

JVC

SERVICE MANUAL

COLOUR TELEVISION

BASIC CHASSIS

CG-F

AV-21P4(BK)

This service manual mainly consists of the following items:

- The items which differ from those for the AV-21PM service manual.
- The initial value for each setting item.

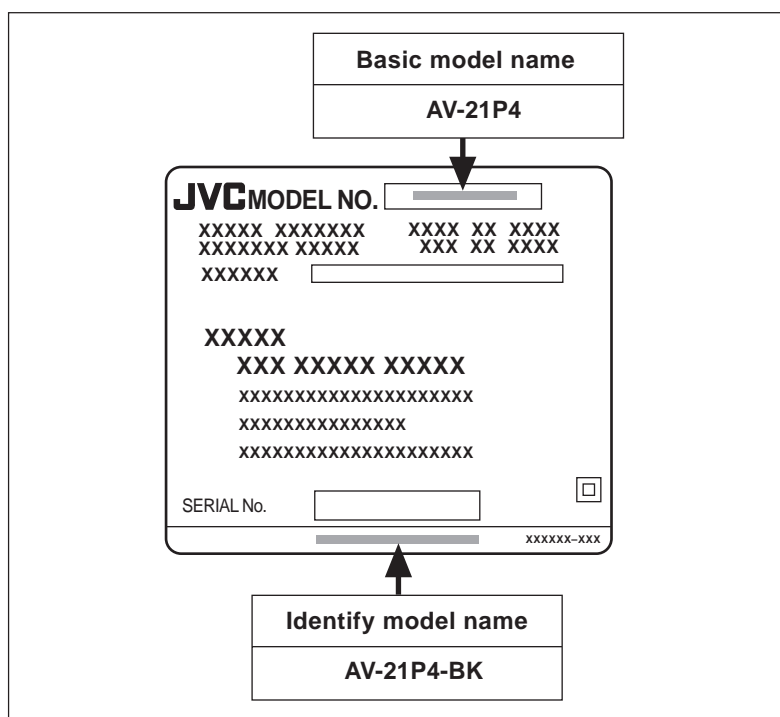
For details other than those described in this manual, please refer to the following service manual.

Reference Service Manual: AV-21PM Service Manual (No. 56055, Aug. 2000)

Note: The page in parentheses shows the one for the AV-21PM service manual (No. 56055, Aug. 2000).


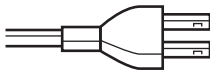
HOW TO IDENTIFY MODEL

While referring to the illustration given below, identify model name on the rating label affixed to the rear cover.



PARTS DIFFERENCE TABLE

The different parts between AV-21PM and AV-21P4(BK) are described below:

▲	REF. NO.	AV-21PM	AV-21P4(BK)	PART NAME	DESCRIPTION
		PART No.	PART No.		
■ EXPLODED VIEW PARTS LIST (Page 30)					
	1	LC10549-015A-H	LC10549-010A-H	FRONT CABI ASSY	
▲	14	QMP40D0-200J5 or QMP40D0-200J3 	QMPR010-200-E2 or QMPR010-200-K2 	POWER CORD	
▲	17	LC20377-010B-H	CM22960-078-H	RATING LABEL	
■ PRINTED WIRING BOARD PARTS LIST [MAIN PWB ASSY] (Page 32-)					
	—	SCG-1232A-H2	SCG-1265A-BK	MAIN PWB ASSY	
	IC1701	MN1873287JB1	MN1873287JC1	IC (MICROCOMPUTER)	
	IC1702	AT24C08-21PM	AT24C08-21P4BK	IC (MEMORY)	(Service)
	—	SCG-3001A-H2	SCG-3001A-BK	CRT SOCKET PWB ASSY	
	—	SCG-8001A-H2	SCG-8002A-BK	FRONT CONTROL PWB ASSY	
■ PACKING PARTS LIST (Page 38)					
	1	GG10044-008A-H	GG10045-006A-H	PACKING CASE	
	4	RM-C364-1H	RM-C365-1H	REMOCON UNIT	
	5	CP30966-001-H	QPA02503505	POLY BAG	
▲	6	LCT0795-001A-H	LCT0799-001A-H	INST BOOK	
▲	8	LCT0796-001A-H	—————	DIGEST MANUAL	
	—	—————	ATEAB001-00A	MATCHING BOX	

SPECIFICATIONS (Page 2)

Item		Content
Dimensions (W × H × D)		596mm × 468.5mm × 481.5mm
Mass		25kg
TV RF System		B / G, I, D / K, K1
Colour System	TV Mode	PAL / SECAM
	VIDEO Mode	PAL / SECAM / NTSC3.58 / NTSC4.43
Stereo System		Bilingual in A2 (Monaural)
Receiving Frequency	VHF (VL)	46.25MHz ~ 168.25MHz
	VHF (VH)	175.25MHz ~ 463.25MHz
	UHF	471.25MHz ~ 863.25MHz
	CATV	● Cable TVs of Mid (X-Z, S1-S10) Super (S11-S20) & Hyper (S21-S41) bands receivable
Intermediate Frequency	VIF Carrier	38.0MHz
	SIF Carrier	31.5MHz (6.5MHz)
		32.0MHz (6.0MHz)
		32.5MHz (5.5MHz)
33.5MHz (4.5MHz)		
Colour Sub Carrier Frequency		PAL (4.43MHz) SECAM (4.40625MHz / 4.25MHz) NTSC (3.58MHz / 4.43MHz)
Aerial Input Terminal		75Ω Unbalanced
Power Input		Rating: AC110 ~ 240V, 50/60Hz Operating: AC90 ~ 260V, 50/60Hz
Power Consumption		116W (Max.) / 74W (Avg.)
Picture Tube		Visible size : 51cm measured diagonally
High Voltage		28.0kV ± 1.5kV (at zero beam current)
Speaker		5cm × 12cm Oval type × 2
Audio Output		5W (Monaural)
Input	Video	1Vp-p, 75Ω
	Audio	500mVrms (-4dBs), High impedance
Output	Video	1Vp-p, 75Ω
	Audio	500mVrms (-4dBs), Low impedance
Headphone Jack		Stereo mini jack (3.5ø)
Remote Control Unit		RM-C365-1H (Battery size : AA/R06/UM-3 × 2)

Design & specifications are subject to change without notice.

SPECIFIC SERVICE INSTRUCTIONS

SETTING OF SYSTEM CONSTANT SET (Page 7)

Table 1

Setting item	Setting contents	Setting value
COLOUR	<input type="checkbox"/> MULTI. <input checked="" type="checkbox"/> TRIPLE <input type="checkbox"/> PAL <input type="checkbox"/>	TRIPLE
BILINGUAL	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/>	YES
TUNER	<input checked="" type="checkbox"/> MU <input type="checkbox"/> MA <input type="checkbox"/>	MU
ECO SENSOR	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/>	YES
LANGUAGE	<input checked="" type="checkbox"/> E/T <input type="checkbox"/> E <input type="checkbox"/>	E/T
B/B SOUND	<input checked="" type="checkbox"/> ON <input type="checkbox"/> OFF <input type="checkbox"/>	OFF
LOCK	YES ↔ 10 ↔ 20 ↔ ... ↔ 230 250 ↔ 240 ←	180
COLOUR AUTO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	NO
QSS	<input type="checkbox"/> MINT <input checked="" type="checkbox"/> MQSS <input type="checkbox"/>	MINT
ALC	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	NO
TEXT RATE	10 ↔ 20 ↔ 40 ↔ 80	20
AMP TUNER	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	NO
VNR	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	YES
EW-PIN IC	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	YES

USER SETTING VALUES (Page 7)

Table 2

Setting item	Setting value	Setting item	Setting value
SUB POWER	ON	PICTURE MODE (VSM)	BRIGHT
CHANNEL POSITION	1 POSITION	VNR	OFF
CHANNEL PRESET	Refer to OPERATING INSTRUCTION	OFF TIMER	OFF
VOLUME	Appropriate sound volume	LANGUAGE	THAI
TV/VIDEO	TV	AUTO SHUTOFF	OFF
ON SCREEN DISPLAY	POSITION NUMBER DISPLAY	ECO SENSOR	OFF
COLOUR SYSTEM	AUTO PAL	BLUE BACK	OFF
SOUND SYSTEM	B / G	ON TIMER	PR1 0:00
BILINGUAL MODE	I	CHILD LOCK	OFF

SERVICE ADJUSTMENTS

■ Initial Setting Value

■ IF CIRCUIT ADJUSTMENT -- Adjustment of DELAY POINT (Page 15)

Setting (Adjustment) Item		Variable range	Initial setting value
DELAY POINT (AGC TAKE-OVER)	NTSC3.58	0 ~ 127	48
	Others		43

■ V/C (VIDEO/CHROMA) CIRCUIT ADJUSTMENT (Page 15)

[SUB MENU 2. V/C]

Setting item	Colour system	Variable range	Initial setting value			
			PAL	SECAM	NTSC 3.58	NTSC 4.43
1. CUT OFF (R / G / B)		-128 ~ +127	-50	←	←	←
2. DRIVE (R / B)		-64 ~ +63	0	←	←	←
3. BRIGHT		-128 ~ +127	0	←	←	←
4. CONT.		-64 ~ +63	0	←	←	←
5. COLOUR (P / S / N3 / N4)		-64 ~ +63	0	←	←	←
6. TINT (N3 / N4)	TV / VIDEO	-64 ~ +63	—	—	0 / 0	0 / 0
7. SECAM BL ADJUST		-32 ~ +31	0	←	←	←
8. SHARP	TV / VIDEO	-32 ~ +31	-14 / +8	←	←	←

: Do not adjust.

Adjustment of SUB COLOUR-II (Page 18)

Adjustment part	Description
5. COLOUR	
PAL COLOUR	Value (A) in the figure: Set to +12V (W & G) .
SECAM COLOUR	Value (A) in the figure: Set to +13V (W & G) .
NTSC 3.58 COLOUR	Value (A) in the figure: Set to +8V (W & G) .

Adjustment of SUB TINT-II (Page 19)

Adjustment part	Description
6. TINT	
NTSC 3.58 TINT	Value (B) in the figure: Set to +5V (W & Cy) .

■ DEFLECTION CIRCUIT ADJUSTMENT (Page 20)

[SUB MENU 3. DEF]

Setting item	Adjustment name	Variable range	Initial setting value	
			50Hz	60Hz
1. VER. POSITION	Vertical center	-4 ~ +3	-2	-2
2. HOR. POSITION	Horizontal center	-16 ~ +15	-1	+1
3. VER. HEIGHT	Vertical height	-64 ~ +63	+13	-2
4. VER. LINEARITY	Vertical linearity	-16 ~ +15	+7	0
5. VER. SCURVE	Vertical scurve	-16 ~ +15	-5	0
6. HOR. VCO ADJUST	Horizontal VCO	-64 ~ +63	0	0
7. HOR. WIDTH	Horizontal width	-32 ~ +31	-1	-5
8. EW-PIN	Side pin correction	-32 ~ +31	-5	0
9. EW-CORNER	Side pin fore correction	-8 ~ +7	-3	+2
10. TRAPEZ	Trapezoidal distortion correction	-32 ~ +31	-13	-5
11. VER. EDGE	Vertical edge correction	-8 ~ +7	0	0
12. HOR. COMP	Horizontal compensation	-8 ~ +7	-2	-2
13. VER. POS2	Vertical center 2	-4 ~ +3	0	0

: Do not adjust.

■ VSM PRESET ADJUSTMENT (Page 23)

[Setting Values for SUB MENU 4. VSM PRESET]

VSM preset mode VSM Setting item	BRIGHT	STANDARD	SOFT
TINT SETTING VALUE	+15	←	←
COLOUR SETTING VALUE	+15	←	←
BRIGHT SETTING VALUE	+15	←	←
CONT. SETTING VALUE	+30	+19	+14
SHARP SETTING VALUE	+20	←	+15

: Do not adjust.

PRESET ADJUSTMENT (Page 24)

[SUB MENU 5. PRESET]

Colour system		Initial setting value			
		PAL	SECAM	NTSC 3.58	NTSC 4.43
1. C-TRAP FIX		1	←	←	←
2. SHARP PEAK		0	←	←	←
3. ABL		1	←	←	←
4. GAMMA		0	←	←	←
5. Y.DELAY TIME	TV	0	2	2	3
	VIDEO	0	2	0	2
6. BLACK EXP START		3	←	←	←
7. C-BPF	TV	1	←	0	←
	VIDEO	1	←	←	←
8. CW/SCP		0	←	←	←
9. V.IF DET. LEVEL		0	←	←	←
11. IF AGC MIN.		0	←	←	←
12. V.IF AGC		0	←	←	←
13. V.IF PMOD		0	←	←	←
19. VNR		15	←	←	←
20. RGB LIM.		1	←	←	←
21. RGB LIMIT LEVEL		2	←	←	←
23. TEXT H. POSITION		5	←	←	←
24. READ DATA		—	—	—	—

: Do not adjust.

TV RF system		Initial setting value			
		B/G	I	D/K	M
10. S.IF DET. LEVEL		0	←	←	←
14. S.IF BPF BW ADJUST		0	←	←	←
15. S.IF TRAP FO ADJUST		0	←	←	←
16. S.IF TRAP FO ADJUST 2		0	←	←	←
17. S.IF-TRAP		0	←	←	←
18. S.IF-BPF		0	←	←	1
22. S.IF SW		1	←	←	0

: Do not adjust.



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