

Appendix

- Manual (2 ~17Page)
- Label (18)
- Block Diagram (19~22)
- Modulator Specification (23~30)



VCP OWNER'S MANUAL

MODEL: AS106M



Before connecting, operating, or adjusting this product, please read this instruction booklet carefully and completely.

INTRODUCTION

PREPARATION

PLAYBACK

ADDITIONAL INFORMATION



WARNING
RISK OF ELECTRIC SHOCK
DO NOT OPEN



WARNING:

TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING:

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

POWER CORD POLARIZATION:

CAUTION: To Prevent Electric Shock, match wide blade of plug to wide slot, fully insert.

ATTENTION: Pour éviter les chocs électriques, introduire la lame la plus large de la fiche dans la borne correspondante de la prise et pousser jusqu'au fond.

NOTE TO CABLE/TV INSTALLER:

This reminder is provided to call the cable TV system installer's attention to Article 820-40 of the National Electric Code (U.S.A.). The code provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of the cable entry as practical.

REGULATORY INFORMATION:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION:

Do not attempt to modify this product in any way without written authorization from Zenith Electronics Corporation. Unauthorized modification could void the user's authority to operate this product.

This class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

"Ce appareil numérique de la class b respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada."

Zenith is a trademark of ZEC © Copyright Zenith Electronics Corporation 1999

IMPORTANT SAFETY INSTRUCTIONS

These simple precautions will help ensure that you get many years of safe enjoyment from your new product.

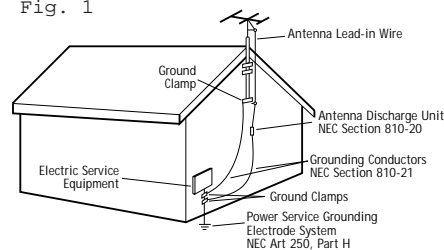
1. **Read Instructions**
Read all of the safety and operating instructions before operating the product.
2. **Retain Instructions**
Keep all safety and operating instructions for future reference.
3. **Heed Warnings**
Follow warnings on the product and in the operating guide.
4. **Follow Instructions**
Follow all operating and use instructions.
5. **Cleaning**
Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
6. **Attachments**
Do not use attachments not recommended by product manufacturer as they may cause hazards.
7. **Water and Moisture**
Do not use this product near water—for example, near a bathtub, wash bowl, sink, or laundry tub, in a wet basement, or near a swimming pool.
8. **Accessories**
Do not place product on an unstable cart, stand, tripod, bracket, or table. Product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer or sold with the product. Any mounting of product should follow manufacturer's instructions and should use a mounting accessory recommended by manufacturer.
9. **Transporting Product**
Move product and cart combinations with care. Quick stops, excessive force, and uneven surfaces may cause product and cart combination to overturn.
10. **Ventilation**
Slots and openings in cabinet must not be blocked or covered. They are provided for ventilation, to ensure reliable operation, and to protect from overheating. Never block openings by placing product on a bed, sofa, rug, or other similar surface. Do not place product in built-in installation such as a bookcase or rack unless proper ventilation is provided or manufacturer's instructions have been adhered to.



11. **Power Sources**
Operate product only from type of power source indicated on marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company. For products intended to operate from battery power or other sources, refer to manual.
12. **Line-Cord Polarization**
Product is equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). As a safety feature, this plug will fit into power outlet only one way. If you're unable to insert plug fully into outlet, try reversing the plug. If plug still fails to fit, contact an electrician to replace your obsolete outlet. Do not defeat safety purpose of polarized plug.
13. **Power-Cord Protection**
Route power-supply cords so they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from product.
14. **Outdoor Antenna Grounding**
If an outside antenna or cable system is connected to this product, be sure antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code (USA), ANSI/NFPA 70 provides information on grounding of mast and supporting structure, grounding of lead-in wire to an antenna discharge unit connection to grounding electrodes, and requirements for grounding electrode. (See Fig. 1 on the below.)



Fig. 1



NEC: National Electrical Code
Antenna grounding per NEC Code, ANSI/NFPA 70

IMPORTANT SAFETY INSTRUCTIONS

These simple precautions will help ensure that you get many years of safe enjoyment from your new product.

15. Lightning

For added protection for this product during a lightning storm, or when product is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect antenna or cable system. This will prevent damage to product due to lightning and power line surges.



16. Power Lines

An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, take extreme care to keep from touching such power lines or circuits, as contact with them might be fatal.

17. Overloading

Do not overload wall outlets, extension cords or integral convenience receptacles, as this can result in risk of fire or electric shock.

18. Object and Liquid Entry

Never push objects of any kind into this product through openings, as they may touch dangerous voltage points or short-out parts that could result in fire or electric shock. Never spill liquid of any kind on product.

19. Servicing

Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

20. Wall or Ceiling Mounting

Mount product to wall or ceiling only as recommended by manufacturer.

21. Replacement Parts

When replacement part(s) are required, be sure service technician has used replacement part(s) specified by manufacturer or have same characteristics as original part(s). Unauthorized substitutions may result in fire, electric shock, or other hazards.

22. Damage Requiring Service

Unplug this product from the wall outlet and refer servicing to qualified service personnel under these conditions:

- a. If power-supply cord or plug is damaged.
- b. If liquid has been spilled or objects have fallen into product.
- c. If product has been exposed to rain or water.
- d. If product doesn't operate normally by following handbook instructions. Adjust only those controls covered by handbook instructions; improper adjustment of other controls may result in damage and often requires extensive work by a qualified technician to restore product to normal operation.
- e. If product has been dropped or cabinet has been damaged.
- f. If product exhibits a distinct change in performance.

23. Heat

Keep product away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.



24. Safety Check

Upon completion of any service or repairs to this product, ask service technician to perform safety checks to determine that product is in proper operating condition.

Contents

SAFETY TIPS2-4
Hook-up6-8
Operation9-13
Controls and Indicators9-10
The Buttons on Your Remote11
VCP Status Displays12
How to using menu13
Troubleshooting & Maintenance14
Specifications15
Warranty	Back Cover

Note: This video cassette player is for video playback only. Recording is not possible with this unit.

Hook-up

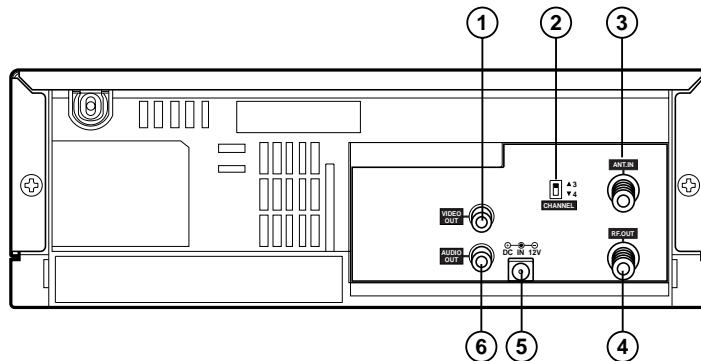
Refer to the following steps to hook up your Video Cassette Player easily and quickly.

Step 1: Identify the Connectors and Switches

Locate the following connectors and switch on the back of your VCP;

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. Video Out Jack
Video output must be used in conjunction with audio out connection. 2. Channel 3/4 Switch
Output video channel switch. 3. Ant In Jack
Input from external antenna or cable-TV Line. 4. RF Out Jack
Output to television. | <ol style="list-style-type: none"> 5. DC Input Jack
Input from optional DC power source. 6. Audio Out Jack
Audio output must be used in conjunction with video out connection. |
|---|--|

Note: Use of the Audio/Video Output jacks is optional. Depending on the capability of your TV, you may get improved picture quality when using these connections.



Step 2: Select the Output Video Channel

Your VCP has been designed to transmit a signal to channel 3 or 4 of your TV. To get the proper TV signal, set the Channel 3/4 switch on the back of the VCP to the channel that provides the best picture.

When playing a tape, the TV must be tuned to the same channel (3 or 4) as the Channel 3/4 switch on the VCP.



Note:

This only applies when the RF OUT connection is used. If the VCP is connected to your TV via the Audio/Video output jacks also, choose appropriate input source at the TV, (TV Channel 3/4 or Audio/Video In.)

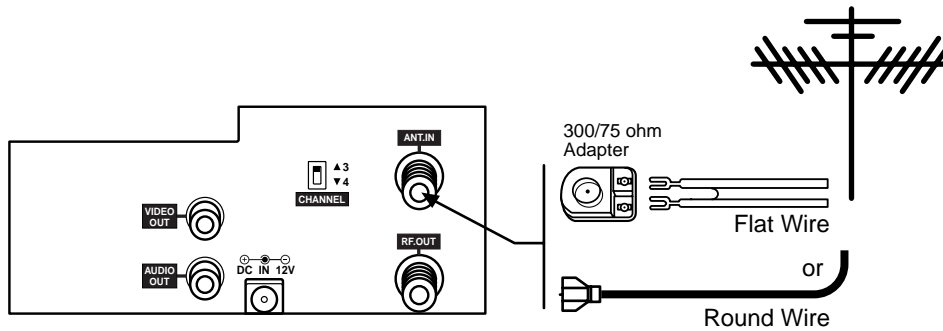
Hook-up (Continued)

Step 3: Connect VCP to Antenna or Cable-TV Line

Your antenna/cable-TV connection will be similar to one of the illustrations below. Match yours to the one like it and make the connections shown.

1. Disconnect the antenna or cable-TV line from the TV.
2. Connect the antenna or cable-TV line to the ANT IN terminal on the VCP.

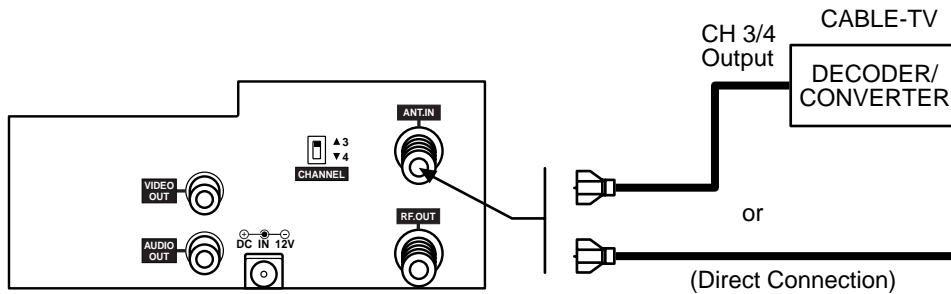
Figure 2a: Antenna Connection



Note: The 300/75 ohm adapter is an optional accessory that is not supplied with the VCP but should be available from your Zenith video product retailer.

! Turn off power or unplug VCP before making any connections.

Figure 2b: Cable-TV Connection



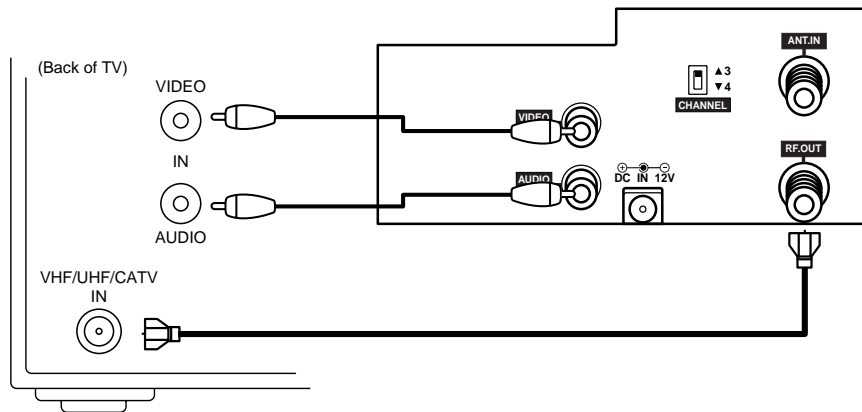
Hook-up (Continued)

Step 4: Connect VCP to the TV

Refer to the following illustration to properly connect the VCP to your TV.

1. Connect one end of the round coaxial cable supplied with your VCP to the RF OUT terminal of the VCP.
2. Connect the other end of the cable to the RF IN (or ANT IN) terminal on your TV.

Figure 3: Connecting the VCP to Your TV



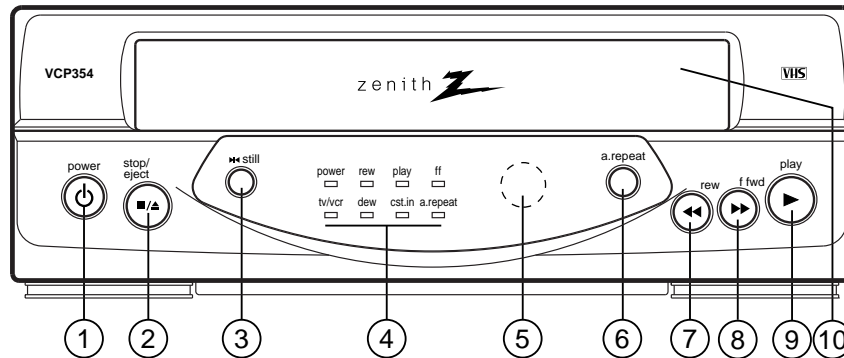
Note: An alternative to using the RF cable is to connect the Audio/Video Out jacks on the VCP to the corresponding jacks on your TV (if present). However, these cables are optional accessories that are not supplied with the VCP but should be available from your Zenith video product retailer.

Step 5: Supply Power to the VCP

1. Plug the AC adapter power cord into an operating 120V AC outlet and the other end into the DC input on the back of the VCP, or
2. Using the adapter cord, plug one end of the cord into a 12 volt negative ground DC source (such as the cigarette lighter socket of a car) and the other end into the DC input on the back of the VCP.

Controls and Indicators

Descriptions of items you need to know to operate your VCP.



Controls and Indicators

1. **POWER**
Turns the VCP on or off.
2. **STOP/EJECT**
Stops playback, fast forward, reverse, rewind, or speed search. Cancels automatic modes of operation.
Ejects a cassette from the video cassette compartment. If pressed while the VCP is turned off, the power will turn on, the cassette will be ejected, then the power will turn off automatically.
3. **STILL**
Press during tape playback to pause the tape and "freeze" the picture. Press **PLAY** to resume normal playback. If left in the Still mode for five minutes, the VCP will automatically go into Stop mode to protect the tape and the VCP from possible damage.
4. **POWER Indicator**
Indicates that the power is on.
REW (Rewind) Indicator
Indicates the VCP is rewinding.
PLAY Indicator
Indicates tape is playing.
FF (Fast Forward) Indicator
Indicates tape is fast forwarding.
- TV/VCR Indicator**
TV/VCR indicator is lighted: To monitor, view playback.
TV/VCR indicator is not lighted: To view channels selected by the TV tuner during dubbing.
- DEW Indicator**
Indicates excessive moisture condensation is in the unit. Keep power on at room temperature until indicator turns off. The VCP will not operate if the DEW indicator is on.
- CST.IN (Cassette In) Indicator**
Indicates a cassette is in the VCP.
- A. (Auto) REPEAT Indicator**
Indicates automatic repeat is active.
5. **REMOTE SENSOR WINDOW**
Receives infrared rays from remote control unit.
6. **A. (Auto) REPEAT**
Enables auto repeat. Tape will automatically rewind when it reaches the end, then begin to play again. Press a second time to disable repeat.

(continued on next page)

Controls and Indicators (Continued)

7. **REW (Rewind/Reverse Search) Button**
Press while the VCP is in Stop mode to rewind the tape (no picture, no sound). During tape playback, press to begin Reverse Search; The picture portion of the tape is played in the reverse direction at high speed (sound is muted). Press **STOP** to end rewind or search.
8. **F FWD (Fast Forward/Forward Search)**
Press while the VCP is in the Stop mode to fast forward the tape (no picture or sound). During tape playback, press to begin Forward search; The picture portion of the tape is played at high speed (the sound is muted). Press **STOP** to end fast forward or search.
9. **PLAY**
Begins tape playback. The correct playback speed is automatically selected.
10. **Cassette Loading Compartment**
Insert a VHS video cassette into the video cassette compartment until it is automatically drawn into the VCP. The cassette can be inserted even when power is off. Power turns on automatically and playback begins.
CAUTION; DO NOT attempt to insert a cassette into the compartment when the power cord is unplugged.
CAUTION; DO NOT insert fingers into the cassette compartment.

Playing a Video Cassette

- Turn on the TV.
- If the VCP is connected to the TV via the RF OUT jack, tune the TV to the same channel (3 or 4) as the Channel 3/4 switch on the back of the VCP.
- If the connection is made via the VCP's Audio/Video Out jacks, your TV must be set to receive audio and video from an auxiliary source. (Refer to your TV operating instructions.)
- To view a VHS cassette tape, insert it into the cassette compartment. The VCP will automatically turn on, play the tape to its end, rewind the tape, eject the tape, and shut off. If necessary, use the TRK (TRACKING) control to adjust for the best picture.

Normal TV Viewing

To watch TV, simply place VCP in TV mode by pressing TV/VCR on the remote repeatedly until the TV/VCR indicator light disappears from the VCP front panel. If the TV antenna or cable-TV line has been connected to the VCP as shown in this manual, its signal will pass through the turned-off VCP unaffected, as if connected directly to the TV.

The Buttons on Your Remote (SC354)

A quick list of all the buttons on your remote control and what they do.

EJECT — Ejects the tape from the VCP.

F FWD (Fast Forward)—Advances tape rapidly.

MENU — Shows main menu.

PLAY — Begins tape playback.

POWER — Turns VCP On and Off. Also turns VCP Timer Off and On, if programmed.

REW — Rewinds tape to the beginning.

STOP — Cancels playback record modes.

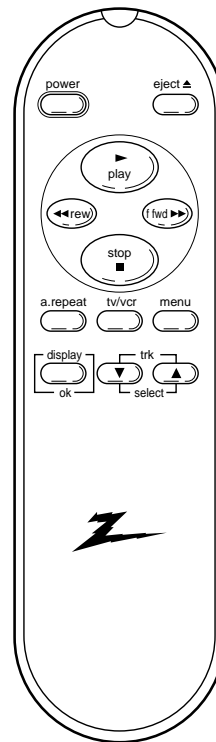
A. (Auto) REPEAT — Enables auto repeat. Tape will automatically rewind when it reaches the end, then begin to play again. Press a second time to disable repeat.

TRACKING/SELECT (▼/▲) — To clear streaks if they appear on the TV screen in the playback mode. Select the desired items on the MENU screen.

TV/VCR — Switches source of TV picture between TV channel and VCP channel selection. VCP functions are available in VCR mode.

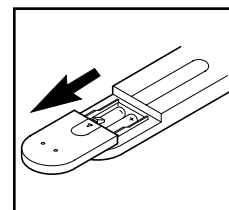
DISPLAY/OK

To display functions on the TV screen. Switches the selected item on the MENU screen.



Installing Batteries

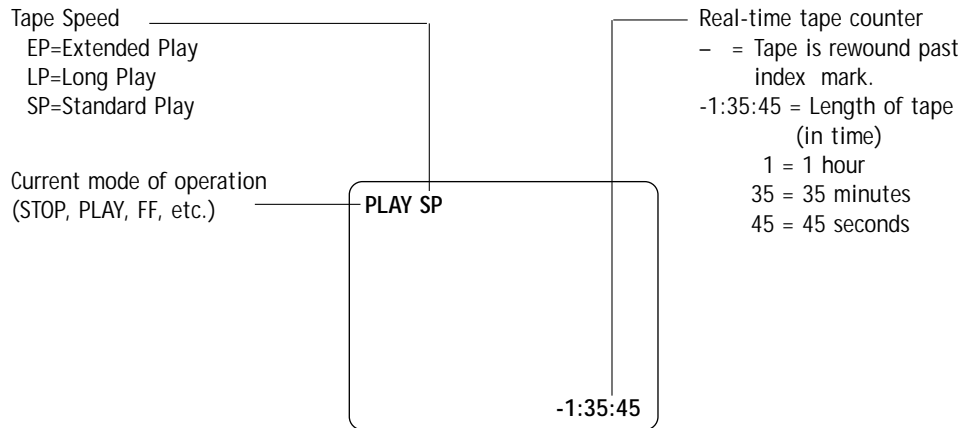
Be sure to install the batteries provided with this remote. Match positive (+) and negative (-) with markings shown in battery compartment.



Note: All VCP operations and menu options can be accessed by using the remote control.

VCP Status Displays

On-Screen displays tell you the status of the tape inserted and VCP functions.



Typical VCP Status Display on TV

VCP Status Display

The VCP Status Display appears on the TV when a VCP function starts, like when you select a different VCP mode. For example, pressing STOP while the VCP is in PLAY mode shows STOP in the display. Press DISPLAY on the remote at any time (except Special Effects Playback mode; STILL etc.) to see the Status Display.

Note:

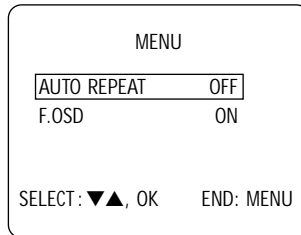
If the VCP Status Display does not appear on the TV screen, check the FUNCTION OSD option on the MENU. Select ON to see the display. See "How to using menu" section for details.

VCP Status Display Options

When the Status Display appears, press DISPLAY repeatedly to see abbreviated displays, as follows:

1. Press DISPLAY to see Status Display.
2. Press DISPLAY to remove the displays, or wait a few seconds and the displays are removed.

How to using menu



How to Access Menu

- 1 Press MENU to see menu.
- 2 Press the SELECT (▼/▲) to choose desired option to be changed. Then you set desired mode by pressing the OK button repeatedly.
- 3 Press MENU to exit menu, or wait a few minutes and the VCP returns to normal operation.

AUTO REPEAT

If you want to play back tape repeatedly, set AUTO REPEAT option to ON.

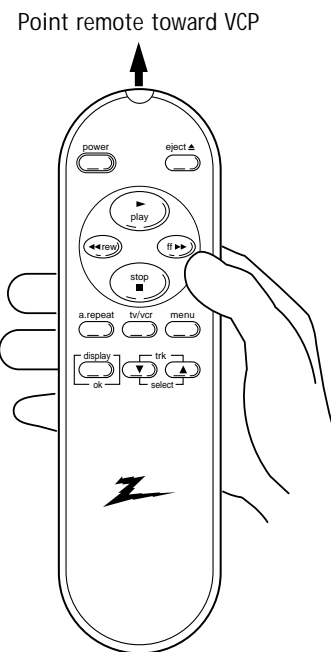
- When the end of the tape is reached, the unit automatically rewinds the tape to the beginning and repeats playback continuously.
- If you release this function, set the AUTO REPEAT to OFF mode.

F.(Function) OSD

Switches the on-screen display ON or OFF.

Note:

Perform menu operations with the VCP and TV on, and tune the TV to channel 3 or 4. The VCP must also be in the VCR mode of operation. Press the TV/VCR button on the Remote Control until TV/VCR indicator light appears in the front panel.



Troubleshooting and Maintenance

Before requesting Warranty service, please refer to the chart below. It may help you avoid a service call.

Operating Problems		
Observed Condition	Possible Cause	Probable Solution
No power to the VCP.	Power cord is not connected.	Connect it.
Playback Problems		
The tape will not rewinds	Tape is already fully rewound.	No action is necessary.
Operating sound is audible during playback, rewind, fast forward. etc.	Normal condition.	No action is necessary.
The playback picture does not appear while the tape is running.))	You are using the RF OUT jack but the TV is not turned to the correct video channel.	Set the TV to either channel 3 or channel 4.
	You are using the VCP audio/video Out jacks but the TV is not set to AUX channel or Audio/Video In source.	Set the TV to AUX channel or Audio/Video In source.
Noise appears during search and still pictures.	Normal condition.	No action is necessary.
Noise appears during playback.	The tracking needs to be adjusted.	Adjust tracking.
Playback picture is blurred or interrupted while normal TV picture is clear.	Video heads may be dirty.	Head cleaning is necessary. Consult your local Zenith video retailer.
Cassette cannot be inserted into VCP.	The cassette is being loaded backwards or upside down or another cassette is already loaded.	Load cassette in direction indicated by arrow on cassette, or remove the cassette that is loaded already.
	Power cord is not connected.	Connect power cord.
Remote control does not work.	Batteries are not installed or old.	Install or replace with new batteries.
DEW Indicator is lit.	Excessive condensation.	Keep power on until indicator turns off.

Maintenance

Video Head Cleaning

Your VCP automatically cleans the heads as it is used.

After long periods of use, the video heads may become clogged with accumulated dirt, causing distortion (snow, streaking in picture and horizontal pulling of picture). When this occurs, use do-it-yourself VHS wet head cleaning cassettes available through your Zenith video product retailer.

Caution: Do not use dry head cleaning systems.

They may seriously damage both the video cassette player and a cassette.

Cabinet Cleaning

Clean the outside surfaces of the VCP with a soft, lint-free cloth as required.

Specifications

Power Requirements

Operating Voltage	.AC 120 V, 60Hz DC 12 V, Neg Ground
Power consumption	.11W (AC) 11W (DC)

Environmental Conditions

Operation	.41°F to 95°F (5°C to 35°C) Temperature 35 to 80% Relative Humidity
Storage	.-4°F to 140°F (-20°C to 60°C) Temperature 5 to 80% Relative Humidity

Physical Characteristics

Dimensions(W x H x D)	.10.6 x 3.6 x 11.7 Inches(270 x 94 x 325 mm)
Weight	.6.4 lbs (2.9 kg)

Video System

Format	.VHS 1/2 Inch (12.7 mm) Tape
Signal	.NTSC color/EIA monochrome (525 lines/60 fields)
Output	.1.0 Vp-p
Signal-to-Noise ratio	.≥ 43 dB (SP speed)

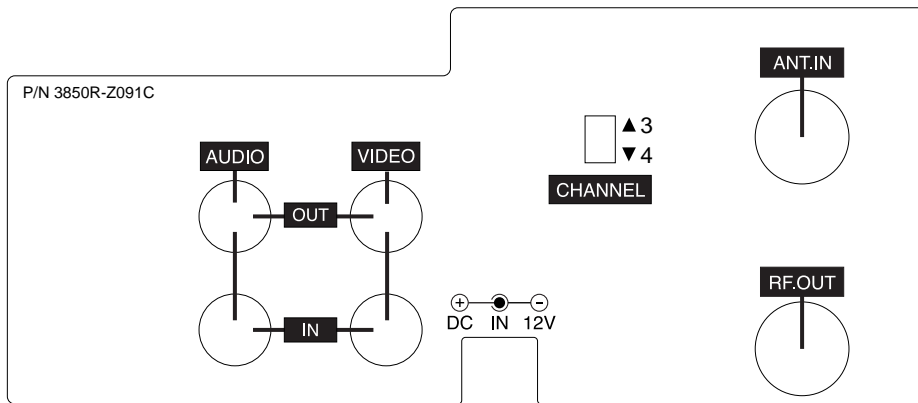
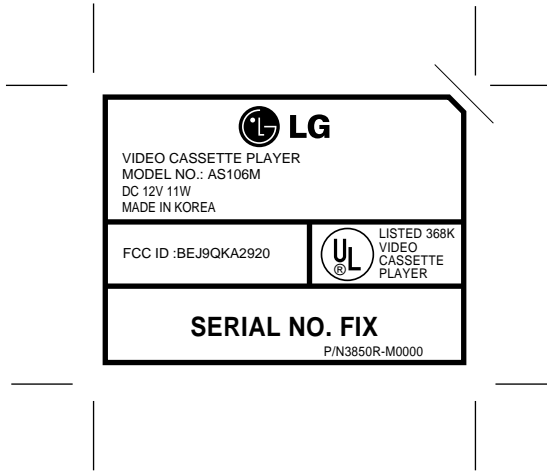
Audio Systems

Monaural	.1 channel standard VHS
Frequency Response	.200 to 7,000 Hz (SP speed)
Signal-to-Noise ratio	.≥ 38 dB (SP speed)
Output	.Minus 8 dB into ≤ 1,000 ohms

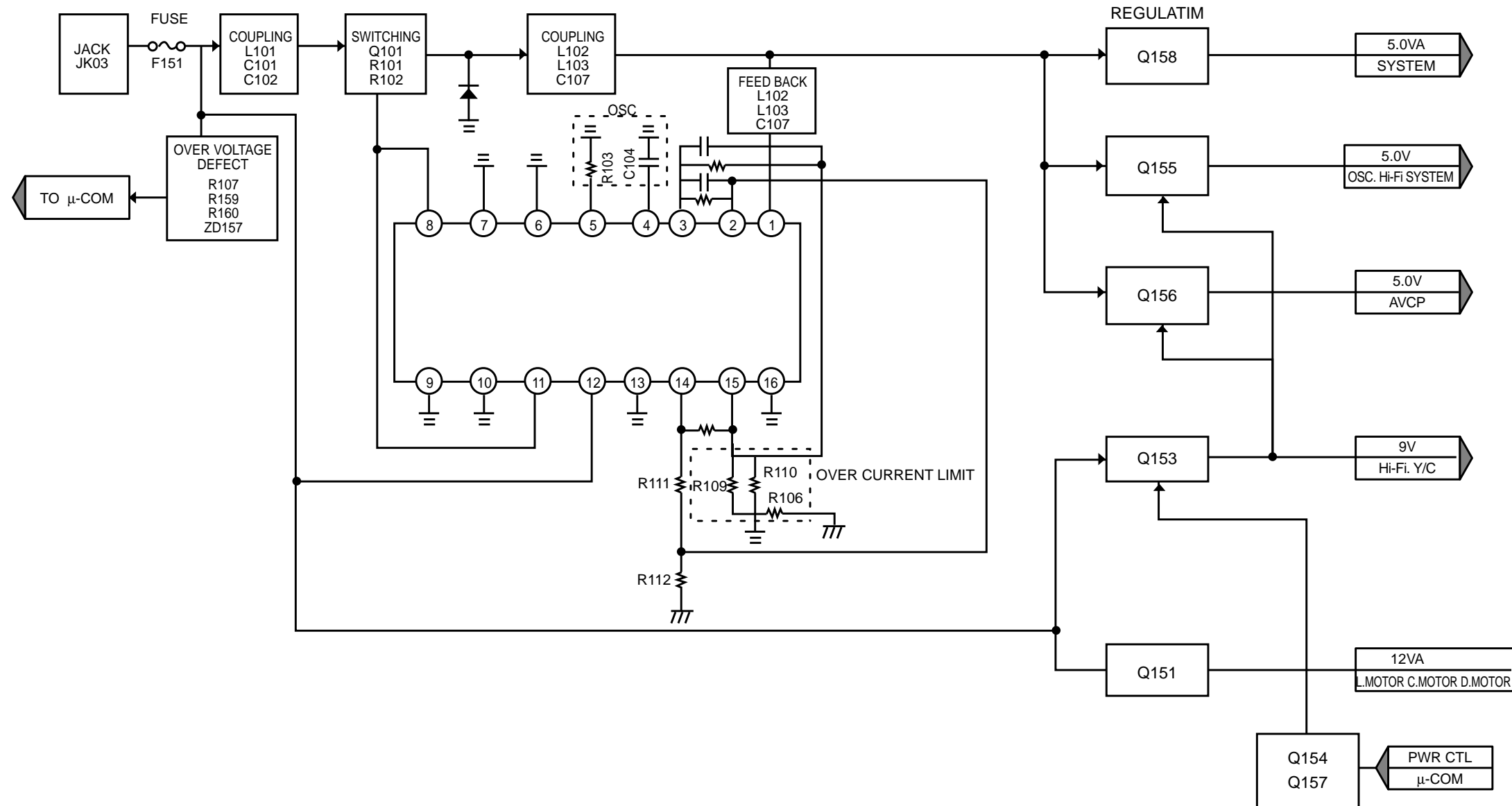
Note: Specifications, features, and appearance of this Video Cassette Player are subject to change without notice. Weight and dimensions are approximate.



P/NO :

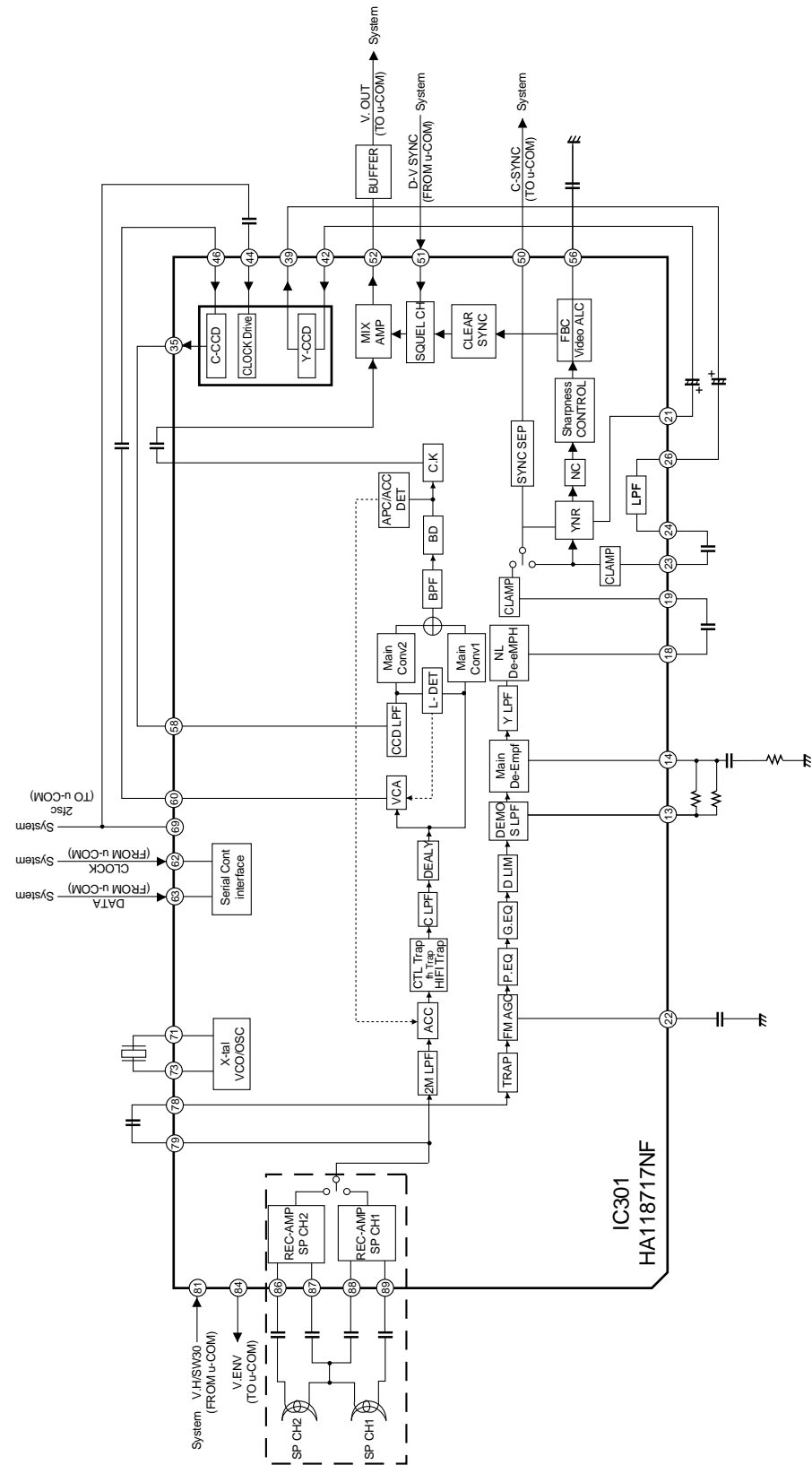


1. Power Block Diagram

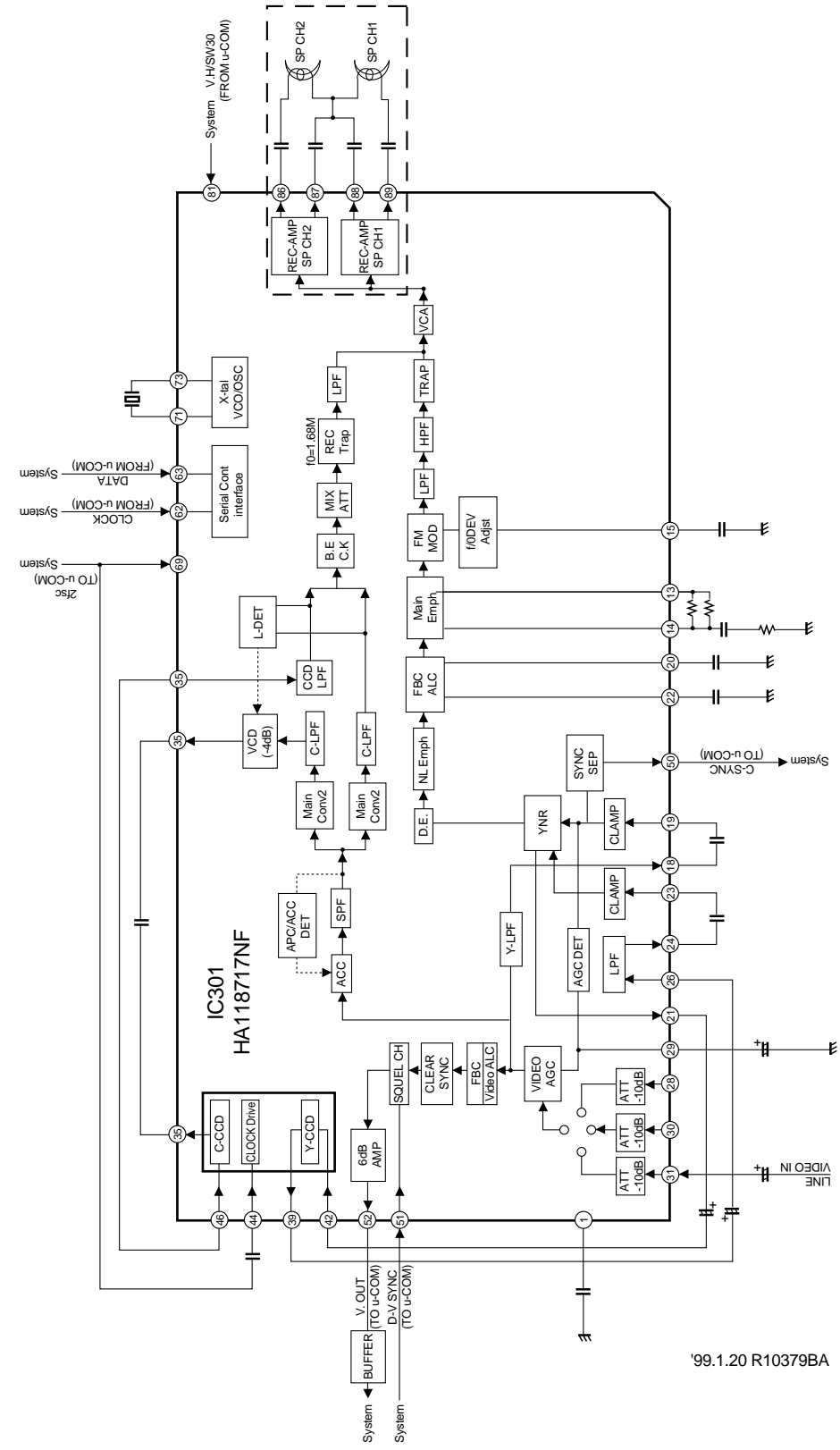


2. AVCP Block Diagram

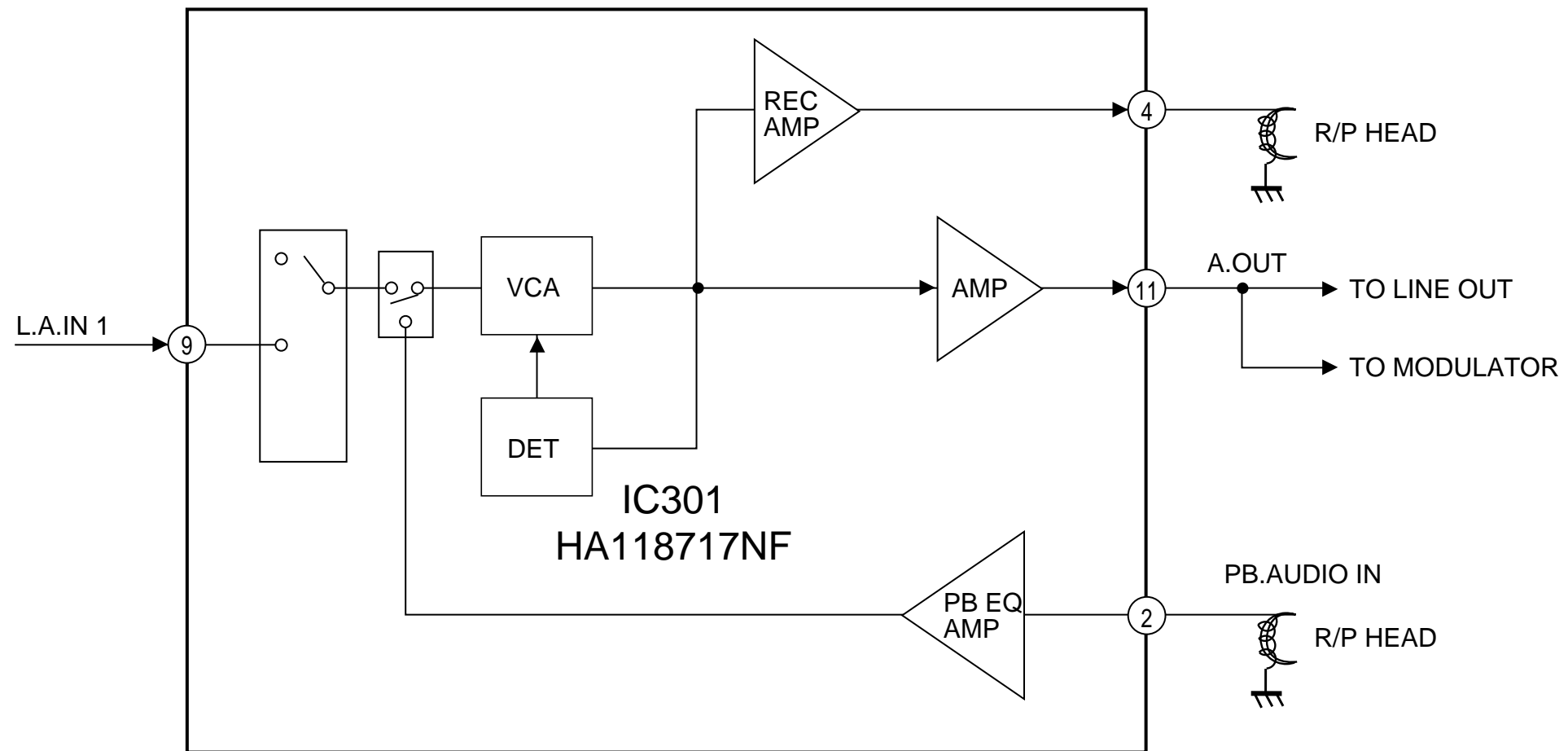
1) PB Mode



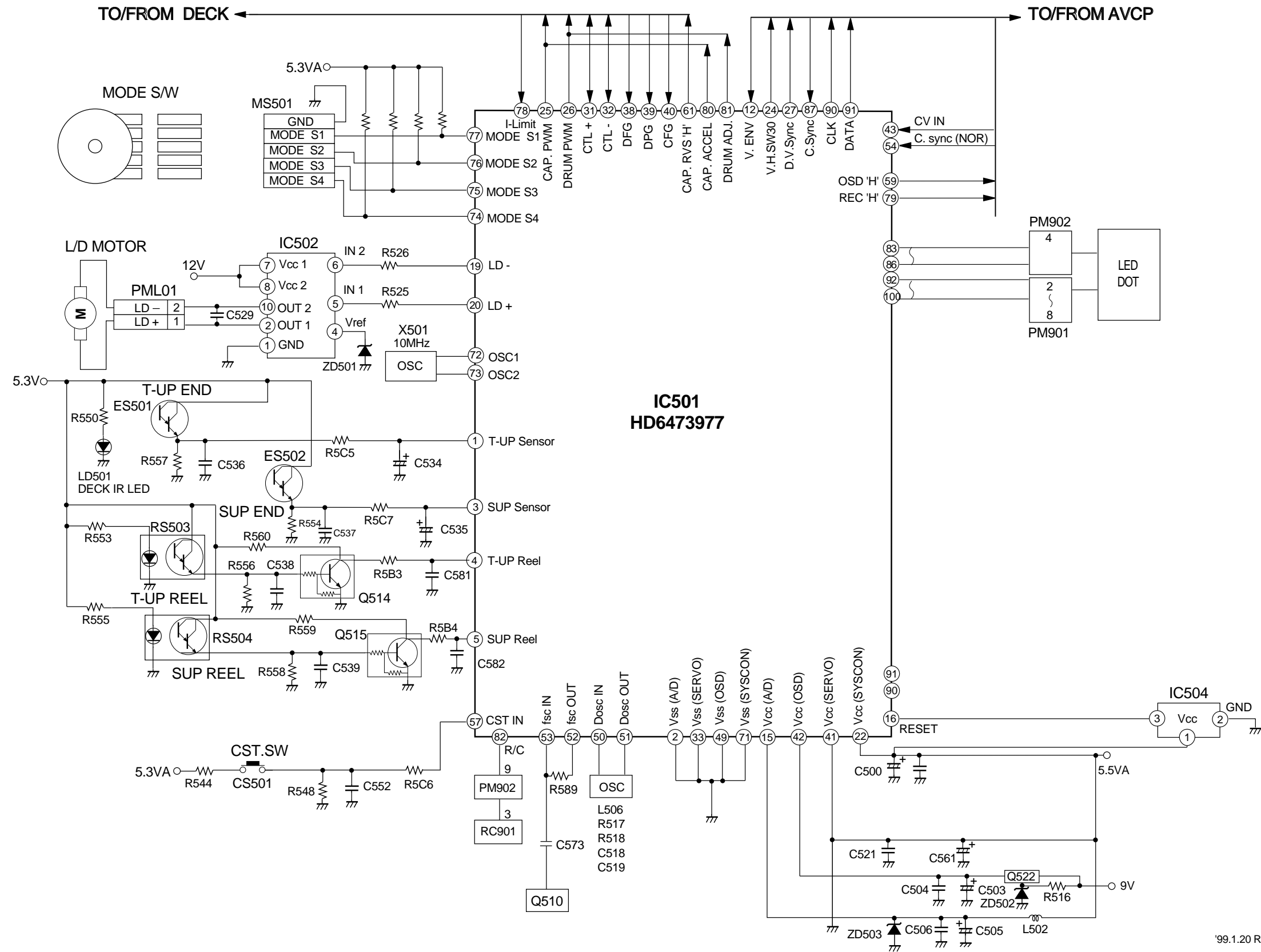
2) REC Mode



3. Audio Block Diagram



4. System Block Diagram



TO : _____

DATE : _____

SPECIFICATION

PRODUCT : RF MODULATOR

MODEL : RMVP13450FW

APPROVED

SAMSUNG ELECTRO - MECHANICS CO., LTD.

MAIN FACTORY

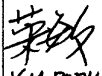


ADD : 314, MEATAN-3DONG, PALDAL-GU, SUWON-CITY, KYOUNGKI-DO, KOREA
TEL : (0331) 210-6025
FAX : (0331) 210-6380

CHINA FACTORY

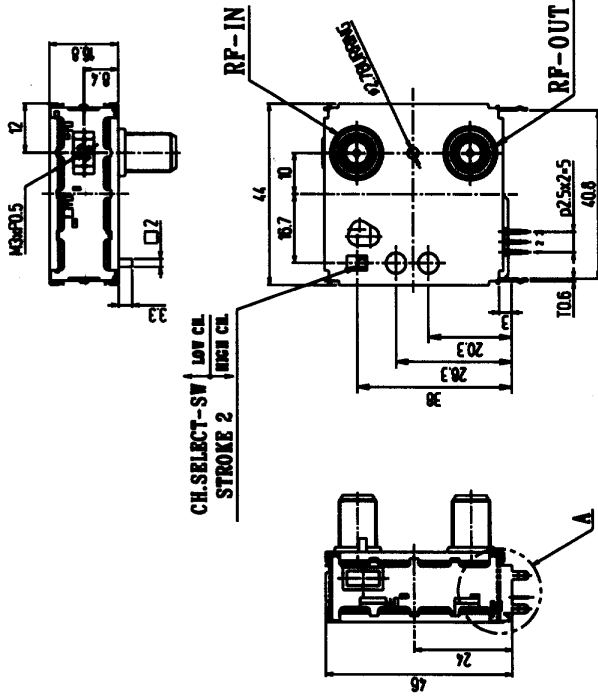
ADD : 27. HEINIU CHENG-ROAD TIANJIN CHINA
TEL : (022) 8301807-9
FAX : (022) 8307436

PORTUGAL FACTORY

ADD : LUA DA RIBEIRA ROTE 12, LINHO, 2710 SINTRA, RORTUGAL
TEL : (351-1) 924-1055
FAX : (351-1) 924-1858

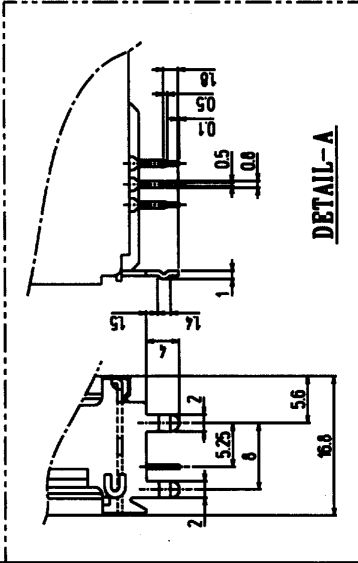
WRITTEN	CHECKED	APPROVED
 Y.M.PARK	 J.J. Lee	

NO.	PART NAME	QTY	MATERIAL	FINISH	REMARK



CONNECTOR DETAIL
 1. VIDEO IN
 2. AUDIO IN
 3. B+(5V)

F-CON
 3/8" X 32NEF-2A



Rev.	DATE	WRITER BY	CHECKED BY	APPROVED	REVISION RECORD	REMARK
UNIT	IN	OR	DESIGNED	CHECKED	PART NAME	OUTLINE DRAWING
SCALE	N.S	CAD	S.C.M		MODEL NAME	RF MODULATOR
TOLERANCE	±0.5	1999/01.20			SEMO P/N	RMVP13460FW
File name: RMVP13460FW ELECTRO-REMARKS: 3RD ANGLE PROJECTION					NO.	B-10300-09000AA-0

SPECIFICATIONS**RMPI3450FW****1. SCOPE**

THIS SPECIFICATION OUTLINES THE PERTINENT ELECTRICAL REQUIREMENTS OF THE RF OUTPUT MODULATOR WHICH CONVERTS THE TV VIDEO AND TV AUDIO SIGNAL INTO THE RF SIGNAL FOR NTSC M COLOR TELEVISION.

2. GENERAL SPECIFICATIONS

- | | |
|--|--|
| 2-1. OUTPUT CHANNEL IS CHANNEL | 3CH of 4CH
PRESET CHANNEL: 4CH(67.25MHz) |
| 2-2. SUPPLY VOLTAGE | B+ : 5 ± 0.25V DC |
| 2-3. CONSUMPTION CURRENT | 50mA MAX |
| 2-4. OPERATION CONDITIONS
FOR GUARANTEE | TEMPERATURE 0 ~ 60°C |
| 2-5. STORAGE CONDITIONS | TEMPERATURE -10 ~ 70°C |
| 2-6. SHAPE AND PHYSICAL
CONDITION | COMPLIES WITH ATTACHED OUTLINE
DIMENSION DRAWING. |

3. TEST CONDITIONS

3-1. TESTING AMBIENT CONDITIONS

DEFINED AS TEMPERATURE OF 25 ± 3°C AND HUMIDITY OF 65 ± 5% RH.

NOTE: THAT TEMPERATURE OF 15 ~ 30°C AND HUMIDITY OF 45 ~ 85% RH
MAY BE REGARDED AS STANDARD.

3-2. DRIVING POWER

B+ : 5 ± 0.25V DC

3-3. UNIT SETTING CONDITIONS

- 1) PICTURE --- APPLY 77% MODULATION COLOR BAR SIGNAL 1Vp-p,
AND SET MODULATION AND V/S RATIO STANDARD VALUES.
NOTE) MODULATION SETTING - WHITE SIGNAL, 1Vp-p : V/S = 10/4
- 2) SOUND --- SET 1.1Vp-p (-6dBs) OF SINE WAVE 1KHz.

SPECIFICATIONS**RMPI3450FW****4. ELECTRICAL PERFORMANCE****4-1. VIDEO SYSTEM CHARACTERISTICS**

	PARAMETER	SPECIFICATION			UNIT	REMARK
		MIN	TYP	MAX		
4-1-1	INPUT IMPEDANCE	0.7	1.0	1.3	K Ω	MEASURE AT 0 ~ 4.2MHz
4-1-2	MODULATION	72	77	82	%	
4-1-3	AMPLITUDE FREQUENCY RESPONSE	-3		3	dB	MEASURE MULTIBURST OR SWEEP RF OUTPUT OVER A RANGE OF 0.75 ~ 4.2MHz WITH 1MHz AS REFERENCE.
4-1-4	DIFFERENTIAL GAIN	-8		8	%	MEASURE AT 10% ~ 90% OF APL.
4-1-5	DIFFERENTIAL PHASE	-10		10	DEG	MEASURE AT 10% ~ 90% OF APL.
4-1-6	MODULATION VARIATION WITH RESPECT TO APL	-3		3	%	MEASURE MODULATION VARIATION OVER A RANGE OF 10~90% APL WITH RESPECT TO 50% APL.
4-1-7	S/N	45			dB	MEASURE WITH RESPECT TO STANDARD DEMODULATOR OUTPUT.
4-1-8	V/S RATIO	6.7 / 3.3	7/3	7.3 / 2.7		APPLY STAIRSTEP INPUT SIGNAL 1Vp-p V/S=7/3 NEGATIVE SYNCHRO SIGNAL
4-1-8	920KHz BEAT	58				VIDEO INPUT SIGNAL: 0.4Vp-p 3.58MHz SINE WAVE

SPECIFICATIONS**RMPI3450FW****4-2. SOUND SYSTEM CHARACTERISTICS**

	PARAMETER	SPECIFICATION			UNIT	REMARK
		MN	TYP	MAX		
4-2-1	INPUT IMPEDANCE	10			K Ω	MEASURE AT 0.1 ~ 10Khz
4-2-2	MODULATION	65	80	95	%	100% = ± 25 KHz
4-2-3	AMPLITUDE FREQUENCY RESPONSE	-3		3	dB	MEASURE DEVIATION FROM THEORETICAL VALUE OF 75usec PRE-EMPHASIS CHARACTER OVER A RANGE OF 100Hz TO 10KHz WITH 1KHz AS REFERENCE.
4-2-4	DISTORTION FACTOR			2.5	%	SOUND INPUT : 1.1Vp-p
4-2-5	S/N	45			dB	

4-3. OUTPUT SYSTEM CHARACTERISTICS

Fp: 3CH(61.25MHz), 4CH(67.25MHz)

	PARAMETER	SPECIFICATION			UNIT	REMARK
		MN	TYP	MAX		
4-3-1	VIDEO CARRIER FREQUENCY	-100	Fp	100	KHz	TEST AT 25 \pm 1 ° C TEMPERATURE AND 65%RH Fp : VIDEO CARRIER FREQUENCY Fs : SOUND CARRIER FREQUENCY (4.5MHz)
4-3-2	SOUND CARRIER FREQUENCY	-10	Fs	-10	KHz	
4-3-3	VIDEO OUTPUT LEVEL	63.5	66.5	69.5	dBu	DIFFERENCE BETWEEN VIDEO AND SOUND OUTPUT LEVEL (SOUND IS UNMODULATION)
4-3-4	V/S RATIO	13	16	19	dB	
4-3-5	OUTPUT TERMINAL SPURIOUS RESPONSE	-30			dB	MEASUREMENT TAKEN UNDER FCC STANDARD PROCEDURE FOR 0 ~ 1GHz.
4-3-6	SPURIOUS RESPONSE WITHIN BANDWIDTH	-60			dB	BETWEEN fp AND fs

SPECIFICATIONS**RMP13450FW**

4-4. OFF THROUGH SWITCH CHARACTERISTICS

	PARAMETER	SPECIFICATION			UNIT	REMARK
		MIN	TYP	MAX		
4-4-1	INSERTION LOSS			3	dB	ANT IN ;æ RF OUT B+ OFF 55MHz ~ 890MHz
4-4-2	V. S. W R			4 4		ANT IN RF OUT
4-4-3	ANT LEAKAGE			9.5	dBu	75¥Ø TERMINATE.
4-4-4	ISOLATION	60			dB	ANT IN ;æ ANT OUT 61 ~ 72MHz

SPECIFICATIONS**RMPI3450FW**

4-5. THERMAL CHARACTERISTICS

	PARAMETER	SPECIFICATION			UNIT	REMARK
		MIN	TYP	MAX		
4-5-1	THERMAL STABILITY IN VIDEO MODULATION	-10	INITIAL VALUE	10	%	-. MEASURE VARIATION WITH RESPECT TO INITIAL VALUE AT 0 ~ 60°C
4-5-2	THERMAL STABILITY IN VIDEO CARRIER FREQUENCY	-100	INITIAL VALUE	100	KHz	
4-5-3	THERMAL STABILITY IN SOUND MODULATION	-10	INITIAL VALUE	10	%	
4-5-4	THERMAL STABILITY IN SOUND CARRIER FREQUENCY	-15	INITIAL VALUE	15	KHz	
4-5-5	THERMAL STABILITY IN VIDEO CARRIER LEVEL	-4	INITIAL VALUE	4	dB	
4-5-6	THERMAL STABILITY IN SOUND OUTPUT LEVEL DIFFERENCE	-4	INITIAL VALUE	4	dB	

UNLESS OTHERWISE SPECIFIED, THE ABOVE TEST SHOULD BE CARRIED UNDER CONDITION OF +25°C, 1HR (INITIAL VALUE) ; ±0°C, 1HR ; ±25°C, 1HR ; ±60°C, 1HR.
HUMIDITY 45 ~ 80% RH.

SPECIFICATIONS**RMPI3450FW****5. ENVIRONMENT TESTS**

	PARAMETER	SPECIFICATION	UNIT	REMARK
5-1	HEAT RESISTANCE STRONG TEST 1. VIDEO MODULATION 2. AUDIO MODULATION 3. VIDEO CARRIER FREQUENCY 4. AUDIO CARRIER FREQUENCY 5. VIDEO OUTPUT LEVEL 6. AUDIO OUTPUT LEVEL	INITIAL $\pm 3/4$ 10 INITIAL $\pm 3/4$ 25 INITIAL $\pm 3/4$ 500 INITIAL $\pm 3/4$ 25 INITIAL $\pm 3/4$ 4 INITIAL $\pm 3/4$ 4	% % KHz KHz dB dB	A. ENVIRONMENTAL CONDITIONS TEMPERATURE: 60 ± 3 ± 1 B. POWER SUPPLY: OFF C. MEASUREMENT: 96HOUR D. AFTER USING THE ABOVE CONDITIONS, THE TESTED MODULATION IS LEFT FOR 2.0 HOUR AT NORMAL ROOM TEMPERATURE E. HUMIDITY: 40% ~ 45%RH
5-2	COLD TEST	SAME AS IN ITEM 5-1		A. ENVIRONMENTAL CONDITIONS TEMPERATURE: -20 ± 3 ± 1 B. C, D, E SAME AS B, C, D, E ITEM 5-1
5-3	HUMIDITY RESISTANCE STORAGE TEST	SAME AS IN ITEM 5-1		A. ENVIRONMENTAL CONDITIONS TEMPERATURE: 40 ± 3 ± 1 B. POWER SUPPLY: ON C, D. SAME AS ITEM 5-1 E. HUMIDITY: 90% ~ 95%RH
5-4	VIBRATION	THE RATED PERFO- RMANCE SHALL BE SATISFIED.		BEFORE MEASUREMENT OF PERFORMANCES, THE VIBRATION TEST FIXTURE IS USED TO GIVE THE MODULATOR VIBRATION WITH TOTAL AMPLITUDE OF 2mm FREQUE- NCY RANGING FROM 7Hz TO 30Hz, ONCE PERMINUTE CONSECUTIVELY FOR 3 MINUTES. IN EACH OF THREE DIRESTIONS X, Y, Z