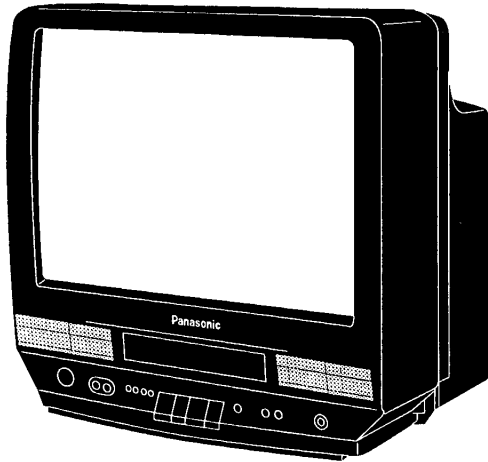


# Service Manual

Combination-VCR

Omnivision **VHS**



- P** PV-M1348
- P** PV-M1358W
- Q** VV1308
- Q** VV1318W
- P** PV-M1368
- P** PV-M1378W
- P** PV-M2038
- P** PV-M2048
- Q** VV2008
- Q** VV2018W
- P** PV-M2058

## SPECIFICATIONS

ITEM	SPECIFICATION	1	2	3	4	5	6	ITEM	SPECIFICATION	1	2	3	4	5	6	
VCR	Video	Head: 2 rotary heads helical scanning system	0	0	0	0	-	VCR	Tape Speed	SP: 1-5/16 i.p.s (33.35 mm/sec), LP: 21/32 i.p.s (16.67 mm/sec), SLP: 7/16 i.p.s (11.12 mm/sec)	0	0	0	0	0	0
		Head: 4 rotary heads helical scanning system	-	-	-	-	0			Tape Format	Tape width 1/2" (12.7 mm) high density tape	0	0	0	0	0
		Input Level: VIDEO IN Jack (Phono type) 1.0 Vp-p 75Ω unbalanced	0	0	0	0	0		FM Radio		Band Range	87.5 - 108.1 MHz	0	-	0	0
	Signal-to-Noise Ratio: SP: more than 43 dB	0	0	0	0	0	DISPLAY	Picture Tube		13 inch measured diagonal 90° deflection		0	0	0	-	-
	LP/SLP: more than 41 dB	0	0	0	0	0			Power	20 inch measured diagonal 90° deflection	-	-	-	0	0	0
	Horizontal Resolution: Color/Monochrome: more than 230 lines	0	0	0	0	0		Television System		EIA Standard (525 lines, 60 fields) NTSC Color Signal	0	0	0	0	0	0
	Audio	Head: Normal Mono: 1 stationary head	0	0	0	0	0		GENERAL	Operating Condition	Source: 120V AC ± 10%, 60 Hz ± 0.5%	0	0	0	0	0
		Input Level: AUDIO IN Jack (Phono type) -10 dBv 50kΩ unbalanced	0	0	0	0	0	Dimension			Consumption: Approx. 69 watts (power on), Approx. 5 watts (power off) Approx. 110 watts (power on), Approx. 5 watts (power off)	0	0	0	-	-
		Frequency Response: Normal Mono: SP: 100 Hz ~ 8 kHz	0	0	0	0	0			Weight	26.4 lbs. (12 kg)	0	-	0	-	-
	Signal-to-Noise Ratio: Normal Mono: SP: more than 42 dB	0	0	0	0	0	Tuner	Broadcast Channels: VHF 2 - 13, UHF 14 - 69	10% - 75% (Humidity)		0	0	0	0	0	0
	LP/SLP: more than 40 dB	0	0	0	0	0			CATV Channels: Midband A through I (14 - 22)	41°F(5°C) ~ 104°F(40°C) (Temperature)	0	0	0	0	0	0
	Wow and Flutter: Normal Mono: SP: Less than 0.2% WRMS	0	0	0	0	0	Special CATV channel 5A (01)	15-3/16"(386mm) (W) X 15-3/16"(385mm) (H) X 16-11/16"(424mm) (D)		0	0	0	-	-	-	
LP/SLP: more than 40 dB	0	0	0	0	0	Ultra-band 65 - 94, 100 - 125		20-5/16"(515mm) (W) X 19-7/8"(505mm) (H) X 19-1/16"(484mm) (D)	-	-	-	0	0	0		

1. PV-M1348/PV-M1358W
2. VV1308/VV1318W
3. PV-M1368/PV-M1378W
4. PV-M2038/PV-M2048
5. VV2008/VV2018W
6. PV-M2058

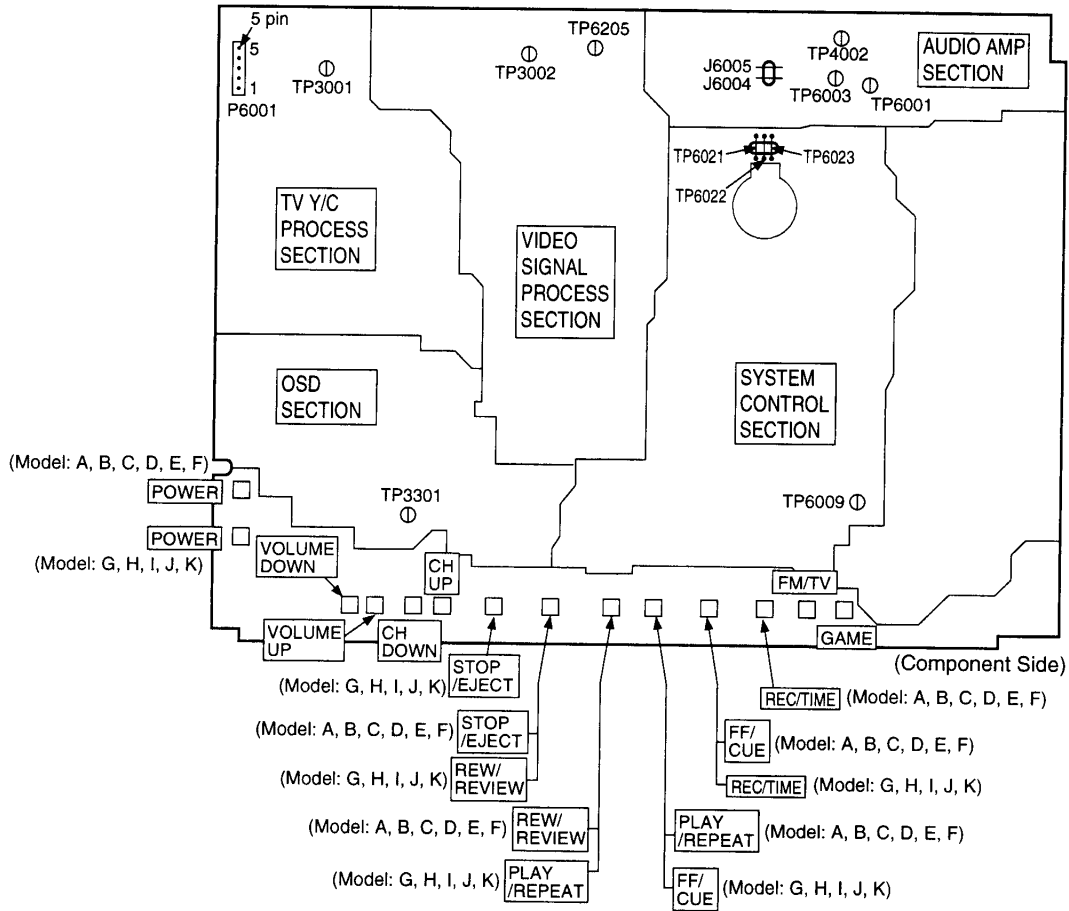
Weight and dimensions shown are approximate.  
Designs and specifications are subject to change without notice.

**Panasonic** / *Quasar*

©1998 Matsushita-Kotobuki Electronics Industries LTD.  
All rights reserved. Unauthorized copying and distribution is a violation of law.

# TEST POINTS AND CONTROL LOCATION

## Main C.B.A.



FUNCTION OF IMPORTANT TEST POINTS		
TP3001	Video Signal to Jack	
TP3002	REC/PB Video envelope signal	
TP4002	Normal Audio signal	
TP6001	Service Test Point (inhibit sensors)	
TP6003	defeat Auto tracking function (connect to +5V(TP6009))	
	PG Shifter Adjustment Mode (connect to GND)	
TP6009	+5V	
TP6205	Head SW.	
TP6021	Mode Select SW. Position	Mode Position (A)
TP6022		Mode Position (B)
TP6023		Mode Position (C)

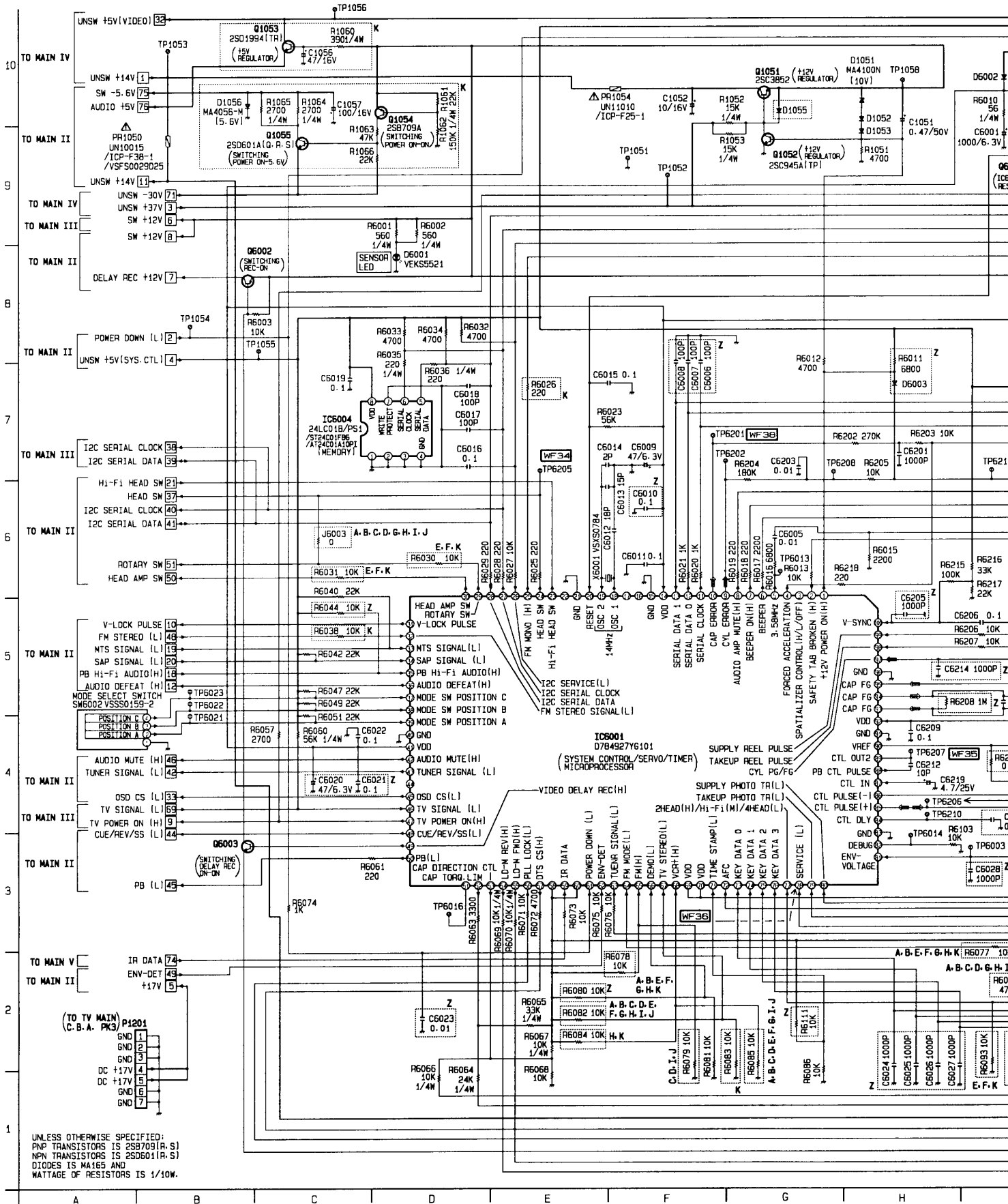
### Test Point Information

- Test Point with a Test Pin.
- ⊙ Test Point with a jumper wire across a hole in the P.C.B.
- Test Point with no Test Pin.

# SCHEMATIC DIAGRAMS


## MAIN I (POWER SUPPLY / SYSTEM CONTROL / SERVO) SCHEMATIC DIAGRAM

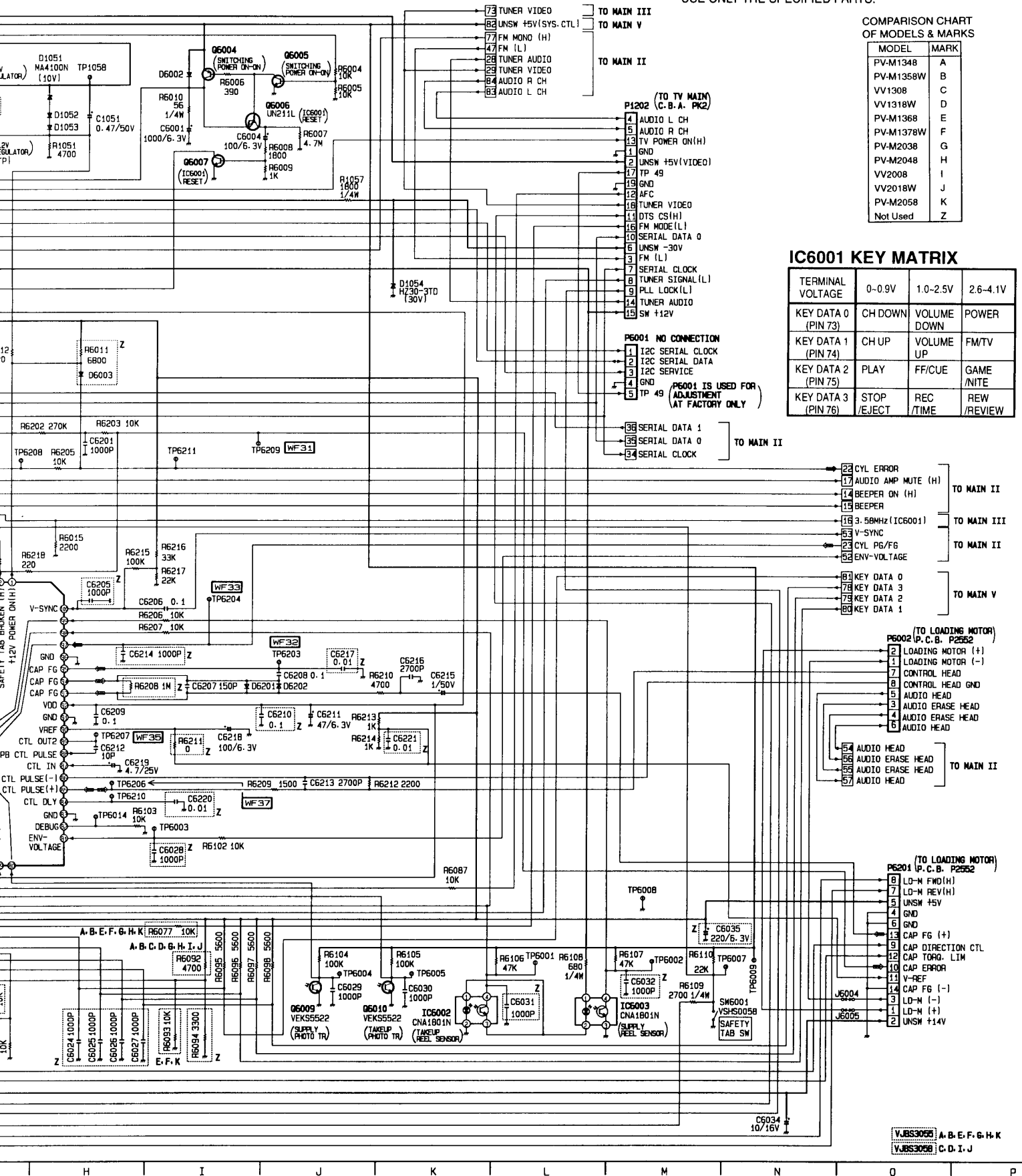
◀ CAPSTAN SERVO    ▶ CYLINDER SERVO



# IC DIAGRAM

NOTE:  
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION.

IMPORTANT SAFETY NOTICE:  
COMPONENTS IDENTIFIED BY THE SIGN  HAVE  
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.  
WHEN REPLACING ANY OF THESE COMPONENTS,  
USE ONLY THE SPECIFIED PARTS.



COMPARISON CHART  
OF MODELS & MARKS

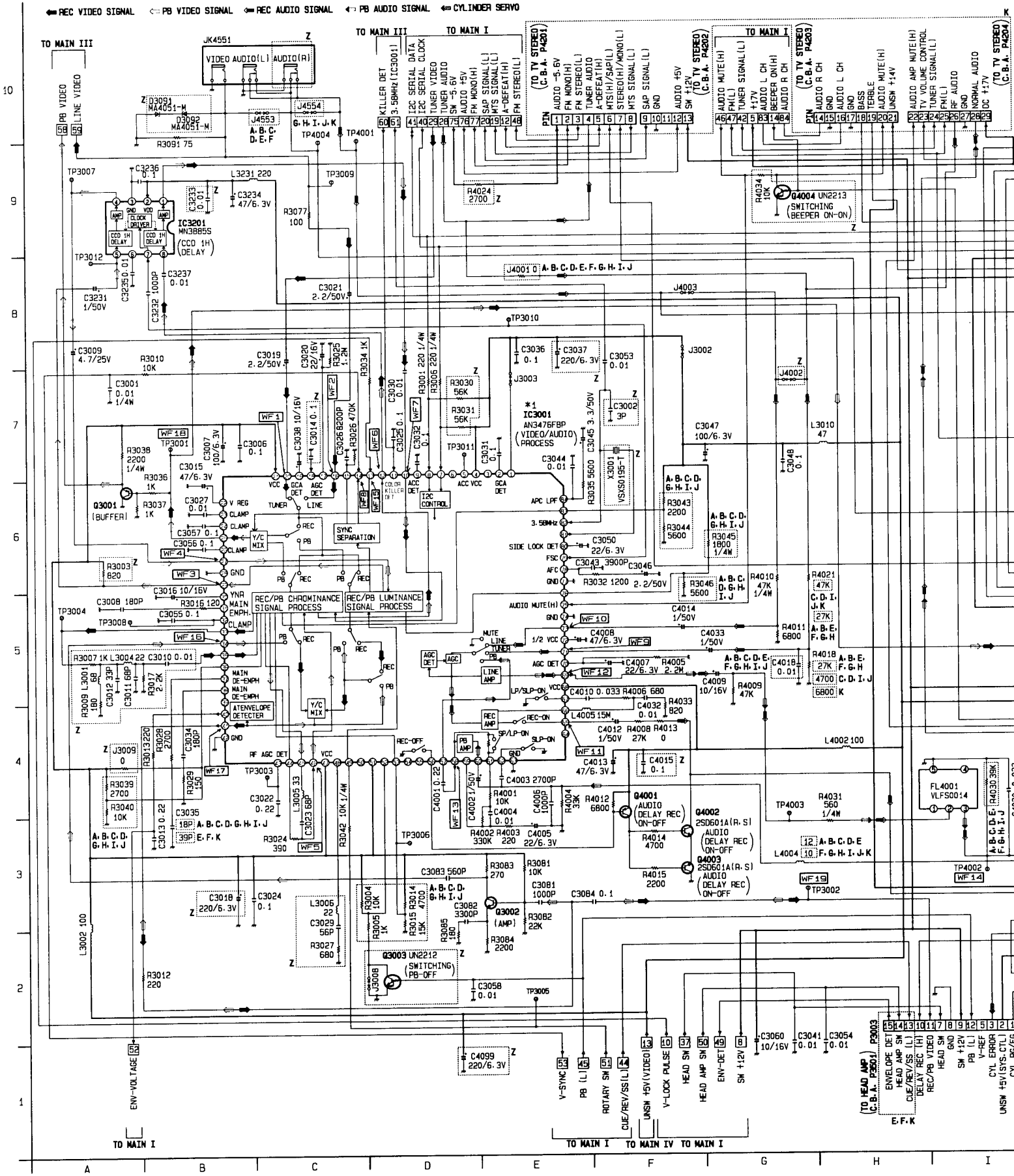
MODEL	MARK
PV-M1348	A
PV-M1358W	B
VV1308	C
VV1318W	D
PV-M1368	E
PV-M1378W	F
PV-M2038	G
PV-M2048	H
VV2008	I
VV2018W	J
PV-M2058	K
Not Used	Z

## IC6001 KEY MATRIX

TERMINAL VOLTAGE	0-0.9V	1.0-2.5V	2.6-4.1V
KEY DATA 0 (PIN 73)	CH DOWN	VOLUME DOWN	POWER
KEY DATA 1 (PIN 74)	CH UP	VOLUME UP	FM/TV
KEY DATA 2 (PIN 75)	PLAY	FF/CUE	GAME NITE
KEY DATA 3 (PIN 76)	STOP/EJECT	REC/TIME	REW/REVIEW

# MAIN II (SIGNAL PROCESS / OSD / AUDIO AMP) SCHEMATIC DIAGRAM

\* 1 NOTE: IC3001 DETAIL BLOCK DIAGRAM IS SHOWN




NOTE:

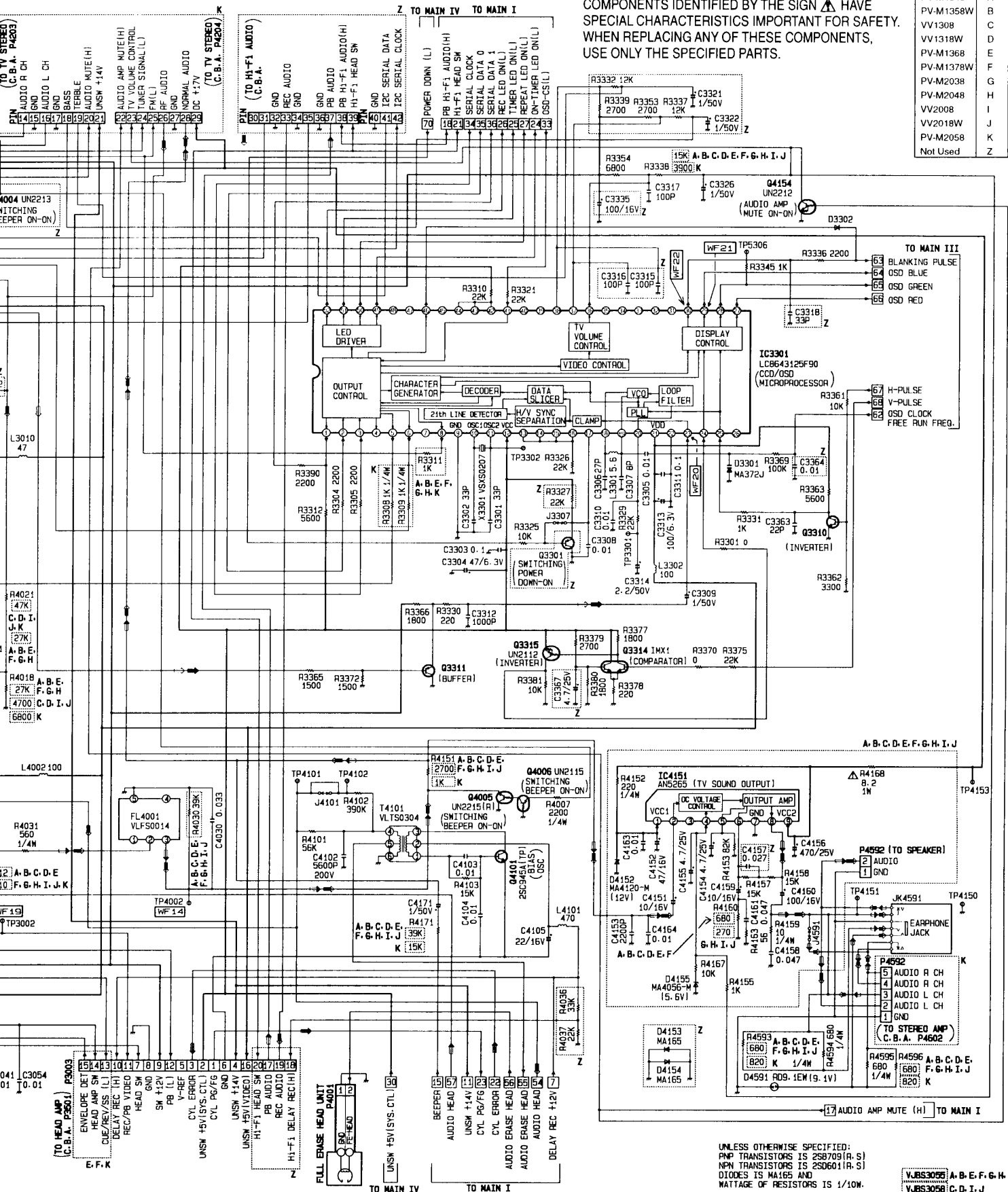
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-M1348	A
PV-M1358W	B
VV1308	C
VV1318W	D
PV-M1368	E
PV-M1378W	F
PV-M2038	G
PV-M2048	H
VV2008	I
VV2018W	J
PV-M2058	K
Not Used	Z

33001 DETAIL BLOCK DIAGRAM IS SHOWN IN "BLOCK DIAGRAM" SECTION.

IMPORTANT SAFETY NOTICE:  
COMPONENTS IDENTIFIED BY THE SIGN  HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

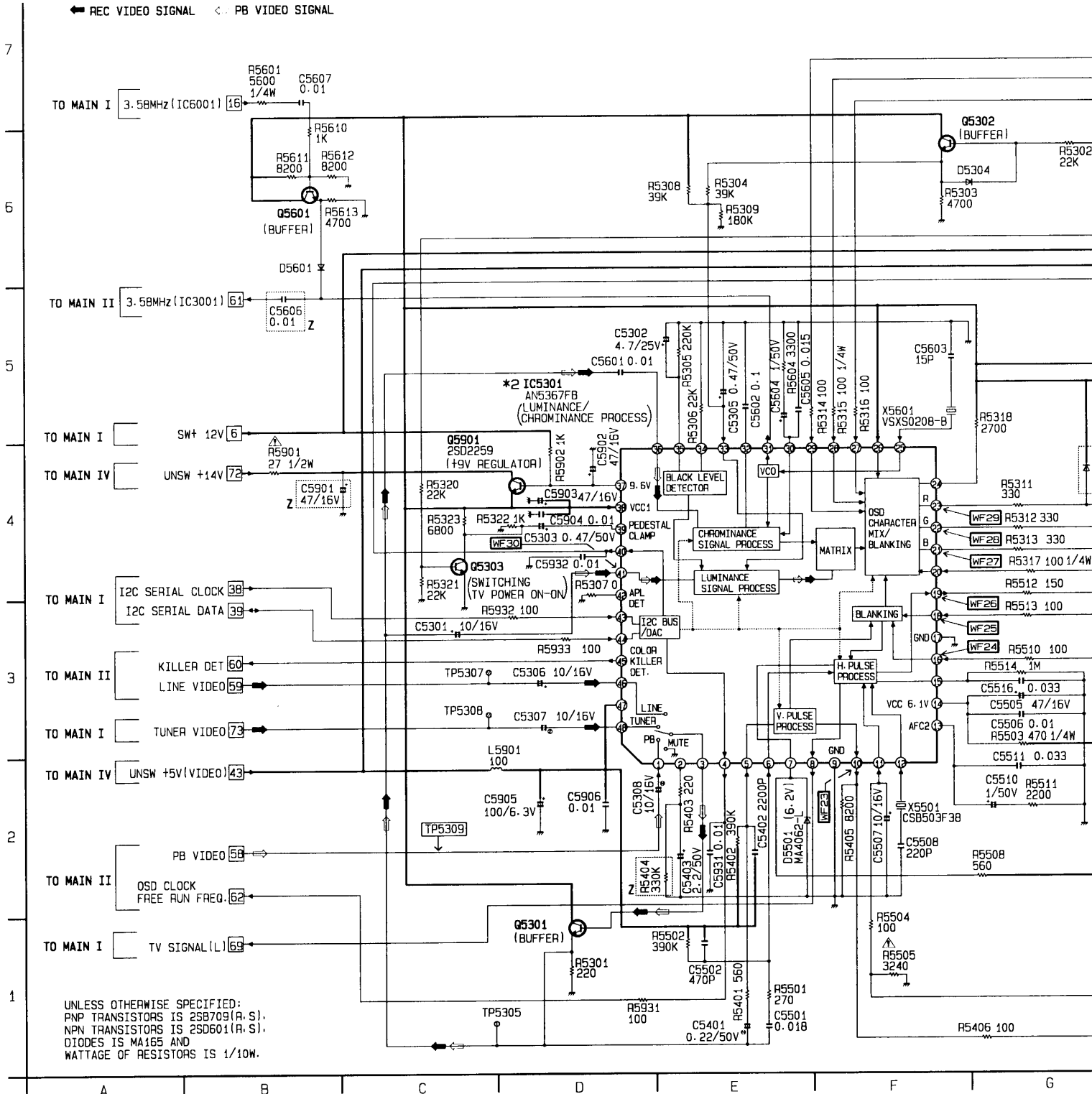


UNLESS OTHERWISE SPECIFIED:  
PNP TRANSISTORS IS 25B709(R.S)  
NPN TRANSISTORS IS 25D601(R.S)  
DIODES IS MA165 AND  
WATTAGE OF RESISTORS IS 1/10W.

VJBS3055 A. B. E. F. G. H. K  
VJBS3058 C. D. I. J


# MAIN III (TV Y/C PROCESS) SCHEMATIC DIAGRAM

\*2 NOTE: IC5301 DETAIL BLOCK DIAGRAM IS SHOWN IN "BLOCK DIAGRAM" SECTION.



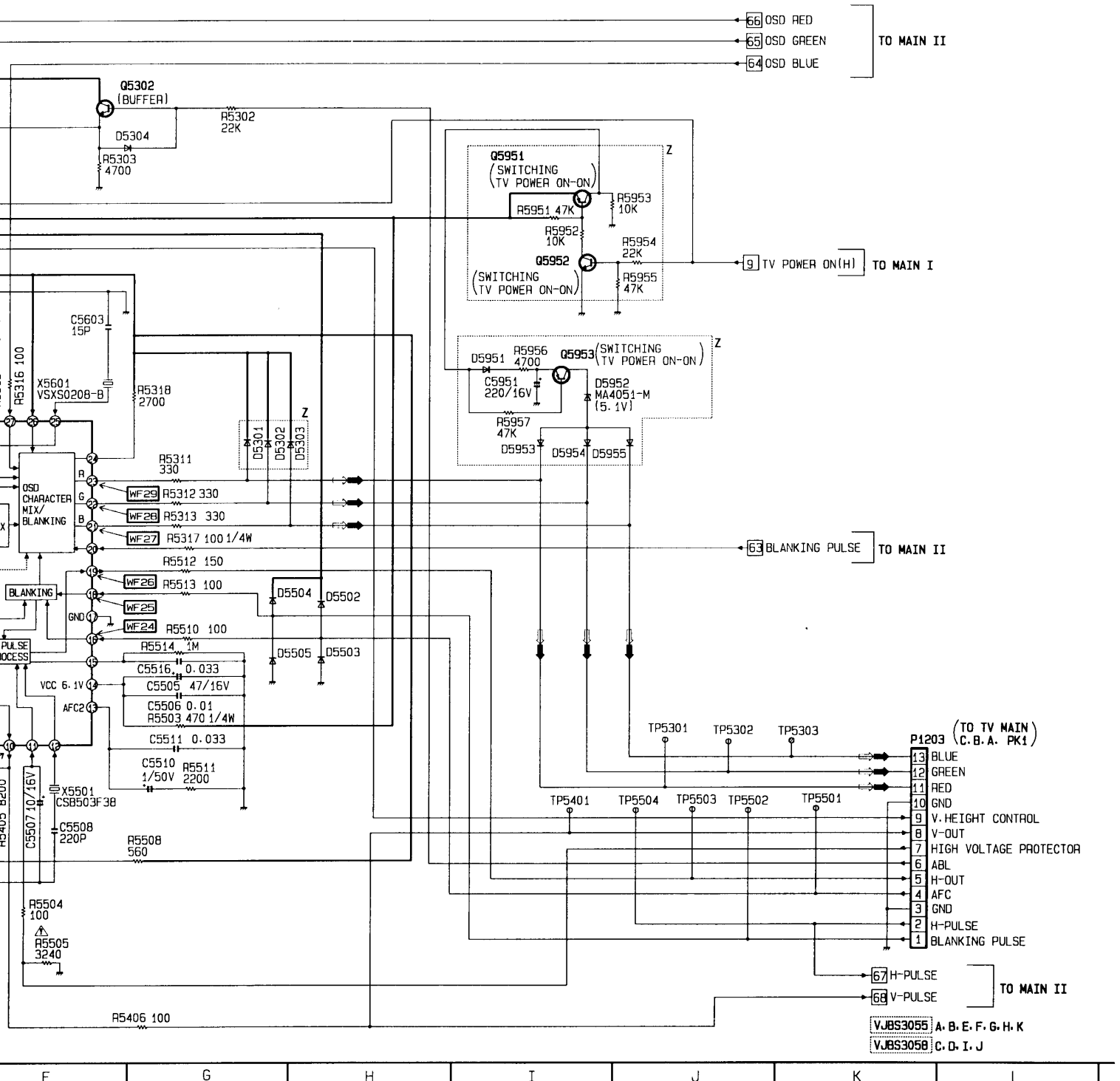
BLOCK DIAGRAM" SECTION.

NOTE:  
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION.

IMPORTANT SAFETY NOTICE:  
COMPONENTS IDENTIFIED BY THE SIGN  HAVE  
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.  
WHEN REPLACING ANY OF THESE COMPONENTS,  
USE ONLY THE SPECIFIED PARTS.

COMPARISON CHART  
OF MODELS & MARKS

MODEL	MARK
PV-M1348	A
PV-M1358W	B
VV1308	C
VV1318W	D
PV-M1368	E
PV-M1378W	F
PV-M2038	G
PV-M2048	H
VV2008	I
VV2018W	J
PV-M2058	K
Not Used	Z





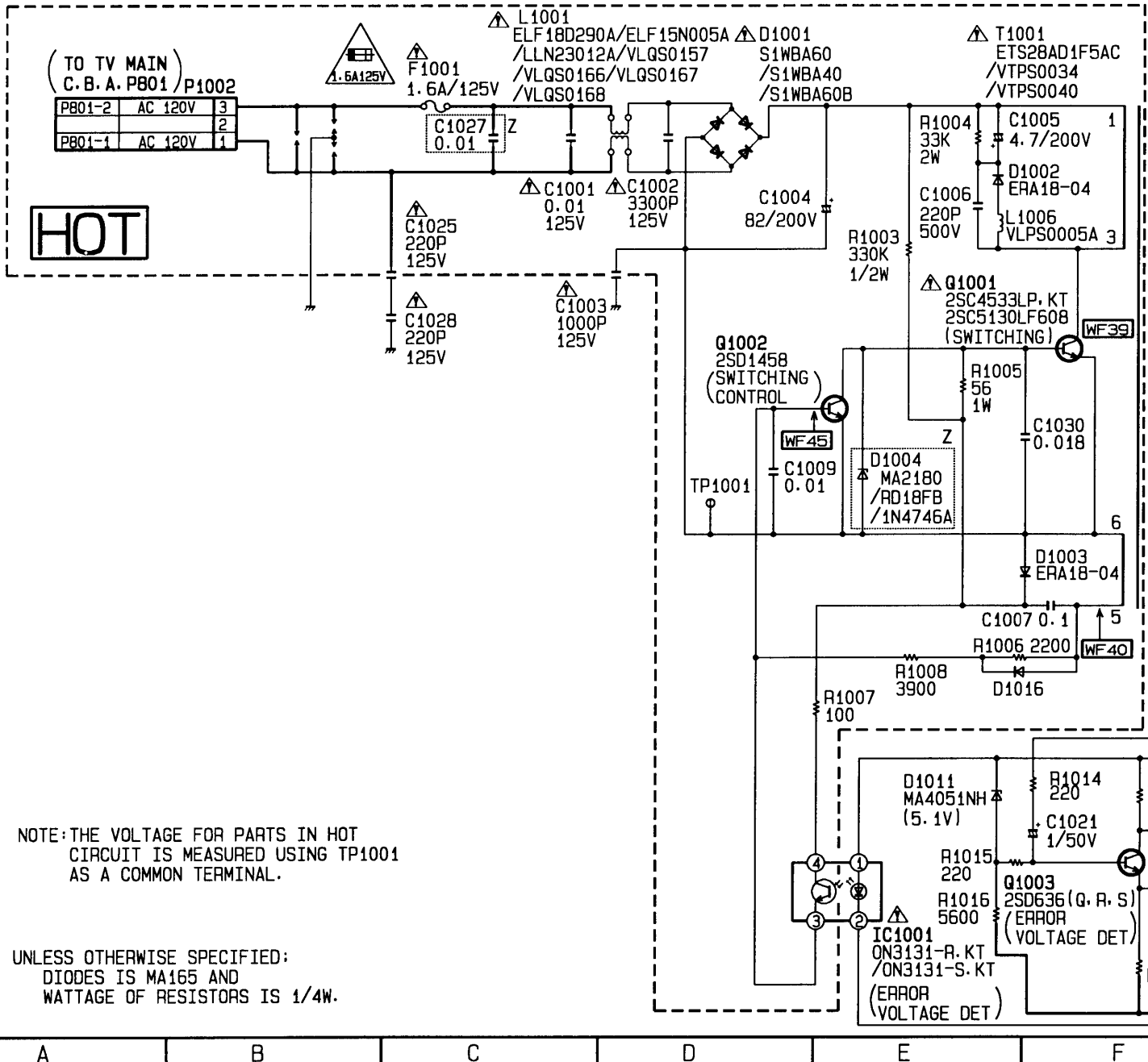
# MAIN IV (POWER SUPPLY) SCHEMATIC DIAGRAM

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,  
 REPLACE ONLY WITH THE SAME TYPE 1.6A 125V FUSE.  
 ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES  
 D'INCENDIE N'UTILISER QUE DES FUSIBLES DE MÊME  
 TYPE 1.6A 125V




NOTE:  
 FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT  
 REFER TO BEGINNING OF SCHEMATIC SECTION.

HOT CIRCUIT. BE CAREFUL AND USE AN ISOLATION TRANSFORMER WHEN SERVICING.



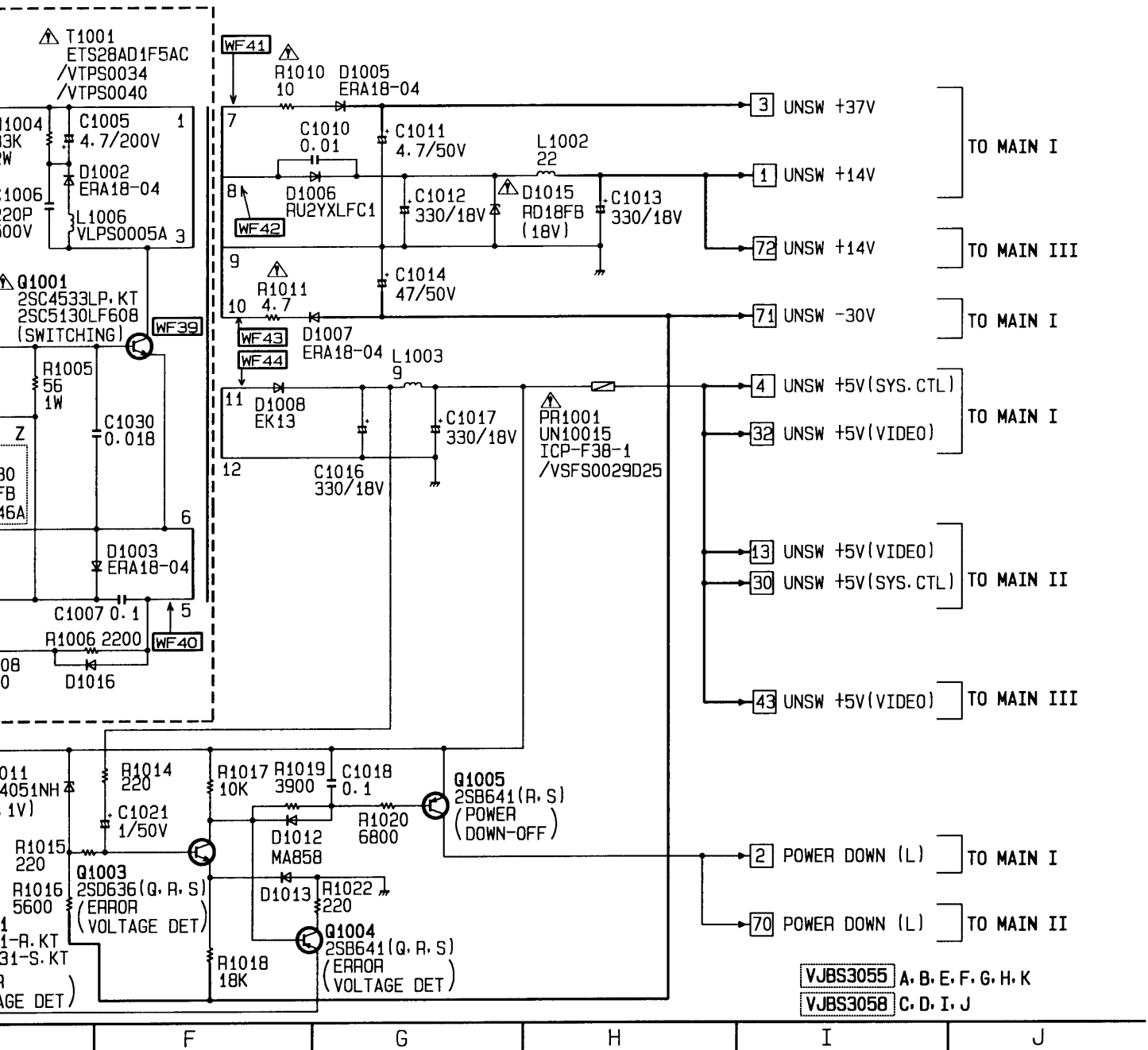
COMPARISON CHART  
OF MODELS & MARKS

MODEL	MARK
PV-M1348	A
PV-M1358W	B
VV1308	C
VV1318W	D
PV-M1368	E
PV-M1378W	F
PV-M2038	G
PV-M2048	H
VV2008	I
VV2018W	J
PV-M2058	K
Not Used	Z

IMPORTANT SAFETY NOTICE:  
COMPONENTS IDENTIFIED BY THE SIGN  HAVE  
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.  
WHEN REPLACING ANY OF THESE COMPONENTS,  
USE ONLY THE SPECIFIED PARTS.

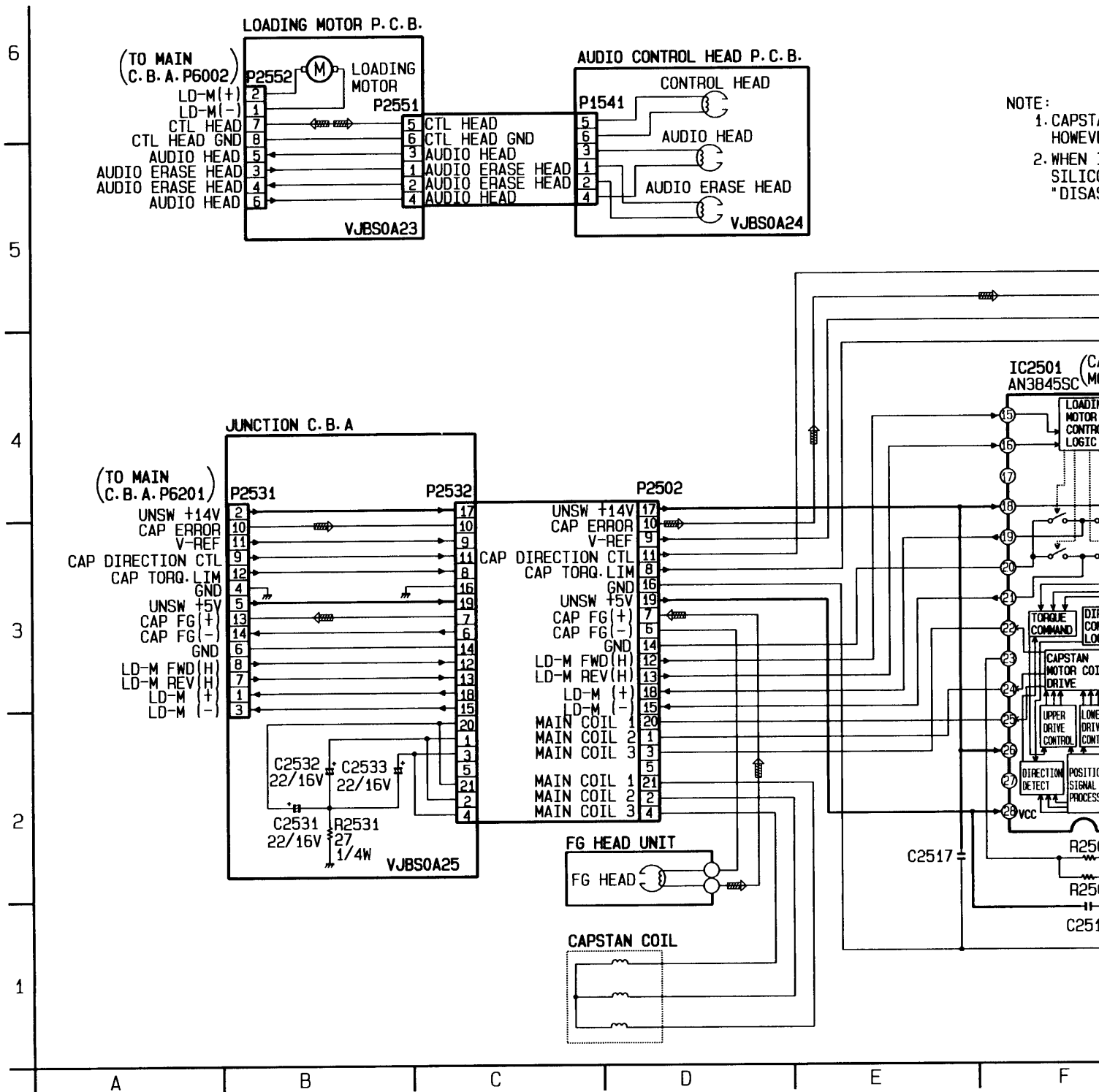
GRAM AND CIRCUIT BOARD LAYOUT NOTES,  
G OF SCHEMATIC SECTION.

ING.



# CAPSTAN STATOR / JUNCTION / LOADING MOTOR / AUDIO CONTROL HEAD SCHE

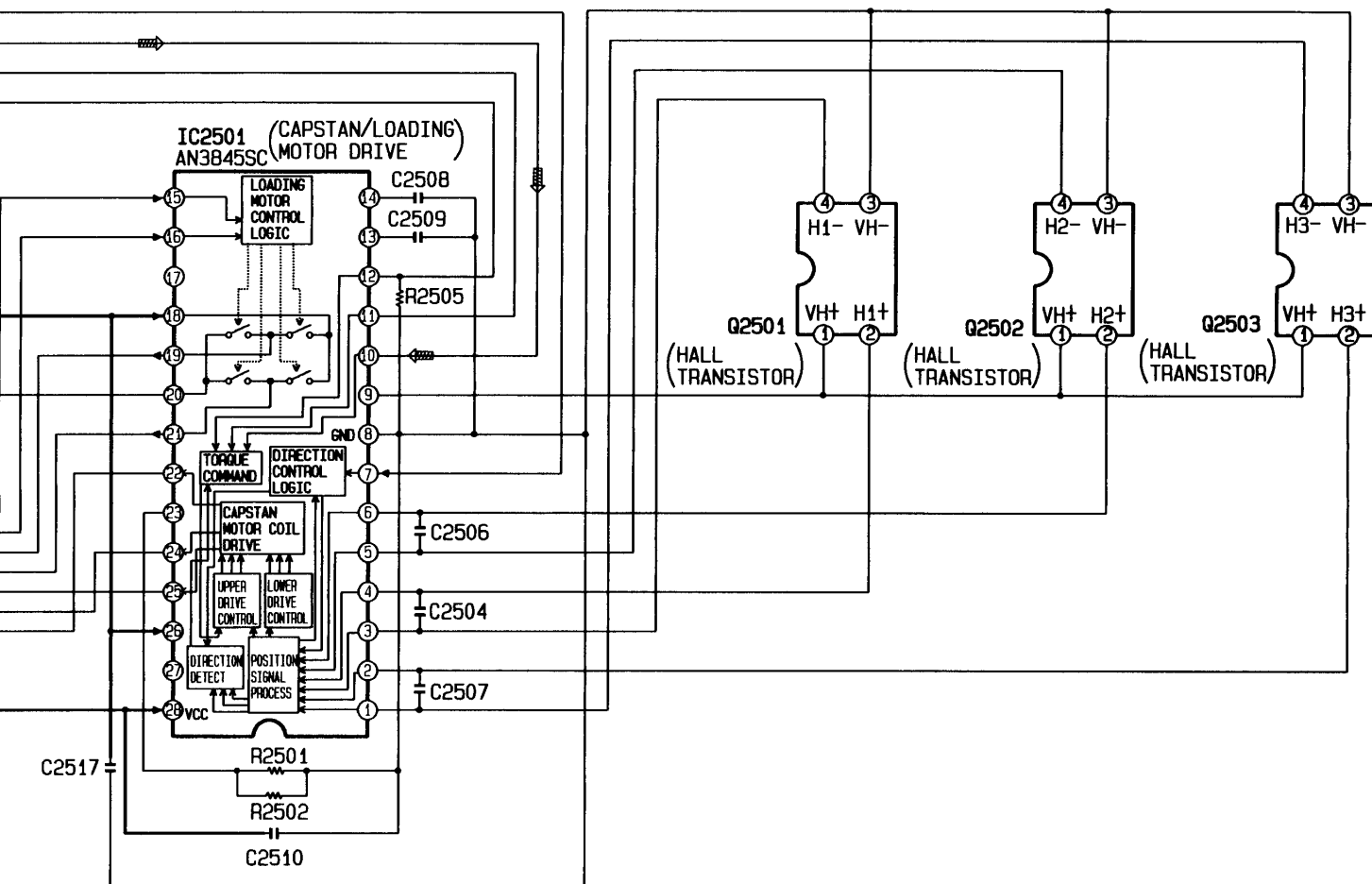
◀ CAPSTAN SERVO



# TROL HEAD SCHEMATIC DIAGRAM

NOTE:  
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION.

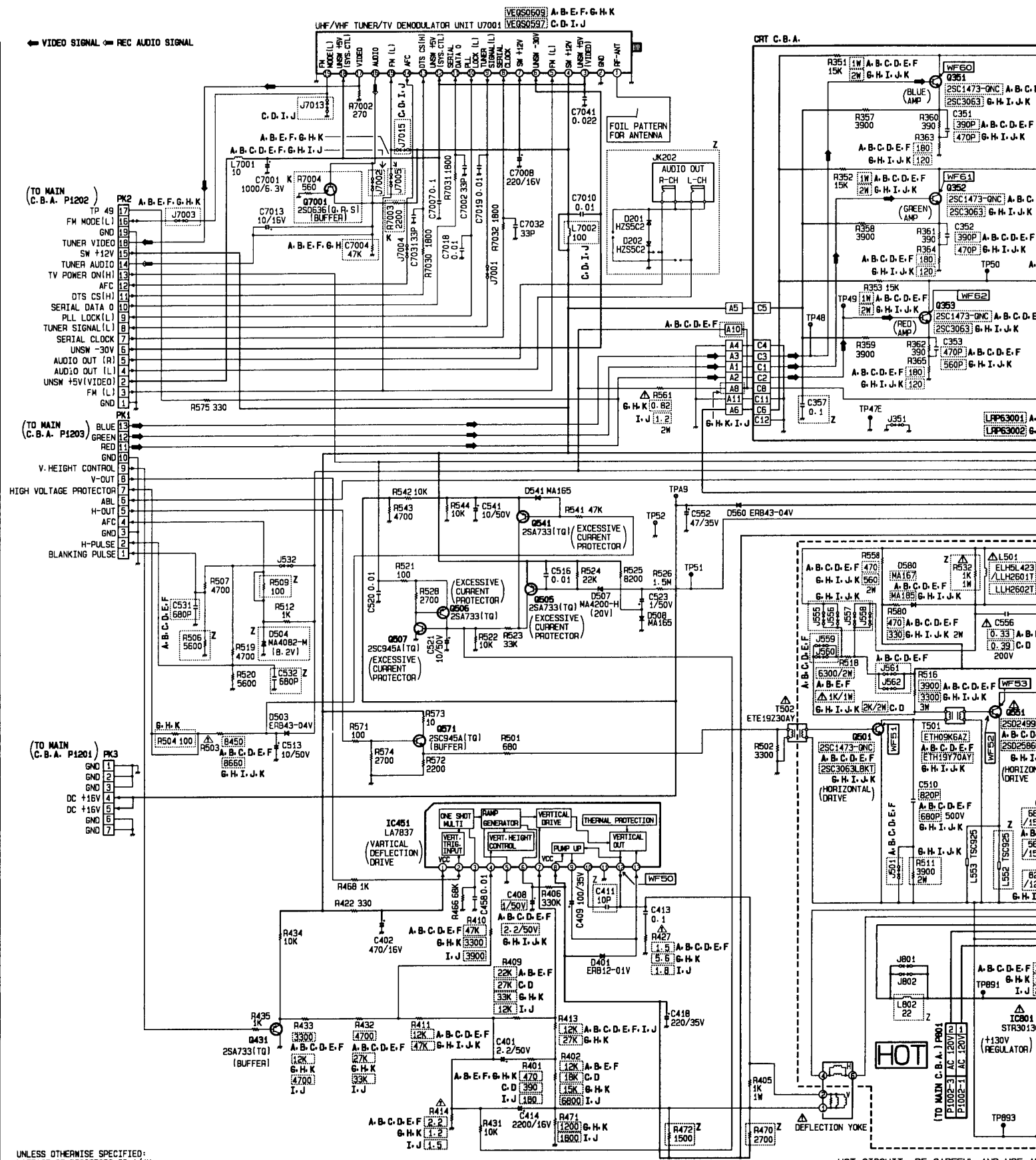
- NOTE:
1. CAPSTAN STATOR UNIT IS SUPPLIED AS A CAPSTAN STATOR KIT ONLY. HOWEVER, IC2501 (AN3845SC) IS AVAILABLE SEPARATELY AS A REPLACEMENT PART.
  2. WHEN INSTALLING THE IC2501 OR CAPSTAN STATOR UNIT, BE SURE TO APPLY SILICON GREASE (VFK1301). REFER TO "CAPSTAN STATOR UNIT" OF "DISASSEMBLY/ASSEMBLY PROCEDURES OF MECHANISM" SECTION.



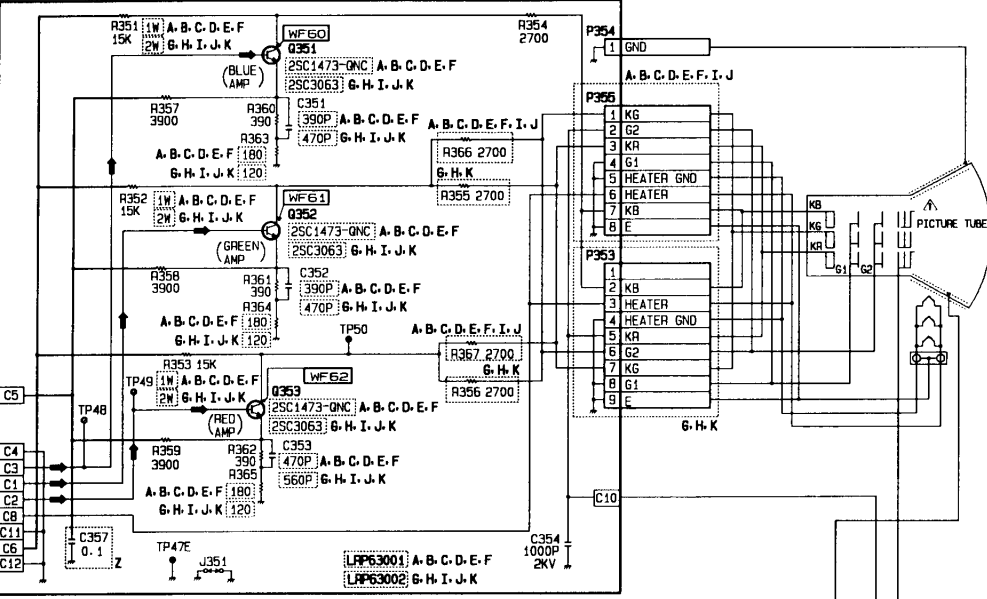
VJBS2006

E F G H I J

# TV MAIN / CRT SCHEMATIC DIAGRAM




CRT C.B.A.



NOTE:

FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

IMPORTANT SAFETY NOTICE:

COMPONENTS IDENTIFIED BY THE SIGN  HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,

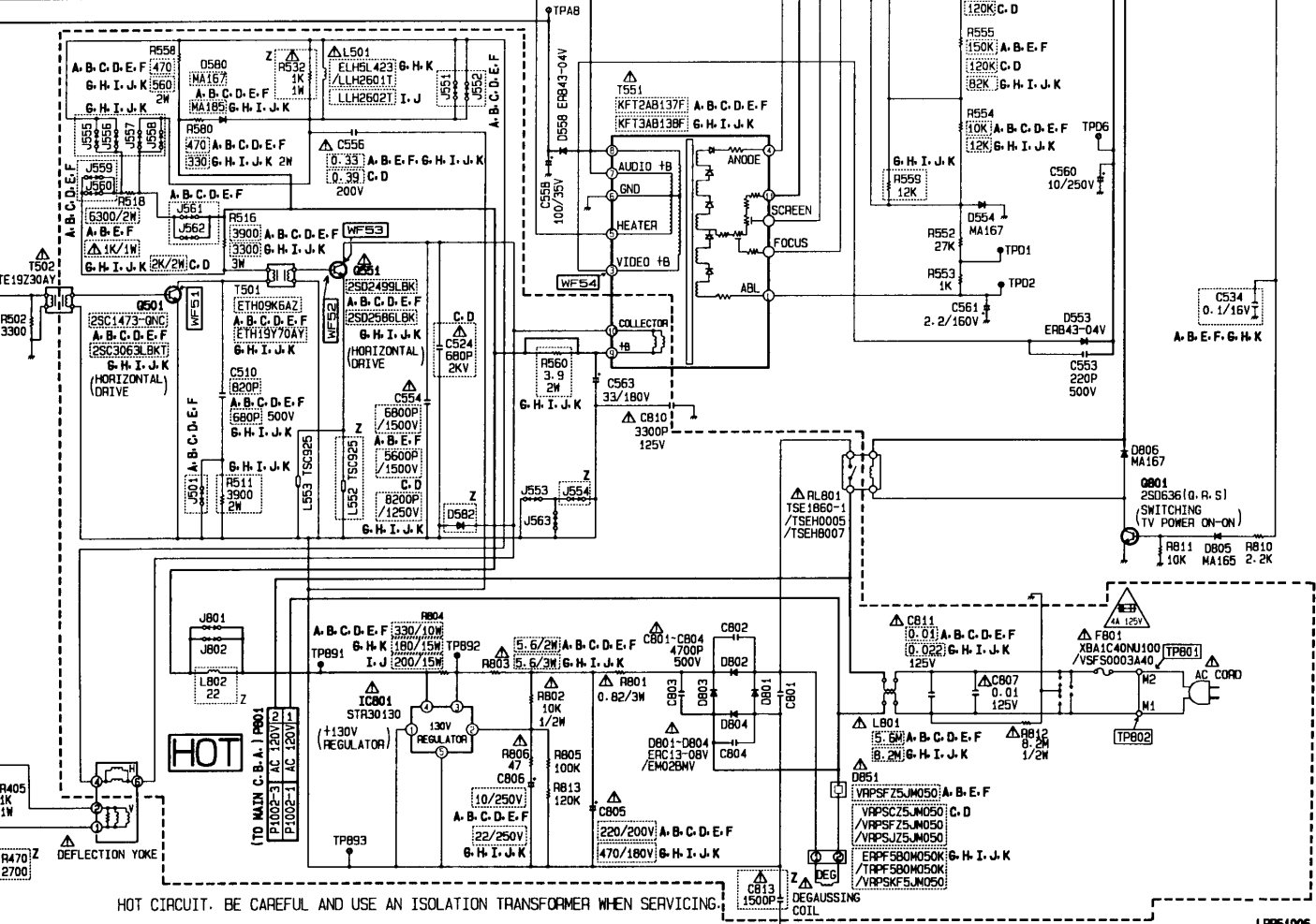
REPLACE ONLY WITH THE SAME TYPE 4A 125V FUSE. ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES D'INCENDIE N'UTILISER QUE DES FUSIBLE DE MEME TYPE 4A 125V



COMPARISON CHART OF MODELS & MARKS

MODEL	MARK	MODEL	MARK
PV-M1348	A	PV-M2038	H
PV-M1358W	B	PV-M2048	G
VV1308	C	VV2008	I
VV1318W	D	VV2018W	J
PV-M1368	E	PV-M2058	K
PV-M1378W	F	Not Used	Z

RB43-04V

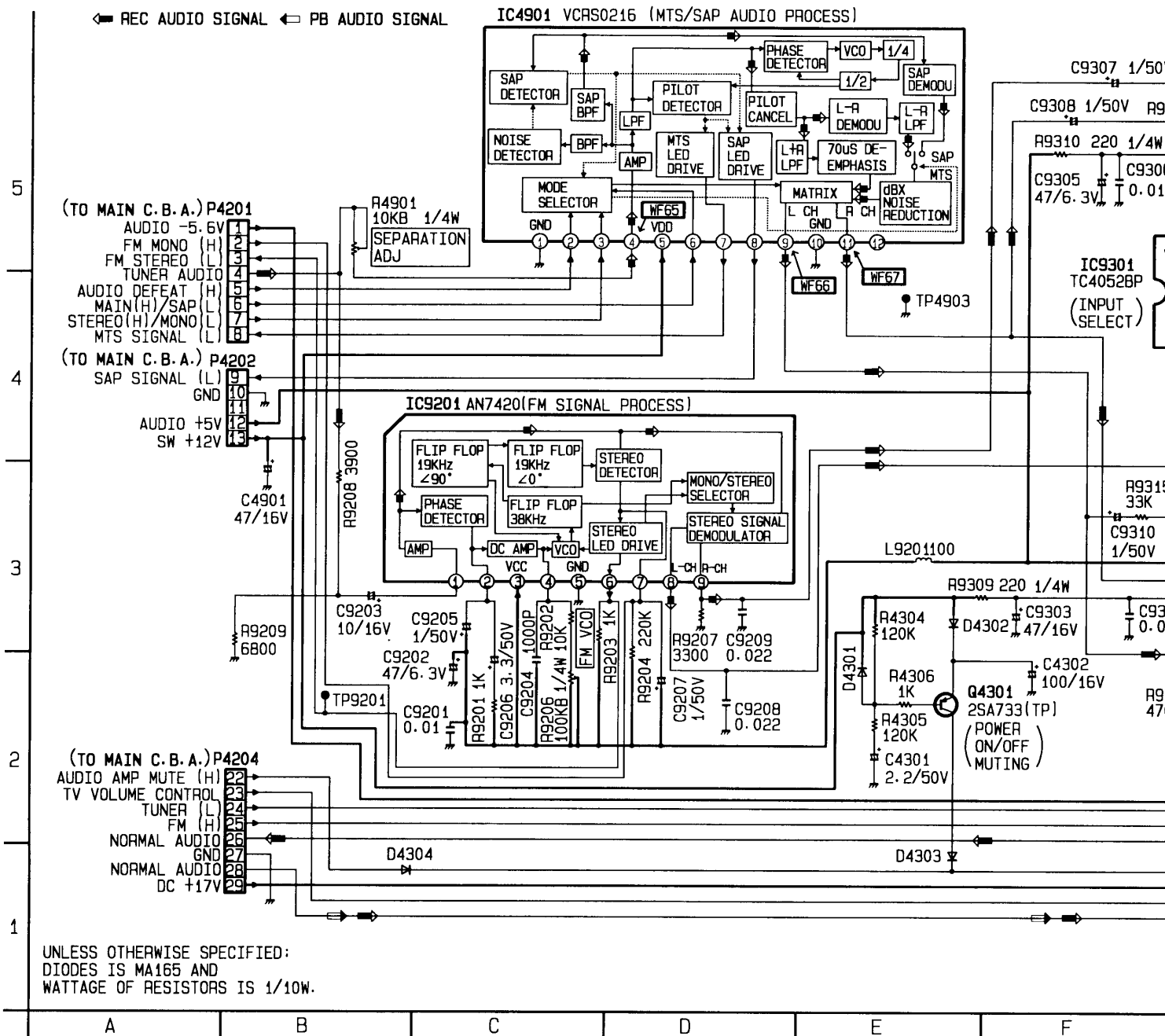


HOT CIRCUIT. BE CAREFUL AND USE AN ISOLATION TRANSFORMER WHEN SERVICING.

LFP61006

# TV STEREO SCHEMATIC DIAGRAM (K)

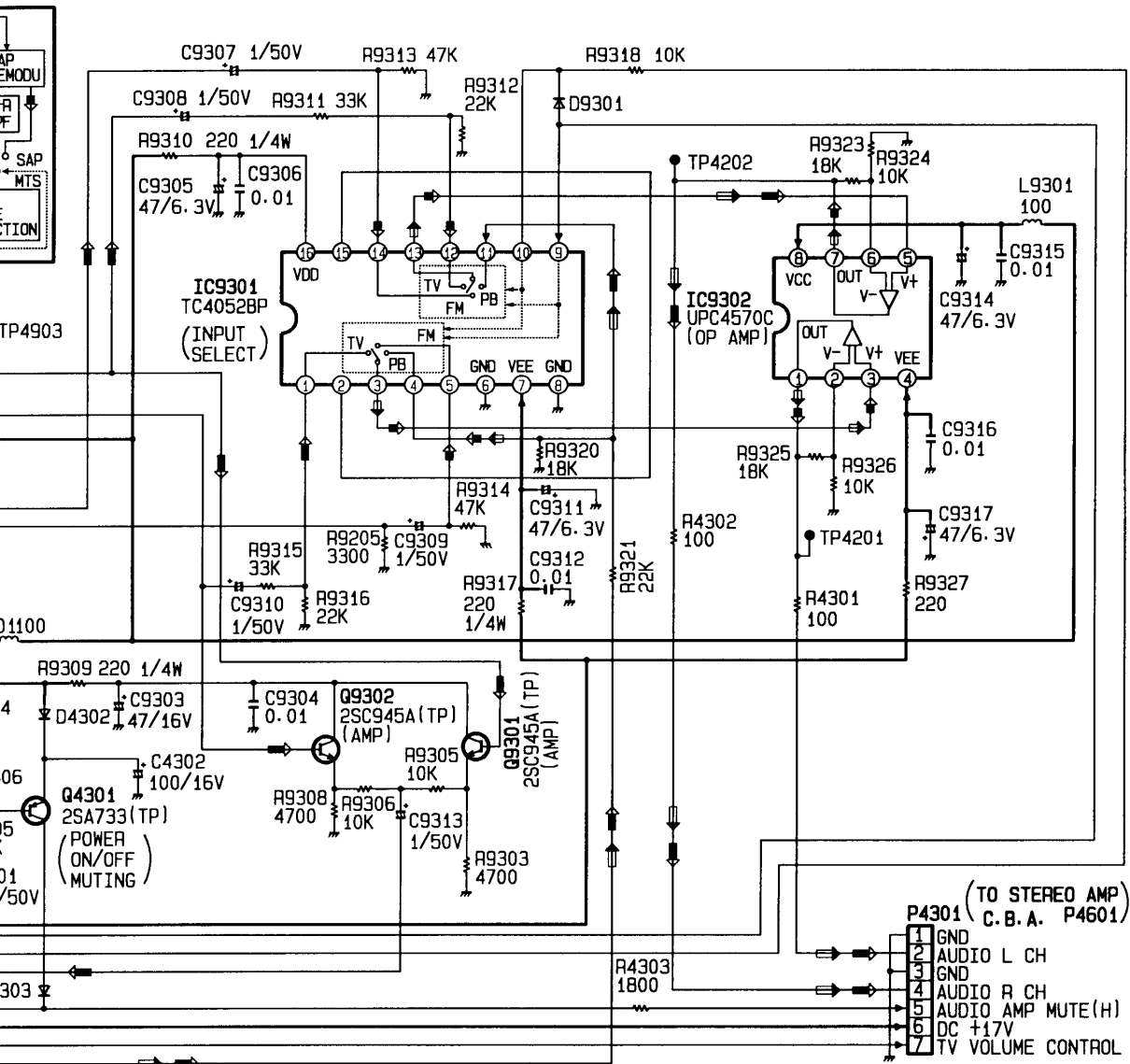
NOTE:  
FOR SCHEMATIC DIAGRAM AND CIRCUIT  
REFER TO BEGINNING OF SCHEMATIC SE



FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION.

COMPARISON CHART  
OF MODELS & MARKS

MODEL	MARK
PV-M1348	A
PV-M1358W	B
VV1308	C
VV1318W	D
PV-M1368	E
PV-M1378W	F
PV-M2038	G
PV-M2048	H
VV2008	I
VV2018W	J
PV-M2058	K
Not Used	Z



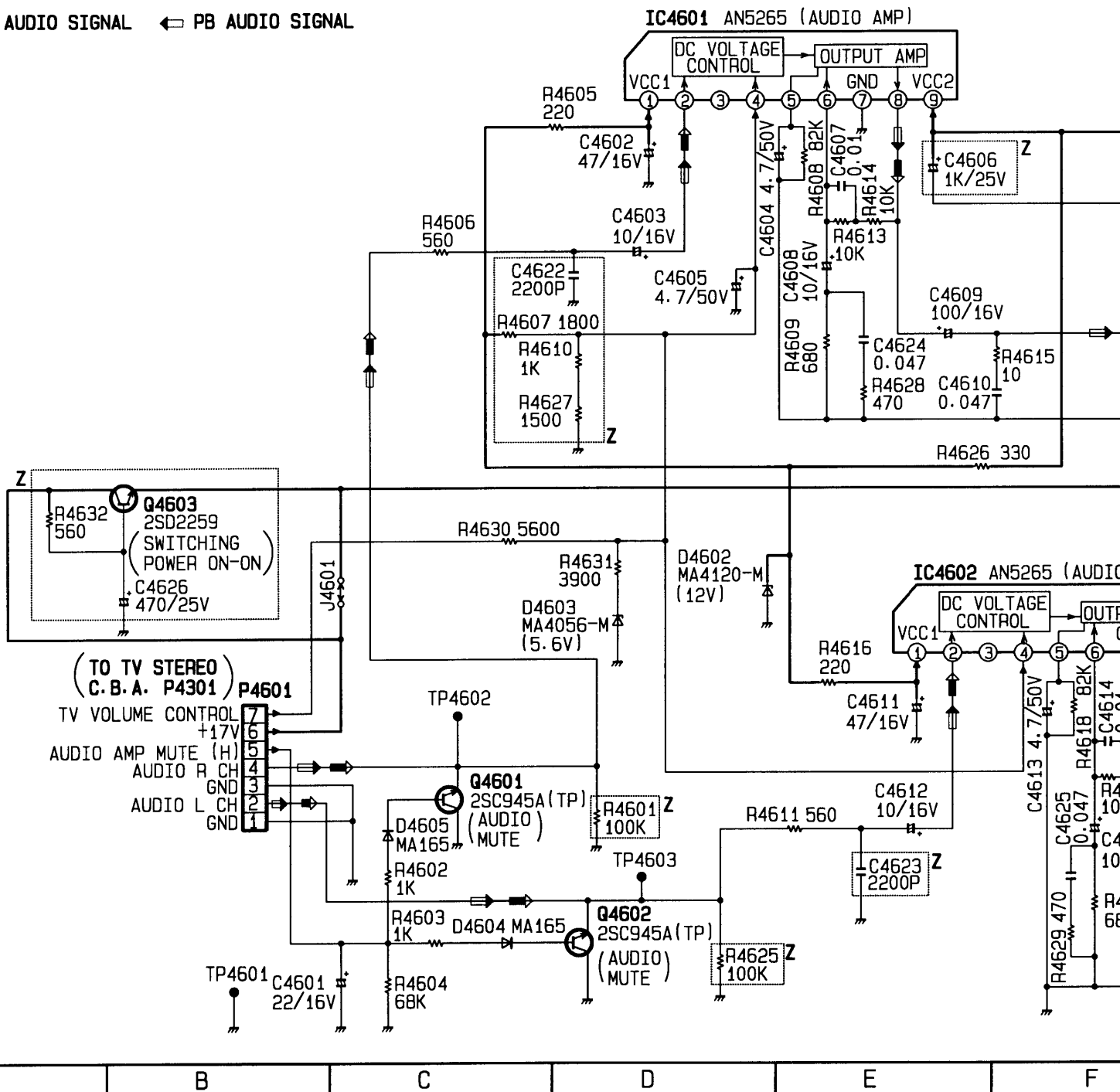
VJBS4022




# STEREO AMP SCHEMATIC DIAGRAM (K)

NOTE:  
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION.

← REC AUDIO SIGNAL   ← PB AUDIO SIGNAL



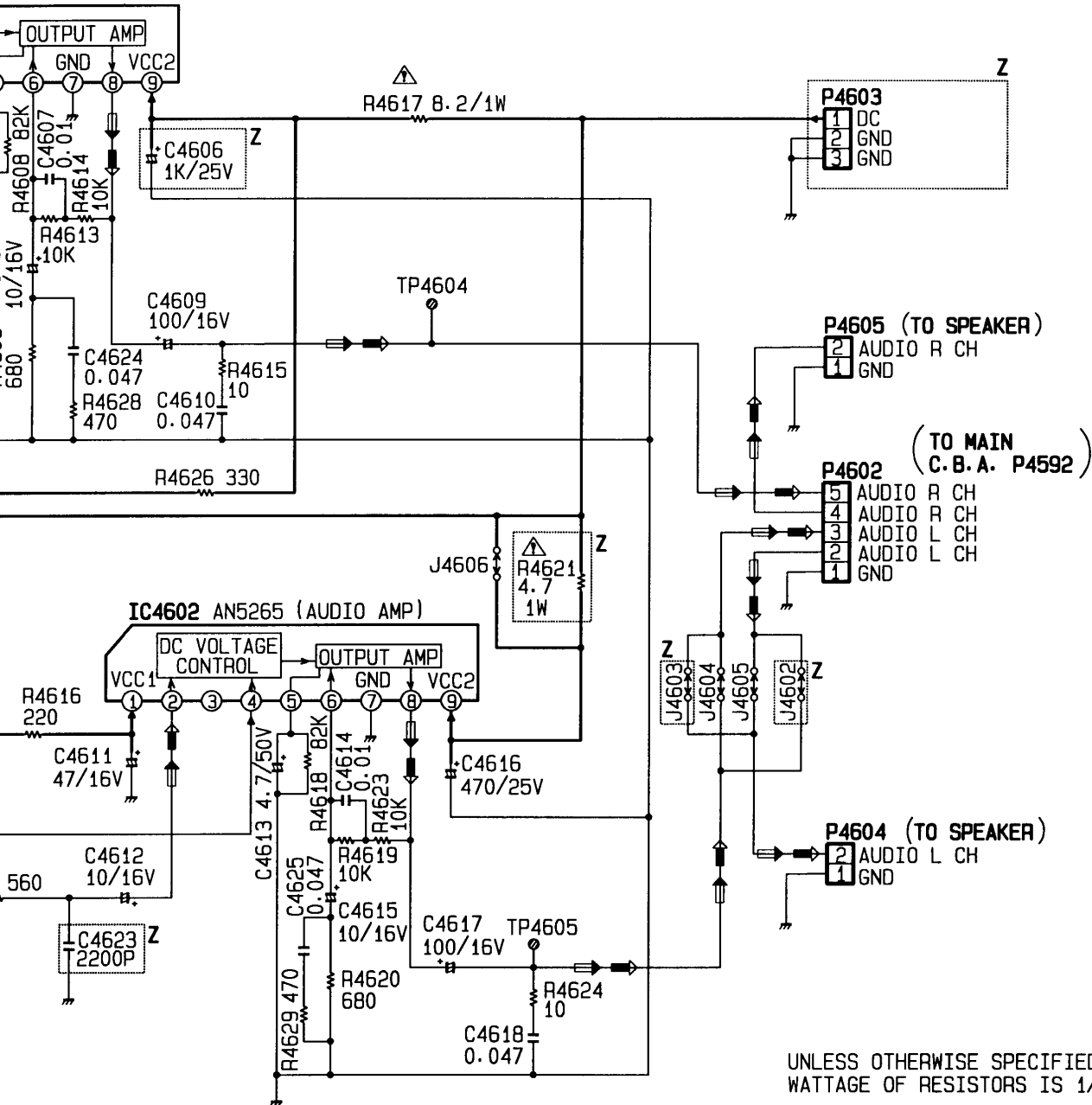
AND CIRCUIT BOARD LAYOUT NOTES,  
SCHEMATIC SECTION.

IMPORTANT SAFETY NOTICE:  
COMPONENTS IDENTIFIED BY THE SIGN  HAVE  
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.  
WHEN REPLACING ANY OF THESE COMPONENTS,  
USE ONLY THE SPECIFIED PARTS.

COMPARISON CHART  
OF MODELS & MARKS

MODEL	MARK
PV-M1348	A
PV-M1358W	B
VV1308	C
VV1318W	D
PV-M1368	E
PV-M1378W	F
PV-M2038	G
PV-M2048	H
VV2008	I
VV2018W	J
PV-M2058	K
Not Used	Z

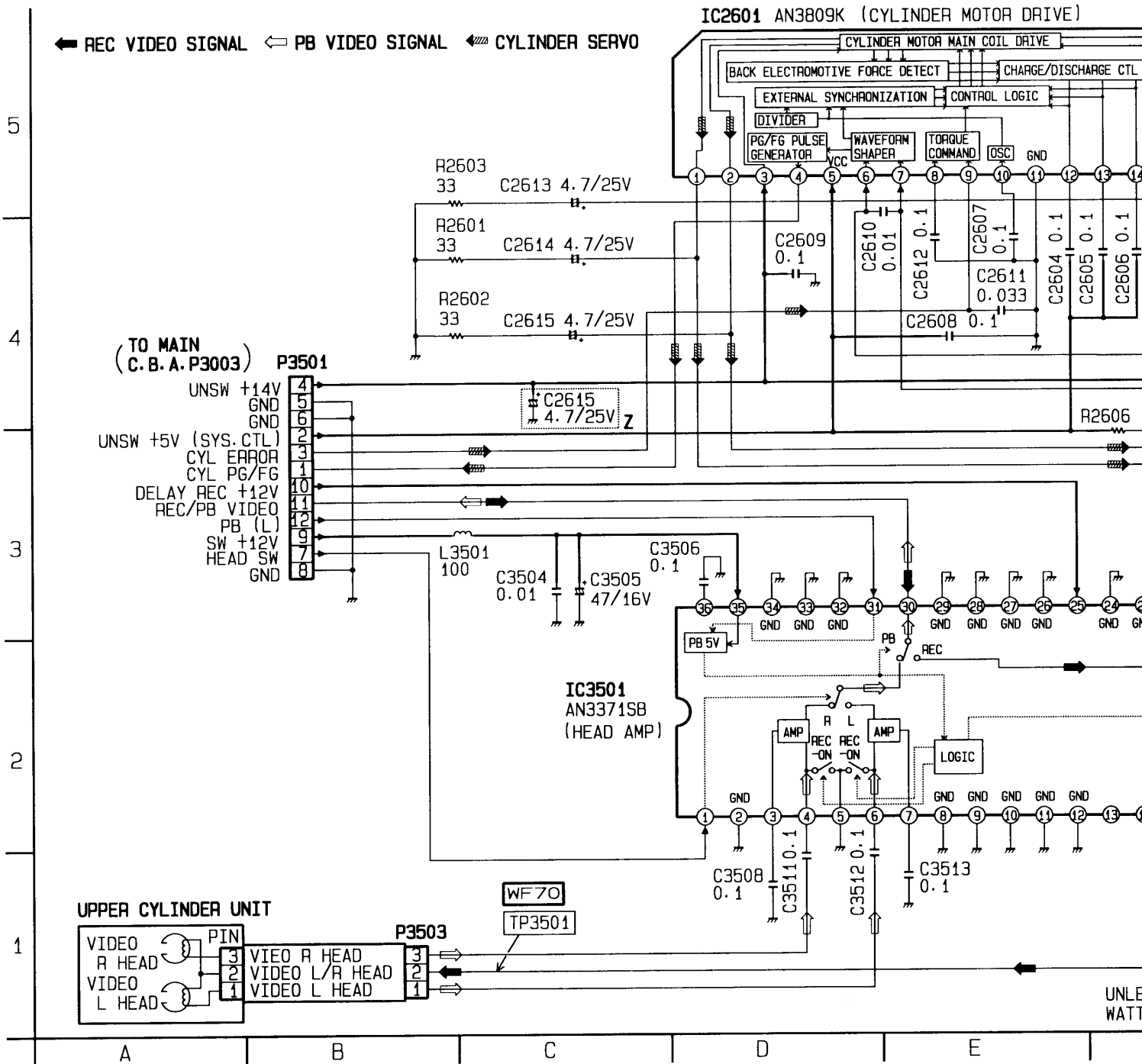
(AUDIO AMP)



UNLESS OTHERWISE SPECIFIED:  
WATTAGE OF RESISTORS IS 1/4W.

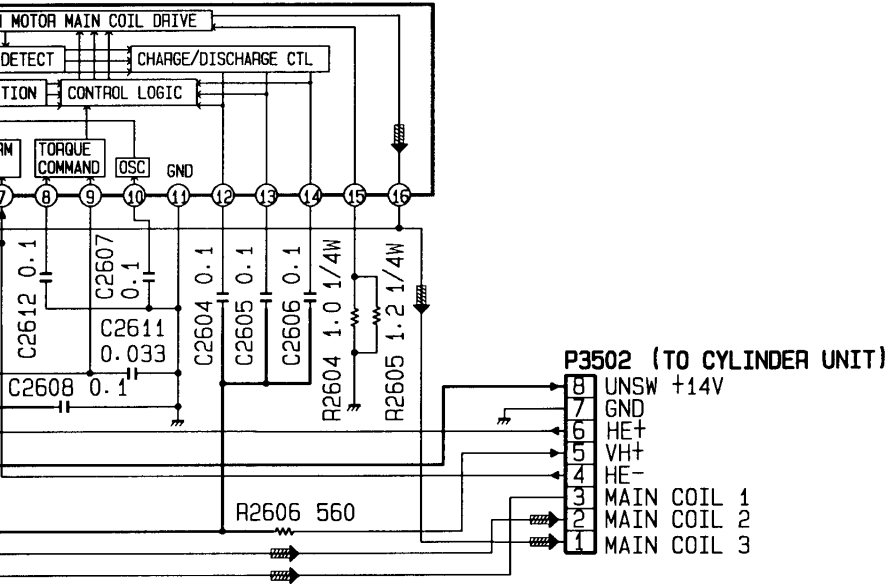
VJBS4014

# HEAD AMP SCHEMATIC DIAGRAM (A,B,C,D,G,H,I,J)



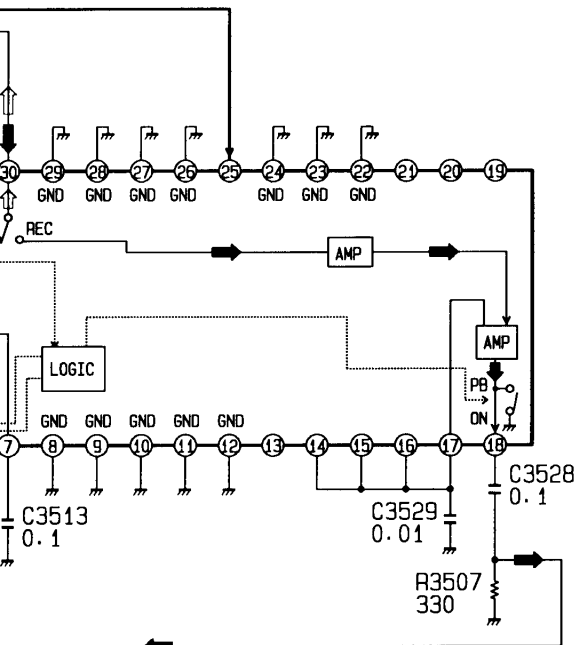
NOTE:  
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION.

(CYLINDER MOTOR DRIVE)



COMPARISON CHART  
OF MODELS & MARKS

MODEL	MARK
PV-M1348	A
PV-M1358W	B
VV1308	C
VV1318W	D
PV-M1368	E
PV-M1378W	F
PV-M2038	G
PV-M2048	H
VV2008	I
VV2018W	J
PV-M2058	K
Not Used	Z

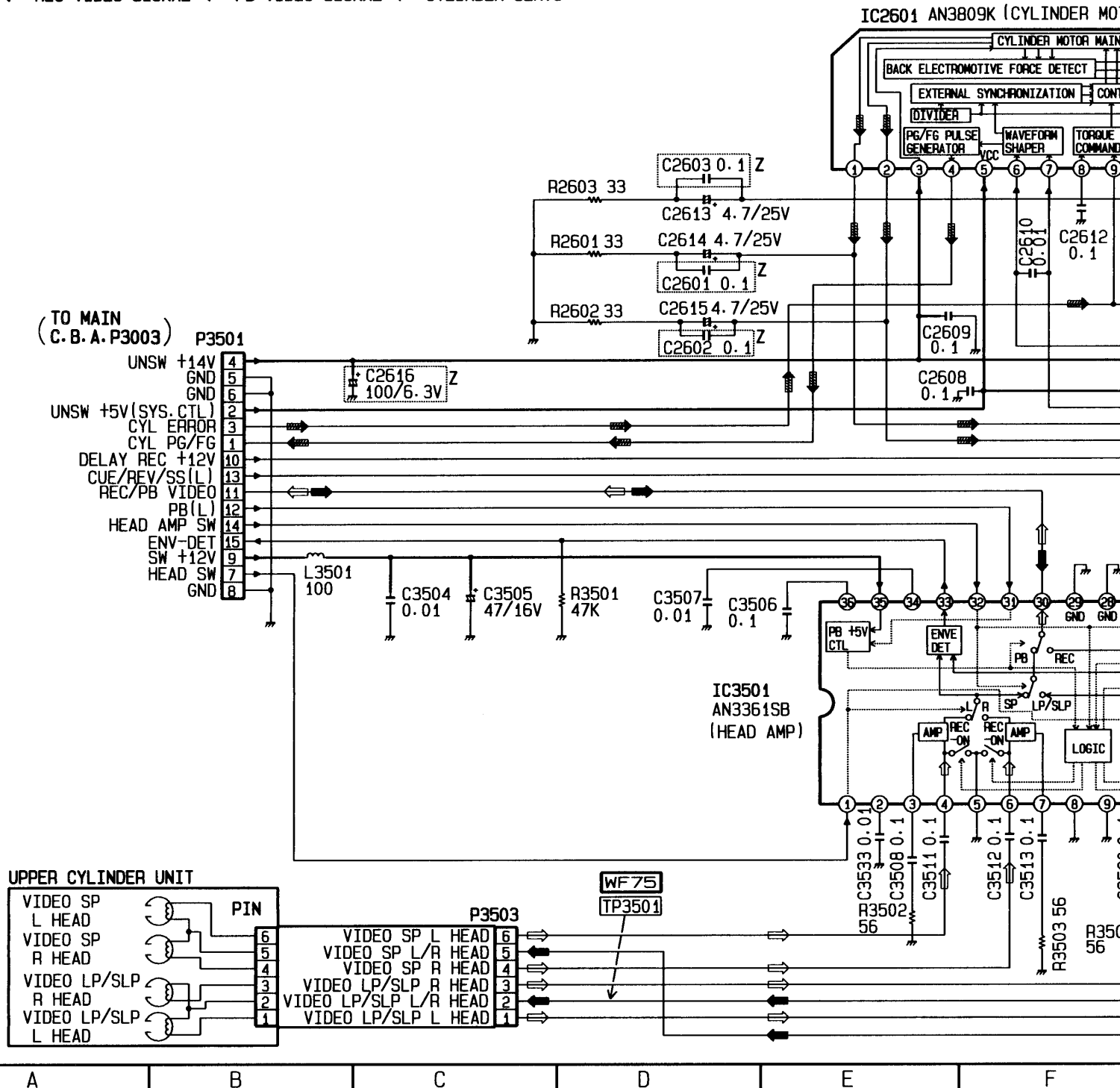


UNLESS OTHERWISE SPECIFIED:  
WATTAGE OF RESISTORS IS 1/10W. **VJBS5012**

E | F | G |

# HEAD AMP SCHEMATIC DIAGRAM (E,F,K)

← REC VIDEO SIGNAL ⇐ PB VIDEO SIGNAL ⇐ CYLINDER SERVO

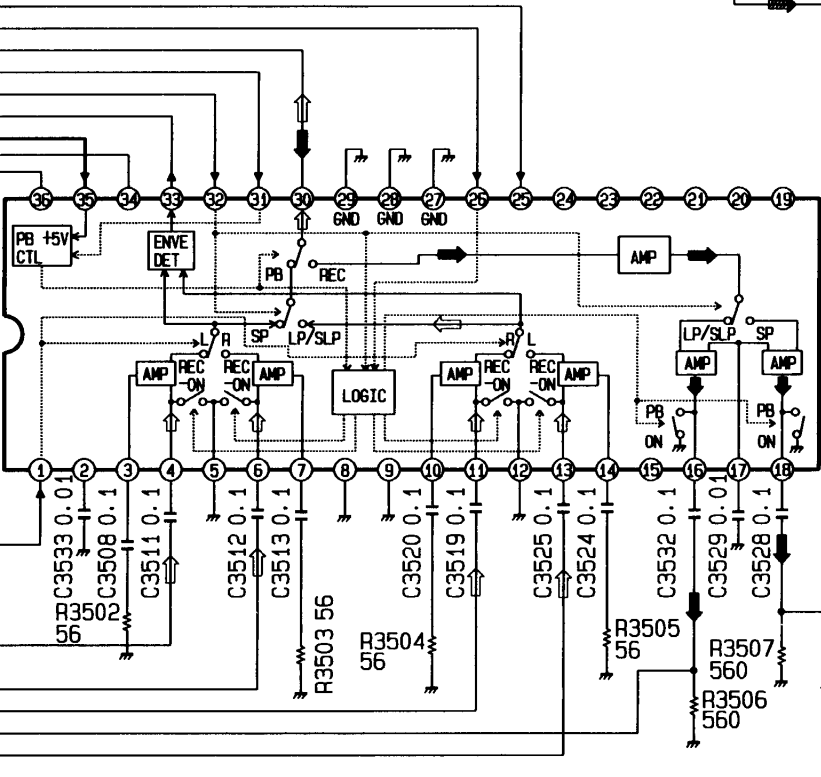
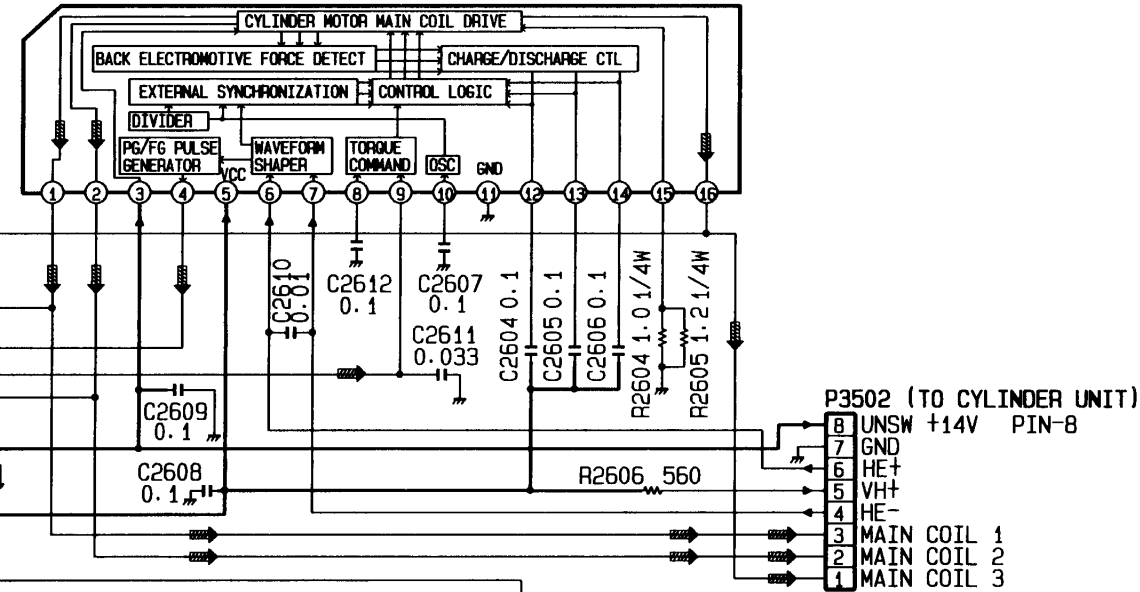


NOTE:  
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION.

COMPARISON CHART  
OF MODELS & MARKS

MODEL	MARK
PV-M1348	A
PV-M1358W	B
VV1308	C
VV1318W	D
PV-M1368	E
PV-M1378W	F
PV-M2038	G
PV-M2048	H
VV2008	I
VV2018W	J
PV-M2058	K
Not Used	Z

IC2601 AN3809K (CYLINDER MOTOR DRIVE)




UNLESS OTHERWISE SPECIFIED;  
WATTAGE OF RESISTORS IS 1/10W.

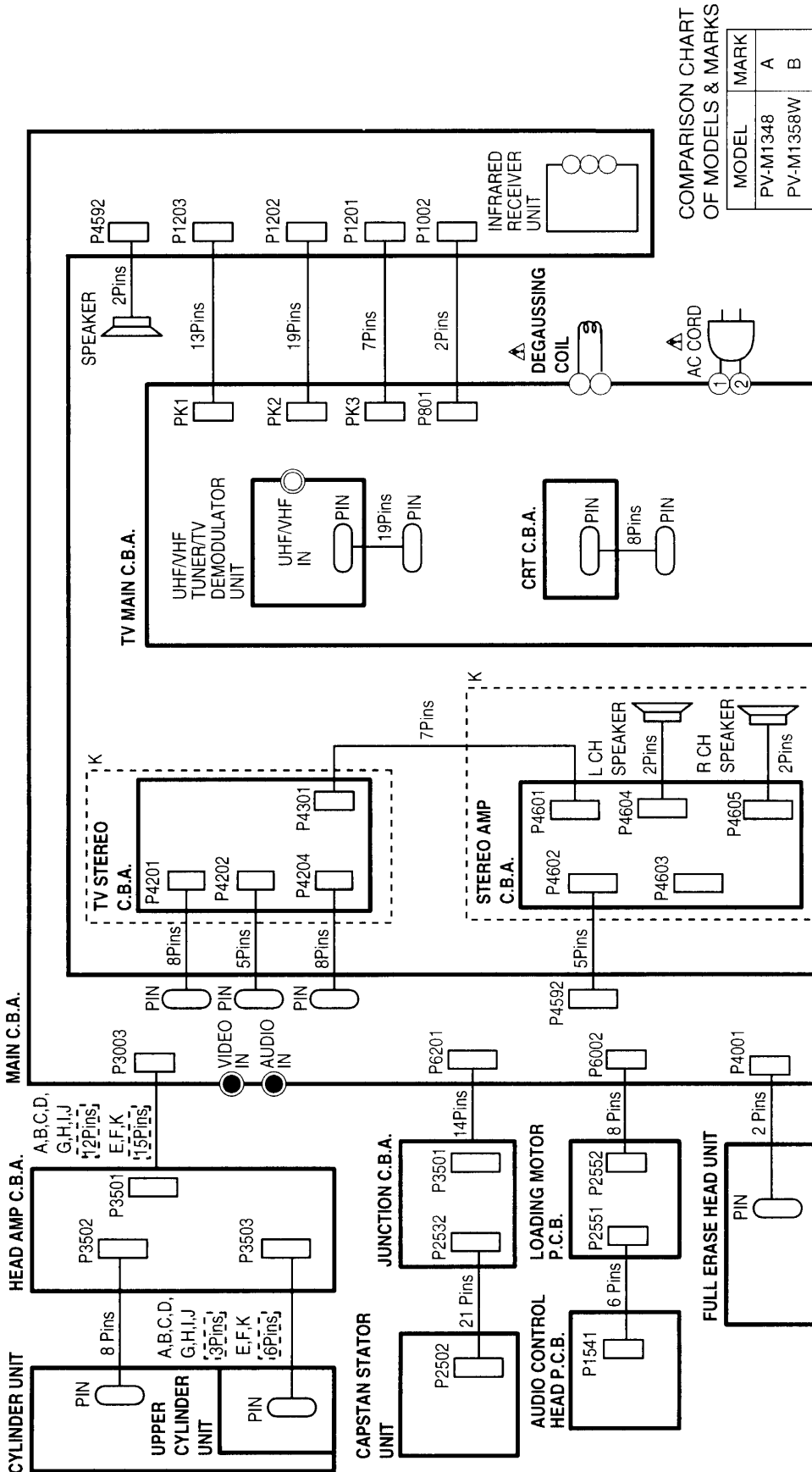
VJBS5011

E | F | G | H | I | H

# INTERCONNECTION SCHEMATIC DIAGRAM

NOTE:  
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION.

IMPORTANT SAFETY NOTICE:  
COMPONENTS IDENTIFIED BY THE SIGN  HAVE  
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.  
WHEN REPLACING ANY OF THESE COMPONENTS,  
USE ONLY THE SPECIFIED PARTS.



COMPARISON CHART  
OF MODELS & MARKS

MODEL	MARK
PV-M1348	A
PV-M1358W	B
VV1308	C
VV1318W	D
PV-M1368	E
PV-M1378W	F
PV-M2038	G
PV-M2048	H
VV2008	I
VV2018W	J
PV-M2058	K
Not Used	Z