

SCHEMATIC DIAGRAM

IMPORTANT SAFETY NOTICE:

BE SURE TO USE GENUINE PARTS FOR SECURING THE SAFETY AND RELIABILITY OF THE SET.

PARTS MARKED WITH " Δ " AND PARTS SHADED (IN BLACK) ARE ESPECIALLY IMPORTANT FOR MAINTAINING THE SAFETY AND PROTECTING ABILITY OF THE SET.

BE SURE TO REPLACE THEM WITH PARTS OF SPECIFIED PART NUMBER.

SAFETY NOTES:

1. DISCONNECT THE AC PLUG FROM THE AC OUTLET BEFORE REPLACING PARTS.
2. SEMICONDUCTOR HEAT SINKS SHOULD BE REGARDED AS POTENTIAL SHOCK HAZARDS WHEN THE CHASSIS IS OPERATING.

NOTES:

1. The unit of resistance "ohm" is omitted ($k=1000$ ohm, $M=1$ Meg ohm).
2. All resistors are 1/8 watt, unless otherwise noted.
3. The unit of capacitance "F" is omitted ($\mu=\mu F$, $p=p\mu F$).
4. The values in parentheses are the ones in the PB mode; the values without parentheses are the ones in the REC mode.

VOLTAGE MEASUREMENT CONDITIONS:

1. DC voltages are measured between points indicated and chassis ground by VTVM, with AC230V/50Hz supplied to unit and all controls are set to normal viewing picture unless otherwise noted.
2. Voltages are measured with 10000 μV B & W or colour noted.

WAVEFORM MEASUREMENT CONDITIONS:

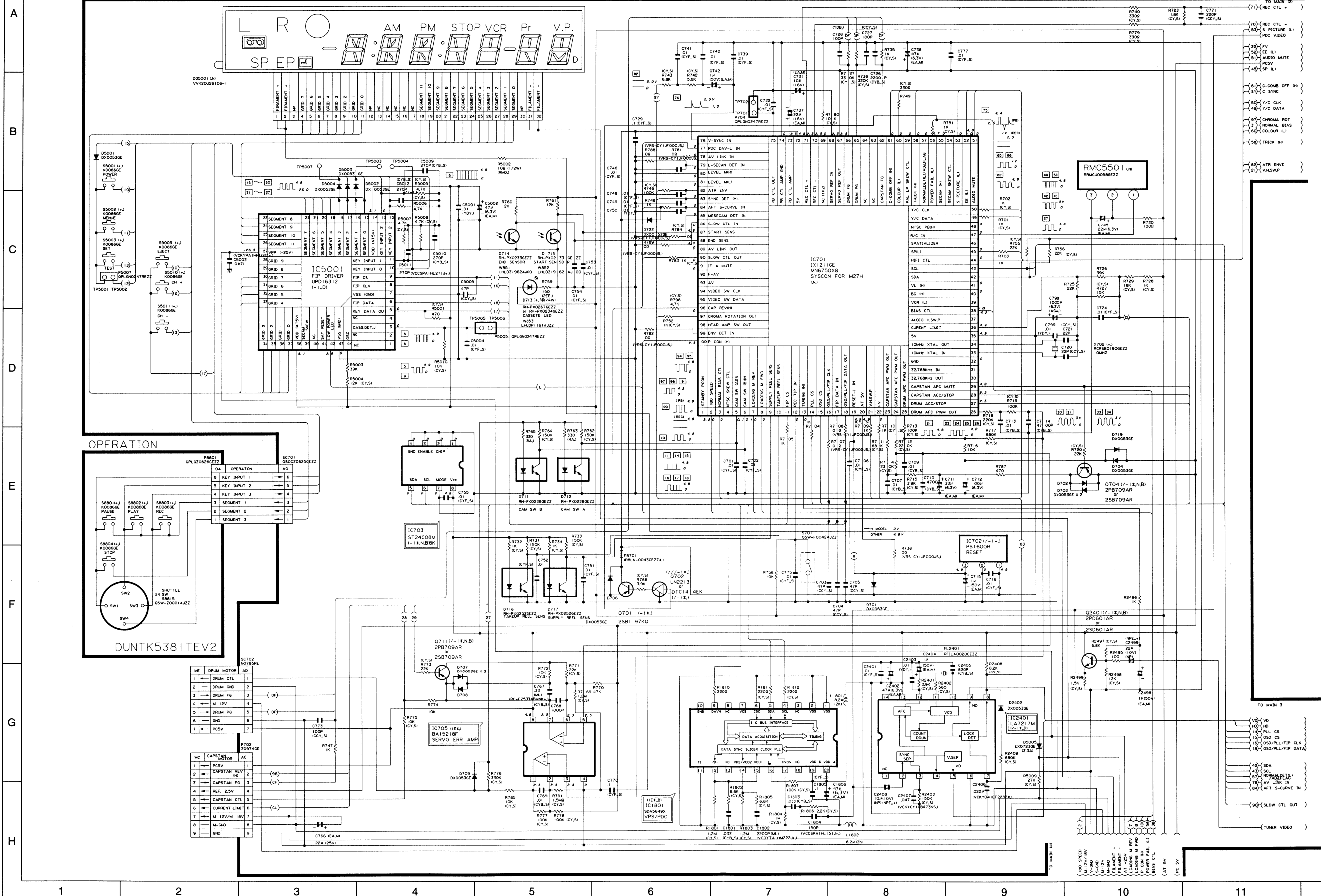
10000 μV 87.5 percent modulated colour bar signal is fed into tuner.

CAUTION:

This circuit diagram is original one. Therefore there may be a slight difference from yours.

9. CIRCUIT DIAGRAM AND PWB FOIL PATTERN

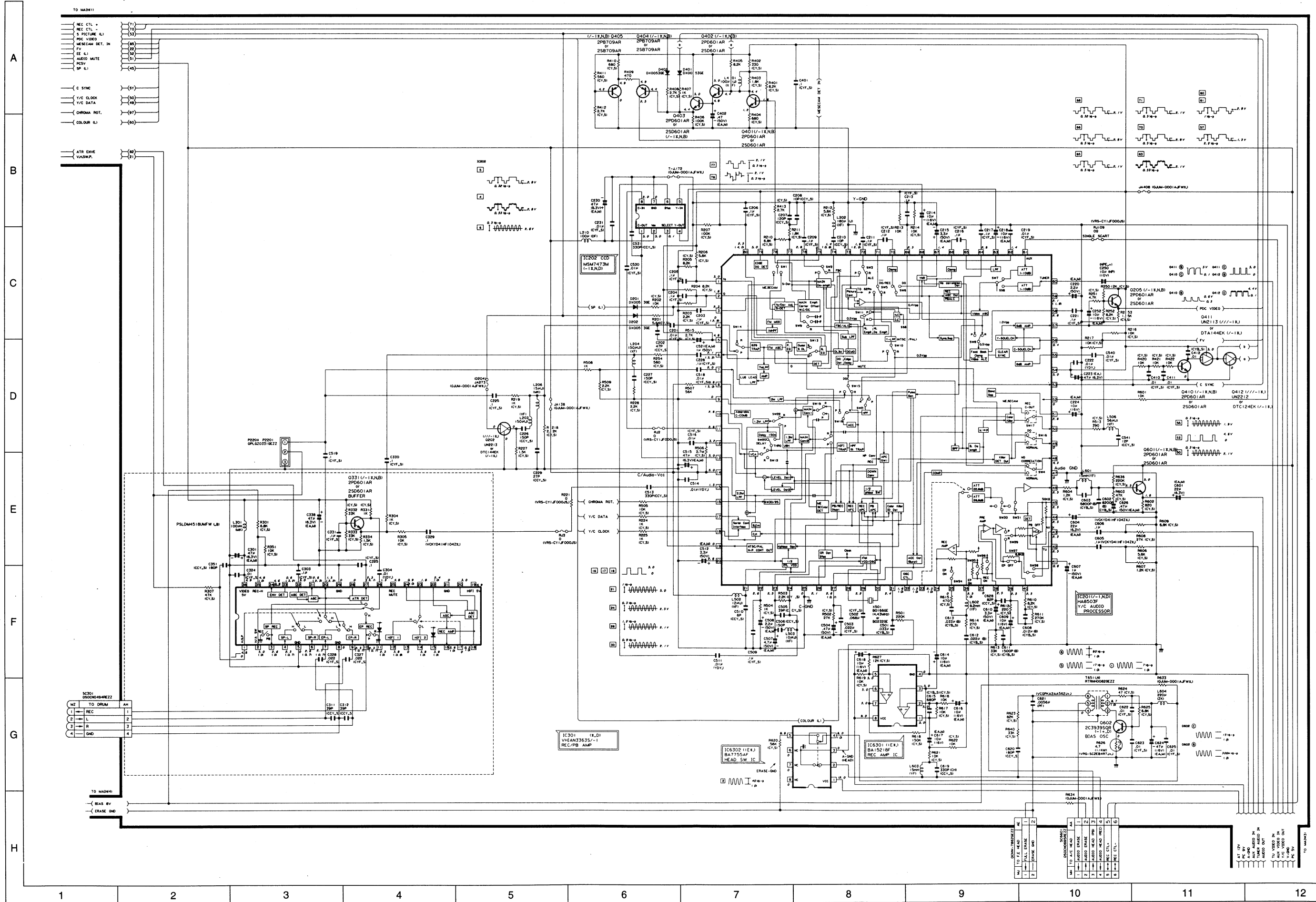
MAIN CIRCUIT (1) AND OPERATION CIRCUIT (VC-M26HM/LM, M27HM, M271LM)



VOLTAGE MEASUREMENT MODE
 PB Parentheses ()
 REC Without Parentheses

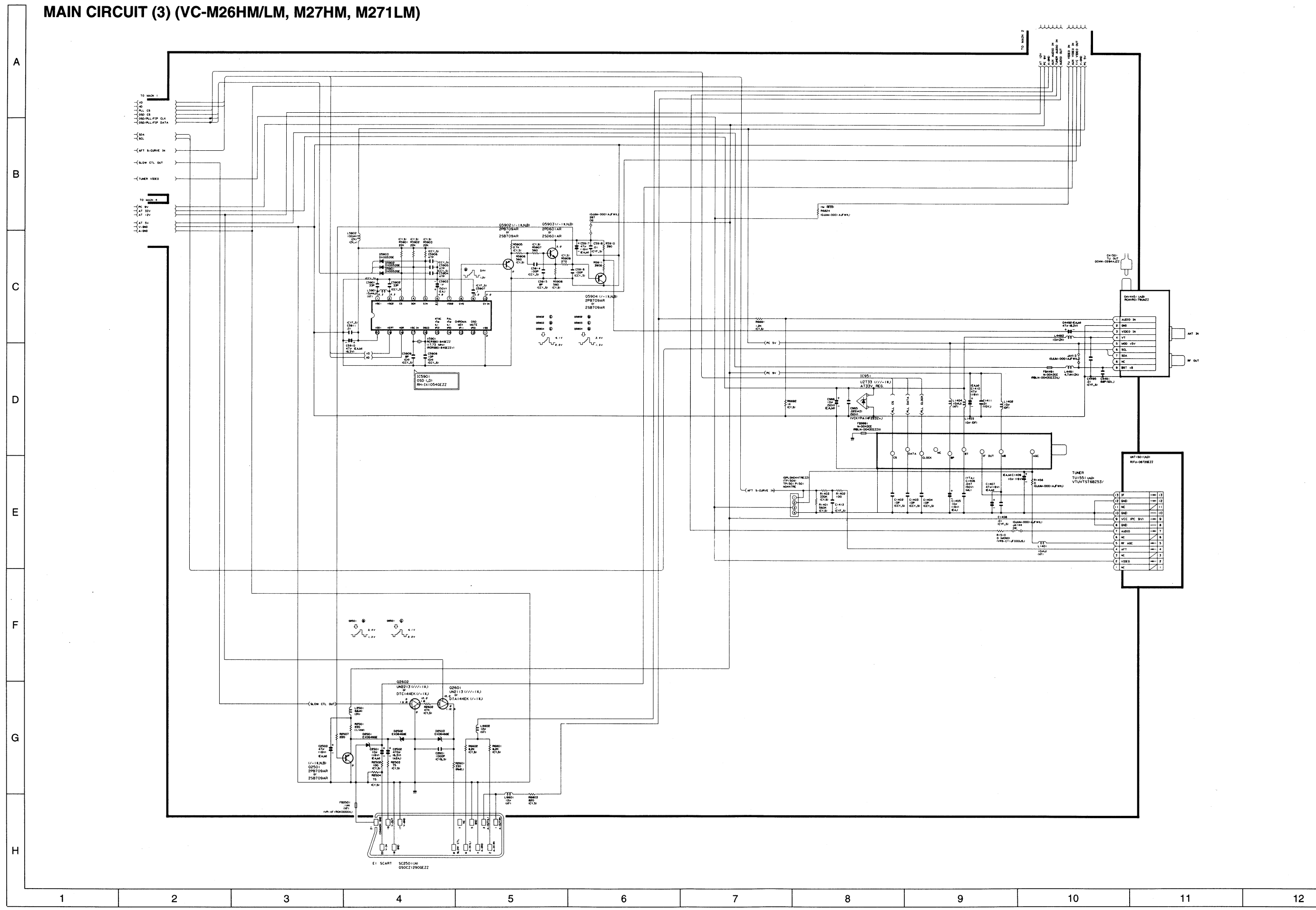
MAIN CIRCUIT (2) (VC-M26HM/LM, M27HM, M271LM)

VC-M26HM/LM VC-MH67HM/LM VC-M26HM/LM VC-MH67HM/LM
 VC-M27HM VC-MH68HM VC-M27HM VC-MH68HM
 VC-M271LM VC-M271LM VC-M271LM VC-M271LM



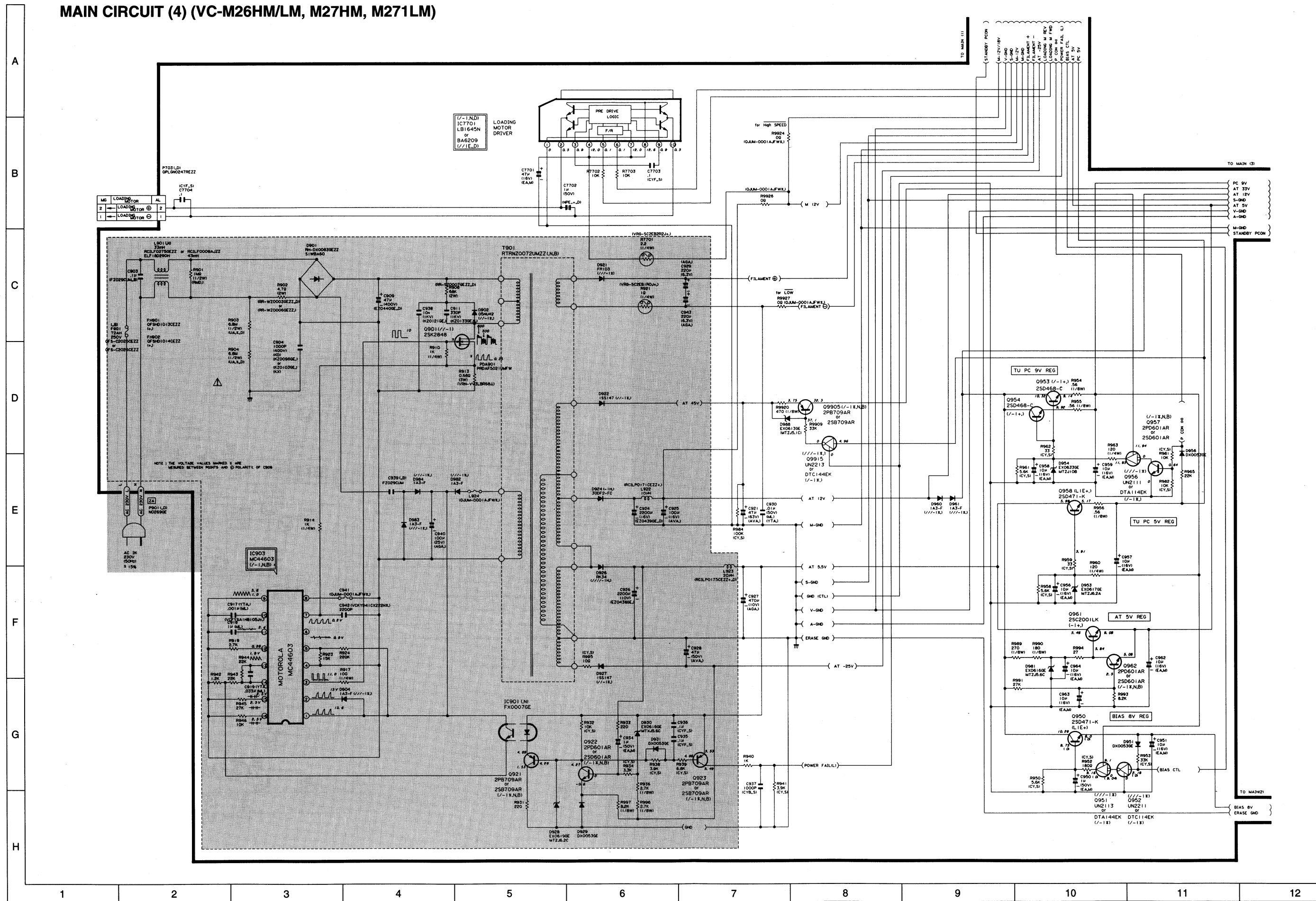
VOLTAGE MEASUREMENT MODE
 PB Parentheses ()
 REC Without Parentheses

MAIN CIRCUIT (3) (VC-M26HM/LM, M27HM, M271LM)



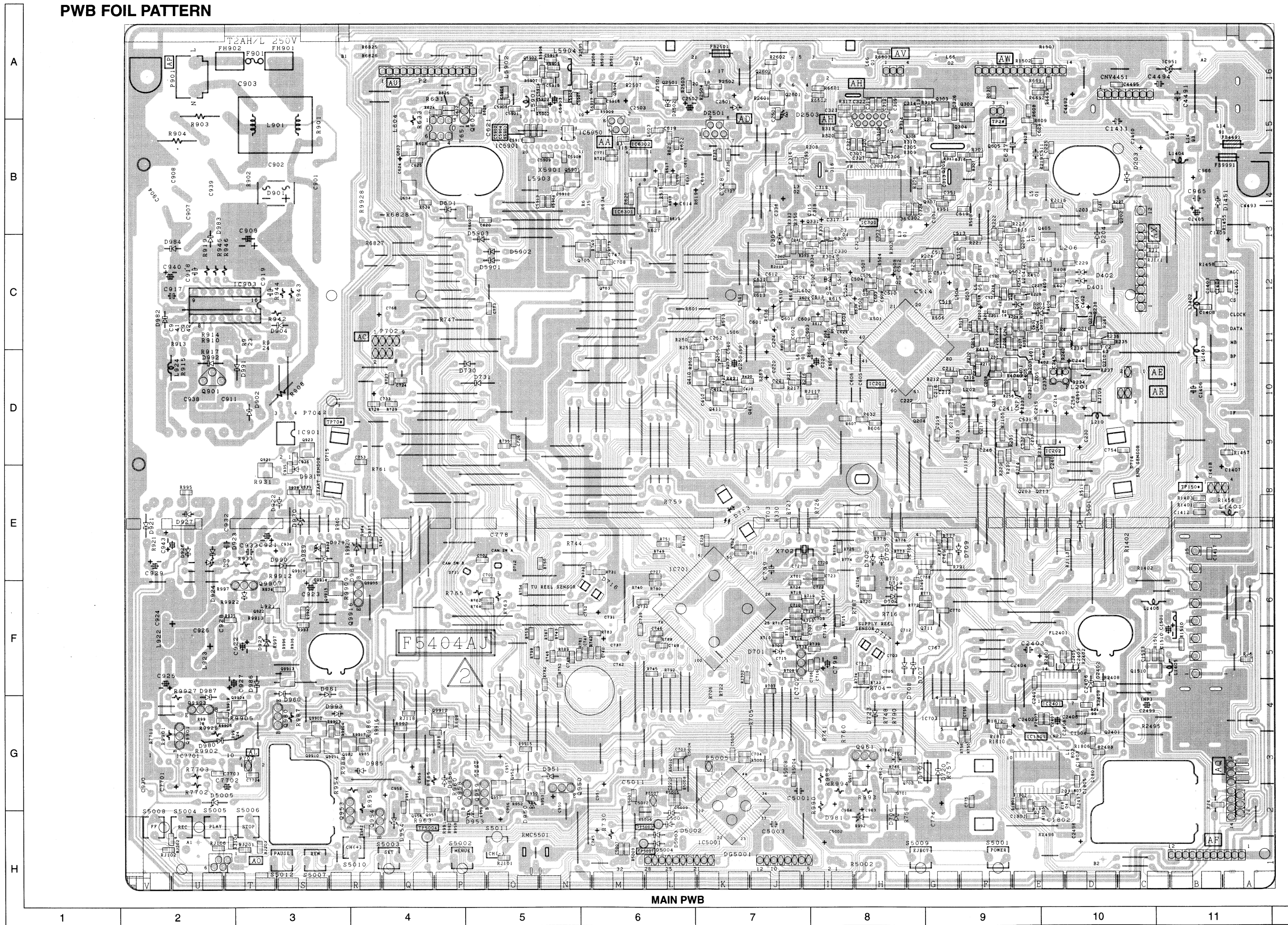
VOLTAGE MEASUREMENT MODE
 PB Parentheses ()
 REC Without Parentheses

MAIN CIRCUIT (4) (VC-M26HM/LM, M27HM, M271LM)

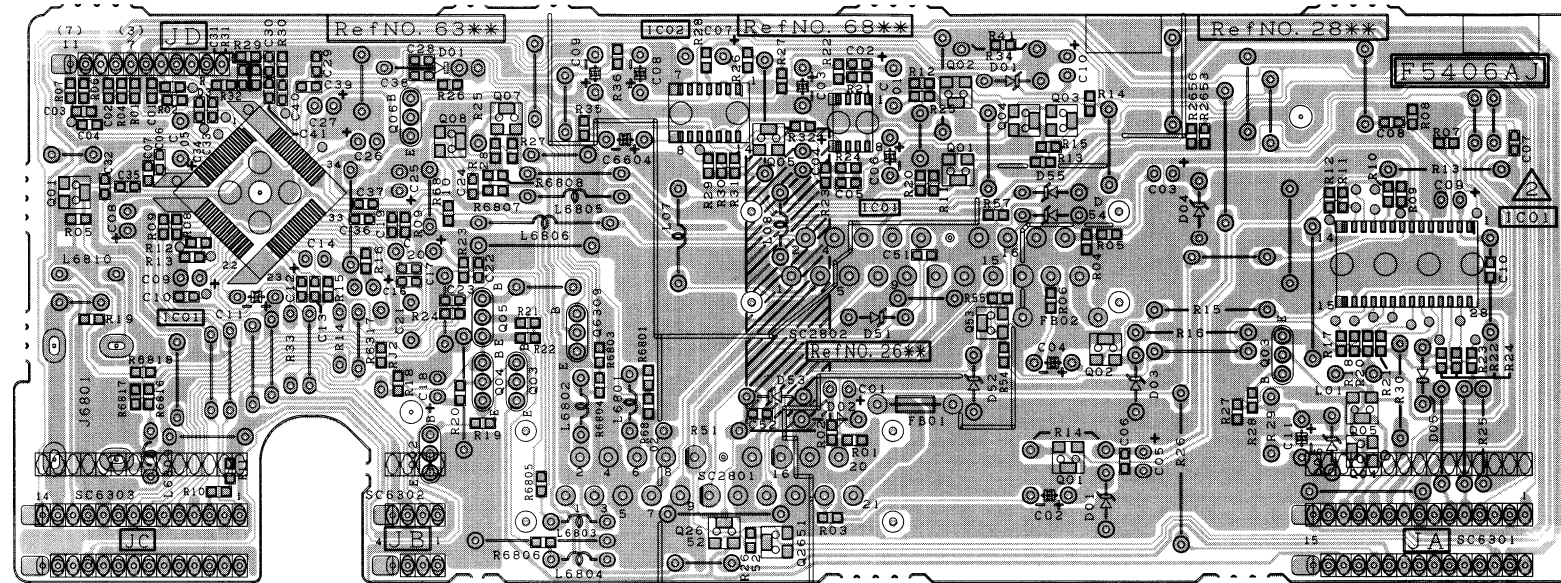


VOLTAGE MEASUREMENT MODE
 PB Parentheses ()
 REC Without Parentheses

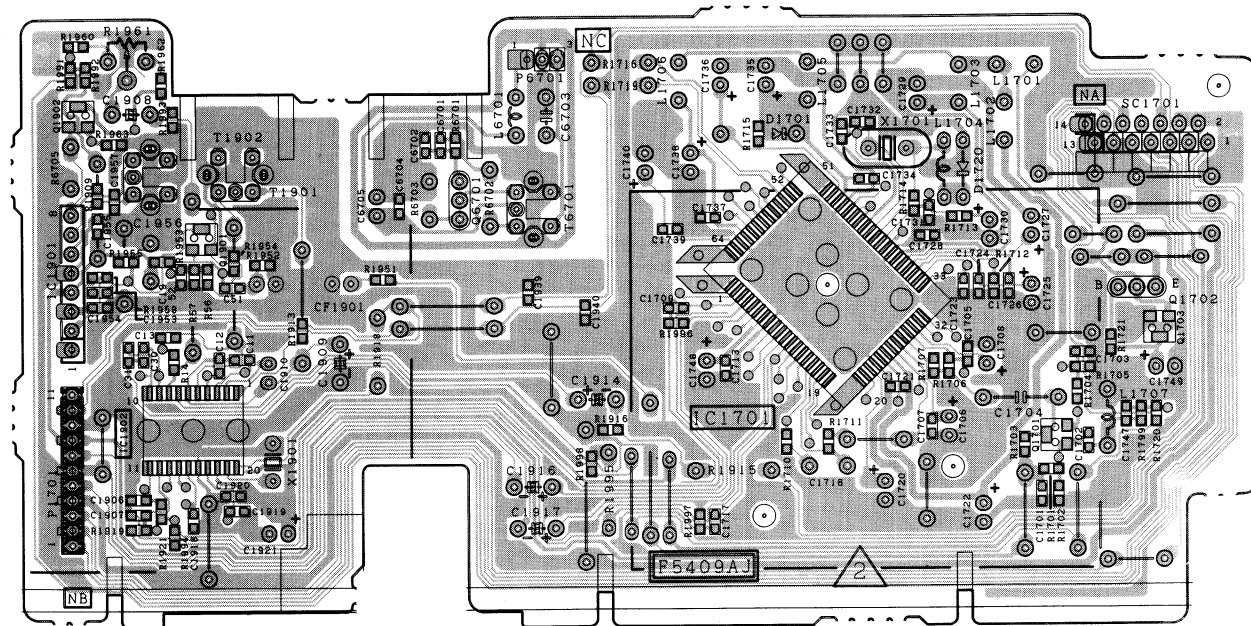
PWB FOIL PATTERN



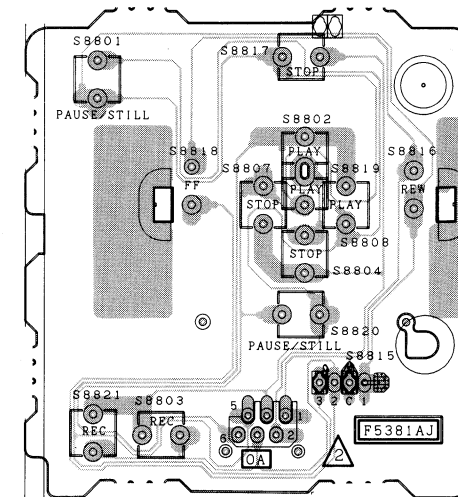
VC-M26HM/LM VC-MH67HM/LM VC-M26HM/LM VC-MH67HM/LM
 VC-M27HM VC-MH68HM VC-M27HM VC-MH68HM
 VC-M271LM VC-M271LM



TERMINAL PWB (VC-MH67HM/LM, MH68HM)

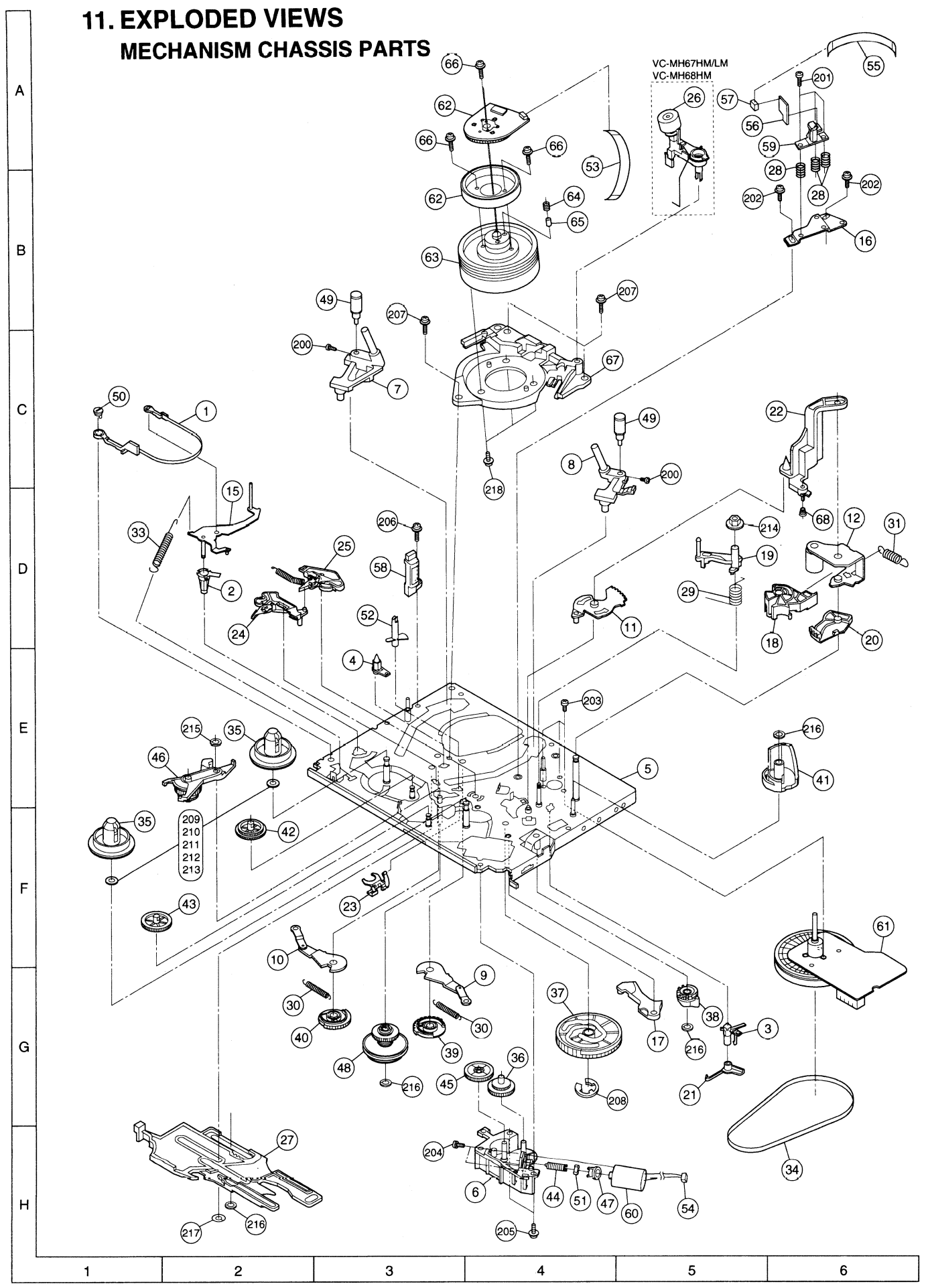


MPX PWB (VC-MH67HM/LM, MH68HM)

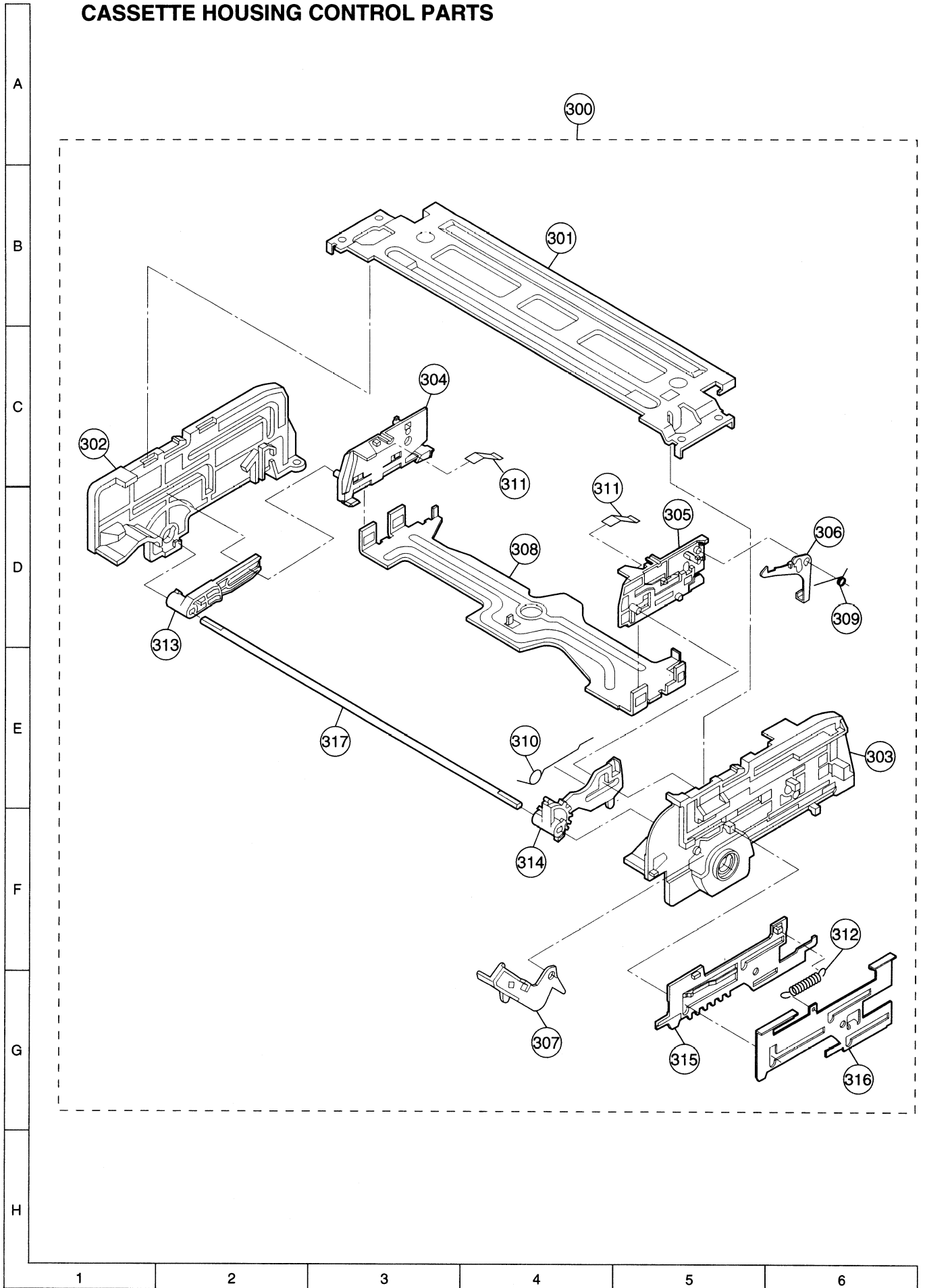


OPERATION PWB (VC-M27HM, M271LM, MH68HM)

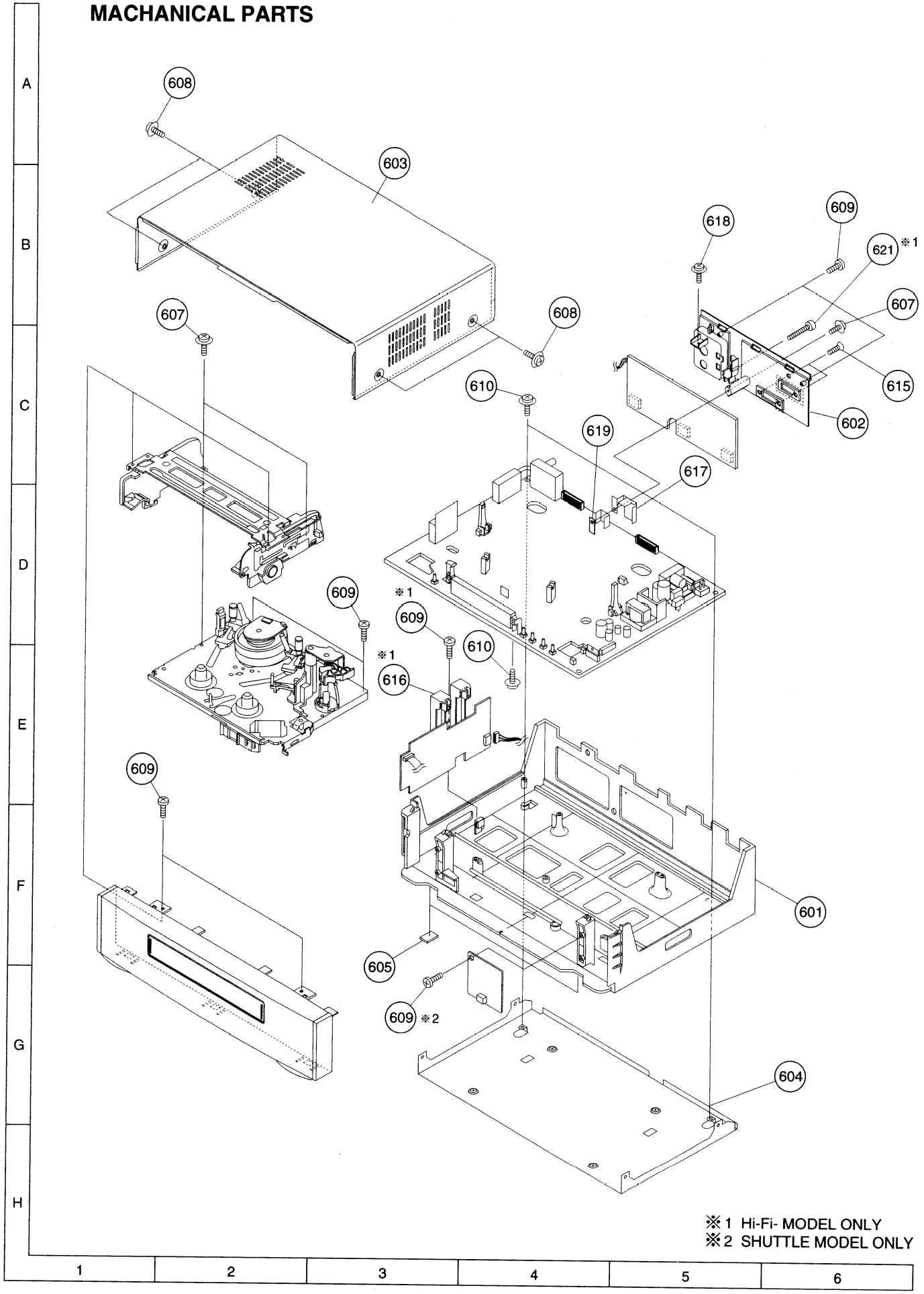
11. EXPLODED VIEWS MECHANISM CHASSIS PARTS



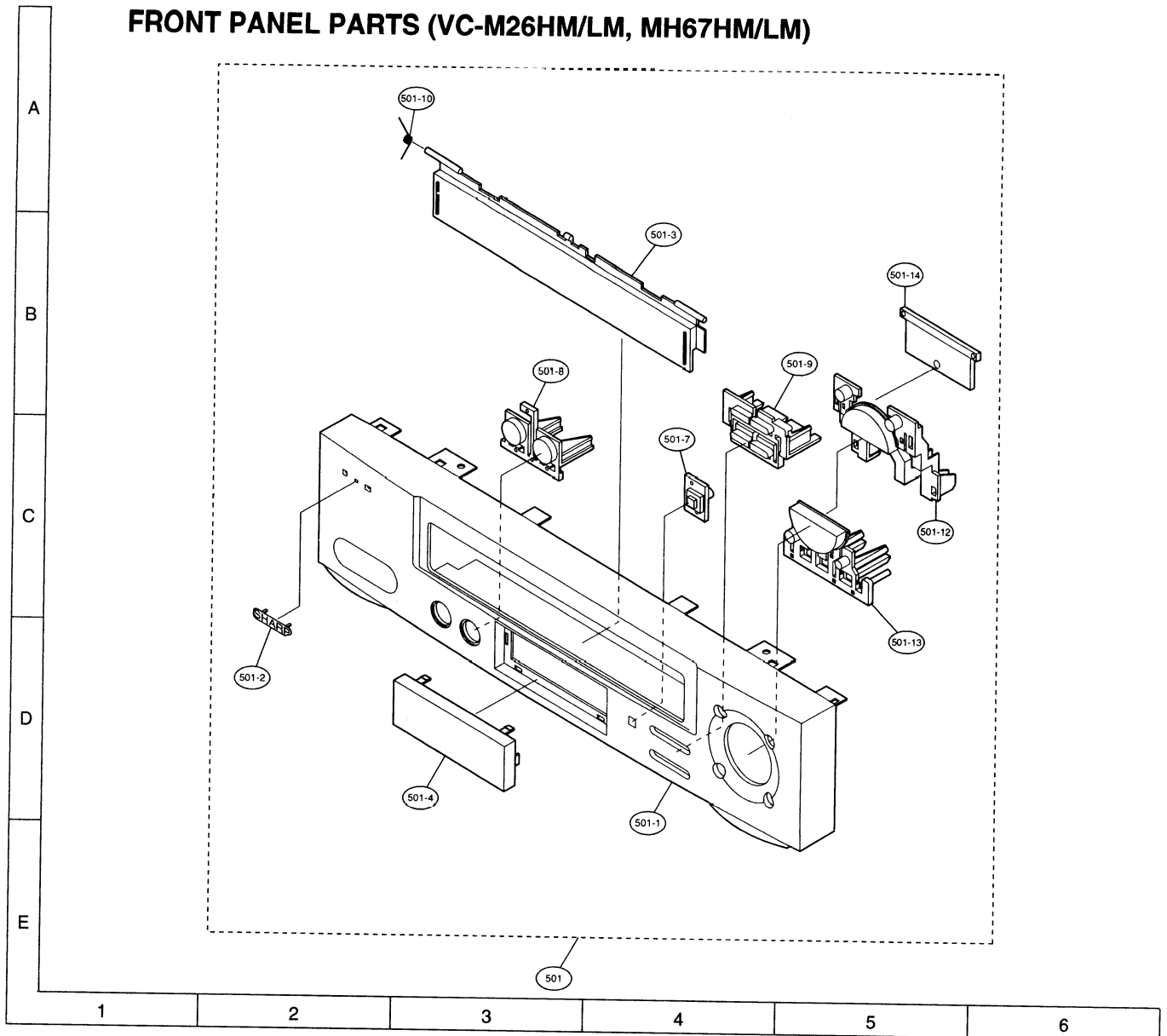
CASSETTE HOUSING CONTROL PARTS



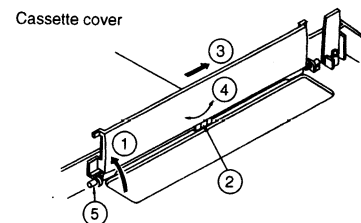
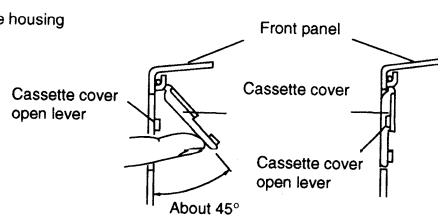
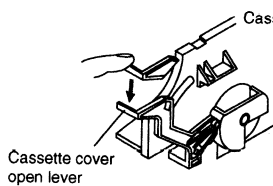
MACHANICAL PARTS



FRONT PANEL PARTS (VC-M26HM/LM, MH67HM/LM)



PRECAUTION ON FRONT PANEL SET-UP



Before attaching the front panel in position, make sure that the cassette cover open lever is in its right place (lower-most). If it is out of position, push it down with a finger.

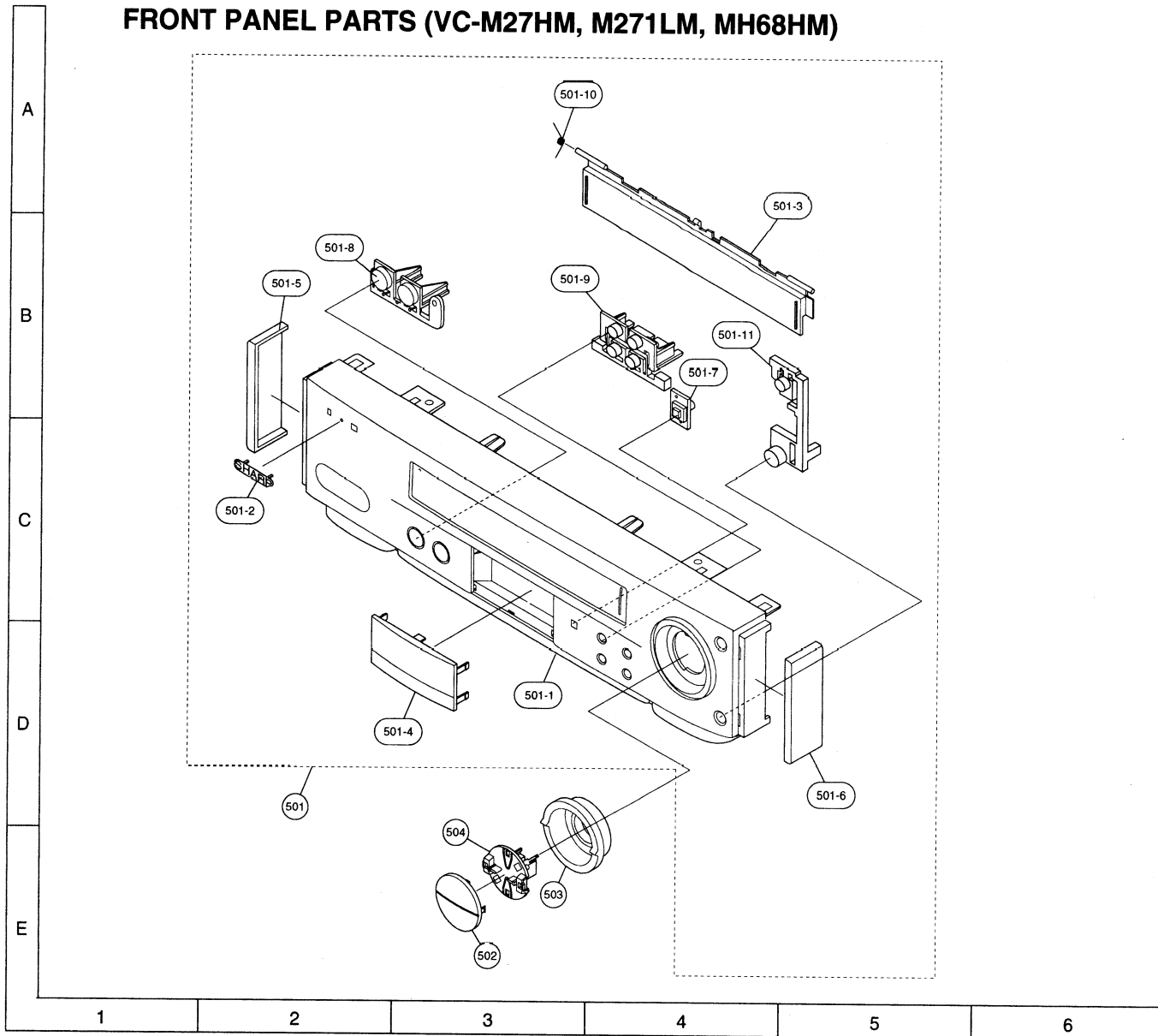
Keep the cassette over about 45° open and make sure that the cassette cover open lever is between the front panel and the cassette cover. Now fix the front panel in place.

Do not mount the front panel with the cassette cover tilted too open. Otherwise the cassette cover might wrongly run on the cassette housing.

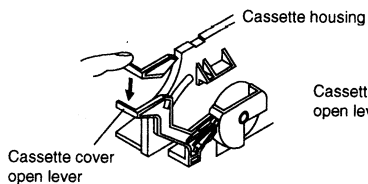
Removing the cassette compartment cover.

- ① Open the cassette compartment cover fully.
- ② Remove the center positioner.
- ③ Slide the cover to the right.
- ④ Slightly bend the cover.
- ⑤ Draw out the left-side rod.

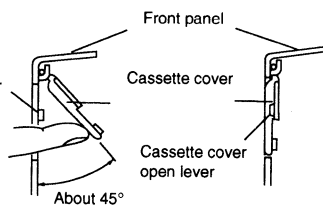
FRONT PANEL PARTS (VC-M27HM, M271LM, MH68HM)



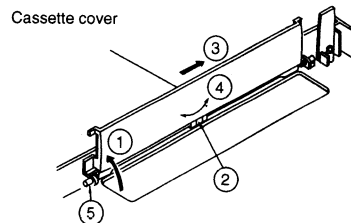
PRECAUTION ON FRONT PANEL SET-UP



Cassette housing
Cassette cover
open lever



About 45°



Before attaching the front panel in position, make sure that the cassette cover open lever is in its right place (lower-most). If it is out of position, push it down with a finger.

Keep the cassette over about 45° open and make sure that the cassette cover open lever is between the front panel and the cassette cover. Now fix the front panel in place.

Do not mount the front panel with the cassette cover tilted too open. Otherwise the cassette cover might wrongly run on the cassette housing.

Removing the cassette compartment cover.

- ① Open the cassette compartment cover fully.
- ② Remove the center positioner.
- ③ Slide the cover to the right.
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- ⑤ Draw out the left-side rod.

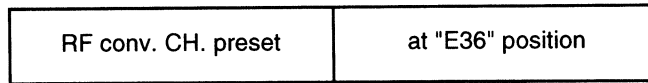
PACKAGING WEIGHTS DATA SHEET

Model: VCM26HM

MATERIAL TYPE	WEIGHT (grammes)
Cardboard	610
Paper	0
Total Card	610
EPS	89
PE	0
PP	0
Other Plastic	0
Total Plastic	89
Aluminium	0
Steel	0
Total Metal	0
Total Wood	0
Total Glass	0
Other	0

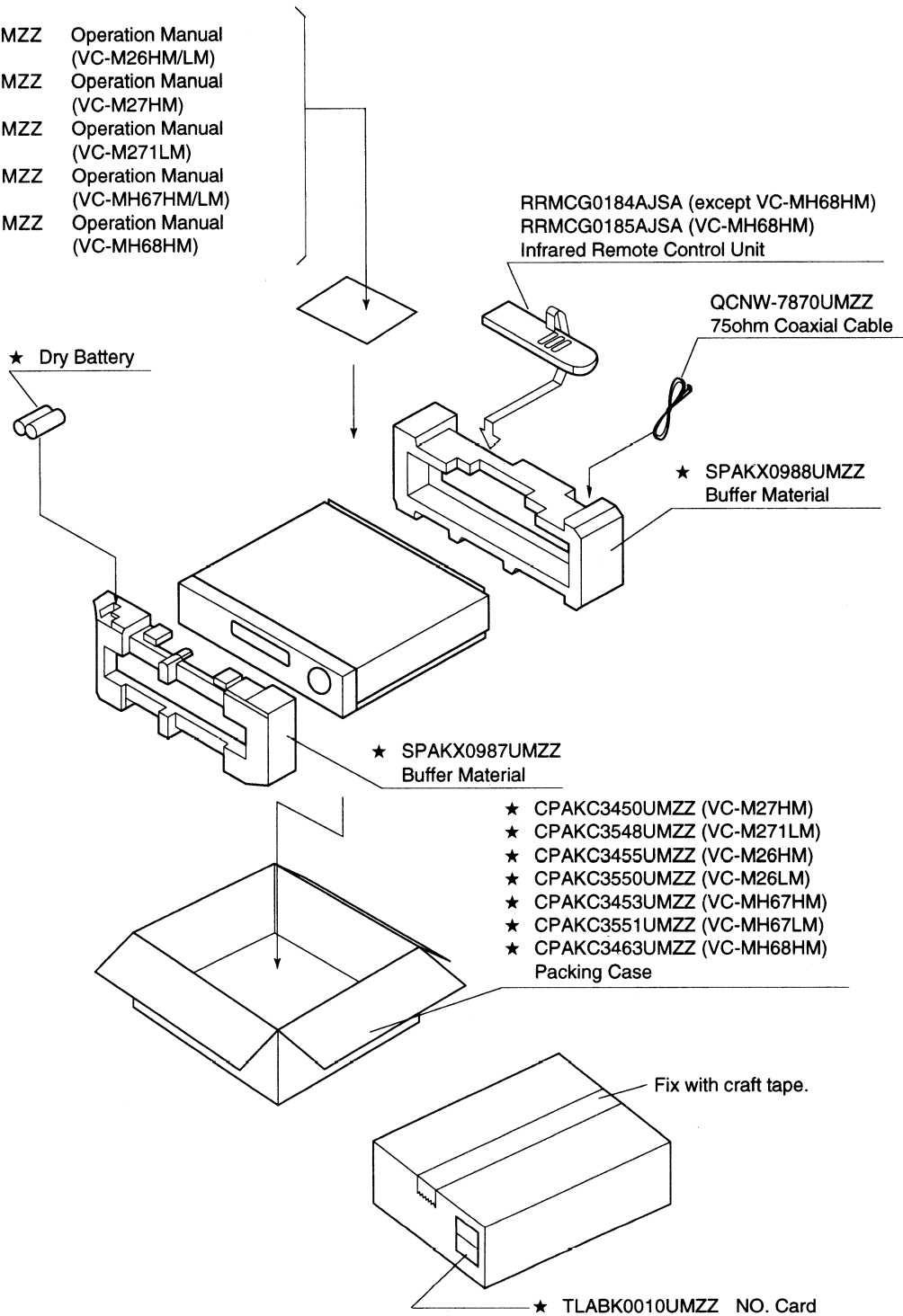
12. PACKING OF THE SET

■ Setting position of the Knobs



Accessories

- TiNS-3089UMZZ Operation Manual (VC-M26HM/LM)
- TiNS-3084UMZZ Operation Manual (VC-M27HM)
- TiNS-3100UMZZ Operation Manual (VC-M271LM)
- TiNS-3088UMZZ Operation Manual (VC-MH67HM/LM)
- TiNS-3094UMZZ Operation Manual (VC-MH68HM)



MARK ★ Not Replacement Item

VIDEO TECHNICAL BULLETIN

MODELS **VCM26HM** **VCM27HM** **VCM271HM**
 VCMH67HM **VCMH68HM** **VCMH69HM**

SYMPTOM No operation from the remote control.

CAUSE Remote control batteries or the remote control receiver.

ACTION If replacement of the remote control batteries does not reinstate the remote control functions, then it is possible that the remote control receiver is at fault.

Use the part number below for the remote control receiver.

<u>REF NO</u>	<u>DESCRIPTION</u>	<u>PART NUMBER</u>	<u>PRICE CODE</u>
-	Remote control receiver	RRMCU0058GEZZ	AG

VIDEO TECHNICAL BULLETIN

MODELS **VCM26HM** **VCM27HM** **VCMH67HM** **VCMH68HM**

REASON The part numbers for switches S8801/2/3/4 are incorrectly shown in the service manual

ACTION Please update service manual with the part numbers given below.

<u>REF NO</u>	<u>DESCRIPTION</u>	<u>PART NUMBER</u>	<u>PRICE CODE</u>
S8801	Pause/Stop switch	QSW-K0086GEZZ	AC
S8802	Play switch	QSW-K0086GEZZ	AC
S8803	Record switch	QSW-K0086GEZZ	AC
S8804	Stop switch	QSW-K0086GEZZ	AC



VIDEO TECHNICAL BULLETIN

MODELS **VCM26HM** **VCM27HM** **VCM271HM**
 VCMH67HM **VCMH68HM** **VCMH69HM**

SYMPTOM No operation from the remote control.

CAUSE Remote control batteries or the remote control receiver.

ACTION If replacement of the remote control batteries does not reinstate the remote control functions, then it is possible that the remote control receiver is at fault.

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<u>REF NO</u>	<u>DESCRIPTION</u>	<u>PART NUMBER</u>	<u>PRICE CODE</u>
-	Remote control receiver	RRMCU0058GEZZ	AG

VIDEO TECHNICAL BULLETIN

<u>MODELS</u>	VCM26HM	VCM27HM	VCM271HM
	VCM29HM	VCMH68HM	VCMH69HM
	VCMH675HM		

SYMPTOM No colour and/or noisy picture.

CAUSE Due to the close proximity of the body of X501 to the base of the drum assembly X501 can be shunted by the drum assembly and cause an open circuit.

ACTION Repair the PWB as necessary and re-seat X501 to avoid contact with the base of the drum assembly.

<u>REF NO</u>	<u>DESCRIPTION</u>	<u>PART NUMBER</u>	<u>PRICE CODE</u>
X501	Crystal	RCRSB0166GEZZ	AH



VIDEO TECHNICAL BULLETIN

MODELS VCM26HM

SYMPTOM Failure of the power supply to operate - no display and no operation. Normally the power supply can be heard to trip.

CAUSE R955 open circuit.

ACTION Replace R995.

<u>REF NO</u>	<u>DESCRIPTION</u>	<u>PART NUMBER</u>	<u>PRICE CODE</u>
R995	Resistor 10R, 1/16W	VRS-CY1JF100J	AA

VIDEO TECHNICAL BULLETIN

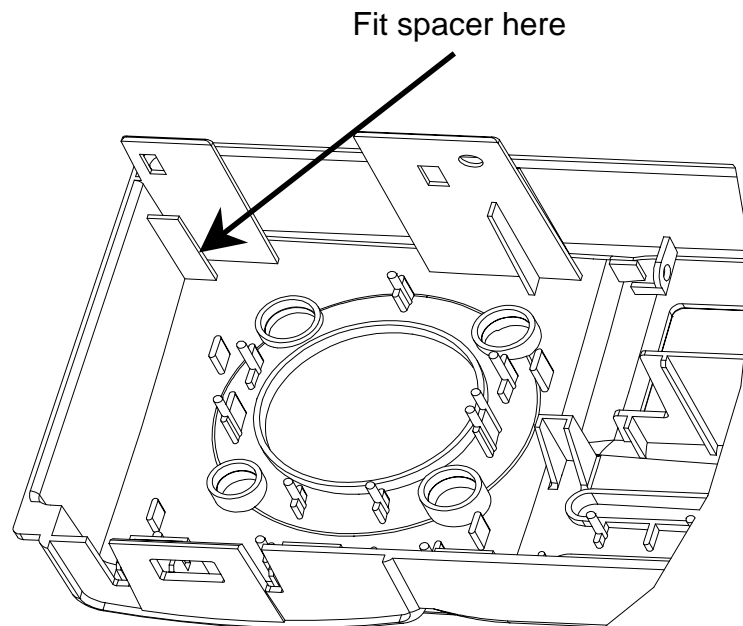
MODELS **VCM26HM** **VCMH67HM** **VCMH675HM**

SYMPTOM The operation of the tape control buttons on the front panel, particularly the fast forward and rewind buttons, under certain conditions, become sensitive and operate by slight pressure on the top of the front cabinet.

CAUSE A degree of warpage may be present in the front panel which will alter the position of the play button assembly in relation to the switches on the main PWB. This will then increase the sensitivity of the button operation.

ACTION Fit a 25.0 x 9.0 x 0.5mm spacer as indicated in the diagram below.

<u>REF NO</u>	<u>DESCRIPTION</u>	<u>PART NUMBER</u>	<u>PRICE CODE</u>
-	Spacer	SPACER001UMZZ	TBA



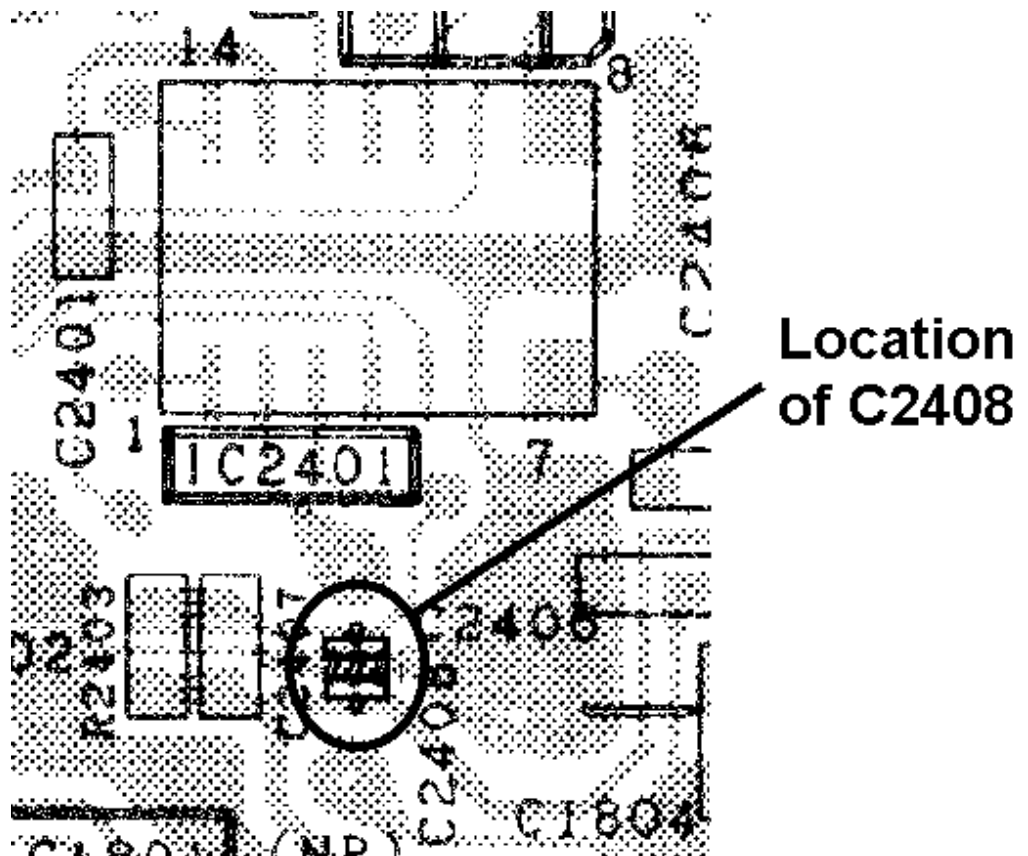
VIDEO TECHNICAL BULLETIN

MODELS	VCM26HM	VCM27HM	VCM271HM	VCMJ67HM
	VCMH675HM	VCM68HM		

SYMPTOM When receiving a signal through the tuner, the screen goes into blue mute. Note that this will not occur if the blue back function is turned off.

CAUSE Input to sync separator (pin 2 of IC2401) not present due to C2408 being dry jointed.

ACTION Re-solder C2408.



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Reference MCSAVC040699

Revision 1



VIDEO TECHNICAL BULLETIN

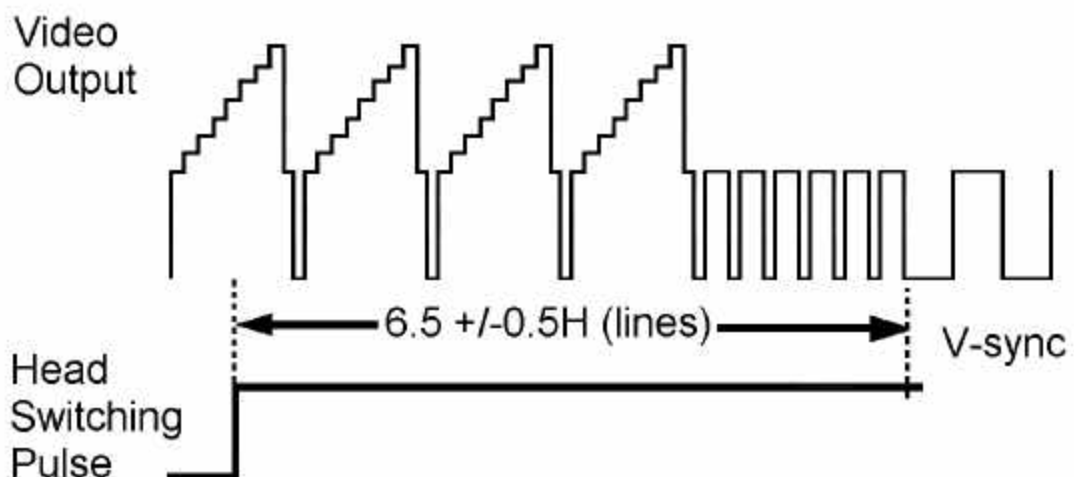
<u>MODELS</u>	VCM26HM	VCM271HM	VCM27HM	VCHM67HM
	VCHM675HM	VCMH68HM		

SYMPTOM Head switching point requires adjustment.

ACTION When carrying out the head switching adjustment for any of the above models, follow the procedure outlined below.

1. Remove the front panel so that access can be gained to the test mode pins.
2. Insert the alignment tape (VROCPSV) into the machine.
3. Play back the alignment tape.
4. Make a momentary short circuit between test points TP5001 and TP5002 (see diagram on page 2).
5. Press the PLAY button – the automatic adjustment is completed at this point (the play symbol may flash during this process).
6. Press the STOP button to return to the normal mode.

Correct head switching points can be checked by connecting an oscilloscope to the video output and triggering it off the head switching pulse (TP2202). Note that if the head switching points can be monitored during the automatic setting procedure.



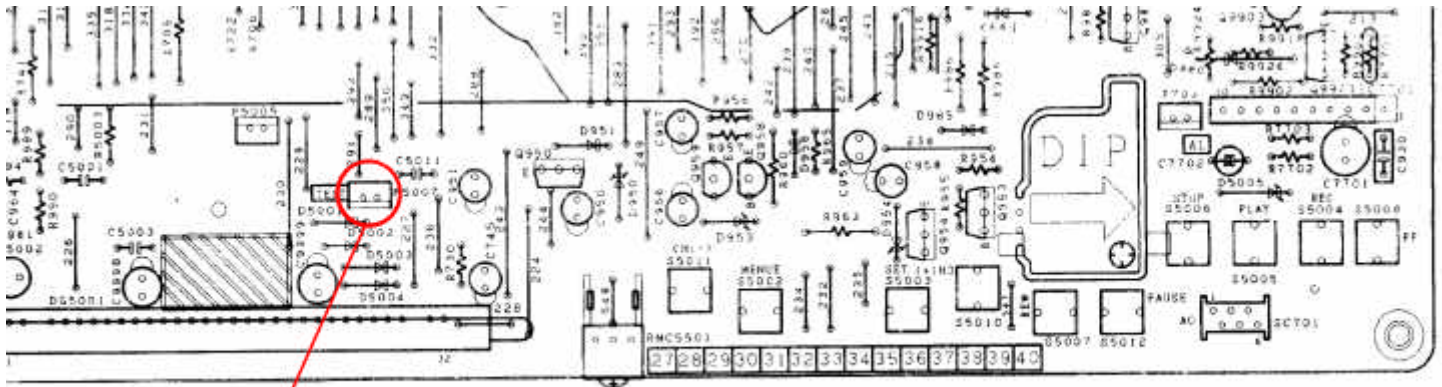
Relationship Between the Head Switching Point and the Video Output Waveform

Sharp Electronics (UK) Limited

Reference JC160699/1

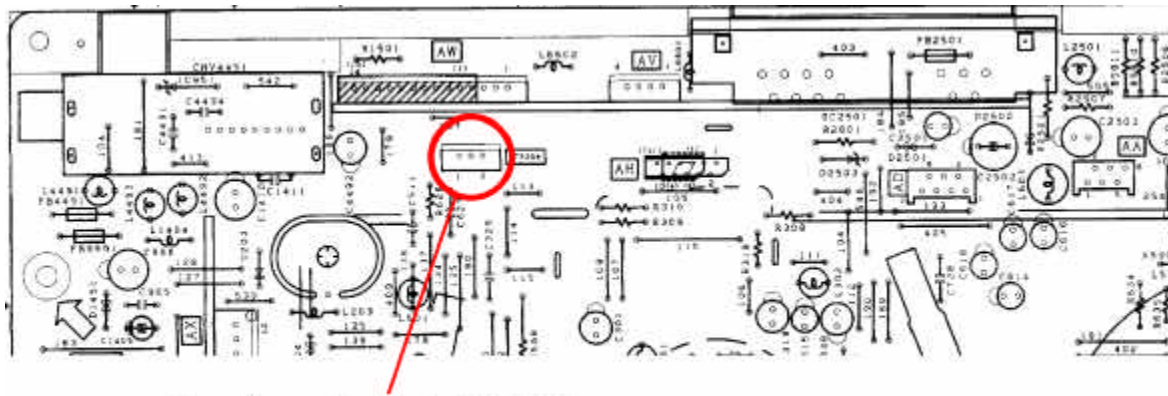
Revision 1





Location of TP5001 and TP5002

Location of TP5001 and TP5002 at the Front of the Main PWB



Centre pin is TP2202

Location of TP2202 (Head Switching Point) Test Point at the Rear of the Main PWB

VIDEO TECHNICAL BULLETIN

MODELS	VCM26HM	VCM271HM	VCM27HM	VCMH67HM
	VCMH68HM			

SYMPTOM Failure of the front panel buttons.

CAUSE Excess travel of the button, causing the hinge to fracture.

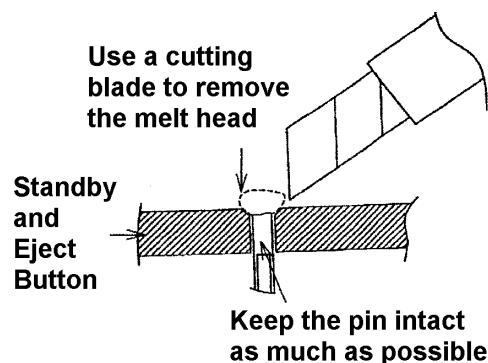
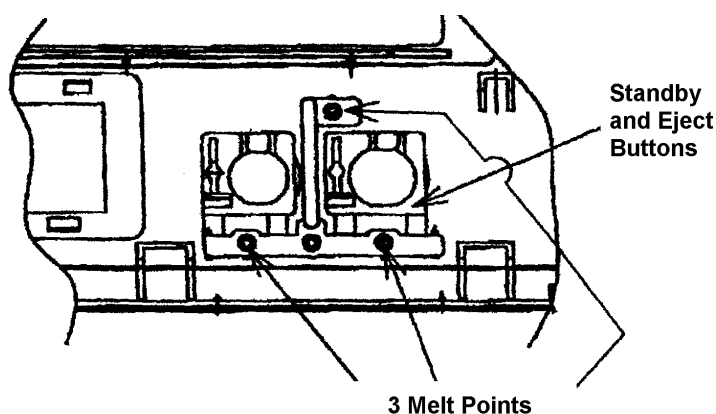
ACTION Replace the broken button assembly and add the holder as shown in the following diagrams.

Note that there are two types of holder for different models.

Holder one
VCM26HM VCMH67HM

Holder two
VCM271HM VCM27HM VCMH68HM

<u>REF NO</u>	<u>DESCRIPTION</u>	<u>PART NUMBER</u>	<u>PRICE CODE</u>
-	Holder	LHLDZ2072GEZZ	AE
-	Holder	LHLDZ2035GEZZ	AD



1. Remove the original button assembly by cutting the melt point as shown

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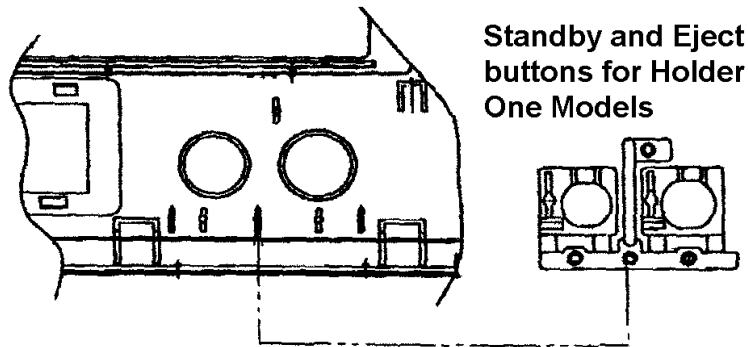
Reference TB-T9905070

Revision 1

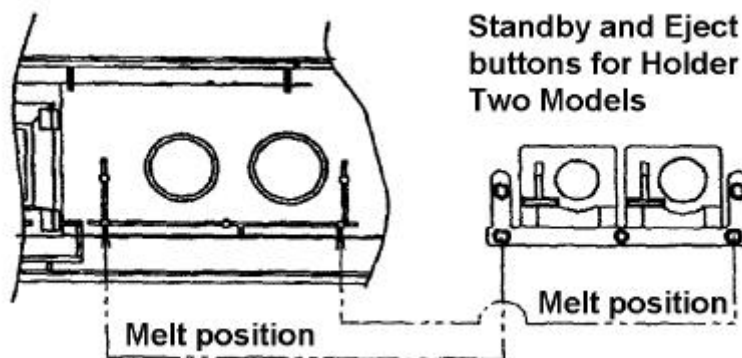


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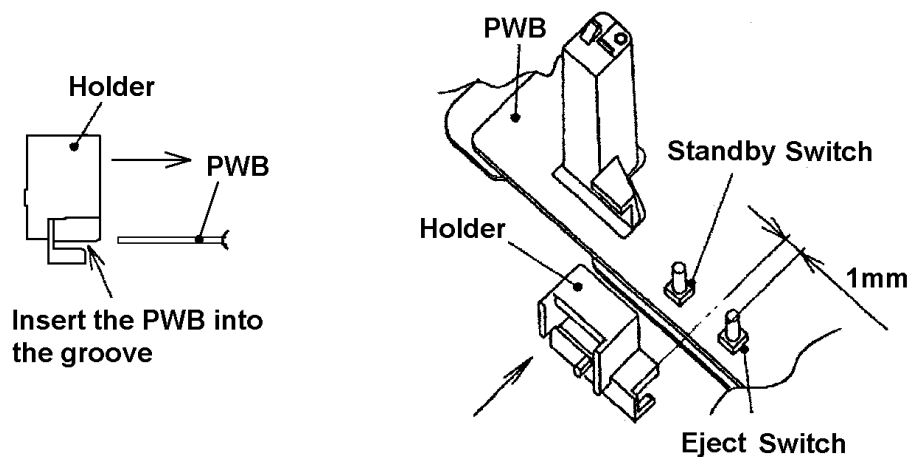
VIDEO TECHNICAL BULLETIN



2a. Melt the Standby and Eject button into position for Holder One models (note that there is only one melt point)



2b. Melt the Standby and Eject button into position for Holder Two models (note that there are two one melt point)



3. Fitting the Holder

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Reference TB-T9905070

Revision 1



VIDEO TECHNICAL BULLETIN

<u>MODELS</u>	VCM26HM	VCM27HM	VCM271HM	VCM29HM
	VCMH67HM	VCMH675HM	VCMH68HM	VCMH69HM

SYMPTOM Dead or tripping power supply.

CAUSE -25V supply is low or missing, or no power supply feedback.

ACTION If the -25V supply is low or missing, replace D927 and R995.

If the D927 and R995 are not found to be faulty, then it is likely that the opto coupler, IC901, is faulty.

Please use the part numbers below for replacement parts.

<u>REF NO</u>	<u>DESCRIPTION</u>	<u>PART NUMBER</u>	<u>PRICE CODE</u>
D927	Diode, 1SS147	VHD1SS147//-1	AA
R995	SMD resistor, 10 (1/16W)	VRS-CY1JF100J	AA
IC901	Photo coupler	RH-FX0007GEZZ	AE

VIDEO TECHNICAL BULLETIN

<u>MODELS</u>	VCM311HM	VCM312HM	VCM522HM	VCMH721HM
	VCMH722HM	VCMH73HM	VCMH731HM	VCM26HM
	VCM27HM	VCM271HM	VCMH67HM	VCMH675HM
	VCMH68HM	VCMH69HM		

SYMPTOM Various faults:

- No operation
- Will not come out of standby
- EEPROM can not be programmed correctly
- Erratic or intermittent functions
- Will not respond to the remote control
- Will not respond to the front panel buttons
- Erratic or intermittent timer programming operations

CAUSE Microprocessor program crash.

All of the models listed above utilise a back-up power facility that maintains the memory inside the main processor in case of a mains power failure. If the mains failure is of reasonable short duration, then all original settings are retained and the unit will continue to function as before the mains interruption (including the retention of any corrupted data).

ACTION Discharge back-up capacitor connected to the supply pins of the processor.

VIDEO TECHNICAL BULLETIN

<u>MODELS</u>	VCM26HM	VCM271HM	VCM27HM	VCMH67HM
	VCMH68HM			

SYMPTOM Failure of the front panel buttons.

CAUSE Excessive travel of the button, causing the hinge to fracture.

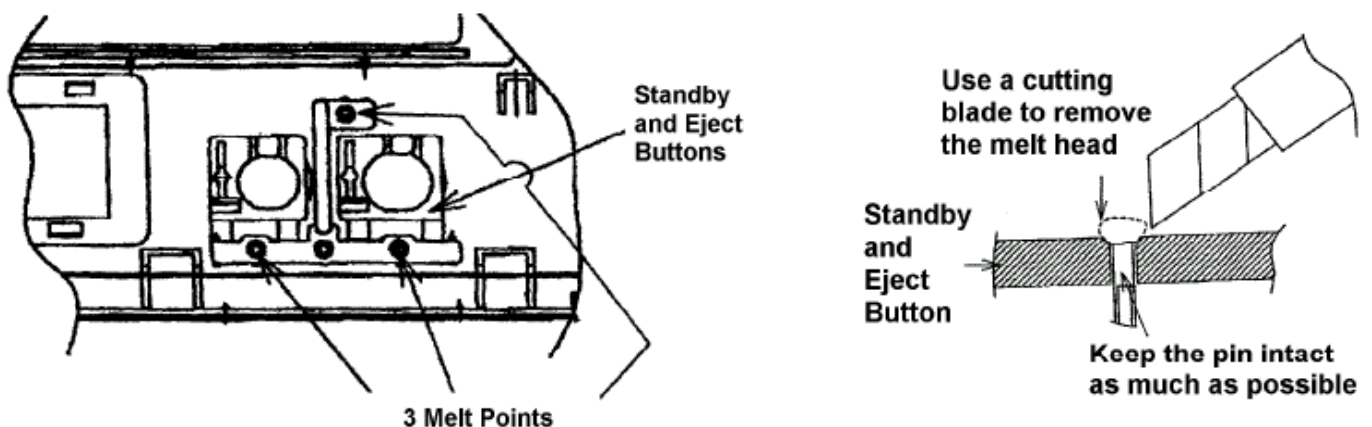
ACTION Replace the broken button assembly and add the holder as shown in the following diagrams.

Note that there are two types of holder for different models.

Holder one: VCM26HM, VCMH67HM

Holder two: VCM271HM, VCM27HM, and VCMH68HM

<u>REF NO</u>	<u>DESCRIPTION</u>	<u>PART NUMBER</u>	<u>PRICE CODE</u>
-	Holder one	LHLDZ2072GEZZ	AE
-	Holder two	LHLDZ2035GEZZ	AD



1. Remove the original button assembly by cutting the melt point as shown

Sharp Electronics (UK) Limited

Reference TBT9905070

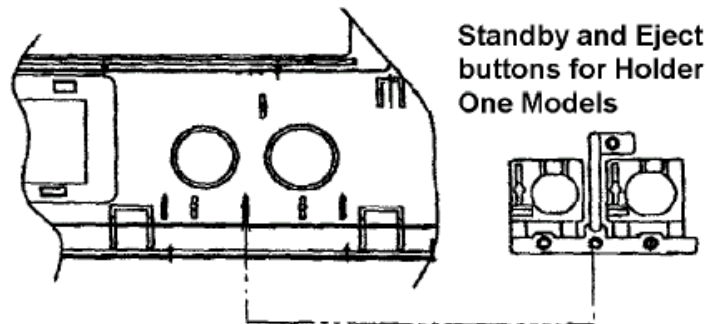
Revision 2



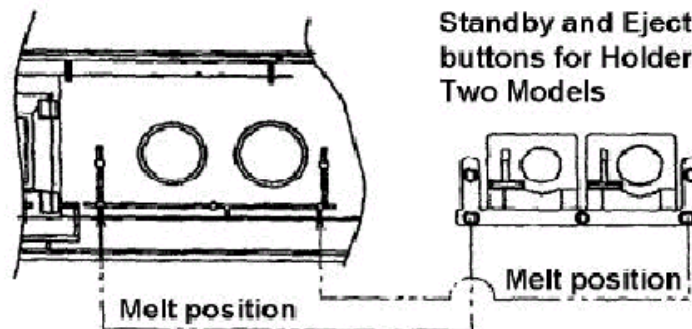
White – Carry out as required

Yellow – Carry out as required and whenever the unit comes in for service

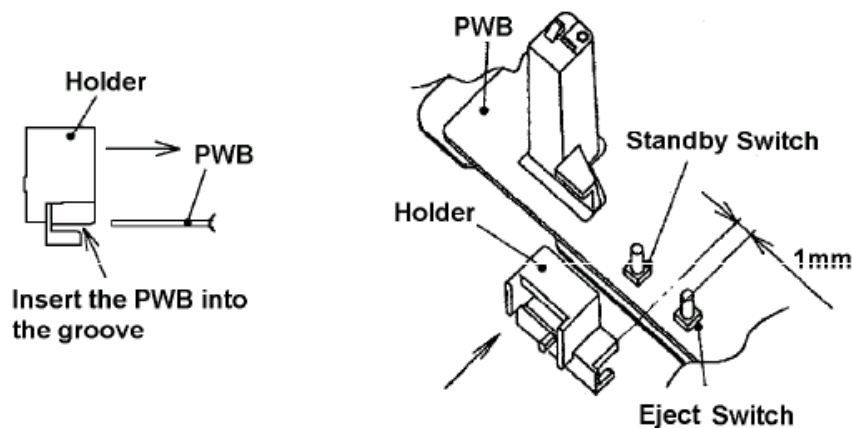
Red – Carry out on all units



2a. Melt the Standby and Eject button into position for Holder One models (note that there is only one melt point)



2b. Melt the Standby and Eject button into position for Holder Two models (note that there are two one melt point)



3. Fitting the Holder

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Reference TBT9905070
Revision 2



White – Carry out as required
Yellow – Carry out as required and whenever the unit comes in for service
Red – Carry out on all units