM TP SAN
ABCDEF	D106	903-10176	DIODE ERC81-004 FUJIL TYPE
ABCDEF	D109	903-10322	DIODE RECTIFIER RU3YLF-C1 BK SANKEN
ABCDEF	D151	903-01623	DIODE IN4003A 1SR35-200A 5
ABCDEF	D152	903-01623	DIODE IN4003A 1SR35-200A 5

RC	REF	PART#	DESCRIPTION
ABCDEF	D153	903-01623	DIODE IN4003A 1SR35-200A 5
ABC	D301	903-10256	DIODE 1SS133 DETECT SW T
DEF	D302	903-10256	DIODE 1SS133 DETECT SW T
ABC	D3V1	903-10256	DIODE 1SS133 DETECT SW T
ABCDEF	D502	903-10256	DIODE 1SS133 DETECT SW T
CF	D5E2	903-10256	DIODE 1SS133 DETECT SW T
AD	D5E3	903-10256	DIODE 1SS133 DETECT SW T
ABCDEF	D5E9	903-10256	DIODE 1SS133 DETECT SW T
ABC	D5F2	903-10256	DIODE 1SS133 DETECT SW T
DEF	D5F5	903-10256	DIODE 1SS133 DETECT SW T
ABCDEF	D801	903-10256	DIODE 1SS133 DETECT SW T
ABCDEF	ES501	841-10067	HOLDER ASSY END
ABCDEF	ES502	841-10067	HOLDER ASSY END
ABCDEF	F101	936-10023	FUSE SLOW BLOW 1600MA 250 V 5.2X20
ABCDEF	FL301	820-10228	COIL CAN BIAC OSC DE0-010 KSE
ABCDEF	IC102	905-10304	SENSOR LTV-817B PHOTO COUPL
ABCDEF	IC103	905-10048	IC KEC KIA431
ABCDEF	IC301	905-10347	IC HITACHI HA118717NF QFP100 BK
DEF	IC3V1	905-10013	IC SANYO LA7016 ANALOG SW
ABDEF	IC501	905-10351	IC LG SEMICONDUCTOR GMS3977RA-A43F 1000F
C	IC501	905-10348	IC HITACHI HD6473977R 100QFP BK
ABCDEF	IC502	905-10349	IC SAMSUNG ELECTRONI KA3082 10-SIP BK MOT
ABCDEF	IC504	905-10206	IC SAMSUNG ELECTRONI KA7531Z T0-92 TP 3.1
ABCDEF	IC505	905-10210	IC SAMSUNG ELECTRONI KA7542Z RESET T092 T
DEF	IC5V1	905-10352	IC OKI MSM6654A-541RS DIP18
CF	IC801	905-10302	IC MATSUSHITA AN3664NFB QFP BK HIF
CF	IC802	905-10350	IC MATSUSHITA AN3328S 16SOP TP AMP
CF	IC803	905-10303	IC SONY CXA2104S DIP30 BK MT
ABDE	JK301	844-10015	JACK BJP-404F
CF	JK301	844-10020	JACK BJP-606 BAE EUN
ABCDEF	L101	820-10229	FILTER CIRC SHT LFSQ2215V4-04220
ABCDEF	L103	820-10230	COIL CHOKE CHOCK 22MH TP 5MM
ABCDEF	L104	820-10230	COIL CHOKE CHOCK 22MH TP 5MM
ABCDEF	L301	820-02191	INDUCTOR RADIAL LEAD 100M K 6X6 L5
ABCDEF	L303	820-10028	INDUCTOR AXIAL LEAD 270U K 2.3X3.4 L5 TP
ABCDEF	L304	820-10012	INDUCTOR RADIAL LEAD 100UH 5% 4X5 TR5
ABCDEF	L306	820-02413	INDUCTOR AXIAL LEAD 12M K 2.3X3.4 L5 T
ABCDEF	L311	820-02401	INDUCTOR AXIAL LEAD 100M K 2.3X3.4 L5 T
ABCDEF	L312	820-10009	INDUCTOR RADIAL LEAD 6800U J 6X7 L5 TP
ABCDEF	L313	820-02401	INDUCTOR AXIAL LEAD 100M K 2.3X3.4 L5 T
ABCDEF	L501	820-02191	INDUCTOR RADIAL LEAD 100M K 6X6 L5
ABDEF	L502	820-02247	INDUCTOR AXIAL LEAD 15M K 2.3X3.4 L5 T
ABDEF	L504	820-02557	INDUCTOR RADIAL LEAD 470M K 6X6 L5
ABCDEF	L506	820-10021	INDUCTOR RADIAL LEAD 6.80UH 5% 4X5 TR5
CF	L803	820-10028	INDUCTOR AXIAL LEAD 270U K 2.3X3.4 L5 TP
CF	L804	820-10231	INDUCTOR RADIAL LEAD 27M K 6X6 L5
CF	L805	820-10012	INDUCTOR RADIAL LEAD 100UH 5% 4X5 TR5
ABCDEF	LD501	841-10068	HOLDER ASSY LED
ABC	LD901	903-10324	LED LTL-16KEE-031 TP LIT
DEF	LD901	903-10331	LED LTL-16KEE-001A TP LI
ABC	LD902	903-10325	LED LTL-16KEE-031 TP LIT



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DEF	LD902	903-10332	LED LTL-16KGE-001A TP LI
AB	LD903	903-10324	LED LTL-16KEE-031 TP LIT
C	LD903	903-10325	LED LTL-16KGE-031 TP LIT
DEF	LD903	903-10331	LED LTL-16KEE-001A TP LI
ABC	LD904	903-10324	LED LTL-16KEE-031 TP LIT
DEF	LD904	903-10331	LED LTL-16KEE-001A TP LI
ABC	LD905	903-10325	LED LTL-16KGE-031 TP LIT
DEF	LD905	903-10332	LED LTL-16KGE-001A TP LI
ABCDEF	MS501	885-10062	SWITCH DETECTOR MMS00420ZMBO MIC NON
A	PBM00	SEE A46	PWB PCB ASSY ALGB210 MAIN
B	PBM00	SEE A46	PWB PCB ASSY ALGB401 MAIN
C	PBM00	SEE A46	PWB PCB ASSY ALGB402 MAIN
D	PBM00	SEE A46	PWB PCB ASSY VRB210 MAIN
E	PBM00	SEE A46	PWB PCB ASSY VBR410 MAIN
F	PBM00	SEE A46	PWB PCB ASSY VBR420 MAIN
DEF	PBT00	SEE A46	PWB PCB ASSY VBR420S DOT TIMER
ABCDEF	Q111	921-10040	TRANSISTOR 2SC4418 SANKEN
ABCDEF	Q112	921-10042	TRANSISTOR KTC1006 T0-92L TP KE
ABCDEF	Q151	921-10156	TRANSISTOR KTC2804-Y BK KEC T01
ABCDEF	Q152	921-10157	TRANSISTOR KTC3203-Y KTC2120
ABCDEF	Q157	921-10157	TRANSISTOR KTC3203-Y KTC2120
ABCDEF	Q158	921-02135-01	TRANSISTOR KTA1266-GR TP KTA101
ABCDEF	Q159	921-10157	TRANSISTOR KTC3203-Y KTC2120
ABCDEF	Q160	921-10002	TRANSISTOR KTC3199-BL MINI TP K
ABCDEF	Q301	921-10006	TRANSISTOR KTC3205-TP-Y KTC223
ABCDEF	Q302	921-02366	TRANSISTOR KTA1273-TP-Y KTA966
ABCDEF	Q303	921-10004	TRANSISTOR KRC103M-TP KRC1203
ABCDEF	Q304	921-10003	TRANSISTOR KTA1267-GR MINI TP
ABCDEF	Q305	921-10002	TRANSISTOR KTC3199-BL MINI TP K
ABCDEF	Q306	921-10002	TRANSISTOR KTC3199-BL MINI TP K
ABCDEF	Q307	921-10012	TRANSISTOR KRA103M-TP KRA2203
ABCDEF	Q308	921-10002	TRANSISTOR KTC3199-BL MINI TP K
ABCDEF	Q501	921-10002	TRANSISTOR KTC3199-BL MINI TP K
ABCDEF	Q503	921-10003	TRANSISTOR KTA1267-GR MINI TP
ABCDEF	Q506	921-10004	TRANSISTOR KRC103M-TP KRC1203
ABCDEF	Q509	921-10003	TRANSISTOR KTA1267-GR MINI TP
ABCDEF	Q510	921-10002	TRANSISTOR KTC3199-BL MINI TP K
ABCDEF	Q514	921-10004	TRANSISTOR KRC103M-TP KRC1203
ABCDEF	Q515	921-10004	TRANSISTOR KRC103M-TP KRC1203
ABCDEF	Q522	921-10002	TRANSISTOR KTC3199-BL MINI TP K
ABCDEF	Q531	921-10004	TRANSISTOR KRC103M-TP KRC1203
ABCDEF	Q701	921-10003	TRANSISTOR KTA1267-GR MINI TP
CF	Q801	921-10002	TRANSISTOR KTC3199-BL MINI TP K
ABCDEF	Q802	921-10002	TRANSISTOR KTC3199-BL MINI TP K
ABCDEF	Q803	921-10002	TRANSISTOR KTC3199-BL MINI TP K
ABCDEF	Q901	921-10004	TRANSISTOR KRC103M-TP KRC1203
ABCDEF	Q902	921-10004	TRANSISTOR KRC103M-TP KRC1203
ABCDEF	Q903	921-10004	TRANSISTOR KRC103M-TP KRC1203
ABCDEF	Q904	921-10004	TRANSISTOR KRC103M-TP KRC1203
ABCDEF	Q905	921-10004	TRANSISTOR KRC103M-TP KRC1203
ABCDEF	R101	863-10386	RESISTOR RCR50 2.2M J M15
ABCDEF	R102	863-10929	RESISTOR CEMENT 2.7 OHM 2 W 5% TR RW
ABCDEF	R103	863-06640	RESISTOR FIXED CARBO 1.0M 1,6W 5 TA26
ABCDEF	R104	863-10384	RESISTOR FIX METAL F 33K 2W 5% TR
ABCDEF	R105	863-10383	RESISTOR FIX METAL F 120 1W 5% TR
ABCDEF	R106	863-10930	RESISTOR FIX METAL F 0.75OHM 2 W 5% TR

RC	REF	PART#	DESCRIPTION
ABCDEF	R107	863-06675	RESISTOR FIXED CARBO 8.2K 1,6W 5 TA26
ABCDEF	R108	863-06672	RESISTOR FIXED CARBO 100 1,6W 5 TA26
ABCDEF	R109	863-06640	RESISTOR FIXED CARBO 1.0M 1,6W 5 TA26
ABCDEF	R112	863-06666	RESISTOR FIXED CARBO 100K 1,6W 5 TA26
ABCDEF	R116	863-06641	RESISTOR FIXED CARBO 220 1,6W 5 TA26
ABCDEF	R117	863-06661	RESISTOR FIXED CARBO 3.9K 1,6W 5 TA26
ABCDEF	R118	863-06627	RESISTOR FIXED CARBO 1.0K 1,6W 5 TA26
ABCDEF	R119	863-10931	RESISTOR FIX METAL F 3.3K 1,6W 1 TA26
ABCDEF	R120	863-10932	RESISTOR FIX METAL F 2.70K 1,6W 1% TA26
ABCDEF	R121	863-06694	RESISTOR FIXED CARBO 180 1,6W 5 TA26
ABCDEF	R135	863-06649	RESISTOR FIXED CARBO 33K 1,6W 5 TA26
ABCDEF	R151	863-06631	RESISTOR FIXED CARBO 5.6K 1,6W 5 TA26
ABCDEF	R152	863-06631	RESISTOR FIXED CARBO 5.6K 1,6W 5 TA26
ABCDEF	R153	863-06644	RESISTOR FIXED CARBO 10K 1,6W 5 TA26
ABCDEF	R162	863-06627	RESISTOR FIXED CARBO 1.0K 1,6W 5 TA26
ABCDEF	R163	863-06646	RESISTOR FIXED CARBO 18K 1,6W 5 TA26
ABDEF	R164	863-06644	RESISTOR FIXED CARBO 10K 1,6W 5 TA26
C	R164	863-06678	RESISTOR FIXED CARBO 6.8K 1,6W 5 TA26
ABDEF	R165	863-06678	RESISTOR FIXED CARBO 6.8K 1,6W 5 TA26
C	R165	863-06644	RESISTOR FIXED CARBO 10K 1,6W 5 TA26
ABDEF	R166	863-06678	RESISTOR FIXED CARBO 6.8K 1,6W 5 TA26
C	R166	863-06644	RESISTOR FIXED CARBO 10K 1,6W 5 TA26
ABDEF	R167	863-06644	RESISTOR FIXED CARBO 10K 1,6W 5 TA26
C	R167	863-06678	RESISTOR FIXED CARBO 6.8K 1,6W 5 TA26
ABCDEF	R169	863-06635	RESISTOR FIXED CARBO 4.7K 1,6W 5 TA26
ABCDEF	R170	863-06635	RESISTOR FIXED CARBO 4.7K 1,6W 5 TA26
ABCDEF	R301	863-06662	RESISTOR FIXED CARBO 330K 1,6W 5 TA26
ABCDEF	R302	863-06673	RESISTOR FIXED CARBO 12K 1,6W 5 TA26
ABCDEF	R303	863-06694	RESISTOR FIXED CARBO 180 1,6W 5 TA26
ABDE	R304	863-06673	RESISTOR FIXED CARBO 12K 1,6W 5 TA26
CF	R304	863-06638	RESISTOR FIXED CARBO 47K 1,6W 5 TA26
ABCDEF	R305	863-06646	RESISTOR FIXED CARBO 18K 1,6W 5 TA26
ABCDEF	R306	863-06661	RESISTOR FIXED CARBO 3.9K 1,6W 5 TA26
ABCDEF	R307	863-06644	RESISTOR FIXED CARBO 10K 1,6W 5 TA26
ABCDEF	R308	863-06693	RESISTOR FIXED CARBO 47 1,6W 5 TA26
ABCDEF	R309	863-06650	RESISTOR FIXED CARBO 1.5K 1,6W 5 TA26
ABCDEF	R310	863-06665	RESISTOR FIXED CARBO 2.7K 1,6W 5 TA26
ABCDEF	R311	863-06635	RESISTOR FIXED CARBO 4.7K 1,6W 5 TA26
ABCDEF	R312	863-06638	RESISTOR FIXED CARBO 47K 1,6W 5 TA26
ABCDEF	R313	863-06673	RESISTOR FIXED CARBO 12K 1,6W 5 TA26
ABCDEF	R314	863-06635	RESISTOR FIXED CARBO 4.7K 1,6W 5 TA26
ABCDEF	R315	863-06665	RESISTOR FIXED CARBO 2.7K 1,6W 5 TA26
ABDE	R318	863-06673	RESISTOR FIXED CARBO 12K 1,6W 5 TA26
ABDE	R319	863-06689	RESISTOR FIXED CARBO 39K 1,6W 5 TA26
ABDE	R320	863-06689	RESISTOR FIXED CARBO 39K 1,6W 5 TA26
CF	R320	863-06644	RESISTOR FIXED CARBO 10K 1,6W 5 TA26
ABDE	R321	863-06673	RESISTOR FIXED CARBO 12K 1,6W 5 TA26
ABCDEF	R322	863-06678	RESISTOR FIXED CARBO 6.8K 1,6W 5 TA26
ABCDEF	R323	863-06692	RESISTOR FIXED CARBO 75 1,6W 5 TA26
ABCDEF	R324	863-06639	RESISTOR FIXED CARBO 2.2K 1,6W 5 TA26
ABCDEF	R325	863-06650	RESISTOR FIXED CARBO 1.5K 1,6W 5 TA26
ABCDEF	R326	863-06692	RESISTOR FIXED CARBO 75 1,6W 5 TA26
ABCDEF	R327	863-06670	RESISTOR FIXED CARBO 3.3K 1,6W 5 TA26
ABCDEF	R329	863-06650	RESISTOR FIXED CARBO 1.5K 1,6W 5 TA26
ABCDEF	R330	863-06734	RESISTOR FIXED CARBO 82K 1,6W 5 TA26
ABCDEF	R332	863-06635	RESISTOR FIXED CARBO 4.7K 1,6W 5 TA26



Critical safety components are identified by shading. Replace only with part numbers specified.

MODULE PARTS LIST

A = ALGB201 B = ALGB401 C = ALGB402 D= VRB210 E = VBR410 F = VBR420

NOTE: This list will enable you to determine the parts used on each Model, Chassis, or Assembly.

RC	REF	PART#	DESCRIPTION
ABCDEF	R333	863-06631	RESISTOR FIXED CARBO 5.6K 1,6W 5 TA26
ABCDEF	R334	863-06627	RESISTOR FIXED CARBO 1.0K 1,6W 5 TA26
ABCDEF	R336	863-06627	RESISTOR FIXED CARBO 1.0K 1,6W 5 TA26
ABCDEF	R338	863-06652	RESISTOR FIXED CARBO 270 1,6W 5 TA26
ABCDEF	R339	863-06691	RESISTOR FIXED CARBO 10 1,6W 5 TA26
ABCDEF	R340	863-10172	RESISTOR FIXED CARBO 2.2 1,6W 5 TA26
ABCDEF	R341	863-10172	RESISTOR FIXED CARBO 2.2 1,6W 5 TA26
ABCDEF	R342	863-06650	RESISTOR FIXED CARBO 1.5K 1,6W 5 TA26
DEF	R344	863-06673	RESISTOR FIXED CARBO 12K 1,6W 5 TA26
ABCDEF	R345	863-06638	RESISTOR FIXED CARBO 47K 1,6W 5 TA26
ABDEF	R346	863-06686	RESISTOR FIXED CARBO 2.2M 1,6W 5 TA26
ABCDEF	R3V1	863-06627	RESISTOR FIXED CARBO 1.0K 1,6W 5 TA26
C	R503	863-06641	RESISTOR FIXED CARBO 220 1,6W 5 TA26
ABCDEF	R504	863-06627	RESISTOR FIXED CARBO 1.0K 1,6W 5 TA26
ABCDEF	R505	863-06627	RESISTOR FIXED CARBO 1.0K 1,6W 5 TA26
ABCDEF	R506	863-06627	RESISTOR FIXED CARBO 1.0K 1,6W 5 TA26
ABCDEF	R507	863-06627	RESISTOR FIXED CARBO 1.0K 1,6W 5 TA26
ABCDEF	R508	863-06678	RESISTOR FIXED CARBO 6.8K 1,6W 5 TA26
ABCDEF	R509	863-06627	RESISTOR FIXED CARBO 1.0K 1,6W 5 TA26
ABCDEF	R510	863-06678	RESISTOR FIXED CARBO 6.8K 1,6W 5 TA26
ABCDEF	R511	863-06627	RESISTOR FIXED CARBO 1.0K 1,6W 5 TA26
ABCDEF	R512	863-06627	RESISTOR FIXED CARBO 1.0K 1,6W 5 TA26
ABDEF	R514	863-07003	RESISTOR FIXED CARBO 390 1,6W 5 TA26
ABCDEF	R515	863-06652	RESISTOR FIXED CARBO 270 1,6W 5 TA26
ABCDEF	R516	863-06663	RESISTOR FIXED CARBO 330 1,6W 5 TA26
ABCDEF	R518	863-06731	RESISTOR FIXED CARBO 22 1,6W 5 TA26
ABCDEF	R519	863-06677	RESISTOR FIXED CARBO 27K 1,6W 5 TA26
ABCDEF	R521	863-06670	RESISTOR FIXED CARBO 3.3K 1,6W 5 TA26
ABCDEF	R522	863-06627	RESISTOR FIXED CARBO 1.0K 1,6W 5 TA26
ABCDEF	R523	863-06648	RESISTOR FIXED CARBO 15K 1,6W 5 TA26
C	R524	820-02557	INDUCTOR RADIAL LEAD 470M K 6X6 L5
ABCDEF	R525	863-06631	RESISTOR FIXED CARBO 5.6K 1,6W 5 TA26
ABCDEF	R526	863-06631	RESISTOR FIXED CARBO 5.6K 1,6W 5 TA26
ABCDEF	R527	863-06653	RESISTOR FIXED CARBO 560 1,6W 5 TA26
ABCDEF	R528	863-06644	RESISTOR FIXED CARBO 10K 1,6W 5 TA26
ABCDEF	R531	863-06644	RESISTOR FIXED CARBO 10K 1,6W 5 TA26
ABCDEF	R532	863-06666	RESISTOR FIXED CARBO 100K 1,6W 5 TA26
ABCDEF	R533	863-06639	RESISTOR FIXED CARBO 2.2K 1,6W 5 TA26
ABCDEF	R534	863-06640	RESISTOR FIXED CARBO 1.0M 1,6W 5 TA26
ABCDEF	R536	863-06631	RESISTOR FIXED CARBO 5.6K 1,6W 5 TA26
ABCDEF	R539	863-06677	RESISTOR FIXED CARBO 27K 1,6W 5 TA26
ABCDEF	R541	863-06631	RESISTOR FIXED CARBO 5.6K 1,6W 5 TA26
ABCDEF	R542	863-06639	RESISTOR FIXED CARBO 2.2K 1,6W 5 TA26
ABCDEF	R543	863-06672	RESISTOR FIXED CARBO 100 1,6W 5 TA26
ABCDEF	R544	863-06635	RESISTOR FIXED CARBO 4.7K 1,6W 5 TA26
ABCDEF	R546	863-06631	RESISTOR FIXED CARBO 5.6K 1,6W 5 TA26
ABCDEF	R547	863-06673	RESISTOR FIXED CARBO 12K 1,6W 5 TA26
ABCDEF	R548	863-06666	RESISTOR FIXED CARBO 100K 1,6W 5 TA26
ABCDEF	R550	863-06641	RESISTOR FIXED CARBO 220 1,6W 5 TA26
ABCDEF	R553	863-06641	RESISTOR FIXED CARBO 220 1,6W 5 TA26
ABCDEF	R555	863-06641	RESISTOR FIXED CARBO 220 1,6W 5 TA26
ABCDEF	R556	863-06632	RESISTOR FIXED CARBO 22K 1,6W 5 TA26
ABCDEF	R557	863-06677	RESISTOR FIXED CARBO 27K 1,6W 5 TA26
ABCDEF	R558	863-06632	RESISTOR FIXED CARBO 22K 1,6W 5 TA26
ABCDEF	R559	863-06635	RESISTOR FIXED CARBO 4.7K 1,6W 5 TA26
ABCDEF	R560	863-06635	RESISTOR FIXED CARBO 4.7K 1,6W 5 TA26

RC	REF	PART#	DESCRIPTION
ABCDEF	R561	863-06653	RESISTOR FIXED CARBO 560 1,6W 5 TA26
ABCDEF	R562	863-06653	RESISTOR FIXED CARBO 560 1,6W 5 TA26
ABCDEF	R563	863-06644	RESISTOR FIXED CARBO 10K 1,6W 5 TA26
ABCDEF	R564	863-06677	RESISTOR FIXED CARBO 27K 1,6W 5 TA26
ABCDEF	R567	863-07004	RESISTOR FIXED CARBO 820 1,6W 5 TA26
ABCDEF	R568	863-06690	RESISTOR FIXED CARBO 680K 1,6W 5 TA26
ABCDEF	R569	863-06688	RESISTOR FIXED CARBO 820K 1,6W 5 TA26
ABCDEF	R570	863-06635	RESISTOR FIXED CARBO 4.7K 1,6W 5 TA26
ABCDEF	R571	863-06636	RESISTOR FIXED CARBO 470 1,6W 5 TA26
ABCDEF	R572	863-06671	RESISTOR FIXED CARBO 120 1,6W 5 TA26
ABCDEF	R573	863-06631	RESISTOR FIXED CARBO 5.6K 1,6W 5 TA26
ABCDEF	R574	863-06655	RESISTOR FIXED CARBO 1.8K 1,6W 5 TA26
ABCDEF	R575	863-06635	RESISTOR FIXED CARBO 4.7K 1,6W 5 TA26
ABCDEF	R576	863-06635	RESISTOR FIXED CARBO 4.7K 1,6W 5 TA26
ABCDEF	R577	863-06635	RESISTOR FIXED CARBO 4.7K 1,6W 5 TA26
ABCDEF	R578	863-06635	RESISTOR FIXED CARBO 4.7K 1,6W 5 TA26
ABCDEF	R579	863-06633	RESISTOR FIXED CARBO 56K 1,6W 5 TA26
ABCDEF	R580	863-06693	RESISTOR FIXED CARBO 47 1,6W 5 TA26
ABCDEF	R581	863-06687	RESISTOR FIXED CARBO 68K 1,6W 5 TA26
ABCDEF	R582	863-06644	RESISTOR FIXED CARBO 10K 1,6W 5 TA26
ABCDEF	R589	863-06640	RESISTOR FIXED CARBO 1.0M 1,6W 5 TA26
ABCDEF	R590	863-06655	RESISTOR FIXED CARBO 1.8K 1,6W 5 TA26
ABCDEF	R591	863-06650	RESISTOR FIXED CARBO 1.5K 1,6W 5 TA26
ABCDEF	R592	863-06639	RESISTOR FIXED CARBO 2.2K 1,6W 5 TA26
ABCDEF	R593	863-06665	RESISTOR FIXED CARBO 2.7K 1,6W 5 TA26
ABCDEF	R594	863-06661	RESISTOR FIXED CARBO 3.9K 1,6W 5 TA26
ABCDEF	R595	863-06655	RESISTOR FIXED CARBO 1.8K 1,6W 5 TA26
ABCDEF	R596	863-06650	RESISTOR FIXED CARBO 1.5K 1,6W 5 TA26
ABCDEF	R597	863-06639	RESISTOR FIXED CARBO 2.2K 1,6W 5 TA26
ABCDEF	R598	863-06665	RESISTOR FIXED CARBO 2.7K 1,6W 5 TA26
ABCDEF	R599	863-06655	RESISTOR FIXED CARBO 1.8K 1,6W 5 TA26
ABCDEF	R5B1	863-06631	RESISTOR FIXED CARBO 5.6K 1,6W 5 TA26
ABCDEF	R5B3	863-06627	RESISTOR FIXED CARBO 1.0K 1,6W 5 TA26
ABCDEF	R5B4	863-06627	RESISTOR FIXED CARBO 1.0K 1,6W 5 TA26
ABCDEF	R5B5	863-06672	RESISTOR FIXED CARBO 100 1,6W 5 TA26
ABCDEF	R5C1	863-06627	RESISTOR FIXED CARBO 1.0K 1,6W 5 TA26
ABCDEF	R5C2	863-06627	RESISTOR FIXED CARBO 1.0K 1,6W 5 TA26
ABCDEF	R5C3	863-06627	RESISTOR FIXED CARBO 1.0K 1,6W 5 TA26
ABCDEF	R5C4	863-06627	RESISTOR FIXED CARBO 1.0K 1,6W 5 TA26
ABCDEF	R5C5	863-06627	RESISTOR FIXED CARBO 1.0K 1,6W 5 TA26
ABCDEF	R5C6	863-06627	RESISTOR FIXED CARBO 1.0K 1,6W 5 TA26
ABCDEF	R5C7	863-06627	RESISTOR FIXED CARBO 1.0K 1,6W 5 TA26
ABCDEF	R5C9	863-06644	RESISTOR FIXED CARBO 10K 1,6W 5 TA26
ABCDEF	R5E7	863-06644	RESISTOR FIXED CARBO 10K 1,6W 5 TA26
ABCDEF	R5E8	863-06644	RESISTOR FIXED CARBO 10K 1,6W 5 TA26
DEF	R5V1	863-06672	RESISTOR FIXED CARBO 100 1,6W 5 TA26
DEF	R5V2	863-06672	RESISTOR FIXED CARBO 100 1,6W 5 TA26
DEF	R5V5	863-06635	RESISTOR FIXED CARBO 4.7K 1,6W 5 TA26
DEF	R5V6	863-06640	RESISTOR FIXED CARBO 1.0M 1,6W 5 TA26
DEF	R5V7	863-06635	RESISTOR FIXED CARBO 4.7K 1,6W 5 TA26
ABCDEF	R701	863-06653	RESISTOR FIXED CARBO 560 1,6W 5 TA26
ABDEF	R702	863-06627	RESISTOR FIXED CARBO 1.0K 1,6W 5 TA26
C	R702	863-06660	RESISTOR FIXED CARBO 1.2K 1,6W 5 TA26
ABCDEF	R703	863-06636	RESISTOR FIXED CARBO 470 1,6W 5 TA26
ABCDEF	R706	863-06663	RESISTOR FIXED CARBO 330 1,6W 5 TA26
ABCDEF	R707	863-06627	RESISTOR FIXED CARBO 1.0K 1,6W 5 TA26



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MODULE PARTS LIST

A = ALGB201 B = ALGB401 C = ALGB402 D= VRB210 E = VBR410 F = VBR420

NOTE: This list will enable you to easily determine the parts used on each Model, Chassis, or Assembly.

RC	REF	PART#	DESCRIPTION
ABCDEF	R708	863-06649	RESISTOR FIXED CARBO 33K 1,6W 5 TA26
ABDE	R709	863-06670	RESISTOR FIXED CARBO 3.3K 1,6W 5 TA26
ABCDEF	R710	863-06650	RESISTOR FIXED CARBO 1.5K 1,6W 5 TA26
ABCDEF	R711	863-06646	RESISTOR FIXED CARBO 18K 1,6W 5 TA26
CF	R802	863-06673	RESISTOR FIXED CARBO 12K 1,6W 5 TA26
CF	R803	863-06689	RESISTOR FIXED CARBO 39K 1,6W 5 TA26
CF	R806	863-06648	RESISTOR FIXED CARBO 15K 1,6W 5 TA26
CF	R807	863-06689	RESISTOR FIXED CARBO 39K 1,6W 5 TA26
CF	R808	863-06635	RESISTOR FIXED CARBO 4.7K 1,6W 5 TA26
CF	R809	863-06651	RESISTOR FIXED CARBO 510 1,6W 5 TA26
CF	R810	863-06686	RESISTOR FIXED CARBO 2.2M 1,6W 5 TA26
CF	R812	863-06651	RESISTOR FIXED CARBO 510 1,6W 5 TA26
CF	R813	863-06635	RESISTOR FIXED CARBO 4.7K 1,6W 5 TA26
CF	R816	863-06689	RESISTOR FIXED CARBO 39K 1,6W 5 TA26
CF	R817	863-06648	RESISTOR FIXED CARBO 15K 1,6W 5 TA26
CF	R820	863-06689	RESISTOR FIXED CARBO 39K 1,6W 5 TA26
CF	R821	863-06673	RESISTOR FIXED CARBO 12K 1,6W 5 TA26
CF	R822	863-06675	RESISTOR FIXED CARBO 8.2K 1,6W 5 TA26
CF	R823	863-06649	RESISTOR FIXED CARBO 33K 1,6W 5 TA26
ABCDEF	R825	863-06677	RESISTOR FIXED CARBO 27K 1,6W 5 TA26
CF	R826	863-06677	RESISTOR FIXED CARBO 27K 1,6W 5 TA26
ABCDEF	R827	863-06677	RESISTOR FIXED CARBO 27K 1,6W 5 TA26
CF	R828	863-06650	RESISTOR FIXED CARBO 1.5K 1,6W 5 TA26
CF	R829	863-06694	RESISTOR FIXED CARBO 180 1,6W 5 TA26
ABDE	R830	863-06670	RESISTOR FIXED CARBO 3.3K 1,6W 5 TA26
CF	R830	863-06650	RESISTOR FIXED CARBO 1.5K 1,6W 5 TA26
ABCDEF	R831	863-06694	RESISTOR FIXED CARBO 180 1,6W 5 TA26
CF	R832	863-06627	RESISTOR FIXED CARBO 1.0K 1,6W 5 TA26
CF	R833	863-06672	RESISTOR FIXED CARBO 100 1,6W 5 TA26
CF	R834	863-06672	RESISTOR FIXED CARBO 100 1,6W 5 TA26
CF	R836	863-06627	RESISTOR FIXED CARBO 1.0K 1,6W 5 TA26
CF	R837	863-06672	RESISTOR FIXED CARBO 100 1,6W 5 TA26
CF	R838	863-10823	RESISTOR FIXED CARBO 15 1,6W 5 TA26
CF	R840	863-06672	RESISTOR FIXED CARBO 100 1,6W 5 TA26
CF	R841	863-06672	RESISTOR FIXED CARBO 100 1,6W 5 TA26
CF	R842	863-06640	RESISTOR FIXED CARBO 1.0M 1,6W 5 TA26
CF	R843	863-06666	RESISTOR FIXED CARBO 100K 1,6W 5 TA26
CF	R844	863-10825	RESISTOR FIXED METAL 62K OHM 1,8 W 1% TA2
CF	R845	863-06670	RESISTOR FIXED CARBO 3.3K 1,6W 5 TA26
C	R846	863-10824	RESISTOR FIXED CARBO 3.0K 1,6W 5 TA26
F	R846	863-06670	RESISTOR FIXED CARBO 3.3K 1,6W 5 TA26
CF	R847	863-06661	RESISTOR FIXED CARBO 3.9K 1,6W 5 TA26
CF	R848	863-06632	RESISTOR FIXED CARBO 22K 1,6W 5 TA26
CF	R849	863-06673	RESISTOR FIXED CARBO 12K 1,6W 5 TA26
ABCDEF	R901	863-06663	RESISTOR FIXED CARBO 330 1,6W 5 TA26
ABCDEF	R902	863-06663	RESISTOR FIXED CARBO 330 1,6W 5 TA26
ABCDEF	R903	863-06663	RESISTOR FIXED CARBO 330 1,6W 5 TA26
ABCDEF	R904	863-06663	RESISTOR FIXED CARBO 330 1,6W 5 TA26
ABCDEF	R905	863-06663	RESISTOR FIXED CARBO 330 1,6W 5 TA26
ABCDEF	R906	863-06663	RESISTOR FIXED CARBO 330 1,6W 5 TA26
ABCDEF	R907	863-10933	RESISTOR FIXED CARBO 5.6 1,6W 5 TA26
ABCDEF	R908	863-06639	RESISTOR FIXED CARBO 2.2K 1,6W 5 TA26
ABCDEF	R909	863-06639	RESISTOR FIXED CARBO 2.2K 1,6W 5 TA26
ABC	RC901	942-10047	REMOTE CONTROLLER RE 20 MM 40KHZ TEMIC TS

RC	REF	PART#	DESCRIPTION
DEF	RC901	942-10050	REMOTE CONTROLLER RE TSOP1840RF1 TEMIC 16
ABCDEF	RS501	942-10049	SENSOR GP1S566 SHARP D-33 R
ABCDEF	RS502	942-10049	SENSOR GP1S566 SHARP D-33 R
AB	SW501	885-10063	SWITCH SKHV10914A GS-ALPS
C	SW501	885-10019	SWITCH TACK S,W EVQ-21309R
ABDEF	SW502	885-10063	SWITCH SKHV10914A GS-ALPS
C	SW502	885-10019	SWITCH TACK S,W EVQ-21309R
DEF	SW503	885-10063	SWITCH SKHV10914A GS-ALPS
DEF	SW504	885-10063	SWITCH SKHV10914A GS-ALPS
AB	SW505	885-10063	SWITCH SKHV10914A GS-ALPS
C	SW505	885-10019	SWITCH TACK S,W EVQ-21309R
DEF	SW506	885-10063	SWITCH SKHV10914A GS-ALPS
ABDEF	SW507	885-10063	SWITCH SKHV10914A GS-ALPS
C	SW507	885-10019	SWITCH TACK S,W EVQ-21309R
ABDEF	SW508	885-10063	SWITCH SKHV10914A GS-ALPS
C	SW508	885-10019	SWITCH TACK S,W EVQ-21309R
ABDEF	SW509	885-10063	SWITCH SKHV10914A GS-ALPS
C	SW509	885-10019	SWITCH TACK S,W EVQ-21309R
DEF	SW510	885-10063	SWITCH SKHV10914A GS-ALPS
AB	SW511	885-10063	SWITCH SKHV10914A GS-ALPS
C	SW511	885-10019	SWITCH TACK S,W EVQ-21309R
ABDEF	SW512	885-10063	SWITCH SKHV10914A GS-ALPS
C	SW512	885-10019	SWITCH TACK S,W EVQ-21309R
ABDEF	SW513	885-10063	SWITCH SKHV10914A GS-ALPS
C	SW513	885-10019	SWITCH TACK S,W EVQ-21309R
ABCDEF	SW701	885-10037	SWITCH SLIDE S,W LUP-FUNG
ABCDEF	T101	895-10064	TRANSFORMER SMPS SHT-021E KSE-021E SH
ABDEF	TU701	975-10033	TUNER TADC-H002F LGEC 3IN1
C	TU701	975-10032	TUNER TMDH2-014 ALPS NT 3I
ABCDEF	V101	903-10326	VARISTOR SVC681D-10A SAMHWA
ABCDEF	VR301	863-10007	RESISTOR SEMI-FIXED RH0638C15R0WA 100K
ABCDEF	VR501	863-10007	RESISTOR SEMI-FIXED RH0638C15R0WA 100K
CF	VR801	863-10007	RESISTOR SEMI-FIXED RH0638C15R0WA 100K
ABCDEF	X301	903-10327	CRYSTAL H49U KJE RADIAL 3.57
ABCDEF	X501	903-10241	CRYSTAL NORMAL 10MHZ 30PPM 12PF 49,
ABCDEF	X502	903-01503	X-TAL 32.768KHZ NDK
DEF	X5V1	905-10353	RESONATOR CERAMIC CSTS0400MG03-T MURAT
ABCDEF	ZD151	903-01628	DIODE ZENER MTZ13A TP ROHM-K
ABCDEF	ZD152	903-01486	DIODE ZENER MTZ10B MINI TP ROHM
ABCDEF	ZD153	903-10329	DIODE ZENER
ABCDEF	ZD154	903-10329	DIODE ZENER
ABCDEF	ZD501	903-10330	DIODE ZENER MTZ6.8C TP ROHM-K
ABCDEF	ZD502	903-10004	DIODE ZENER MTZ5.6B TP ROHM-K
ABCDEF	ZD503	903-10125	DIODE ZENER MTZ5.1B 0.5W TP
ABCDEF	ZD701	903-10028	DIODE ZENER MTZ33B TP ROHM-K



Critical safety components are identified by shading. Replace only with part numbers specified.

