ORDER NO. VRD9509M139

Service Manual

General Description
Adjustment Procedures
Block/Schematic Diagrams
Exploded Views/Parts List

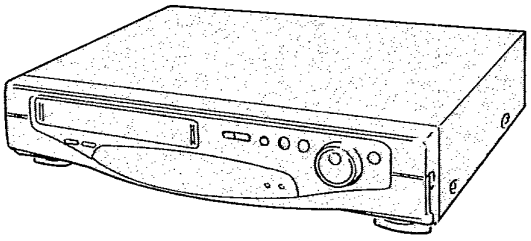
Video Cassette Recorder

Panasonic VHS PAL

Hi-Fi HQ

NV-HD650$^{B}_{EC}$

K-MECHANISM



SPECIFICATIONS

ITEM	SPECIFICATION		ITEM	SPECIFICATION
POWER	SOURCE: 220−240 V AC 50/60 Hz		AUDIO	HEAD: 1 Stationary head (Normal-mono only) 2 channels (Hi-Fi Sound-Stereo)
	CONSUMPTION: 20 watts			INPUT: EURO AV (AV1, AV2) Connector (21 pin×2) More than −6 dBV (500 mV), 10 kΩ AUDIO IN (AV3) Connector (Phono type) More than −10 dBV (316 mV), 47 kΩ MICROPHONE JACK −70 dBV
RECORDING SYSTEM	2 rotary heads, helical scanning system			OUTPUT: AUDIO OUT Connector (Phono type) −8 dBV (400 mV), Less than 1 kΩ EURO AV (AV1, AV2) Connector (21 pin×2) −6 dBV (500 mV), Less than 1 kΩ
	PAL		TAPE SPEED	SP: 23.39 mm/s LP: 11.695 mm/s Record/Playback Time: SP: 4 hours with 240 min. type tape LP: 8 hours with 240 min. type tape FF/REW Time: 2.5 min. with 180 min. type tape
TV TUNER SYSTEM	NV-HD650B	UHF: CH21−CH69 (PAL I) 75Ω terminated	OPERATING TEMPERATURE	5°C−40°C
	NV-HD650EC	VHF I: CHE2∼CHS3 VHF II: CHM1−CHM9 VHF III: CHM10−CHU2 VHF H: CHU3−CHS41 (PAL/SECAM B) UHF: CH21−CH69 (PAL/SECAM G) 75Ω terminated	OPERATING HUMIDITY	35 %−80 %
RF OUT SYSTEM	NV-HD650B	UHF: CH 36±6CH (PAL I) 73±3 dBμ, 75Ω terminated	DIMENSIONS	430(W)×91(H)×312(D) mm
	NV-HD650EC	UHF: CH 36±6CH (PAL/SECAM G) 70^{+2}_{-3} dBμ, 75Ω terminated	WEIGHT	4.8 kg
VIDEO	HEADS: 4 rotary heads 1 pair for recording and playback (L-R heads) 1 pair for trick play (L′-R′ heads)		STANDARD ACCESSORIES	1 pc. DIN-RF Cable 1 pc. AC Mains Lead 1 pc. Infra-res Remote Controller 1 pc. Audio Cable
	INPUT: EURO AV (AV1, AV2) Connector (21 pin×2) 1.0 Vp-p, 75Ω unbalanced VIDEO IN (AV3) Connector (Phono type) 1.0 Vp-p, 75Ω unbalanced			
	OUTPUT: EURO AV (AV1, AV2) Connector (21 pin×2) 1.0 Vp-p, 75Ω unbalanced			

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

Panasonic

⚠ **WARNING**

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

INTRODUCTION

This service manual contains technical information which will allow service personnels to understand and service this model.

Section 1 presents you with technical know how for actual servicing and general information of features and controls, enabling you to become familiar with each function.

Section 2 presents to your mechanical and electrical adjustment information as well disassembly and replacement procedures.

In the case of very common information relating to other models like mechanical adjustments, please refer to the appropriate service manual.

Section 3, 4 contains block diagrams which provides you with information for checking and understanding each circuit. Schematic diagrams which give you detailed information such as waveforms, voltage data, function e.t.c. ...

Section 5 contains exploded views and parts list.

Please place orders using the parts list and not the drawing reference numbers.

If the circuit is changed or modified, this information will be followed by supplementary service manual to be filed with original service manual.

CONTENTS

SECTION 1
GENERAL DESCRIPTIONS

1-1. SERVICE INFORMATION

1-1-1. CHANNEL MEMORY IC INITIALIZATION

When replacing the memory IC7704, its IC should be initialized.

Note:1) It should be performed before tuning.
2) Meaning of "INITIALIZATION" is to make dependency in different models and to distinguish between different features.

Method:
1) Connect a jumper wire (K2501) which has been cut as shown below.

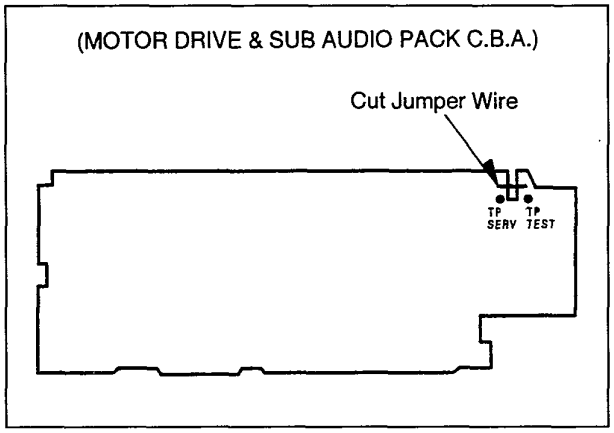


Fig. S1

2) Press the "FF", "REW" and "EJECT" buttons to set the Service Mode. (Test Mode will be appeared on the monitor TV.)
3) Set the Model Code for this model by using 10-key on the Remote Controller Unit as follows.
4) After finishing the initialization, cut the K2501 and cancel the Service Mode.

		NV-HD650B	NV-HD650EC
Code No.	IR	169	165
	OSD	168	164

Note:1) Set to IR No. when there is OSD button on the Remote Controller.
2) Set to OSD No. when there is not OSD button on the Remote Controller.

1-1-2. SERVICE POSITION

A. CHECKING OF MAIN C.B.A.

When servicing the MAIN C.B.A., take out the MAIN C.B.A. and mechanism from the frame and turn over.

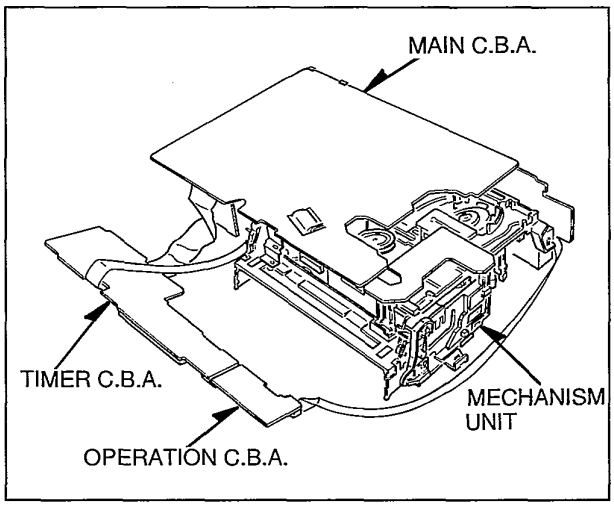


Fig. S2

B. MECHANISM SERVICE POSITION

When servicing the K-Mechanism, take out the mechanism from the MAIN C.B.A. and connect Extention Cable (VFK0889) between the loading-motor connector and P2001 as shown below.
In this position, the following services are possible.

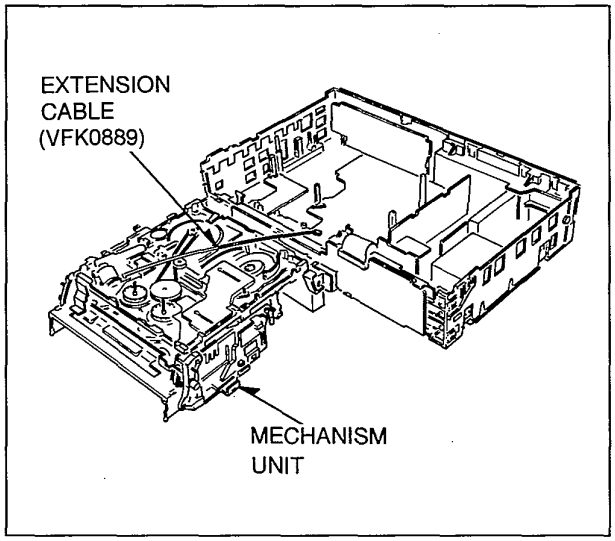


Fig. S3

B-1. CHECKING OF GEAR PHASE ALIGNMENT CONDITION

1) Check gear phase Alignment Condition of Mechanism.

B-2. CHECKING OF LOADING/UNLOADING OPERATION

There are 3 methods for manual operation of loading/unloading operation as follows.

1. HAND OPERATION
   1) Turn the Worm Gear or the Worm Wheel Gear (Remove the Loading Motor Unit) manually.

2. BATTERY OPERATION
   1) Remove the Extention Cable (VFK0889).
   2) Connect the Battery (Manganes-Type R6 (AA) 3pcs./+4.5V) to the Loading Motor terminals.

3. SERVICE INFORMATION DISPLAY OPERATION
   1) Set the Service Information Display mode.
      Turn the Shuttle Ring to FF then push the EJECT button.
   2) Turn the Shuttle Ring to FF then push the EJECT button 7 times to set the Service Mode 7. (The end of display on the Display becomes "--".)
   3) In the above Service Information Display mode, the Loading Motor rotates for Loading operation when the "PLAY" button is pressed.
      The Loading Motor rotates for unloading operation when the "STOP" button is pressed.

Remark:
Use the "SERVICE INFORMATION DISPLAY" mode for a final check of mechanism movement.

B-3. CHECKING OF REEL GEARS OPERATION

1) Move the mechanism to "PLAY" position by loading operation. (Refer to B-2)
2) Turn the Capstan Rotor Unit to check movement of reel gears.

1-1-3. INPUT/OUTPUT PACK AND MOTOR DRIVE & SUB AUDIO PACK C.B.A.s SERVICE POSITION

Use the extension cables when checking.

PART NO.	PART NAME	PCS	CONNECTION
VFK1139	20-PIN WIRE CABLE	1	PP3901 (MAIN) – PS3901 (I/O)
VFK0678	18-PIN WIRE CABLE	1	PP3902 (MAIN) – PS3902 (I/O)
VFK0917	11-PIN WIRE CABLE	1	PP2001 (MAIN) – PS2501 (M. DRIVE)
VFK0918	17-PIN WIRE CABLE	1	PP2002 (MAIN) – PS4701 (M. DRIVE)

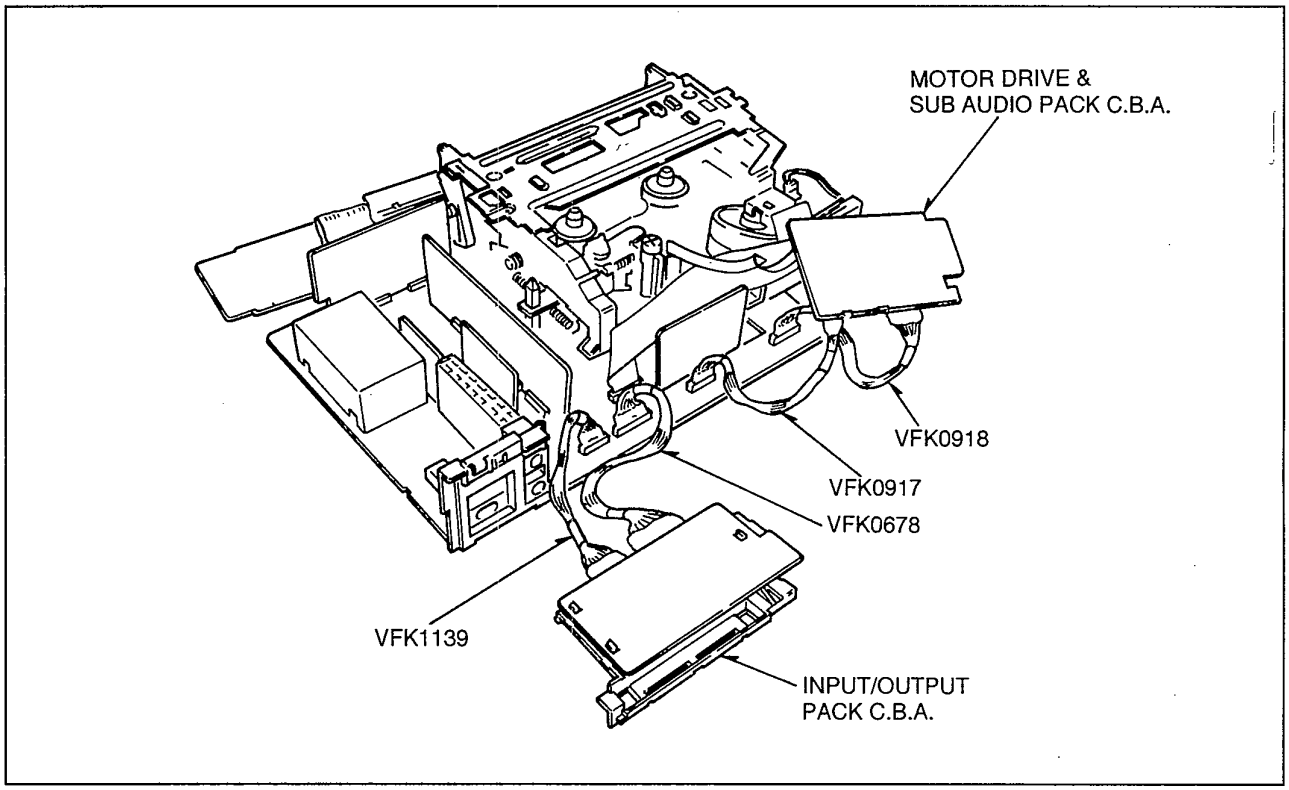


Fig. S4

1-1-4. UPPER CYLINDER REPLACEMENT

A. UPPER CYLINDER DISASSEMBLY

1) Remove the Top Panel.
2) Remove the Screw (A) and Earth Plate.
3) Lift up the Upper Cylinder.

Note: Do not remove 3 Screws on the Upper Cylinder.

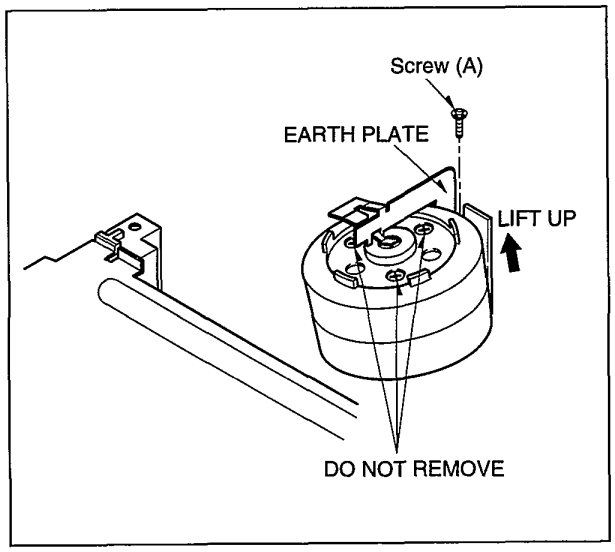


Fig. S5

Do not remove the Rotor Magnet which fixed by 3 screws on the Upper Cylinder.

If it is removed, refer to following method.

1) Install the Rotor Magnet so that the hole (C) on the Rotor Magnet fits to the small projection (D) on bottom of the Upper Cylinder.
2) Tighten 3 screws on top of the Upper Cylinder.

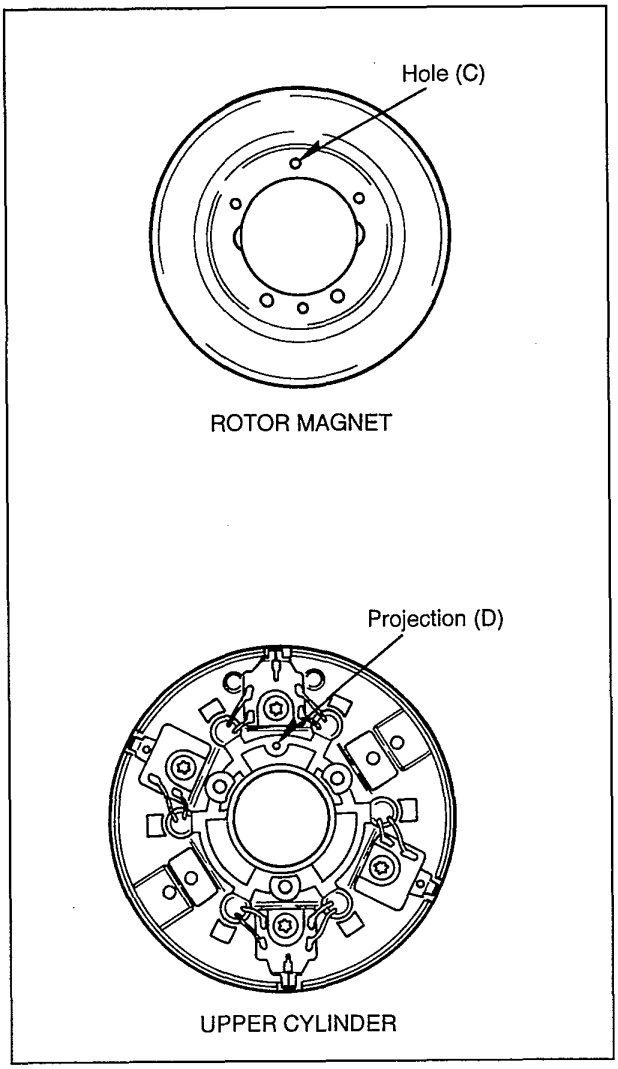


Fig. S6

B. UPPER CYLINDER ASSEMBLY

When reassembling, perform the steps in the reverse order of the DISASSEMBLY METHOD.

1-1-5. NEW GLDD CYLINDER UNIT REPLACEMENT

The Cylinder Unit can be replaced easily by the following method.

1) Remove the Top Panel.
2) Remove the 2 screws (RED) of Head Amp Mount.
3) Remove the Screw (A) and Earth Plate. (Fig. S5)
4) Remove the 3 screws of the Cylinder Unit with a magnetized screw driver through the holes on the Bottom Plate as shown below.

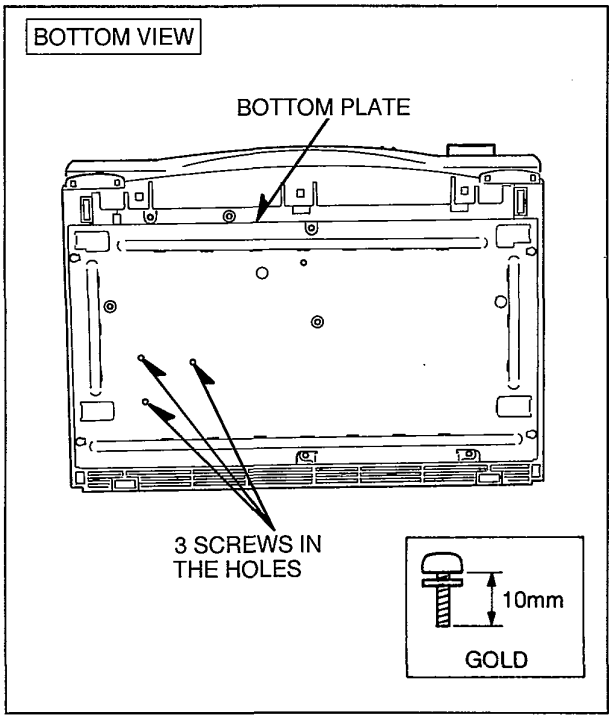


Fig. S7

1-1-6. FLAT CARD CABLE INSTLLATION

When installing the Flat Card Cable on the connector, install the Flat Card Cable with the cable contacts facing the connector contacts.

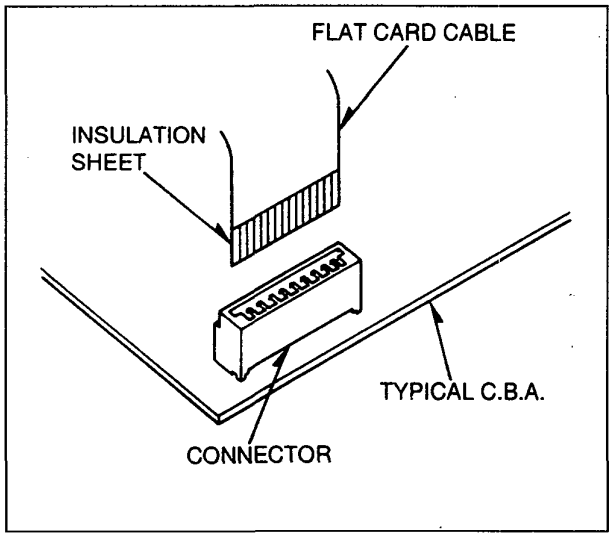


Fig. S8

1-1-7. CAPSTAN STATOR UNIT ASSEMBLY

When replacing the Capstan Stator Unit, the Centre Fixing Tool (VFK0851) must be used to fix the centre of Capstan Stator Unit.

Method:

1) Place the Capstan Stator Unit into position.
2) Loosely tighten the 3 screws.
3) Insert the Centre Fixing Tool (VFK0851) as shown below.
4) Tighten the 3 screws.
5) Remove the Centre Fixing Tool.

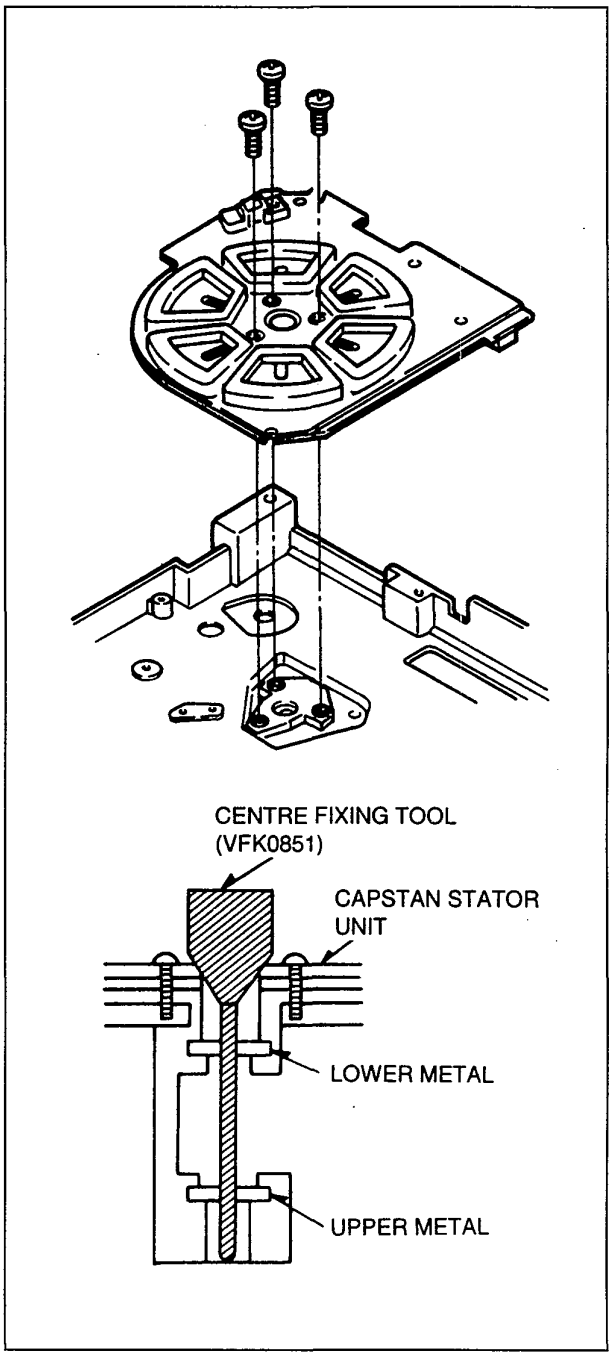


Fig. S9

1-1-8. EJECT OPERATION

The main cam gear rotates in the direction of the arrow. The projection (B) of the carriage connection gear engages with the recession (A) of the main cam gear. The carriage connection gear rotates in the direction of the arrow to perform the Eject operation.

<NOTE>
If the Eject operation is performed without the cassette carriage installed while repairing or making the mechanical phase alignment, the main cam gear will not engage with the carriage connection gear and will not rotate.
To perform the Eject operation with the cassette carriage not installed, it is necessary to rotate the carriage connection gear by hand in the direction of the arrow.

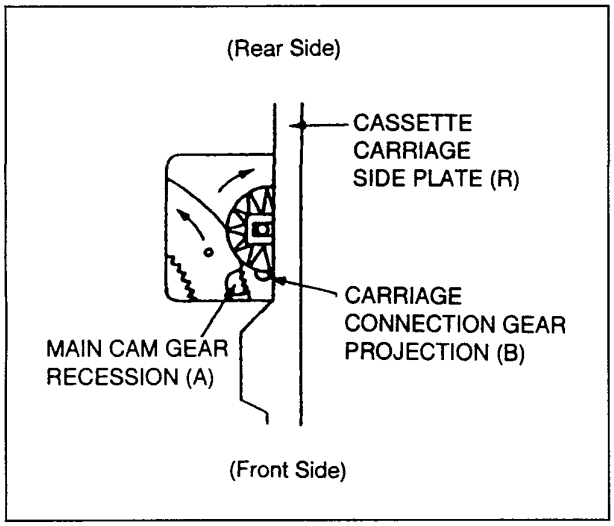


Fig. S10 Top View of Eject Operation

1-1-9. TAKE-UP PHOTO SENSOR OPERATION

Note the following matters for Take-up Photo Sensor Operation.

1) While servicing of the K-Mechanism, the unit will not operate properly if a strong light (ex, Fluorescent light, Spot light) falls on the Take-up Photo Sensor. In this case, cover the Take-up Photo Sensor to prevent the light from falling on it.
2) While servicing of the K-Mechanism with "Power On" and without cassette tape inserted, the Unit does not operate properly.

1-1-10. REMOVAL OF THE CASSETTE TAPE

If the electrical circuit is defective and the action of unloading and front unloading do not work properly, it is possible to remove the cassette manually. There are 2 methods of removing the cassette.

1. HAND OPERATION

1) Take out the mechanism from MAIN C.B.A.
2) Turn the Worm Gear manually, moving the Loading Post to the unloaded position.
3) Turn the Capstan Rotor Unit clockwise to take up the tape.
4) Turn the Worm Gear again to eject the cassette.

2. BATTERY OPERATION

1) Take out the mechanism from Main C.B.A.
2) Connect the Battery (Manganes-Type R6 (AA) 3pcs./ +4.5V) to the Loading Motor terminals as shown below.
3) After moving the Loading Post to the unloaded position, disconnect the battery to stop the motor.
4) Turn the Capstan Rotor Unit to clockwise to take up the tape.
5) Reconnect the battery to eject the cassette.

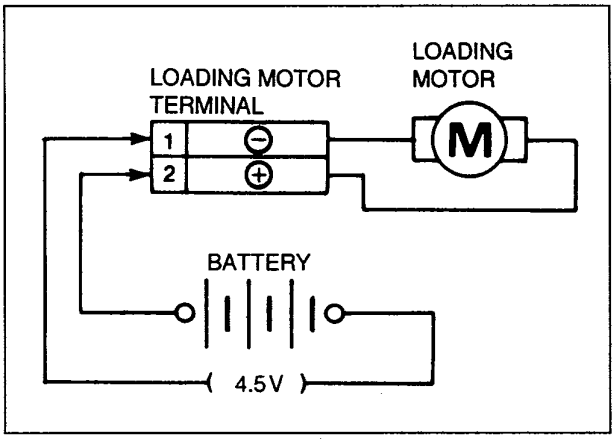


Fig. S11

If the cassette tape can not be removed by the above 2 methods, remove it by the following method.

1) Remove the Top Panel.
2) Remove the Front Panel Unit.
3) Lift up the Pinch Arm after removing spring.
4) Push the P5 Arm and remove the cassette tape from tape transportation (P1, P2, P3 and P5 Posts).
5) Turn the Capstan Rotor Unit to take up the tape.
6) Remove 1 screw from the Side Plate (R) Unit to disconnect the Rack Gear from the Carriage Connection Gear.
7) Take out the cassette tape from the Cassette Compartment.

1-2. SELF-TEST INDICATION DISPLAY

This VTR has a self-diagnosis and display function. If the VTR detects trouble during installation or during use, one of the following Fault Indication Codes will automatically appear in the VTR display. Fault Indication codes are displayed in the form of a single English letter followed by two numbers, as for example "H01".

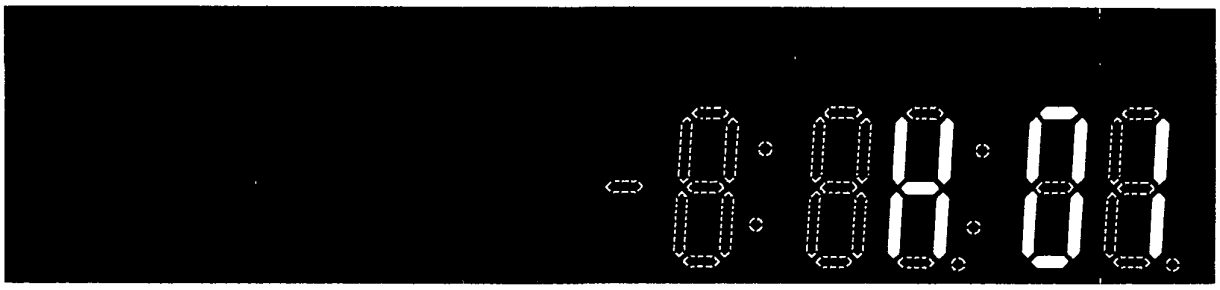
Note:1. The indication "U" is displayed on the FIP while power remains on.

2. Otherwise, the indication "H" or "F" is displayed on the FIP, and the power is automatically turned off. When the power is turned on again, the Fault Indication Code will disappear and the unit will return to normal display mode (either clock or counter).

3. This Fault Indication Code will be stored in the Timer microprocessor even with the AC plug disconnected.
The two-digit number portion of the stored Fault Indication Code can be redisplayed in the FIP's "second" display position (the last 2 digits on the light) by placing the unit is Service Mode Number 2 when turning on Service Information Display as for example "01" or "02" etc.
If a second error occurs, only the most recent error will be displayed and stored.

4. To erase the stored Fault Indication Code data, Turn the Shuttle Ring to FF then push the EJECT button for 5 seconds.

〈FIP〉



INDICATION	CAUSE	REMEDY/CHECK
U 10	Dew formation.	Wait until the indication disappears.
H 01	After cylinder lock is detected, the cylinder does not start rotating again even after tape unloading.	Check the cylinder-motor drive circuit.
H 02	Cassette tape is not wound up during tape unloading except Eject mode.	Check the capstan-motor drive circuit.
F 03	Mechanism locks during mode transition except Eject mode.	1. Check the loading-motor drive circuit. 2. Check the mechanism phase alignment. 3. Check the Mode Switch.
F 04	Mechanism locks during tape unloading.	1. Check the loading-motor drive circuit. 2. Check the mechanism phase alignment.
F 05	Cassette tape is not wound up during tape unloading in Eject mode.	1. Check the capstan-motor drive circuit. 2. Check the Supply/Take-up reel pulse.
F 06	Mechanism locks after tape unloading in Eject mode.	1. Check the loading-motor drive circuit. 2. Check the mechanism phase alignment for Cassette Holder Unit.
F 09	No serial clock transmission between IC6001 and IC7501.	Check the serial clock circuit.

Fig. T1 Self-Test Indication Display

1-3. SERVICE INFORMATION DISPLAY

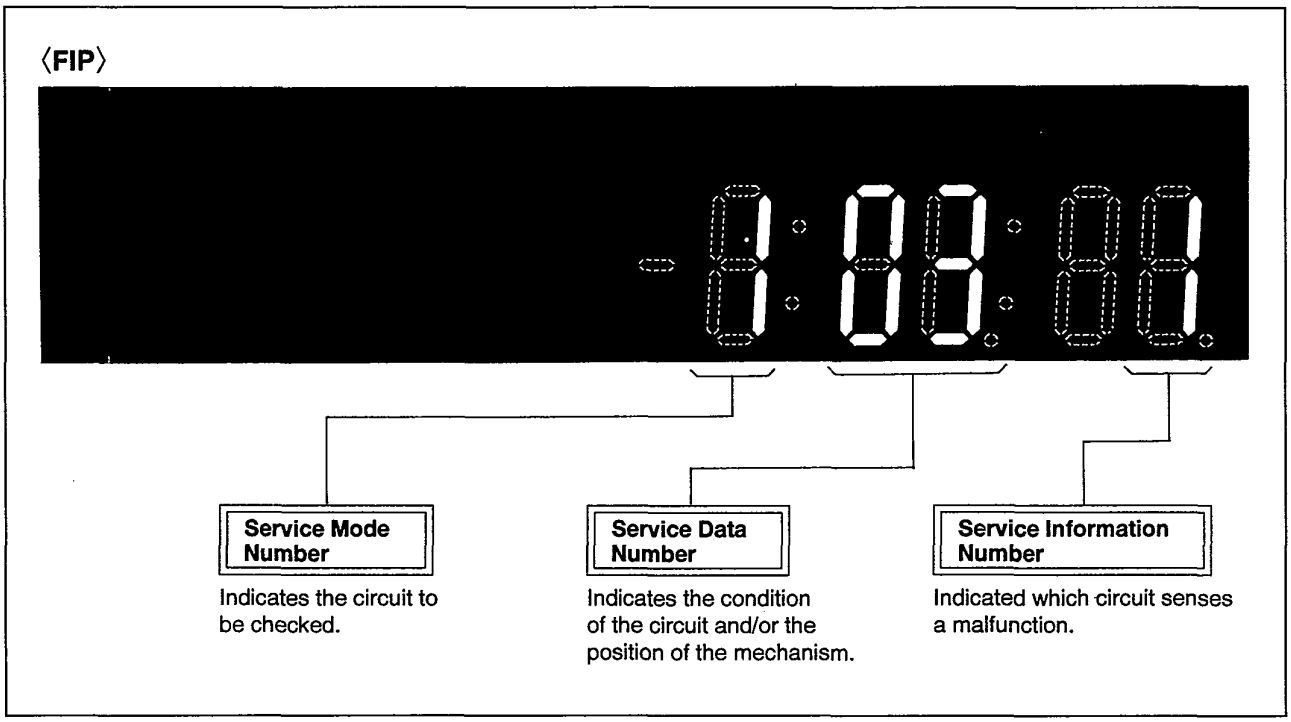


Fig. D1 Service Information Display

1-3-1. Purpose of Service Information Display

This information aids trouble shooting by indicating the source of the malfunction. The service mode number & service data number are used by the technician during repair while the service information can be used by the consumer to diagnose malfunctions allowing the technician to provide a more accurate repair cost estimate and reduce repair time.

1-3-2. Turning on Service Information Display

There are two ways to turn on the Service Information Display.

(1) Turn the Shuttle Ring to FF then push the EJECT button.
(2) Connecting a Jumper wire between TPSERV and TPTEST will display the service information indefinitely.

In the Service Information Display, there are four digits divided into 3 functions.
The first digit indicates which of the 8 service modes that the unit is currently in.

MODE 1 : Checks tape protection circuit
MODE 2 : Checks tape transport mechanism
MODE 3 : Checks mode switching operation
MODE 4 : Checks control buttons
MODE 5 : Checks capstan motor
MODE 6 : Checks cylinder motor
MODE 7 : Checks loading/unloading operation
MODE 8 : Not used.
(The MODE 8 is displayed only when connecting a jumper wire between TPSERV and TPTEST.)

The second and third digits are service data which indicate the condition of the circuit or mechanism being checked.

The forth digit is the service Information display. It is to be used by the consumer to help determine the source of a malfunction. The service information display operates independently of the service modes and stores the fault indication in memory for as long as AC power is not supplied.

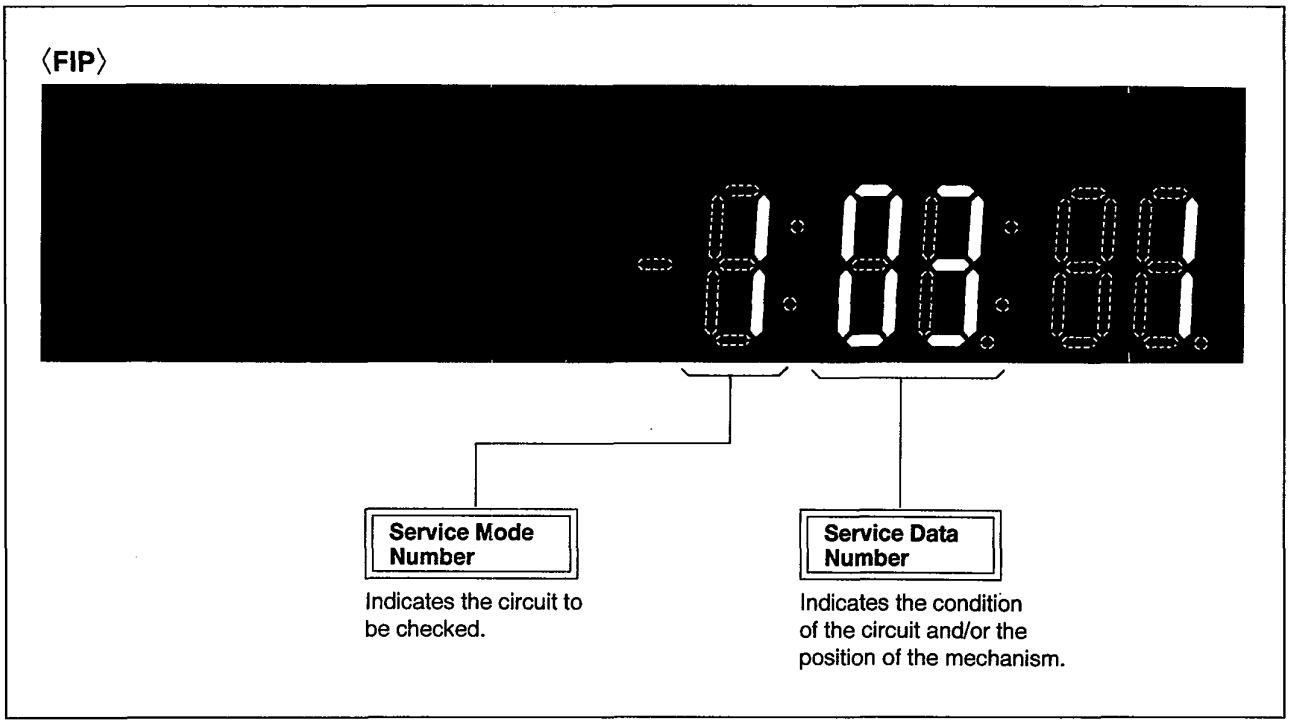


Fig. D2 Service Mode Number and Service Data Number on S.I.D.

(1) Turn on Service Information Display.
(2) To change Service Modes press the "FF", "REW" and "EJECT" buttons simultaneously.
(3) Mode 1 : Checks that the Sensor LED, Supply & Take-up Sensor circuits check the circuits by blocking the light from the Sensor LED to either or both Supply & Take-up Sensors.
When the light is blocked to both sensors, "00" should be indicated on the service data number.
When the light is blocked to the supply sensor, "01" should be indicated.
(4) Mode 2 : Checks the mode switch circuit while indicating mechanism position.
Service Data Numbers indicate the position of the mode switch and there by the mechanism position.
(5) Mode 3 : Checks that mode switch circuit operations have been completed.
Service Data Number should indicate "00" after each mechanism operation is completed.
(6) Mode 4 : Checks the operation circuit.
Indicates if IC6001 receives the operating commands from the mode buttons and/or remote controller.
(7) Mode 5 : Checks the capstan motor circuit.
Indicates if the IC6001 has received the command to rotate the capstan motor.
(8) Mode 6 : Checks the cylinder motor circuit.
IC6001 has received the command to rotate the cylinder motor.
(9) Mode 7 : Checks the Loading/Unloading Operation.
The Loading Motor rotates for loading operation when the "PLAY" button is pressed.
The Loading Motor rotates for unloading operation when the "STOP" button is pressed. This mode can be displayed indefinitely until the OPERATE button is pressed.
(10) Mode 8 : Not used.

<NOTE>
Refer to Fig. D5 for details of Service Data Numbers.

1-3-4. Service Information Number

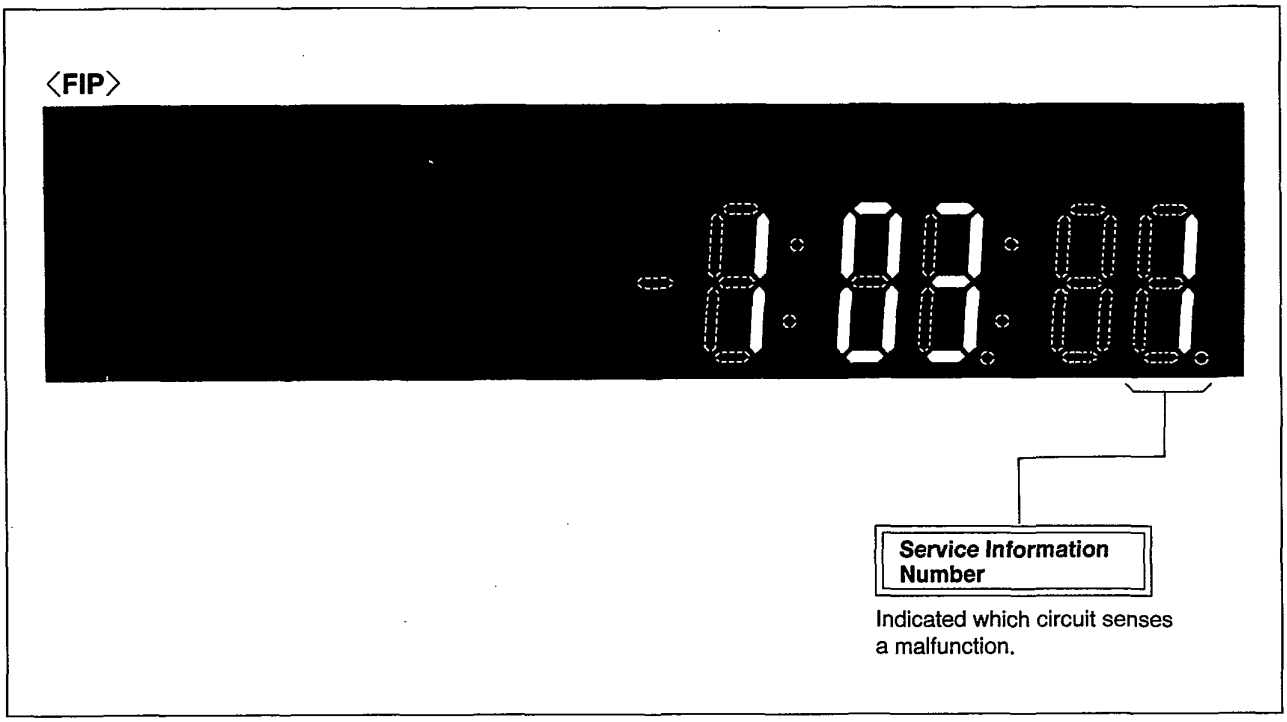


Fig. D3 Service Information Number on S.I.D.

Refer to Fig. D4 for details of Service Information Number.

Note:
The Service Information Number display is independent of the service mode display.
The Service Information Number will be stored as long as AC power is not supplied. (If can be displayed in the Service Mode 2.)
If a second error occurs, only the most recent error will be displayed.

Service Information Number	Malfunction
0	Normal (No problem)
1	Cylinder stop
2	Tape reel stop
3	Stop at position other than 4 or 6
4	Stop during unloading
5	Faulty capstan rotation
6	Stop during Cassette-In/Eject operation

Fig. D4 Detail Service Information Numbers

Service mode Number	Note for checking Service Data Numbers	Service Data Numbers	Indication	Remarks
1	———	00	No light detected at either sensor.	Tape not required.
		01	Tape Beginning. Light to Supply Photo Sensor is blocked.	
		02	Tape End. Light to Take-up Photo Sensor is blocked.	
		03	Light detected at both sensors.	
2	———	00	EJECT	Tape Required. *1: STOP3; The Pinch Roller is on the capstan motor shaft. *2: STOP; The Pinch Roller is off the capstan motor shaft. Refer to Fig. D7 to Check mechanism Position and timing.
		01	Cassette-down	
		02	REV, REV SLOW	
		03	Loading/Unloading	
		04	PLAY/REC, STILL/PAUSE, CUE, FWD SLOW, STOP3 *1	
		05	STOP *2	
		06	FF/REW	
		07	Intermediate position	
3	Disregard service data displayed until mechanism operation is completed. Then the display should indicate "00".	00	Any display other than "00" indicates a fault in the mode switch circuit or system.	Tape Required.
4	Display only when the operating button is pressed.	Refer to Fig. D6		Tape not required.
5	Left digit only, disregard Right digit display.	8 1 (Left Digit / Right Digit)	8, 9, u, A, −, n, L, and no display indicate that the Capstan motor "PLAY" command received by IC6001.	Tape required. If a symbol other than those listed is displayed, a malfunction in that circuit is indicated.
	Right digit only, disregard left digit display.	8 7 (Left Digit / Right Digit)	1, 2, 3, 4, 5, 6, 7, indicate that the Capstan motor "CUE, FF, Forward Slow" commands received by IC6001.	
	Right digit only, disregard left digit display.	8 (Left Digit / Right Digit)	8, 9, u, A, −, n, L, and no display indicate that the Capstan motor "Reverse, Rew, Reverse Slow" commands received by IC6001.	
6	Left digit only, disregard Right digit display.	1 0 (Left Digit / Right Digit)	1, 3, 5, 7, 9, A, n and no display indicate that the cylinder motor "ON" command received by IC6001.	Tape required. If a symbol other than those listed is displayed, a malfunction in that circuit is indicated.

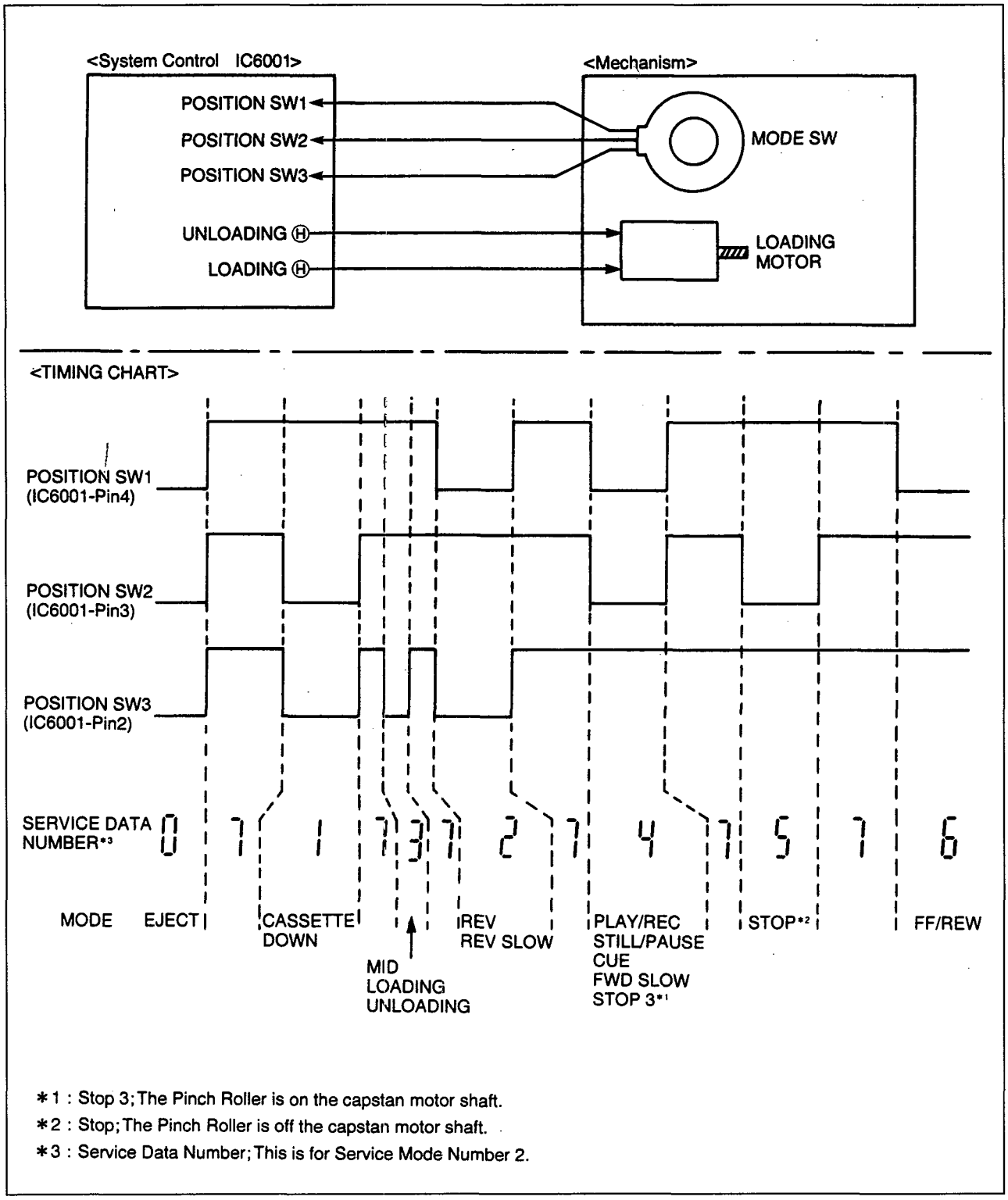
Fig. D5 Service Data Display and Indication

SERVICE DATA NUMBERS	MODE BUTTONS	SERVICE DATA NUMBERS	MODE BUTTONS
3n	OPERATE	80	PAUSE/STILL
01	EJECT	54	COUNTER RESET
-0	INPUT SELECT	5	ZERO STOP
—	SP/LP	49,4U	INDEX
34,35	∧ ∨, + −	A1,A2	TRACKING (+, −)/V-LOCK
—	CANCEL	0	SLOW
—	MENU	57	OSD
A4	TIMER REC	00	STOP
08	REC	03,02	FF, REW
33	AUDIO OUT	55	DISPLAY
—	SHOW VIEW/G-CODE/VIDEO PLUS	0U	PLAY
09	AUDIO DUB	A3	INSERT

Fig. D6 Service Data Display for Service mode 4

1-3-5. Timing Chart from Mode SW to System control IC6001

System control IC6001 senses the mechanism position through the Mode SW.
Fig. D7 shows the timing for Service Mode Number 2.



*1 : Stop 3; The Pinch Roller is on the capstan motor shaft.
*2 : Stop; The Pinch Roller is off the capstan motor shaft.
*3 : Service Data Number; This is for Service Mode Number 2.

Fig. D7 Timing Chart of Mode SW

1-3-6. Input/Output Chart for IC6001

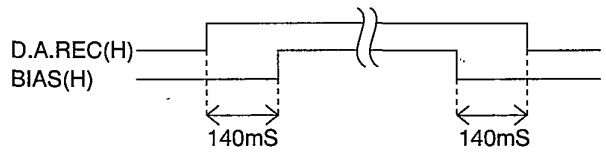
Pin Number	Input/Output	Port Name	Function
1	O	TV (H) / VTR (L)	TV/VTR switch output
2	O	FM MUTE(H)	This port is high during special playback (CUE, REV, SLOW, STILL) mode.
3	O	AUDIO MUTE (H)	This port is high during special playback (CUE, REV, SLOW, STILL) mode.
4	O	CHG KEY (H)	This port is high during variable speed playback mode.
5	O	VIDEO EE (L)	This port is low during EE mode.
6	O	SLOW/STILL (L)	This port is low during SLOW and STILL modes.
7	O	CHG AT (H)	This port is high while the auto-tracking is performed in variable speed playback mode.
8	O	VOLTAGE CHANGE (H)	This port is high while the loading motor torque is increased in FF and REW modes.
9	O	LM LIMIT (H)	Loading motor torque limitter output
10	O	FF/REW (L)	This port is low during FF and REW modes.
11	O	UNLOADING (H)	This port is high while the mechanism is unloaded.
12	O	LOADING (H)	This port is high while the mechanism is loaded.
13	O	D.A. REC (H)	Normal audio recording control 
14	O	BIAS (H)	
15	O	MIX (H)	Normal and HIFI audio mix control MIX ON : HIGH MIX OFF : LOW
16	I	SHORT CHECK (H)	DC voltage (BIAS (H)) detection ● When the low voltage is detected in recording mode, the VCR is turned off. ● When the high voltage is detected in except recordfing mode, the VCR is turned off.
17	I	S-VHS PB (H)	This port is high during S-VHS playback.
18	O	PB AI2 (H)	AI playback control
19	O	PB AI1 (H)	AI playback control
20	I	S-TAB (L)	This port is low while the cassette tape with safety tab is inserted.

Fig. MP1

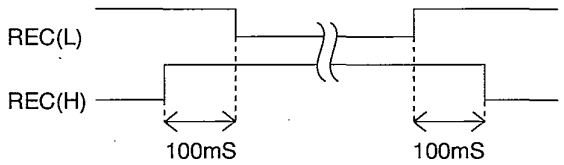
<table>
<tr><th>Pin Number</th><th>Input/Output</th><th>Port Name</th><th>Function</th></tr>
<tr><td>21</td><td>I</td><td>ABS NORM IN</td><td>HIFI audio mode detection
● When the low voltage is detected, the audio output is compulsory normal audio mode.</td></tr>
<tr><td>22</td><td>I</td><td>L CH IN</td><td rowspan="2">HIFI audio mode detection
<table><tr><th></th><th>L CH IN</th><th>R CH IN</th></tr><tr><td>L CH SEL</td><td>L</td><td>H</td></tr><tr><td>R CH SEL</td><td>H</td><td>L</td></tr><tr><td>L+R SEL</td><td>L</td><td>L</td></tr><tr><td>NORMAL SEL</td><td>H</td><td>H</td></tr></table></td></tr>
<tr><td>23</td><td>I</td><td>R CH IN</td></tr>
<tr><td>24</td><td>I</td><td>REC AI (L)</td><td>AI mode selection
AI PB ONLY : HIGH
AI PB AND REC : LOW</td></tr>
<tr><td>25</td><td>I</td><td>RESET (L)</td><td>This port is low while IC6001 is reset.</td></tr>
<tr><td>26</td><td>I</td><td>MODE SEL</td><td>Active mode selection for microprocessor</td></tr>
<tr><td>27</td><td>I</td><td>NC</td><td>Not used (Low setting)</td></tr>
<tr><td>28</td><td>I</td><td>PG AUTO (H)</td><td>PG shifter adjustment selection
AUTO ADJUST : HIGH
MANUAL ADJUST : LOW</td></tr>
<tr><td>29</td><td>O</td><td>CAPSTAN RVS (H)</td><td>Capstan motor direction selection
REVERSE : HIGH
FORWARD : LOW</td></tr>
<tr><td>30</td><td>O</td><td>REC (L)</td><td rowspan="2">DC voltage control for recording mode.
 
</td></tr>
<tr><td>31</td><td>O</td><td>REC (H)</td></tr>
<tr><td>32</td><td>O</td><td>A. DUB (H)</td><td>This port is high during audio dubbing mode.</td></tr>
<tr><td>33</td><td>O</td><td>INSERT (L)</td><td>This port is low during insert mode.</td></tr>
<tr><td>34</td><td>O</td><td>SYSTEM 3</td><td>Refer to Fig. MP. 6</td></tr>
<tr><td>35</td><td>O</td><td>SYSTEM 4</td><td>Refer to Fig. MP. 6</td></tr>
<tr><td>36</td><td>O</td><td>SYSTEM 5</td><td>Refer to Fig. MP. 6</td></tr>
<tr><td>37</td><td>I</td><td>DIGITAL 5V</td><td>VDD</td></tr>
<tr><td>38</td><td>O</td><td>12MHz OUT</td><td>Oscillator output</td></tr>
<tr><td>39</td><td>I</td><td>12MHz IN</td><td>Oscillator input</td></tr>
<tr><td>40</td><td>O</td><td>32KHz OUT</td><td>Oscillator output</td></tr>
<tr><td>41</td><td>I</td><td>32KHz IN</td><td>Oscillator input</td></tr>
</table>

Fig. MP2

Pin Number	Input/Output	Port Name	Function
42	I	DIGITAL GND	GND
43	O	FULL ERASE (H)	Full erase on/off control ON : HIGH OFF : LOW
44	O	D. REC (H)	Video signal recording on/off control
45	O	D. FM. REC (H)	HIFI audio signal recording on/off control
46	O	C. EMPHASYS (H)	This port supplies high signal during a certain time (refer to following chart) from starting the recording to control the HIFI audio recording current. TAPE SPEED / OUTPUT NTSC 2H — 6 sec NTSC 4H — 12 sec NTSC 6H — 18 sec PAL 3H — 9 sec PAL 6H — 18 sec
47	O	REC CUR 1	AI REC current switching signal output
48	O	REC CUR 2	AI REC current switching signal output
49	O	REC CUR 3	AI REC current switching signal output
50	O	A. H. SW	HIFI audio head switching signal output
51	O	S. DATA OUT	Serial data output
52	I	S. DATA IN	Serial data input
53	O	S. CLOCK	Serial clock output
54	O	5P S. DATA OUT	EDIT 5P serial data output
55	I	5P S. DATA IN	EDIT 5P serial data input
56	O	5P S. CLOCK	EDIT 5P serial clock output
57	O	CAP R/S/F	Capstan rotation direction control REVERSE : HIGH STOP :MIDDLE FOWARD : LOW
58	O	CURRENT LIMIT	Capstan motor current limitter output
59	O	ENV2	AI PB control signal output
60	O	PIC VR OUT	This port supplies the voltage which depends on picture VR setting.
61	O	ART V/H/N	This port supplies artificial vertical sync signal to stabilize the picture in special playback mode.

Fig. MP3

<table>
<tr><th>Pin Number</th><th>Input/Output</th><th>Port Name</th><th>Function</th></tr>
<tr><td>62</td><td>O</td><td>VIDEO H. SW</td><td>Video head switching signal output</td></tr>
<tr><td>63</td><td>O</td><td>ROTARY SW</td><td>Rotary switching signal output</td></tr>
<tr><td>64</td><td>O</td><td>H. AMP. SW</td><td>Head amp switching signal output</td></tr>
<tr><td>65</td><td>I</td><td>ENVE SELECT</td><td>This port receives the playback envelope signal level to select the video head in special playback mode.</td></tr>
<tr><td>94</td><td>I</td><td>T- PHOTO</td><td>This port receives the signal when take-up photo sensor detects the tape beginning.</td></tr>
<tr><td>95</td><td>I</td><td>S-PHOTO</td><td>This port receives the signal when supply photo sensor detects the tape end.</td></tr>
<tr><td>96</td><td>I</td><td>NORMAL/
SERVICE/TEST</td><td>NORMAL/SERVICE/TEST mode selection
<table><tr><th>INPUT VOLTAGE</th><th>MODE</th></tr><tr><td>MORE THAN 4.0V</td><td>NORMAL</td></tr><tr><td>2.5V~4.0V</td><td>SERVICE</td></tr><tr><td>LESS THAN 2.5V</td><td>TEST</td></tr></table></td></tr>
<tr><td>97</td><td>I</td><td>SYSTEM
SELECT</td><td>System mode selection for auto setup
<table><tr><th>INPUT VOLTAGE</th><th>MODE</th></tr><tr><td>MORE THAN 3.0V</td><td>MODE 4</td></tr><tr><td>2.0V~3.0V</td><td>MODE 2</td></tr><tr><td>LESS THAN 2.0V</td><td>MODE 1</td></tr></table></td></tr>
<tr><td>98</td><td>I</td><td>STEREO/BIL</td><td>Audio mode detection for display on the OSD
<table><tr><th>INPUT VOLTAGE</th><th>DISPLAY</th></tr><tr><td>MORE THAN 4.2V</td><td>NO DISPLAY</td></tr><tr><td>3.0V~4.2V</td><td>MONO 1</td></tr><tr><td>2.0V~3.0V</td><td>BILINGUAL</td></tr><tr><td>0.8V~2.0V</td><td>MONO 1+2</td></tr><tr><td>LESS THAN 0.8V</td><td>STEREO</td></tr></table></td></tr>
<tr><td>99</td><td>I</td><td>DEW SNS</td><td>This port is more than 1.36V during detecting the dew formation.</td></tr>
<tr><td>100</td><td>I</td><td>ATIC SEL</td><td>Head amp IC setting for playback envelope detection
<table><tr><th>INPUT VOLTAGE</th><th>IC</th></tr><tr><td>MORE THAN 3.0V</td><td>TEA5705</td></tr><tr><td>2.0V~3.0V</td><td>AN3336</td></tr><tr><td>LESS THAN 2.0V</td><td>AN3360</td></tr></table></td></tr>
<tr><td>101</td><td>I</td><td>PIC VR IN</td><td>This port receives the voltage which depends on picture VR setting.</td></tr>
<tr><td>102</td><td>I</td><td>CHROMA IN</td><td>AI PB Chrominance level adjustment input</td></tr>
<tr><td>103</td><td>I</td><td>SLTR MM</td><td>Slowtracking adjustment input</td></tr>
<tr><td>104</td><td>I</td><td>AV MODE SEL</td><td>TV/VTR switch setting
<table><tr><th>INPUT VOLTAGE</th><th>SWITCH</th></tr><tr><td>MORE THAN 3.0V</td><td>TV/VTR</td></tr><tr><td>2.0V~3.0V</td><td>NO SW</td></tr><tr><td>LESS THAN 2.0V</td><td>AV LINK</td></tr></table></td></tr>
</table>

Fig. MP4

<table>
<tr><th>Pin Number</th><th>Input/Output</th><th>Port Name</th><th>Function</th></tr>
<tr><td>105</td><td>I</td><td>TRACKING ENVE</td><td>Playback envelope input for tracking adjustment</td></tr>
<tr><td>106</td><td>I/O</td><td>EDIT TRIG</td><td>Trigger signal in/output for synchronized editing</td></tr>
<tr><td>107</td><td>O</td><td>2H (H)</td><td>This port supplies the high signal in SP mode.</td></tr>
<tr><td>108</td><td>O</td><td>T SNS LED (L)</td><td>Sensor LED drive signal output
● When this port supplies the low signal, the sensor LED is lit.</td></tr>
<tr><td>109</td><td>I/O</td><td>PREROLL</td><td>Preroll signal in/output for synchronized editing.</td></tr>
<tr><td>110</td><td>O</td><td>SYSTEM 2</td><td>Refer to Fig. MP. 6</td></tr>
<tr><td>111</td><td>O</td><td>SYSTEM 1</td><td>Refer to Fig. MP. 6</td></tr>
<tr><td>112</td><td>I/O</td><td>HIFI/MIX/NORM</td><td rowspan="2">Audio output mode control
<table><tr><th></th><th colspan="4">MODE</th></tr><tr><th></th><th>STEREO</th><th>L CH</th><th>R CH</th><th>NORMAL</th></tr><tr><td>HIFI/MIX/NORM</td><td>H</td><td>H</td><td>H</td><td>L</td></tr><tr><td>L CH/R CH/STEREO</td><td>L</td><td>H</td><td>Z</td><td>L</td></tr></table>Z: HIGH IMPEDANCE</td></tr>
<tr><td>113</td><td>O</td><td>L CH/R CH/
STEREO</td></tr>
<tr><td>114</td><td>I</td><td>DIGITAL 5V</td><td>VDD</td></tr>
<tr><td>115</td><td>I</td><td>POSITION SW1</td><td rowspan="3"><table><tr><th>P. SW 3</th><th>P. SW 2</th><th>P. SW 1</th><th>Position (Mode) Name</th></tr><tr><td>O</td><td>O</td><td>O</td><td>EJECT</td></tr><tr><td>O</td><td>O</td><td>I</td><td>CASSETTE DOWN</td></tr><tr><td>O</td><td>I</td><td>O</td><td>REV, REV SLOW</td></tr><tr><td>O</td><td>I</td><td>I</td><td>MID (LOADING/UNLOADING)</td></tr><tr><td>I</td><td>O</td><td>O</td><td>PLAY/REC, STILL/PAUSE, CUE, FWD SLOW STOP3 *1</td></tr><tr><td>I</td><td>O</td><td>I</td><td>STOP</td></tr><tr><td>I</td><td>I</td><td>O</td><td>FF/REW</td></tr><tr><td>I</td><td>I</td><td>I</td><td>INTERMEDIATE</td></tr></table>(*1) The Pinch Roller is on the capstan motor shaft.</td></tr>
<tr><td>116</td><td>I</td><td>POSITION SW2</td></tr>
<tr><td>117</td><td>I</td><td>POSITION SW3</td></tr>
<tr><td>118</td><td>O</td><td>AUDIO MODE
SELECT</td><td>Audio mode switching signal output</td></tr>
<tr><td>119</td><td>I</td><td>GND</td><td>GND</td></tr>
<tr><td>120</td><td>I</td><td>REC WIDE (H)</td><td>This port is high during wide recording mode.</td></tr>
<tr><td>121</td><td>O</td><td>WIDE (H)</td><td>This port is high during playback the tape recorded with wide mode.</td></tr>
<tr><td>122</td><td>O</td><td>AI MES (H)</td><td>This port is high when measuring the head and tape condition to determine the optimum recording current before starting the AI recording.</td></tr>
<tr><td>123</td><td>O</td><td>POWER OFF (H)</td><td>Power on/off control</td></tr>
<tr><td>124</td><td>O</td><td>TRICK (L)</td><td>This port is low during special playback (CUE, REV, SLOW, STILL) mode.</td></tr>
</table>

Fig. MP5

	MODE 1	MODE 2	MODE 3	MODE 4
PIN 111 (SYSTEM 1)	H: MESECAM L : PAL Z : AUTO	H: MESECAM L : PAL	H: PAL L : NTSC Z : AUTO	H: MESECAM L : PAL Z : AUTO
PIN 110 (SYSTEM 2)	H: EXCEPT NTSC L : NTSC-M	H: SECAM L : PAL Z : AUTO	——	H: EXCEPT NTSC L : NTSC-M
PIN 34 (SYSTEM 3)	H: NORMAL L : DBS/CANAL	H: NORMAL L : DBS/CANAL	——	H: NORMAL L : DBS/CANAL
PIN 35 (SYSTEM 4)	H: PAL- I L : B/G/D/K	H: SECAM L : PAL	——	H: PAL-I L : B/G/D/K
PIN 36 (SYSTEM 5)	H: PAL L : NTSC	H: PAL L : NTSC	H: 50Hz L : 60Hz	H: PAL L : NTSC

Z: HIGH IMPEDANCE

Fig. MP6

Note: 1. The mode is decided depend on SYSTEM SELECT PORT (PIN 97).

1-3-7. CVC (CRISTAL VIEW CONTROL) FUNCTION

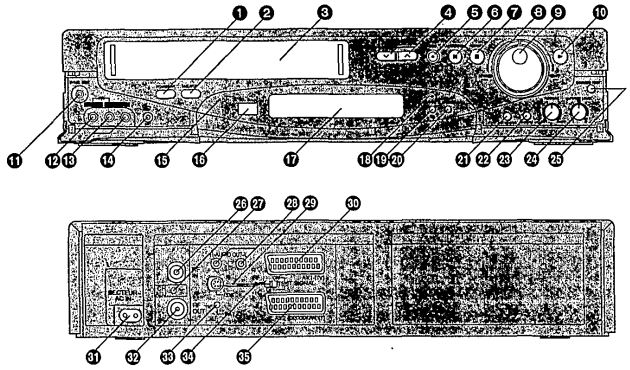
The playback are adjusted to achieve optimum picture quality from tapes with varying charactristics.

(1) Detail explanation
<Playback mode>
The picture quality is varying from the different tapes as follows:
1) If the output level is low, from worn or rental cassette tapes, a soft picture is obtained by the RF equlizer and picture control on the Lumi./Chro. Pack C.B.A.
2) If the output level is medium, from normal tapes, a sharp picture is obtained from the emphasis and picture control on the Lumi./Chro. Pack C.B.A.
3) If the output level is high, from HG/S tapes, a sharp and detailed picture is obtained from the RF equlizer, emphasis picture control and noise canceller on the Lumi./Chro. Pack C.B.A.

<Recording mode>
The optimum recording level is used for all head conditions and for all types of tapes.
1) The luminance S/N is boosted 2dB.
2) Recording head wear compensation.
3) The optimum recording current is achieved in 1.5 seconds.

Controls and Connection Sockets

This gives a detailed explanation of the function of each button, switch and connection socket.



❶ POWER ⏻/I
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still connected to the mains.

❷ EJECT
To eject a video cassette.

❸ Cassette Compartment
Insert a video cassette here.

❹ ∨ ∧
To select the required programme position (TV station).

❺ REC
To start a recording.

❻ PAUSE/STILL
In the stop mode: Still picture (Jog/Shuttle mode).
During playback: Still picture (Jog/Shuttle mode).
During recording: To interrupt recording.

❼ STOP
To stop any playback or recording.

❽ Shuttle Ring
In the stop mode: To rewind or fast forward the tape.
In the playback mode:
To search picture backward or forward.
In the still playback mode:
To adjust playback speed backward or forward.
In the rewind or fast forward mode:
To obtain high speed picture.

❾ Jog Dial
To locate any desired frame with utmost precision.

❿ PLAY
To start playback. "▷" is lit.
For the repeat playback function.

⓫ SYNC. EDIT
To connect a movie camera or another VTR equipped with synchronized editing capability.
To connect a movie camera or another VTR equipped with LANC socket for One-Touch-Editing.

⓬ VIDEO IN (AV3)
To connect the video cable to a movie camera or to another VTR.

⓭ AUDIO IN (AV3)
To connect the audio cable to a movie camera or to another VTR.

⓮ MIC
To connect a microphone for recording. Once connected, this socket has priority.

⓯ Standby Indicator
This indicator is lit when the VTR is turned off or the VTR is timer recording standby mode.

⓰ *Infra-red Remote Control Receiver Window*

⓱ Display

⓲ CVC Indicator
When the CVC function is on, this indicator is lit.

⓳ CVC (Crystal View Control)
ON: Using the CVC function, playback and recording are performed in the state which achieves optimum picture quality in light of characteristics of a tape.
- The CVC indicator is lit.
- This control should normally be left in the ON position.

OFF: Turn off the CVC function.
- The CVC indicator is not lit.

⓴ TIMER REC
To turn the timer recording function on and off.
⏲ is lit or not lit.
Once operating timer recording function, the normal VTR operation is not possible unless this button is set to off.

㉑ AUDIO DUB
To set up the VTR for audio dubbing.
A DUB is appeared on screen display.

㉒ INSERT
To set up the VTR for insert editing.
INSERT is appeared on screen display.

㉓ PICTURE
To make picture sharper (SHARP) or softer (SOFT).

㉔ HI-FI REC LEVEL
To adjust the recording level to peak at +4 dB on the recording level indicator.

㉕ COUNTER RESET
To reset the tape counter (elapsed time) to "0:00.00".
- The tape counter is automatically reset to "0:00.00" when a video cassette is inserted.

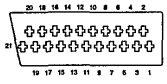
㉖ RF IN
To connect to the external aerial.

㉗ CH ADJ.
To adjust the RF transmitting channel 30–42.

㉘ AUDIO OUT
To connect the sound to a stereo audio system.

㉙ RF OFF/TEST SIGNAL
RF OFF: Set to this position when the VTR is connected to the TV via the 21-pin scart cable.
TEST SIGNAL OFF:
Set to this position when the VTR is connected to the TV via the RF coaxial cable only.
TEST SIGNAL ON:
Set to this position when tuning the TV into the VTR.
The test signal is transmitted on channel 36 initially.

㉚ AV1 (TV)
This 21-pin scart terminal carries input and output signals for both picture and sound. TV sets equipped with a similar socket can be connected here.
This is also called Scart
Peritel
Euro Connector
Euro AV



1	AUDIO OUTPUT CH2 (R)	13	RED GROUND
2	AUDIO INPUT CH2 (R)	14	BLANKING GROUND
3	AUDIO OUTPUT CH1 (L)		
4	AUDIO GROUND	15	RED
5	BLUE GROUND	16	BLANKING
6	AUDIO INPUT CH1 (L)	17	VIDEO OUTPUT GROUND
7	BLUE		
8	SWITCHING VOLTAGE	18	VIDEO INPUT GROUND
9	GREEN GROUND		
10	No connection	19	VIDEO OUTPUT
11	GREEN	20	VIDEO INPUT
12	No connection	21	GROUND

Caution: RGB reservation for only E/E operation when connecting the Pay TV decoder

㉛ AC IN~
To connect to the main power supply.

㉜ RF OUT
To connect to the aerial terminal on a TV set.

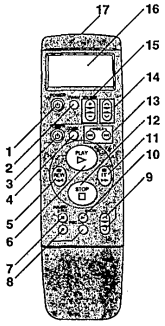
㉝ No function.

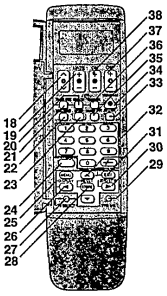
㉞ EDIT
By connecting the optional Editing Controller (VW-EC300E/VW-EC310E) to this socket, such editing functions as Assemble Editing, Insert Editing and *Audio Dubbing can be performed more quickly* and efficiently between two VTRs or between a VTR and a movie camera.

To connect the Edit cable (VW-K5E) to a movie camera or to another VTR for One-Touch-Editing.

㉟ AV2 (DECODER/EXT)
To connect to a decoder or another VTR.

Infra-red Remote Controller





1 POWER (TV)
To switch the TV from on to standby mode or vice versa. In standby mode, the TV is still connected to the mains.
- With some TV models, it may only be possible to switch the TV to standby mode using this button. In this case, use **TV/AV** or ∨ ∧ **(TV)** to switch the TV on.

2 TV/AV
To select the TV input.

3 POWER
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still connected to the mains.

4 OSD
For the On Screen Display Function.

5 REW (REWIND)
In the stop mode: To rewind the tape.
In the playback mode: To search backward.
In the rewind mode: To obtain high speed picture.
"◁◁" is lit.

6 PLAY
To start playback. "▷" is lit.
For the repeat playback function.

7 PAUSE/STILL
During playback: Still picture.
During recording: To interrupt recording.

8 REC
To start a recording.
- Press both buttons simultaneously.

9 ∨ ∧ (VTR)
To select the required programme position (TV station).

10 SLOW
For the slow motion playback function. "▯▷" is lit.

11 FF (FAST FORWARD)
In the stop mode: To fast forward the tape.
In the playback mode: To search forward.
In the fast forward mode: To obtain high speed picture.
"▷▷" is lit.

12 STOP
To stop any playback or recording.

13 INDEX
For the index search function.

14 ∨ ∧ (TV)
To select the required programme position (TV station) of the TV.

15 VOLUME
To adjust the volume of the TV.

16 Display

17 Infra-red Transmitter
The programming data are transmitted from here to the VTR.

18 ∨ ∧
To programme a timer recording.

19 DATE
To programme a timer recording.

20 CHECK
To check timer programmes.

21 TIMER REC
To turn the timer recording function on and off.
⊡ is lit or not lit.
Once operating timer recording function, the normal VTR operation is not possible unless this button is set to off.

22 SHOWVIEW
For the ShowView programming.

23 SP/LP
To select the tape speed desired for recording.
SP gives the best picture quality.
LP gives the longest recording time.

24 INPUT SELECT
To select the A1, A2 or A3 external recording source.

25 OSD Operation Buttons
MENU: To make On Screen Display **Main Menu** appear on the TV screen.
▲ ▼ ◀ ▶/STORE:
To make selections from On Screen Display.
EXIT: To make On Screen Display disappear on the TV screen.

26 DISPLAY
To change the indication on the VTR Display or On Screen Display.

→Clock→Counter→Remaining Tape Time→

27 TV SELECT
To set the remote controller for operation of the TV.

28 RESET
To reset the tape counter (elapsed time) to "0:00.00".
- The tape counter is automatically reset to "0:00.00" when a video cassette is inserted.

29 VTR 1/2
VTR1: Set to this position on both the VTR and remote controller for normal use with one VTR.
VTR2: Set to this position when using two Panasonic VTRs.

30 ZERO STOP
For the zero stop function.

31 TRACKING/V-LOCK
For manual tracking adjustment
The + and − buttons are used to adjust the tracking when, for example, noise bars on the picture are better removed manually than by the automatic digital tracking control. After making a manual adjustment, press both buttons together to return to automatic digital tracking control.

For slow tracking adjustment
When noise bars appear during Still or Slow playback, switch over to slow playback and adjust with the + or − Button to reduce the noise bars.

For vertical locking adjustment
Use the + and − buttons to minimize any vertical jitter during still-picture playback.

32 Number Buttons
- To select the programme positions (1–99).

9: 9
19: -/-- → 1 → 9

- To programme a ShowView number.

33 AV LINK
To select the VTR mode or TV mode for AV LINK.

34 TRANSMIT
To transmit the data that has been set on the remote controller to the VTR.

35 AUDIO OUT
To select the desired sound mode.
At the every push of this button, the audio output mode changes as follows.

→Stereo→Left→Right→Normal audio track

The Left (L) and Right (R) indicators shown which sound mode is selected in the following way.

Stereo: Both the L and R indicators appear.
Left: The L indicator appears.
Right: The R indicator appears.
Normal: Both the L and R indicators don't appear.

36 CANCEL
To cancel the settings made for a timer recording.

37 OFF
To programme a timer recording.

38 ON
To programme a timer recording.

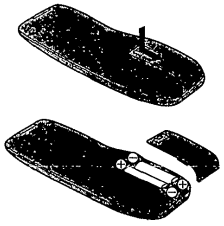
Power Source for the Remote Controller

The remote controller is powered by 2 "AA", "UM3" or "R6" size batteries. The life of the batteries is about one year, although this depends on the frequency of use.

Precautions for Battery Replacement

- Load the new batteries with their polarity (⊕ and ⊖) aligned correctly.
- Do not apply heat to the batteries, or an internal short-circuit may occur.
- If you do not intend to use the remote controller for a long period of time, remove the batteries and store them in a cool and dry place.
- Remove spent batteries immediately and dispose of them.
- Do not use an old and a new battery together, and never use an alkaline battery with a manganese battery.

Installing the Batteries

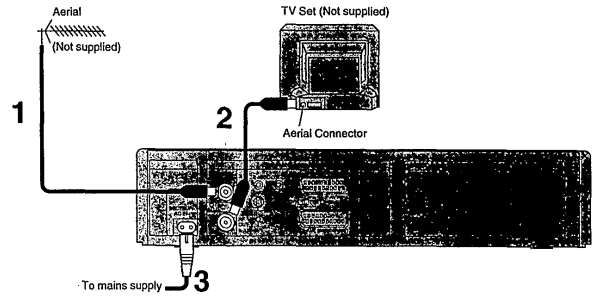


Connections

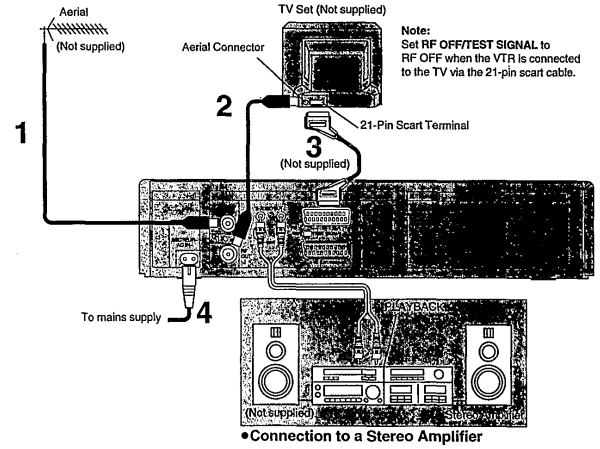
This tells you how to connect with an aerial, TV, etc.

Basic Connections

The following connections are required to record and play back the VTR through TV set:



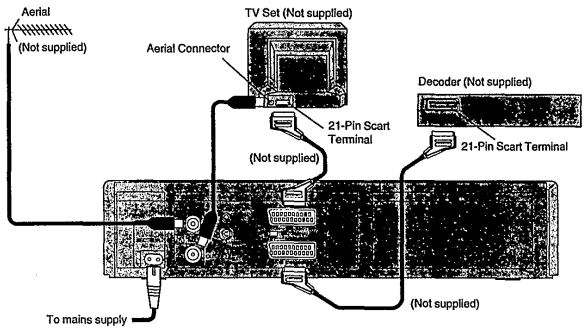
Connection to a TV Set with 21-Pin Scart Terminal



Note:
Set **RF OFF/TEST SIGNAL** to RF OFF when the VTR is connected to the TV via the 21-pin scart cable.

•Connection to a Stereo Amplifier

Connection to a Decoder



Notes:
- If the TV set is provided with an RGB-compatible connector, connect the 21-pin AV cable from the VTR to this connector. Use full-pin 21-pin AV cables for connecting the TV set and VTR and for connecting the VTR and decoder.
- Set **RF OFF/TEST SIGNAL** to RF OFF when the VTR is connected to the TV via the 21-pin scart cable.

AV LINK

With this button the connected colour TV set can be switched from TV mode to VTR mode (vice versa) when it is connected by means of 21-pin scart cable.

This makes a variety of functions possible such as simultaneous recording and viewing when a Pay TV decoder or a satellite receiver has been connected.

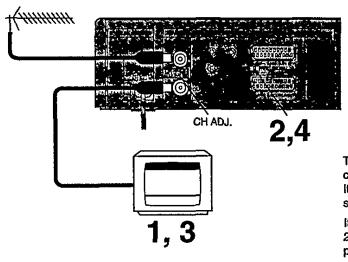
VTR mode (VTR indicator lights):
To enjoy sound and pictures from the VTR.
- When **MENU** is pressed and the OSD (On Screen Display) screen is displayed, the unit also automatically switches to VTR mode.
  However, if the unit is originally in TV mode, the VTR indicator is not displayed.
- The unit also automatically switched to VTR mode when playback is started. However, the unit cannot be returned to TV mode during playback.

TV mode (VTR indicator goes off):
To watch another programme on the TV while recording on the VTR.
- Select the programme to be watched using the TV set's tuner.
- The sound and pictures of a different channel are received by the VTR.

	VTR	TV set
Power on	VTR mode	AV input selected
	TV mode	Input from TV set's tuner*
Stand-by	—	Input from TV set's tuner

*When the VTR is set to the TV mode and the Pay TV channel is selected, the signals will still be scrambled even when Pay TV is selected by the TV set's tuner. At a time like this, either set the VTR to the VTR mode or switch the TV set's input signals to AV input.

Tuning the TV to your VTR



The VTR supplies a signal to the TV set via the RF coaxial cable on channel 36.
It is possible to view the video picture on your TV in the same way that you watch TV broadcasts.

If you have connected the VTR to the TV through the *21-pin scart terminal, then you do not need to follow the procedure mentioned below.*

Operations

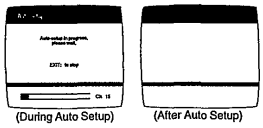
1 POWER

Turn on the TV and VTR.

2 RF ON / OFF TEST SIGNAL OFF

To generate a test pattern, set **RF OFF/ TEST SIGNAL** to TEST SIGNAL ON.

3 On Screen Display



Set the TV to an unused position which you wish to use for your video playback.

4 RF ON / OFF TEST SIGNAL OFF

Set **RF OFF/TEST SIGNAL** to TEST SIGNAL OFF.

Note:
The test signal is transmitted on video channel 36. If you are encountering interference from a TV broadcast on this video channel, you may readjust to another free channel (30–42) by using the **CH ADJ.** screw which is located on the rear of the VTR.
Please note that if the **CH ADJ.** screw is used then you will have to retune your TV to the test signal as in item **2** to **4** above.

Auto Setup

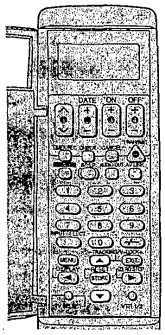
Auto Setup

When the VTR is turned on after connecting the aerial *lead and the mains lead, Auto setup (Auto tuning and Auto* clock setting) starts.

On Screen Display

- The Auto setup is searching for TV station from VHF minimum to UHF maximum and memorizing the data for every programme position. The other programme positions are skipped.
- The Auto setup takes five or more minutes to complete the search for TV station and the clock setting.

Notes:
- If VTR is not correctly set by Auto setup, see **Various settings** on pages 28–31.
- Auto clock setting will not work correctly if teletext information is not available. If the clock setting screen appears after auto tuning has been completed, set clock manually. See page 31.
- Clock information is subject to teletext information. If year information is not in teletext or time information in teletext is incorrect, set clock manually. See page 31.



Country-Selection

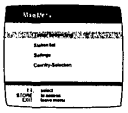
After the Auto setup is finished, select your country to set *TV station list, guide number for ShowView and language.*

Preparations

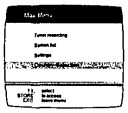
- Confirm that the TV is on and the VTR viewing channel is selected.
- Turn on the VTR.

1 Press **MENU.**

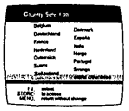
MENU



2 Select **Country-Selection.**



3 Select the desired country.
- Refer to page 35 as well.



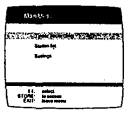
4 Press **STORE,** and then press **MENU.**

STORE → MENU

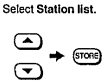
Viewing the TV station list

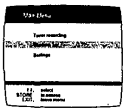
1 Press **MENU.**

MENU

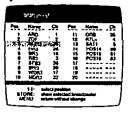


2 Select **Station list.**

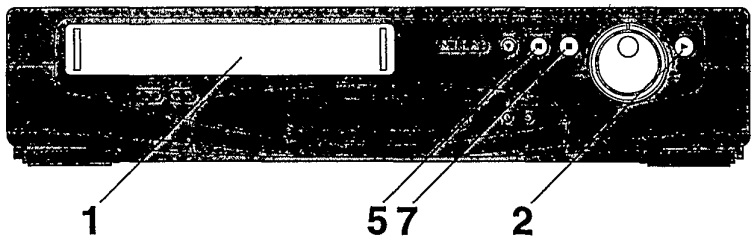


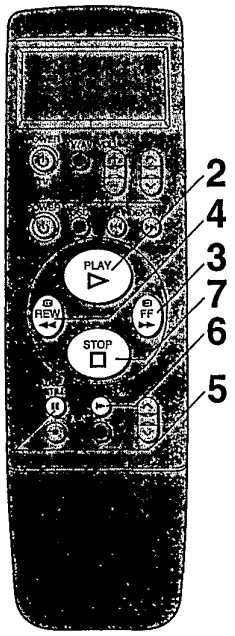


3 Select the desired TV station, if you want to view the broadcast.



Playback





Operations	Display Symbols	
1		Insert a recorded cassette tape.
2 PLAY		Start viewing the picture.
3 FF		Search forward by tapping **FF**. •To change back to normal playback, press **PLAY**.
4 REW		Search backward by tapping **REW**. •To change back to normal playback, press **PLAY**.
5 PAUSE/STILL		View a still picture. •To continue the normal playback, press **PLAY** or **PAUSE/STILL**.
6 SLOW		View the slow motion picture. •To continue the normal playback, press **PLAY**.
7 STOP		Stop viewing the picture.

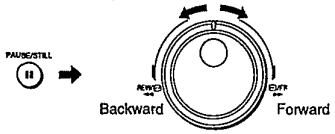
Other Playback Functions

To change the Playback Speed

Using Shuttle Ring:

1 Press **PAUSE/STILL** on the VTR.

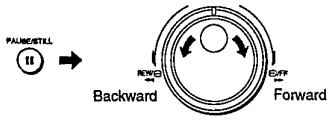
2 Rotate Shuttle Ring.



To locate the Desired Picture Exactly

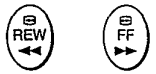
1 Press **PAUSE/STILL** on the VTR.

2 Turn Jog Dial.



To obtain High Speed Picture During Fast Forward or Rewind

Keep **FF** pressed during fast forward.
Keep **REW** pressed during rewind.



To playback the Recorded Part Repeatedly

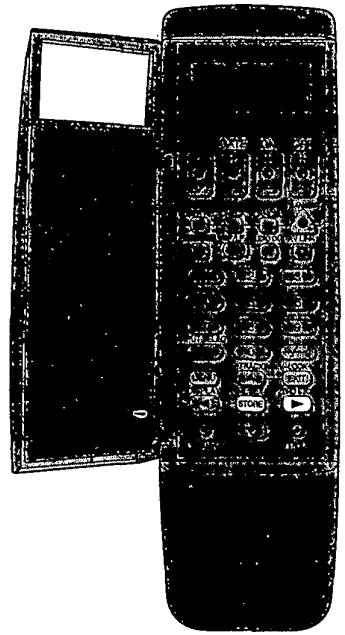
Keep **PLAY** pressed for more than 5 seconds.

•Press **STOP** to release from Repeat Playback mode.

To return to a Specified Scene

1 Press **RESET** to set the counter to 0:00.00.

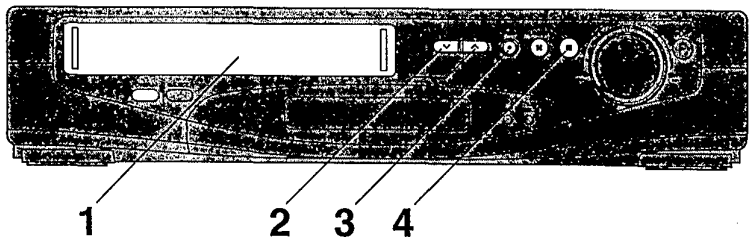
2 After playback, press **ZERO STOP** in the stop mode.
•The tape will be rewound or fast forwarded to 0:00.00 approximately.

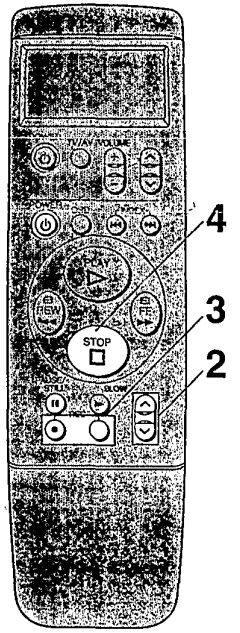


Notes:

- Audio reproduction of linear (conventionally recorded) tapes will be monaural when played back on the FM Hi-Fi video recorders.
- Cue, review or slow playback will be automatically released after 10 minutes, and still playback after 5 minutes.
- In LP mode only:
  1. During any playback mode other than normal playback, the picture may have some noise bars, the colour may be unstable, or a black and white picture may appear.
  2. When playing back a tape which was recorded on another VTR, it may be necessary to adjust the Tracking Control. In some cases the picture quality may still be inferior. This is due to limitation of format.

Manual Recording





Operations	Display Symbols	
1		Insert a cassette tape. ●If it has already been inserted, press **POWER** to turn the VTR on.
2		Select TV station.
3		Start recording.
4		Stop recording.

To select the Desired Tape Speed

Press **SP/LP** before recording.

To interrupt Recording

Press **PAUSE/STILL** during recording.
Press again to continue recording.

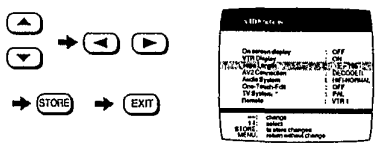
To record One TV Programme while Viewing Another Programme

1 Refer to the manual recording operations steps 1 to 3.

2 Select the TV programme on your TV set you wish to view at the present time.

To display the Approximate Remaining Tape Time

1 Select **Tape Length** from On Screen Display and select the corresponding cassette tape length. See page 33.



◀ E-180: For E30, -60, -90, -120 and -180 tapes.
E-195: For E195 tape.
E-240: For E240 tape.
E-260 ▶: For E260 and -300 tapes.

2 Press **DISPLAY**.

→Clock→Counter→**Remaining Tape Time**—

●The remaining tape time may not be displayed correctly depending on the tape used.

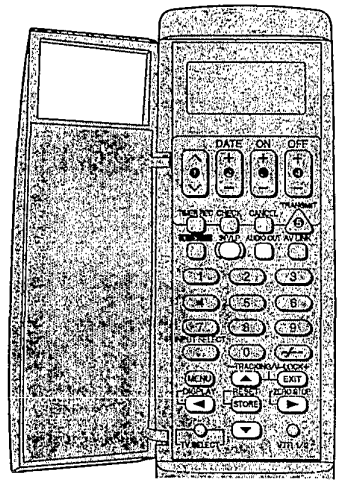
Recording of Stereo and Bilingual Programmes

1 Recording are automatically made in the stereo or bilingual mode. This prevents errors in the selection of the dubbed or the original language.

2 During playback press **AUDIO OUT** to select the desired sound mode. See page 7.

Notes:

●When a video cassette with a broken off tab is inserted, the "OO" indication will flash to indicate that recording is not possible.
●The recording pause mode will be automatically released after 5 minutes, and be back to the stop mode.



The NICAM Broadcast System (NV-HD650EC only)

NV-HD650EC is equipped with the NICAM sound system also.
NICAM is a 2 Channel sound broadcast system to provide either a high quality stereo sound track or
2 independent MONO sound tracks, M1 and M2.
NICAM programmes are always accompanied by standard sound broadcasts and you can select the desired sound with ***AUDIO OUT*** during playback.

●The NICAM digital stereo sound can only be recorded on the Hi-Fi audio track.
●To record the regular sound (ordinary normal sound) on the FM audio tracks when a Stereo, Bilingual or NICAM programme is received, select **Mono ON** during manual tuning procedure. See page 28.

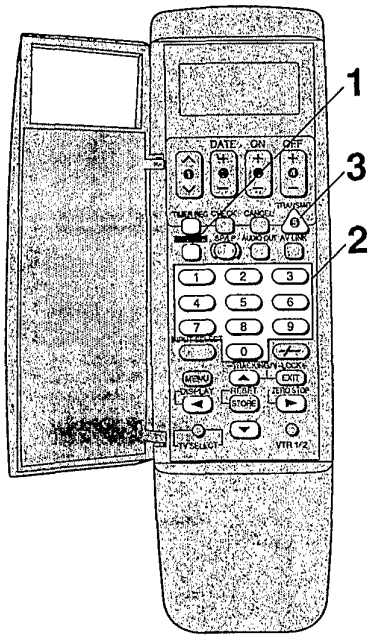
Important Note for the NICAM System

When NV-HD650EC is switched on, the tuner will *automatically switch to a NICAM broadcast, if NICAM is* being transmitted. During test transmissions, it is possible that the sound received doesn't correspond to the picture being viewed. In order to receive a synchronized sound and picture, select monaural sound with **AUDIO OUT** or **Mono ON** setting. This will only apply until NICAM transmissions are fully operational.
At this time the NICAM signal is transmitted on stereo channels only, since the M1 and M2 formats are not yet available. Even if the sound track is in MONO, the stereo *indicator will appear.*

Timer Recording

ShowView Programming

Programming is now easier than ever: simply enter the ShowView number provided in the programme schedule column carried by newspapers and magazines. ShowView numbers are numbers which are assigned to each programme listed in the TV programme schedule carried in newspapers and TV guides. When these numbers are entered and **TRANSMIT** is pressed, the numbers are converted into the actual programming.



Preparations

- Insert a cassette tape with an intact erasure prevention tab.
- Confirm that the TV is on and the VTR viewing channel is selected.

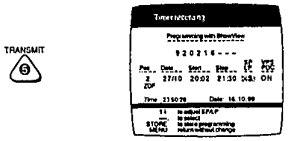
Operations	Display Symbols

1 Press **SHOWVIEW.**

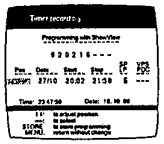
2 Enter a ShowView number.
Example: 920216

3 Press **TRANSMIT.**

On Screen Display



- The VTR will be in the timer recording standby mode after about 1 minute.
- If the "– –" appears in the programme position:



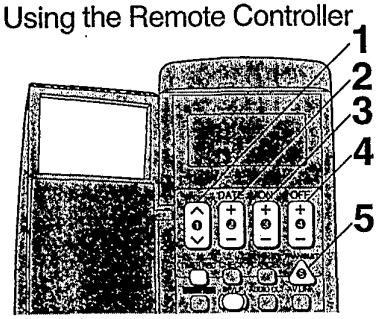
select the programme position of your VTR which receives the TV station you entered at step 2 using button ▲ or ▼.

- To extend the ending time or to make any corrections, use buttons ▲ ▼ ◄ ►.

Notes:

- To release from the standby mode, press **TIMER REC.**
- When the ShowView number is used for programming, the recording time may be slightly longer than the actual programme time.
- When programming two or more programmes, repeat steps 1–3.
- The procedures for checking and cancelling a timer programme are the same as on page 19.

Using the Remote Controller



For Example:

Programme position (channel);	2
Date;	27th, October
Starting time;	20:02
Ending time;	21:30

Preparation

- Insert a cassette tape with an intact erasure prevention tab.
- Open the door of the remote controller.

Operations	Display Symbols

1 Set Programme position (channel) "2".

2 Set Date "27".

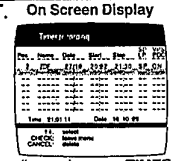
3 Set Starting time "20:02".

- When it is kept pressed, the indication changes in 30-minute steps.

4 Set Ending time "21:30".

5 Press **TRANSMIT.**

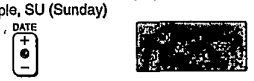
On Screen Display



- The VTR will be in the timer recording standby mode after about 10 seconds.
- To release from the standby mode, press **TIMER REC.**

Weekly Timer Recording

In step 2, select the desired day by pressing **DATE –.**
For example, SU (Sunday)



(SU=Sunday, MO=Monday, TU=Tuesday, WE=Wednesday, TH=Thursday, FR=Friday, SA=Saturday)

Daily Timer Recording

For this timer function, several groups of days can be selected.

Ⓐ Daily recording from Monday to Friday
Ⓑ Daily recording from Monday to Saturday
Ⓒ Daily recording from Sunday to Saturday

In step 2, select the desired days by pressing **DATE –.**
For Example, Ⓒ

Timer Recording from External Signal Source

If Timer Recording is performed by a unit connected to the AV1 (TV), AV2 (DECODER/EXT) Sockets or AV3 (Audio/Video input sockets), select the A1, A2 or A3 indicator for the programme position.

A1: Through the AV1 (TV) socket.
A2: Through the AV2 (DECODER/EXT) socket.
A3: Through the AV3 (AUDIO IN/VIDEO IN) sockets on front panel.

Selecting the Desired Tape Speed

Press SP/LP in any of steps 2–4.

Checking and Cancelling a Timer Programme

The procedures for checking and cancelling a timer programme are the same as on page 19.

Using On Screen Display

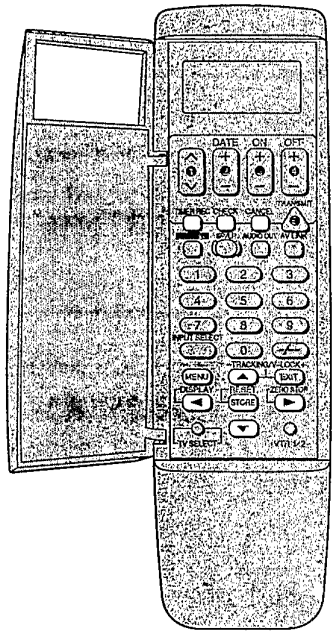
Up to 8 timer programmes can be recorded up to one month in advance by setting the timer, including weekly and daily programmes.

Preparations

- Insert a cassette tape with an intact erasure prevention tab.
- Confirm that the TV is on and the VTR viewing channel is selected.

For Example:

Programme position (channel);	2
Date;	27th, October
Starting time;	20:02
Ending time;	21:30
(Present date;	16th, October)

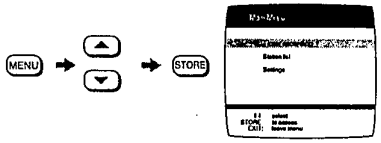


Follow the operation guide on screen display.

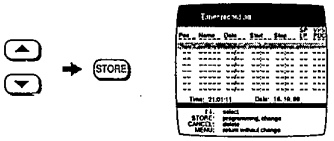
Operations

1 Press **MENU**, and then select **Timer recording**.

On Screen Display

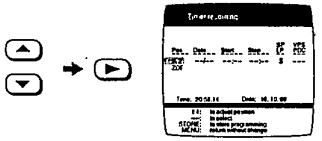


2 Select the unoccupied position.

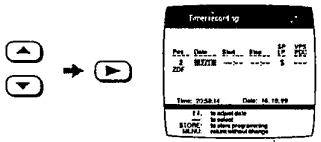


3 Set **Programme position** (channel) "2".

- Press ◄ to return to the previous item.

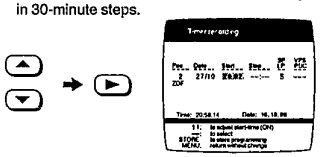


4 Set **Date** "27/10".



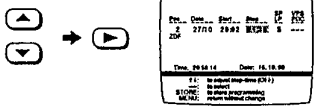
5 Set **Starting time** "20:02".

- When it is kept pressed, the indication changes in 30-minute steps.

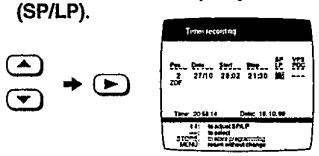


6 Set **Ending time** "21:30".

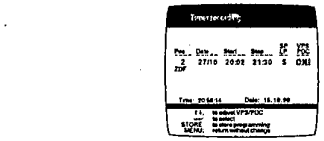
On Screen Display



7 Select the desired **Tape speed (SP/LP)**.



8 Select **VPS/PDC ON** or **OFF (---)**.



9 Press **STORE**.

10 To activate timer recording, press **TIMER REC**.

Weekly Timer Recording

In step 4, select the desired day by pressing ▼.

Daily Timer Recording

For this timer function, several groups of days can be selected.

Ⓐ Daily recording from Monday to Friday
Ⓑ Daily recording from Monday to Saturday
Ⓒ Daily recording from Sunday to Saturday

In step 4, select the desired days by pressing ▼.

Timer Recording from External Signal Source

If Timer Recording is performed by a unit connected to the AV1 (TV), AV2 (DECODER/EXT) Socket or the Audio/Video input sockets, select the A1, A2 or A3 for the programme position.

A1: Through the AV1 (TV) socket.
A2: Through the AV2 (DECODER/EXT) socket.
A3: Through the AV3 (AUDIO IN/VIDEO IN) sockets on front panel.

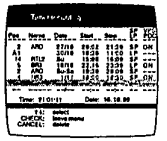
Setting other Programmes in Succession

Repeat steps **2–9**.

Checking a Timer Programme

- The VTR must be turned on, or the timer recording indicator "⏲" is lit.
- Confirm that the TV is on and the VTR viewing channel is selected.

Press **CHECK**.



- On Screen Display may be distorted in the PDC/VPS recording standby mode.

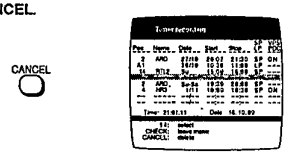
Cancelling a Timer Programme

- The VTR must be turned on, or the timer recording indicator "⏲" is lit.
- Confirm that the TV is on and the VTR viewing channel is selected.

1 Press **CHECK**.

2 Select the desired timer programme.

3 Press **CANCEL**.



Note:
If a timer recording is not performed to the end (due to insufficient tape or cancellation by the user), the programmed timer recording data will be cancelled from the memory by 4 a.m. the next day.
However, if the Timer Record Function is activated at that time, the programmed timer recording data will be cancelled at 4 a.m. the next day.

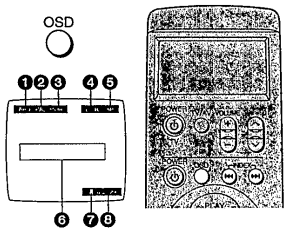
PDC (Programme Delivery Control)/VPS (Video Programme System)

The Programme Delivery Control (PDC) or the Video Programme System (VPS) is a very convenient system which assures that the TV programmes you have programmed for timer recording will be recorded exactly from beginning to end, even if the actual broadcasting time differs from the scheduled time due to delayed start or extension of the programme duration. Also, if a programme is interrupted and, for example, some special news are inserted, the recording will also be interrupted automatically and resumed when the programme continues.

- In the case of PDC/VPS recording, use the correct time (PDC/VPS time) for recording the TV programmes. PDC/VPS recording is not performed when the time (PDC/VPS time) is incorrect, even if only by one minute.
- If the actual broadcasting times of timer recordings overlap (regardless of whether they are PDC/VPS controlled), the recording that starts first has always priority, and the recording of the later beginning programme will start only after the first timer recording has finished.
- When the PDC/VPS signal drops out because the broadcast signal is weak, or when a broadcasting station does not transmit a regular PDC/VPS signal, the timer recording will be performed in the normal mode (without PDC/VPS) even if it was programmed for PDC/VPS. In this case, even if the timer recording is performed, whatever has been programmed will not be cancelled at that particular time but at 4 a.m. on the following day.
- PDC/VPS recording is also possible during timer recording from AV2.

On Screen Display

Press **OSD** to make the On Screen Display appear on the TV screen.



1 TV station

2 TV system

3 Stereo or Bilingual Indicator
When receiving a TV programme, the type of sound system in which it is broadcast is automatically indicated.

4 Audio Output Mode Indicators
The Left (L) and Right (R) Indicators show which sound mode is selected with **AUDIO OUT**.
Stereo: Both the L and R indicators appear.
Left: The L Indicator appears.
Right: The R Indicator appears.
Normal: Both the L and R Indicators don't appear.

5 Tape speed indicator

6 Error message

7 Tape running display

Stop, Eject	■
Rewind	◀◀
Fast Forward	▶▶
Playback	▶
Recording	●
Repeat Playback	R
Insert Editing	INSERT
AV Insert Editing	AV INSERT
Audio Dubbing	A DUB

8 Present time/Tape counter

Information	Display
Present time	17:24:31
Tape counter	−2:35.47
Remaining tape time	REMAIN 2:34

Notes:
- On Screen Display may be disturbed or disappear during special playback.
- When the item **"On screen display"** is set to OFF, the On Screen Display will not appear. (See page 32.)

VHS Index Search System

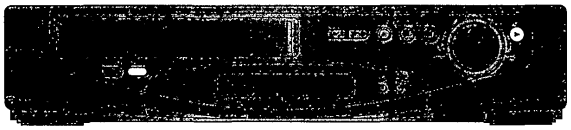
It is very easy to find the beginning of each recording, because a special index signal is recorded at the start of each recorded segment on the tape.

For example:
Searching for the 2nd recorded segment in the forward direction.

Press **INDEX ▶▶I** twice.

- After finding the specific recorded segment, playback starts automatically.
- For the reverse direction, press **INDEX I◀◀**.
- Up to 20 index signals can be searched for in both directions.
- When the opposite **INDEX** button is pressed, the number shall be decreased till 1.
- The figure on the display is decremented by 1 each time an index signal is located.
- The INDEX search function can only work correctly, if the index signals are spaced at least 3 minutes apart in the SP mode and 5 minutes apart in the LP mode.

Recording Index Signals
Index signals are recorded in following cases.
- When a recording is started by pressing **REC**.
- When **REC** is pressed during recording.
- When timer recording is activated.



NTSC Playback

Tapes recorded in the NTSC system can be played back with this VTR via a PAL system TV set.

- The playback picture may roll up or down. If the TV set is equipped with a V-HOLD control, it may be possible to stop the picture movement by adjusting this control.
- Depending on the TV set used, the picture may be in black and white. However, this is not an indication of a malfunction.

S-VHS Quasi Playback (SQPB)

It is also possible to playback tapes recorded in the S-VHS system.

- Some picture noise may occur depending on the type of tape used.
- It is not possible to fully obtain the high resolution that S-VHS is capable of.
- It is not possible to record in the S-VHS system with this VTR.

Other Automatic Functions

Automatic Playback

When a cassette without an erasure prevention tab is inserted, the VTR starts playback automatically.

VTR-off Playback

When the VTR is off, an inserted cassette can be played back by pressing **PLAY**.

Automatic Rewinding

When the tape reaches its end during recording (except for timer recording) or playback, it will automatically be rewound to the beginning.

Automatic Switching Off and Ejection

When the VTR is switched off, and inserted cassette can be ejected simply by pressing **EJECT**. The VTR will eject the cassette and automatically turn itself off again.

Editing

Assembly Editing

This function can be used to make up an edited tape from other recordings or video sources.

A new scene can be added to the end of a previous one.

Preparations

- Connect a movie camera or another VTR to this VTR as shown.
- Insert a recorded cassette tape with an intact erasure prevention tab.
- Select the video source required by pressing **INPUT SELECT** to set A1, A2 or A3.
  - A1: Through the AV1 (TV) socket.
  - A2: Through the AV2 (DECODER/EXT) socket.
  - A3: Through the AV3 (AUDIO IN/VIDEO IN) sockets on front panel.

Operations

1 Press **PAUSE/STILL** on the recording VTR.

2 Search for the end of the previous recording.

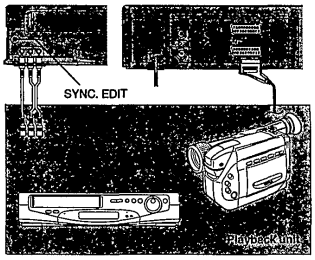
3 Press **REC** to switch the VTR from the pause mode to the recording standby mode.

4 Start the new recording by pressing **PAUSE/STILL** again.

5 Press **STOP** to stop recording.

Note:
The new sound will be recorded on both the normal and Hi-Fi sound tracks, only monaural sound recording is possible on the normal sound tracks.

Recording VTR



Synchronized Editing

It is possible to synchronize the playback start and stop of the Movie Camera with the recording start and stop of this VTR.

Preparations

- Connect a Movie Camera to this VTR with Synchro Connection Cord (VW-K1E).
- Select **One-Touch-Edit** to OFF for synchronized editing. (See page 34.)

1 Put the VTR in the recording pause mode by pressing **REC** and **PAUSE/STILL**.

2 Put the Movie Camera in the still playback mode at the point where you want to start editing.

3 Press **PAUSE/STILL** on the VTR.
- The Movie Camera changes over to the playback mode and the dubbing will start automatically.

Synchronized Editing between the VTRs
When editing from another VTR equipped with Synchro Edit Socket, synchronized start and stop of both VTRs can be activated from this VTR.

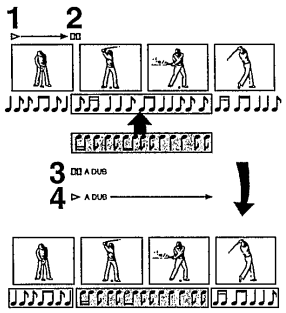
The operation is the same as described for synchronized editing from a Movie Camera.

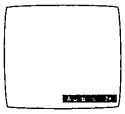
Audio Dubbing

The audio dubbing is made on the normal audio track and erases the original sound on this track. On Hi-Fi audio tracks, however, the original sound is maintained.

Preparation

- Insert a recorded cassette with an intact erasure prevention tab.
- Select the video source required by pressing **INPUT SELECT** to set A1, A2 or A3.
  - A1: Through the AV1 (TV) socket.
  - A2: Through the AV2 (DECODER/EXT) socket.
  - A3: Through the AV3 (AUDIO IN) sockets on front panel.



Operations	Display Symbols	
1 PLAY		Search for the starting point for audio dubbing.
2 PAUSE/STILL		Press **PAUSE/STILL** at the starting point.
3 AUDIO DUB	On Screen Display 	Set for audio dubbing by pressing **AUDIO DUB**. • On some televisions, the screen image may become unstable or begin to scroll at this point. However, this is not an indication of a malfunction.
4 PAUSE/STILL		Start recording the new sound by pressing **PAUSE/STILL**. • Stop recording by pressing **STOP**.

Note:
The new sound will be recorded on the normal sound track of the tape, and the original sound will remain on the Hi-Fi sound track. Only monaural sound recording is possible on the normal sound track.

To hear the new sound, select the normal sound track by pressing **AUDIO OUT**.
To hear the new sound and original sound mixed together, set **Audio System** to HIFI-MIX. (See page 33.)

Audio dubbing with Panasonic Hi-Fi VTR

General

a) Due to VHS format reasons, audio dubbing can be performed only on the normal audio track.
b) The Hi-Fi audio tracks cannot be influenced without erasing the video signal.
c) The audio dubbing function is provided with an automatic recording function. The volume level cannot be adjusted. When dubbing to the Hi-Fi VTR, the volume level must be considered in advance.
d) There are three types of audio dubbing (A–C):

A. Audio dubbing on the normal audio track

1. Select the desired AV input.
1.2. The microphone input may also be selected. In this case, the microphone signal has priority.
   Disconnect the microphone when other audio signals are to be used.
2. Locate the recording starting point and press **PLAY-PAUSE**.
3. Press **AUDIO OUT** three times to select the normal audio track.
4. Press **AUDIO DUB**.
5. Start audio dubbing by releasing the pause function.
6. After audio dubbing has been completed, rewind the tape and make sure that the normal audio track is selected. (Step 3)
7. Check the audio dubbing.

B. Audio dubbing on the normal audio track with Hi-Fi Mix function

1. Select the desired AV input.
2. Locate the recording starting point and press **PLAY-PAUSE**.
3. The Hi-Fi tracks should be set to playback.
   - When a videocassette is inserted, the Hi-Fi tracks are automatically set to playback.
   - Hi-Fi tracks must be recorded. Copy the audio signal, if necessary.
4. Press **AUDIO DUB**.
5. Start audio dubbing by releasing the pause function.
6. After audio dubbing has been completed, rewind the tape and set **Audio System** to HIFI-MIX. (See page 33.)
7. Check the audio dubbing.
   The original sound and the new sound are heard simultaneously.

C. Audio dubbing on the normal audio track with original sound and new sound

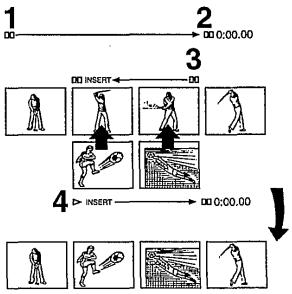
1. Select the desired AV input.
2. Locate the recording starting point and press **PLAY-PAUSE**.
3. The Hi-Fi tracks should be set to playback.
   - When a videocassette is inserted, the Hi-Fi tracks are automatically set to playback.
   - Hi-Fi tracks must be recorded. Copy the audio signal, if necessary.
4. Press **AUDIO DUB**.
   - Input the original signals of the Hi-Fi tracks (Audio-Out) to a mixing console (optional) and mix with the new sound as required.
5. Start audio dubbing by releasing the pause function.
6. After audio dubbing has been completed, rewind the tape and make sure that the normal audio track is selected. (Step 3)
7. Check the audio dubbing.

Insert Editing

This is used to substitute one scene for another providing.

Preparation

- Insert a recorded cassette with an intact erasure prevention tab.
- Select the video source required by pressing **INPUT SELECT** to set A1, A2 or A3.
  - A1: Through the AV1 (TV) socket.
  - A2: Through the AV2 (DECODER/EXT) socket.
  - A3: Through the AV3 (AUDIO IN/VIDEO IN) sockets on front panel.



Operations	Display Symbols	
1		Press **PAUSE/STILL** on recording the VTR.
2	0:00.00	Search for the Edit out (ending) point, and set the counter to 0:00.00 by pressing **COUNTER RESET**.
3	On Screen Display	Search for the Edit in (starting) point, and press **INSERT**. • If you want to replace the sound on the "normal" audio track, press **AUDIO DUB**, too. (AV Insert Editing)
4		Start insert editing by pressing **PAUSE/STILL**. • The insert editing will finish when the counter reaches 0:00.00.

Note:
Insert Editing cannot be used on blank sections of a tape. In this case use Assembly Editing first.

The new sound will be recorded on the Hi-Fi sound track. If AUDIO DUB selected, the new sound will also be recorded on the normal sound track.

Only monaural sound recording is possible on the normal sound tracks.

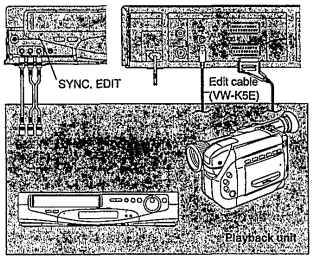
One-Touch-Editing

With this editing, it is easy to perform repeated assemble editing, insert editing or audio dubbing operations.

Preparations

- Before the VTR is connected to a movie camera or another VTR, select **One-Touch-Edit** to ON. (See page 34.) The playback VTR display or movie camera viewfinder image may be abnormal if the edit cable is connected with **One-Touch-Edit** left OFF.
- Connect a movie camera or another VTR to this VTR as shown.
- Use the **SYNC. EDIT** socket when connecting this unit to a VTR or movie camera equipped with a LANC socket.
- Insert a recorded cassette tape with an intact erasure prevention tab.
- Select the video source required by pressing **INPUT SELECT** to set A1, A2 or A3.
  - A1: Through the AV1 (TV) socket.
  - A2: Through the AV2 (DECODER/EXT) socket.
  - A3: Through the AV3 (AUDIO IN/VIDEO IN) sockets on front panel.

Recording VTR



Operations

1. Press **PAUSE/STILL** on the recording VTR.
2. Search for the end of the previous recording.
3. Press **REC** to switch the VTR from the pause mode to the recording standby mode.
   - The playback VTR will be in still mode.
   - If **INSERT** or **AUDIO DUB** is pressed instead of **REC**, Insert Editing or Audio Dubbing can be performed.
4. Search for the Edit in (starting) point on the playback VTR.
5. Start One-Touch-Editing by pressing **PAUSE/STILL** again.
6. Press **PAUSE/STILL** at the Edit out (ending) point on the playback VTR.
   - For Editing in succession, repeat **4** to **6**.
7. Press **STOP** to stop editing.

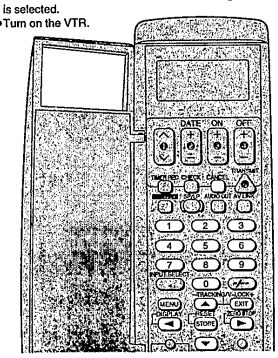
Storing TV Broadcasts into your VTR

Introduction

The VTR is fitted with its own tuner (just like a normal TV set) and can be pre-set to receive up to 99 TV broadcast stations.
If VTR is not correctly tuned by Auto setup, follow the procedure bellow.

Preparation

- Confirm that the TV is on and the VTR viewing channel is selected.
- Turn on the VTR.



Manual Tuning Procedure

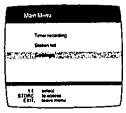
Follow the operation guide on screen display.

Operations

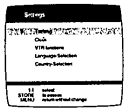
1 Press **MENU**.

2 Select **Settings**.

On Screen Display

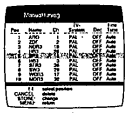


3 Select **Tuning**.

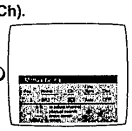


4 Select **Manual**.

5 Select desired programme position.



6 Select Channel **(Ch)**.



7 Select **Dec ON** or **Dec OFF**.
ON: To preset pay TV stations.
OFF: To preset normal TV stations.

8 Use ◄ ► to display the next screen.
Select **TV System**.
PAL: For receiving PAL signal.
MESECAM: For receiving SECAM signal.

9 NV-HD650EC only
Select **Mono OFF**.
- Select **Mono ON** to record the normal sound during a stereo, bilingual or NICAM broadcast or if the stereo sound is distorted due to inferior reception conditions.

10 Press **MENU**, and then press **EXIT**.

Channel Plan

Channel indication	TV channel	
	Germany/Italy	other countries
2–12	*E2–E12	E2–E12
13–20	A–H (Only Italy)	—
21–69	21–69	21–69
74–76	—	S1–S3
80–82	—	M1–M3
83–89	S4–S10	M4–M10
90–99	S11–S20	U1–U10
121–141 Hyperband	**S21–S41	S21–S41

*In Italy: H1...(11), H2...(12)
**Only for 8 MHz channel raster

To change the programme position or TV station name:

After step 5 but before step 8, select the programme position (Pos) or TV station name (Name) item using ◄ ►, and then make the desired change.

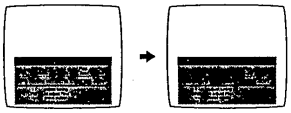
Fine Tuning Procedure

Follow steps 1 to 5 on page 28.

6 Select **Fine Tune**.

7 Press ▲ or ▼ to obtain the best tuning condition.
- To return the tuning to its former state, press **STORE**.

On Screen Display



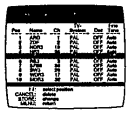
8 Press **MENU**, and then press **EXIT**.

Blanking of Unoccupied Programme positions

Follow steps 1 to 4 on page 28.

5 Select the desired TV station.

6 Press **CANCEL**.



- Repeat steps 5 and 6 for another unoccupied programme positions to skip during the selection of the programme positions.

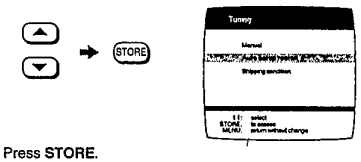
7 Press **EXIT**.

Auto Setup Restart

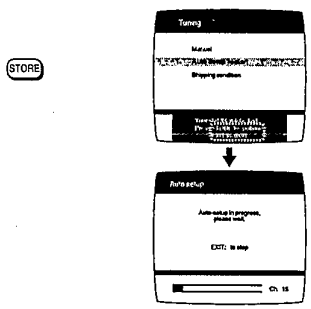
When your address changes, follow the procedure below.
Follow the steps 1 to 3 on page 28.

4 Select **Auto setup restart.**

On Screen Display



5 Press **STORE.**

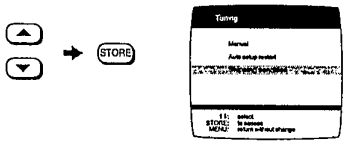


- After the Auto setup, select the your country to set TV station list, guide number for ShowView and language. See page 11.

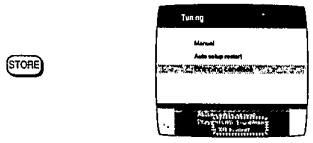
Shipping Condition

If you want to return the VTR to the factory-preset condition, follow the procedure bellow.
Follow the steps 1 to 3 on page 28.

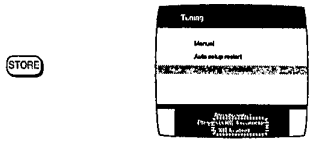
4 Select **Shipping condition.**



5 Press **STORE.**



6 Press **STORE** again.



Note:
To re-tune VTR, disconnect mains lead and then reconnect mains lead. If VTR is off, turn on the VTR. Auto setup starts.

Setting the Clock of your VTR

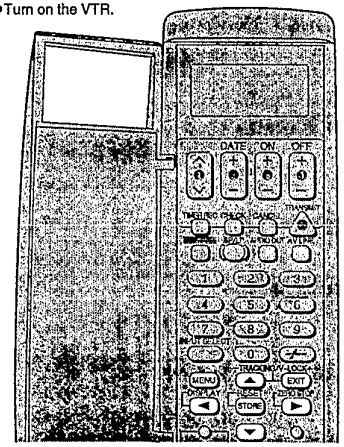
The built-in clock is used to activate the timer for automatic recording and must be set to the correct time.

The built-in digital clock employs the 24-hour system.

If VTR is not correctly set by Auto setup, follow the procedure below.

Preparation

- Confirm that the TV is on and the VTR viewing channel is selected.
- Turn on the VTR.



Manual Clock Setting

Follow the operation guide on screen display.

Operations

1 Press **MENU**, and then select **Settings.**

2 Select **Clock.**

3 Select **Manual setting.**

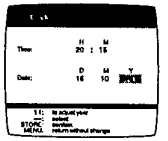
4 Set **Time (H/M).**
- When it is kept pressed, the indication changes in 30-minute steps.
- Press ◄ to return to the previous item.

5 Set **Date (D).**

6 Set **Month (M).**

7 Set **Year (Y).**
- There is no need to press ►.

On Screen Display



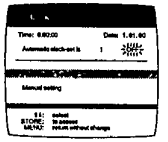
8 Press **STORE.**
- The clock will start.

9 Press **EXIT.**

Automatic Clock Setting

Follow steps 1 to 2 of the above procedure.

3 Select **Automatic setting.**



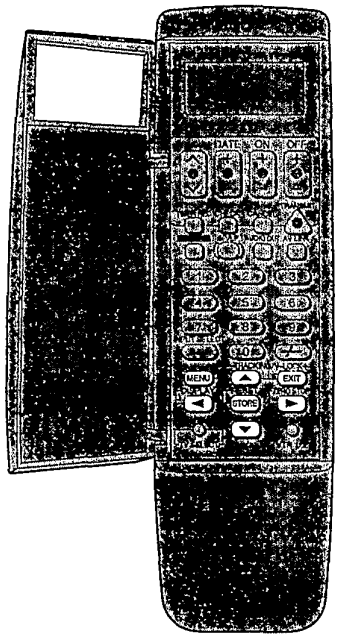
4 Press **STORE.**
- The clock is set automatically.

Notes:
- The clock operates for at least 60 minutes by its backup system in the event of power failure.
- When the item **"Automatic clock-set is"** is ON on screen display, Automatic time correcting function is activated.
  The Automatic time correcting function is only activated when the power is off. This function is not activated during timer recording standby mode.

Settings Using On Screen Display

Preparations

- Confirm that the TV is on and the VTR viewing channel is selected.
- Turn on the VTR.

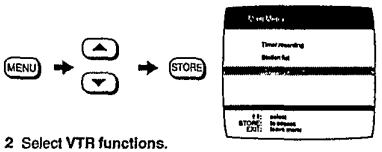


VTR functions

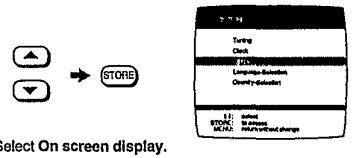
On Screen Display

1 Press **MENU**, and then select **Settings**.

On Screen Display



2 Select **VTR functions**.



3 Select **On screen display**.

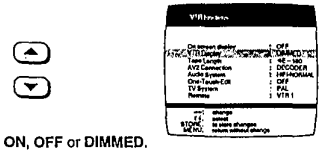
4 Select **ON** or **OFF**.

ON: The On Screen Display will appear on the TV screen by pressing **OSD**.
OFF: The On Screen Display will not appear even if **OSD** is pressed.

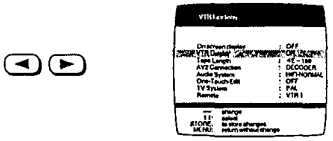
VTR Display

1 Select **VTR Display**.

On Screen Display



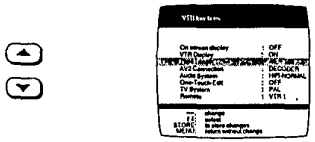
2 Select **ON**, **OFF** or **DIMMED**.



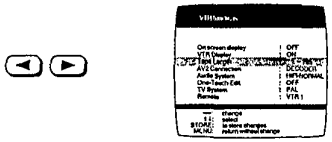
ON: When VTR is turned off, the characters are lit in the VTR display.
OFF: When VTR is turned off, the characters are not lit in the VTR display.
DIMMED: When VTR is turned off, the characters are dimmed in the VTR display.

To select the Corresponding Cassette Tape Length for Displaying the Approximate Remaining Tape Time

1 Select **Tape Length**.



2 Select the corresponding cassette tape length.

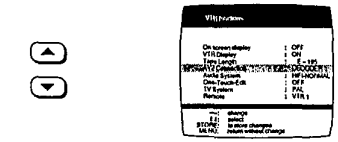


◄ E-180: *For E30, -60, -90, -120 and -180 tapes.*
E-195: For E195 tape.
E-240: For E240 tape.
E-260 ►: For E260 and -300 tapes.

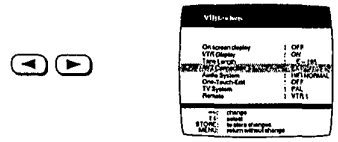
- The times displayed may differ depending on the tape used.

AV2 Connection

1 Select **AV2 Connection**.



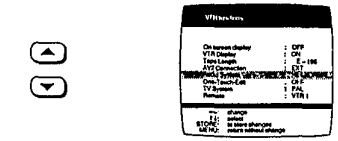
2 Select **EXT** or **DECODER**.



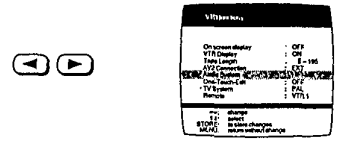
EXT: When another VTR is connected to the AV2 (DECODER/EXT) socket.
DECODER: When the decoder is connected to the AV2 (DECODER/EXT) socket.

Audio System

1 Select **Audio System**.



2 Select **HIFI-NORMAL** or **HIFI-MIX**.

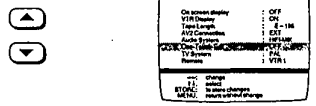


HIFI-NORMAL: *Normally set at this position to* reproduce the better sound available from the Hi-Fi track.
HIFI-MIX: Both sound tracks (the Hi-Fi sound track and the normal sound track) are played back mixed together. Use this setting when playing back a cassette tape which has been insert edited or audio dubbed.

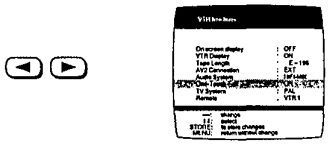
One-Touch-Edit

1 Select **One-Touch-Edit**.

On Screen Display



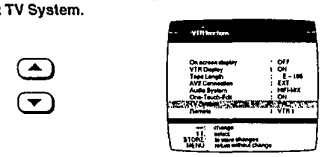
2 Select **ON** or **OFF**.



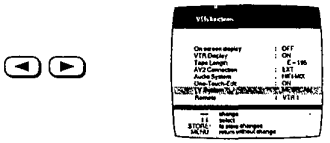
ON: For One-Touch-Editing.
OFF: For editing with editing controller or synchronized editing.

To set the Colour TV System

1 Select **TV System**.



2 Select **PAL** or **MESECAM**.



- Set according to the colour TV system used during playback or external recording.

Remote Control Mode

1 Select **Remote**.

2 Select **VTR1** or **VTR2**.

VTR1: Set to this position on both the VTR and remote controller for normal use with one VTR.
VTR2: Set to this position when using two Panasonic VTRs.
This allows to operate VTR1 or VTR2 with remote controller.

- After changing the remote control mode, press **VTR1/2** to change the remote control mode of the remote controller. If this is not done, it will not be possible to operate the VTR using the remote controller.

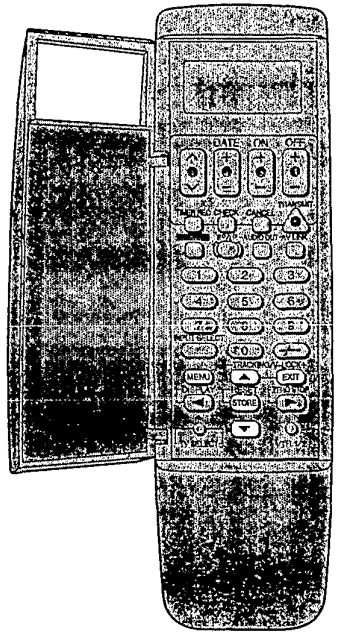
After All Settings are selected

Press **STORE**, and then press **EXIT** to make On Screen Display disappear.

STORE → EXIT

Language-Selection

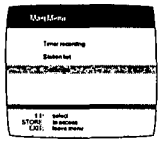
To change the language setting for On Screen Display, follow the steps bellow.



1 Press **MENU**, and then select **Settings**.

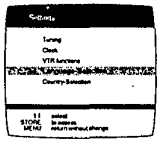
On Screen Display

MENU → ↑↓ → STORE



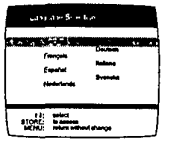
2 Select **Language-Selection**.

↑↓ → STORE



3 Select the desired language.

↑↓



4 Press **STORE**, and then press **EXIT**.

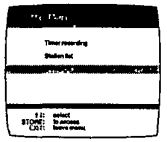
STORE → EXIT

Country-Selection

To change the country setting, follow the steps bellow.

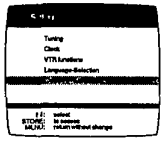
1 Press **MENU**, and then select **Settings**.

MENU → ↑↓ → STORE



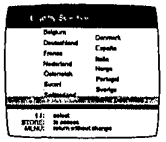
2 Select **Country-Selection**.

↑↓ → STORE

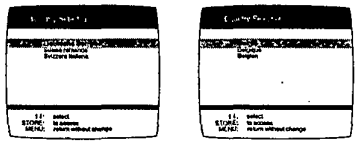


3 Select the desired country.

↑↓



- When Switzerland or Belgium has been selected, operation moves to the screen which follows. Select the item in accordance with the language required.

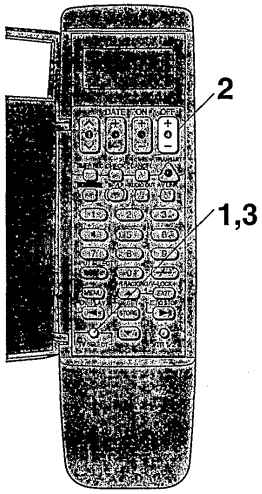


4 Press **STORE**, and then press **EXIT**.

STORE → EXIT

Setting the Remote Controller for Operation of your TV

You can operate some TV manufacturers (see next page) using the supplied Remote Controller after this setting up.



Preparation
Turn on the TV.

Operations **Display Symbols**

1 Keep **TV SELECT** pressed for more than 2 seconds.

TV SELECT

2 Press **OFF** several times.

OFF

- When the number matches the manufacturer of your TV, the TV's power is turned off.

Read through the information on the following page as well.

3 Press **TV SELECT.**

TV SELECT

How to change the number
Each time the "+" side of **OFF** is pressed, the number is counted up by one as follows:

→1→2→3...28→

When the "–" side is pressed, the number is counted down by one in the reverse order to that indicated above.

Note:
Some TV models cannot be operated using this remote controller.

Number	Manufacturer
1–4	Panasonic
5	GRUNDIG, Blaupunkt, SIEMENS
6	PHILIPS, LOEWE, SAMSUNG, RADIOLA, DUAL, PYE, BUSH, GOODMANS, ELEMIS, CURTIS
7	SONY
8	METZ
9*	FERGUSON, THOMSON, TELEFUNKEN, GOODMANS, SABA
10*	FERGUSON, THOMSON, TELEFUNKEN, GOODMANS
11*	FERGUSON, THOMSON, TELEFUNKEN, GOODMANS, SABA
12*	FERGUSON, TELEFUNKEN, GOODMANS, SABA
13*	TELEFUNKEN
14*	FERGUSON, THOMSON, TELEFUNKEN, GOODMANS, SABA
15*	FERGUSON, THOMSON, TELEFUNKEN, GOODMANS, SABA, NORDMENDE, BRANDT
16*	TELEFUNKEN
17, 18	HITACHI
19	*SIEMENS*
20	SAMSUNG
21	ITT, NOKIA, SELECO
22	NOKIA, SALORA
23	MIVAR
24	TOSHIBA
25	SANYO
26	SHARP
27	JVC
28	MITSUBISHI

When a TV manufacturer has the plural number
For example, When the number is 1, 2, 3 or 4 (Panasonic):
When the TV's power is turned off in step **2** above, turn it back on and adjust the TV's volume using this remote controller. The volume can be adjusted if the number matches the TV manufacturer. If it is not possible to adjust the TV's volume, try setting the number (1 to 4) to match the TV manufacturer again until the volume can be adjusted.

***When the number is 9–16**
How to change the programme position of TV:

1 Press ∧ **(TV)** to make **POS** appear on screen display.

2 Press **VOLUME** + or –.
- To adjust the TV's volume using the remote controller after that, press ∧ **(TV)** to make **POS** on screen display disappear and then adjust the volume. For some models, **POS** *disappears automatically after* several seconds. In these cases, this operation is not necessary.

Note:
FERGUSON, THOMSON, TELEFUNKEN, GOODMANS and SABA have plural numbers. Although some models may operate with any of these numbers, other models may operate with only one number. Check each number in turn, and set the optimal number.

SECTION 2
ADJUSTMENT PROCEDURES

2-1. DISASSEMBLY METHOD

2-1-1. DISASSEMBLY FLOW CHART

This flow chart indicates disassembly steps of the cabinet parts and the circuit boards in order to find the necessary items for servicing.
When reassembling, perform the steps in the reverse order.

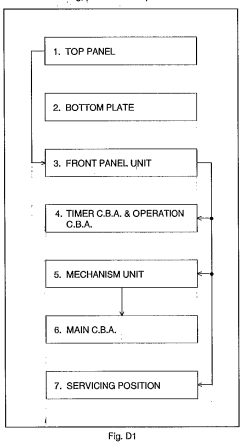


Fig. D1

2-1-2. DETAIL OF DISASSEMBLY METHOD

1. REMOVAL OF THE TOP PANEL

Remove..... 4 Screws (A)

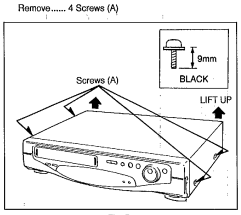


Fig. D2

2. REMOVAL OF THE BOTTOM PLATE

Remove..... Screw (B)
Remove..... 2 Screws (C)
Unlock ..... 4 tabs (D)

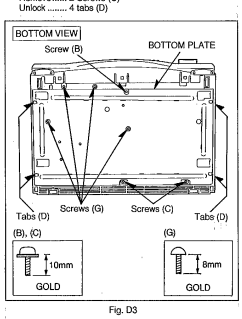


Fig. D3

3. REMOVAL OF THE FRONT PANEL UNIT

Pull out ..... JOG & SHUTTLE Knob
Remove..... Screw (D)
Unlock ..... 8 Tabs (E)

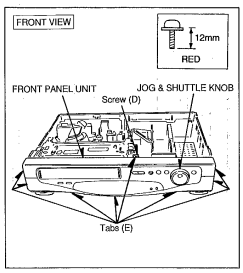


Fig. D4

4. REMOVAL OF THE TIMER C.B.A. & OPERATION C.B.A.

Unlock ..... 6 Tabs (F)

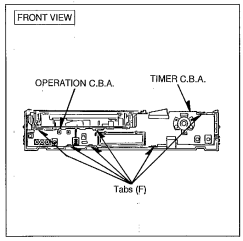


Fig. D5

5. REMOVAL OF THE MECHANISM UNIT

Remove..... 4 Screws (G) [Fig. D3]
Remove..... 3 Screws (H)
Remove..... Screw (I)
Unlock ..... Tab (J) and PACK HOLDER

6. REMOVAL OF THE MAIN C.B.A.

Remove..... 2 Screws (C) [Fig. D3]
Unlock ..... 7 Tabs (K)

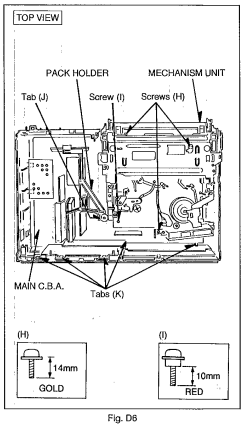


Fig. D6

7. SERVICING POSITION

Remove..... 2 Screws (C) [Fig. D3]
Remove..... 3 Screws (H)
Remove..... Screw (I)
Unlock ..... Tab (J) and PACK HOLDER
Unlock ..... 7 Tabs (K)

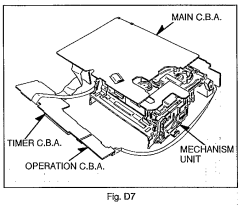


Fig. D7

2-2. MECHANICAL ADJUSTMENT PROCEDURES

The mechanical chassis of this model is the K Mechanical Chassis.
Therefore refer to the Service Manual for K Mechanical Chassis. (Order No. VRD9307M131)

CAUTIONS:

To make a Adjustment Mode for Tape Interchangeability, there are two ways to turn off the Auto Tracking.

(1) Connect a jumper wire (K2501) which has been cut as shown in Fig. M1.
After finishing the adjustment, disconnect the jumper wire.
(2) Press the "FF", "REW" and "EJECT" buttons 3 times to set the Service Mode 2.

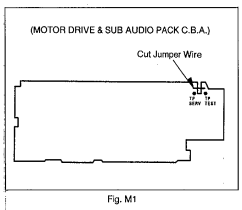


Fig. M1

2-3. DISASSEMBLY PROCEDURES OF MECHANISM

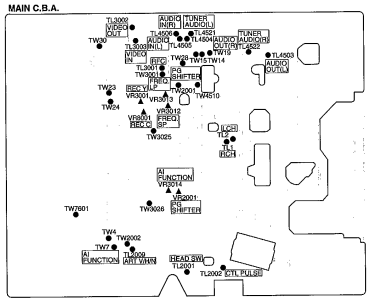
The mechanical chassis of this model is the K Mechanical Chassis.
Therefore refer to the Service Manual for K Mechanical Chassis. (Order No. VRD9307M131)

2-4. ASSEMBLY PROCEDURES OF MECHANISM

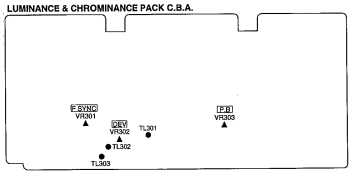
The mechanical chassis of this model is the K Mechanical Chassis.
Therefore refer to the Service Manual for K Mechanical Chassis. (Order No. VRD9307M131)

LOCATION OF TEST POINTS & CONTROLS

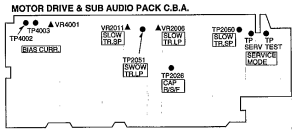
MAIN C.B.A.



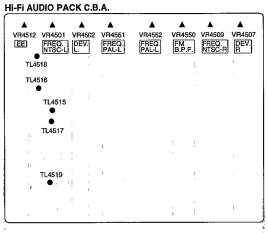
LUMINANCE & CHROMINANCE PACK C.B.A.



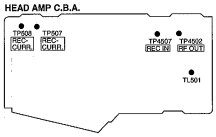
MOTOR DRIVE & SUB AUDIO PACK C.B.A.



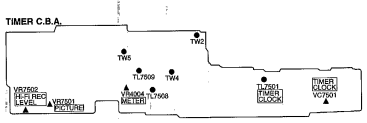
Hi-Fi AUDIO PACK C.B.A.



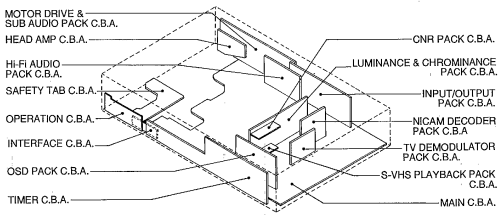
HEAD AMP C.B.A.



TIMER C.B.A.



CIRCUIT BOARD LAYOUT



2-5. ELECTRICAL ADJUSTMENT PROCEDURES

This section provides complete adjustment procedures required for electric circuits of VHS Video Cassette Recorders.

2-5-1. TEST EQUIPMENT
To perform electrical adjustments following equipment is required.

1. Dual-Trace Oscilloscope. (More than 35MHz)
   Voltage Range: 0.005-5Vdiv
   Frequency Range: DC-35MHz
   Probes: 10:1 OR 1:1
2. Frequency Counter.
   Frequency Range: 0-10MHz
   Probes: 1:1
3. Universal Counter.
4. Digital Volt Meter. (D.V.M.)
5. Video Sweep Generator.
6. Sine Wave Generator.
7. Video Pattern Generator.
8. VHS Alignment Tape. (VFJ8125H3F)
9. VHS Blank Tape.
10. Monitor.
11. Plastic Tip Driver.
12. DC Power Supply.

2-5-2. PREPARATION
During adjustment, set each selector as follows: when no indication in the procedure.

CVC SW .....ON
TAPE SPEED .....SP
CHANNEL.....AV1/AV2/AV3
(Set to signal input terminal number)
TEST SIGNAL SW (REAR) .....OFF
HI-FI REC VR.....CENTRE FIX
PICTURE VR .....CENTRE FIX

2-5-3. HOW TO READ ADJUSTMENT PROCEDURES

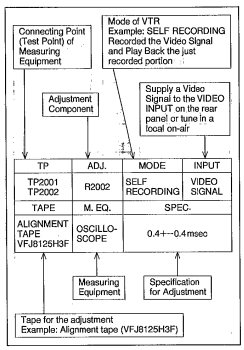


Fig. E1

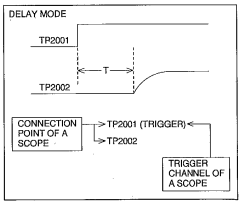


Fig. E2

SERVO SECTION

2-5-4. PG SHIFTER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TW2001 VIDEO OUT	VR2001	PLAYBACK	
TAPE	M. EQ.	SPEC.	
ALIGNMENT TAPE VFJ8125H3F	OSCILLO-SCOPE	7.0+−0.5 (H)	

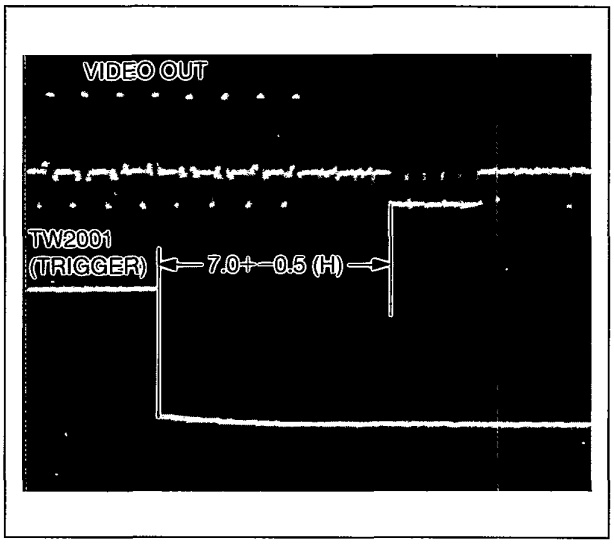


Fig. E3

2-5-5. SLOW TRACKING ADJUSTMENT

TP	ADJ.	MODE	INPUT
MONITOR SCREEN	VR2011 (SP) VR2006 (LP)	(SELF RECORD) SLOW	CCIR PATTERN
TAPE	M. EQ.	SPEC.	
BLANK TAPE	MONITOR TV	Noise bar on the monitor screen is minimized. (Shown in Fig. E5)	

Note: 1. Before this adjustment, connect a jumper wire which has been cut as shown in Fig. E4 or set the service mode 2 (refer to section 2-2).
2. After connecting a jumper wire or setting the service mode 2, press the TRACKING (+) and (−) buttons on the Remote Controller simultaneously to set the tracking to centre fix position.
3. After this adjustment, disconnect a jumper wire or cancel the service mode.

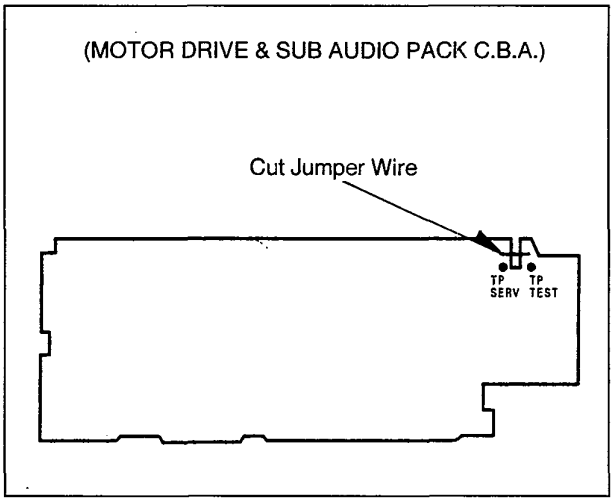


Fig. E4

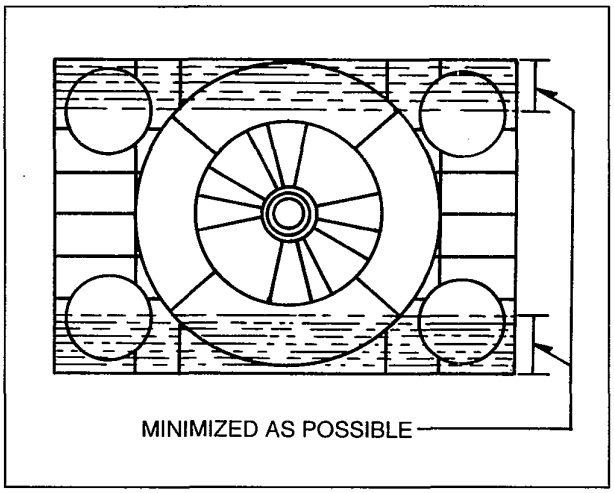


Fig. E5

LUMINANCE & CHROMINANCE SECTION

2-5-6. RECORDING CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP507 (HOT) TP508 (GND)	VR3001 (Y) VR8001 (C)	SP RECORDING	PAL COLOUR BAR
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLO-SCOPE	Y=140+−5 (mVp-p) C=32+−5 (mVp-p)	

Note: 1. Adjust the Luminance level until the peak level of V-SYNC is 140+−5mVp-p.
2. When adjusting the Chrominance level, Supply +5V DC to Pin 6 of PP3001 to eliminate Luminance component.

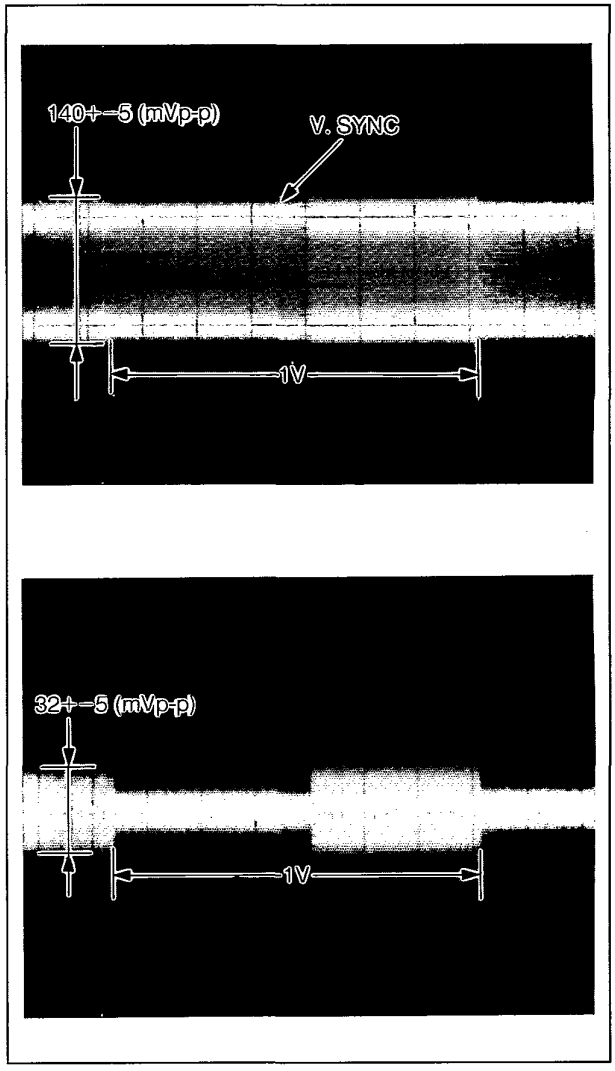
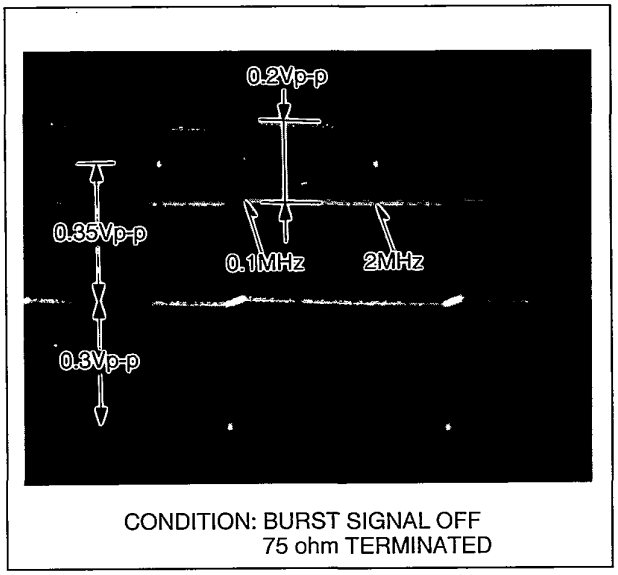


Fig. E6

2-5-7. VIDEO FREQUENCY RESPONSE ADJUSTMENT

TP	ADJ.	MODE	INPUT
VIDEO OUT	VR3012 (SP) VR3013 (LP)	SP/LP (SELF RECORD) PLAYBACK	VIDEO SWEEP SIGNAL (Shown in Fig. E7)
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLO-SCOPE/ VIDEO SWEEP GENERATOR	SP: 0+−1 (dB) (90−110%) LP: 0+−1 (dB) (90−110%)	

Note: 1. Set the Video Sweep Signal as shown in Fig. E7.
2. Set the CVC SW to OFF position.



CONDITION: BURST SIGNAL OFF
75 ohm TERMINATED

Fig. E7

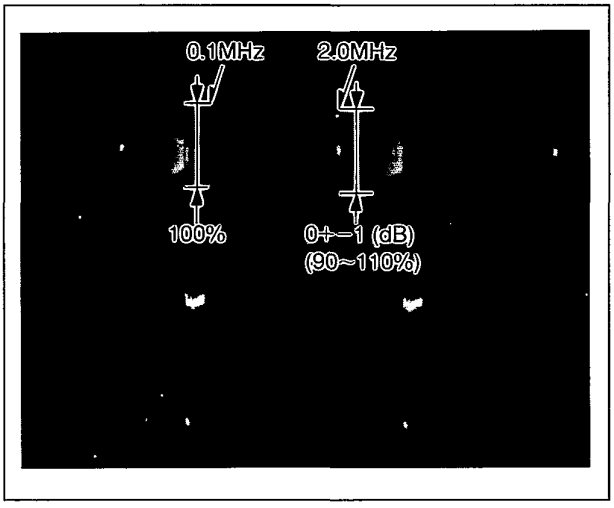


Fig. E8

2-5-8. PLAYBACK LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
VIDEO OUT	VR303	PLAYBACK	
TAPE	M. EQ.	SPEC.	
ALIGNMENT TAPE VFJ8125H3F	OSCILLO-SCOPE	Y: 2.0+−0.1 Vp-p CYAN: 1.1+−0.3 Vp-p	

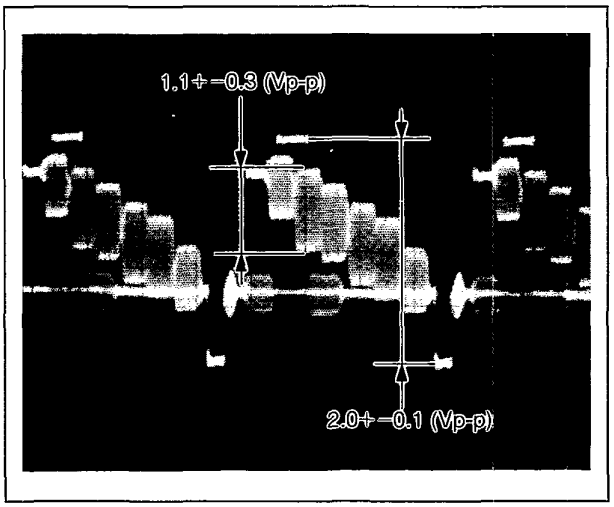


Fig. E9

2-5-9. DEVIATION ADJUSTMENT

TP	ADJ.	MODE	INPUT
VIDEO OUT	VR301 VR302	(SELF RECORDED) PLAYBACK	PAL COLOUR BAR
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLO-SCOPE	Y: 2.0+−0.1 (Vp-p) (VIDEO: SYNC=70 : 30)	

Note: 1. Before this adjustment, the PLAYBACK LEVEL ADJUSTMENT (2-5-8) must be done.
2. Record the colour bar signal and adjust VR301 and VR302 during recording.
3. Playback the just recorded portion and confirm the playback Y-signal level is 2.0+−0.1 Vp-p.
4. If the signal level is out of the specification, repeat 2 and 3 until the signal level is the specification.

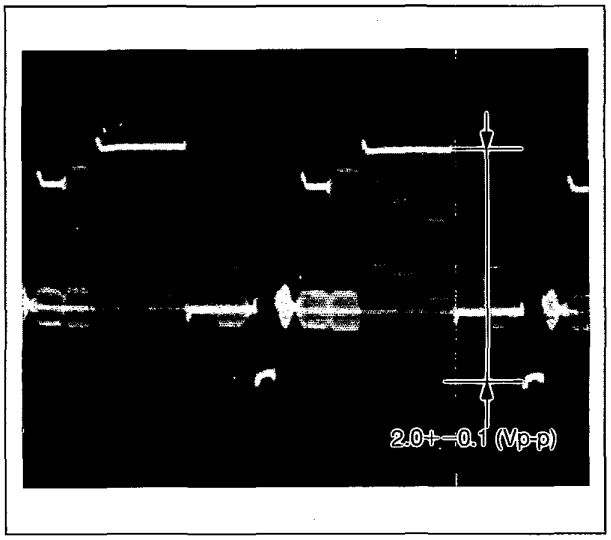


Fig. E10

2-5-10. AI FUNCTION ADJUSTMENT

TP	ADJ.	MODE	INPUT
TW7	VR3014	PLAYBACK (SELF RECORDED)	PAL COLOUR BAR
TAPE	M. EQ.	SPEC.	
BLANK TAPE	D.V.M	2.5+−0.3 (V)	

AUDIO SECTION

2-5-11. BIAS CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4002 (HOT) TP4003 (GND)	VR4001	RECORDING	
TAPE	M. EQ.	SPEC.	
BLANK TAPE	D.V.M.	2.6+−0.1 (mVrms)	

Note: 1. Connect the Audio Input and GND.

2-5-12. HiFi E-E LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
AUDIO OUT (L)	VR4512	STOP	SINEWAVE 1 KHz/−6 dB (AVI IN)
TAPE	M. EQ.	SPEC.	
	V.T.V.M./ SINEWAVE GENERATOR	−8+−2.0 (dB)	

Note: 1. Select the STEREO mode by Remote Controller. (Both Left and Right indicators on the FIP are lit.)
2. Set the HIFI REC VR to FIX position.

2-5-13. CARRIER FREQUENCY ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC4501-34 (L) IC4501-47 (R)	VR4501 (NTSC-L) VR4509 (NTSC-R) VR4551 (PAL-L) VR4552 (PAL-R)	SP RECORDING	
TAPE	M. EQ.	SPEC.	
BLANK TAPE	FREQUENCY COUNTER	NTSC-L: 1.3+−0.003 (MHz) NTSC-R: 1.7+−0.003 (MHz) PAL-L: 1.4+−0.003 (MHz) PAL-R: 1.8+−0.003 (MHz)	

Note: 1. When adjusting the NTSC mode, connect a jumper wire between PP3002-2 and GND.
2. When adjusting the PAL mode, disconnect a jumper wire.

2-5-14. DEVIATION ADJUSTMENT

TP	ADJ.	MODE	INPUT
BETWEEN VR4502 and R4511 (L) BETWEEN VR4507 and R4501 (R)	VR4502 (L) VR4507 (R)	SP RECORDING	SINEWAVE 1KHz/−6dB (AV1 IN)
TAPE	M. EQ.	SPEC.	
BLANK TAPE	V.T.V.M./ SINEWAVE GENERATOR	110 (mVrms)	

Note: 1. Before recording the sinewave, adjust the HIFI REC VR until the audio output level at Audio Output Terminal is 400mVrms.

2-5-15. FM B.P.F. ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC4501-33 (L) IC4501-48 (R)	VR4550	PLAYBACK	SINEWAVE 1.608MHz/ 200mVp-p (PK4003-8)
TAPE	M. EQ.	SPEC.	
NTSC RECORDED TAPE	OSCILLO-SCOPE/ SINEWAVE GENERATOR	Lch (IC4501-33)= Rch (IC4501-48)	

Note: 1. Disconnect P501 (from MAIN C.B.A. to HEAD AMP C.B.A.).
2. The GND lead of oscilloscope must be connected to GND on HIFI AUDIO PACK C.B.A. to reduce the noise.
3. Supply the sinewave signal (1.608MHz/200mVp-p) to PK4003-8.
4. After this adjustment, connect P501.

TIMER SECTION

2-5-16. TIMER REFERENCE CLOCK ADJUSTMENT

TP	ADJ.	MODE	INPUT
TL7501	VC7501	STOP	
TAPE	M. EQ.	SPEC.	
	UNIVERSAL COUNTER	7812.5+−0.015 (usec)	

2-5-17. LEVEL METER SENSITIVITY ADJUSTMENT

TP	ADJ.	MODE	INPUT
LEVEL METER ON THE FIP	VR4004	STOP	SINEWAVE 1KHz/−6dB (AVI IN)
TAPE	M. EQ.	SPEC.	
		0dB INDICATOR ON THE AUDIO LEVEL METER JUST LIGHTS UP	

Note: 1. Select the STEREO mode.
(Both Left and Right indicators on the FIP are lit.)
2. Before recording the sinewave, adjust the HIFI REC VR until the signal level at Audio Output Terminal is 400mVrms.
3. Set the HIFI REC VR to FIX position.
4. Before this adjustment, the HIFI EE LEVEL ADJUSTMENT (2-5-12) must be done.

SECTION 3
ABBREVIATIONS & BLOCK DIAGRAMS

3-1. ABBREVIATIONS

443NT [L]	4.43 NTSC Ⓛ	BIL. [H]	BILINGUAL Ⓗ
A. COMP	AUDIO COMPONENT SIGNAL	BIL/M1 [L]	BILINGUAL Ⓛ
A. COMPO	AUDIO COMPONENT SIGNAL	BS CLOCK	BS CLOCK
A. D.P [L]	AUDIO DUBBING PAUSE Ⓛ	BS DATA	BS DATA
A. D/L [L]	AUDIO DUBBING PAUSE Ⓛ	BS LCH IN	BS L CHANNEL INPUT
A. DEF [S]	AUDIO DEFEAT	BS MIX [H]	BS MIX Ⓗ
A. DEF [S] [L]	AUDIO DEFEAT	BS MON [H]	BS MONITOR Ⓗ
A. DUB P [L]	AUDIO DUBBING PAUSE Ⓛ	BS MONI [H]	BS MONITOR Ⓗ
A. DUB [H]	AUDIO DUBBING Ⓗ	BS RCH IN	BS R CHANNEL INPUT
A. ERASE	AUDIO ERASE	BS VIDEO	BS VIDEO SIGNAL
A. H. SW	AUDIO HEAD SWITCHING PULSE	BS VIDEO/BS1	BS VIDEO SIGNAL
A. HEAD [R]	AUDIO HEAD (REC)	BS [H]	BS Ⓗ
A. HEAD [W]	AUDIO HEAD (PLAY)	BS. LEVEL	BS LEVEL
A. IN [L]	AUDIO INPUT (L)	BS. M [H]	BS MONITOR Ⓗ
A. IN [R]	AUDIO INPUT (R)	BS/VTR [H]	BS/VTR Ⓗ
A. MUT [H]	AUDIO MUTE Ⓗ	BUS CLK	BUS CLOCK
A. MUTE [H]	AUDIO MUTE Ⓗ	BUS LSN	BUS LISTEN
A. OUT [L]	AUDIO OUTPUT (L)	BUS TLK	BUS TALK
A. OUT [R]	AUDIO OUTPUT (R)	BUZZER	BUZZER
A. RF OUT	AUDIO RF SIGNAL OUTPUT	CAP EC	CAPSTAN TORQUE CONTROL
A/VS/S. DATA	AV SW/SERIAL DATA	CAP M GND	CAPSTAN MOTOR GND
AC ONLINE	AC ONLINE	CAP. ET	CAPSTAN TORQUE CONTROL
AC. O/EE. H	AC ONLINE/EE Ⓗ	CAP. FG1	CAPSTAN FG1 PULSE
AFC S C	AFC S CURVE	CAP. FG2	CAPSTAN FG2 PULSE
AFC [S]	AFC S CURVE	CAS. SW	CASSETTE SW
AFC. DEF	AFC DEFEAT	CCN	PLAYBACK CONTROL SIGNAL (−)
ARFC OUT	AUDIO RF SIGNAL OUTPUT	CCP	PLAYBACK CONTROL SIGNAL (+)
ART. V	ARTIFICIAL VERTICAL SYNC SIGNAL	CHM	CONTROL SIGNAL (+)
ART. V. MM	ARTIFICIAL VERTICAL SYNC SIGNAL MONO MULTI	CHP	CONTROL SIGNAL (−)
		CINEM [L]	CINEMA Ⓛ
ART. V/H/N	ARTIFICIAL VERTICAL SYNC SIGNAL Ⓗ/NORMAL	CINEMA [L]	CINEMA Ⓛ
		CINEMA/MIX	CINEMA/MIX
AT. V/H/N	ARTIFICIAL VERTICAL SYNC SIGNAL	CKL	RATCH LOCK
ATSW/TEST/NOR/SE	TEST/NORMAL/SERVICE	CKS	SHIFT LOCK
AUDIO IN [L]	AUDIO INPUT (L)	CL	CLOCK
AUDIO IN [R]	AUDIO INPUT (R)	CLK	CLOCK
AUDIO OUT [L]	AUDIO OUTPUT (L)	CLK (C.G)	CLOCK
AUDIO OUT [R]	AUDIO OUTPUT (R)	CLOCK. IN	CLOCK INPUT
AUDIO SELECT [H]	AUDIO SELECT Ⓗ	CLP	CLAMP
AUDIO. L	AUDIO (L)	COL/B/W/NOR	COLOUR/BLACK & WHITE/NORMAL
AUDIO. R	AUDIO (R)	COLOR [H]	COLOUR Ⓗ
AV CNT	AV CONTROL	CONV	CONVERTOR
AV CTL	AV CONTROL	CS	CHIP SELECT
AV CTL/S. CLK	AV CONTROL/SERIAL CLOCK	CTL GND	CONTROL GND
AV. C.M.	AV CONTROL MODE	CTL HEAD [+]	CONTROL HEAD (+)
AVCNT/METER. R	AV CONTROL/LEVEL METER (R)	CTL HEAD [−]	CONTROL HEAD (−)
AVSW/METER. L	AV SW/LEVEL METER (L)	CTL [+]	CONTROL HEAD (+)
B MODE. H	B MODE Ⓗ	CTL [−]	CONTROL HEAD (−)
B.G.P	BURST GATE PULSE	CUE BIAS	CUE BIAS
BACKUP 5V	BACK UP 5V	CURRENT LIM	CURRENT LIMMITER
BAND. U.E.	BAND U	CYL ET	CYLINDER TORQUE CONTROL
BANDVL. D	BAND VL	CYL GND	CYLINDER GND
BI/MI [L]	BILINGUAL/MIX Ⓛ	D.F.M. REC [H]	DELAIED FM RECORDING Ⓗ
BIL	BILINGUAL	D. FM REC [L]	DELAIED FM RECORDING Ⓛ
BIL [L]	BILINGUAL Ⓛ	D. GND	DIGITAL GND

D. REC [H]	DELAYED RECORDING Ⓗ	H. SYNC	HORIZONTAL SYNC
D4/S. LED	D4/STILL LED	H. AMP. SW	HEAD AMP SW PULSE
D4/STILLED	D4/STILL LED	H. P <R>	HEAD PHONE (R)
DAC [CLK]	TUNER DAC (CLOCK)	H. P <L>	HEAD PHONE (L)
DAC/FSCS	TUNER DAC/FS CHIP SELECT	H. P GND	HEAD PHONE GND
DAREC [H]	DELAYED AUDIO RECORDING Ⓗ	H. P OUT [L]	HEAD PHONE OUTPUT (L)
DATA	DATA	H. P OUT [R]	HEAD PHONE OUTPUT (R)
DECODER [L]	DECODER (L)	H. SW	HEAD SW PULSE
DECODER [R]	DECODER (R)	HEAD PHONE [L]	HEAD PHONE (L)
DEW	DEW	HEAD PHONE [R]	HEAD PHONE (R)
DEW SNS	DEW SENSOR	HEAD SW	HEAD SW
DFMRE [H]	DELAYED FM AUDIO RECORDING Ⓗ	HEATER [+]	HEATER (+)
E. REC 5V	EXCEPT RECORDING 5V	HEATER [−]	HEATER (−)
EC	ERR0R TORQUE CONTROL	HSS	HORIZONTAL SYNC SIGNAL
ECR	ERROR TORQUE CONTROL	HTR [+]	HEATER (+)
	REFERENCE VOLTAGE	HTR [−]	HEATER (−)
EDT TRIG [L]	EDIT TRIGGER Ⓛ	I RFE	REFERENCE CURRENT
EDIT [H]	EDIT Ⓗ	ICL	CONTROL AGC CIRCUIT
EE [H]	EE Ⓗ	IF	INTERMEDIATE FREQUENCY
EE [H]/INS [M]	EE Ⓗ/INSERT Ⓜ	IN SELA1	INPUT SELECT A1 POSITION
EE. VV. TR	EE/VV/TRICK PLAY	IN SELA2	INPUT SELECT A2 POSITION
EJECT. PO	EJECT POSITION	IN SELA3	INPUT SELECT A3 POSITION
EJECT/VDET	EJECT/REVERSE SLOW LOCK	INS L/R [L]	INSERT Lch/Rch Ⓛ
ENV. SEL	ENVELOPE SELECT	INS. [H]	INSERT Ⓗ
ENVE. OUT	ENVELOPE OUTPUT	INSEL A1	INPUT SELECT A1 POSITION
ENVE. SEL	ENVELOPE SELECT	INSEL A2	INPUT SELECT A2 POSITION
ENV SELECT	ENVELOPE SELECT	INSERT	INSERT
EP [H]	LP Ⓗ	INSERT [H]	INSERT Ⓗ
EP/LP [H]	LP Ⓗ	IO CS	INPUT/OUTPUT CHIP SELECT
EP/LP/SP	LP/SP	JOG1	JOG1
EP/SS [H]	LP/SLOW/STILL/STOP Ⓗ	JOG S3 LED/FOWRD	JOG LED/FORWARD LED
EPROMCS	EPROM CHIP SELECT	JOG/F. LED	JOG LED/FORWARD LED
EX. REC 5V	EXCEPT RECORDING 5V	JSB [H]	JSB Ⓗ
FF/REW [L]	FIRST FORWARD/REWIND Ⓛ	JST. CLCK	JUST CLOCK
FG1 IN	FG1 PULSE INPUT	JST. CLK	JUST CLOCK
FG2 IN	FG2 PULSE INPUT	JST. CLOCK	JUST CLOCK
FILTER ADJUSTMEN	FILTER ADJUSTMENT	L. OUT	Lch OUTPUT
FLY ERASE [H]	FLYING ERASE HEAD ON Ⓗ	L. CH [H]	Lch Ⓗ
FLY ON [H]	FLYING ERASE E HEAD ON Ⓗ	L. CH [L]	Lch Ⓛ
FLY. E [H]	FLYING ERASE HEAD ON Ⓗ	LED (MAIN)	LED (MAIN)
FM MUT [H]	FM AUDIO MUTE Ⓗ	LED (STEREO)	LED (STEREO)
FM MUTE [H]	FM AUDIO MUTE Ⓗ	LED (SUB)	LED (SUB)
FM OUT [L]	FM OUTPUT (L)	LED CKL	LED SERIAL CLOCK
FM OUT [R]	FM OUTPUT (R)	LED CKS	LED SERIAL CLOCK
FM PACK OUT [L]	FM PACK OUTPUT (L)	LED DATA	LED SERIAL DATA
FM PACK OUT [R]	FM PACK OUTPUT (R)	LINE IN 1 [L]	LINE INPUT 1 (L)
FM/BS SEL [L]	FM/BS SELECT (L)	LINE IN 1 [R]	LINE INPUT 1 (R)
FM/BS SEL [R]	FM/BS SELECT (R)	LINE IN 2 [L]	LINE INPUT 2 (L)
FS. CLK	FS CLOCK	LINE IN 2 [R]	LINE INPUT 2 (R)
FUL. E [H]	FULL ERASE HEAD ON Ⓗ	LINE IN V	LINE INPUT VIDEO
FULL. E [H]	FULL ERASE HEAD ON Ⓗ	LINE IN [L]	LINE INPUT (L)
FULL. E. 12V	FULL ERASE 12V	LINE IN [R]	LINE INPUT (R)
GND [A]	GND (ANALOGUE)	LINE OUT [L]	LINE OUTPUT (L)
GND [TU]	GND (TUNER)	LINE OUT [R]	LINE OUTPUT (R)
GND/N. SW. 12V	GND/NON SW 12V	LP [H]	LP Ⓗ

LPTRI [L]	LP TRICK PLAY Ⓛ	P. OFF [L]	POWER OFF Ⓛ
Lch/A. DUB	Lch/AUDIO DUBBING	PAL [H]	PAL Ⓗ
M GND	MOTOR GND	PAL [L]/NTSC [H]	PAL Ⓛ/NTSC Ⓗ
M REG	MOTOR REGULATOR	PB ADJ OUT	PLAYBACK ADJUST OUTPUT
MAIN OUT	MAIN OUTPUT	PB OUT	PLAYBACK OUTPUT
MAIN [L]	MAIN Ⓛ	PB. H	PLAYBACK Ⓗ
MAIN/MONO	MAIN/MONAURAL	PFG	PG/FG
MAX IN	MAXIMAM INPUT	PHOTSN +B	PHOTO SENSOR +B
MES [H]	MESECAM Ⓗ	PICT. CNT	PICTURE CONTROL
MESE [H]	MESECAM Ⓗ	PLAY LED/RVS LED	PLAY LED/REVERSE LED
MESE [L]	MESECAM Ⓛ	PLAY. PO	PLAY POSITION
METER 5V	LEVEL METER 5V	PLAY/R. LED	PLAY LED/REVERSE LED
METER [L]	LEVEL METER (L)	PLY/DEW	PLAY/DEW Ⓗ
METER [R]	LEVEL METER (R)	POWER OFF [L]	POWER OFF Ⓛ
METER. L/AVS	LEVEL METER (L)	PREROLL [H]	PREROLL Ⓗ
METER. R/AVC	LEVEL METER (R)	PWRFAIL	POWER FAILURE DETECT
MI/BI [L]	MIX Ⓗ/BILIGUAL	R. CH [H]	Rch Ⓗ
MIC GND	MIC GND	R. CH [L]	Rch Ⓛ
MIC IN	MIC INPUT	R. ST	RESET
MIC IN [L]	MIC INPUT (L)	R/S/F	REVERSE Ⓗ/STOP Ⓜ/FORWARD Ⓛ
MIC IN [R]	MIC INPUT (R)	RCH [H]	Rch Ⓗ
MIC [H]	MIC Ⓗ	REC 12V	RECORDING 12V
MIX [H]	MIX Ⓗ	REC CHROMA	RECORDING CHROMINANCE SIGNAL
MIX [H]/CINEMA [L]	MIX Ⓗ/CINEMA SOUND Ⓛ	REC H	RECORDING Ⓗ
MIX/CINE	MIX Ⓗ/CINEMA SOUND Ⓛ	REC IN	RECORDING INPUT
MIX/CINEMA [L]	MIX Ⓗ/CINEMA SOUND Ⓛ	REC OUT [L]	RECORDING OUTPUT Ⓛ
MN. H/M. L	MONAURAL Ⓗ/MAIN Ⓛ	REC START	RECORDING START
MN. H/MAI. L	MONAURAL Ⓗ/MAIN Ⓛ	REC VR [C]	RECORDING VOLUME (COMMON)
MN2/MES. L	MONAURAL 2/MESECAM Ⓛ	REC VR [L]	RECORDING VOLUME (L)
MODE SEL	AUDIO MODE SELECT	REC VR [R]	RECORDING VOLUME (R)
MODE SW	AUDIO MODE SW	REC Y	RECORDING LUMINANCE SIGNAL
MODE. S. IN	AUDIO MODE SELECT INPUT	REC [H]	RECORDING Ⓗ
MODE. S. OUT	AUDIO MODE SELECT OUTPUT	REC. C	RECORDING CHROMINANCE SIGNAL
MONO [H]	MONAURAL Ⓗ	REC. Y	RECORDING LUMINANCE SIGNAL
MONO [H]/MAIN [L]	MONAURAL Ⓗ/MAIN Ⓛ	REC/EE CTL	RECORDING/EE CONTROL
MONO2 [L]	MONAURAL 2	REEL-T	REEL PULSE (TAKE-UP)
MONO2/MESE [FM(L)]	MONAURAL 2/MESECAM (FM Ⓛ)	REEL-S	REEL PULSE (SUPPLY)
MOTOR GND	MOTOR GND	REGULATOR FILTER	REGULATOR FILTER
MUTE	MUTE	RESET	RESET
N. A. REC [L]	NORMAL AUDIO RECORDING	REV M F/R	REVIEW MOTOR FORWARD/REVERSE
N. SW 12V	NON SW 12V		
N. SW. 5. DET	NON SW 5V DETECT	REV M V1	REVIEW MOTOR V1
NICAM	NICAM	REV M V2	REVIEW MOTOR V2
NICAM [L]	NICAM Ⓛ	REV MOTOR F/R	REVIEW MOTOR FORWARD/REVERSE
NOL [H]	PAL Ⓗ/4.43 NTSC Ⓜ/3.58 NTSC Ⓛ		
NOR/SOFT [H]	NORMAL/SOFT TAPE PLAY Ⓗ	REV MOTOR V1	REVIEW MOROR V1
NORMAL [H]	NORMAL Ⓗ	REV MOTOR V2	REVIEW MOTOR V2
NR BIAS	NR BIAS	REV MOTOR [+]	REVIEW MOTOR (+)
NTSC [L]	NTSC Ⓛ	REV MOTOR [−]	REVIEW MOTOR (−)
OCH	CONTROL AGC CIRCUIT	REV. M. GND	REVIEW MOTOR GND
OUT	OUTPUT	RF. CHROMA	RF CHROMINANCE SIGNAL
P-OFF [H]	POWER OFF Ⓗ	RF OUT	RF OUTPUT
P-OFF [L]	POWER OFF Ⓛ	RF Y	RF LUMINANCE SIGNAL
P. FAIL	POWER FAILURE DETECT	RF. Y. IN	RF LUMINANCE SIGNAL INPUT
P. OFF [H]	POWER OFF Ⓗ	RF. Y. OUT	RF LUMINANCE SIGNAL OUTPUT

ROTAR. SW	ROTARY SW
ROTARY	ROTARY SW
RST	RESET
RST [L]	RESET Ⓛ
Rch/INST	Rch/INSERT
S IN	SERIAL DATA INPUT
S OUT	SERIAL DATA OUTPUT
S-PHOTO	SUPPLY PHOTO TRANSISTOR
S-RL. PLS	SUPPLY REEL PULSE
S. CLK	SERIAL CLOCK
S. CLK/AV	SERIAL CLOCK/AV
S. DATA	SERIAL DATA
S. DATA/A	SERIAL DATA
S. PHOTO	SUPPLY PHOTO TRANSISTOR
S. TAB [L]	SAFETY TAB SW ON Ⓛ
S/P/N	SECAM/PAL/NTSC
SC IN	SERIAL CLOCK INPUT
SC OUT	SERIAL CLOCK OUTPUT
SCK SELECT	SERIAL CLOCK SELECT
SEL OUT [L]	SELECT OUTPUT (L)
SEL OUT [R]	SELECT OUTPUT (R)
SHUTTLE 1	SHUTTLE 1
SIF	SOUND INTERMEDIATE FREQUENCY
SLMUT [H]	INPUT SELECT MUTE Ⓗ
SLNID [+]	SOLENOID (+)
SLNID [−]	SOLENOID (−)
SLW TR. MM	SLOW TRACKING MONO MULTI
SLW TR. REF	SLOW TRACKING REFERENCE VOLTAGE
SNS. GND	SENSOR GND
SOFT [H]	SOFT TAPE PLAY Ⓗ
SOFT [H]/NORMAL	SOFT TAPE PLAY Ⓗ/NORMAL Ⓗ
SOLENOID ON [L]	SOLENOID ON Ⓛ
SP [H]	SP Ⓗ
SP/L/SLP	SP/LP
SSS [L]	SLOW/STILL/STOP
STEREO LED	STEREO LED
STEREO [H]	STEREO Ⓗ
STEREO [L]	STEREO Ⓛ
STOP. PO	STOP POSITION
STOP/5V	STOP POSITION/5V
STOP1/TAPE SEL	STOP1 POSITION/TAPE SELECT
STOP1/PAL:ST	STOP1 POSITION/PAL
STOP2. PO	STOP 2 POSITION
STOP2/S-TAB	STOP 2 POSITION/SAFETY TAB SW
STREO [H]	STEREO Ⓗ
SUB BIAS	SUB BIAS
SUB. SW	SUB SW
SVHS CAS [L]	S-VHS CASSETTE Ⓛ
SW. 5. DET	SW 5V DETECT
SYNC [L]	SYNC Ⓛ
SYSCON 5V	SYSTEM CONTROL 5V
SYSTEM	SYSTEM SW
T-PHOTO	TAKE-UP PHOTO TRANSISTOR
T-RL. PLS	TAKE-UP REEL PULSE
T. BUSCLK	TIMER BUS CLOCK
T. BUSLSN	TIMER BUS LISTEN
T. BUSTLK	TIMER BUS TALK
T. END [L]	TAPE END Ⓛ
T. PHOTO	TAKE-UP PHOTO TRANSISTOR
TAPE END [L]	TAPE END Ⓛ
TAPE END [L]/CAM	TAPE END Ⓛ/CAMERA PAUSE
TEST	TEST MODE
TPZ	TRAPEZOIDAL WAVE CIRCUIT
TRIC [L]	TRIC PLAY Ⓛ
TRICK [L]	TRIC PLAY Ⓛ
TRK. ENV	AUTO TRACKING ENVELOPE DETECT
TU. AUDIO	TUNER AUDIO
TU. GND	TUNER GND
TU. V. IN	TUNER VIDEO SIGNAL INPUT
TU. VIDEO	TUNER VIDEO
TUN NOR IN	TUNER NORMAL INPUT
TUN R	TUNER AUDIO (R)
TUN. AUDIO IN	TUNER AUDIO INPUT
TUNER 12V	TUNER 12V
TUNER L	TUNER AUDIO (L)
TUNER V IN	TUNER VIDEO SIGNAL INPUT
TUNER [L]	TUNER AUDIO (L)
TUNER [N]	TUNER AUDIO (NORMAL)
TUNER [R]	TUNER AUDIO (R)
TUNER. 12	TUNER 12V
TUOFF [H]	TUNER OFF Ⓗ
TV. AUDIO	TV AUDIO
TV/VTR	TV/VTR
TXTON [L]	TEXT ON Ⓛ
U. REG45V	UNREGULATOR 45V
UNREG	UNREGULATOR
UNREG19V	UNREGULATOR 19V
V. REF	REFERENCE VOLTAGE
V. EE [H]	VIDEO EE Ⓗ
V. EE [L]	VIDEO EE Ⓛ
VCO REF	RERERENCE OSCILLATER
VD. IN	VIDEO SIGNAL INPUT
VD. OUT	VIDEO SIGNAL OUTPUT
VIDEO EE [L]	VIDEO EE Ⓛ
VIDEO IN	VIDEO SIGNAL INPUT
VIDEO OUT	VIDEO SIGNAL OUTPUT
VM	MOTOR VOLTAGE
VM DOWN [L]	MOTOR VOLTAGE DOWN Ⓛ
VSS	VERTICAL SYNC SIGNAL
VTR [H]	VTR Ⓗ
VTR. 12V	VTR 12V
X IN	OSCILLATOR INPUT
X OUT	OSCILLATOR OUTPUT

TRUTH TABLE (NV-HD650B)

IC3904 INPUT								IC3904 OUTPUT								VIDEO OUTPUT RESULT				AUDIO OUTPUT RESULT							
POWER	AV2 SLCT	EE/VV	OSD ON	INPUT CH.			AV2 PB	AV2 OUT SLCT		VTR IN SLCT		AV1 OUT SLCT	AV1 PB	RGB SW	FM INS	AV1 OUT	AV2 OUT	VTR IN	VTR OUT	AV1 OUT (L)	AV1 OUT (R)	AV2 OUT (L)	AV2 OUT (R)	AUDIO IN (L)	AUDIO IN (R)	AUDIO OUT (L)	AUDIO OUT (R)
⑥	④	⑦	⑪	②	⑧	⑨	③	⑯	⑰	⑱	⑲	⑫	⑬	⑭	⑮	(AV1-⑲)	(AV2-⑲)	(PP3901-3)	(PP3901-7)	(AV1-③)	(AV1-①)	(AV2-③)	(AV2-①)	(PP3902-9)	(PP3902-10)	(PP3902-6)	(PP3902-7)
OFF Ⓛ	----	----	----	--	--	--	L	L	L	L	L	L	L	L	L	AV2 IN	AV1 IN	TUNER	TUNER	AV2 IN (L)	AV2 IN (R)	AV1 IN (L)	AV1 IN (R)	-----	-----	TUNER	TUNER
							H	L	L	L	L	L	H	H	L	AV2 IN	AV1 IN	TUNER	TUNER	AV2 IN (L)	AV2 IN (R)	AV1 IN (L)	AV1 IN (R)	-----	-----	TUNER	TUNER
ON Ⓗ	VTR Ⓗ	EE Ⓗ	OFF Ⓛ	H	L	L	----	H	H	L	L	H	L	L	L	VTR OUT	VTR OUT	TUNER	TUNER	AUDIO OUT (L)	AUDIO OUT (R)	AUDIO OUT (L)	AUDIO OUT (R)	-----	-----	TUNER	TUNER
				H	L	H	----	H	H	L	H	H	L	L	H	VTR OUT	VTR OUT	AV1 IN	AV1 IN	AUDIO OUT (L)	AUDIO OUT (R)	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	AV1 IN (L)	AV1 IN (R)
				H	H	L	----	H	H	H	L	H	L	H	H	VTR OUT	VTR OUT	AV2 IN	AV2 IN	AUDIO OUT (L)	AUDIO OUT (R)	AUDIO OUT (L)	AUDIO OUT (R)	AV2 IN (L)	AV2 IN (R)	AV2 IN (L)	AV2 IN (R)
			ON Ⓗ	H	L	L	----	H	H	L	L	H	H	L	L	VTR OUT	VTR OUT	TUNER	TUNER	AUDIO OUT (L)	AUDIO OUT (R)	AUDIO OUT (L)	AUDIO OUT (R)	-----	-----	TUNER	TUNER
				H	L	H	----	H	H	L	H	H	H	L	H	VTR OUT	VTR OUT	AV1 IN	AV1 IN	AUDIO OUT (L)	AUDIO OUT (R)	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	AV1 IN (L)	AV1 IN (R)
				H	H	L	----	H	H	H	L	H	H	L	H	VTR OUT	VTR OUT	AV2 IN	AV2 IN	AUDIO OUT (L)	AUDIO OUT (R)	AUDIO OUT (L)	AUDIO OUT (R)	AV2 IN (L)	AV2 IN (R)	AV2 IN (L)	AV2 IN (R)
		VV Ⓛ	----	H	L	L	----	H	H	L	L	H	H	L	L	VTR OUT	VTR OUT	TUNER	PLAYBACK	AUDIO OUT (L)	AUDIO OUT (R)	AUDIO OUT (L)	AUDIO OUT (R)	-----	-----	PLAYBACK	PLAYBACK
				H	L	H	----	H	H	L	H	H	H	L	H	VTR OUT	VTR OUT	AV1 IN	PLAYBACK	AUDIO OUT (L)	AUDIO OUT (R)	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	PLAYBACK	PLAYBACK
				H	H	L	----	H	H	H	L	H	H	L	H	VTR OUT	VTR OUT	AV2 IN	PLAYBACK	AUDIO OUT (L)	AUDIO OUT (R)	AUDIO OUT (L)	AUDIO OUT (R)	AV2 IN (L)	AV2 IN (R)	PLAYBACK	PLAYBACK
	DECODER Ⓛ	EE Ⓗ	OFF Ⓛ	H	L	L	L	L	H	L	L	H	L	L	L	VTR OUT	TUNER IN	TUNER	TUNER	AUDIO OUT (L)	AUDIO OUT (R)	TUN A IN (L)	TUN A IN (R)	-----	-----	TUNER	TUNER
							H	L	H	H	L	H	L	H	H	VTR OUT	TUNER IN	AV2 IN	AV2 IN	AUDIO OUT (L)	AUDIO OUT (R)	TUN A IN (L)	TUN A IN (R)	AV2 IN (L)	AV2 IN (R)	AV2 IN (L)	AV2 IN (R)
				H	L	H	L	L	L	L	H	H	L	L	H	VTR OUT	AV1 IN	AV1 IN	AV1 IN	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	AV1 IN (L)	AV1 IN (R)	AV1 IN (L)	AV1 IN (R)
							H	L	L	L	H	H	L	H	H	VTR OUT	AV1 IN	AV2 IN	AV2 IN	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	AV2 IN (L)	AV2 IN (R)	AV2 IN (L)	AV2 IN (R)
				H	L	L	L	L	H	L	L	H	L	H	H	VTR OUT	AV1 IN	AV2 IN	AV2 IN	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	AV2 IN (L)	AV2 IN (R)	AV2 IN (L)	AV2 IN (R)
							H	L	L	L	H	H	L	H	H	VTR OUT	AV1 IN	AV2 IN	AV2 IN	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	AV2 IN (L)	AV2 IN (R)	AV2 IN (L)	AV2 IN (R)
			ON Ⓗ	H	L	L	L	L	H	L	L	H	H	L	L	VTR OUT	TUNER IN	TUNER	TUNER	AUDIO OUT (L)	AUDIO OUT (R)	TUN A IN (L)	TUN A IN (R)	-----	-----	TUNER	TUNER
							H	L	H	H	L	H	H	H	H	VTR OUT	TUNER IN	AV2 IN	AV2 IN	AUDIO OUT (L)	AUDIO OUT (R)	TUN A IN (L)	TUN A IN (R)	AV2 IN (L)	AV2 IN (R)	AV2 IN (L)	AV2 IN (R)
				H	L	H	L	L	L	L	H	H	H	L	H	VTR OUT	AV1 IN	AV1 IN	AV1 IN	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	AV1 IN (L)	AV1 IN (R)	AV1 IN (L)	AV1 IN (R)
							H	L	L	H	L	H	H	H	H	VTR OUT	AV1 IN	AV2 IN	AV2 IN	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	AV2 IN (L)	AV2 IN (R)	AV2 IN (L)	AV2 IN (R)
				H	H	L	L	L	H	L	L	H	H	L	L	VTR OUT	TUNER IN	TUNER	PLAYBACK	AUDIO OUT (L)	AUDIO OUT (R)	TUN A IN (L)	TUN A IN (R)	-----	-----	PLAYBACK	PLAYBACK
							H	L	H	H	L	H	H	L	H	VTR OUT	TUNER IN	AV2 IN	PLAYBACK	AUDIO OUT (L)	AUDIO OUT (R)	TUN A IN (L)	TUN A IN (R)	AV2 IN (L)	AV2 IN (R)	PLAYBACK	PLAYBACK
				H	L	H	L	L	L	H	H	H	H	L	H	VTR OUT	AV1 IN	AV1 IN	PLAYBACK	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	AV1 IN (L)	AV1 IN (R)	PLAYBACK	PLAYBACK
							H	L	L	H	L	H	H	L	H	VTR OUT	AV1 IN	AV2 IN	PLAYBACK	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	AV2 IN (L)	AV2 IN (R)	PLAYBACK	PLAYBACK
				H	H	L	L	L	H	L	H	H	L	L	H	VTR OUT	AV1 IN	AV2 IN	PLAYBACK	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	AV2 IN (L)	AV2 IN (R)	PLAYBACK	PLAYBACK
							H	L	L	H	L	H	H	L	H	VTR OUT	AV1 IN	AV2 IN	PLAYBACK	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	AV2 IN (L)	AV2 IN (R)	PLAYBACK	PLAYBACK

INPUT CH SELECT			INPUT CH
DBS/CANAL ②	INPUT SLCT B ⑧	INPUT SLCT A ⑨	
H	L	L	NORMAL TUNER
L	L	L	DBS/C+ TUNER
H	L	H	AV1
H	H	L	AV2

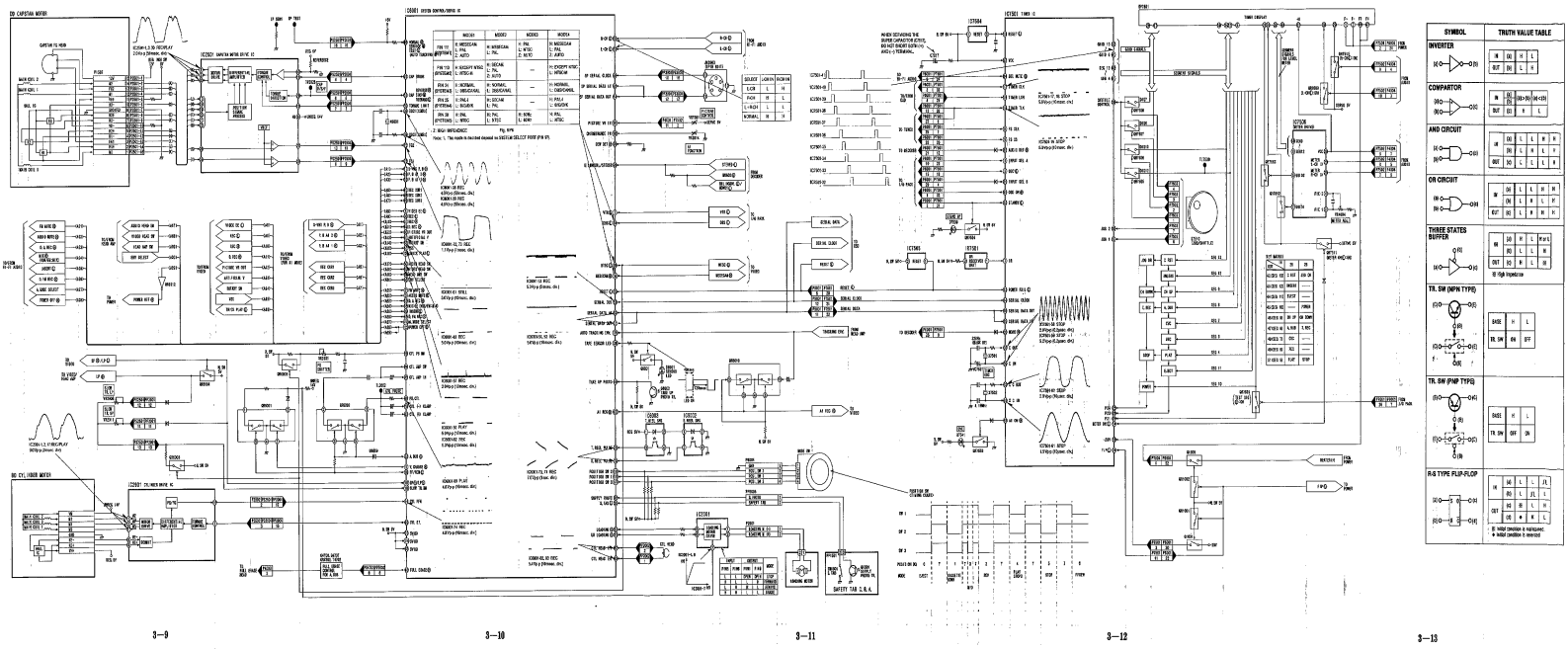
TRUTH TABLE (B) TRUTH TABLE (EC) TRUTH TABLE (EC) TRUTH TABLE (B)

TRUTH TABLE (NV-HD650EC)

IC3904 INPUT									IC3904 OUTPUT								VIDEO OUTPUT RESULT				AUDIO OUTPUT RESULT							
POWER ⑥	AV2 SLCT ④	DEC SLCT ①	EE/VV ⑦	OSD ON ⑪	INPUT CH ②⑧⑨			AV2 PB ③	AV2 OUT SLCT ⑯		VTR IN SLCT ⑱	⑲	AV1 OUT SLCT ⑫	AV1 PB ⑬	RGB SW ⑭	FM INS ⑮	AV1 OUT (AV1-⑲)	AV2 OUT (AV2-⑲)	VTR IN (PP3901-3)	VTR OUT (PP3901-7)	AV1 OUT (L) (AV1-③)	AV1 OUT (R) (AV1-①)	AV2 OUT (L) (AV2-③)	AV2 OUT (R) (AV2-①)	AUDIO IN (L) (PP3902-9)	AUDIO IN (R) (PP3902-10)	AUDIO OUT (L) (PP3902-6)	AUDIO OUT (R) (PP3902-7)
OFF Ⓛ	----	----	----	----	--	--	--	L	L	L	L	L	L	L	L	L	AV2 IN	AV1 IN	TUNER	TUNER	AV2 IN (L)	AV2 IN (R)	AV1 IN (L)	AV1 IN (R)	-----	-----	TUNER	TUNER
								H	L	L	L	L	L	H	H	L	AV2 IN	AV1 IN	TUNER	TUNER	AV2 IN (L)	AV2 IN (R)	AV1 IN (L)	AV1 IN (R)	-----	-----	TUNER	TUNER
ON Ⓗ	VTR Ⓗ	----	EE Ⓗ	OFF Ⓛ	H	L	L	----	H	H	L	L	H	L	L	L	VTR OUT	VTR OUT	TUNER	TUNER	AUDIO OUT (L)	AUDIO OUT (R)	AUDIO OUT (L)	AUDIO OUT (R)	-----	-----	TUNER	TUNER
					L	L	L	----	H	H	L	L	H	L	L	L	VTR OUT	VTR OUT	TUNER	TUNER	AUDIO OUT (L)	AUDIO OUT (R)	AUDIO OUT (L)	AUDIO OUT (R)	-----	-----	TUNER	TUNER
					H	L	H	----	H	H	L	H	H	L	L	H	VTR OUT	VTR OUT	AV1 IN	AV1 IN	AUDIO OUT (L)	AUDIO OUT (R)	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	AV1 IN (L)	AV1 IN (R)
					H	H	L	----	H	H	H	L	H	L	H	H	VTR OUT	VTR OUT	AV2 IN	AV2 IN	AUDIO OUT (L)	AUDIO OUT (R)	AUDIO OUT (L)	AUDIO OUT (R)	AV2 IN (L)	AV2 IN (R)	AV2 IN (L)	AV2 IN (R)
				ON Ⓗ	H	L	L	----	H	H	L	L	H	H	L	L	VTR OUT	VTR OUT	TUNER	TUNER	AUDIO OUT (L)	AUDIO OUT (R)	AUDIO OUT (L)	AUDIO OUT (R)	-----	-----	TUNER	TUNER
					L	L	L	----	H	H	L	L	H	H	L	L	VTR OUT	VTR OUT	TUNER	TUNER	AUDIO OUT (L)	AUDIO OUT (R)	AUDIO OUT (L)	AUDIO OUT (R)	-----	-----	TUNER	TUNER
					H	L	H	----	H	H	L	H	H	H	L	H	VTR OUT	VTR OUT	AV1 IN	AV1 IN	AUDIO OUT (L)	AUDIO OUT (R)	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	AV1 IN (L)	AV1 IN (R)
					H	H	L	----	H	H	H	L	H	H	H	H	VTR OUT	VTR OUT	AV2 IN	AV2 IN	AUDIO OUT (L)	AUDIO OUT (R)	AUDIO OUT (L)	AUDIO OUT (R)	AV2 IN (L)	AV2 IN (R)	AV2 IN (L)	AV2 IN (R)
			VV Ⓛ	----	H	L	L	----	H	H	L	L	H	H	L	L	VTR OUT	VTR OUT	TUNER	PLAYBACK	AUDIO OUT (L)	AUDIO OUT (R)	AUDIO OUT (L)	AUDIO OUT (R)	-----	-----	PLAYBACK	PLAYBACK
					L	L	L	----	H	H	L	L	H	H	L	L	VTR OUT	VTR OUT	TUNER	PLAYBACK	AUDIO OUT (L)	AUDIO OUT (R)	AUDIO OUT (L)	AUDIO OUT (R)	-----	-----	PLAYBACK	PLAYBACK
					H	L	H	----	H	H	L	H	H	H	L	H	VTR OUT	VTR OUT	AV1 IN	PLAYBACK	AUDIO OUT (L)	AUDIO OUT (R)	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	PLAYBACK	PLAYBACK
					H	H	L	----	H	H	H	L	H	H	L	H	VTR OUT	VTR OUT	AV2 IN	PLAYBACK	AUDIO OUT (L)	AUDIO OUT (R)	AUDIO OUT (L)	AUDIO OUT (R)	AV2 IN (L)	AV2 IN (R)	PLAYBACK	PLAYBACK
	DECODER Ⓛ	TV Ⓗ	----	OFF Ⓛ	H	L	L	L	L	L	L	L	H	L	L	L	VTR OUT	AV1 IN	TUNER	TUNER	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	-----	-----	TUNER	TUNER
					H			L	L	L	L	L	L	H	H	L	AV2 IN	AV1 IN	TUNER	TUNER	AV2 IN (L)	AV2 IN (R)	AV1 IN (L)	AV1 IN (R)	-----	-----	TUNER	TUNER
					L	L	L	L	L	H	L	L	H	L	L	L	VTR OUT	TUNER IN	TUNER	TUNER	AUDIO OUT (L)	AUDIO OUT (R)	TUN A IN (L)	TUN A IN (R)	-----	-----	TUNER	TUNER
					H			L	L	H	H	L	H	L	L	H	VTR OUT	TUNER IN	AV2 IN	AV2 IN	AUDIO OUT (L)	AUDIO OUT (R)	TUN A IN (L)	TUN A IN (R)	AV2 IN (L)	AV2 IN (R)	AV2 IN (L)	AV2 IN (R)
					H	L	H	L	L	L	L	H	H	L	L	H	VTR OUT	AV1 IN	AV1 IN	AV1 IN	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	AV1 IN (L)	AV1 IN (R)	AV1 IN (L)	AV1 IN (R)
					H			L	L	L	H	L	L	H	H	H	AV2 IN	AV1 IN	AV2 IN	AV2 IN	AV2 IN (L)	AV2 IN (R)	AV1 IN (L)	AV1 IN (R)	AV2 IN (L)	AV2 IN (R)	AV2 IN (L)	AV2 IN (R)
					H	H	L	L	L	L	H	L	H	L	H	H	VTR OUT	AV1 IN	AV2 IN	AV2 IN	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	AV2 IN (L)	AV2 IN (R)	AV2 IN (L)	AV2 IN (R)
					H			L	L	L	H	L	L	H	H	H	AV2 IN	AV1 IN	AV2 IN	AV2 IN	AV2 IN (L)	AV2 IN (R)	AV1 IN (L)	AV1 IN (R)	AV2 IN (L)	AV2 IN (R)	AV2 IN (L)	AV2 IN (R)
				ON Ⓗ	H	L	L	L	L	L	L	L	H	H	L	L	VTR OUT	AV1 IN	TUNER	TUNER	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	-----	-----	TUNER	TUNER
					H			L	L	L	L	L	H	H	L	L	VTR OUT	AV1 IN	TUNER	TUNER	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	-----	-----	TUNER	TUNER
					L	L	L	L	L	H	L	L	H	H	L	L	VTR OUT	TUNER IN	TUNER	TUNER	AUDIO OUT (L)	AUDIO OUT (R)	TUN A IN (L)	TUN A IN (R)	-----	-----	TUNER	TUNER
					H			L	L	H	H	L	H	H	H	H	VTR OUT	TUNER IN	AV2 IN	AV2 IN	AUDIO OUT (L)	AUDIO OUT (R)	TUN A IN (L)	TUN A IN (R)	AV2 IN (L)	AV2 IN (R)	AV2 IN (L)	AV2 IN (R)
					H	L	H	L	L	L	L	H	H	H	L	H	VTR OUT	AV1 IN	AV1 IN	AV1 IN	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	AV1 IN (L)	AV1 IN (R)	AV1 IN (L)	AV1 IN (R)
					H			L	L	L	H	L	H	H	H	H	VTR OUT	AV1 IN	AV2 IN	AV2 IN	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	AV2 IN (L)	AV2 IN (R)	AV2 IN (L)	AV2 IN (R)
					H	H	L	L	L	L	H	H	H	H	L	L	VTR OUT	AV1 IN	AV2 IN	AV2 IN	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	AV2 IN (L)	AV2 IN (R)	AV2 IN (L)	AV2 IN (R)
					H			L	L	L	H	H	H	H	H	H	VTR OUT	AV1 IN	AV2 IN	AV2 IN	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	AV2 IN (L)	AV2 IN (R)	AV2 IN (L)	AV2 IN (R)
		VTR Ⓛ	EE Ⓗ	OFF Ⓛ	H	L	L	L	L	L	L	L	H	H	L	L	VTR OUT	AV1 IN	TUNER	TUNER	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	-----	-----	TUNER	TUNER
					H			L	L	L	L	L	H	H	L	L	VTR OUT	AV1 IN	TUNER	TUNER	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	-----	-----	TUNER	TUNER
					L	L	L	L	L	H	L	L	H	H	L	L	VTR OUT	TUNER IN	TUNER	TUNER	AUDIO OUT (L)	AUDIO OUT (R)	TUN A IN (L)	TUN A IN (R)	-----	-----	TUNER	TUNER
					H			L	L	H	H	L	H	H	H	H	VTR OUT	TUNER IN	AV2 IN	AV2 IN	AUDIO OUT (L)	AUDIO OUT (R)	TUN A IN (L)	TUN A IN (R)	AV2 IN (L)	AV2 IN (R)	AV2 IN (L)	AV2 IN (R)
					H	L	H	L	L	L	L	H	H	H	L	H	VTR OUT	AV1 IN	AV1 IN	AV1 IN	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	AV1 IN (L)	AV1 IN (R)	AV1 IN (L)	AV1 IN (R)
					H			L	L	L	H	L	H	H	H	H	VTR OUT	AV1 IN	AV2 IN	AV2 IN	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	AV2 IN (L)	AV2 IN (R)	AV2 IN (L)	AV2 IN (R)
					H	H	L	L	L	L	H	H	H	H	L	L	VTR OUT	AV1 IN	AV2 IN	AV2 IN	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	AV2 IN (L)	AV2 IN (R)	AV2 IN (L)	AV2 IN (R)
					H			L	L	L	H	H	H	H	H	H	VTR OUT	AV1 IN	AV2 IN	AV2 IN	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	AV2 IN (L)	AV2 IN (R)	AV2 IN (L)	AV2 IN (R)
				ON Ⓗ	H	L	L	L	L	L	H	H	L	L	VTR OUT	AV1 IN	TUNER	TUNER	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	-----	-----	TUNER	TUNER
					H			L	L	L	L	L	H	H	L	L	VTR OUT	AV1 IN	TUNER	TUNER	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	-----	-----	TUNER	TUNER
					L	L	L	L	L	H	L	L	H	H	L	L	VTR OUT	TUNER IN	TUNER	TUNER	AUDIO OUT (L)	AUDIO OUT (R)	TUN A IN (L)	TUN A IN (R	-----	-----	TUNER	TUNER
					H			L	L	H	H	L	H	H	H	H	VTR OUT	TUNER IN	AV2 IN	AV2 IN	AUDIO OUT (L)	AUDIO OUT (R)	TUN A IN (L)	TUN A IN (R)	AV2 IN (L)	AV2 IN (R)	AV2 IN (L)	AV2 IN (R)
					H	L	H	L	L	L	L	H	H	H	L	H	VTR OUT	AV1 IN	AV1 IN	AV1 IN	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	AV1 IN (L)	AV1 IN (R)	AV1 IN (L)	AV1 IN (R)
					H			L	L	H	H	L	H	H	H	H	VTR OUT	AV1 IN	AV2 IN	AV2 IN	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	AV2 IN (L)	AV2 IN (R)	AV2 IN (L)	AV2 IN (R)
					H	H	L	L	L	L	H	H	H	H	L	L	VTR OUT	AV1 IN	AV2 IN	AV2 IN	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	AV2 IN (L)	AV2 IN (R)	AV2 IN (L)	AV2 IN (R)
					H			L	L	H	H	L	H	H	H	H	VTR OUT	AV1 IN	AV2 IN	AV2 IN	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	AV2 IN (L)	AV2 IN (R)	AV2 IN (L)	AV2 IN (R)
			VV Ⓛ	----	H	L	L	L	L	L	L	L	H	H	L	L	VTR OUT	AV1 IN	TUNER	PLAYBACK	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	-----	-----	PLAYBACK	PLAYBACK
					H			L	L	L	L	L	H	H	L	L	VTR OUT	AV1 IN	TUNER	PLAYBACK	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	-----	-----	PLAYBACK	PLAYBACK
					L	L	L	L	L	H	L	L	H	H	L	L	VTR OUT	TUNER IN	TUNER	PLAYBACK	AUDIO OUT (L)	AUDIO OUT (R)	TUN A IN (L)	TUN A IN (R)	-----	-----	PLAYBACK	PLAYBACK
					H			L	L	H	H	L	H	H	L	H	VTR OUT	TUNER IN	AV2 IN	PLAYBACK	AUDIO OUT (L)	AUDIO OUT (R)	TUN A IN (L)	TUN A IN (R)	AV2 IN (L)	AV2 IN (R)	PLAYBACK	PLAYBACK
					H	L	H	L	L	L	L	H	H	H	L	H	VTR OUT	AV1 IN	AV1 IN	PLAYBACK	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	AV1 IN (L)	AV1 IN (R)	PLAYBACK	PLAYBACK
					H			L	L	H	H	L	H	H	L	H	VTR OUT	AV1 IN	AV2 IN	PLAYBACK	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	AV2 IN (L)	AV2 IN (R)	PLAYBACK	PLAYBACK
					H	H	L	L	L	L	H	H	H	H	L	L	VTR OUT	AV1 IN	AV2 IN	PLAYBACK	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	AV2 IN (L)	AV2 IN (R)	PLAYBACK	PLAYBACK
					H			L	L	H	H	L	H	H	L	H	VTR OUT	AV1 IN	AV2 IN	PLAYBACK	AUDIO OUT (L)	AUDIO OUT (R)	AV1 IN (L)	AV1 IN (R)	AV2 IN (L)	AV2 IN (R)	PLAYBACK	PLAYBACK

INPUT CH SELECT			INPUT CH
DBS/CANAL ②	INPUT SLCT B ⑧	INPUT SLCT A ⑨	
H	L	L	NORMAL TUNER
L	L	L	DBS/C+ TUNER
H	L	H	AV1
H	H	L	AV2

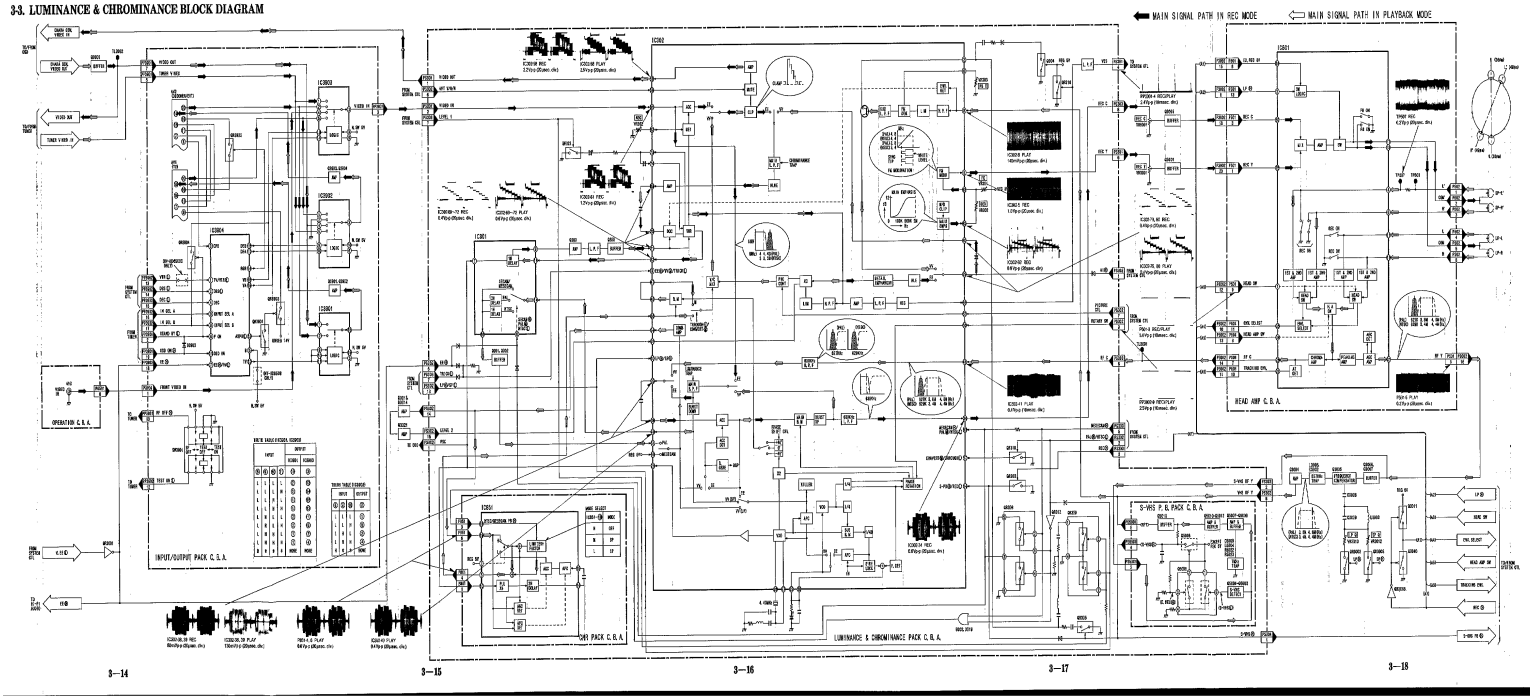
3-2. SYSTEM CONTROL & SERVO BLOCK DIAGRAM



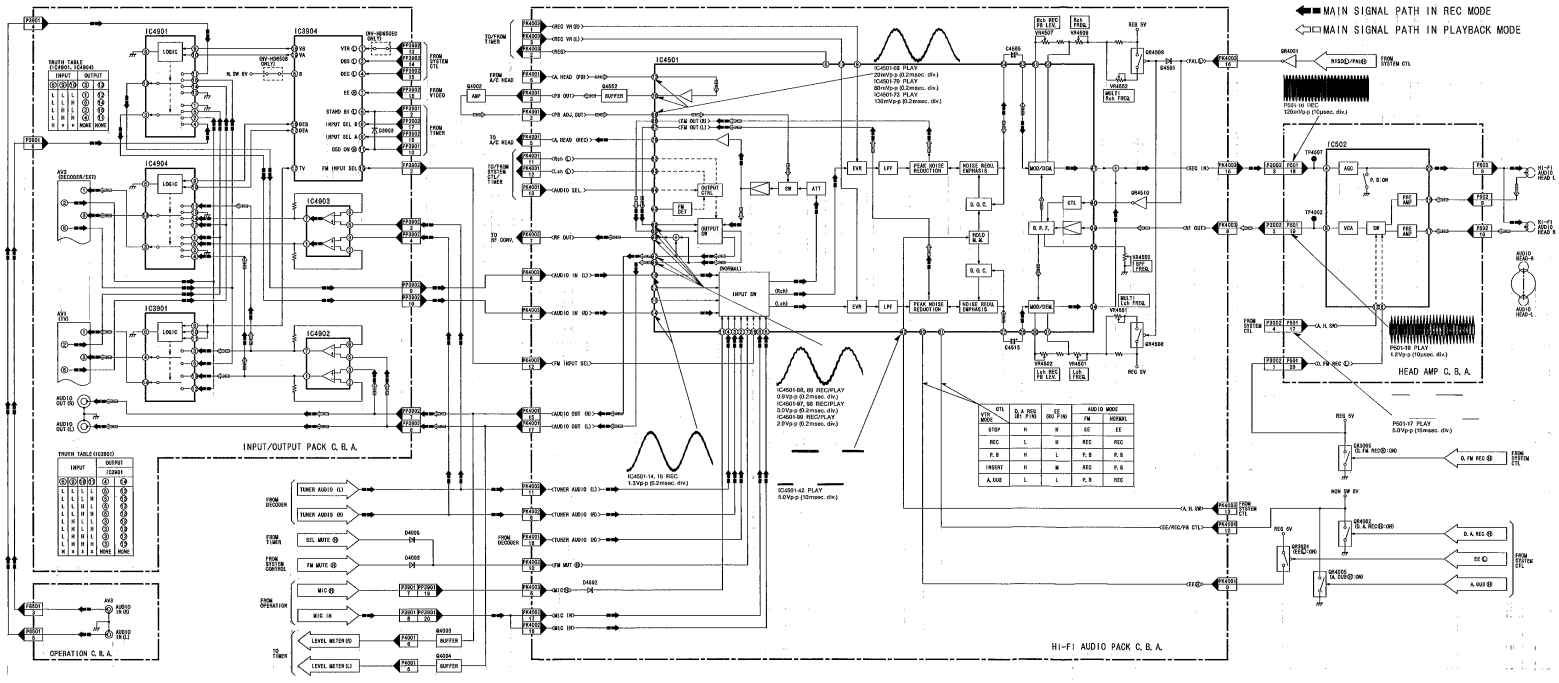
SYMBOL	TRUTH VALUE TABLE
INVERTER	IN: H / L; OUT: L / H
COMPARATOR	IN: (+) > (−) / (+) < (−); OUT: H / L
AND CIRCUIT	IN, IN: H H / H L / L H / L L; OUT: H / L / L / L
OR CIRCUIT	IN, IN: H H / H L / L H / L L; OUT: H / H / H / L
THREE STATES BUFFER	IN: H / L / H or L; OUT: H / L / H
TR. SW (NPN TYPE)	BASE: H / L; TR. SW: ON / OFF
TR. SW (PNP TYPE)	BASE: H / L; TR. SW: OFF / ON
R-S TYPE FLIP-FLOP	R, S: H H / L H / H L / L L; OUT: H / L / H

3—9 3—10 3—11 3—12 3—13

3-3. LUMINANCE & CHROMINANCE BLOCK DIAGRAM



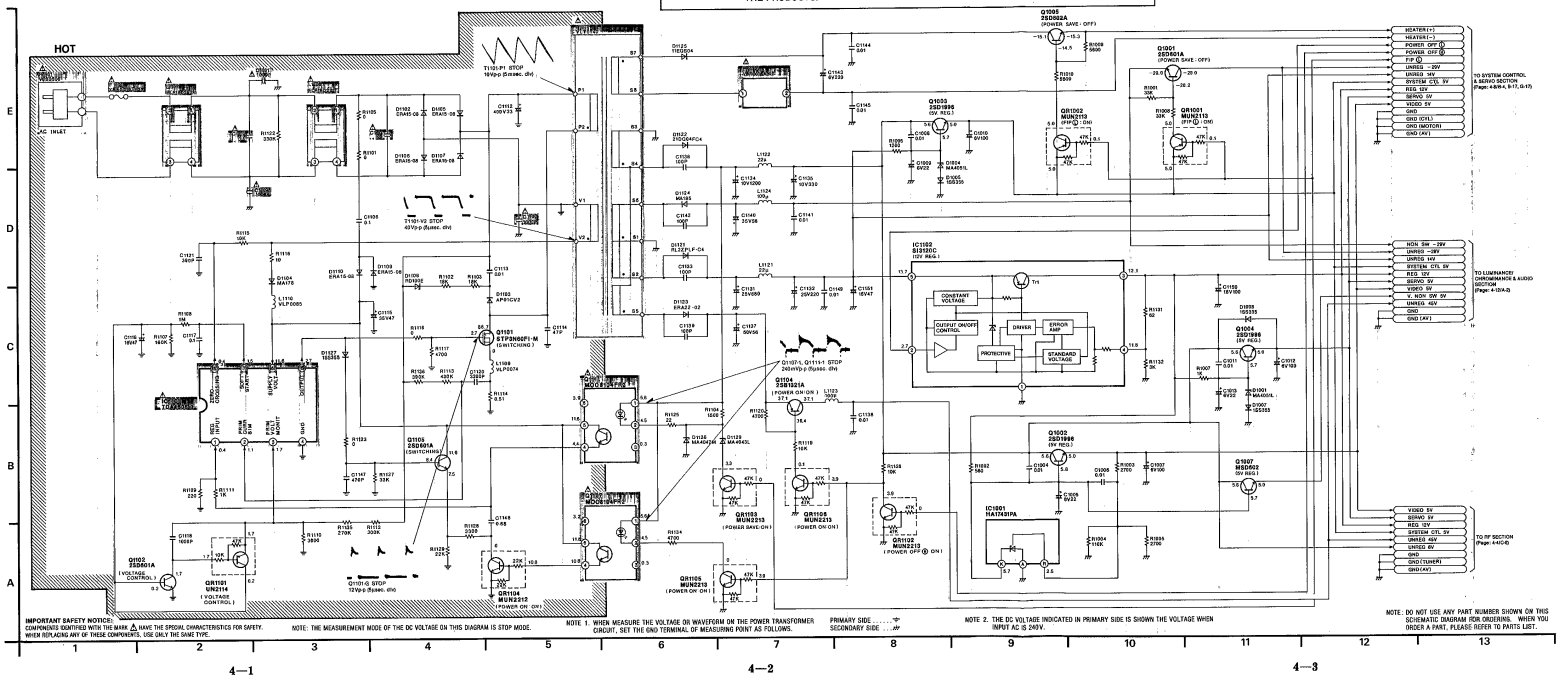
3-4. Hi-Fi AUDIO BLOCK DIAGRAM



SECTION 4
SCHEMATIC DIAGRAMS

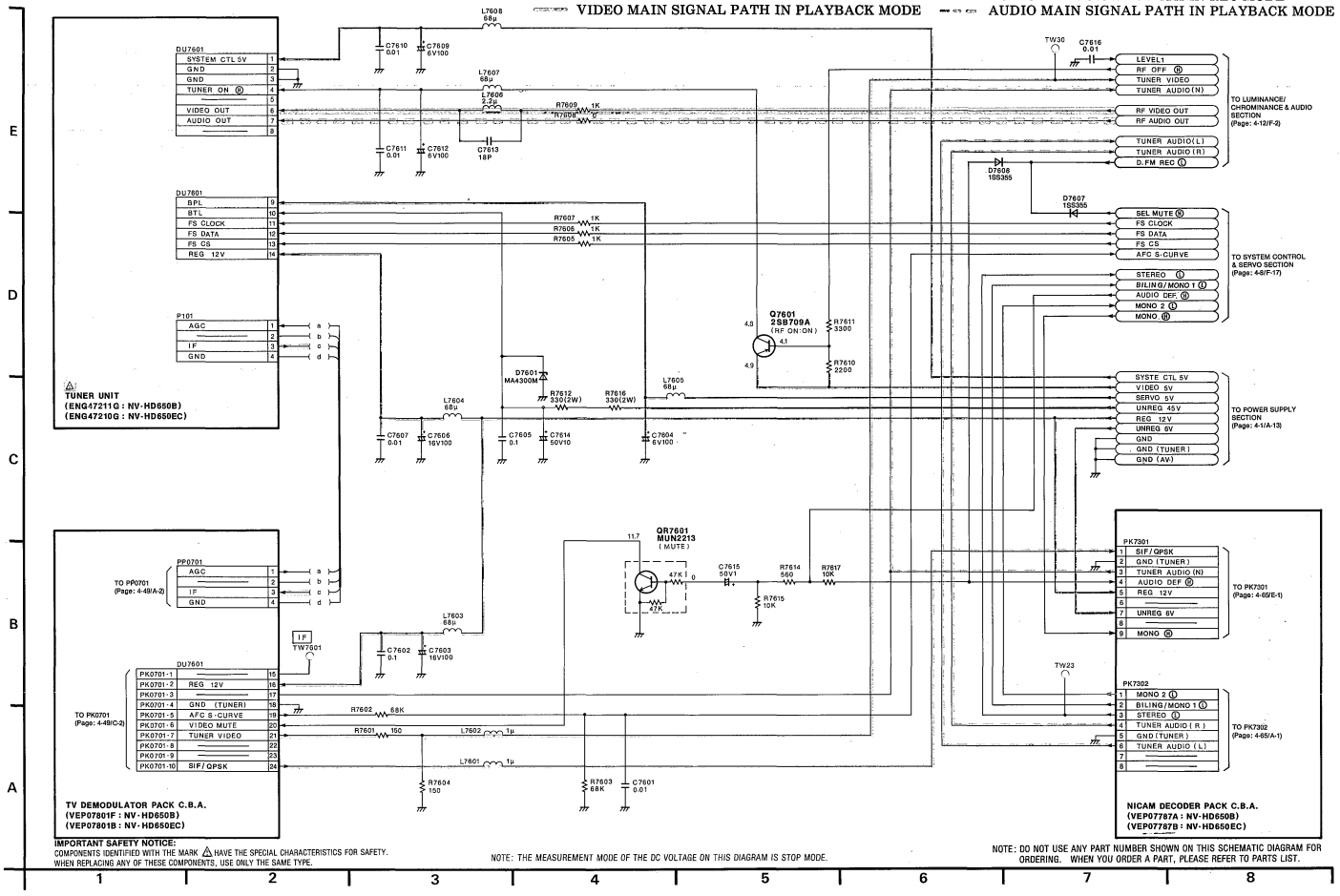
4-1. POWER SUPPLY SECTION IN MAIN SCHEMATIC DIAGRAM

CAUTION THE RED MARK INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE SECONDARY CIRCUIT.
PAY ATTENTION NOT TO RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.



4-2. RF SECTION IN MAIN SCHEMATIC DIAGRAM

VIDEO MAIN SIGNAL PATH IN REC MODE
VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE
AUDIO MAIN SIGNAL PATH IN REC MODE
AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE



IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

SYSTEM CONTROL & SERVO ICs DC VOLTAGE CHART (SP MODE)

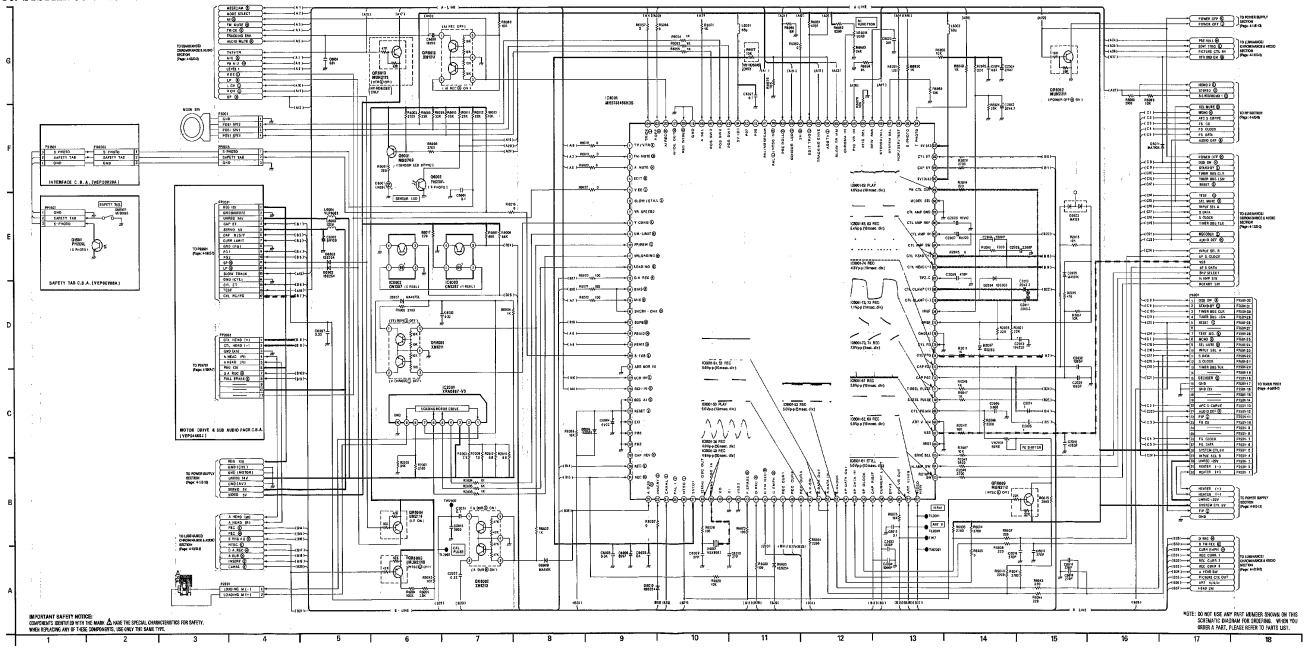
REF. NO.	IC2001																			
MODE	1	2	3	4	5	6	7	8	9	10										
STOP	4.9	14.3	14.3	0	0	0	7.3	9.4	5.2	0										
PLAY	5.8	14.1	14.1	0	0	0	7.4	9.3	3.3	0										
REC	1.8	14.1	14.1	0	0	0	7.4	9.3	2.2	0										
F.F	5.1	14.1	14.1	0	0	0	14.1	9.3	4.8	0										
REW	4.1	14.1	14.1	0	0	0	14.1	9.3	4.2	0										
REF. NO.	IC6001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	4.9	0	0	0	0	0	4.9	4.8	0	4.8	0	0	0	0	0	0	0	0	4.8	0
PLAY	0.5	0	0	0	4.9	0	4.9	4.8	0	4.8	0	0	0	0	0	0	0	0	4.8	0
REC	4.9	0	0	0	0	0	4.9	4.8	0	4.8	0	0	4.9	4.9	0	4.9	0	0	0	0
F.F	4.9	0	0	0	0	0	4.9	0	0	0	0	0	0	0	0	0	0	0	0	0
REW	4.9	0	0	0	0	0	4.9	0	0	0	0	0	0	0	0	0	0.6	0	0	0
REF. NO.	IC6001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	0	0	0	0	4.9	0	0	0	0	4.9	0.1	0	4.9	4.9	4.9	4.9	4.9	–	–	4.7
PLAY	0	0	0	0	4.8	0	0	0	0	4.8	0.1	0	4.9	4.8	4.9	4.8	4.9	–	–	4.7
REC	0	0	0	0	4.8	0	0	0	0	0	4.8	0	4.9	4.9	4.9	4.8	4.9	–	–	4.7
F.F	0	0	0	0	4.9	0	0	0	0	4.9	0.1	0	4.9	4.9	4.9	4.8	4.9	–	–	4.7
REW	0	0	0	0	4.9	0	0	0	0	4.9	0.1	0	4.9	4.9	4.9	4.8	4.8	–	–	4.7
REF. NO.	IC6001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	0	0	0	0	0	0	0	0	0	0	4.7	4.5	4.0	4.7	4.9	4.7	2.0	0	0	1.3
PLAY	0	0	0	0	0	0	0	0	0	3.7	4.7	4.6	4.0	4.7	4.8	4.6	0	4.8	0	1.3
REC	0	0	4.9	4.9	4.9	0	0	0	0	0	4.6	4.5	4.0	4.8	4.7	4.7	0	4.9	4.9	2.5
F.F	0	0	0	0	0	0	0	0	0	0	4.6	4.6	4.0	4.9	4.7	4.8	0	4.9	4.9	2.4
REW	0	0	0	0	0	0	0	0	0	0	4.6	4.7	3.9	4.9	4.7	4.8	4.9	4.9	4.9	2.4
REF. NO.	IC6001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
STOP	0	4.9	0	0	3.9	0	2.4	0	3.3	4.9	0.1	2.4	2.4	1.3	0	0	2.4	2.4	2.3	2.5
PLAY	0	4.8	3.7	0	3.8	0	2.4	0	3.3	4.9	0.1	2.4	2.4	1.2	0	0	2.4	2.4	2.6	-2.5
REC	0	4.7	4.8	0	4.6	0	2.4	0	3.5	4.9	4.9	2.3	2.4	1.4	0	0	2.4	2.4	2.3	2.5
F.F	0	4.8	0	0	2.5	0	2.4	0	3.5	3.4	2.7	2.4	2.4	1.0	0	0	2.4	2.4	2.8	2.3
REW	0	4.8	0	0	2.6	0	2.4	0	3.3	4.7	1.9	2.4	2.4	1.4	0	0	2.4	2.4	2.8	2.3
REF. NO.	IC6001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
STOP	4.9	0	0	0	2.5	2.4	0	0	2.4	4.9	1.4	2.3	4.9	5.0	4.9	4.9	0	5.1	0	0
PLAY	4.8	0	0	0	2.5	4.8	0	0	0.6	4.9	2.5	2.3	4.9	5.0	4.9	4.9	0	5.1	0	0
REC	4.8	3.5	3.7	0	2.4	2.4	0	0	2.4	4.9	2.5	2.3	4.9	5.0	4.8	4.8	0	5.1	0	0
F.F	4.8	0	0	0	2.4	2.4	0	0	2.4	4.9	2.4	2.3	4.9	4.9	4.7	4.9	0	5.1	0	0
REW	4.8	0	0	0	2.4	2.4	0	0	2.3	4.9	2.4	2.3	4.9	4.9	4.8	4.9	0	5.1	0	0
REF. NO.	IC6001																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
STOP	2.5	3.3	4.6	0	1.8	5.0	4.8	4.9	0	0	0	1.2	2.3	4.9	0	0	5.0	4.9	0	0
PLAY	2.5	3.3	4.5	0	3.6	5.0	4.8	0.1	0	0	0	1.8	1.6	4.9	0	0	4.9	4.9	0	0
REC	2.5	3.3	5.1	0	1.0	5.0	4.8	0.1	0	0	0	2.3	2.3	4.9	0	0	4.9	4.9	0	0
F.F	2.5	3.3	4.5	0	1.6	5.0	4.8	0.1	0	0	0	0.9	0.9	4.9	0	4.9	4.9	4.9	0	0
REW	2.5	3.3	4.5	0	2.7	5.0	4.8	0.1	0	0	0	2.3	2.3	4.9	0	4.9	5.0	4.9	0	0
REF. NO.	IC6001																			
MODE	121	122	123	124																
STOP	0	0	0	4.9																
PLAY	0	0	0	4.9																
REC	0	0	0	4.9																
F.F	0	0	0	4.9																
REW	0	0	0	4.9																
REF. NO.	IC6002										IC6003									
MODE	1	2	3	4							1	2	3	4						
STOP	1.1	0	4.9	0							2.3	1.2	4.9	0						
PLAY	1.1	0	4.9	0							2.3	1.2	4.9	0						
REC	1.1	0	4.9	0							2.3	1.2	4.9	0						
F.F	1.2	0	2.2	0							2.3	1.2	2.5	0						
REW	1.2	0	2.6	0							2.3	1.2	2.8	0						

SYSTEM CONTROL & SERVO TR.s DC VOLTAGE CHART (SP MODE)

REF. NO.	Q1501			Q6001			Q6002											
MODE	E	C		E	C	B	E	C										
STOP	0	4.9		5.0	0.5	4.9	0	5.0										
PLAY	0	4.9		5.0	4.9	4.2	0	4.9										
REC	0	4.9		5.0	4.9	4.2	0	4.9										
F.F	0	4.8		5.0	4.9	4.2	0	4.9										
REW	0	4.8		5.0	4.9	4.2	0	4.9										
REF. NO.	QR6001						QR6002					QR6004			QR6005			
MODE	1	2	3	4	5		1	2	3	4	5	E	C	B	E	C	B	
STOP	0	0	4.8	0	4.8		0	0	4.6	0	4.6	5.0	0.3	4.8	5.0	4.5	4.9	
PLAY	0	0	4.8	0	4.8		0	0	4.6	0	4.6	5.0	0.3	4.8	5.0	4.4	4.8	
REC	0	0	4.8	0	4.8		0	0	4.6	0	4.6	5.0	0.2	4.8	5.0	5.0	4.8	
F.F	14.1	7.6	0	0	0		2.2	1.6	0	0	0	5.0	0.3	4.8	5.0	4.4	4.8	
REW	14.1	8.4	0	0	0		2.8	2.2	0	0	0	5.0	0.3	4.8	5.0	4.4	4.8	
REF. NO.	QR6009			QR6010						QR6012								
MODE	E	C	B	1	2	3	4	5		E	C	B						
STOP	5.0	4.8	4.9	0	2.9	0	0	2.9		0	13.0	0						
PLAY	5.0	4.8	4.8	0	2.9	0	0	2.9		0	13.0	0						
REC	5.0	4.8	4.8	0	2.9	0	0	2.9		0	13.0	0						
F.F	5.0	4.8	4.8	0	2.9	0	0	2.9		0	13.0	0						
REW	5.0	4.6	4.8	0	2.9	0	0	2.9		0	13.0	0						

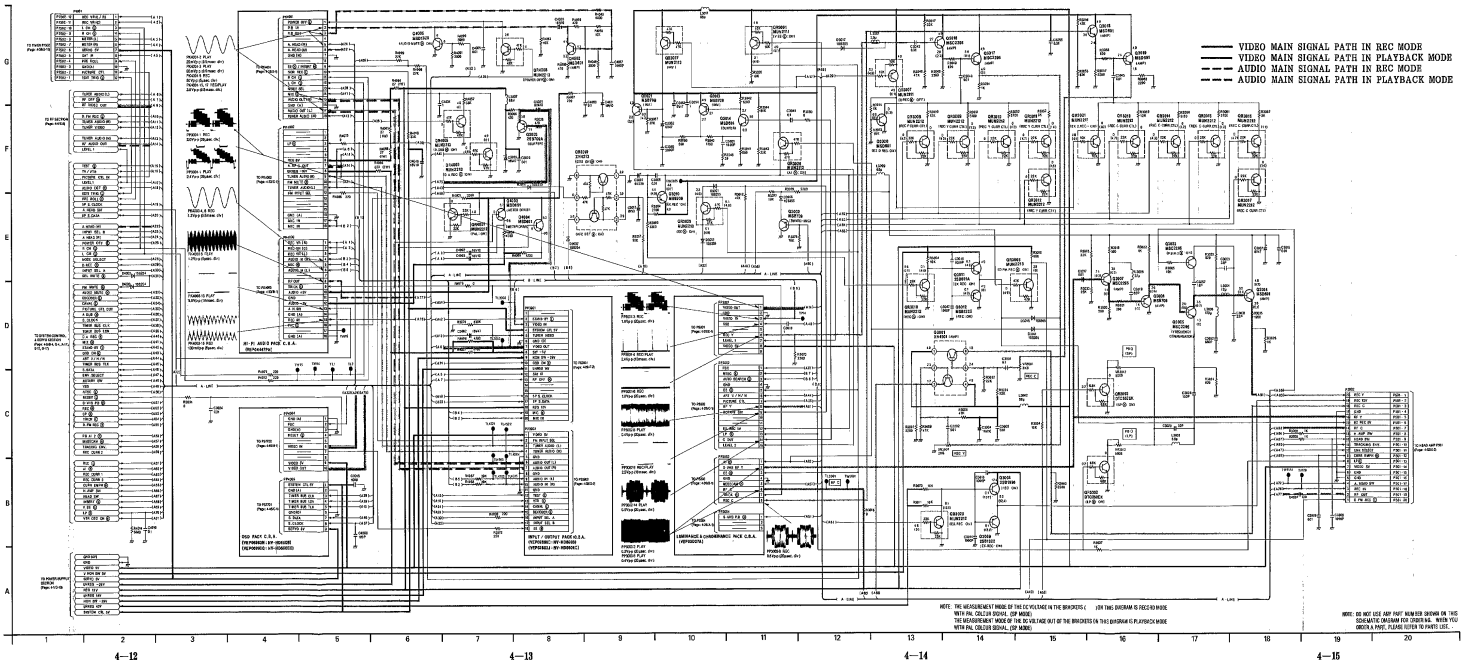
4-3. SYSTEM CONTROL & SERVO SECTION IN MAIN SCHEMATIC DIAGRAM

CAPSTAN SERVO SPEED LOOP — CAPSTAN SERVO PHASE LOOP - - - CYLINDER SERVO SPEED LOOP - - - CYLINDER SERVO PHASE LOOP

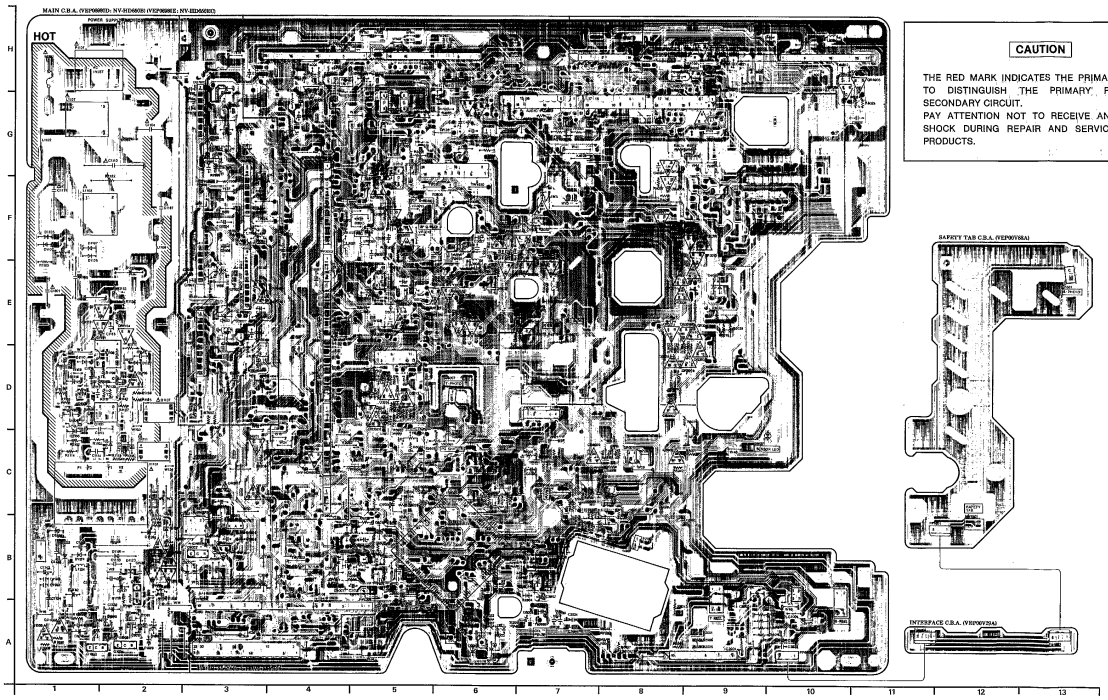


4—8 4—9 4—10 4—11

4-4. LUMINANCE/CHROMINANCE & AUDIO SECTION IN MAIN SCHEMATIC DIAGRAM



4-5. MAIN C.B.A. (VEP06980D: NV-HD650B) (VEP06980E: NV-HD650EC)



CAUTION

THE RED MARK INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE SECONDARY CIRCUIT.
PAY ATTENTION NOT TO RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.

MAIN C.B.A. ADDRESS INFORMATION

POWER SUPPLY SECTION	
Transistor	
Q1001	G-3
Q1002	B-3
Q1003	A-1
Q1004	A-2
Q1005	A-1
Q1007	B-3
Q1101	B-2
Q1102	E-1
Q1104	B-2
Q1105	B-2
Q1107	B-2
Q1111	C-2
Transistor & Resistor	
QR1001	C-3
QR1002	A-1
QR1101	E-1
QR1102	B-2
QR1103	B-2
QR1104	E-2
QR1105	B-2
QR1106	B-2
Integrated Circuit	
IC1001	B-3
IC1101	D-2
IC1102	B-3

ADDRESS INFORMATION

RF SECTION	
Transistor	
Q7501	G-7
Transistor & Resistor	
QR7501	E-4
Test Point	
TW23	F-3
TW24	F-3
TW30	G-3
TW7801	C-3
Connector	
PK7301	E-3
PK7302	F-3

ADDRESS INFORMATION

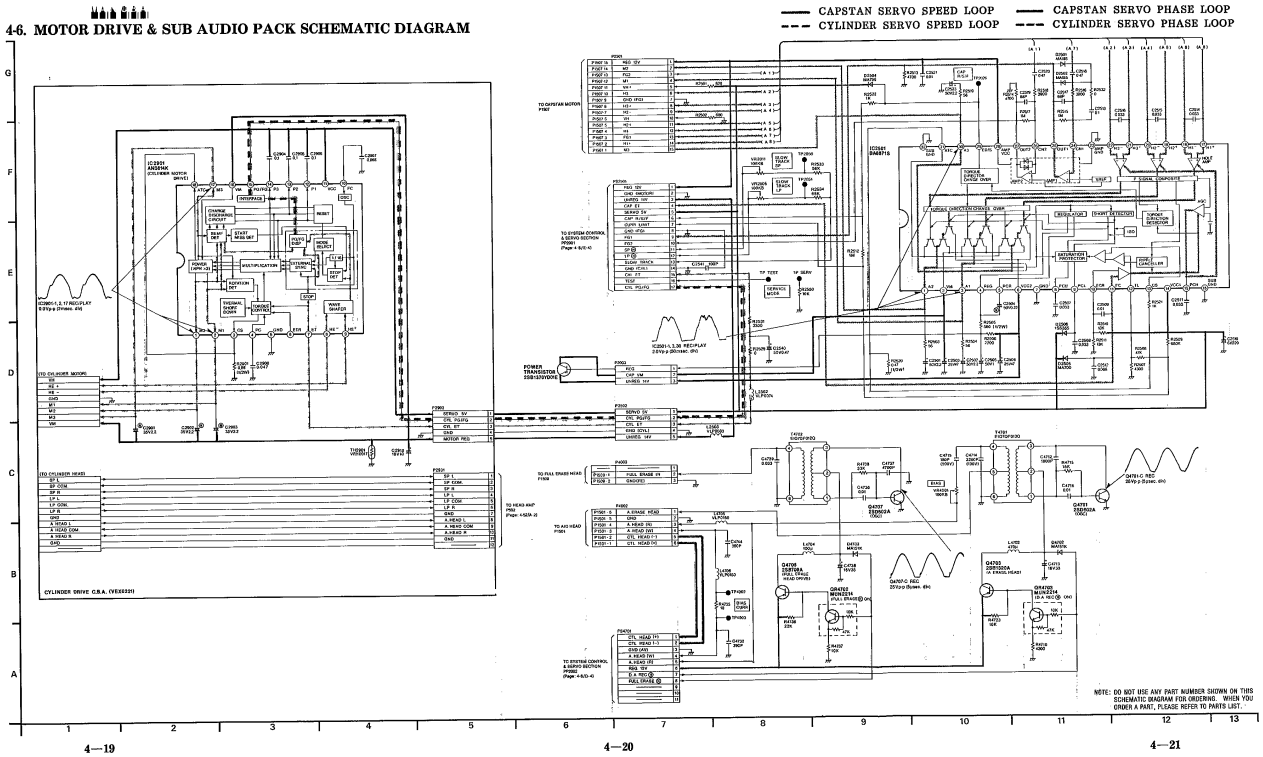
SYSTEM CONTROL & SERVO SECTION			
Transistor		**Test Point**	
Q1501	E-13	TL2001	A-8
Q6001	C-8	TL2002	A-7
Q6002	D-8	TL2008	B-4
Transistor & Resistor		TW7	B-4
QR5001	B-10	TW2001	F-8
QR6002	B-7	TW2002	B-4
QR6004	H-10	**Adjustment**	
QR6005	H-11	VR3001	C-6
QR6009	C-7	**Connector**	
QR6010	C-8	P2001	B-8
QR6013	C-4	P6001	A-3
Integrated Circuit		P6004	D-7
IC2001	A-8	PP1501	B-12
IC5001	C-6	PP2001	H-10
IC5002	B-10	PP2002	H-7
IC6003	B-8	PP6002	A-10
		PS1801	A-13
		PSB206	A-11

ADDRESS INFORMATION

LUMINANCE/CHROMINANCE & AUDIO SECTION			
Transistor		QR3027	D-5
Q3001	E-5	QR4001	G-7
Q3002	E-7	QR4002	G-8
Q3003	G-4	QR4003	G-9
Q3004	F-6	QR4005	F-9
Q3005	E-6	**Test Point**	
Q3006	E-7	TL1	E-7
Q3007	E-7	TL2	E-7
Q3008	G-5	TL3001	G-5
Q3009	G-5	TL3002	H-4
Q3010	F-5	TL3003	H-4
Q3011	G-5	TL4501	G-4
Q3012	G-5	TL4504	H-5
Q3013	D-5	TL4505	H-5
Q3014	D-5	TL4506	H-5
Q3016	F-6	TL4521	H-6
Q3017	E-5	TL4522	G-5
Q3018	E-6	TW4	B-3
Q3019	E-6	TW14	G-8
Q3020	D-8	TW15	G-5
Q3021	D-5	TW19	G-7
Q3023	F-7	TW35	G-5
Q4002	H-9	TW3001	G-5
Q4003	G-6	TW3025	E-5
Q4004	G-6	TW3026	C-5
Q4005	H-9	TW4510	F-4
Transistor & Resistor		**Adjustment**	
QR3001	F-8	VR3001	F-5
QR3002	F-5	VR3012	F-5
QR3003	F-5	VR3013	F-5
QR3005	F-7	VR3014	G-5
QR3007	D-8	VR6001	F-5
QR3008	D-9	**Connector**	
QR3009	D-9	P3002	G-5
QR3010	E-8	PK001	D-5
QR3011	E-8	PP3001	C-4
QR3012	E-8	PP3002	E-4
QR3013	E-8	PP3003	D-4
QR3014	E-8	PP3004	C-4
QR3015	F-9	PP3501	H-4
QR3016	F-9	PP3502	H-6
QR3017	F-9	PP4004	A-3
QR3018	F-5	PP4005	A-5
QR3019	D-3	PK4001	G-6
QR3020	G-5	PK4002	G-7
QR3021	E-6	PK4003	G-7
QR3023	E-4		
QR3026	E-5		

ADDRESS INFORMATION

4-6. MOTOR DRIVE & SUB AUDIO PACK SCHEMATIC DIAGRAM



MOTOR DRIVE & SUB AUDIO PACK ICs DC VOLTAGE CHART (SP MODE)

REF. NO. \ MODE	IC2501																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	0.6	4.4	0.6	13.2	0.1	13.9	0	4.5	0.7	2.8	0.2	0.4	0	4.9	1.5	0	2.3	2.3	2.3	2.2
PLAY	2.6	4.3	2.6	12.4	1.9	13.6	0	0.7	0.7	2.8	2.5	0.4	0.1	4.9	1.5	0	2.3	2.3	2.3	2.3
REC	2.7	4.3	2.7	12.4	2.0	13.6	0	0.7	0.7	2.8	2.5	0.4	0.1	5.0	1.5	0	2.3	2.3	2.3	2.3
F.F	7.5	13.4	7.5	4.3	11.6	13.5	0.1	0.8	0.8	2.8	2.0	0.5	0.2	4.9	1.5	0	2.3	2.3	2.3	2.3
REW	7.0	13.5	7.0	6.9	11.7	13.6	0	0.7	0.8	2.8	2.3	0.5	0.1	4.9	1.5	0	2.3	2.3	2.3	2.3
REF. NO.	IC2501																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32								
STOP	2.2	2.3	0	6.3	6.3	6.3	6.3	12.3	2.0	0.6	0	0								
PLAY	2.3	2.3	0	6.3	6.3	6.3	6.3	12.3	0	2.6	0	0								
REC	2.3	2.3	0	6.3	6.3	6.3	6.3	12.3	0	2.6	0.1	0								
F.F	2.3	2.3	0	6.3	6.3	6.3	6.3	12.3	0	7.5	0.2	0								
REW	2.3	2.3	0	6.3	6.3	6.3	6.3	12.3	4.9	7.4	0.2	0								
REF. NO.	IC2901																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
STOP	13.1	13.1	0.1	0.6	0	2.5	2.4	2.6	2.5	2.6	4.9	3.7	3.6	3.7	1.3	13.8	13.3	0.1		
PLAY	13.8	12.8	0.2	0.6	0	2.5	2.4	2.6	2.5	2.7	4.9	3.7	3.7	3.7	1.4	13.6	13.7	0.2		
REC	13.7	13.7	0.2	0.6	0	2.5	2.4	2.6	2.5	2.7	4.9	3.8	3.7	3.7	1.5	13.6	13.7	0.2		
F.F	13.8	13.8	0.1	0.6	0	2.5	2.4	2.6	2.5	2.7	4.9	3.8	3.7	3.7	1.5	13.5	13.7	0.1		
REW	13.8	13.8	0.2	0.6	0	2.5	2.4	2.6	2.5	2.7	4.9	3.7	3.7	3.7	1.5	13.5	13.7	0.2		

MOTOR DRIVE & SUB AUDIO PACK PINs DC VOLTAGE CHART (SP MODE)

REF. NO. \ MODE	PS2501																
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
STOP	12.3	0	13.8	0.2	4.9	2.0	4.9	0	6.3	6.3	4.4	0	0	0	2.4	5.0	1.4
PLAY	12.3	0	13.6	2.5	4.9	0	4.9	0	6.3	6.3	4.4	0	0	0	2.4	4.9	1.4
REC	12.3	0	13.6	2.5	4.9	0	4.9	0	6.3	6.3	4.4	0	0	0	2.4	4.9	1.4
F.F	12.3	0	13.5	2.1	4.9	0	4.9	0	6.3	6.3	4.4	0	0	0	2.4	4.9	1.4
REW	12.3	0	13.5	2.1	4.9	4.9	4.9	0	6.3	6.3	4.4	0	0	0	2.4	4.9	1.4
REF. NO.	PS4701																
MODE	1	2	3	4	5	6	7	8	9	10	11						
STOP	0	0	0	0	0	12.3	0	0	0	4.9	0						
PLAY	0	0	0	0	0	12.3	0	0	0	0	4.9						
REC	3.5	3.5	0	0	0	12.3	4.9	4.7	0	4.9	0						
F.F	0	0	0	0	0	12.3	0	0	0	4.9	0						
REW	0	0	0	0	0	12.3	0	0	0	4.9	0						

MOTOR DRIVE & SUB AUDIO PACK TR.s DC VOLTAGE CHART (SP MODE)

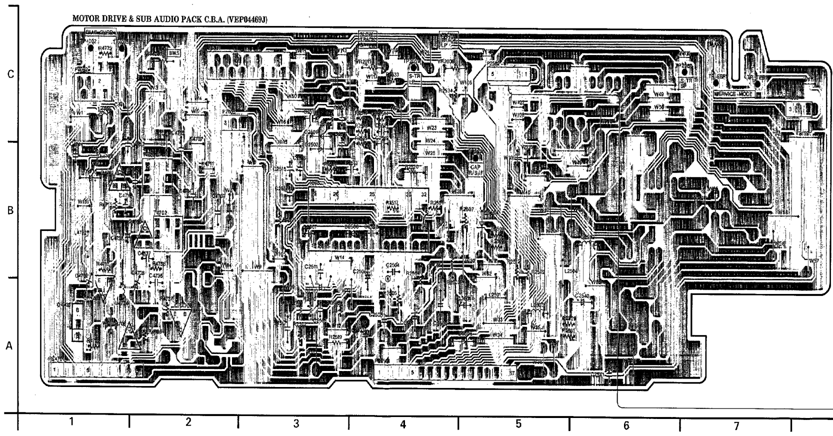
REF. NO. \ MODE	Q4701			Q4703			Q4706			Q4707		
MODE	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0	0.2	0.2	12.3	0.3	12.3	12.5	0.4	12.5	0	0.4	0.3
PLAY	0	0.3	0.3	12.3	0.3	12.3	12.6	0.4	12.6	0	0.4	0.3
REC	0	11.3	−1.4	12.3	11.9	11.9	12.5	12.5	11.7	0	12.2	0
F.F	0	0.3	0.3	12.3	0.3	12.3	12.5	0.4	12.5	0	0.4	0.3
REW	0	0.3	0.3	12.3	0.3	12.3	12.5	0.4	12.5	0	0.4	0.3
REF. NO.	QR4702			QR4703								
MODE	E	C	B	E	C	B						
STOP	0	12.5	0	0	12.3	0						
PLAY	0	12.5	0	0	12.3	0						
REC	3.6	11.7	4.7	4.1	11.5	4.9						
F.F	0	12.5	0	0	12.3	0						
REW	0	12.5	0	0	12.3	0						

4-7. MOTOR DRIVE & SUB AUDIO PACK C.B.A. (VEP04469J)

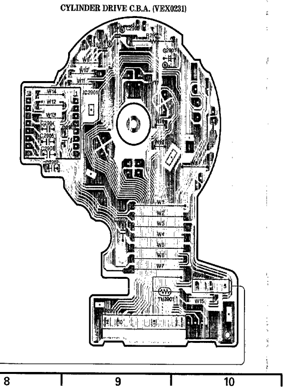
MOTOR DRIVE & SUB AUDIO PACK C.B.A.			
Transistor		**Adjustment**	
Q4701	B-1	VR2006	C-4
Q4703	A-1	VR2011	C-4
Q4706	A-1	VR4001	C-2
Q4707	B-2	**Connector**	
Transistor & Resistor		P2003	C-2
QR4702	A-2	P2501	C-2
QR4703	A-1	P2502	C-5
Integrated Circuit		P2901	A-9
IC2501	B-3	P2902	A-10
IC2902	B-8	P4002	C-1
Test Point		P4003	C-7
TP2026	B-5	PS2501	A-4
TP2050	C-7	PS4701	A-1
TP2051	C-4		
TP4002	C-1		
TP4003	C-1		
TP SERV	C-7		
TP TEST	C-7		

ADDRESS INFORMATION

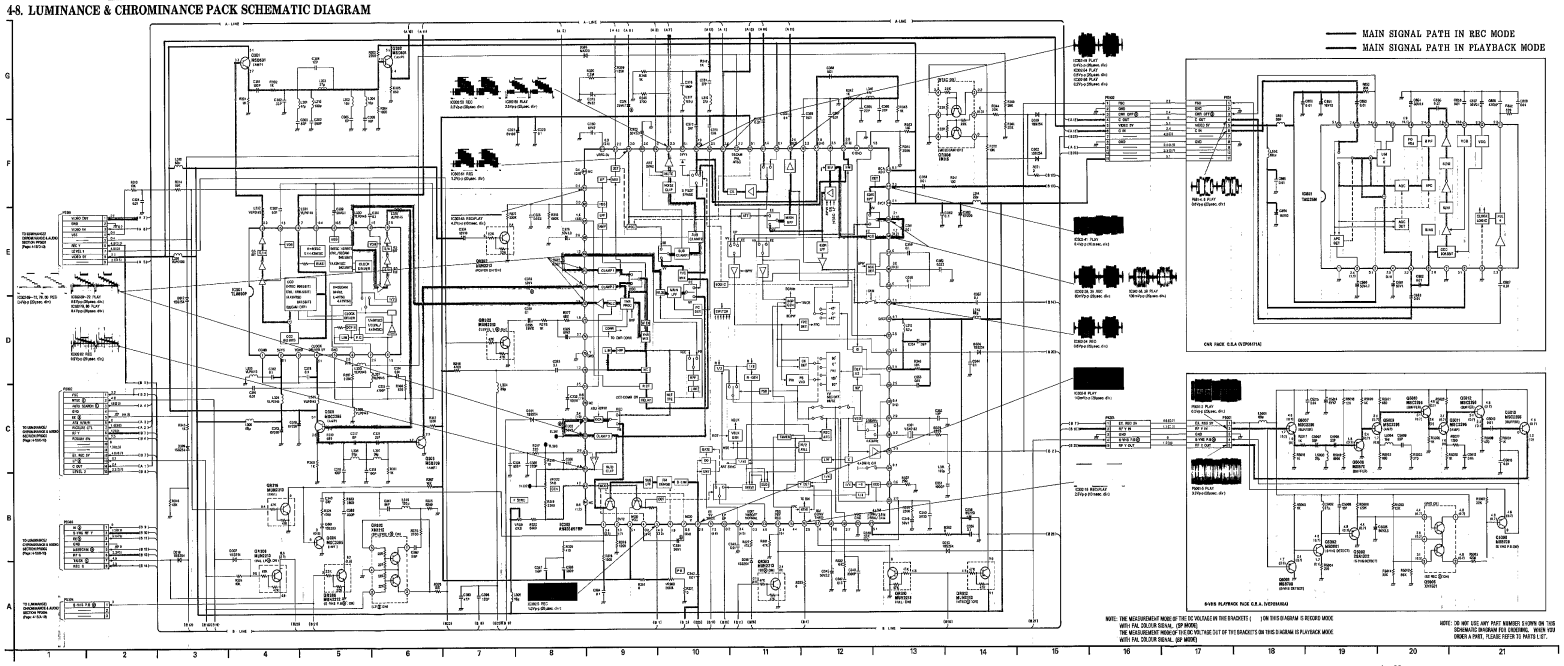
MOTOR DRIVE & SUB AUDIO PACK C.B.A. (VEP04469J)



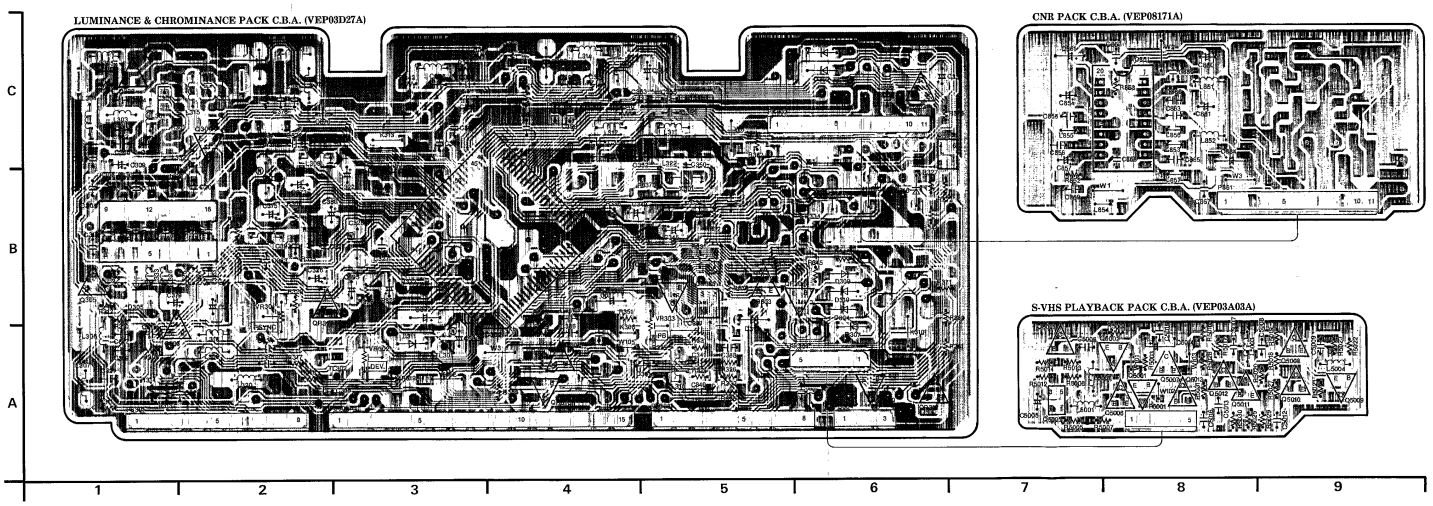
CYLINDER DRIVE C.B.A. (VEX0231)



4-8. LUMINANCE & CHROMINANCE PACK SCHEMATIC DIAGRAM



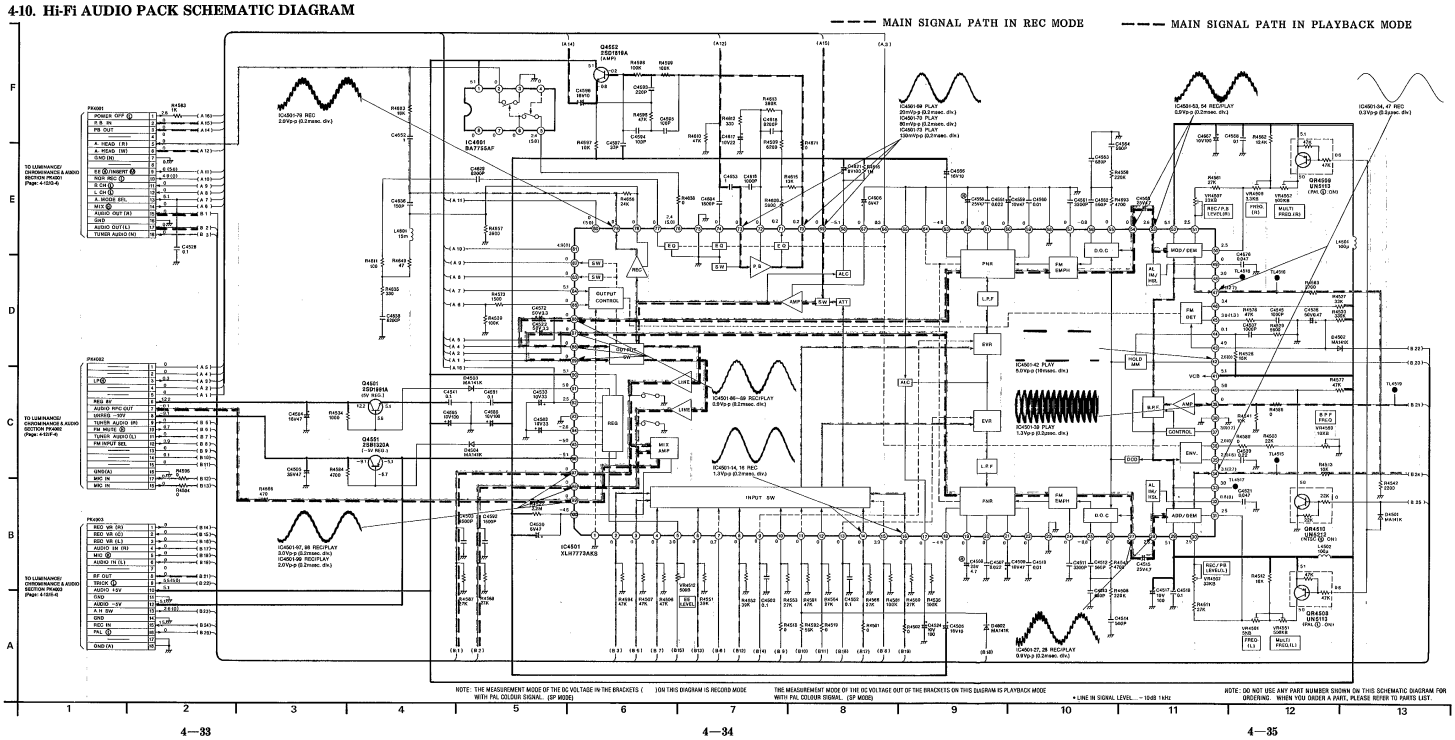
4-9. LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03D27A)



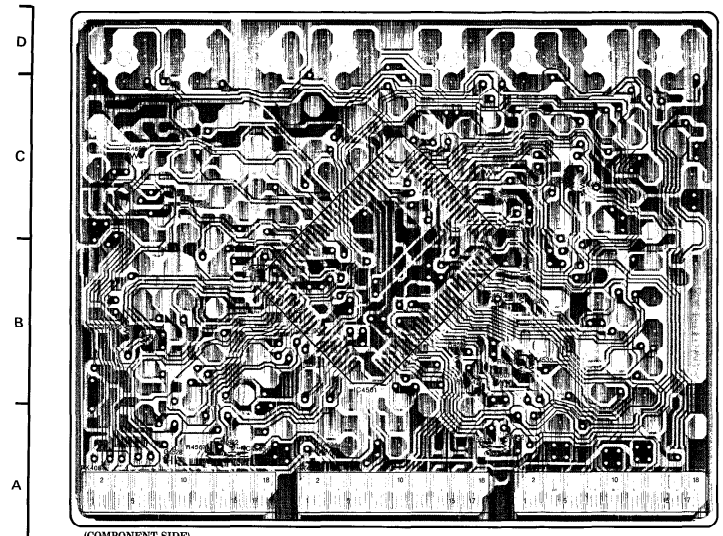
LUMINANCE & CHROMINANCE PACK C.B.A.	
Transistor	
Q301	C-2
Q302	C-1
Q303	A-1
Q304	A-4
Q305	B-1
Q5001	A-8
Q5002	A-8
Q5003	A-7
Q5005	A-7
Q5006	A-8
Q5007	A-9
Q5008	A-9
Q5009	A-9
Q5010	A-9
Q5011	A-8
Q5012	A-8
Q5013	A-9
Transistor & Resistor	
QR302	C-6
QR303	B-6
QR305	B-6
QR306	B-6
QR308	C-6
QR310	A-6
QR312	A-6
QR316	A-4
QR320	B-6
QR322	B-2
Integrated Circuit	
IC301	B-1
IC302	B-4
IC351	C-8
Test Point	
TL301	A-3
TL302	A-3
TL303	A-2
Adjustment	
VR101	B-2
VR302	A-3
VR303	B-6
Connector	
PB51	B-9
PS001	A-8
PX301	A-6
PX802	C-5
PS301	A-1
PS302	A-3
PS305	A-9
PS306	A-6

ADDRESS INFORMATION

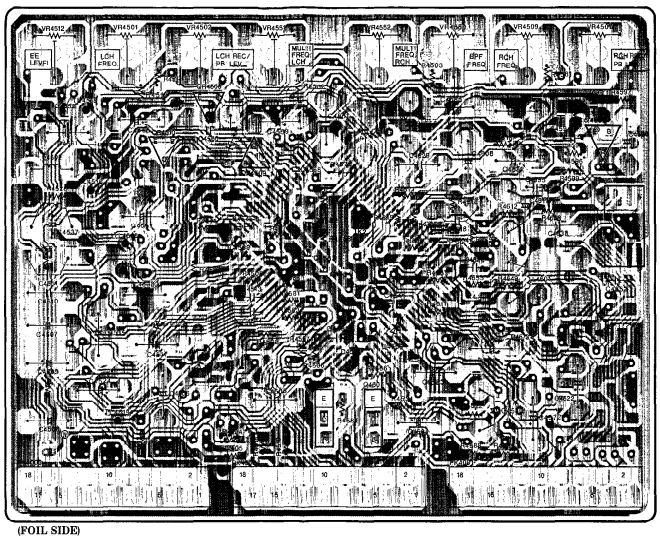
4-10. Hi-Fi AUDIO PACK SCHEMATIC DIAGRAM



4-11. Hi-Fi AUDIO PACK C.B.A. (VEP04447PN)



(COMPONENT SIDE)

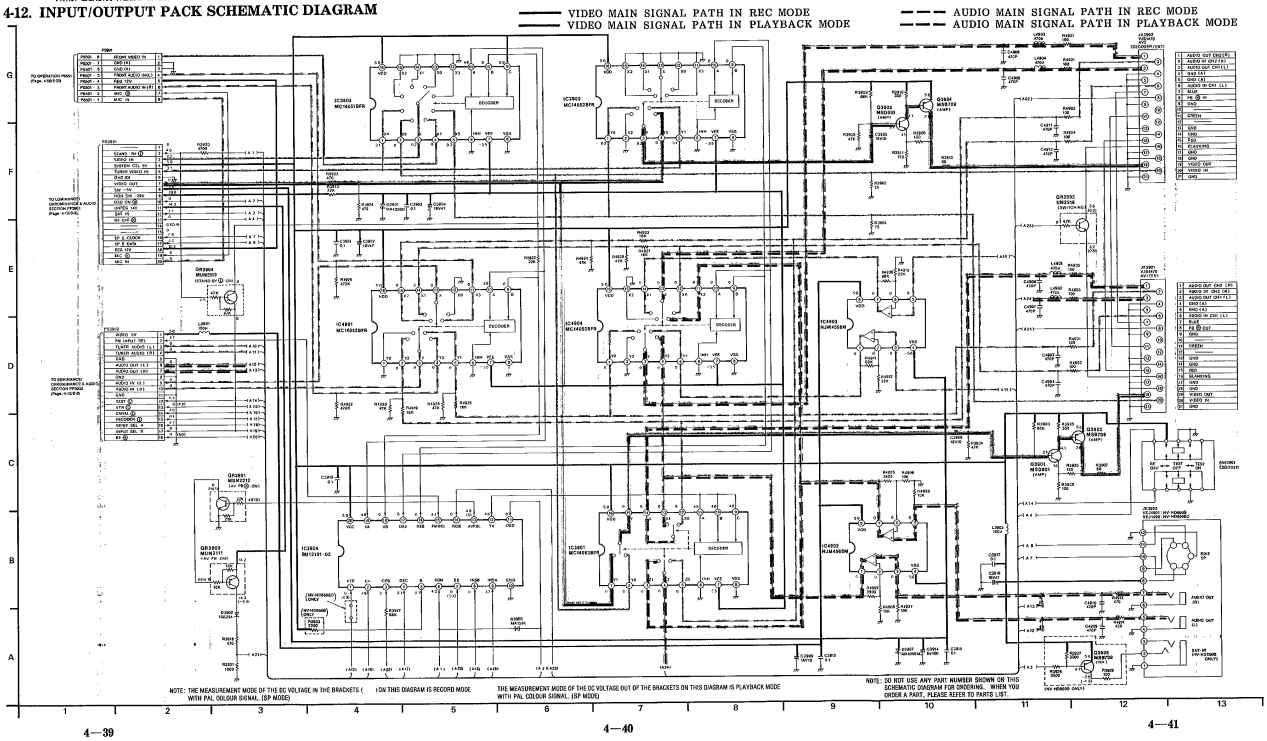


(FOIL SIDE)

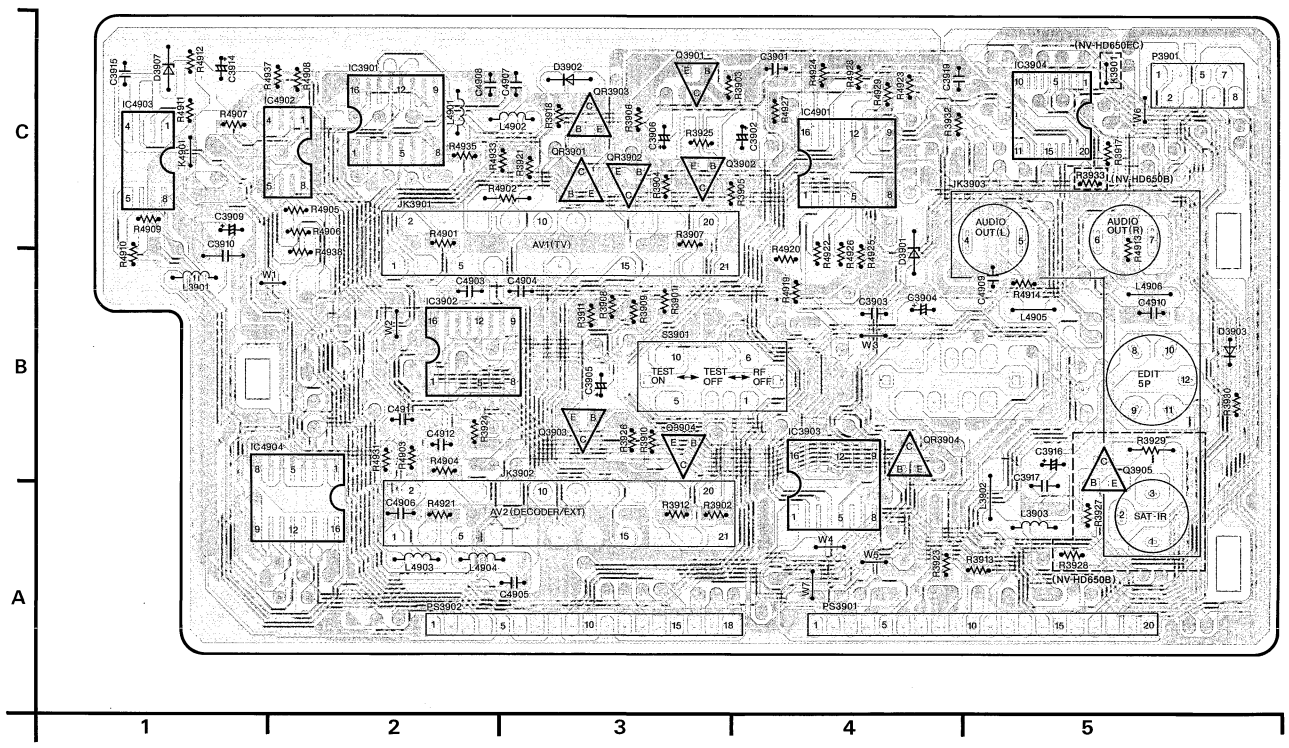
Hi-Fi AUDIO PACK C.B.A.	
Transistor	
Q4501	A-7
Q4551	A-7
Q4552	C-6
Transistor & Resistor	
QRH500	C-8
QRH508	C-7
QRH510	C-6
Integrated Circuit	
IC4501	D-5
IC4551	C-5
Test Point	
TL4515	B-6
TL4516	C-5
TL4517	B-5
TL4518	C-5
TL4519	A-5
Adjustment	
VR4501	D-5
VR4502	D-5
VR4507	D-5
VR4508	D-5
VR4512	D-5
VR4550	D-5
VR4551	D-7
VR4552	D-7
Connector	
PK4001	A-1
PK4001	A-5
PK4002	A-2
PK4002	A-7
PK4003	A-4
PK4003	A-5

ADDRESS INFORMATION

4-12. INPUT/OUTPUT PACK SCHEMATIC DIAGRAM



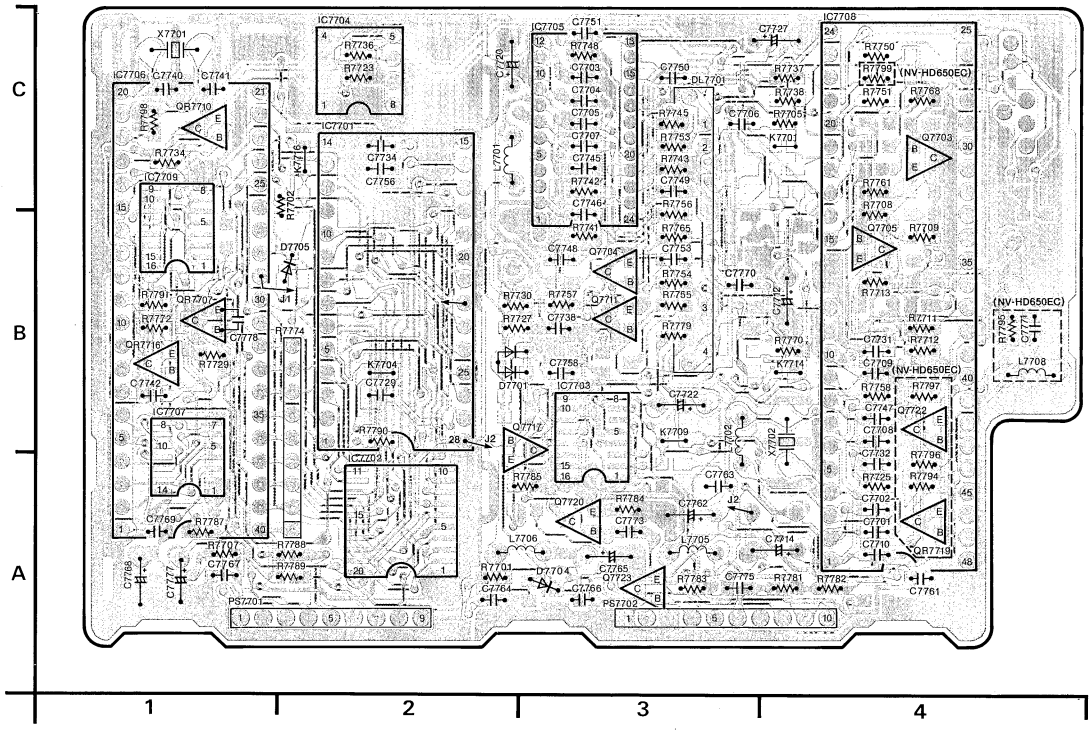
4-13. INPUT/OUTPUT PACK C.B.A. (VEP03B93C: NV-HD650B) (VEP03B93J: NV-HD650EC)



INPUT/OUTPUT PACK C.B.A.	
Transistor	
Q3901	C-3
Q3902	C-3
Q3903	B-3
Q3904	B-3
Q3905	B-5
Transistor & Resistor	
QR3901	C-3
QR3902	C-3
QR3903	C-3
QR3904	B-4
Integrated Circuit	
IC3901	C-2
IC3902	B-2
IC3903	B-4
IC3904	C-5
IC4901	C-4
IC4902	C-2
IC4903	C-1
IC4904	B-2
Connector	
P3901	C-5
PS3901	A-4
PS3902	A-2

ADDRESS INFORMATION

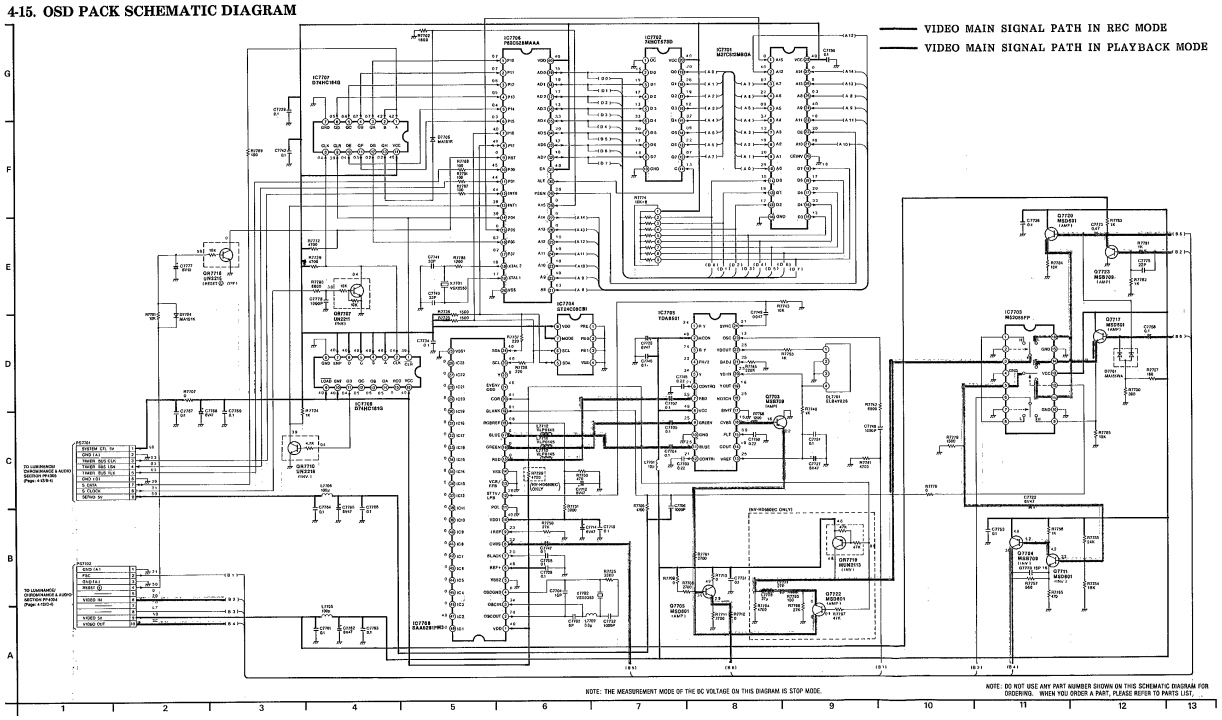
4-14. OSD PACK C.B.A. (VEP06993M: NV-HD650B) (VEP06993Q: NV-HD650EC)



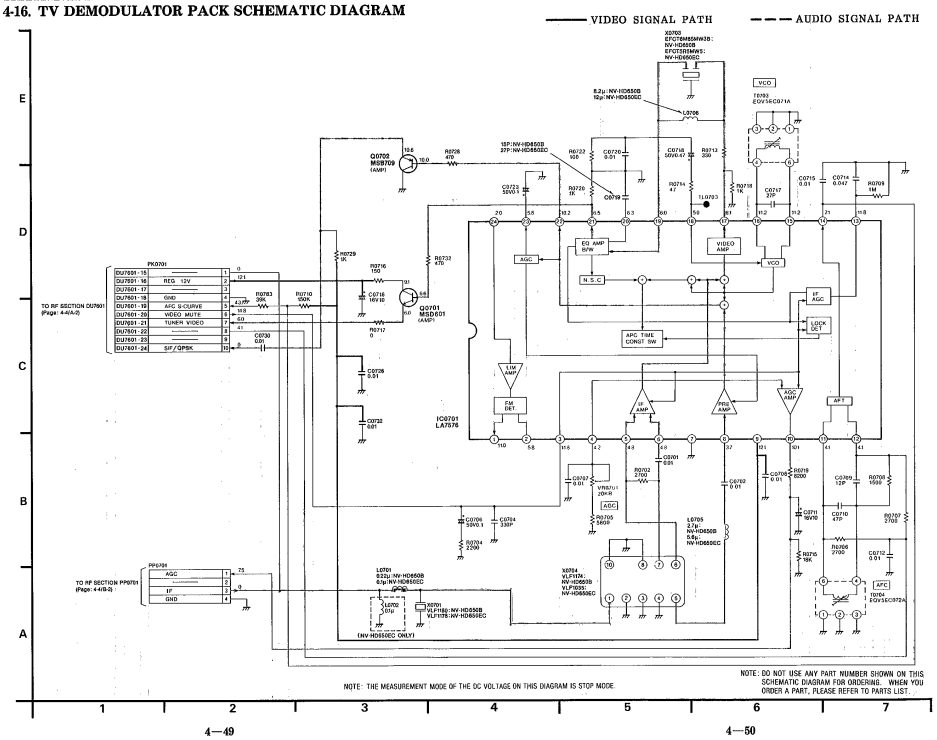
OSD PACK C.B.A.	
Transistor	
Q7703	C-4
Q7704	B-3
Q7705	B-4
Q7711	B-3
Q7717	B-3
Q7720	A-3
Q7722	B-4
Q7723	A-3
Transistor & Resistor	
QR7707	B-1
QR7710	C-1
QR7716	B-1
QR7719	A-4
Integrated Circuit	
IC7701	C-2
IC7702	A-2
IC7703	B-3
IC7704	C-2
IC7705	C-3
IC7706	C-1
IC7707	B-1
IC7708	C-4
IC7709	C-1
Connector	
PS7701	A-1
PS7702	A-3

ADDRESS INFORMATION

4-15. OSD PACK SCHEMATIC DIAGRAM



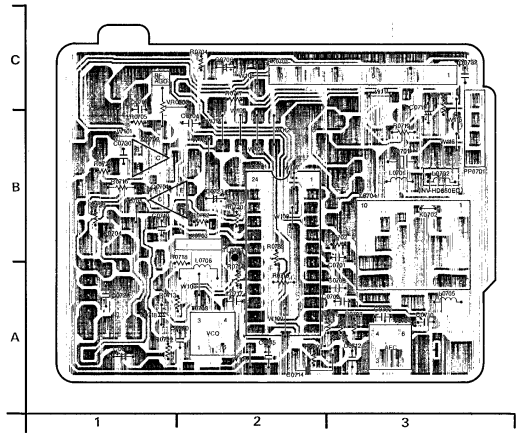
4-16. TV DEMODULATOR PACK SCHEMATIC DIAGRAM



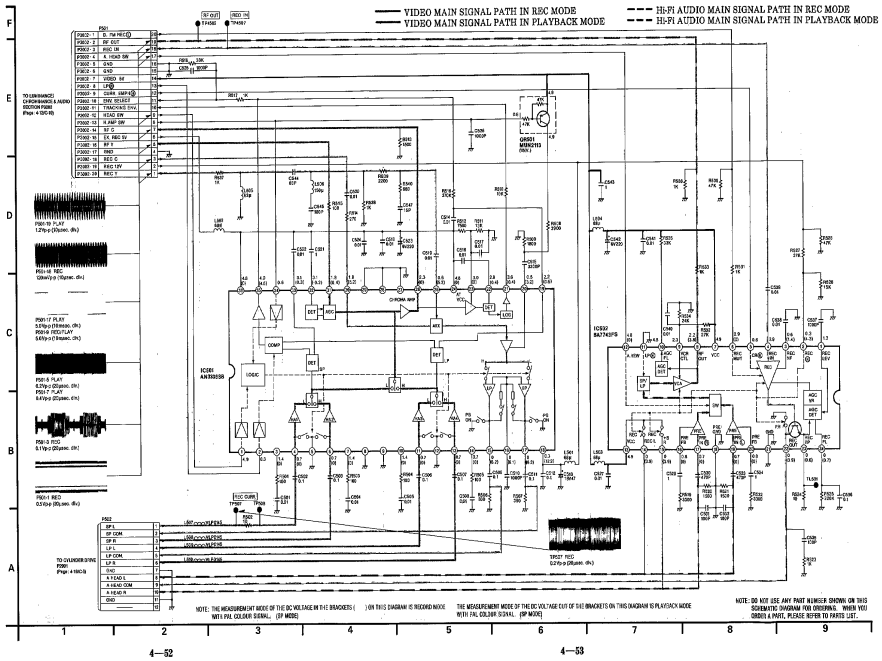
4-17. TV DEMODULATOR PACK C.B.A. (VEP07801F: NV-HD650B) (VEP07801B: NV-HD650EC)

TV DEMODULATOR PACK C.B.A.	
Transistor	
Q6701 Q6702	B-1 B-1
Integrated Circuit	
IC6701	B-2
Test Point	
TL0703	B-2
Adjustment	
T0703 T6704 VR0701	A-2 A-3 C-1
Connector	
P60701 PP0701	C-2 C-3

ADDRESS INFORMATION



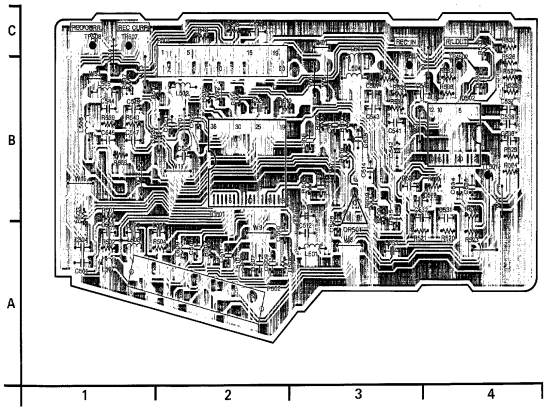
4-18. HEAD AMP SCHEMATIC DIAGRAM



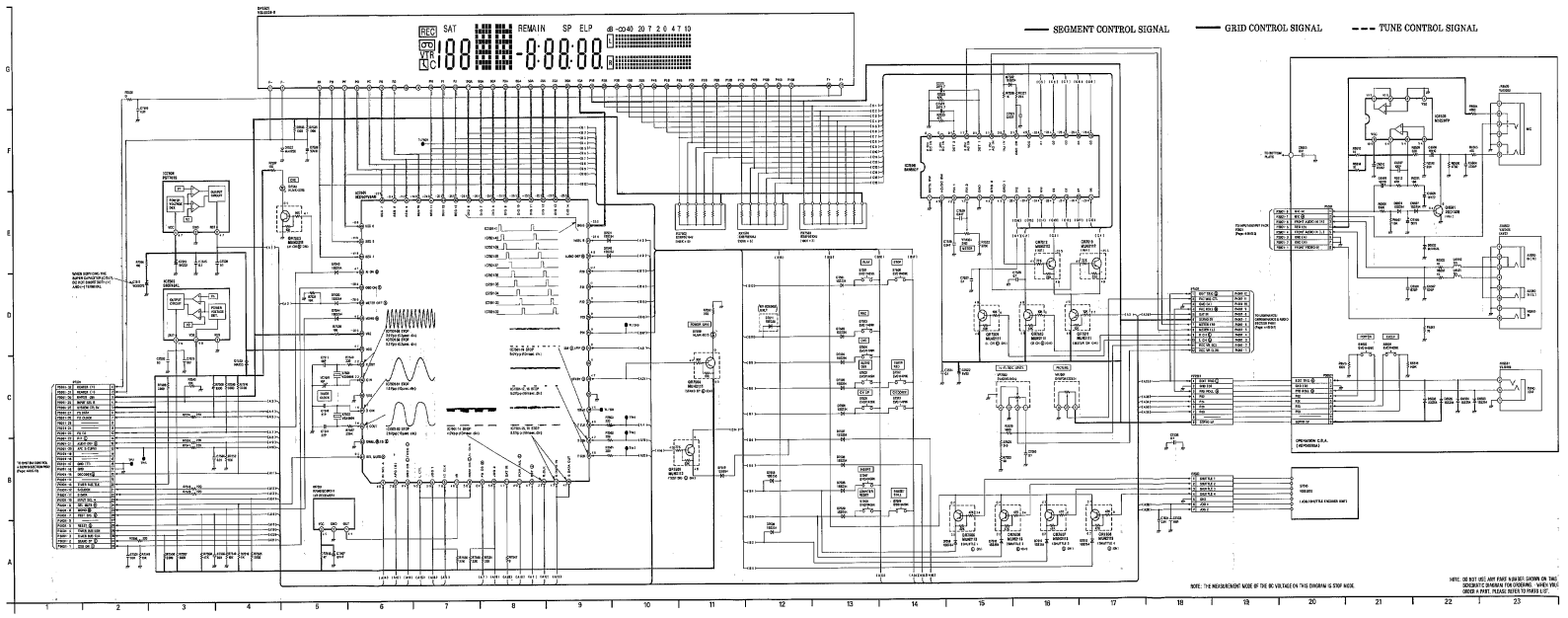
4-19. HEAD AMP C.B.A. (VEP05227A)

HEAD AMP C.B.A.	
Transistor & Resistor	
QR501	A-3
Integrated Circuit	
IC500	B-2
IC502	B-4
Test Point	
TL501	B-4
TP502	C-3
TP506	C-1
TP4502	B-4
TP4507	B-3
Connector	
PD01	C-3
PD02	A-3

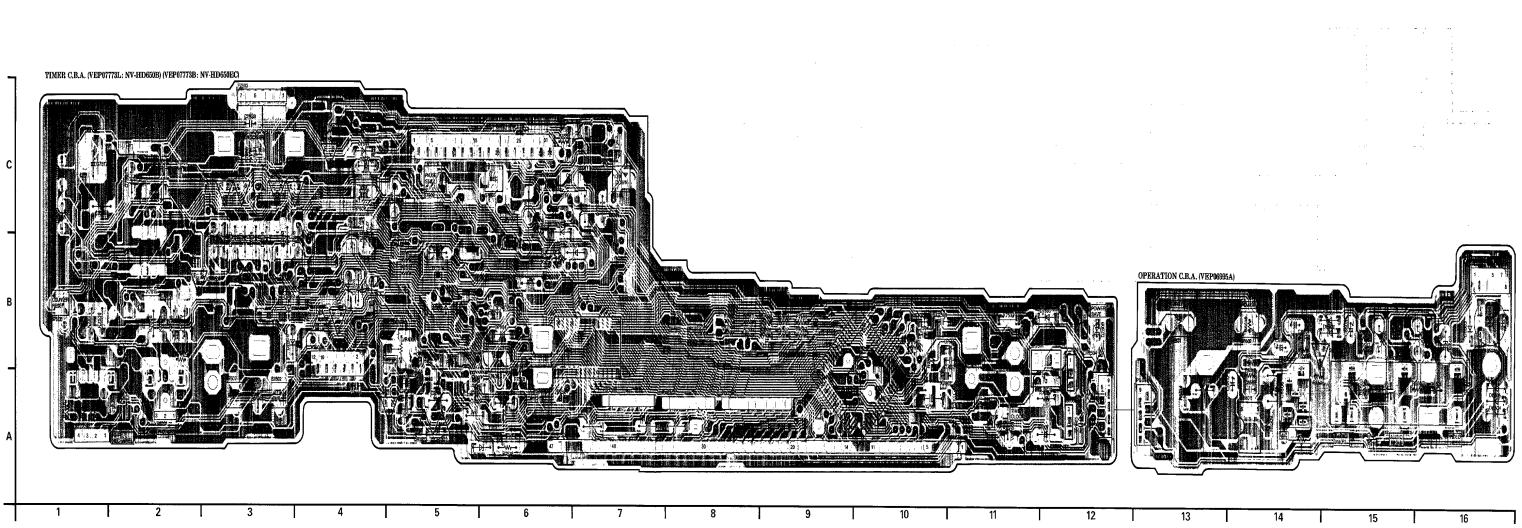
ADDRESS INFORMATION



4-20. TIMER & OPERATION SCHEMATIC DIAGRAM

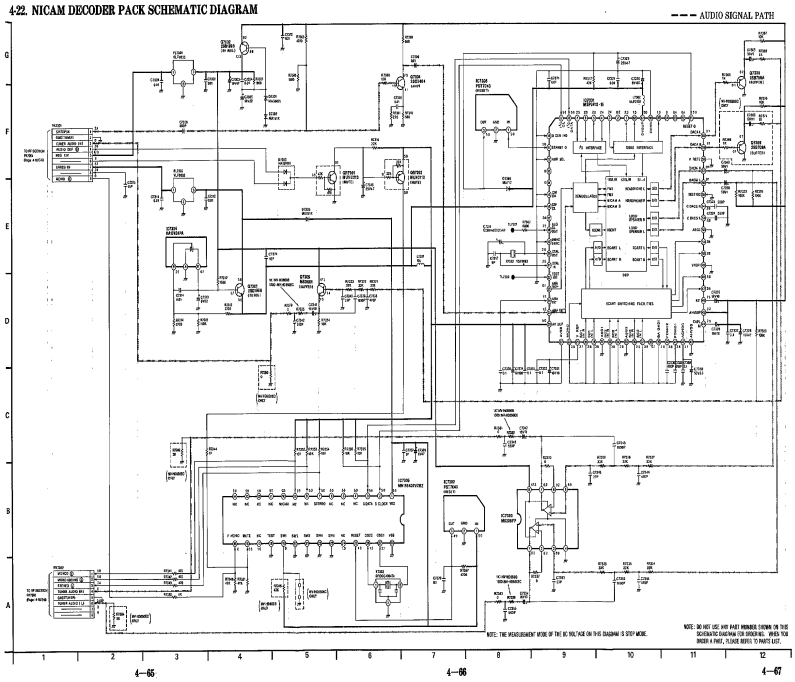


4-21. TIMER C.B.A. (VEP07773L: NV-HD650B) (VEP07773B: NV-HD650EC) & OPERATION C.B.A. (VEP06995A)



4—60 4—61 4—62 4—63 4—64

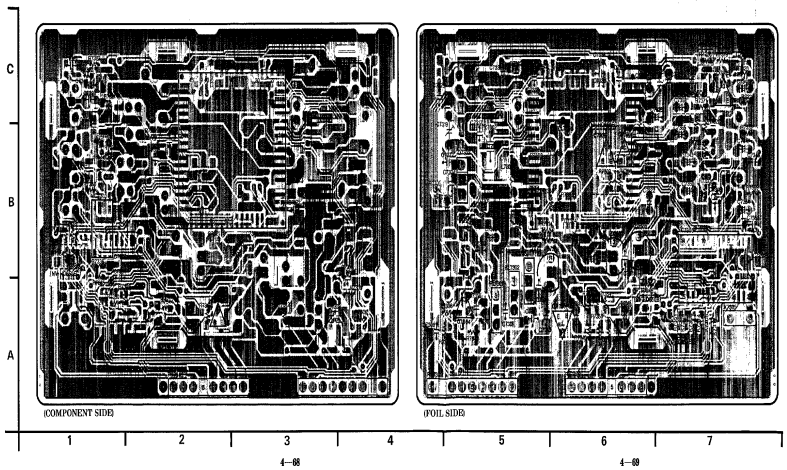
4-22. NICAM DECODER PACK SCHEMATIC DIAGRAM



4-23. NICAM DECODER PACK C.B.A. (VEP07787A: NV-HD650B) (VEP07787B: NV-HD650EC)

NICAM DECODER PACK C.B.A.			
Transistor		IC7505	B-6
Q7501	B-6	IC7506	D-7
Q7502	B-5	IC7508	B-6
Q7504	A-6	Test Point	
Q7505	C-7	TL7301	B-6
Q7506	B-6	TL7302	C-6
Q7508	B-6	Adjustment	
Transistor & Resistor		CP270	B-5
Q7501	A-4	Connector	
Q7502	A-3	Integrated Circuit	
IC7201	C-3	IC7202	B-4
IC7203	B-4	IC7205	B-1

ADDRESS INFORMATION



TV SYSTEM SELECT

IC7305		TV SYSTEM	SOUND MODULATION
SW1	SW2		
L	L	B/G	FM-MONO/NICAM GERMAN MULTIPLEX
H	L	I	FM-MONO/NICAM
*	H	M	FM-MONO

*: DO NOT CARE

FM-MONO MODE SELECT

IC7305 SW3	FM-MONO MODE	FM-MONO SOURCE
L	INT	SIF (IF INPUT1, IF INPUT2)
H	EXT	AUDIO MULTI (MONO IN)

SIF INPUT SELECT

IC7305 SW4	SIF INPUT
L	IF INPUT 1
H	IF INPUT 2

AUDIO OUTPUT SELECT

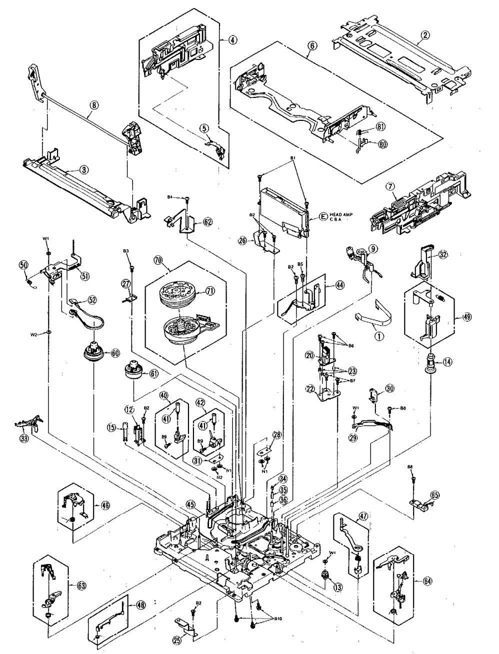
INPUT TV SYSTEM	SOUND MODULATION	FM-MONO MODE	MAIN OUTPUT		SUB OUTPUT	
			INPUT SOURCE	MATRIX	INPUT SOURCE	MATRIX
B/G	MONO	INT	IF INPUT 1/2 (FM)	MONAURAL	IF INPUT 1/2 (FM)	MONAURAL
		EXT	MONO IN	MONAURAL	MONO IN	MONAURAL
	NICAM STEREO	INT	IF INPUT 1/2 (NICAM)	STEREO	IF INPUT 1/2 (FM)	MONAURAL
		EXT	IF INPUT 1/2 (NICAM)	STEREO	MONO IN	MONAURAL
	NICAM M1/DATA	INT	IF INPUT 1/2 (NICAM)	MONAURAL	IF INPUT 1/2 (FM)	MONAURAL
		EXT	IF INPUT 1/2 (NICAM)	MONAURAL	MONO IN	MONAURAL
	NICAM M1/M2	INT	IF INPUT 1/2 (NICAM)	STEREO	IF INPUT 1/2 (FM)	MONAURAL
		EXT	IF INPUT 1/2 (NICAM)	STEREO	MONO IN	MONAURAL
	NICAM DATA	INT	IF INPUT 1/2 (FM)	MONAURAL	IF INPUT 1/2 (FM)	MONAURAL
		EXT	MONO IN	MONAURAL	MONO IN	MONAURAL
	STEREO	INT	IF INPUT 1/2 (FM)	STEREO	IF INPUT 1/2 (FM)	MONAURAL
	BILINGUAL	INT	IF INPUT 1/2 (FM)	STEREO	IF INPUT 1/2 (FM)	MONAURAL
I	MONO	INT	IF INPUT 1/2 (FM)	MONAURAL	IF INPUT 1/2 (FM)	MONAURAL
		EXT	MONO IN	MONAURAL	MONO IN	MONAURAL
	NICAM STEREO	INT	IF INPUT 1/2 (NICAM)	STEREO	IF INPUT 1/2 (FM)	MONAURAL
		EXT	IF INPUT 1/2 (NICAM)	STEREO	MONO IN	MONAURAL
	NICAM M1/DATA	INT	IF INPUT 1/2 (NICAM)	MONAURAL	IF INPUT 1/2 (FM)	MONAURAL
		EXT	IF INPUT 1/2 (NICAM)	MONAURAL	MONO IN	MONAURAL
	NICAM M1/M2	INT	IF INPUT 1/2 (NICAM)	STEREO	IF INPUT 1/2 (FM)	MONAURAL
		EXT	IF INPUT 1/2 (NICAM)	STEREO	MONO IN	MONAURAL
	NICAM DATA	INT	IF IMPUT 1/2 (FM)	MONAURAL	IF INPUT 1/2 (FM)	MONAURAL
		EXT	MONO IN	MONAURAL	MONO IN	MONAURAL
M	MONO	INT	IFINPUT 1/2 (FM)	MONAURAL	IF INPUT 1/2 (FM)	MONAURAL

Note: When the IC7305-15 (F MONO) is high, both the MAIN OUTPUT and the SUB OUTPUT apply the FM-MONO audio.

SECTION 5
EXPLODED VIEWS & PARTS LIST

5-1. EXPLODED VIEW & MECHANICAL REPLACEMENT PARTS LIST

❶ CHASSIS PARTS SECTION (1)



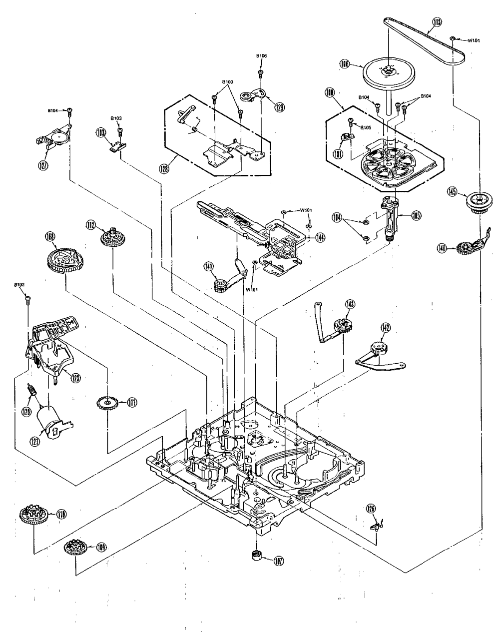
Note:1.* Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark ⟨!⟩ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
**********		NV-HD650B/EC			
1(1)		VWJ0743	FLEXIBLE CABLE (6P)	1	P4002-P1501
2(1)		VMA8644	TOP PLATE	1	
3(1)		VMA8787	CASSETTE GUIDE	1	
4(1)		VXA4660	SIDE PLATE (L) UNIT	1	
5(1)		VML2902	OPENER LEVER	1	
6(1)		VXA4661	CASSETTE HOLDER PLATE UNIT	1	
7(1)		VXA4806	SIDE PLATE (R) UNIT	1	
8(1)		VXP1339	MAIN SHAFT UNIT	1	
9(1)		VXL2440	CLEANER ARM UNIT	1	
12(1)		VBS0052	FE HEAD	1	
13(1)		VDG0871	CARRIAGE CONNECTION GEAR	1	
14(1)		VDG0886	PINCH CAM GEAR	1	
15(1)		VXP1402	IMPEDANCE ROLLER UNIT	1	
20(1)		VED0217	A/C HEAD (1) UNIT	1	
22(1)		VMA8624	A/C HEAD BASE	1	
23(1)		VMB2515	A/C HEAD SPRING	3	
25(1)		VMA8761	MOUNT ANGLE	1	
26(1)		VMA9158	HEAD AMP MOUNT ANGLE (L)	1	
27(1)		VMC0917	EARTH SPRING	1	
28(1)		VMA8874	INCLIND BASE HOLDER (S)	1	
29(1)		VMD2078	P5 STOPPER BASE	1	
30(1)		VXA4927	P5 POST STOPPER	1	
31(1)		VMA8873	INCLIND BASE HOLDER (T)	1	
32(1)		VMD2101	OPENER PIECE	1	
33(1)		VML2776	TENSION SPRING ARM	1	
34(1)		VMX1544	P4 UPPER LIMITER	1	
35(1)		VMX2175	P4 SLEEVE	1	
36(1)		VMX2176	P4 LOWER LIMITER	1	
40(1)		VXA5245KIT	INCLINED BASE (S) UNIT	1	OR VXA4982KIT
41(1)		VXP1415	ROLLER POST	2	
42(1)		VXA5247KIT	INCLINED BASE (T) UNIT	1	OR VXA4984KIT
44(1)		VXA4974	HEAD AMP MOUNT ANGLE (R) U.	1	
45(1)		VMS5383	CASSETTE POSITION FIXTURE	1	
46(1)		VXL2310	REVIEW ARM UNIT	1	
47(1)		VXL2306	P5 ARM UNIT	1	
48(1)		VXL2394	TAKE UP TENSION REGULATOR	1	
			ARM UNIT		
49(1)		VXL2246	PINCH ARM UNIT	1	
50(1)		VMB2434	TENSION SPRING	1	
51(1)		VXL2309	TENSION ARM (1) UNIT	1	
52(1)		VXZ0310	TENSION BAND UNIT	1	
60(1)		VXR0236	SUPPLY REEL TABLE UNIT	1	
61(1)		VXR0237	TAKE UP REEL TABLE UNIT	1	
62(1)		VXS0241	EARTH PLATE	1	
63(1)		VXZ0312	SUPPLY BRAKE ARM UNIT	1	
64(1)		VXZ0313	TAKE UP BRAKE ARM UNIT	1	
65(1)		2SB1370YDO1E	POWER TRANSISTOR	1	
70(1)		VEG1215	CYLINDER UNIT	1	[SUPPLIED FROM MBV]
71(1)		VXP1553	UPPER CYLINDER UNIT	1	[SUPPLIED FROM MBV]
80(1)		VML2680	RELEASE LEVER	1	
81(1)		VMB2013	RELEASE SPRING	1	
B1(1)		VHD0773	SCREW	2	
B2(1)		XTV26+6F	SCREW	5	
B3(1)		XTV26+4F	SCREW	1	
B4(1)		XTN3+6FFZ	SCREW	1	
B5(1)		XTV26+10F	SCREW	1	
B6(1)		VHD0762	SCREW	3	
B7(1)		XTV26+6FZ	SCREW	2	
B8(1)		XTV26+8F	SCREW	2	
B9(1)		XQN2+AJ4	SCREW	2	
B10(1)		VHD0342	SCREW	3	
N1(1)		VHN0192	NUT	3	
N2(1)		VHN0193	NUT	1	
W1(1)		VMX2208	WASHER	3	
W2(1)		XWGV26D5G	WASHER	1	

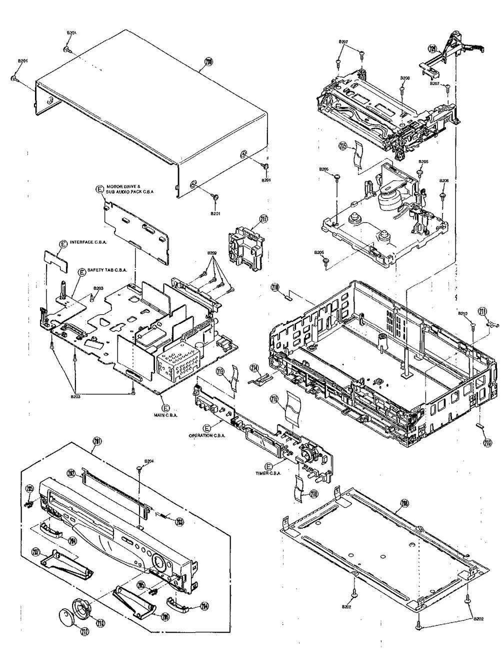
Note:1.* Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark ⟨!⟩ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
100(2)		VEK5927	CAPSTAN STATOR UNIT	1	
101(2)		VBK0061	FG HEAD	1	
103(2)		VMA8930	ROTOR STOPPER	1	
104(2)		VMX1927	OIL SEAL	2	
105(2)		VXD0140	HOUSING UNIT	1	
106(2)		VXP1519	CAPSTAN ROTOR UNIT	1	
107(2)		VXQ0297	THRUST SCREW UNIT	1	
108(2)		VDG0913	MAIN CAM GEAR	1	
109(2)		VDG0956	SUPPLY REEL GEAR	1	
110(2)		VDG0957	TAKE UP REEL GEAR	1	
111(2)		VDG0868	WORM WHEEL GEAR	1	
112(2)		VDG0885	SUB CAM GEAR	1	
113(2)		VDV0235	TIMING BELT	1	
120(2)		VDG0866	WORM GEAR	1	
121(2)		VEM0427	LOADING MOTOR (1) UNIT	1	
123(2)		VMD1942	MOTOR BRACKET	1	
126(2)		VML2725	IDLER CONTROL LEVER	1	
127(2)		VSS0365	MODE SW	1	
128(2)		VXA5138	SS BRAKE BASE UNIT	1	
129(2)		VXA4799	TENSION ROLLER UNIT	1	
140(2)		VXL2378	IDLER ARM UNIT	1	
141(2)		VXL2372	DIRECT LEVER UNIT	1	
142(2)		VXL2299	SUPPLY LOADING ARM UNIT	1	
143(2)		VXL2300	TAKE UP LOADING ARM UNIT	1	
144(2)		VXL2307	MAIN LEVER UNIT	1	
145(2)		VXP1409	CENTRE CLUTCH	1	
B102(2)		XTV26+8F	SCREW	1	
B103(2)		XTV26+6F	SCREW	3	
B104(2)		VHD0753	SCREW	4	
B105(2)		VHD0754	SCREW	1	
B106(2)		XSB26+4FZ	SCREW	1	
W101(2)		VMX2208	WASHER	4	

❷ CHASSIS PARTS SECTION (2)



❸ CASING PARTS SECTION



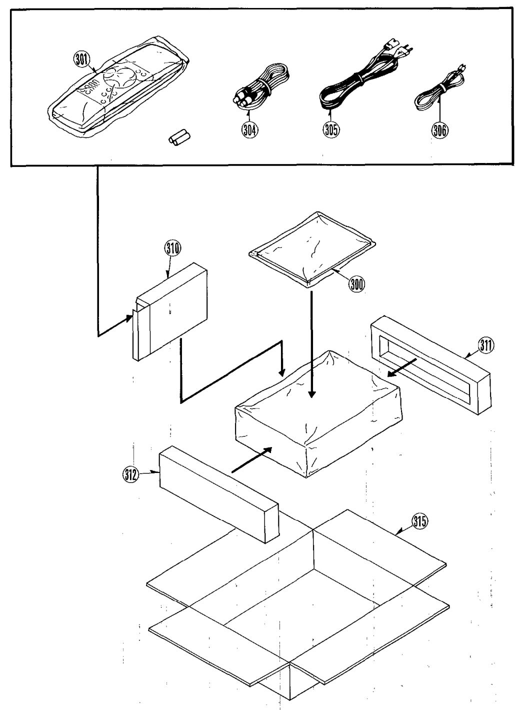
Note:1.* Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
200(3)		VGM1105	TOP PANEL	1	
201(3)		VYP5925	FRONT PANEL UNIT	1	[SUPPLIED FROM MBV]
					NV-HD650B
201(3)		VYP5926	FRONT PANEL UNIT	1	[SUPPLIED FROM MBV]
					NV-HD650EC
202(3)		VKF2293	BLINDER PANEL	1	
203(3)		VMB2521	BLINDER SPRING	1	
204(3)		VKA0153	LEG	2	
205(3)		VGQ0550	DOOR LOCK PIECE	2	
206(3)		VKF2370	FRONT DOOR (R)	1	[SUPPLIED FROM MBV]
					NV-HD650B
206(3)		VKF2307	FRONT DOOR (R)	1	[SUPPLIED FROM MBV]
					NV-HD650EC
207(3)		VYF2184	FRONT DOOR (L) UNIT	1	[SUPPLIED FROM MBV]
208(3)		VKU0404	BOTTOM PLATE	1	
209(3)		VJF1134	PACK HOLDER	1	
210(3)		VKA0122	FOOT	2	
211(3)		VMC1065	EARTH SPRING	1	
212(3)		VGU6770	JOG DIAL	1	
213(3)		VGU6772	SHUTTLE RING	1	
214(3)		VMC1062	JACK EARTH SPRING	1	
215(3)		VWJ0875	FLAT CARD CABLE	1	P501-P3002
216(3)		VWJ32C9160BB	FLAT CARD CABLE	1	P6001-P7501
217(3)		VJH0790	ANTENNA JACK PLATE	1	
218(3)		VWJ0908	FLAT CARD CABLE	1	[SUPPLIED FROM MBV]
					P4001-P7502
219(3)		VWJ0909	FLAT CARD CABLE	1	[SUPPLIED FROM MBV]
					P3901-P6501
B201(3)		XTW3+10TFZ	SCREW	4	
B202(3)		VHD0059	SCREW	3	
B203(3)		VHD0772	SCREW	4	
B204(3)		VHD0773	SCREW	1	
B205(3)		VHD0168	SCREW	3	
B206(3)		VHD0874	SCREW	1	
B207(3)		XTV26+8FR	SCREW	3	
B208(3)		XTV26+10F	SCREW	1	
B209(3)		XTV3+8GFZ	SCREW	4	
B210(3)		XTN2+8GFZ	SCREW	1	

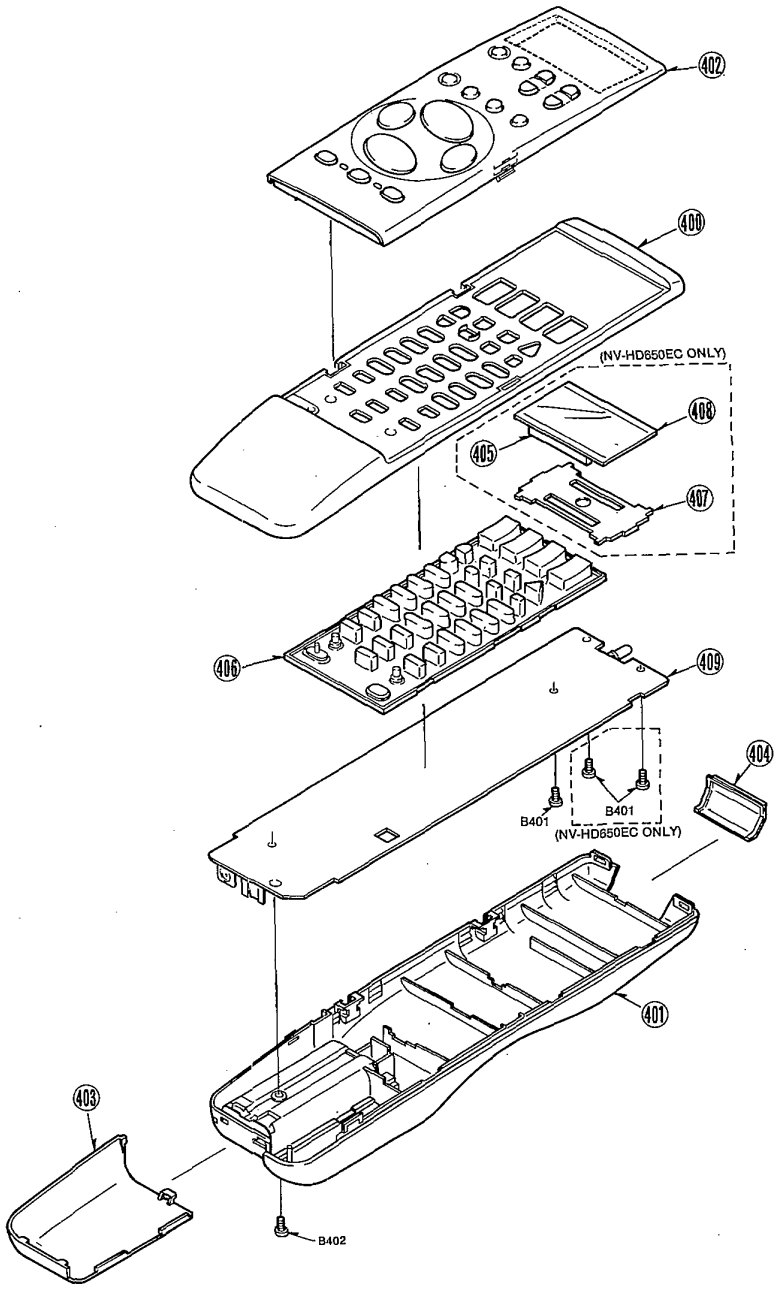
Note:1.* Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
300(4)		VQT5980	OPERATING INSTRUCTIONS	1	[SUPPLIED FROM MBV]
			(ENGLISH)		<!>NV-HD650B
300(4)		VQT5976	OPERATING INSTRUCTIONS	1	[SUPPLIED FROM MBV]
			(GERMAN/FRENCH/DUTCH)		<!>NV-HD650EC
300(4)		VQT5978	OPERATING INSTRUCTIONS	1	[SUPPLIED FROM MBV]
			(SWEDISH/DANISH/FINNISH)		<!>NV-HD650EC
300(4)		VQT5979	OPERATING INSTRUCTIONS	1	[SUPPLIED FROM MBV]
			(SPANISH)		<!>NV-HD650EC
301(4)		VEQ1694	REMOTE CANTROLLER	1	[SUPPLIED FROM MBV]
					NV-HD650B
301(4)		VEQ1677	REMOTE CONTROLLER	1	[SUPPLIED FROM MBV]
					NV-HD650EC
304(4)		VJA0710	DIN RF CABLE	1	
305(4)		VJA0733	AC CORD	1	<!>NV-HD650B
305(4)		VJA0664	AC CORD	1	<!>NV-HD650EC
306(4)		VJA0231	AUDIO CABLE	1	
310(4)		VPK0825	ACCESSORIES PAKING	1	
311(4)		VPN4034	CUSHION (R)	1	
312(4)		VPN4035	CUSHION (L)	1	
315(4)		VPG8011	PACKING	1	[SUPPLIED FROM MBV]
					NV-HD650B
315(4)		VPG8013	PACKING	1	[SUPPLIED FROM MBV]
					NV-HD650EC
			SERVICE FIXTURES & TOOLS		
		VFJ8125H3F	VHS ALIGNMENT TAPE(PAL)	1	
		VFK0335	RETAINING RING REMOVER	1	
			(3mm/4mm)		
		VFK0329	POST ADJUSTMENT SCREWDRIVER	1	
		VFK0326	HEX WRENCH SET	1	
		VFK0132	BACK TENSION METER	1	
		VFK27	HEAD CLEANING STICK	1	
		VFK1024	MORLYTONE GREASE	1	
		VFK0341	UPPER CYLINDER REMOVER	1	
		VFK0680	WHITE GREASE	1	
		VFK0851	CENTRE FIXING TOOL	1	
		VFK0330	FINE ADJUSTMENT GEAR DRIVER	1	
		VFK1139	20P EXTENSION CABLE	1	
		VFK0678	18P EXTENSION CABLE	1	
		VFK0917	11P EXTENSION CABLE	1	
		VFK0918	17P EXTENSION CABLE	1	

❹ PACKING PARTS SECTION



❺ REMOTE CONTROLLER UNIT



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2.IMPORTANT SAFETY NOTICE
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Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
400(5)		VYK6616	TOP COVER UNIT	1	[SUPPLIED FROM MBV]
					NV-HD650B
400(5)		VYK6514	TOP COVER UNIT	1	[SUPPLIED FROM MBV]
					NV-HD650EC
401(5)		VYK5446	BOTTOM COVER UNIT	1	
402(5)		VYK6604	DOOR PANEL UNIT	1	[SUPPLIED FROM MBV]
					NV-HD650B
402(5)		VYK6367	DOOR PANEL UNIT	1	[SUPPLIED FROM MBV]
					NV-HD650EC

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
403(5)		VKF2115	BATTERY COVER	1	
404(5)		VKW1802	IR WINDOW	1	
405(5)		VSQ0830	CONDUCTIVE RUBBER	2	NV-HD650EC
406(5)		VSP0870	RUBBER CONTACT	1	NV-HD650B
406(5)		VSP0861	RUBBER CONTACT	1	[SUPPLIED FROM MBV]
					NV-HD650EC
407(5)		VSQ0829	LCD SPACER	1	NV-HD650EC
408(5)		VSL0319A	LCD	1	NV-HD650EC
409(5)		----------	REMOTE CONTROLLER C.B.A.	1	THE C.B.A. IS NOT
					SUPPLIED AS SPARE
					PART.
B401(5)		XTB2+6G	SCREW	1	NV-HD650B
B401(5)		XTB2+6G	SCREW	3	NV-HD650EC
B402(5)		XTB2+8GFZ	SCREW	1	

5-2. ELECTRICAL REPLACEMENT PARTS LIST

Note:1.* Be sure to make your orders of replacement parts according to this list.
2.IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components,use only the same type.
3.Unless otherwise specified,
All resistors are in OHMS ,K=1,000 OHMS. All capacitors are in MICRO-FARADS(uf),P=uuF.
4.The P.C.Board units marked width'■'show below the main assembled parts.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
**********		NV-HD650B/EC			
		VEP06980D	MAIN C.B.A.	1	[SUPPLIED FROM MBV]
			(Page:5-9)		(RTL)<!>NV-HD650B
					INCLUDING THE
					LUMINANCE &
					CHROMINANCE PACK
					C.B.A.(VEP03D27A),
					S-VHS PB PACK C.B.A.
					(VEP03A03A),
					CNR PACK C.B.A.
					(VEP08171A),
					Hi-Fi AUDIO PACK
					C.B.A.(VEP04447PN),
					NICAM DECODER PACK
					C.B.A.(VEP07787A),
					TV DEMODULATOR PACK
					C.B.A.(VEP07801F).
		VEP03D27A	LUMINANCE & CHROMINANCE	1	[SUPPLIED FROM MBV]
			PACK C.B.A.		(RTL)NV-HD650B
					INCLUDING THE
					S-VHS PB PACK C.B.A.
					(VEP03A03A),
					CNR PACK C.B.A.
					(VEP08171A).
					INCLUDED IN MAIN
					C.B.A.(VEP06980D).
		VEP03A03A	S-VHS PB PACK C.B.A.	1	[SUPPLIED FROM MBV]
					(RTL)NV-HD650B
					INCLUDED IN
					LUMINANCE &
					CHROMINANCE PACK
					C.B.A.(VEP03D27A).
		VEP08171A	CNR PACK C.B.A.	1	[SUPPLIED FROM MBV]
					(RTL)NV-HD650B
					INCLUDED IN
					LUMINANCE &
					CHROMINANCE PACK
					C.B.A.(VEP03D27A).
		VEP04447PN	Hi-Fi AUDIO PACK C.B.A.	1	[SUPPLIED FROM MBV]
					(RTL)NV-HD650B
					INCLUDED IN MAIN
					C.B.A.(VEP06980D).
		VEP07787A	NICAM DECODER PACK C.B.A.	1	[SUPPLIED FROM MBV]
					(RTL)NV-HD650B
					INCLUDED IN MAIN
					C.B.A.(VEP06980D).
		VEP07801F	TV DEMODULATOR PACK C.B.A.	1	[SUPPLIED FROM MBV]
					(RTL)NV-HD650B
					INCLUDED IN MAIN
					C.B.A.(VEP06980D).
		VEP06980E	MAIN C.B.A.	1	[SUPPLIED FROM MBV]
			(Page:5-16)		(RTL)<!>NV-HD650EC
					INCLUDING THE
					LUMINANCE &
					CHROMINANCE PACK
					C.B.A.(VEP03D27A),
					S-VHS PB PACK C.B.A.
					(VEP03A03A),

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
					CNR PACK C.B.A.
					(VEP08171A),
					Hi-Fi AUDIO PACK
					C.B.A.(VEP04447PN),
					NICAM DECODER PACK
					C.B.A.(VEP07787B),
					TV DEMODULATOR PACK
					C.B.A.(VEP07801B).
		VEP03D27A	LUMINANCE & CHROMINANCE	1	[SUPPLIED FROM MBV]
			PACK C.B.A.		(RTL)NV-HD650EC
					INCLUDING THE
					S-VHS PB PACK C.B.A.
					(VEP03A03A),
					CNR PACK C.B.A.
					(VEP08171A).
					INCLUDED IN MAIN
					C.B.A.(VEP06980E).
		VEP03A03A	S-VHS PB PACK C.B.A.	1	[SUPPLIED FROM MBV]
					(RTL)NV-HD650EC
					INCLUDED IN
					LUMINANCE &
					CHROMINANCE PACK
					C.B.A.(VEP03D27A).
		VEP08171A	CNR PACK C.B.A.	1	[SUPPLIED FROM MBV]
					(RTL)NV-HD650EC
					INCLUDED IN
					LUMINANCE &
					CHROMINANCE PACK
					C.B.A.(VEP03D27A).
		VEP04447PN	Hi-Fi AUDIO PACK C.B.A.	1	[SUPPLIED FROM MBV]
					(RTL)NV-HD650EC
					INCLUDED IN MAIN
					C.B.A.(VEP06980E).
		VEP07787B	NICAM DECODER PACK C.B.A.	1	[SUPPLIED FROM MBV]
					(RTL)NV-HD650EC
					INCLUDED IN MAIN
					C.B.A.(VEP06980E).
		VEP07801B	TV DEMODULATOR PACK C.B.A.	1	[SUPPLIED FROM MBV]
					(RTL)NV-HD650EC
					INCLUDED IN MAIN
					C.B.A.(VEP06980E).
		VEP06993M	OSD C.B.A.	1	[SUPPLIED FROM MBV]
			(Page:5-23)		(RTL)NV-HD650B
		VEP06993Q	OSD C.B.A.	1	[SUPPLIED FROM MBV]
			(Page:5-24)		(RTL)NV-HD650EC
		VEP03B93C	INPUT/OUTPUT C.B.A.	1	[SUPPLIED FROM MBV]
			(Page:5-25)		(RTL)NV-HD650B
		VEP03B93J	INPUT/OUTPUT C.B.A.	1	[SUPPLIED FROM MBV]
			(Page:5-26)		(RTL)NV-HD650EC
		VEP04469J	MOTOR DRIVE C.B.A.	1	[SUPPLIED FROM MBV]
			(Page:5-27)		(RTL)
		VEP05227A	HEAD AMP C.B.A.	1	[SUPPLIED FROM MBV]
			(Page:5-28)		(RTL)
		VEP07773L	TIMER C.B.A.	1	[SUPPLIED FROM MBV]
			(Page:5-29)		(RTL)NV-HD650B
		VEP07773B	TIMER C.B.A.	1	[SUPPLIED FROM MBV]
			(Page:5-30)		(RTL)NV-HD650EC
		VEP06995A	OPERATION C.B.A.	1	[SUPPLIED FROM MBV]
			(Page:5-31)		(RTL)

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
		VEP00V29A	MAIN INTERFACE C.B.A.	1	[SUPPLIED FROM MBV]
			(Page:5-31)		(RTL)
		VEP00V88A	S-TAB C.B.A.	1	[SUPPLIED FROM MBV]
			(Page:5-31)		(RTL)
		VEX0231	CYLINDER DRIVE C.B.A.	1	[SUPPLIED FROM MBV]
			(Page:5-31)		(RTL)
		----------	MOTOR C.B.A.	1	C.B.A. IS INCLUDED
			(Page:5-31)		IN LOADING MOTOR (1)
					UNIT(VEM0427).
		ENG47211G	TUNER	1	[SUPPLIED FROM MBV]
					<!>NV-HD650B
		ENG47210G	TUNER	1	<!>NV-HD650EC
F1101		XBA2C16TH15	FUSE	1	<!>
	■	VEP06980D	MAIN C.B.A.		[SUPPLIED FROM MBV]
					(RTL)<!>NV-HD650B
C301		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C302		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C303		ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C304		ECUM1H120JCN	C.CAPACITOR CH 50V 12P	1	
C305		ECUM1H060DCN	C.CAPACITOR CH 50V 6P	1	
C306		ECUM1H100DCN	C.CAPACITOR CH 50V 10P	1	
C307		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C308		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C309		ECEA1HKA0R1	E.CAPACITOR 50V 0.1U	1	
C310-12		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	3	
C313		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C314		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C315		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C316		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C317		ECUM1H080DCN	C.CAPACITOR CH 50V 8P	1	
C318,19		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C321		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C322		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C323		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C324		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C325		ECUM1H223KBN	C.CAPACITOR CH 50V 0.022U	1	
C326		ECEA1HKA3R3	E.CAPACITOR 50V 3.3U	1	
C327		ECUM1E823KBN	C.CAPACITOR CH 25V 0.082U	1	
C328		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C329		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C331,32		ECEA1CKA100	E.CAPACITOR 16V 10U	2	
C333		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C334		ECUM1H821JCN	C.CAPACITOR CH 50V 820P	1	
C335		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C336		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C340		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C341		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C342		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C343		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C344		ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C345		ECEA1HKA2R2	E.CAPACITOR 50V 2.2U	1	
C347		ECUM1E154KBM	C.CAPACITOR CH 25V 0.15U	1	
C348		ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	1	
C349		ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C350		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
C351		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C352		ECUM1H100DCN	C.CAPACITOR CH 50V 10P	1	
C353		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C354		ECUM1H390JCN	C.CAPACITOR CH 50V 39P	1	
C355		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C356		ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C357		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C358,59		ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C360		ECUM1H223KBN	C.CAPACITOR CH 50V 0.022U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C361		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C362		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C363		ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C364		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C365		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C366		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C367-72		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	6	
C373		ECEA1HKA3R3	E.CAPACITOR 50V 3.3U	1	
C374		ECEA1EKN4R7	E.CAPACITOR 25V 4.7U	1	
C375		ECEA0JKA220	E.CAPACITOR 6.3V 220U	1	
C376		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C378		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C379		ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C380		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C381		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C383		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C386		ECUM1H561JCN	C.CAPACITOR CH 50V 560P	1	
C387		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C388		ECUM1H331JCN	C.CAPACITOR CH 50V 330P	1	
C391		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C392		ECUM1H681KBN	C.CAPACITOR CH 50V 680P	1	
C393		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C394		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C395		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C396		ECUM1H121JCN	C.CAPACITOR CH 50V 120P	1	
C397		ECCF1H560JC	C.CAPACITOR 50V 56P	1	
C0701,02		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C0704		ECUX1H331JCV	C.CAPACITOR CH 50V 330P	1	
C0706		ECEA1HKA0R1	E.CAPACITOR 50V 0.1U	1	
C0707,08		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C0709		ECUX1H120JCV	C.CAPACITOR CH 50V 12P	1	
C0710		ECUX1H470JPV	C.CAPACITOR CH 50V 47P	1	
C0711		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C0712		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C0714		ECQB1H473JF	P.CAPACITOR 50V 0.047U	1	
C0715		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C0716		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C0717		ECUX1H270JPV	C.CAPACITOR CH 50V 27P	1	
C0718		ECEA1HKAR47	E.CAPACITOR 50V 0.47U	1	
C0719		ECUX1H150JCV	C.CAPACITOR CH 50V 15P	1	
C0720		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C0723		ECEA1HKA0R1	E.CAPACITOR 50V 0.1U	1	
C0726		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C0730		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C0732		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C851		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C852,53		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C854		ECEA1HKA0R1	E.CAPACITOR 50V 0.1U	1	
C855,56		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C857		ECEA1HKA0R1	E.CAPACITOR 50V 0.1U	1	
C858		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C859		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C860		ECEA1HKA4R7	E.CAPACITOR 50V 4.7U	1	
C861		ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C862,63		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C864		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C865		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C867		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C1004		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C1005		ECEA0JKA220	E.CAPACITOR 6.3V 220U	1	
C1006		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C1007		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C1008		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C1009		ECEA0JKA220	E.CAPACITOR 6.3V 22U	1	
C1010		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C1011		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C1012		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C1013		ECEA0JKA220	E.CAPACITOR 6.3V 22U	1	
C1101		ECKMWS102MEH	C.CAPACITOR	1	<!>
C1104		ECKMWS102MEH	C.CAPACITOR	1	<!>
C1106		ECQE6104KF	P.CAPACITOR	1	
C1107		ECKMWS102MEH	C.CAPACITOR	1	<!>
C1110,11		ECQU2A104MNB	P.CAPACITOR 100V 0.1U	2	<!>
C1112		ECEC2GG330	E.CAPACITOR 400V 33U	1	
C1113		ECKD2H103PU	C.CAPACITOR 500V 0.01U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C1114	ECCD3A470KGE	C.CAPACITOR 1KV 47P	1	
C1115	ECA1VXLV470	E.CAPACITOR 35V 47U	1	
C1116	ECA1CXLV470	E.CAPACITOR 16V 47U	1	
C1117	ECQV1H104JM	P.CAPACITOR 50V 0.1U	1	
C1118	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C1120	ECQB1H332JF	P.CAPACITOR 50V 3300P	1	
C1121	ECUM1H391KBN	C.CAPACITOR CH 50V 390P	1	
C1131	EEUFA1E681	E.CAPACITOR 25V 680P	1	
C1132	ECEA1EU221	E.CAPACITOR 25V 220U	1	
C1133	ECKD2H101KB	C.CAPACITOR 500V 100P	1	
C1134	EEUFA1A122	E.CAPACITOR 10V 1200P	1	[SUPPLIED FROM MBV]
C1135	ECEA1AU331	E.CAPACITOR 10V 330U	1	
C1136	ECKD2H101KB	C.CAPACITOR 500V 100P	1	
C1137	ECA1HFQ560	E.CAPACITOR 50V 56U	1	[SUPPLIED FROM MBV]
C1138	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C1139	ECKD2H101KB	C.CAPACITOR 500V 100P	1	
C1140	ECA1VFQ560	E.CAPACITOR 35V 56U	1	
C1141	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C1142	ECKD2H101KB	C.CAPACITOR 500V 100P	1	
C1143	ECAOJFQ221	E.CAPACITOR 6.3V 220U	1	
C1144,45	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C1147	ECUM1H471KBN	C.CAPACITOR CH 50V 470P	1	
C1148	ECQV1H684JL	P.CAPACITOR 50V 0.68U	1	
C1149	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C1150	ECA1CM101	E.CAPACITOR 16V 100U	1	
C1151	ECEA1EGE470	E.CAPACITOR 25V 47U	1	
C2004	ECEAOJKA470	E.CAPACITOR 6.3V 47U	1	
C2005	ECQV1H683JM	P.CAPACITOR 50V 0.068U	1	
C2006	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C2007	ECEAOJKA221	E.CAPACITOR 6.3V 220U	1	
C2008	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C2009	ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C2010,11	ECEA1EKN3R3	E.CAPACITOR 25V 3.3U	2	
C2012	ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	1	
C2013	ECEA1AKS221	E.CAPACITOR 10V 220U	1	
C2014	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2015	ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C2016	ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C2019	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C2021	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1	
C2022	ECUM1H223KBN	C.CAPACITOR CH 50V 0.022U	1	
C2024,25	ECUM1C1052FN	C.CAPACITOR CH 16V 1U	2	
C2030	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C2032-34	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	3	
C3001	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3002,03	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C3004	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C3006	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3007	ECEAOJKA221	E.CAPACITOR 6.3V 220U	1	
C3008	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C3009	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3010	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C3012	ECEAOJKA330	E.CAPACOTOR 6.3V 33U	1	
C3013,14	ECUM1H102JCN	C.CAPACITOR CH 50V 1000P	2	
C3016	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C3017,18	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C3019	ECUM1H620JCN	E.CAPACITOR CH 50V 62P	1	
C3021	ECAOJM471	E.CAPACITOR 6.3V 470U	1	
C3022	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3023	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C3024	ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C3027	ECEAOJKA470	E.CAPACITOR 6.3V 47U	1	
C3028	ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C3029	ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3031	ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3032	ECUM1H681JCN	C.CAPACITOR CH 50V 680P	1	
C3033	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C3040	ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C3041	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1	
C3042,43	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C3045	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3046,47	ECUM1H102JCN	C.CAPACITOR CH 50V 1000P	2	
C3051	ECUM1H152KBN	C.CAPACITOR CH 50V 1500P	1	
C3052,53	ECEAOJKA470	E.CAPACITOR 6.3V 47U	2	
C3054	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C3055	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3057	ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C3062	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C4001	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C4002,03	ECEA1CKA100	E.CAPACITOR 16V 10U	2	
C4005	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C4008	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C4010	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1	
C4017	ECUM1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C4021	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C4034	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C4035	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C4046	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C4063	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1	
C4502	ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	1	
C4503	ECUX1H152KBV	C.CAPACITOR CH 50V 1500P	1	
C4504	ECEA1CU470	E.CAPACITOR 16V 47U	1	
C4505	ECA1VM470	E.CAPACITOR 35V 47P	1	
C4506	ECEA1CU100	E.CAPACITOR 16V 10U	1	
C4507	ECQB1H223JF	P.CAPACITOR 50V 0.022U	1	
C4508	ECEA1EKN4R7	E.CAPACITOR 25V 4.7U	1	
C4509	ECEA1AU470	E.CAPACITOR 10V 47U	1	
C4510	ECQB1H103JF	P.CAPACITOR 50V 0.01U	1	
C4511	ECQB1H332JF	P.CAPACITOR 50V 3300P	1	
C4512	ECUX1H561JV	C.CAPACITOR CH 50V 560P	1	
C4513	ECUX1H681JV	C.CAPACITOR CH 50V 680P	1	
C4514	ECUX1H561JV	C.CAPACITOR CH 50V 560P	1	
C4515	ECEA1EU4R7	E.CAPACITOR 25V 4.7U	1	
C4517	ECEA1AU101	E.CAPACITOR 10V 100U	1	
C4518	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C4521	ECUM1E473KBN	C.CAPACITOR CH 25V 0.047U	1	
C4522	ECEA1HU3R3	E.CAPACITOR 50V 3.3U	1	
C4524	ECEA1AU101	E.CAPACITOR 10V 100U	1	
C4528	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C4530	ECEAOJU470	E.CAPACITOR 6.3V 47U	1	
C4533	ECEA1AU330	E.CAPACITOR 10V 33U	1	
C4537	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C4538	ECEA1HUR47	E.CAPACITOR 50V 0.47U	1	
C4539	ECUX1C224ZFV	C.CAPACITOR CH 16V 0.22U	1	
C4541	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C4545	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C4551	ECQB1H223JF	P.CAPACITOR 50V 0.022U	1	
C4552	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C4556	ECEA1CU100	E.CAPACITOR 16V 10U	1	
C4558	ECEA1EKN4R7	E.CAPACITOR 25V 4.7U	1	
C4559	ECEA1AU470	E.CAPACITOR 10V 47U	1	
C4560	ECQB1H103JF	P.CAPACITOR 50V 0.01U	1	
C4561	ECQB1H332JF	P.CAPACITOR 50V 3300P	1	
C4562	ECUX1H561JV	C.CAPACITOR CH 50V 560P	1	
C4563	ECUX1H681JV	C.CAPACITOR CH 50V 680P	1	
C4564	ECUX1H561JV	C.CAPACITOR CH 50V 560P	1	
C4565	ECEA1EU4R7	E.CAPACITOR 25V 4.7U	1	
C4567	ECEA1AU101	E.CAPACITOR 10V 100U	1	
C4568	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C4572	ECEA1HU3R3	E.CAPACITOR 50V 3.3U	1	
C4576	ECUM1E473KBN	C.CAPACITOR CH 25V 0.047U	1	
C4583	ECEA1AU330	E.CAPACITOR 10V 33U	1	
C4585,86	ECEA1AU101	E.CAPACITOR 10V 100U	2	
C4591	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C4592	ECUX1H152KBV	C.CAPACITOR CH 50V 1500P	1	
C4593	ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1	
C4594,95	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	2	
C4596	ECEA1CU100	E.CAPACITOR 16V 10U	1	
C4597	ECUX1H330JCV	C.CAPACITOR CH 50V 33P	1	
C4604	ECUM1H182JN	C.CAPACITOR CH 50V 1800P	1	
C4606	ECEAOJKA470	E.CAPACITOR 6.3V 47U	1	
C4616	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C4617	ECEA10M22	E.CAPACITOR 10V 22U	1	
C4618	ECQB1H822JZ	P.CAPACITOR 50V 8200P	1	
C4621	ECEAOJKA101	E.CAPACITOR 6.3V 100U	1	
C4629	ECQB1H822JZ	P.CAPACITOR 50V 8200P	1	
C4636	ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	
C4638	ECQB1H822JZ	P.CAPACITOR 50V 8200P	1	
C4652,53	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	2	
C5005	ECEA1HKA3R3	E.CAPACITOR 50V 3.3U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C5006		ECUM1H150JCN	C.CAPACITOR CH 50V 15P	1	
C5007-09		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	3	
C5012,13		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C5014		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C5015,16		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C6001		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C6003		ECUM1C224ZFN	C.CAPACITOR CH 16V 0.22U	1	
C6004		ECEA0JKA220	E.CAPACITOR 6.3V 220U	1	
C6005		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6006		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C6007		ECQV1H334JM	P.CAPACITOR 50V 0.33U	1	
C6009,10		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	2	
C6013		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C6016-19		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	4	
C6020		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C6021		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C6023,24		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C6027,28		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C7301,02		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C7303		ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C7304		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C7305		ECEA1CKA220	E.CAPACITOR 16V 22U	1	
C7306		ECUX1H391JCV	C.CAPACITOR CH 50V 390P	1	
C7309-12		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	4	
C7313		ECEA0JKA220	E.CAPACITOR 6.3V 220U	1	
C7314		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C7315		ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	1	
C7317		ECUX1H090DCV	C.CAPACITOR CH 50V 90P	1	
C7319		ECRHA020D54R	V.CAPACITOR	1	
C7320		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C7321		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C7322		ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	1	
C7323,24		ECUX1H391JCV	C.CAPACITOR CH 50V 390P	2	
C7325,26		ECEA1CKA100	E.CAPACITOR 16V 10U	2	
C7327		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C7328		ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C7329,30		ECUX1H471JCV	C.CAPACITOR CH 50V 470P	2	
C7331		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C7332,33		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	2	
C7334		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C7335		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C7338		ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C7339		ECUM1H182KBM	C.CAPACITOR CH 50V 1800P	1	
C7340		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C7341		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C7342		ECUM1H561JCN	C.CAPACITOR CH 50V 560P	1	
C7343		ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C7344		ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C7345		ECUM1H182KBM	C.CAPACITOR CH 50V 1800P	1	
C7346		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C7347		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C7348		ECUM1H561JCN	C.CAPACITOR CH 50V 560P	1	
C7350		ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C7351		ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C7352		ECUM1H182KBM	C.CAPACITOR CH 50V 1800P	1	
C7353		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C7354		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C7355		ECUM1H561JCN	C.CAPACITOR CH 50V 560P	1	
C7357		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C7358		ECEA1HKA3R3	E.CAPACITOR 50V 3.3U	1	
C7359		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C7365		ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C7369		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C7370		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C7371,72		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C7374,75		ECUX1H150JCV	C.CAPACITOR CH 50V 15P	2	
C7601		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7602		ECQV1H104JM	P.CAPACITOR 50V 0.1U	1	
C7603		ECEA1CKA101	E.CAPACITOR 16V 100U	1	
C7604		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C7605		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7606		ECEA1CKA101	E.CAPACITOR 16V 100U	1	
C7607		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7608		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
C7609		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C7610,11		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C7612		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C7613		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C7614		ECEA1HKA100	E.CAPACITOR 50V 10U	1	
C7615		ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C7616		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
D301		1SS283	DIODE	1	
D302		1SS254	DIODE	1	
D304		1SS254	DIODE	1	
D305		MA723VT	DIODE	1	
D307		1SS254	DIODE	1	
D309-13		1SS254	DIODE	5	
D316		1SS254	DIODE	1	
D319		1SS254	DIODE	1	
D1001		MA4051-L	DIODE	1	
D1004		MA4051-L	DIODE	1	
D1005		1SS355	DIODE	1	
D1007,08		1SS355	DIODE	2	
D1102		ERA15-08	DIODE	1	
D1103		AP01C	DIODE	1	
D1104		MA178	DIODE	1	
D1105-07		ERA15-08	DIODE	3	
D1108		RD100E	DIODE	1	
D1109,10		ERA15-08	DIODE	2	
D1121		RL22	DIODE	1	
D1122		21DQ04FC4	DIODE	1	
D1123		ERA22-02	DIODE	1	
D1124		MA185	DIODE	1	
D1125		11EQS04	DIODE	1	
D1126		MA4047M	DIODE	1	
D1127		1SS355	DIODE	1	
D1129		MA4043-L	DIODE	1	
D2003		MA153	DIODE	1	
D2004		1SS355	DIODE	1	
D2005		MA151K	DIODE	1	
D2007		1SS355	DIODE	1	
D3001		1SS355	DIODE	1	
D3007		1SS254	DIODE	1	
D3011,12		1SS355	DIODE	2	
D3014-17		1SS355	DIODE	4	
D4003		1SS254	DIODE	1	
D4005		1SS254	DIODE	1	
D4501-04		MA141K	DIODE	4	
D4602		MA141K	DIODE	1	
D6001		LN59L.VT	LED	1	
D6002,03		1SS254	DIODE	2	
D6004		1SS355	DIODE	1	
D6005		1SS254	DIODE	1	
D6007		MA4075-L	DIODE	1	
D6009		MA151K	DIODE	1	
D6010		1SS254	DIODE	1	
D6011		MA700A	DIODE	1	
D7301		MA3082-L	DIODE	1	
D7302		MA151K	DIODE	1	
D7303		MA151WK	DIODE	1	
D7304		MA717	DIODE	1	
D7306		MA151K	DIODE	1	
D7601		MA4300M	DIODE	1	
D7607,08		1SS355	DIODE	2	
F1101		XBA2C16TH15	FUSE	1	<!>
FL7301,02		VLF0633	FILTER	2	
IC301		TL8850P	IC	1	
IC302		AN3554NFBP	IC	1	[SUPPLIED FROM MBV]
IC0701		LA7576	IC	1	
IC851		TA1225N	IC	1	[SUPPLIED FROM MBV]
IC1001		HA17431PA	IC	1	
IC1101		TDA4605-3	IC	1	<!>

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC1102	SI3120C	IC	1	
IC2001	XRA6887-V3	IC	1	
IC4501	XLH7773AKS	IC	1	
IC4601	BA7755AF	IC	1	
IC5001	MN6755486H3S	IC	1	[SUPPLIED FROM MBV]
IC5002,03	ON1387	PHOTO INTERRUPTER	2	
IC7301	MSP3410-15	IC	1	
IC7302	PST7043	IC	1	
IC7303	M5238FP	IC	1	
IC7304	HA17431PA	IC	1	
IC7305	MN155402VZBZ	IC	1	
IC7306	PST7043	IC	1	
K2	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
K4	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
K303,04	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	2	
K308	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K0702	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
K0704,05	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
K3008	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K3013	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K3015	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K3019	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K4002	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K4005	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K4011	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K4016	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K4031	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K4035	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K4037	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K6015-17	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	3	
K7305-07	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	3	
K7314	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
K7317	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
K7604	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
L301	VLQ0599J470	COIL 47UH	1	
L302	VLQ0599J100	COIL 10UH	1	
L303	VLQ0599J270	COIL 27UH	1	
L304	VLQ0599J100	COIL 10UH	1	
L305	VLQ0599J680	COIL 68UH	1	
L306,07	VLQ0599J390	COIL 39UH	2	
L308	VLQ0599J150	COIL 15UH	1	
L310	VLQ0599J121	COIL 120UH	1	
L311	VLQ0599J101	COIL 100UH	1	
L312	VLQ0599J8R2	COIL 8.2UH	1	
L313	VLQ0599J680	COIL 68UH	1	
L314	VLQ0599J220	COIL 22UH	1	
L315	VLQ0599J101	COIL 100UH	1	
L316	VLQ0599J470	COIL 47UH	1	
L317	VLQ0599J101	COIL 100UH	1	
L318	VLQ0599J680	COIL 68UH	1	
L319	VLQ0599J270	COIL 27UH	1	
L320	VLP0125	COIL	1	
L322	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
L323-28	VLP0145	COIL	6	
L330-33	VLP0145	COIL	4	
L334	VLQ0599J390	COIL 39UH	1	
L0701	VLQ0163JR22	COIL	1	
L0705	VLQ0163J2R7	COIL	1	
L0706	VLQEL05S8R2K	COIL	1	
L851,52	VLQ0599J680	COIL 68UH	2	
L853-57	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	5	
L1107	ELF18D290A	COIL 29UH	1	<!>
L1108	ELF18D221F	COIL 220UH	1	<!>
L1109	VLP0074	COIL	1	
L1110	VLP0085	COIL	1	
L1121	VLQ0611K220	COIL 22UH	1	
L1122	ELEIN220KA	COIL 22UH	1	
L1123,24	VLQEL05S101K	COIL 100UH	2	
L3001	VLQ0599J3R3	COIL 3.3UH	1	
L3002	VLQ0599J680	COIL 68UH	1	
L3003	VLQ0599J6R8	COIL 6.8UH	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
L3004	VLQ0599J120	COIL 120UH	1	
L3006	VLQ0599J101	COIL 100UH	1	
L3007	VLQ0599J680	COIL 68UH	1	
L3008	VLQ0599J270	COIL 27UH	1	
L3009	VLQ0599J680	COIL 68UH	1	
L3011	VLQ0599J680	COIL 68UH	1	
L3012,13	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	2	
L4501,02	ELESE101KA	COIL 100UH	2	
L4601	VLQEL07F153J	COIL	1	
L5001	VLQ0599J680	COIL 68UH	1	
L5002,03	VLQ0599J270	COIL 27UH	2	
L5004	VLQ0599J150	COIL 15UH	1	
L6001,02	VLQ0599J680	COIL 68UH	2	
L6003	VLQEL05S101K	COIL 100UH	1	
L6004	VLP0083	COIL	1	
L7301	ELEXH100JBV	COIL 10UH	1	
L7302	VLP0150	INDUCTOR	1	
L7601,02	VLQ0599J1R0	COIL 1UH	2	
L7603-05	VLQ0599J680	COIL 68UH	3	
L7606	VLQ0599J2R2	COIL	1	[SUPPLIED FROM MBV]
L7607,08	VLQ0599J680	COIL 68UH	2	
P851	VJR0777B011W	CONNECTOR 11P	1	
P1101	VJS3306	AC INLET	1	<!>
P2001	VJS3316A002	CONNECTOR (FEMALE) 2P	1	
P3002	VJS3537A020G	CONNECTOR (FEMALE) 20P	1	
P4001	VJS3537A012G	CONNECTOR (FEMALE) 12P	1	
P5001	VJR0777B005W	CONNECTOR 5P	1	
P6001	VJS3537A032G	CONNECTOR (FEMALE) 32P	1	
P6004	VJS3820	CONNECTOR	1	
PK0701	VJR0816A010W	CONNECTOR 10P	1	
PK4001-03	VJR0757B018T	CONNECTOR (MALE) 18P	3	
PK7301	VJR0777B009W	CONNECTOR 9P	1	
PK7302	VJR0777B008W	CONNECTOR 8P	1	
PP0701	VJP3589A004B	CONNECTOR (MALE) 4P	1	
PP2001	VJP3042A017W	CONNECTOR (MALE) 17P	1	
PP2002	VJP3042A011W	CONNECTOR (MALE) 11P	1	
PP3901	VJP3042G020W	CONNECTOR (MALE)	1	[SUPPLIED FROM MBV]
PP3902	VJP3042A018W	CONNECTOR (MALE) 18P	1	
PP4004	VJP3043A010W	CONNECTOR (MALE) 10P	1	
PP4005	VJP3043A009W	CONNECTOR (MALE) 9P	1	
PP6005	VJP3043A003W	CONNECTOR (MALE) 3P	1	
PR1101	VSF0015A10	IC PROTECTOR	1	<!>
PS301	VJR0776B009W	CONNECTOR (MALE) 9P	1	
PS302	VJR0776B015W	CONNECTOR (MALE) 15P	1	[SUPPLIED FROM MBV]
PS303	VJR0776B008W	CONNECTOR (MALE) 8P	1	
PS304	VJR0776B003W	CONNECTOR (MALE) 3P	1	[SUPPLIED FROM MBV]
Q301,02	MSD601	TRANSISTOR	2	
Q303,04	MSC2295	TRANSISTOR	2	
Q305	MSB709	TRANSISTOR	1	
Q0701	MSD601-S	TRANSISTOR	1	
Q0702	MSB709	TRANSISTOR	1	
Q1001	2SD601A	TRANSISTOR	1	
Q1002,03	2SD1996-S	TRANSISTOR	2	
Q1004	2SD1996	TRANSISTOR	1	
Q1005	2SD602A	TRANSISTOR	1	
Q1007	MSD602	TRANSISTOR	1	
Q1101	STP3N60FI-M	TRANSISTOR	1	
Q1102	2SD601A	TRANSISTOR	1	
Q1104	2SB1321A	TRANSISTOR	1	
Q1105	2SD601A	TRANSISTOR	1	
Q1107	MOC8104FR2	TRANSISTOR	1	<!>
Q1111	MOC8104FR2	TRANSISTOR	1	<!>
Q3001	XN4501	TRANSISTOR-RESISTOR	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
Q3002	MSB709	TRANSISTOR	1	
Q3003	2SB709A	TRANSISTOR	1	
Q3004	MSD601	TRANSISTOR	1	
Q3005	MSC2295	TRANSISTOR	1	
Q3006	MSB709	TRANSISTOR	1	
Q3007	MSC2295	TRANSISTOR	1	
Q3008	2SD1996	TRANSISTOR	1	
Q3009	2SB1322	TRANSISTOR	1	
Q3010	MSB709	TRANSISTOR	1	
Q3011	2SD601A	TRANSISTOR	1	
Q3012	2SB1322	TRANSISTOR	1	
Q3013	MSB709	TRANSISTOR	1	
Q3014	MSD601	TRANSISTOR	1	
Q3016,17	MSC2295	TRANSISTOR	2	
Q3018-20	MSD601	TRANSISTOR	3	
Q3021	MSB709	TRANSISTOR	1	
Q3023	MSC2295	TRANSISTOR	1	
Q4002-04	MSD601	TRANSISTOR	3	
Q4005	MSD1328	TRANSISTOR	1	
Q4501	2SD1991A-R	TRANSISTOR	1	
Q4551	2SB1320A-R	TRANSISTOR	1	
Q4552	2SD1819A	TRANSISTOR	1	
Q5001	MSB709	TRANSISTOR	1	
Q5002	MSD601	TRANSISTOR	1	
Q5003	2SA1022	TRANSISTOR	1	
Q5005	XN1501	TRANSISTOR-TRANSISTOR	1	
Q5006	MSB709	TRANSISTOR	1	
Q5007	MSC2295	TRANSISTOR	1	
Q5008	MSB709	TRANSISTOR	1	
Q5009-13	MSC2295	TRANSISTOR	5	
Q6001	MSB709	TRANSISTOR	1	
Q6002	PN205L-NC.VT	PHOTO TRANSISTOR	1	
Q7301,02	2SD1996	TRANSISTOR	2	
Q7304	2SC2404	TRANSISTOR	1	
Q7305	MSD601-S	TRANSISTOR	1	
Q7308	2SB709A	TRANSISTOR	1	
Q7601	2SB709A-R	TRANSISTOR	1	
QR302	MUN2212	TRANSISTOR-RESISTOR	1	
QR303	MUN2213	TRANSISTOR-RESISTOR	1	
QR305	MUN2212	TRANSISTOR-RESISTOR	1	
QR306	MUN2213	TRANSISTOR-RESISTOR	1	
QR308	IMH5	TRANSISTOR-RESISTOR	1	
QR310	MUN2213	TRANSISTOR-RESISTOR	1	
QR312	MUN2113	TRANSISTOR-RESISTOR	1	
QR316	MUN2213	TRANSISTOR-RESISTOR	1	
QR320	XN1212	TRANSISTOR-RESISTOR	1	
QR322	MUN2213	TRANSISTOR-RESISTOR	1	
QR1001,02	MUN2113	TRANSISTOR-RESISTOR	2	
QR1101	UN2114	TRANSISTOR-RESISTOR	1	
QR1102,03	MUN2213	TRANSISTOR-RESISTOR	2	
QR1104	MUN2212	TRANSISTOR-RESISTOR	1	
QR1105,06	MUN2213	TRANSISTOR-RESISTOR	2	
QR3001	MUN2111	TRANSISTOR-RESISTOR	1	
QR3002,03	DTC363EK	TRANSISTOR-RESISTOR	2	
QR3005	MUN2213	TRANSISTOR-RESISTOR	1	
QR3007	MUN2111	TRANSISTOR-RESISTOR	1	
QR3008-18	MUN2212	TRANSISTOR-RESISTOR	11	
QR3019	XN4213	TRANSISTOR-RESISTOR	1	
QR3020	MUN2212	TRANSISTOR-RESISTOR	1	
QR3021	MUN2211	TRANSISTOR-RESISTOR	1	
QR3023	MUN2213	TRANSISTOR-RESISTOR	1	
QR3026,27	MUN2113	TRANSISTOR-RESISTOR	2	
QR4001	MUN2212	TRANSISTOR-RESISTOR	1	
QR4002,03	MUN2213	TRANSISTOR-RESISTOR	2	
QR4005	MUN2213	TRANSISTOR-RESISTOR	1	
QR4508,09	UN5113	TRANSISTOR-RESISTOR	2	
QR4510	UN5212	TRANSISTOR-RESISTOR	1	
QR6001	XN1211	TRANSISTOR-RESISTOR	1	
QR6002	XN1213	TRANSISTOR-TRANSISTOR	1	
QR6004	UN2114	TRANSISTOR-RESISTOR	1	
QR6005	MUN2113	TRANSISTOR-RESISTOR	1	
QR6009	MUN2112	TRANSISTOR-RESISTOR	1	
QR6010	XN1211	TRANSISTOR-RESISTOR	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
QR6012	MUN2211	TRANSISTOR-RESISTOR	1	
QR7301	MUN2213	TRANSISTOR-RESISTOR	1	
QR7302	MUN2112	TRANSISTOR-RESISTOR	1	
QR7601	MUN2213	TRANSISTOR-RESISTOR	1	
R301,02	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R303	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R304	ERJ6GMYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R305	ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R306	ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R307	ERJ6GMYK225	M.RESISTOR CH 1/10W 2.2M	1	
R308	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R310	ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R311	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R312	ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R313,14	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R315	ERJ6GMYJ684	M.RESISTOR CH 1/10W 680K	1	
R316	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R317	ERJ6GMYG221	M.RESISTOR CH 1/10W 220	1	
R318	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R319	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R320	ERJ6GMYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R321	ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R324	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R325	ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R326	ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R327	ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R328	ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R329	ERJ6GMYG471	M.RESISTOR CH 1/10W 470	1	
R330	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R331	ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R332	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R333	ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R334	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R336	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R337	ERJ6GMYG201	M.RESISTOR CH 1/10W 68K	1	
R339	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R340	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R341	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R342,43	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R344	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R345	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R346	ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R347,48	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R349	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R350	ERJ6GMYK225	M.RESISTOR CH 1/10W 2.2M	1	
R351	ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R353	ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R359	ERJ6GMYJ124	M.RESISTOR CH 1/10W 120K	1	
R361	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R362	ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R363	ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
R364	ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R367	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R369	ERJ6GMYJ393	M.RESISTOR CH 1/10W 39K	1	
R371	ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R372	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R373	ERJ6GMYJ334	M.RESISTOR CH 1/10W 330K	1	
R375	ERDS2TJ272	C.RESISTOR 1/4W 2.7K	1	
R376	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R377	ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R378	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R0702	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R0704	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R0705	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R0706,07	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	2	
R0708	ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1	
R0709	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R0710	ERJ6GEYJ154	M.RESISTOR CH 1/10W 150K	1	
R0713	ERJ3GEYJ301	M.RESISTOR CH 1/16W 300	1	
R0714	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R0715	ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R0716	VRD004OE151	M.RESISTOR CH 1/10W 150	1	
R0717	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R0718	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R0719	ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R0720	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R0722	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R0728	ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
R0729	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R0732	ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
R0783	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R852	ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R853	ERJ6GMYJ203	M.RESISTOR CH 1/10W 20K	1	
R1001	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R1002	ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R1003	ERJ6GMYG272	M.RESISTOR CH 1/10W 2.7K	1	
R1004	ERJ6GMYJ114	M.RESISTOR CH 1/10W 110K	1	
R1005	ERJ6GMYG272	M.RESISTOR CH 1/10W 2.7K	1	
R1006	ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R1007	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R1008	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R1009,10	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R1102,03	ERDS1TJ183	C.RESISTOR 1/2W 18K	2	
R1104	ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R1107	ERJ6GMYJ164	M.RESISTOR CH 1/10W 160K	1	
R1108	ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R1109	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R1110	ERJ6GMYJ362	M.RESISTOR CH 1/10W 3.6K	1	
R1111	ERDS2FJ102	C.RESISTOR 1/4W 1K	1	
R1112	ERJ8GEYJ304	M.RESISTOR CH 1/8W 300K	1	
R1113	ERJ8GEYJ434	M.RESISTOR CH 1/8W 430K	1	
R1114	ERX12SJR51	M.RESISTOR 1/2W 0.51	1	
R1115	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R1116	ERJ6GMYJ100	M.RESISTOR CH 1/10W 10	1	
R1117	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R1118	ERJ8GEY0R00	M.RESISTOR CH 1/8W 0	1	
R1119	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R1120	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R1122	ERC12AGM334	S.RESISTOR 1/2W 330K	1	
R1123	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R1125	ERJ6GMYJ220	M.RESISTOR CH 1/10W 22	1	
R1126	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R1127	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R1128	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R1129	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R1131	ERJ6GMYG620	M.RESISTOR CH 1/10W 62	1	[SUPPLIED FROM MBV]
R1132	ERJ6GMYG302	M.RESISTOR CH 1/10W 3K	1	
R1134	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R1135	ERJ8GEYJ274	M.RESISTOR CH 1/8W 270K	1	
R1136	ERJ8GEYJ394	M.RESISTOR CH 1/8W 390K	1	
R2001	ERJ6GMYG512	M.RESISTOR CH 1/10W 5.1K	1	
R2002	ERJ6GMYG913	M.RESISTOR CH 1/10W 91K	1	
R2003	ERDS2FJ7R5	C.RESISTOR 1/4W 7.5	1	
R2004	ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R2005,06	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R2007	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2008	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2009	ERDS2FJ7R5	C.RESISTOR 1/4W 7.5	1	
R2010	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2011	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2012	ERDS2FJ6R8	C.RESISTOR 1/4W 6.8	1	
R2013	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2014	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R2015	ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R2016	ERDS2FJ6R8	C.RESISTOR 1/4W 6.8	1	
R2017	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2023,24	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2026,27	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2028	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R2040	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2041	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R2042	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2045	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R3001,02	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R3003	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3004	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R3005	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R3006	ERDS2TJ471	C.RESISTOR 1/4W 470	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3007	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3008,09	ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	2	
R3010	ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R3011	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3012	ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R3013	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3014	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3017	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R3018	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R3019,20	ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	2	
R3021	ERJ6GMYJ391	M.RESISTOR CH 1/10W 390	1	
R3022	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3023,24	ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	2	
R3025	ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R3026	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3028	ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R3029	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3030	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3031	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R3033	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R3034	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3037-39	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	3	
R3040	ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R3041	ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R3042	ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R3043	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R3044	ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R3045	ERJ6GMYJ390	M.RESISTOR CH 1/10W 39	1	
R3046	ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R3047	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R3048	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3049	ERJ6GMYG821	M.RESISTOR CH 1/10W 820	1	
R3050	ERJ6GMYG123	M.RESISTOR CH 1/10W 12K	1	
R3051	ERJ6GMYG512	M.RESISTOR CH 1/10W 5.1K	1	
R3052	ERJ6GMYG272	M.RESISTOR CH 1/10W 2.7K	1	
R3053	ERJ6GMYG302	M.RESISTOR CH 1/10W 3K	1	
R3054	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3055	ERJ6GMYJ823	M.RESISTOR CH 1/10W 82K	1	
R3056	ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R3057	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3058	ERJ6GMYG821	M.RESISTOR CH 1/10W 820	1	
R3059	ERJ6GMYG123	M.RESISTOR CH 1/10W 12K	1	
R3060	ERJ6GMYG512	M.RESISTOR CH 1/10W 5.1K	1	
R3061	ERJ6GMYG272	M.RESISTOR CH 1/10W 2.7K	1	
R3062	ERJ6GMYG302	M.RESISTOR CH 1/10W 3K	1	
R3063	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3064,65	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R3066	ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R3067	ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R3070	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3072	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R3073	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3076,77	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R3079	ERJ6GMYJ334	M.RESISTOR CH 1/10W 330K	1	
R3080	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R4001	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R4003	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R4004,05	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	2	
R4006,07	ERDS2TJ472	C.RESISTOR 1/4W 4.7K	2	
R4008,09	ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	2	
R4014	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4018	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R4043	ERJ6GMYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R4046	ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R4055	ERG2SJ821	M.RESISTOR 2W 820	1	
R4057	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R4058	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R4059,60	ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	2	
R4061	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R4064-66	ERG1SJ270	M.RESISTOR 1W 27	3	
R4067,68	ERJ6GMYJ393	M.RESISTOR CH 1/10W 39K	2	
R4071,72	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	2	
R4073	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R4074	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R4075	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4086	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R4087	ERDS2TJ221	C.RESISTOR 1/4W 220	1	
R4090,91	ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	2	
R4501,02	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R4503	ERJ3GEYG223	M.RESISTOR CH 1/16W 22K	1	
R4504,05	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R4506,07	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2	
R4508	ERJ3GEYG224	M.RESISTOR CH 1/16W 220K	1	
R4509	VRE0071E622	M.RESISTOR CH 1/10W 6.2K	1	
R4511	ERJ3GEYG273	M.RESISTOR CH 1/16W 27K	1	
R4512	VRE0071E163	M.RESISTOR CH 1/10W 16K	1	
R4513	ERJ3GEYG103	M.RESISTOR CH 1/16W 10K	1	
R4518,19	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R4522	ERJ3GEYJ225	M.RESISTOR CH 1/16W 2.2M	1	
R4527	VRE0071E333	M.RESISTOR 33K	1	
R4528	VRE0071E153	M.RESISTOR 15K	1	
R4529	ERJ3GEYG562	M.RESISTOR CH 1/16W 5.6K	1	
R4530	ERJ3GEYJ334	M.RESISTOR CH 1/16W 330K	1	
R4534	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R4535	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R4539	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R4541	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R4542	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R4543	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R4551,52	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	2	
R4553,54	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	2	
R4558	ERJ3GEYG224	M.RESISTOR CH 1/16W 220K	1	
R4561	ERJ3GEYG273	M.RESISTOR CH 1/16W 27K	1	
R4562	VRB0034E10C	M.RESISTOR CH 1/10W	1	
R4563	ERJ3GEYG272	M.RESISTOR CH 1/16W 2.7K	1	
R4568,69	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	2	
R4573	ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1	
R4577	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R4578	VRE0071E473	M.RESISTOR CH 1/10W 47K	1	
R4581	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R4583	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R4584	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R4585,86	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R4587,88	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	2	
R4591	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R4592	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R4593	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R4594	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R4596	ERJ3GEYG473	M.RESISTOR CH 1/16W 47K	1	
R4597	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R4598,99	ERJ3GEYG104	M.RESISTOR CH 1/16W 100K	2	
R4603	ERJ3GEYG183	M.RESISTOR CH 1/16W 18K	1	
R4606	VRE0071E562	M.RESISTOR 5.6K	1	
R4610	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R4611	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R4612	VRE0071E331	M.RESISTOR CH 1/10W 330	1	
R4613	ERJ3GEYG394	M.RESISTOR CH 1/16W 390K	1	
R4615	VRE0071E133	M.RESISTOR CH 1/10W 13K	1	
R4616	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R4638	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R4649	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R4653	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R4656	ERJ3GEYG243	M.RESISTOR CH 1/16W 24K	1	
R4657	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R4666	ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
R4671	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R5003	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R5004	ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R5005	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R5006	ERJ6GMYJ124	M.RESISTOR CH 1/10W 120K	1	
R5007	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R5012	ERJ6GMYJ563	M.RESISTOR CH 1/10W 56K	1	
R5013	ERJ6GMYG123	M.RESISTOR CH 1/10W 12K	1	
R5014	ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	1	
R5016,17	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R5018	ERJ6GMYJ123	M.RESISTOR CH 1/10W 12K	1	
R5019	ERJ6GMYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R5020	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R5021,22	ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	2	
R5023	ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R5025	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R5027	ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R5028,29	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R5030	ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R5031	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6001	ERJ6GMYJ201	M.RESISTOR CH 1/10W 200	1	
R6002	ERJ6GMYG272	M.RESISTOR CH 1/10W 2.7K	1	
R6003	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R6004	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6005	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R6006,07	ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	2	
R6008	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R6009	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R6010	ERDS2TJ333	C.RESISTOR 1/4W 33K	1	
R6011,12	ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	2	
R6013	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R6015	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R6017	ERDS2TJ271	C.RESISTOR 1/4W 270	1	
R6018-20	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	3	
R6021	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6022	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R6023	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R6024	ERJ6GMYJ104	M.RESISTOR CH 1/10W 1M	1	
R6025	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R6026	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R6027	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R6028	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R6029	ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R6030	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R6031	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R6032	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6034,35	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	2	
R6036	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R6037,38	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	2	
R6039	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R6040,41	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	2	
R6042	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R6043,44	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	2	
R6045	ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R6047-50	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	4	
R6051	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R6052	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R6053-55	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	3	
R6056,57	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	2	
R6058	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R6059	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6060	ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
R6061	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R6063	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R6065	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R6068	ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R6069	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R6071	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R6072	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R6073	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R6075-77	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	3	
R6079	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R6082	ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R6083	ERJ6GMYJ243	M.RESISTOR CH 1/10W 24K	1	
R7301	ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R7302	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R7303	ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1	
R7308	ERJ3GEYJ121	M.RESISTOR CH 1/16W 120	1	
R7309,10	ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	2	
R7311	ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1	
R7312	ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R7313,14	ERJ3GEYG272	M.RESISTOR CH 1/16W 2.7K	2	
R7315	ERJ3GEYJ114	M.RESISTOR CH 1/16W 110K	1	
R7316	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R7317	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R7320	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R7321-23	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	3	
R7324	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R7325	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R7326	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R7327-29		ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	3	
R7330		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R7332		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R7333		ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R7334-36		ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	3	
R7337		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R7339		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R7341-43		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	3	
R7344		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R7345,46		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2	
R7350		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R7351		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R7352-56		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	5	
R7357		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R7362		ERJ3GEYJ682	M.RESISTOR CH 1/16W 6.8K	1	
R7366		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R7367		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R7368		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R7370		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R7379		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R7381		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R7383		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R7601		ERJ6GMYJ151	M.RESISTOR CH 1/10W 150	1	
R7602,03		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	2	
R7604		ERJ6GMYJ151	M.RESISTOR CH 1/10W 150	1	
R7605-07		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	3	
R7608		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R7609		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R7610		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R7611		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7612		ERG2SJ331	M.RESISTOR 2W 330	1	
R7614		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R7615		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R7616		ERG2SJ331	M.RESISTOR 2W 330	1	
R7617		ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1	
T0703		EQV5EC071A	TRANSFORMER	1	
T0704		EQV5EC072A	TRANSFORMER	1	
T1101		VLT0740	TRANSFORMER	1	<!>
VR301		EVMEASA00B14	V.RESISTOR	1	
VR302		EVMEASA00B53	V.RESISTOR	1	
VR303		EVMEASA00B24	V.RESISTOR	1	
VR0701		EVNCBAA00B24	V.RESISTOR	1	
VR2001		EVNCYAA03B54	V.RESISTOR	1	
VR3001		EVNCYAA03B23	V.RESISTOR	1	
VR3012,13		EVNCYAA03B52	V.RESISTOR	2	
VR3014		EVNCYAA03B54	V.RESISTOR	1	
VR4501		EVMECSA00B53	V.RESISTOR	1	
VR4502		EVMEASA00BY4	V.RESISTOR	1	
VR4507		EVMEASA00BY4	V.RESISTOR	1	
VR4509		EVMECSA00BY3	V.RESISTOR	1	
VR4512		EVNCBAA00B52	V.RESISTOR	1	
VR4550		EVMECSA00B14	V.RESISTOR	1	
VR4551,52		EVMEASA00B55	V.RESISTOR	2	
VR8001		EVNCYAA03B23	V.RESISTOR	1	
X301		VSX0162	CRYSTAL OSCILLATOR	1	
X0701		VLF1180	CRYSTAL OSCILLATOR	1	[SUPPLIED FROM MBV]
X0703		EFCS6M65MW3B	CRYSTAL OSCILLATOR	1	
X0704		VLF1174	CRYSTAL OSCILLATOR	1	[SUPPLIED FROM MBV]
X6001		VSX0583	CRYSTAL OSCILLATOR	1	
X7302		VSX0683	CRYSTAL OSCILLATOR	1	
X7303		EFOGC4004T4	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		EYF52BC	FUSE HOLDER	2	<!>
		VSC4141	SW SHIELD COVER	1	
		VMZ2212	CAPACITOR COVER	3	<!>
		ENG47211G	TUNER	1	[SUPPLIED FROM MBV]
					<!>

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
		VMD2029	REEL GUIDE	1	
		VMD1926	SENSOR LED HOLDER	1	FOR D6001
		VMD1927	PHOTO TR.HOLDER	1	FOR Q6002
		VSC3553	SHIELD COVER (MAIN)	1	FOR NICAM DECODER
		VSC3555	SHIELD COVER (BOTTOM)	1	FOR NICAM DECODER
		VMP4471	TV DEMODULATOR ANGLE	1	FOR TV DEMODU. C.B.A.
	■	VEP06980E	MAIN C.B.A.		[SUPPLIED FROM MBV]
					(RTL)<!>NV-HD650EC
C301		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C302		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C303		ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C304		ECUM1H120JCN	C.CAPACITOR CH 50V 12P	1	
C305		ECUM1H060DCN	C.CAPACITOR CH 50V 6P	1	
C306		ECUM1H100DCN	C.CAPACITOR CH 50V 10P	1	
C307		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C308		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C309		ECEA1HKA0R1	E.CAPACITOR 50V 0.1U	1	
C310-12		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	3	
C313		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C314		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C315		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C316		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C317		ECUM1H080DCN	C.CAPACITOR CH 50V 8P	1	
C318,19		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C321		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C322		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C323		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C324		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C325		ECUM1H223KBN	C.CAPACITOR CH 50V 0.022U	1	
C326		ECEA1HKA3R3	E.CAPACITOR 50V 3.3U	1	
C327		ECUM1E823KBN	C.CAPACITOR CH 25V 0.082U	1	
C328		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C329		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C331,32		ECEA1CKA100	E.CAPACITOR 16V 10U	2	
C333		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C334		ECUM1H821JCN	C.CAPACITOR CH 50V 820P	1	
C335		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C336		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C340		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C341		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C342		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C343		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C344		ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C345		ECEA1HKA2R2	E.CAPACITOR 50V 2.2U	1	
C347		ECUM1E154KBM	C.CAPACITOR CH 25V 0.15U	1	
C348		ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	1	
C349		ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C350		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
C351		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C352		ECUM1H100DCN	C.CAPACITOR CH 50V 10P	1	
C353		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C354		ECUM1H390JCN	C.CAPACITOR CH 50V 39P	1	
C355		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C356		ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C357		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C358,59		ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C360		ECUM1H223KBN	C.CAPACITOR CH 50V 0.022U	1	
C361		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C362		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C363		ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C364		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C365		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C366		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C367-72		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	6	
C373		ECEA1HKA3R3	E.CAPACITOR 50V 3.3U	1	
C374		ECEA1EKN4R7	E.CAPACITOR 25V 4.7U	1	
C375		ECEA0JKA220	E.CAPACITOR 6.3V 220U	1	
C376		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C378		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C379		ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C380		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C381		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C383		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C386		ECUM1H561JCN	C.CAPACITOR CH 50V 560P	1	
C387		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C388		ECUM1H331JCN	C.CAPACITOR CH 50V 330P	1	
C391		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C392		ECUM1H681KBN	C.CAPACITOR CH 50V 680P	1	
C393		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C394		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C395		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C396		ECUM1H121JCN	C.CAPACITOR CH 50V 120P	1	
C397		ECCF1H560JC	C.CAPACITOR 50V 56P	1	
C0701,02		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C0704		ECUX1H331JCV	C.CAPACITOR CH 50V 330P	1	
C0706		ECEA1HKA0R1	E.CAPACITOR 50V 0.1U	1	
C0707,08		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C0709		ECUX1H120JCV	C.CAPACITOR CH 50V 12P	1	
C0710		ECUX1H470JFV	C.CAPACITOR CH 50V 47P	1	
C0711		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C0712		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C0714		ECQB1H473JF	P.CAPACITOR 50V 0.047U	1	
C0715		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C0716		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C0717		ECUX1H270JFV	C.CAPACITOR CH 50V 27P	1	
C0718		ECEA1HKAR47	E.CAPACITOR 50V 0.47U	1	
C0719		ECUX1H270JCV	C.CAPACITOR CH 50V 27P	1	
C0720		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C0723		ECEA1HKA0R1	E.CAPACITOR 50V 0.1U	1	
C0726		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C0730		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C0732		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C851		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C852,53		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C854		ECEA1HKA0R1	E.CAPACITOR 50V 0.1U	1	
C855,56		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C857		ECEA1HKA0R1	E.CAPACITOR 50V 0.1U	1	
C858		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C859		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C860		ECEA1HKA4R7	E.CAPACITOR 50V 4.7U	1	
C861		ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C862,63		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C864		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C865		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C867		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C1004		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C1005		ECEA0JKA220	E.CAPACITOR 6.3V 220U	1	
C1006		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C1007		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C1008		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C1009		ECEA0JKA220	E.CAPACITOR 6.3V 22U	1	
C1010		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C1011		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C1012		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C1013		ECEA0JKA220	E.CAPACITOR 6.3V 22U	1	
C1101		ECKMWS102MEH	C.CAPACITOR	1	<!>
C1104		ECKMWS102MEH	C.CAPACITOR	1	<!>
C1106		ECQE5104KF	P.CAPACITOR	1	
C1107		ECKMWS102MEH	C.CAPACITOR	1	<!>
C1110,11		ECQU2A104MNB	P.CAPACITOR 100V 0.1U	2	<!>
C1112		ECEC2GG330	E.CAPACITOR 400V 33U	1	
C1113		ECKD2H103PU	C.CAPACITOR 500V 0.01U	1	
C1114		ECCD3A470KGE	C.CAPACITOR 1KV 47P	1	
C1115		ECA1VXLV470	E.CAPACITOR 35V 47U	1	
C1116		ECA1CXLV470	E.CAPACITOR 16V 47U	1	
C1117		ECQV1H104JM	P.CAPACITOR 50V 0.1U	1	
C1118		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C1120		ECQB1H332JF	P.CAPACITOR 50V 3300P	1	
C1121		ECUM1H391KBN	C.CAPACITOR CH 50V 390P	1	
C1131		EEUFA1E681	E.CAPACITOR 25V 680P	1	
C1132		ECEA1EU221	E.CAPACITOR 25V 220U	1	
C1133		ECKD2H101KB	C.CAPACITOR 500V 100P	1	
C1134		EEUFA1A122	E.CAPACITOR 10V 1200P	1	[SUPPLIED FROM MBV]
C1135		ECEA1AU331	E.CAPACITOR 10V 330U	1	
C1136		ECKD2H101KB	C.CAPACITOR 500V 100P	1	
C1137		ECA1HFQ560	E.CAPACITOR 50V 56U	1	[SUPPLIED FROM MBV]

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C1138		ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
C1139		ECKD2H101KB	C.CAPACITOR 500V 100P	1	
C1140		ECA1VFQ560	E.CAPACITOR 35V 56U	1	
C1141		ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
C1142		ECKD2H101KB	C.CAPACITOR 500V 100P	1	
C1143		ECA0JFQ221	E.CAPACITOR 6.3V 220U	1	
C1144,45		ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	2	
C1147		ECUM1H471KBN	C.CAPACITOR CH 50V 470P	1	
C1148		ECQV1H684JL	P.CAPACITOR 50V 0.68U	1	
C1149		ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
C1150		ECA1CM101	E.CAPACITOR 16V 100U	1	
C1151		ECEA1EGE470	E.CAPACITOR 25V 47U	1	
C2004		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C2005		ECQV1H683JM	P.CAPACITOR 50V 0.068U	1	
C2006		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C2007		ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C2008		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C2009		ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C2010,11		ECEA1EKN3R3	E.CAPACITOR 25V 3.3U	2	
C2012		ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	1	
C2013		ECEA1AKS221	E.CAPACITOR 10V 220U	1	
C2014		ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
C2015		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C2016		ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C2019		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C2021		ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1	
C2022		ECUM1H223KBN	C.CAPACITOR CH 50V 0.022U	1	
C2024,25		ECUM1C1052FN	C.CAPACITOR CH 16V 1U	2	
C2030		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C2032-34		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	3	
C3001		ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1	
C3002,03		ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	2	
C3004		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C3006		ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
C3007		ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C3008		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C3009		ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
C3010		ECUM1C1052FN	C.CAPACITOR CH 16V 1U	1	
C3012		ECEA0JKA330	E.CAPACOTOR 6.3V 33U	1	
C3013,14		ECUM1H102JCN	C.CAPACITOR CH 50V 1000P	2	
C3016		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C3017,18		ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	2	
C3019		ECUM1H620JCN	E.CAPACITOR CH 50V 62P	1	
C3021		ECA0JM471	E.CAPACITOR 6.3V 470U	1	
C3022		ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
C3023		ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C3024		ECKF1H1032F	C.CAPACITOR 50V 0.01U	1	
C3027		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C3028		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C3029		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3031		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3032		ECUM1H681JCN	C.CAPACITOR CH 50V 680P	1	
C3033		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C3040		ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C3041		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3042,43		ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	2	
C3045		ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
C3046,47		ECUM1H102JCN	C.CAPACITOR CH 50V 1000P	2	
C3051		ECUM1H152KBN	C.CAPACITOR CH 50V 1500P	1	
C3052,53		ECEA0JKA470	E.CAPACITOR 6.3V 47U	2	
C3054		ECUM1C1052FN	C.CAPACITOR CH 16V 1U	1	
C3055		ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
C3057		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C3062		ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C4001		ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
C4002,03		ECEA1CKA100	E.CAPACITOR 16V 10U	2	
C4005		ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
C4008		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C4010		ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1	
C4017		ECUM1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C4021		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C4034		ECUM1C1052FN	C.CAPACITOR CH 16V 1U	1	
C4035		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C4046		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C4063		ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C4502	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C4503	ECUX1H152KBV	C.CAPACITOR CH 50V 1500P	1	
C4504	ECEA1CU470	E.CAPACITOR 16V 47U	1	
C4505	ECA1VM470	E.CAPACITOR 35V 47P	1	
C4506	ECEA1CU100	E.CAPACITOR 16V 10U	1	
C4507	ECQB1H223JF	P.CAPACITOR 50V 0.022U	1	
C4508	ECEA1EKN4R7	E.CAPACITOR 25V 4.7U	1	
C4509	ECEA1AU470	E.CAPACITOR 10V 47U	1	
C4510	ECQB1H103JF	P.CAPACITOR 50V 0.01U	1	
C4511	ECQB1H332JF	P.CAPACITOR 50V 3300P	1	
C4512	ECUX1H561JV	C.CAPACITOR CH 50V 560P	1	
C4513	ECUX1H681JV	C.CAPACITOR CH 50V 680P	1	
C4514	ECUX1H561JV	C.CAPACITOR CH 50V 560P	1	
C4515	ECEA1EU4R7	E.CAPACITOR 25V 4.7U	1	
C4517	ECEA1AU101	E.CAPACITOR 10V 100U	1	
C4518	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C4521	ECUM1E473KBN	C.CAPACITOR CH 25V 0.047U	1	
C4522	ECEA1HU3R3	E.CAPACITOR 50V 3.3U	1	
C4524	ECEA1AU101	E.CAPACITOR 10V 100U	1	
C4528	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C4530	ECEA0JU470	E.CAPACITOR 6.3V 47U	1	
C4533	ECEA1AU330	E.CAPACITOR 10V 33U	1	
C4537	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C4538	ECEA1HUR47	E.CAPACITOR 50V 0.47U	1	
C4539	ECUX1C224ZFV	C.CAPACITOR CH 16V 0.22U	1	
C4541	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C4545	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C4551	ECQB1H223JF	P.CAPACITOR 50V 0.022U	1	
C4552	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C4556	ECEA1CU100	E.CAPACITOR 16V 10U	1	
C4558	ECEA1EKN4R7	E.CAPACITOR 25V 4.7U	1	
C4559	ECEA1AU470	E.CAPACITOR 10V 47U	1	
C4560	ECQB1H103JF	P.CAPACITOR 50V 0.01U	1	
C4561	ECQB1H332JF	P.CAPACITOR 50V 3300P	1	
C4562	ECUX1H561JV	C.CAPACITOR CH 50V 560P	1	
C4563	ECUX1H681JV	C.CAPACITOR CH 50V 680P	1	
C4564	ECUX1H561JV	C.CAPACITOR CH 50V 560P	1	
C4565	ECEA1EU4R7	E.CAPACITOR 25V 4.7U	1	
C4567	ECEA1AU101	E.CAPACITOR 10V 100U	1	
C4568	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C4572	ECEA1HU3R3	E.CAPACITOR 50V 3.3U	1	
C4576	ECUM1E473KBN	C.CAPACITOR CH 25V 0.047U	1	
C4583	ECEA1AU330	E.CAPACITOR 10V 33U	1	
C4585,86	ECEA1AU101	E.CAPACITOR 10V 100U	2	
C4591	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C4592	ECUX1H152KBV	C.CAPACITOR CH 50V 1500P	1	
C4593	ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1	
C4594,95	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	2	
C4596	ECEA1CU100	E.CAPACITOR 16V 10U	1	
C4597	ECUX1H330JCV	C.CAPACITOR CH 50V 33P	1	
C4604	ECUM1H182JN	C.CAPACITOR CH 50V 1800P	1	
C4606	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C4616	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C4617	ECEA1CM22	E.CAPACITOR 10V 22U	1	
C4618	ECQB1H822JZ	P.CAPACITOR 50V 8200P	1	
C4621	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C4629	ECQB1H822JZ	P.CAPACITOR 50V 8200P	1	
C4636	ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	
C4638	ECQB1H822JZ	P.CAPACITOR 50V 8200P	1	
C4652,53	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	2	
C5005	ECEA1HKA3R3	E.CAPACITOR 50V 3.3U	1	
C5006	ECUM1H150JCN	C.CAPACITOR CH 50V 15P	1	
C5007-09	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	3	
C5012,13	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C5014	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C5015,16	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C6001	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C6003	ECUM1C224ZFN	C.CAPACITOR CH 16V 0.22U	1	
C6004	ECEA0JKA220	E.CAPACITOR 6.3V 220U	1	
C6005	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6006	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C6007	ECQV1H334JM	P.CAPACITOR 50V 0.33U	1	
C6009,10	ECUM1H270JCN	C.CAPACITOR CH 50V 27P	2	
C6013	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C6016-19	ECUM1H271JCN	C.CAPACITOR CH 50V 270P	4	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C6020	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C6021	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C6023,24	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C6027,28	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C7301,02	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C7303	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C7304	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C7305	ECEA1CKA220	E.CAPACITOR 16V 22U	1	
C7306	ECUX1H391JCV	C.CAPACITOR CH 50V 390P	1	
C7309-12	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	4	
C7313	ECEA0JKA220	E.CAPACITOR 6.3V 220U	1	
C7314	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C7315	ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	1	
C7317	ECUX1H090DCV	C.CAPACITOR CH 50V 90P	1	
C7319	ECRHA020D54R	V.CAPACITOR	1	
C7320	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C7321	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C7322	ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	1	
C7323,24	ECUX1H391JCV	C.CAPACITOR CH 50V 390P	2	
C7325,26	ECEA1CKA100	E.CAPACITOR 16V 10U	2	
C7327	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C7328	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C7329,30	ECUX1H471JCV	C.CAPACITOR CH 50V 470P	2	
C7331	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C7332,33	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	2	
C7334	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C7335	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C7338	ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C7339	ECUM1H182KBM	C.CAPACITOR CH 50V 1800P	1	
C7340	ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C7341	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C7342	ECUM1H561JCN	C.CAPACITOR CH 50V 560P	1	
C7343	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C7344	ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C7345	ECUM1H182KBM	C.CAPACITOR CH 50V 1800P	1	
C7346	ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C7347	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C7348	ECUM1H561JCN	C.CAPACITOR CH 50V 560P	1	
C7350	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C7351	ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C7352	ECUM1H182KBM	C.CAPACITOR CH 50V 1800P	1	
C7353	ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C7354	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C7355	ECUM1H561JCN	C.CAPACITOR CH 50V 560P	1	
C7357	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C7358	ECEA1HKA3R3	E.CAPACITOR 50V 3.3U	1	
C7359	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C7365,66	ECEA1HKA010	E.CAPACITOR 50V 1U	2	
C7369	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C7370	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C7371,72	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C7374,75	ECUX1H150JCV	C.CAPACITOR CH 50V 15P	2	
C7601	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7602	ECQV1H104JM	P.CAPACITOR 50V 0.1U	1	
C7603	ECEA1CKA101	E.CAPACITOR 16V 100U	1	
C7604	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C7605	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7606	ECEA1CKA101	E.CAPACITOR 16V 100U	1	
C7607	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7608	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
C7609	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C7610,11	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C7612	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C7613	ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C7614	ECEA1HKA100	E.CAPACITOR 50V 10U	1	
C7615	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C7616	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
D301	1SS283	DIODE	1	
D302	1SS254	DIODE	1	
D304	1SS254	DIODE	1	
D305	MA723VT	DIODE	1	
D307	1SS254	DIODE	1	
D309-13	1SS254	DIODE	5	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
D316		1SS254	DIODE	1	
D319		1SS254	DIODE	1	
D1001		MA4051-L	DIODE	1	
D1004		MA4051-L	DIODE	1	
D1005		1SS355	DIODE	1	
D1007,08		1SS355	DIODE	2	
D1102		ERA15-08	DIODE	1	
D1103		APO1C	DIODE	1	
D1104		MA178	DIODE	1	
D1105-07		ERA15-08	DIODE	3	
D1108		RD100E	DIODE	1	
D1109,10		ERA15-08	DIODE	2	
D1121		RL2Z	DIODE	1	
D1122		21DQ04FC4	DIODE	1	
D1123		ERA22-02	DIODE	1	
D1124		MA185	DIODE	1	
D1125		11EQS04	DIODE	1	
D1126		MA4047M	DIODE	1	
D1127		1SS355	DIODE	1	
D1129		MA4043-L	DIODE	1	
D2003		MA153	DIODE	1	
D2004		1SS355	DIODE	1	
D2005		MA151K	DIODE	1	
D2007		1SS355	DIODE	1	
D3001		1SS355	DIODE	1	
D3007		1SS254	DIODE	1	
D3011,12		1SS355	DIODE	2	
D3014-17		1SS355	DIODE	4	
D4003		1SS254	DIODE	1	
D4005		1SS254	DIODE	1	
D4501-04		MA141K	DIODE	4	
D4602		MA141K	DIODE	1	
D6001		LN59L.VT	LED	1	
D6002,03		1SS254	DIODE	2	
D6004		1SS355	DIODE	1	
D6005		1SS254	DIODE	1	
D6007		MA4075-L	DIODE	1	
D6009		MA151K	DIODE	1	
D6010		1SS254	DIODE	1	
D6011		MA700A	DIODE	1	
D7301		MA3082-L	DIODE	1	
D7302		MA151K	DIODE	1	
D7303		MA151WK	DIODE	1	
D7304		MA717	DIODE	1	
D7306		MA151K	DIODE	1	
D7601		MA4300M	DIODE	1	
D7607,08		1SS355	DIODE	2	
F1101		XBA2C16TH15	FUSE	1	<!>
FL7301,02		VLF0633	FILTER	2	
IC301		TL8850P	IC	1	
IC302		AN3554NFBP	IC	1	[SUPPLIED FROM MBV]
IC0701		LA7576	IC	1	
IC851		TA1225N	IC	1	[SUPPLIED FROM MBV]
IC1001		HA17431PA	IC	1	
IC1101		TDA4605-3	IC	1	<!>
IC1102		SI3120C	IC	1	
IC2001		XRA6887-V3	IC	1	
IC4501		XLH7773AKS	IC	1	
IC4601		BA7755AF	IC	1	
IC6001		MN6755486H3S	IC	1	[SUPPLIED FROM MBV]
IC6002,03		ON1387	PHOTO INTERRUPTER	2	
IC7301		MSP3410-15	IC	1	
IC7302		PST7043	IC	1	
IC7303		M5238FP	IC	1	
IC7304		HA17431PA	IC	1	
IC7305		MN155402VZBZ	IC	1	
IC7306		PST7043	IC	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
K2		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
K4		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
K303,04		ERJ6GM2OR00	M.RESISTOR CH 1/10W 0	2	
K308		ERJ6GM2OR00	M.RESISTOR CH 1/10W 0	1	
K0702		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
K0704,05		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
K3008		ERJ6GM2OR00	M.RESISTOR CH 1/10W 0	1	
K3013		ERJ6GM2OR00	M.RESISTOR CH 1/10W 0	1	
K3015		ERJ6GM2OR00	M.RESISTOR CH 1/10W 0	1	
K3019		ERJ6GM2OR00	M.RESISTOR CH 1/10W 0	1	
K4002		ERJ6GM2OR00	M.RESISTOR CH 1/10W 0	1	
K4005		ERJ6GM2OR00	M.RESISTOR CH 1/10W 0	1	
K4011		ERJ6GM2OR00	M.RESISTOR CH 1/10W 0	1	
K4016		ERJ6GM2OR00	M.RESISTOR CH 1/10W 0	1	
K4031		ERJ6GM2OR00	M.RESISTOR CH 1/10W 0	1	
K4035		ERJ6GM2OR00	M.RESISTOR CH 1/10W 0	1	
K4037		ERJ6GM2OR00	M.RESISTOR CH 1/10W 0	1	
K6015-17		ERJ6GM2OR00	M.RESISTOR CH 1/10W 0	3	
K7304-07		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	4	
K7314		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
K7317		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
K7604		ERJ6GM2OR00	M.RESISTOR CH 1/10W 0	1	
L301		VLQ0599J470	COIL 47UH	1	
L302		VLQ0599J100	COIL 10UH	1	
L303		VLQ0599J270	COIL 27UH	1	
L304		VLQ0599J100	COIL 10UH	1	
L305		VLQ0599J680	COIL 68UH	1	
L306,07		VLQ0599J390	COIL 39UH	2	
L308		VLQ0599J150	COIL 15UH	1	
L310		VLQ0599J121	COIL 120UH	1	
L311		VLQ0599J101	COIL 100UH	1	
L312		VLQ0599J8R2	COIL 8.2UH	1	
L313		VLQ0599J680	COIL 68UH	1	
L314		VLQ0599J220	COIL 22UH	1	
L315		VLQ0599J101	COIL 100UH	1	
L316		VLQ0599J470	COIL 47UH	1	
L317		VLQ0599J101	COIL 100UH	1	
L318		VLQ0599J680	COIL 68UH	1	
L319		VLQ0599J270	COIL 27UH	1	
L320		VLP0125	COIL	1	
L322		ERJ6GM2OR00	M.RESISTOR CH 1/10W 0	1	
L323-28		VLP0145	COIL	6	
L330-33		VLP0145	COIL	4	
L334		VLQ0599J390	COIL 39UH	1	
L0701,02		ELJNAR10MF	COIL	2	
L0705		VLQ0163J5R6	COIL 5.6UH	1	
L0706		VLQEL05S120J	COIL 12UH	1	
L851,52		VLQ0599J680	COIL 68UH	2	
L853-57		ERJ6GM2OR00	M.RESISTOR CH 1/10W 0	5	
L1107		ELF18D290A	COIL 29UH	1	<!>
L1108		ELF18D221F	COIL 220UH	1	<!>
L1109		VLP0074	COIL	1	
L1110		VLP0085	COIL	1	
L1121		VLQ0611K220	COIL 22UH	1	
L1122		ELELN220KA	COIL 22UH	1	
L1123,24		VLQEL05S101K	COIL 100UH	2	
L3001		VLQ0599J3R3	COIL 3.3UH	1	
L3002		VLQ0599J680	COIL 68UH	1	
L3003		VLQ0599J6R8	COIL 6.8UH	1	
L3004		VLQ0599J120	COIL 120UH	1	
L3006		VLQ0599J101	COIL 100UH	1	
L3007		VLQ0599J680	COIL 68UH	1	
L3008		VLQ0599J270	COIL 27UH	1	
L3009		VLQ0599J680	COIL 68UH	1	
L3011		VLQ0599J680	COIL 68UH	1	
L3012,13		ERJ6GM2OR00	M.RESISTOR CH 1/10W 0	2	
L4501,02		ELESE101KA	COIL 100UH	2	
L4601		VLQEL07F153J	COIL	1	
L5001		VLQ0599J680	COIL 68UH	1	
L5002,03		VLQ0599J270	COIL 27UH	2	
L5004		VLQ0599J150	COIL 15UH	1	
L6001,02		VLQ0599J680	COIL 68UH	2	
L6003		VLQEL05S101K	COIL 100UH	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
L6004	VLP0083	COIL	1	
L7301	ELEXH100JBV	COIL 10UH	1	
L7302	VLP0150	INDUCTOR	1	
L7601,02	VLQ0599J1R0	COIL 1UH	2	
L7603-05	VLQ0599J680	COIL 68UH	3	
L7606	VLQ0599J2R2	COIL 2.2UH	1	[SUPPLIED FROM MBV]
L7607,08	VLQ0599J680	COIL 68UH	2	
P851	VJR0777B011W	CONNECTOR 11P	1	
P1101	VJS3306	AC INLET	1	<!>
P2001	VJS3316A002	CONNECTOR (FEMALE) 2P	1	
P3002	VJS3537A020G	CONNECTOR (FEMALE) 20P	1	
P4001	VJS3537A012G	CONNECTOR (FEMALE) 12P	1	
P5001	VJR0777B005W	CONNECTOR 5P	1	
P6001	VJS3537A032G	CONNECTOR (FEMALE) 32P	1	
P6004	VJS3820	CONNECTOR	1	
PK0701	VJR0816A010W	CONNECTOR 10P	1	
PK4001-03	VJR0757B018T	CONNECTOR (MALE) 18P	3	
PK7301	VJR0777B009W	CONNECTOR 9P	1	
PK7302	VJR0777B008W	CONNECTOR 8P	1	
PP0701	VJP3589A004B	CONNECTOR (MALE) 4P	1	
PP2001	VJP3042A017W	CONNECTOR (MALE) 17P	1	
PP2002	VJP3042A011W	CONNECTOR (MALE) 11P	1	
PP3901	VJP3042G020W	CONNECTOR (MALE) 20P	1	[SUPPLIED FROM MBV]
PP3902	VJP3042A018W	CONNECTOR (MALE) 18P	1	
PP4004	VJP3043A010W	CONNECTOR (MALE) 10P	1	
PP4005	VJP3043A009W	CONNECTOR (MALE) 9P	1	
PP6005	VJP3043A003W	CONNECTOR (MALE) 3P	1	
PR1101	VSF0015A10	IC PROTECTOR	1	<!>
PS301	VJR0776B009W	CONNECTOR (MALE) 9P	1	
PS302	VJR0776B015W	CONNECTOR (MALE) 15P	1	[SUPPLIED FROM MBV]
PS303	VJR0776B008W	CONNECTOR (MALE) 8P	1	
PS304	VJR0776B003W	CONNECTOR (MALE) 3P	1	[SUPPLIED FROM MBV]
Q301,02	MSD601	TRANSISTOR	2	
Q303,04	MSC2295	TRANSISTOR	2	
Q305	MSB709	TRANSISTOR	1	
Q0701	MSD601-S	TRANSISTOR	1	
Q0702	MSB709	TRANSISTOR	1	
Q1001	2SD601A	TRANSISTOR	1	
Q1002,03	2SD1996-S	TRANSISTOR	2	
Q1004	2SD1996	TRANSISTOR	1	
Q1005	2SD602A	TRANSISTOR	1	
Q1007	MSD602	TRANSISTOR	1	
Q1101	STP3N60FI-M	TRANSISTOR	1	
Q1102	2SD601A	TRANSISTOR	1	
Q1104	2SB1321A	TRANSISTOR	1	
Q1105	2SD601A	TRANSISTOR	1	
Q1107	MOC8104FR2	TRANSISTOR	1	<!>
Q1111	MOC8104FR2	TRANSISTOR	1	<!>
Q3001	XN4501	TRANSISTOR-RESISTOR	1	
Q3002	MSB709	TRANSISTOR	1	
Q3003	2SB709A	TRANSISTOR	1	
Q3004	MSD601	TRANSISTOR	1	
Q3005	MSC2295	TRANSISTOR	1	
Q3006	MSB709	TRANSISTOR	1	
Q3007	MSC2295	TRANSISTOR	1	
Q3008	2SD1996	TRANSISTOR	1	
Q3009	2SB1322	TRANSISTOR	1	
Q3010	MSB709	TRANSISTOR	1	
Q3011	2SD601A	TRANSISTOR	1	
Q3012	2SB1322	TRANSISTOR	1	
Q3013	MSB709	TRANSISTOR	1	
Q3014	MSD601	TRANSISTOR	1	
Q3016,17	MSC2295	TRANSISTOR	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
Q3018-20	MSD601	TRANSISTOR	3	
Q3021	MSB709	TRANSISTOR	1	
Q3023	MSC2295	TRANSISTOR	1	
Q4002-04	MSD601	TRANSISTOR	3	
Q4005	MSD1328	TRANSISTOR	1	
Q4501	2SD1991A-R	TRANSISTOR	1	
Q4551	2SB1320A-R	TRANSISTOR	1	
Q4552	2SD1819A	TRANSISTOR	1	
Q5001	MSB709	TRANSISTOR	1	
Q5002	MSD601	TRANSISTOR	1	
Q5003	2SA1022	TRANSISTOR	1	
Q5005	XN1501	TRANSISTOR-TRANSISTOR	1	
Q5006	MSB709	TRANSISTOR	1	
Q5007	MSC2295	TRANSISTOR	1	
Q5008	MSB709	TRANSISTOR	1	
Q5009-13	MSC2295	TRANSISTOR	5	
Q6001	MSB709	TRANSISTOR	1	
Q6002	PN205L-NC.VT	PHOTO TRANSISTOR	1	
Q7301,02	2SD1996	TRANSISTOR	2	
Q7304	2SC2404	TRANSISTOR	1	
Q7305	MSD601-S	TRANSISTOR	1	
Q7308,09	2SB709A	TRANSISTOR	2	
Q7601	2SB709A-R	TRANSISTOR	1	
QR302	MUN2212	TRANSISTOR-RESISTOR	1	
QR303	MUN2213	TRANSISTOR-RESISTOR	1	
QR305	MUN2212	TRANSISTOR-RESISTOR	1	
QR306	MUN2213	TRANSISTOR-RESISTOR	1	
QR308	IMH5	TRANSISTOR-RESISTOR	1	
QR310	MUN2213	TRANSISTOR-RESISTOR	1	
QR312	MUN2113	TRANSISTOR-RESISTOR	1	
QR316	MUN2213	TRANSISTOR-RESISTOR	1	
QR320	XN1212	TRANSISTOR-RESISTOR	1	
QR322	MUN2213	TRANSISTOR-RESISTOR	1	
QR1001,02	MUN2113	TRANSISTOR-RESISTOR	2	
QR1101	UN2114	TRANSISTOR-RESISTOR	1	
QR1102,03	MUN2213	TRANSISTOR-RESISTOR	2	
QR1104	MUN2212	TRANSISTOR-RESISTOR	1	
QR1105,06	MUN2213	TRANSISTOR-RESISTOR	2	
QR3001	MUN2111	TRANSISTOR-RESISTOR	1	
QR3002,03	DTC363EK	TRANSISTOR-RESISTOR	2	
QR3005	MUN2213	TRANSISTOR-RESISTOR	1	
QR3007	MUN2111	TRANSISTOR-RESISTOR	1	
QR3008-18	MUN2212	TRANSISTOR-RESISTOR	11	
QR3019	XN4213	TRANSISTOR-RESISTOR	1	
QR3020	MUN2212	TRANSISTOR-RESISTOR	1	
QR3021	MUN2211	TRANSISTOR-RESISTOR	1	
QR3023	MUN2213	TRANSISTOR-RESISTOR	1	
QR3026,27	MUN2113	TRANSISTOR-RESISTOR	2	
QR4001	MUN2212	TRANSISTOR-RESISTOR	1	
QR4002,03	MUN2213	TRANSISTOR-RESISTOR	2	
QR4005	MUN2213	TRANSISTOR-RESISTOR	1	
QR4508,09	UN5113	TRANSISTOR-RESISTOR	2	
QR4510	UN5212	TRANSISTOR-RESISTOR	1	
QR6001	XN1211	TRANSISTOR-RESISTOR	1	
QR6002	XN1213	TRANSISTOR-TRANSISTOR	1	
QR6004	UN2114	TRANSISTOR-RESISTOR	1	
QR6005	MUN2113	TRANSISTOR-RESISTOR	1	
QR6009	MUN2112	TRANSISTOR-RESISTOR	1	
QR6010	XN1211	TRANSISTOR-RESISTOR	1	
QR6012	MUN2211	TRANSISTOR-RESISTOR	1	
QR6013	MUN2113	TRANSISTOR-RESISTOR	1	
QR7301	MUN2213	TRANSISTOR-RESISTOR	1	
QR7302	MUN2112	TRANSISTOR-RESISTOR	1	
QR7601	MUN2213	TRANSISTOR-RESISTOR	1	
R301,02	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R303	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R304	ERJ6GMYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R305	ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R306	ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R307	ERJ6GMYK225	M.RESISTOR CH 1/10W 2.2M	1	
R308	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R310		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R311		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R312		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R313,14		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R315		ERJ6GMYJ684	M.RESISTOR CH 1/10W 680K	1	
R316		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R317		ERJ6GMYG221	M.RESISTOR CH 1/10W 220	1	
R318		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R319		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R320		ERJ6GMYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R321		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R324		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R325		ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R326		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R327		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R328		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R329		ERJ6GMYG471	M.RESISTOR CH 1/10W 470	1	
R330		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R331		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R332		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R333		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R334		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R336		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R337		ERJ6GMYG201	M.RESISTOR CH 1/10W 68K	1	
R339		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R340		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R341		ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R342,43		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R344		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R345		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R346		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R347,48		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R349		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R350		ERJ6GMYK225	M.RESISTOR CH 1/10W 2.2M	1	
R351		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R353		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R359		ERJ6GMYJ124	M.RESISTOR CH 1/10W 120K	1	
R361		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R362		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R363		ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
R364		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R367		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R369		ERJ6GMYJ393	M.RESISTOR CH 1/10W 39K	1	
R371		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R372		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R373		ERJ6GMYJ334	M.RESISTOR CH 1/10W 330K	1	
R375		ERDS2TJ272	C.RESISTOR 1/4W 2.7K	1	
R376		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R377		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R378		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R0702		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R0704		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R0705		ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R0706,07		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	2	
R0708		ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1	
R0709		ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R0710		ERJ6GEYJ154	M.RESISTOR CH 1/10W 150K	1	
R0713		ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R0714		ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R0715		ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R0716		VRE0040E151	M.RESISTOR CH 1/10W 150	1	
R0717		ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
R0718		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R0719		ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R0720		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R0722		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R0728		ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
R0729		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R0732		ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
R0783		ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R852		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R853		ERJ6GMYJ203	M.RESISTOR CH 1/10W 20K	1	
R1001		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R1002		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R1003		ERJ6GMYG272	M.RESISTOR CH 1/10W 2.7K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R1004		ERJ6GMYJ114	M.RESISTOR CH 1/10W 110K	1	
R1005		ERJ6GMYG272	M.RESISTOR CH 1/10W 2.7K	1	
R1006		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R1007		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R1008		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R1009,10		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R1102,03		ERDS1TJ183	C.RESISTOR 1/2W 18K	2	
R1104		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R1107		ERJ6GMYJ164	M.RESISTOR CH 1/10W 160K	1	
R1108		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R1109		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R1110		ERJ6GMYJ362	M.RESISTOR CH 1/10W 3.6K	1	
R1111		ERDS2FJ102	C.RESISTOR 1/4W 1K	1	
R1112		ERJ8GEYJ304	M.RESISTOR CH 1/8W 300K	1	
R1113		ERJ8GEYJ434	M.RESISTOR CH 1/8W 430K	1	
R1114		ERX12SJR51	M.RESISTOR 1/2W 0.51	1	
R1115		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R1116		ERJ6GMYJ100	M.RESISTOR CH 1/10W 10	1	
R1117		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R1118		ERJ8GEYOR00	M.RESISTOR CH 1/8W 0	1	
R1119		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R1120		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R1122		ERC12AGM334	S.RESISTOR 1/2W 330K	1	
R1123		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R1125		ERJ6GMYJ220	M.RESISTOR CH 1/10W 22	1	
R1126		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R1127		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R1128		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R1129		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R1131		ERJ6GMYG620	M.RESISTOR CH 1/10W 62	1	[SUPPLIED FROM MBV]
R1132		ERJ6GMYG302	M.RESISTOR CH 1/10W 3K	1	
R1134		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R1135		ERJ8GEYJ274	M.RESISTOR CH 1/8W 270K	1	
R1136		ERJ8GEYJ394	M.RESISTOR CH 1/8W 390K	1	
R2001		ERJ6GMYG512	M.RESISTOR CH 1/10W 5.1K	1	
R2002		ERJ6GMYG913	M.RESISTOR CH 1/10W 91K	1	
R2003		ERDS2FJ7R5	C.RESISTOR 1/4W 7.5	1	
R2004		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R2005,06		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R2007		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2008		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2009		ERDS2FJ7R5	C.RESISTOR 1/4W 7.5	1	
R2010		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2011		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2012		ERDS2FJ6R8	C.RESISTOR 1/4W 6.8	1	
R2013		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2014		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R2015		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R2016		ERDS2FJ6R8	C.RESISTOR 1/4W 6.8	1	
R2017		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2023,24		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2026,27		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2028		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R2040		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2041		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R2042		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2045		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R3001,02		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R3003		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3004		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R3005		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R3006		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R3007		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3008,09		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	2	
R3010		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R3011		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3012		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R3013		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3014		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3017		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R3018		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R3019,20		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	2	
R3021		ERJ6GMYJ391	M.RESISTOR CH 1/10W 390	1	
R3022		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3023,24		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3025	ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R3026	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3028	ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R3029	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3030	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3031	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R3033	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R3034	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3037-39	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	3	
R3040	ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R3041	ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R3042	ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R3043	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R3044	ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R3045	ERJ6GMYJ390	M.RESISTOR CH 1/10W 39	1	
R3046	ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R3047	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R3048	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3049	ERJ6GMYG821	M.RESISTOR CH 1/10W 820	1	
R3050	ERJ6GMYG123	M.RESISTOR CH 1/10W 12K	1	
R3051	ERJ6GMYG512	M.RESISTOR CH 1/10W 5.1K	1	
R3052	ERJ6GMYG272	M.RESISTOR CH 1/10W 2.7K	1	
R3053	ERJ6GMYG302	M.RESISTOR CH 1/10W 3K	1	
R3054	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3055	ERJ6GMYJ823	M.RESISTOR CH 1/10W 82K	1	
R3056	ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R3057	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3058	ERJ6GMYG821	M.RESISTOR CH 1/10W 820	1	
R3059	ERJ6GMYG123	M.RESISTOR CH 1/10W 12K	1	
R3060	ERJ6GMYG512	M.RESISTOR CH 1/10W 5.1K	1	
R3061	ERJ6GMYG272	M.RESISTOR CH 1/10W 2.7K	1	
R3062	ERJ6GMYG302	M.RESISTOR CH 1/10W 3K	1	
R3063	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3064,65	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R3066	ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R3067	ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R3070	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3072	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R3073	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3076,77	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R3079	ERJ6GMYJ334	M.RESISTOR CH 1/10W 330K	1	
R3080	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R4001	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R4003	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R4004,05	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	2	
R4006,07	ERDS2TJ472	C.RESISTOR 1/4W 4.7K	2	
R4008,09	ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	2	
R4014	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4018	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R4043	ERJ6GMYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R4046	ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R4055	ERG2SJ821	M.RESISTOR 2W 820	1	
R4057	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R4058	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R4059,60	ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	2	
R4061	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R4064-66	ERG1SJ270	M.RESISTOR 1W 27	3	
R4067,68	ERJ6GMYJ393	M.RESISTOR CH 1/10W 39K	2	
R4071,72	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	2	
R4073	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R4074	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R4075	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R4086	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R4087	ERDS2TJ221	C.RESISTOR 1/4W 220	1	
R4090,91	ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	2	
R4501,02	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R4503	ERJ3GEYG223	M.RESISTOR CH 1/16W 22K	1	
R4504,05	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R4506,07	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2	
R4508	ERJ3GEYG224	M.RESISTOR CH 1/16W 220K	1	
R4509	VRE0071E622	M.RESISTOR CH 1/10W 6.2K	1	
R4511	ERJ3GEYG273	M.RESISTOR CH 1/16W 27K	1	
R4512	VRE0071E163	M.RESISTOR CH 1/10W 16K	1	
R4513	ERJ3GEYG103	M.RESISTOR CH 1/16W 10K	1	
R4518,19	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4522	ERJ3GEYJ225	M.RESISTOR CH 1/16W 2.2M	1	
R4527	VRE0071E333	M.RESISTOR 33K	1	
R4528	VRE0071E153	M.RESISTOR 15K	1	
R4529	ERJ3GEYG562	M.RESISTOR CH 1/16W 5.6K	1	
R4530	ERJ3GEYJ334	M.RESISTOR CH 1/16W 330K	1	
R4534	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R4535	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R4539	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R4541	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R4542	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R4543	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R4551,52	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	2	
R4553,54	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	2	
R4558	ERJ3GEYG224	M.RESISTOR CH 1/16W 220K	1	
R4561	ERJ3GEYG273	M.RESISTOR CH 1/16W 27K	1	
R4562	VRE0034E10C	M.RESISTOR CH 1/10W	1	
R4563	ERJ3GEYG272	M.RESISTOR CH 1/16W 2.7K	1	
R4568,69	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	2	
R4573	ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1	
R4577	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R4578	VRE0071E473	M.RESISTOR CH 1/10W 47K	1	
R4581	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R4583	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R4584	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R4585,86	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R4587,88	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	2	
R4591	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R4592	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R4593	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R4594	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R4596	ERJ3GEYG473	M.RESISTOR CH 1/16W 47K	1	
R4597	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R4598,99	ERJ3GEYG104	M.RESISTOR CH 1/16W 100K	2	
R4603	ERJ3GEYG183	M.RESISTOR CH 1/16W 18K	1	
R4606	VRE0071E562	M.RESISTOR 5.6K	1	
R4610	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R4611	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R4612	VRE0071E331	M.RESISTOR CH 1/10W 330	1	
R4613	ERJ3GEYG394	M.RESISTOR CH 1/16W 390K	1	
R4615	VRE0071E133	M.RESISTOR CH 1/10W 13K	1	
R4616	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R4638	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R4649	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R4653	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R4656	ERJ3GEYG243	M.RESISTOR CH 1/16W 24K	1	
R4657	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R4666	ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
R4671	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R5003	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R5004	ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R5005	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R5006	ERJ6GMYJ124	M.RESISTOR CH 1/10W 120K	1	
R5007	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R5012	ERJ6GMYJ563	M.RESISTOR CH 1/10W 56K	1	
R5013	ERJ6GMYG123	M.RESISTOR CH 1/10W 12K	1	
R5014	ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	1	
R5016,17	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R5018	ERJ6GMYJ123	M.RESISTOR CH 1/10W 12K	1	
R5019	ERJ6GMYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R5020	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R5021,22	ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	2	
R5023	ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R5025	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R5027	ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R5028,29	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R5030	ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R5031	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6001	ERJ6GMYJ201	M.RESISTOR CH 1/10W 200	1	
R6002	ERJ6GMYG272	M.RESISTOR CH 1/10W 2.7K	1	
R6003	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R6004	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6005	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R6006,07	ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	2	
R6008	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R6009	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R6010		ERDS2TJ333	C.RESISTOR 1/4W 33K	1	
R6011,12		ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	2	
R6013		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R6015		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R6017		ERDS2TJ271	C.RESISTOR 1/4W 270	1	
R6018-20		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	3	
R6021		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6022		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R6023		ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R6024		ERJ6GMYJ104	M.RESISTOR CH 1/10W 1M	1	
R6025		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R6026		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R6027		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R6028		ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R6029		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R6030		ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R6031		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R6032		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6034,35		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	2	
R6036		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R6037,38		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	2	
R6039		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R6040,41		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	2	
R6042		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R6043,44		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	2	
R6045		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R6047-50		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	4	
R6051		ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R6052		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R6053-55		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	3	
R6056,57		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	2	
R6058		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R6059		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6060		ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
R6061		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R6063		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R6065		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R6068		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R6069		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R6071		ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R5072		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R6073		ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R6075,76		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R6079		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R6082		ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R6083		ERJ6GMYJ243	M.RESISTOR CH 1/10W 24K	1	
R7301		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R7302		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R7303		ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1	
R7308		ERJ3GEYJ121	M.RESISTOR CH 1/16W 120	1	
R7309,10		ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	2	
R7311		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1	
R7312		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R7313,14		ERJ3GEYG272	M.RESISTOR CH 1/16W 2.7K	2	
R7315		ERJ3GEYJ114	M.RESISTOR CH 1/16W 110K	1	
R7316		ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R7317		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R7320		ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R7321-23		ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	3	
R7324		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R7325		ERJ3GEYG122	M.RESISTOR CH 1/16W 1.2K	1	
R7326		ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R7327-29		ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	3	
R7330		ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
R7332		ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R7333		ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R7334-36		ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	3	
R7337		ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
R7339		ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R7341-43		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	3	
R7344		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R7346		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R7350		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R7351		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R7352-56		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	5	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R7357		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R7362		ERJ3GEYJ682	M.RESISTOR CH 1/16W 6.8K	1	
R7366		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R7367		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R7368,69		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2	
R7370		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R7371		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R7379		ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
R7380		ERJ3GEYG302	M.RESISTOR CH 1/16W 3K	1	
R7381		ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
R7382		ERJ3GEYG302	M.RESISTOR CH 1/16W 3K	1	
R7383		ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
R7384		ERJ3GEYG302	M.RESISTOR CH 1/16W 3K	1	
R7601		ERJ6GMYJ151	M.RESISTOR CH 1/10W 150	1	
R7602,03		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	2	
R7604		ERJ6GMYJ151	M.RESISTOR CH 1/10W 150	1	
R7605-07		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	3	
R7608		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R7609		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R7610		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R7611		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7612		ERG2SJ331	M.RESISTOR 2W 330	1	
R7614		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R7615		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R7616		ERG2SJ331	M.RESISTOR 2W 330	1	
R7617		ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1	
T0703		EQV5EC071A	TRANSFORMER	1	
T0704		EQV5EC072A	TRANSFORMER	1	
T1101		VLT0740	TRANSFORMER	1	<!>
VR301		EVMEASA00B14	V.RESISTOR	1	
VR302		EVMEASA00B53	V.RESISTOR	1	
VR303		EVMEASA00B24	V.RESISTOR	1	
VR0701		EVNCBAA00B24	V.RESISTOR	1	
VR2001		EVNCYAA03B54	V.RESISTOR	1	
VR3001		EVNCYAA03B23	V.RESISTOR	1	
VR3012,13		EVNCYAA03B52	V.RESISTOR	2	
VR3014		EVNCYAA03B54	V.RESISTOR	1	
VR4501		EVMECSA00B53	V.RESISTOR	1	
VR4502		EVMEASA00BY4	V.RESISTOR	1	
VR4507		EVMEASA00BY4	V.RESISTOR	1	
VR4509		EVMECSA00BY3	V.RESISTOR	1	
VR4512		EVNCBAA00B52	V.RESISTOR	1	
VR4550		EVMECSA00B14	V.RESISTOR	1	
VR4551,52		EVMEASA00B55	V.RESISTOR	2	
VR8001		EVNCYAA03B23	V.RESISTOR	1	
X301		VSX0162	CRYSTAL OSCILLATOR	1	
X0701		VLF1178	CRYSTAL OSCILLATOR	1	[SUPPLIED FROM MBV]
X0703		EFCT5R5MW5	CRYSTAL OSCILLATOR	1	
X0704		VLF1035	CRYSTAL OSCILLATOR	1	
X6001		VSX0583	CRYSTAL OSCILLATOR	1	
X7302		VSX0683	CRYSTAL OSCILLATOR	1	
X7303		EFOGC4004A4	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		EYF52BC	FUSE HOLDER	2	<!>
		VSC4141	SW SHIELD COVER	1	
		VMZ2212	CAPACITOR COVER	3	<!>
		ENG47210G	TUNER	1	<!>
		VMD2029	REEL GUIDE	1	
		VMD1926	SENSOR LED HOLDER	1	FOR D6001
		VMD1927	PHOTO TR.HOLDER	1	FOR Q6002
		VSC3553	SHIELD COVER (MAIN)	1	FOR NICAM DECODER
		VSC3555	SHIELD COVER (BOTTOM)	1	FOR NICAM DECODER
		VMP4471	TV DEMODULATOR ANGLE	1	FOR TV DEMODU. C.B.A.
	■	VEP06993M	OSD C.B.A.		[SUPPLIED FROM MBV]

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
					(RTL)NV-HD650B
C7701		ECUM1H150JCN	C.CAPACITOR CH 50V 15P	1	
C7702		ECUM1H080DCN	C.CAPACITOR CH 50V 80P	1	
C7703		ECUM1E224ZFN	C.CAPACITOR CH 25V 0.22U	1	
C7704,05		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C7706		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C7707-10		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	4	
C7712		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C7714		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C7720		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C7722		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C7727		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C7729		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7731		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7732		ECUM1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C7734		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7738		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7740,41		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	2	
C7742		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7745		ECUM1E224ZFN	C.CAPACITOR CH 25V 0.22U	1	
C7746,47		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C7748		ECUM1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C7749		ECUM1H473ZFN	C.CAPACITOR CH 50V 0.047U	1	
C7750		ECUM1E224ZFN	C.CAPACITOR CH 25V 0.22U	1	
C7751		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7753		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7756		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7758		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7761		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7762		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C7763,64		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C7765		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C7766,67		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C7768		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C7769		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7770		ECUM1H150JCN	C.CAPACITOR CH 50V 15P	1	
C7773		ECUM1C474ZFN	C.CAPACITOR CH 16V 0.47U	1	
C7775		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C7777		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C7778		ECKF1H102KB	C.CAPACITOR 50V 1000P	1	
D7701		MA151WA	DIODE	1	
D7704,05		MA151K	DIODE	2	
DL7701		ELB4Y026	DELAY	1	[SUPPLIED FROM MBV]
IC7701		M27C512MBGA	IC	1	[SUPPLIED FROM MBV]
IC7702		74HCT573D	IC	1	
IC7703		M52055FP	IC	1	
IC7704		ST24C08CB1	IC	1	[SUPPLIED FROM MBV]
IC7705		TDA8501	IC	1	[SUPPLIED FROM MBV]
IC7706		P83C528MAAA	IC	1	[SUPPLIED FROM MBV]
IC7707		D74HC164G	IC	1	
IC7708		SAA5281PM3	IC	1	
IC7709		D74HC161G	IC	1	
K7701		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
K7704		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
K7709		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
K7714		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
K7716		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
L7701		ELESE100KA	COIL 10UH	1	
L7702		ELESE3R3KA	COIL 3.3UH	1	
L7705,06		ELESE101KA	COIL 100UH	2	
PS7701		VJS3043B009W	CONNECTOR (FEMALE) 9P	1	
PS7702		VJS3043B010W	CONNECTOR (FEMALE) 10P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
Q7703,04		MSB709	TRANSISTOR	2	
Q7705		MSD601	TRANSISTOR	1	
Q7711		MSD601	TRANSISTOR	1	
Q7717		MSD601	TRANSISTOR	1	
Q7720		MSD601	TRANSISTOR	1	
Q7723		MSB709	TRANSISTOR	1	
QR7707		MUN2211	TRANSISTOR-RESISTOR	1	
QR7710		UN2216	TRANSISTOR-RESISTOR	1	
QR7716		UN2215	TRANSISTOR-RESISTOR	1	
R7701		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7702		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R7705		ERJ6GEYG472	M.RESISTOR CH 1/10W 4.7K	1	
R7707		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R7708		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R7709		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R7711		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R7712,13		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	2	
R7723		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R7725		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7727		ERJ6GEYJ181	M.RESISTOR CH 1/10W 180	1	
R7729		ERJ6GEYG472	M.RESISTOR CH 1/10W 4.7K	1	
R7730		ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	1	
R7734		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R7736		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R7737,38		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	2	
R7741		ERJ6GEYG472	M.RESISTOR CH 1/10W 4.7K	1	
R7742		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R7743		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7745		ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R7748		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R7750		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R7751		ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R7753		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R7754		ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
R7755		ERJ6GEYJ243	M.RESISTOR CH 1/10W 24K	1	
R7756		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R7757		ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1	
R7758		ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	1	
R7761		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R7765		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R7768		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R7770		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R7772		ERJ6GEYG472	M.RESISTOR CH 1/10W 4.7K	1	
R7774		EXBF9E103J	COMBI.R-R 10K	1	
R7779		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R7781-83		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	3	
R7784,85		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	2	
R7787-89		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	3	
R7790		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R7791		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R7798		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
X7701		VSX0583	CRYSTAL OSCILLATOR	1	
X7702		VSX0353	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VMZ2373	BARRIER	1	
	■	VEP06993Q	OSD C.B.A.		[SUPPLIED FROM MBV]
					(RTL)NV-HD650EC
C7701		ECUM1H150JCN	C.CAPACITOR CH 50V 15P	1	
C7702		ECUM1H080DCN	C.CAPACITOR CH 50V 80P	1	
C7703		ECUM1E224ZFN	C.CAPACITOR CH 25V 0.22U	1	
C7704,05		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C7706		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C7707-10		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	4	
C7712		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C7714		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C7720		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C7722		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C7727		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C7729		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7731		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7732		ECUM1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C7734		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7738		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7740,41		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	2	
C7742		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7745		ECUM1E224ZFN	C.CAPACITOR CH 25V 0.22U	1	
C7746,47		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C7748		ECUM1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C7749		ECUM1H473ZFN	C.CAPACITOR CH 50V 0.047U	1	
C7750		ECUM1E224ZFN	C.CAPACITOR CH 25V 0.22U	1	
C7751		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7753		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7756		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7758		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7761		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7762		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C7763,64		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C7765		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C7766,67		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C7768		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C7769		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7770		ECUM1H150JCN	C.CAPACITOR CH 50V 15P	1	
C7771		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C7773		ECUM1C474ZFN	C.CAPACITOR CH 16V 0.47U	1	
C7775		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C7777		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C7778		ECKF1H102KB	C.CAPACITOR 50V 1000P	1	
D7701		MA151WA	DIODE	1	
D7704,05		MA151K	DIODE	2	
DL7701		ELB4Y026	DELAY	1	[SUPPLIED FROM MBV]
IC7701		M27C512MBGA	IC	1	[SUPPLIED FROM MBV]
IC7702		74HCT573D	IC	1	
IC7703		M52055FP	IC	1	
IC7704		ST24C08CB1	IC	1	[SUPPLIED FROM MBV]
IC7705		TDA8501	IC	1	[SUPPLIED FROM MBV]
IC7706		P83C528MAAA	IC	1	[SUPPLIED FROM MBV]
IC7707		D74HC164G	IC	1	
IC7708		SAA5281PM3	IC	1	
IC7709		D74HC161G	IC	1	
K7701		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
K7704		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
K7709		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
K7714		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
K7716		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
L7701		ELESE100KA	COIL 10UH	1	
L7702		ELESE3R3KA	COIL 3.3UH	1	
L7705,06		ELESE101KA	COIL 100UH	2	
L7708		ELESE270KA	COIL 27UH	1	
PS7701		VJS3043B009W	CONNECTOR (FEMALE) 9P	1	
PS7702		VJS3043B010W	CONNECTOR (FEMALE) 10P	1	
Q7703,04		MSB709	TRANSISTOR	2	
Q7705		MSD601	TRANSISTOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
Q7711		MSD601	TRANSISTOR	1	
Q7717		MSD601	TRANSISTOR	1	
Q7720		MSD601	TRANSISTOR	1	
Q7722		MSD601	TRANSISTOR	1	
Q7723		MSB709	TRANSISTOR	1	
QR7707		MUN2211	TRANSISTOR-RESISTOR	1	
QR7710		UN2216	TRANSISTOR-RESISTOR	1	
QR7716		UN2215	TRANSISTOR-RESISTOR	1	
QR7719		MUN2113	TRANSISTOR-RESISTOR	1	
R7701		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7702		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R7705		ERJ6GEYG472	M.RESISTOR CH 1/10W 4.7K	1	
R7707		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R7708		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R7709		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R7711		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R7712,13		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	2	
R7723		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R7725		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7727		ERJ6GEYJ181	M.RESISTOR CH 1/10W 180	1	
R7729		ERJ6GEYG472	M.RESISTOR CH 1/10W 4.7K	1	
R7730		ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	1	
R7734		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R7736		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R7737,38		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	2	
R7741		ERJ6GEYG472	M.RESISTOR CH 1/10W 4.7K	1	
R7742		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R7743		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7745		ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R7748		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R7750		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R7751		ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R7753		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R7754		ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
R7755		ERJ6GEYJ243	M.RESISTOR CH 1/10W 24K	1	
R7756		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R7757		ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1	
R7758		ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	1	
R7761		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R7765		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R7768		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R7770		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R7772		ERJ6GEYG472	M.RESISTOR CH 1/10W 4.7K	1	
R7774		EXBF9E103J	COMBI.R-R 10K	1	
R7779		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R7781-83		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	3	
R7784,85		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	2	
R7787-89		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	3	
R7790		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R7791		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R7794		ERJ6GEYG472	M.RESISTOR CH 1/10W 4.7K	1	
R7795		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R7796		ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	1	
R7797		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R7798		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R7799		ERJ6GEYG472	M.RESISTOR CH 1/10W 4.7K	1	
X7701		VSX0583	CRYSTAL OSCILLATOR	1	
X7702		VSX0353	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VMZ2373	BARRIER	1	
	■	VEP03B93C	INPUT/OUTPUT C.B.A.		[SUPPLIED FROM MBV]
					(RTL)NV-HD650B
C3901		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C3902	ECEA1AKA470I	E.CAPACITOR 10V 47U	1	
C3903	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3904	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C3905,06	ECEA1CKA100	E.CAPACITOR 16V 10U	2	
C3909	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C3910	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3914	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C3915	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3916	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C3917	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3919	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4903-12	ECUM1H471JCN	C.CAPACITOR CH 50V 470P	10	
D3901	MA4056M	DIODE	1	
D3902	1SS254	DIODE	1	
D3903	MA151A	DIODE	1	
D3907	MA4056M	DIODE	1	
IC3901	MC14053BF	IC	1	
IC3902	MC14052BF	IC	1	
IC3903	MC14051BF	IC	1	
IC3904	BU12101-02	IC	1	[SUPPLIED FROM MBV]
IC4901	MC14052BF	IC	1	
IC4902,03	NJM4558M	IC	2	
IC4904	MC14052BF	IC	1	
JK3901,02	VJS1470	21PIN SKIRT JACK	2	
JK3903	VEJ1501	I/O JACK PLATE	1	[SUPPLIED FROM MBV]
K4901	ERJ6GNZOR00	M.RESISTOR CH 1/10W 0	1	
L3901	VLQ0599J101	COIL	1	
L3903	VLQ0599J101	COIL	1	
L4901-04	VLQ0599J471	COIL 470UH	4	
P3901	VJS3537B008G	CONNECTOR (FEMALE) 8P	1	
PS3901	VJS3042F020W	CONNECTOR (FEMALE)	1	[SUPPLIED FROM MBV]
PS3902	VJS3042B018W	CONNECTOR (FEMALE) 18P	1	
Q3901	MSD601	TRANSISTOR	1	
Q3902	MSB709	TRANSISTOR	1	
Q3903	MSD601	TRANSISTOR	1	
Q3904,05	MSB709	TRANSISTOR	2	
QR3901	MUN2212	TRANSISTOR-RESISTOR	1	
QR3902	UN2216	TRANSISTOR-RESISTOR	1	
QR3903	MUN2111	TRANSISTOR-RESISTOR	1	
QR3904	MUN2113	TRANSISTOR-RESISTOR	1	
R3901,02	ERJ6GEYJ750	M.RESISTOR CH 1/10W 75	2	
R3903	ERJ6GEYJ683	M.RESISTOR CH 1/10W 68K	1	
R3904	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R3905	ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R3906	ERJ6GEYJ121	M.RESISTOR CH 1/10W 120	1	
R3907	ERJ6GEYJ680	M.RESISTOR CH 1/10W 68	1	
R3908	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R3909	ERJ6GEYJ683	M.RESISTOR CH 1/10W 68K	1	
R3910	ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R3911	ERJ6GEYJ121	M.RESISTOR CH 1/10W 120	1	
R3912	ERJ6GEYJ680	M.RESISTOR CH 1/10W 68	1	
R3913	ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R3917	ERJ6GEYJ683	M.RESISTOR CH 1/10W 68K	1	
R3918	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R3921	ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3923,24	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	2	
R3925,26	ERJ6GEYJ121	M.RESISTOR CH 1/10W 120	2	
R3927,28	ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	2	
R3929	ERDS2TJ121	C.RESISTOR 1/4W 120	1	
R3930	ERJ6GEYG472	M.RESISTOR CH 1/10W 4.7K	1	
R3932	ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R3933	ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R4901	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R4902	ERDS2TJ101	C.RESISTOR 1/4W 100	1	
R4903,04	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	2	
R4905	ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R4906	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R4907	ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R4908	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R4909	ERJ6GEYJ683	M.RESISTOR CH 1/10W 68K	1	
R4910	ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R4911	ERJ6GEYJ683	M.RESISTOR CH 1/10W 68K	1	
R4912	ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R4913,14	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	2	
R4919	ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
R4920	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R4921	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R4922	ERJ6GEYJ474	M.RESISTOR CH 1/10W 470K	1	
R4923	ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
R4924	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R4925	ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
R4926	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R4927	ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
R4928	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R4929	ERJ6GEYJ474	M.RESISTOR CH 1/10W 470K	1	
R4931	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R4933	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R4935	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R4937,38	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	2	
S3901	ESD172311	SWITCH	1	
		MISCELLANEOUS		
	XTV3+8GFZ	SCREW	4	FOR 21PIN SKIRT JACK
	VEP03B93J	INPUT/OUTPUT C.B.A.		[SUPPLIED FROM MBV]
				(RTL)NV-HD650EC
C3901	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3902	ECEA1AKA470I	E.CAPACITOR 10V 47U	1	
C3903	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3904	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C3905,06	ECEA1CKA100	E.CAPACITOR 16V 10U	2	
C3909	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C3910	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3914	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C3915	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3916	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C3917	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4903-12	ECUM1H471JCN	C.CAPACITOR CH 50V 470P	10	
D3901	MA4056M	DIODE	1	
D3902	1SS254	DIODE	1	
D3903	MA151A	DIODE	1	
D3907	MA4056M	DIODE	1	
IC3901	MC14053BF	IC	1	
IC3902	MC14052BF	IC	1	
IC3903	MC14051BF	IC	1	
IC3904	BU12101-02	IC	1	[SUPPLIED FROM MBV]
IC4901	MC14052BF	IC	1	
IC4902,03	NJM4558M	IC	2	
IC4904	MC14052BF	IC	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
JK3901,02		VJS1470	21PIN SKIRT JACK	2	
JK3903		VEJ1490	I/O JACK PLATE	1	[SUPPLIED FROM MBV]
K3901		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
K4901		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
L3901		VLQ0599J101	COIL	1	
L3903		VLQ0599J101	COIL	1	
L4901-04		VLQ0599J471	COIL 470UH	4	
P3901		VJS3537B008G	CONNECTOR (FEMALE) 8P	1	
P5901		VJS3042F020W	CONNECTOR (FEMALE)	1	[SUPPLIED FROM MBV]
P5902		VJS3042B018W	CONNECTOR (FEMALE) 18P	1	
Q3901		MSD601	TRANSISTOR	1	
Q3902		MSB709	TRANSISTOR	1	
Q3903		MSD601	TRANSISTOR	1	
Q3904		MSB709	TRANSISTOR	1	
QR3901		MUN2212	TRANSISTOR-RESISTOR	1	
QR3902		UN2216	TRANSISTOR-RESISTOR	1	
QR3903		MUN2111	TRANSISTOR-RESISTOR	1	
QR3904		MUN2113	TRANSISTOR-RESISTOR	1	
R3901,02		ERJ6GEYJ750	M.RESISTOR CH 1/10W 75	2	
R3903		ERJ6GEYJ683	M.RESISTOR CH 1/10W 68K	1	
R3904		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R3905		ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R3906		ERJ6GEYJ121	M.RESISTOR CH 1/10W 120	1	
R3907		ERJ6GEYJ680	M.RESISTOR CH 1/10W 68	1	
R3908		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R3909		ERJ6GEYJ683	M.RESISTOR CH 1/10W 68K	1	
R3910		ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R3911		ERJ6GEYJ121	M.RESISTOR CH 1/10W 120	1	
R3912		ERJ6GEYJ680	M.RESISTOR CH 1/10W 68	1	
R3913		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R3917		ERJ6GEYJ683	M.RESISTOR CH 1/10W 68K	1	
R3918		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R3921		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R3923,24		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	2	
R3925,26		ERJ6GEYJ121	M.RESISTOR CH 1/10W 120	2	
R3930		ERJ6GEYG472	M.RESISTOR CH 1/10W 4.7K	1	
R3932		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R4901		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R4902		ERDS2TJ101	C.RESISTOR 1/4W 100	1	
R4903,04		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	2	
R4905		ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R4906		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R4907		ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R4908		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R4909		ERJ6GEYJ683	M.RESISTOR CH 1/10W 68K	1	
R4910		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R4911		ERJ6GEYJ683	M.RESISTOR CH 1/10W 68K	1	
R4912		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R4913,14		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	2	
R4919		ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
R4920		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R4921		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R4922		ERJ6GEYJ474	M.RESISTOR CH 1/10W 470K	1	
R4923		ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
R4924		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R4925		ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
R4926		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R4927		ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
R4928		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R4929		ERJ6GEYJ474	M.RESISTOR CH 1/10W 470K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R4931		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R4933		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R4935		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R4937,38		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	2	
S3901		ESD172311	SWITCH	1	
			MISCELLANEOUS		
		XTV3+8GFZ	SCREW	4	FOR 21PIN SKIRT JACK
	■	VEP04469J	MOTOR DRIVE C.B.A.		[SUPPLIED FROM MBV] (RTL)
C2501,02		ECEA1HKA2R2	E.CAPACITOR 50V 2.2U	2	
C2503		ECA1EM470	E.CAPACITOR 25V 47U	1	
C2504		ECEA1HKNR22	E.CAPACITOR 50V 0.22	1	
C2505		ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C2506		ECA1EM470	E.CAPACITOR 25V 47U	1	
C2507,08		ECUM1E333KBN	C.CAPACITOR CH 25V 0.033U	2	
C2509		ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
C2510		ECA0JM221	E.CAPACITOR 6.3V 220U	1	
C2511		ECUM1E333KBN	C.CAPACITOR CH 25V 0.033U	1	
C2512		ECQV1H683JM	P.CAPACITOR 50V 0.068U	1	
C2513		ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1	
C2514-16		ECUM1E333KBN	C.CAPACITOR CH 25V 0.033U	3	
C2517		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C2518		ECUM1C474ZFN	C.CAPACITOR CH 16V 0.47U	1	
C2519		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C2520		ECUM1C474ZFN	C.CAPACITOR CH 16V 0.47U	1	
C2521		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2523		ECEA1HKA2R2	E.CAPACITOR 50V 2.2U	1	
C2525		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C2540		ECEA1HKAR47	E.CAPACITOR 50V 0.47	1	
C2541		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C4712		ECUM1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C4713		ECEA1CKA330	E.CAPACITOR 16V 33U	1	
C4714		ECQP1222JZ	P.CAPACITOR 100V 2200P	1	
C4715		ECCD2H181J	C.CAPACITOR 500V 180P	1	
C4716		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4732		ECUM1H391JCN	C.CAPACITOR CH 50V 390P	1	
C4736		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4737		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C4738		ECEA1CKA330	E.CAPACITOR 16V 33U	1	
C4739		ECQB1H333JZ	F.CAPACITOR 50V 0.033U	1	
C4744		ECUM1H391JCN	C.CAPACITOR CH 50V 390P	1	
D2501,02		MA185	DIODE	2	
D2504,05		MA700	DIODE	2	
D2506		1SS355	DIODE	1	
D4702,03		MA151K	DIODE	2	
IC2501		BA6871S	IC	1	
K4707		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
K4711		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
L2502		VLP0074	COIL	1	
L2503		VLP0083	COIL	1	
L4702		ELESE471KA	COIL	1	
L4704		ELESE101KA	COIL 100UH	1	
L4705,06		VLP0150	INDUCTOR	2	
P2003		VJP3502	CONNECTOR (MALE)	1	
P2501		VJS3537A015G	CONNECTOR (FEMALE) 15P	1	
P2502		VJP1232T	CONNECTOR (MALE) 5P	1	
P4002		VJS2329	CONNECTOR (FEMALE)	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
P4003		VJP1230T	CONNECTOR (MALE) 3P	1	
PS2501		VJS3042B017W	CONNECTOR (FEMALE) 17P	1	
PS4701		VJS3042B011W	CONNECTOR (FEMALE) 11P	1	
Q4701		2SD602A-R	TRANSISTOR	1	
Q4703		2SB1320A-R	TRANSISTOR	1	
Q4706		2SB709A-R	TRANSISTOR	1	
Q4707		2SD602A-R	TRANSISTOR	1	
QR4702,03		MUN2214	TRANSISTOR-RESISTOR	2	
R2501		ERJ6GMYG821	M.RESISTOR CH 1/10W 820	1	
R2502		ERJ6GMYG681	M.RESISTOR CH 1/10W 680	1	
R2503,04		ERDS2TJ560	C.RESISTOR 1/4W 56	2	
R2505		ERDS1TJ561	C.RESISTOR 1/2W 560	1	
R2506		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2507		ERJ6GMYG432	M.RESISTOR CH 1/10W 4.3K	1	
R2508		ERJ6GMYG473	M.RESISTOR CH 1/10W 47K	1	
R2509		ERJ6GMYJ684	M.RESISTOR CH 1/10W 680K	1	
R2510		ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1	
R2511		ERJ6GMYG133	M.RESISTOR CH 1/10W 13K	1	
R2512		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2513,14		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	2	
R2515		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2516		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2517		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2518		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2519		ERDS2TJ560	C.RESISTOR 1/4W 56	1	
R2520		ERX12SJR47	M.RESISTOR 1/2W 0.47	1	
R2521,22		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R2529		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R2530		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2531		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2532		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R2533		ERJ6GMYJ563	M.RESISTOR CH 1/10W 56K	1	
R2534		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R4710		ERJ6GMYJ432	M.RESISTOR CH 1/10W 4.3K	1	
R4715		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4723		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R4735		ERJ6GMYJ100	M.RESISTOR CH 1/10W 10	1	
R4736		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R4737		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R4738		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
T4701		EIQ7QF013Q	TRANSFORMER	1	
T4702		EIQ7QF012Q	TRANSFORMER	1	
VR2006		EVNDCAA03B15	V.RESISTOR	1	
VR2011		EVNDCAA03B15	V.RESISTOR	1	
VR4001		EVNDCAA03B15	V.RESISTOR	1	
			MISCELLANEOUS		
		VEE9091	WIRE CABLE	1	(P2003-POWER TR.)
		VEE9112	WIRE CABLE	1	(P4003-FE HEAD)
		VWJ0868	FLAT CARD CABLE	1	(P2501-CAPSTAN)
		VEE9144	WIRE CABLE	1	(P2502-CYLINDER)
	■	VEP05227A	HEAD AMP C.B.A.		[SUPPLIED FROM MBV]
					(RTL)
C501		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C502,03		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C504,05		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C506,07		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C508		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C509		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C510		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C511		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C512		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C513		ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C514		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C515		ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	1	
C516-20		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	5	
C521		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C522		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C523		VCEA0JAC221	E.CAPACITOR	1	
C524		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C525,26		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	2	
C527		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C529		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C530		ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C531,32		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C533		ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C534		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C535		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C536		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C537		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C538-41		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	4	
C542		ECEA0JPK221	E.CAPACITOR 6.3V 220U	1	
C543		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C544		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C545		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C547		ECUM1H150JCN	C.CAPACITOR CH 50V 15P	1	
IC501		AN3336SB	IC	1	
IC502		BA7743FS	IC	1	
L501-04		VLQ0599J680	COIL 68UH	4	
L505		VLQ0599J820	COIL	1	
L506		VLQ0599J151	COIL 150UH	1	
L507-10		VLP0145	COIL	4	
P501		VJS3537B020G	CONNECTOR (FEMALE) 20P	1	
P502		VJS2603	CONNECTOR (FEMALE)	1	
QR501		MUN2113	TRANSISTOR-RESISTOR	1	
R501		ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R502		ERJ6GMYJ100	M.RESISTOR CH 1/10W 10	1	
R503-05		ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	3	
R506		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R507		ERJ6GMYJ391	M.RESISTOR CH 1/10W 390	1	
R508		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R509		ERJ6GMYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R510		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R511		ERJ6GMYG133	M.RESISTOR CH 1/10W 13K	1	
R512		ERJ6GMYG752	M.RESISTOR CH 1/10W 7.5K	1	
R513		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R514		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R515		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R516		ERJ6GMYJ274	M.RESISTOR CH 1/10W 270K	1	
R517		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R518		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R519		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R520,21		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	2	
R522		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R523		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R524		VRE0034E100	M.RESISTOR CH 1/10W 10	1	
R525		ERJ6GMYJ224	M.RESISTOR CH 1/10W 220K	1	
R526		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R527		ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R528		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R530		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R531		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R532		ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R533		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R534		ERJ6GMYJ243	M.RESISTOR CH 1/10W 24K	1	
R535		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R536		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R537		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R538		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R539		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R540		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
			MISCELLANEOUS		
		VSC3478	SHIELD COVER (MAIN)	1	
		VSC3714	SHIELD COVER (TOP)	1	
		VSC3715	SHIELD COVER (BOTTOM)	1	
	■	VEP07773L	TIMER C.B.A.		[SUPPLIED FROM MBV]
					(RTL)NV-HD650B
C7502		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7504		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7505		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7507		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C7508		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7509		ECEA1HKA100	E.CAPACITOR 50V 10U	1	
C7510		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7511		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C7513		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C7514		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C7515		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7516		ECAOJM221	E.CAPACITOR 6.3V 220U	1	
C7517		VCB0073	E.CAPACITOR	1	
C7519,20		ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	2	
C7521		ECUM1H223KBN	C.CAPACITOR CH 50V 0.022U	1	
C7522		ECEA0JKA330	E.CAPACOTOR 6.3V 33U	1	
C7524		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7525		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7526,27		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C7528,29		ECUM1H473ZFN	C.CAPACITOR CH 50V 0.047U	2	
C7531		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7533-35		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C7536		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
D7501-08		1SS254	DIODE	8	
D7509		HLMK-D215	DIODE	1	[SUPPLIED FROM MBV]
D7510,11		1SS254	DIODE	2	
D7516		1SS254	DIODE	1	
D7518-20		1SS254	DIODE	3	
D7526		1SS254	DIODE	1	
D7528,29		1SS254	DIODE	2	
D7531		1SS254	DIODE	1	
D7532		MA4220	DIODE	1	
D7533		MA723VT	DIODE	1	
D7541		HLMK-D315	DIODE	1	
D7542		1SS254	DIODE	1	
D7544		1SS254	DIODE	1	
D7546		1SS254	DIODE	1	
D7551		MA165	DIODE	1	
D7555		1SS355	DIODE	1	
DP7501		VSL0336	DISPLAY TUBE	1	[SUPPLIED FROM MBV]
IC7501		M37507V6AD	IC	1	[SUPPLIED FROM MBV]
IC7504		PST7023	IC	1	
IC7505		S80743AL	IC	1	
IC7506		BA6810F	IC	1	
IR7501		RPM675CBRX10	IR RECEIVER UNIT	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
K7501		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
K7503		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
P7501		VJS3537B032G	CONNECTOR (FEMALE) 32P	1	
P7502		VJS3537B012G	CONNECTOR (FEMALE) 12P	1	
P7503		VJS3301	CONNECTOR (FEMALE)	1	
PP7501		VJP3405A009W	CONNECTOR (MALE) 9P	1	
QR7501		MUN2112	TRANSISTOR-RESISTOR	1	
QR7503		MUN2211	TRANSISTOR-RESISTOR	1	
QR7504		MUN2111	TRANSISTOR-RESISTOR	1	
QR7505-08		MUN2113	TRANSISTOR-RESISTOR	4	
QR7509-11		MUN2111	TRANSISTOR-RESISTOR	3	
QR7512,13		MUN2112	TRANSISTOR-RESISTOR	2	
R7501-03		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	3	
R7505		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R7506-10		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	5	
R7512		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R7513		ERJ6GMYJ132	M.RESISTOR CH 1/10W 1.3K	1	
R7514		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R7515		ERDS2TJ470	C.RESISTOR 1/4W 47	1	
R7516		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7518		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R7519		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R7520,21		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	2	
R7522		ERJ6GMYG680	M.RESISTOR CH 1/10W 68	1	
R7525		ERJ6GMYG241	M.RESISTOR CH 1/10W 240	1	
R7526		ERJ6GMYJ162	M.RESISTOR CH 1/10W 1.6K	1	
R7527		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R7528		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R7529,30		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	2	
R7531		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R7532		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R7535		ERJ6GMYJ132	M.RESISTOR CH 1/10W 1.3K	1	
R7537		ERJ6GMYJ151	M.RESISTOR CH 1/10W 150	1	
R7538		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R7539		ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R7540		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R7541		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R7542		ERJ6GMYJ224	M.RESISTOR CH 1/10W 220K	1	
R7545		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R7546		ERJ6GMYJ181	M.RESISTOR CH 1/10W 180	1	
R7547		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R7548,49		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R7552		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R7555,56		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R7558		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R7559		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
RX7501,02		EXBF6E104J	RESISTOR-RESISTOR	2	
RX7503		EXBF8E104J	COMBI.R-R 100K	1	
S7501-09		EVQ11409K	SWITCH	9	
S7510		VSQ0822	SWITCH	1	
S7512,13		EVQ11409K	SWITCH	2	
VC7501		ECRHA010A54R	V.CAPACITOR	1	
VR4004		EVNCYAA03B53	V.RESISTOR	1	[SUPPLIED FROM MBV]
VR7501		EVUF3AE20B24	V.RESISTOR 20K	1	
VR7502		EVJ021E2054J	V.RESISTOR	1	
X7501		VSX0608	CRYSTAL OSCILLATOR	1	
X7502		VSX0094	CRYSTAL OSCILLATOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			MISCELLANEOUS		
		VJF1139	FIP HOLDER	1	[SUPPLIED FROM MBV]
		VMD1047	LED HOLDER	2	
		VMD2035	JOG HOLDER	1	
		VMD2247	IR RECEIVER HOLDER	1	
	■	VEP07773B	TIMER C.B.A.		[SUPPLIED FROM MBV]
					(RTL)NV-HD650EC
C7502		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7504		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7505		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7507		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C7508		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7509		ECEA1HKA100	E.CAPACITOR 50V 10U	1	
C7510		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7511		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C7513		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C7514		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C7515		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7516		ECA0JM221	E.CAPACITOR 6.3V 220U	1	
C7517		VCE0073	E.CAPACITOR	1	
C7519,20		ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	2	
C7521		ECUM1H223KBN	C.CAPACITOR CH 50V 0.022U	1	
C7522		ECEA0JKA330	E.CAPACOTOR 6.3V 33U	1	
C7524		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7525		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7526,27		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C7528,29		ECUM1H473ZFN	C.CAPACITOR CH 50V 0.047U	2	
C7531		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7533-35		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C7536		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
D7501-08		1SS254	DIODE	8	
D7509		HLMK-D215	DIODE	1	[SUPPLIED FROM MBV]
D7510,11		1SS254	DIODE	2	
D7516		1SS254	DIODE	1	
D7518-20		1SS254	DIODE	3	
D7526		1SS254	DIODE	1	
D7528,29		1SS254	DIODE	2	
D7531		1SS254	DIODE	1	
D7532		MA4220	DIODE	1	
D7533		MA723VT	DIODE	1	
D7541		HLMK-D315	DIODE	1	
D7542		1SS254	DIODE	1	
D7544		1SS254	DIODE	1	
D7546		1SS254	DIODE	1	
D7555		1SS355	DIODE	1	
DP7501		VSL0336	DISPLAY TUBE	1	[SUPPLIED FROM MBV]
IC7501		M37507V6AD	IC	1	[SUPPLIED FROM MBV]
IC7504		PST7023	IC	1	
IC7505		S80743AL	IC	1	
IC7506		BA6810F	IC	1	
IR7501		RPM675CBRX10	IR RECEIVER UNIT	1	
K7501		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K7503		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
P7501		VJS3537B032G	CONNECTOR (FEMALE) 32P	1	
P7502		VJS3537B012G	CONNECTOR (FEMALE) 12P	1	
P7503		VJS3301	CONNECTOR (FEMALE)	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
PP7501		VJP3405A009W	CONNECTOR (MALE) 9P	1	
QR7501		MUN2112	TRANSISTOR-RESISTOR	1	
QR7503		MUN2211	TRANSISTOR-RESISTOR	1	
QR7504		MUN2111	TRANSISTOR-RESISTOR	1	
QR7505-08		MUN2113	TRANSISTOR-RESISTOR	4	
QR7509-11		MUN2111	TRANSISTOR-RESISTOR	3	
QR7512,13		MUN2112	TRANSISTOR-RESISTOR	2	
R7501-03		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	3	
R7505		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R7506-10		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	5	
R7512		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R7513		ERJ6GMYJ132	M.RESISTOR CH 1/10W 1.3K	1	
R7514		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R7515		ERDSZTJ470	C.RESISTOR 1/4W 47	1	
R7516		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7518		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R7519		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R7520,21		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	2	
R7522		ERJ6GMYG680	M.RESISTOR CH 1/10W 68	1	
R7525		ERJ6GMYG241	M.RESISTOR CH 1/10W 240	1	
R7526		ERJ6GMYJ162	M.RESISTOR CH 1/10W 1.6K	1	
R7527		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R7528		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R7529,30		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	2	
R7531		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R7532		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R7535		ERJ6GMYJ132	M.RESISTOR CH 1/10W 1.3K	1	
R7537		ERJ6GMYJ151	M.RESISTOR CH 1/10W 150	1	
R7538		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R7539		ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R7540		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R7541		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R7542		ERJ6GMYJ224	M.RESISTOR CH 1/10W 220K	1	
R7545		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R7546		ERJ6GMYJ181	M.RESISTOR CH 1/10W 180	1	
R7547		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R7548,49		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R7552		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R7555,56		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R7558		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R7559		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
RX7501,02		EXBF6E104J	RESISTOR-RESISTOR	2	
RX7503		EXBF8E104J	COMBI.R-R 100K	1	
S7501-09		EVQ11409K	SWITCH	9	
S7510		VSQ0822	SWITCH	1	
S7512,13		EVQ11409K	SWITCH	2	
VC7501		ECRHA010A54R	V.CAPACITOR	1	
VR4004		EVNCYAA03B53	V.RESISTOR	1	[SUPPLIED FROM MBV]
VR7501		EVUF3AE20B24	V.RESISTOR 20K	1	
VR7502		EVJ021E2054J	V.RESISTOR	1	
X7501		VSX0608	CRYSTAL OSCILLATOR	1	
X7502		VSX0094	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VJF1139	FIP HOLDER	1	[SUPPLIED FROM MBV]
		VMD1047	LED HOLDER	2	
		VMD2035	JOG HOLDER	1	
		VMD2247	IR RECEIVER HOLDER	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
	■	VEP06995A	OPERATION C.B.A.		[SUPPLIED FROM MBV]
					(RTL)
C6501,02		ECUM1H821JCN	C.CAPACITOR CH 50V 820P	2	
C6503		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6504		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C6505		ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C6506		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C6507		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C6508		ECEA1CKA220	E.CAPACITOR 16V 22U	1	
C6509		ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C6510		ECEA1CKA470	E.CAPACITOR 16V 47U	1	
D6501		1SS254	DIODE	1	
D6502		MA4051-L	DIODE	1	
D6503-07		1SS254	DIODE	5	
IC6501		M5220FP	IC	1	
JK6501		VJJ0169	JACK	1	
JK6502		VJJ0416	JACK	1	[SUPPLIED FROM MBV]
JK6505		VJJ0263	JACK	1	[SUPPLIED FROM MBV]
L6501,02		ELESE102KA	COIL 1000UH	2	
P6501		VJS3537B008G	CONNECTOR (FEMALE) 8P	1	
PS6501		VJS3405A009A	CONNECTOR (FEMALE) 9P	1	
Q6501		2SD1328	TRANSISTOR	1	
R6501		ERJ6GMYJ750	M.RESISTOR CH 1/10W 75	1	
R6502,03		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R6504		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R6505		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R6506		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R6507		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R6508		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6509,10		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R6511		ERJ6GMYJ151	M.RESISTOR CH 1/10W 150	1	
R6512		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R6513,14		ERDS2TJ102	C.RESISTOR 1/4W 1K	2	
R6515,16		ERJ6GMYJ104	M.RESISTOR CH 1/10W 1M	2	
S6501,02		EVQ11409K	SWITCH	2	
	■	VEP00V29A	MAIN INTERFACE C.B.A.		[SUPPLIED FROM MBV]
					(RTL)
PS1501		VJS3043B003W	CONNECTOR (FEMALE) 3P	1	
PS6005		VJS3043B003W	CONNECTOR (FEMALE) 3P	1	
	■	VEP00V88A	S-TAB C.B.A.		[SUPPLIED FROM MBV]
					(RTL)
PP1501		VJP3043A003W	CONNECTOR (MALE) 3P	1	
Q1501		PN205L-NC.VT	PHOTO TRANSISTOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
S1501		VES0695	S-TAB SW	1	
			MISCELLANEOUS		
		VMD1927	PHOTO TR. HOLDER	1	
	■	VEX0231	CYLINDER DRIVE C.B.A.		[SUPPLIED FROM MBV]
					(RTL)
C2901-03		ECEA1VSN2R2	E.CAPACITOR 35V 2.2U	3	
C2904-06		ECUM1E104KBM	C.CAPACITOR CH 25V 0.1U	3	
C2907		ECUM1E683KBM	C.CAPACITOR CH 25V 0.068U	1	
C2908		ECUM1E473KBM	C.CAPACITOR CH 25V 0.047U	1	
C2910		ECEA1CKS100	E.CAPACITOR 16V 10U	1	
IC2901		AN3814K	IC	1	
P2901		VJP2603W	CONNECTOR (MALE)	1	
P2902		VJP1232T	CONNECTOR (MALE) 5P	1	
R2901		ERX12SJR68	M.RESISTOR CH 1/2W 0.68	1	
TH2901		VRH0017-1A	THERMISTOR	1	
			MISCELLANEOUS		
		VMA9138	MAIN HOLDER	1	
	■	----------	MOTOR C.B.A.		
			MISCELLANEOUS		
		VJP3316B002	CONNECTOR (FEMALE) 2P	1	

INTERNAL REFERENCE CODES

NOTE: This chart is only for internal reference.
Do not order any parts according to these codes.

P. C. B.	FILM CODE
MAIN SYUGO	H0A001-0317A
LUMINANNCE & CHROMINANCE	H0A000-03D27
SQ PB	H0A000-03A03
CNR	H0A000-08171
OSD	H0A002-06993
HIFI AUDIO	H0A000-04447
INPUT/OUTPUT	H0A000-03B93
TIMER SYUGO	H0A000-0318A
TV DEMODULATOR	H0A000-07801
NICAM DECODER	H0A000-07787
MOTOR DRIVE	H0A001-04469
HEAD AMP	H0A000-05227
CYLINDER DRIVE	H0A000-00X69
LOADING MOTOR	H0A000-00S75

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