

SANYO

SERVICE MANUAL

COLOUR CCD Camera

SPECIFICATIONS

Camera

Scanning system : PAL standard (625 TV lines, 25 frames/sec.)

Interface : PLL 2:1 Interlace

Image device : 1/3 inch solid state image device CCD

Picture elements : 537 (Horizontal) x 597 (Vertical)

Effective picture elements : 500 (Horizontal) x 582 (Vertical)

Synchronizing system : Internal sync, External sync (automatic switching)

Resolution : 330 TV lines horizontally, 400 TV lines vertically

Video output level : 1.0 Vp-p/75 Ω , composite

Video S/N ratio : More than 48 dB

Minimum required illumination : Approx. 0.05 lux with a F 1.2 lens (B/W mode),

(incandescent lighting) Approx. 1.0 lux with a F 1.2 lens (color mode)

Backlight compensation : Manual ON/OFF switching, Multi-zone light measuring system
(Active when using an auto-iris lens)

Iris function : Manual ON/OFF switching

Electronic iris range : 1 lux to 50,000 lux (F1.2, lens: color mode)

1.4 lux to 70,000 lux (F1.4, lens: color mode)

Flange-back : 12.5 mm \pm 0.5 mm

White balance : ATW/Manual switching

Lens mount : CS mount (or C mount with the supplied adaptor)

Environmental conditions : Temperature: -10 $^{\circ}$ C ~ + 50 $^{\circ}$ C

Humidity: less than 90 % (no condensation)

Power supply : 12 V DC (Supplied from AC adaptor)

Power requirement : 12-15 V DC/ 210-170 mA (without auto iris lens)

Weight : Approx. 450 g (without auto iris lens)

Dimensions : 67 (W) mm x 54 (H) mm x 128 (D) mm

AC Adaptor

Environmental conditions : Temperature: -10 $^{\circ}$ C ~ + 50 $^{\circ}$ C

Humidity: less than 90 %

Power requirement : 220-230 V AC 50 Hz

Power consumption : Approx. 5.3 W

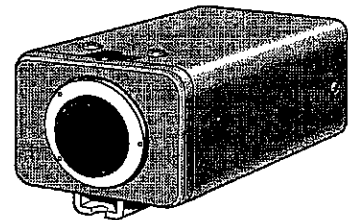
Weight : Approx. 450 g

VCC-4312P

(Product Code : 117 102 14)

(South East Asia)

(Europe)



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PRODUCT SAFETY NOTICE

The components designated by a symbol (Δ) in this schematic diagram designates components whose value are of special significance to product safety. Should any component designated by a symbol need to be replaced, use only the part designated in the Parts List. Do not deviate from the resistance, wattage, and voltage ratings shown.

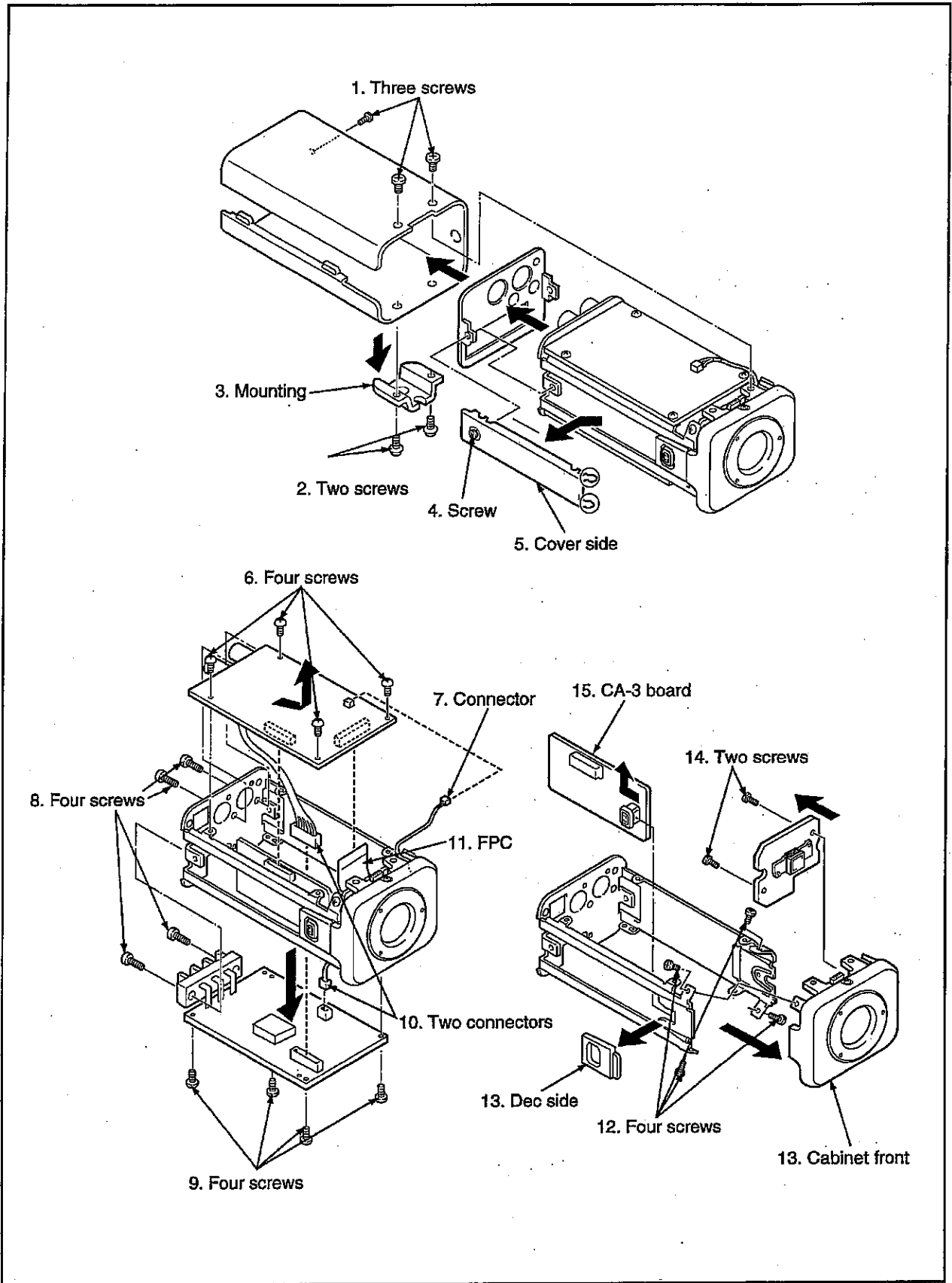
NOTE : 1. Parts order must contain model number, part number, and description.

2. Substitute parts may be supplied as the service parts.

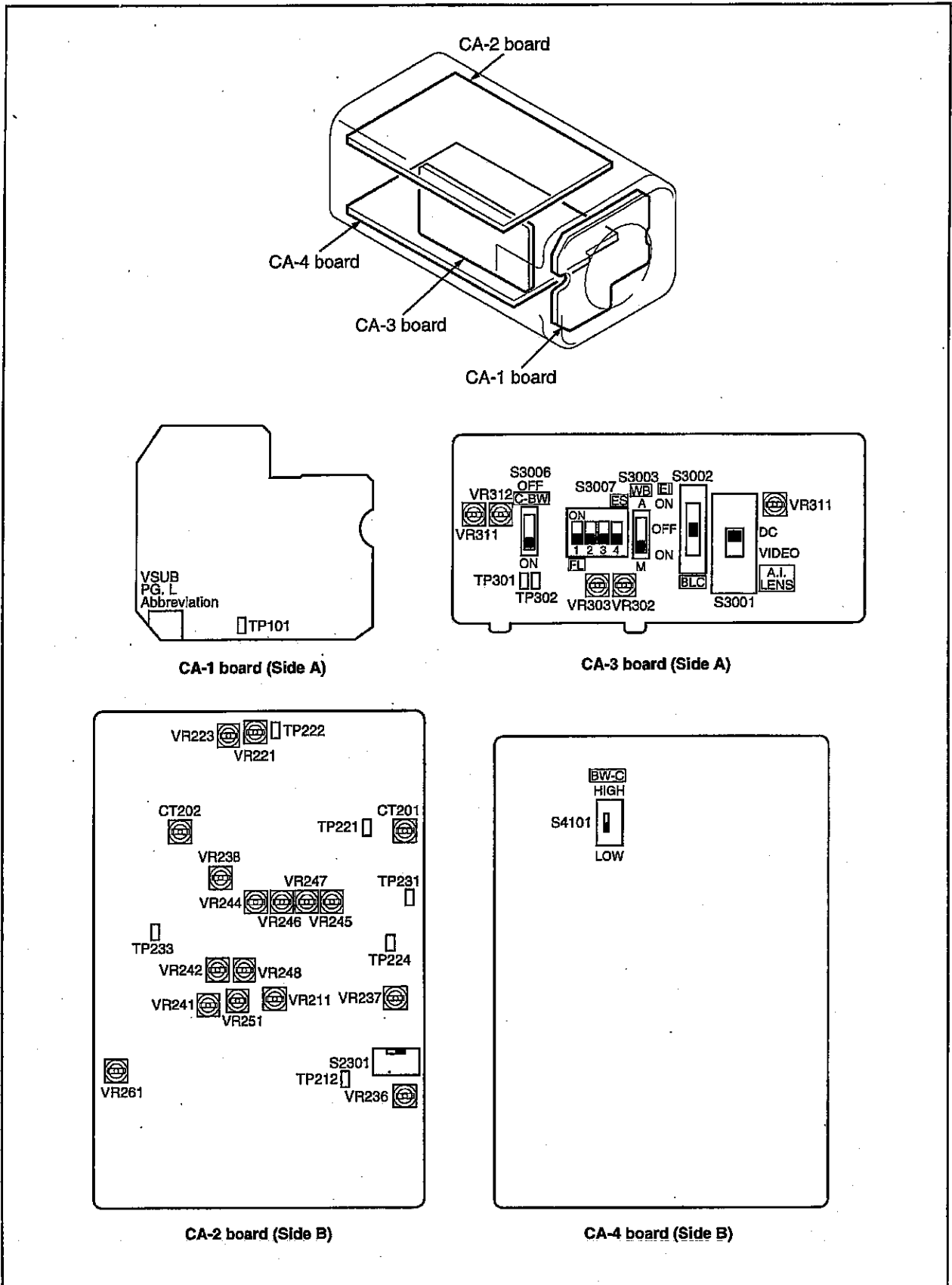
3. N. S. P. : Not available as service parts.

Design and specification are subject to change without notice.

1. DISASSEMBLY



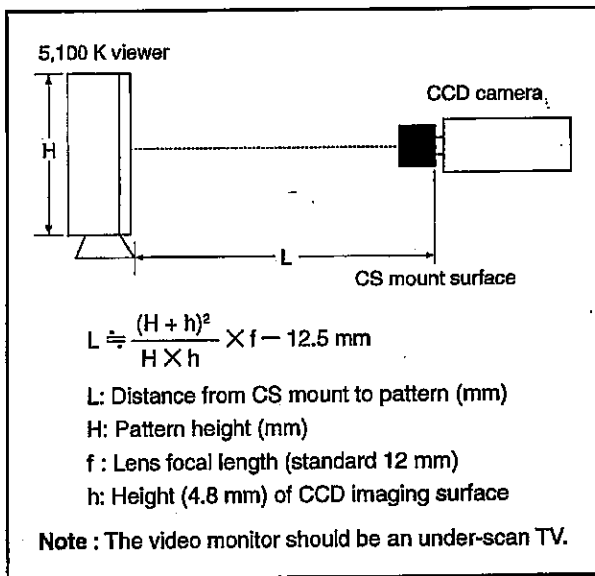
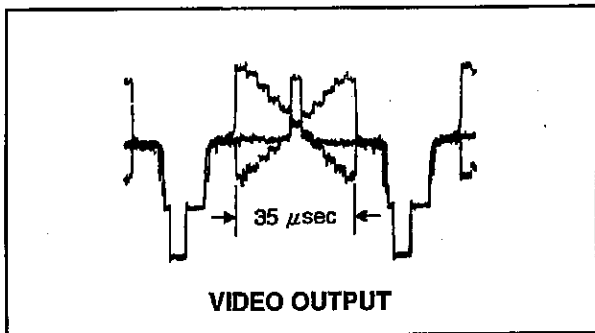
2. BOARD LOCATION



3. ADJUSTMENT

3-1. ADJUSTMENT PREPARATION

1. Use the 5,100K viewer for the subject.
2. Set the distance from the subject to about 60 cm and adjust the camera position so that the picture frame size becomes as shown below when performing the adjustment with the gray scale chart (ITE gray scale chart/ $\gamma = 0.45$).
3. Set each of the switches inside the side panel to the following positions.
 Adjustment switch (S2301): "Outside" position
 A. I. switch (S3001): "DC" position
 EI/BLC switch (S3002): "OFF" position
 WB switch (S3003): "A" position
 ES switch (S3004): all "OFF" position
 C-BW switch (S3006): "L" position
 BW-C switch (S4101): "L" position
4. Connect the trigger signal of the oscilloscope to the video output and synchronize the signal horizontally.
5. Connect the video output to a video monitor with an input impedance of 75 Ω .
6. In adjustments without direction to display charts, shield light with a lens cap to provide dark condition.
7. Ground test point are TP103 (CA-1) and TP200 (CA-2).
8. Apply 12 VDC to the 12 VDC terminal on the camera.



3-2. M-clock Oscillation Frequency Adjustment

- Adjustment location:** CT202 (CA-2)
Measuring location: TP224 (CA-2)
Measuring equipment: Frequency counter
Subject: No designation
Adjusting method:
 1. Adjust with CT202 to 14187500 Hz \pm 50 Hz.

3-3. 4Fsc Oscillation Frequency Adjustment

- Adjustment location:** CT201 (CA-2)
Measuring location: TP221 (CA-2)
Measuring equipment: Frequency counter
Subject: No designation
Preparation:
 1. Input a monochrome video signal with no burst and chroma signals to the VBS IN terminal.
Adjusting method:
 1. Adjust with CT201 to 17734475 Hz \pm 50 Hz.

3-4. CCD Driving Voltage Adjustment

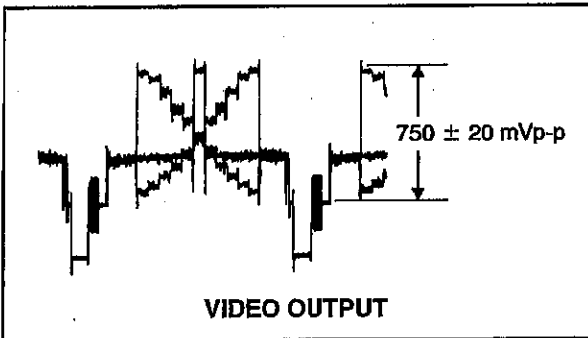
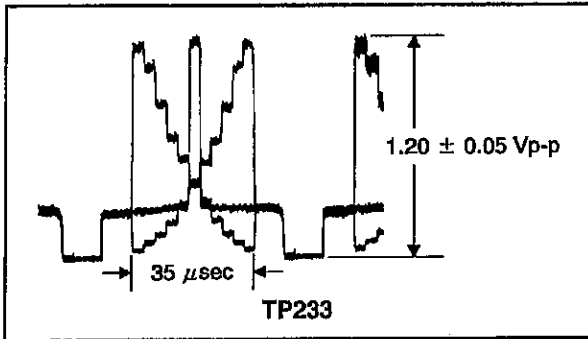
- Adjustment location:** VR221 (CA-2), VR223 (CA-2)
Measuring location: TP101 (CA-1), TP222 (CA-2)
Measuring equipment: Digital voltmeter
Subject: No designation
Adjusting method:
 1. Read the two-digit abbreviation display on the rear side of CCD (CA-1 board side A). Convert these to voltages using the table below.
 For example, [4L] means PGL = 3.0 V, VSUB = 12.0 V
 2. Adjust with VR221 so that the voltage at VSUB becomes the displayed voltage value \pm 0.2 V.
 3. Adjust with VR223 so that the voltage at PGL becomes the displayed voltage value \pm 0.1 V.

Vsub abbreviation	E	f	G	h	J	K	L	m
Vsub voltage (V)	9.0	9.5	10.0	10.5	11.0	11.5	12.0	12.5
N	P	Q	R	S	T	U	V	W
13.0	13.5	14.0	14.5	15.0	15.5	16.0	16.5	17.0
X	Y	Z						
17.5	18.0	18.5						

PGL abbreviation	1	2	3	4	5	6	7
Voltage (V)	1.5	2.0	2.5	3.0	3.5	4.0	4.5

3-5. AGC LEVEL ADJUSTMENT

- Adjustment location:** VR238 (CA-2)
Measuring location: TP233 (CA-2), VIDEO OUT
Measuring equipment: Oscilloscope
Subject: Gray scale chart
Preparation:
 1. Adjust the distance between the camera and the subject so that the gray scale waveform width is 35 μ sec. (Refer to the figure page 5.)
Adjusting method:
 1. Adjust the lens aperture so that the waveform level of TP233 is 1.20 \pm 0.05 Vp-p.
 2. Adjust with VR238 so that the waveform level is 750 \pm 20 mVp-p during video output.



3-6. Y1 Level Adjustment

Adjustment location: VR248 (CA-2)

Measuring location: TP231 (CA-2), TP233 (CA-2)

Measuring equipment: Oscilloscope

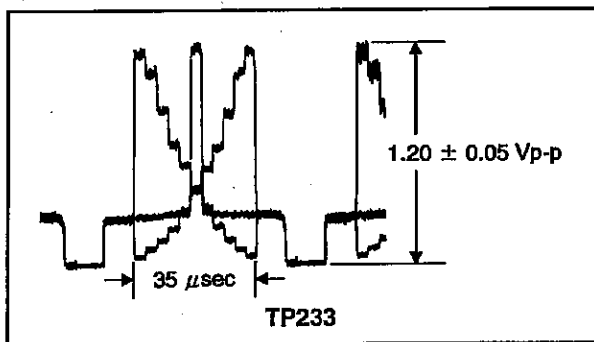
Subject: Gray scale chart

Preparation:

1. Adjust the distance between the camera and the subject so that the gray scale waveform width is $35 \mu\text{sec}$. (Refer to the figure below.)

Adjusting method:

1. Adjust the lens aperture so that the waveform level of TP233 is $1.20 \pm 0.05 \text{ Vp-p}$.
2. Adjust with VR248 so that the amplitude (gray scale waveform) of TP231 becomes a minimum.



3-7. Switching Color/ B/W Level Adjustment

Adjustment location: VR211 (CA-2)

Measuring location: TP212 (CA-2)

Measuring equipment: Oscilloscope

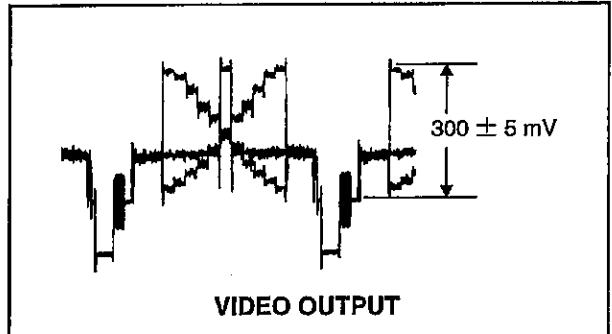
Subject: Gray scale chart

Preparation:

1. Adjust the distance between the camera and the subject so that the gray scale waveform width is $35 \mu\text{sec}$. (Refer to the figure right above.)

Adjusting method:

1. Adjust the lens aperture so that the waveform level of VIDEO OUT is $300 \pm 5 \text{ mV}$.
2. Adjust VR211 so that the waveform level of TP212 is $3.05 \pm 0.05 \text{ V}$.



3-8. Chroma Balance Adjustment

Adjustment location: VR251 (CA-2), VR302 (CA-3), VR303 (CA-3)

Measuring location: TP233 (CA-2), VIDEO OUT

Measuring equipment: Oscilloscope, Vectorscope

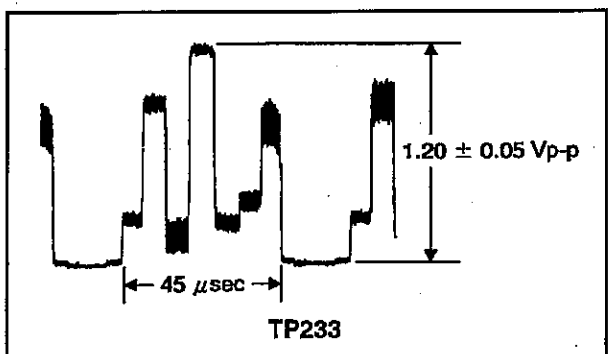
Subject: Color bar chart

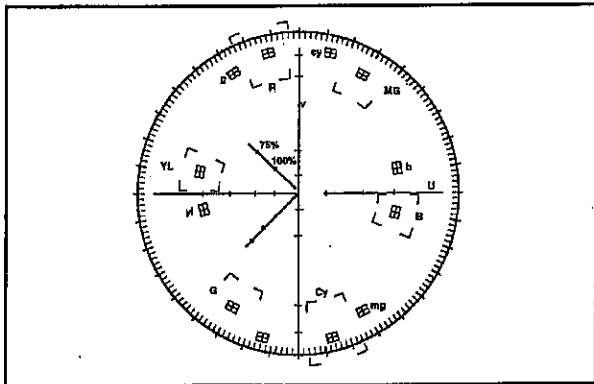
Preparation:

1. Adjust the distance between the camera and the subject so that the color bar waveform width is $45 \mu\text{sec}$. (Refer to the figure below.)

Adjusting method:

1. Adjust the lens aperture so that the waveform level of TP233 is $1.20 \pm 0.05 \text{ Vp-p}$.
2. Set the WB switch (S3003) to the "M" position.
3. Turn VR302 and VR303 to adjust so that the white luminescent spot on the color bar chart is overlapping with the center crosshair mark in the vectorscope.
4. Turn VR251 to adjust so that the luminescent spots representing all of the colors in the vectorscope are overlapping as much as possible.
5. Return the WB switch (S3003) to the "A" position.





3-9. Hue and Chroma Adjustment

Adjustment location: VR244, VR245, VR246, VR247 (CA-2), VR302, VR303 (CA-3)

Measuring location: TP233 (CA-2), VIDEO OUT

Measuring equipment: Oscilloscope, Vectorscope

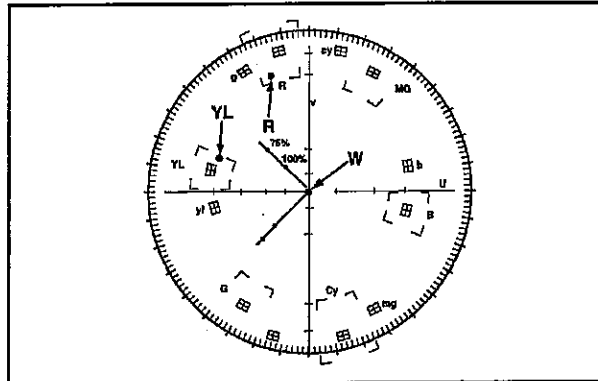
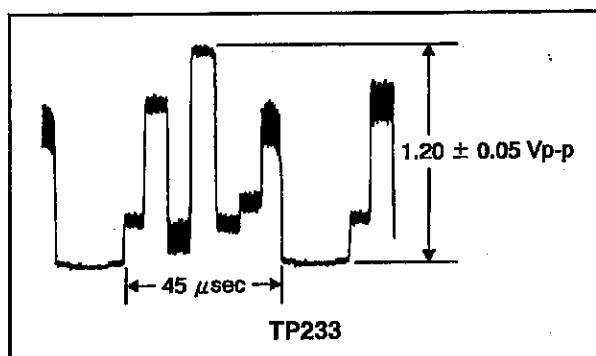
Subject: Color bar chart

Preparation:

1. Adjust the distance between the camera and the subject so that the color bar waveform width $45 \mu\text{sec}$. (Refer to the figure below.)

Adjusting method:

1. Adjust the lens aperture so that the waveform level of TP233 is $1.20 \pm 0.05 \text{ Vp-p}$.
2. Set the WB switch (S3003) to the "M" position.
3. Turn VR302 and VR303 to adjust so that the white luminescent spot on the color bar chart is overlapping with the crosshair mark in the center of the vectorscope.
4. Turn VR244 and VR247 to adjust so that the luminescent spot representing red is aligned with the [R] position in the vectorscope. (Refer to the figure right above.)
5. Turn VR245 and VR246 to adjust so that the luminescent spots representing yellow is aligned with the [YL] position in the vectorscope. (Refer to the figure right above.)
6. Repeat steps 4. and 5. until both adjustments are complete.
7. Return the WB switch (S3003) to the "A" position.



3-10. White Balance Adjustment

Adjustment location: VR236, VR237, VR241, VR242 (CA-2), VR302, VR303 (CA-3)

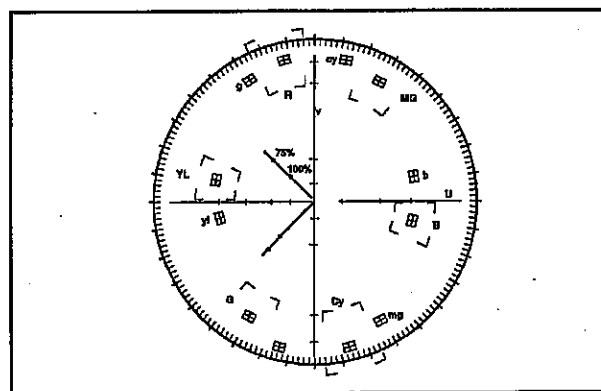
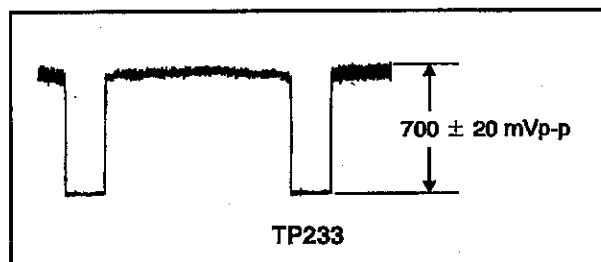
Measuring location: TP233 (CA-2), VIDEO OUT

Measuring equipment: Oscilloscope, Vectorscope

Subject: All white pattern (No chart)

Adjusting method:

1. Adjust the lens aperture so that the waveform level of TP233 is $700 \pm 20 \text{ mVp-p}$.
2. Move the adjustment switch (S2301) to the inside position, and then turn VR241 and VR242 to adjust so that the luminescent spot representing white is overlapping with the crosshair mark in the center of the vectorscope.
3. Move the adjustment switch (S2301) to the outside position, and then turn VR236 and VR237 to adjust so that the luminescent spot representing white is overlapping with the crosshair mark in the center of the vectorscope.
4. Move the WB switch (S3003) to the "M" position, and then turn VR302 and VR303 to adjust so that the luminescent spot representing white is overlapping with the crosshair mark in the center of the vectorscope.
5. Return the WB switch (S3003) to the "A" position.



3-11. Auto Iris Level Adjustment

Adjustment location: VR301 (CA-3), VR261 (CA-2)

Measuring location: TP233 (CA-2)

Measuring equipment: Oscilloscope

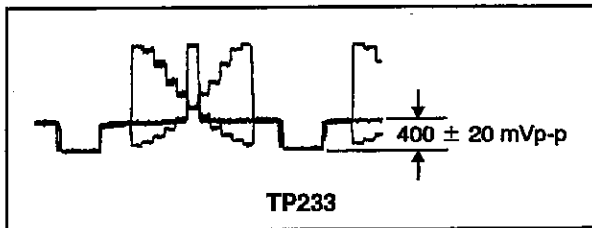
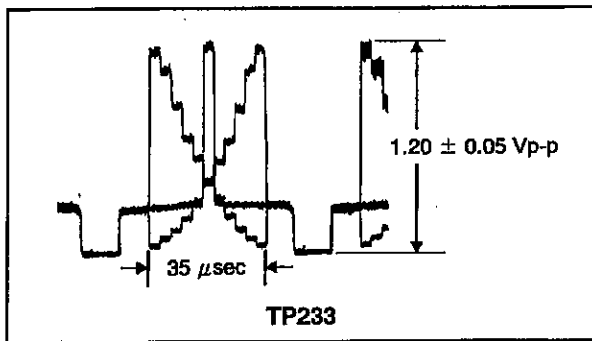
Subject: Gray scale chart

Preparation:

1. Attach the automatic iris lens, and then adjust the distance between the camera and the subject so that the gray scale waveform width is $35 \mu\text{sec}$. (Refer to the figure below.)

Adjusting method:

1. Adjust with VR301 so that the waveform level of TP233 is $1.20 \pm 0.05 \text{ Vp-p}$.
2. Set the BLC switch (S3002) to the "BLC" position.
3. Adjust with VR261 so that the waveform level of TP233 is $400 \pm 20 \text{ mVp-p}$.
4. Return the BLC switch (S3002) to the "OFF" position.



3-12. Horizontal Phase of Ext-sync Adjustment

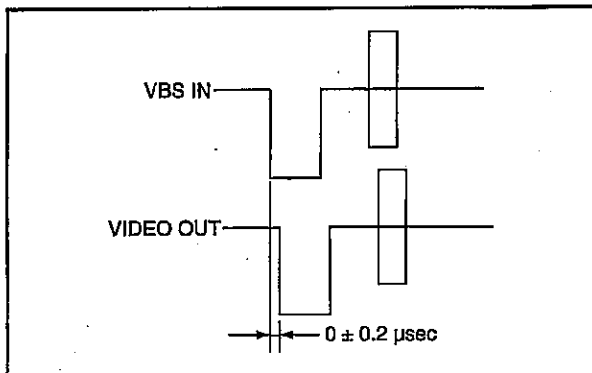
Adjustment location: VR312 (CA-3)

Measuring location: VIDEO OUT, VBS IN

Measuring equipment: Oscilloscope

Adjusting method:

1. Input a video signal to the VBS IN terminal, and then use this signal to trigger an oscilloscope.
2. Turn VR312 to adjust so that the phase difference between the leading edge of the horizontal synchronization signals of the VBS IN and VIDEO OUT waveforms is $0 \pm 0.2 \mu\text{sec}$.



3-13. Flange-back Adjustment

Adjustment location: FLANGE BACK ADJ. lever

Measuring location: Monitor display

Measuring equipment: Video monitor

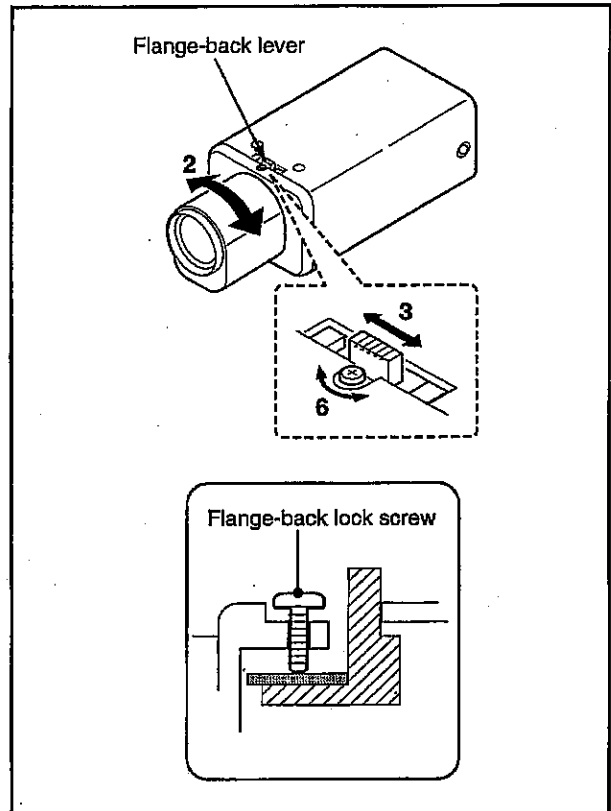
Subject: Siemens star chart

Adjusting method:

1. Attach the zoom lens.
2. Set the zoom lens to the maximum telephoto position, and set the focus using the focus ring on the lens.
3. Set the zoom lens to the maximum wide angle position, and set the focus using the flange-back adjustment lever.
4. Set the zoom lens to the maximum telephoto position, and confirm the image stays in focus. If it doesn't, repeat step 2.
5. Set the zoom lens to the maximum wide angle position, and set focus using focus ring so that the image stays at a distance of more than 10 m. If it doesn't, repeat step 2.
6. Tighten the flange-back lock screw.

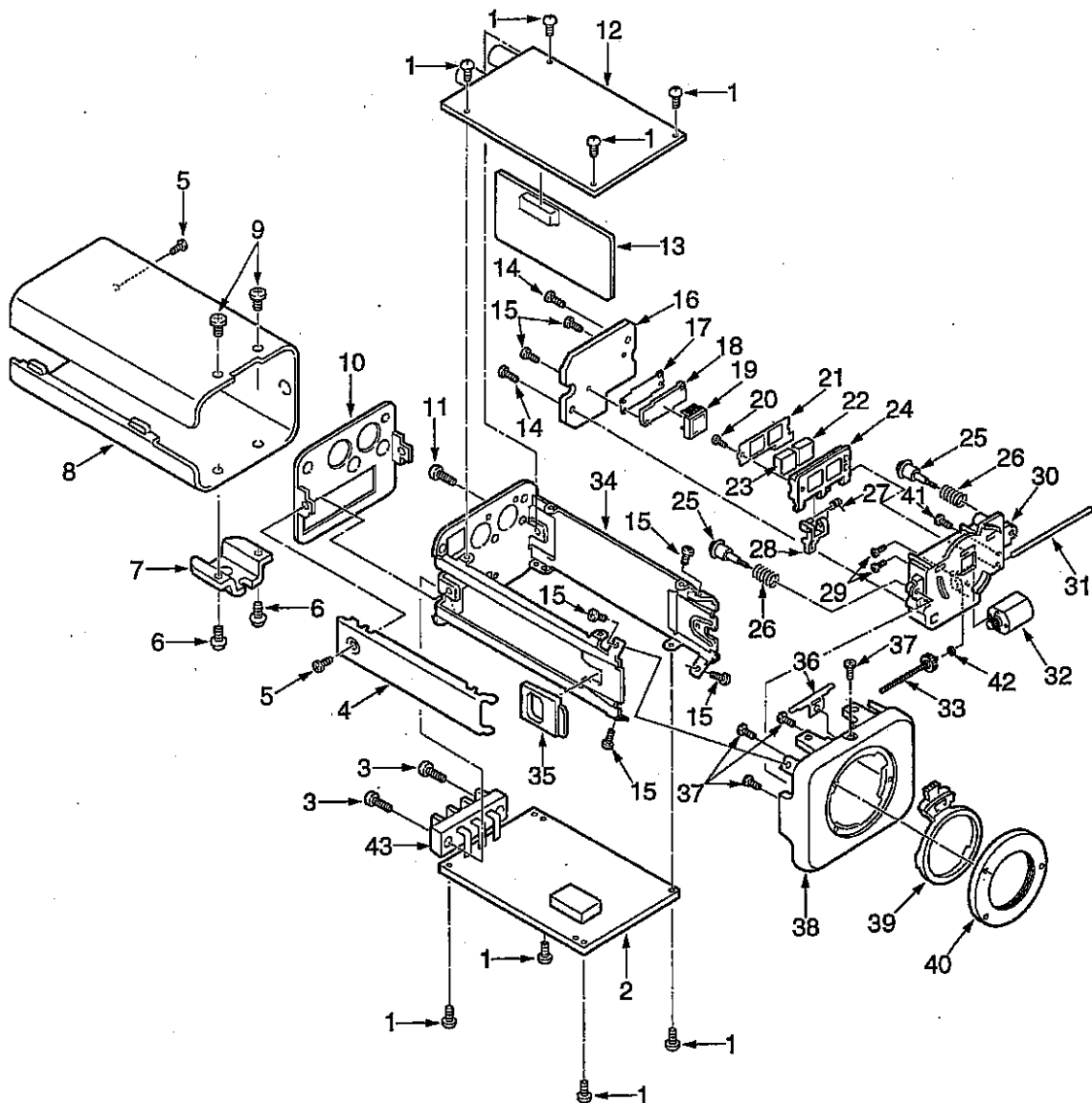
Note:

When flange-back lock screw is completely tighten it will protrude slightly as shown in the figure below. Do not tighten the screw further.



4. PARTS LIST

LOCATION	PARTS NO.	DESCRIPTION	LOCATION	PARTS NO.	DESCRIPTION
CABINET & CHASSIS PARTS					
1	411 164 7703	SCR TRS+IN TW 2X5	22	645 031 7804	OPTICAL FILTER
2	613 185 7254	COMPL PWB,CA-4	23	645 031 7811	OPTICAL,DUMMY GLASS
3	411 045 2407	SCR PAN+SW 3X10	24	613 184 1482	MOUNTING,FILTER
4	613 185 2501	COVER SIDE	25	613 184 1550	STOPPER
5	412 054 3805	SPECIAL SCREW-2.DX4.0	26	613 184 1543	SPRING,HOUSING
6	411 126 4702	SCR PAN+SW+W 3X6	27	613 184 1536	SPRING,SLIDE
7	613 159 2797	MOUNTING	28	613 186 7963	SLIDE,MOUNTING
8	613 184 1376	COVER	29	411 017 7508	SCR PAN PCS 1.4X2
9	412 051 6007	SPECIAL SCREW-3X4	30	613 184 1451	HOUSING,CCD
10	613 185 2518	DEC,INDICATOR	31	613 184 1512	SHAFT
11	411 023 4201	SCR S-TPG PAN 3X10	32	645 031 8351	MOTOR,LOADING DC
12	613 185 7230	COMPL PWB,CA-2	33	613 184 1338	ASSY,GEAR
13	613 185 7247	COMPL PWB,CA-3	34	613 184 1352	CHASSIS
14	411 097 7306	SCR TPG BIN 2X6	35	613 184 1406	DEC,SIDE
15	411 126 1404	SCR S-TPG BIN 2X4	36	613 184 1468	LATCH,CAM
16	613 183 4606	COMPL PWB,CA-1	37	411 170 6509	SCR PAN PCS 2X4
17	613 184 1499	SPACER,INSULATOR	38	613 184 1345	CABINET FRONT
18	613 184 1437	HOLDER,CCD	39	613 184 1369	CAM
19	409 434 6402	IC ICX055BK-A,IC101	40	613 185 6462	MOUNTING,LENS
20	411 170 4604	SCR TPG PAN PCS 1.4X3	41	411 030 7202	SCR BIN 2X6
21	613 184 1444	HOLDER,FILTER	42	412 046 8009	SPECIAL WASHER 1.5X0.2
			43	645 004 9347	TERMINAL,BOARD,CN404



ELECTRICAL PARTS

Note:

1. Materials of Capacitors and Resistors are abbreviated as follows :

Resistors		Capacitors	
MT-FILM	Metallized Film Resistor	MT-POLYEST	Metallized Polyester Capacitor
MT-GLAZE	Metallized Glaze Resistor	MT-COMPO	Metallized Composite Capacitor
OXIDE-MT	Oxide Metallized Film Resistor	TA-SOLID	Tantalum Solid Capacitor
		AL-SOLID	Aluminum Solid Capacitor
		NP-ELECT	Non-Polarized Electrolytic Capacitor
		OS-SOLID	Aluminum Solid Capacitors with Organic Semiconductive Electrolytic Capacitor
		DL-ELECT	Double Layered Electrolytic Capacitor

2. Tolerance of Capacitor (10pF over) and Resistor are noted with follow symboles.

F	.....1%	G	.....2%	J	.....5%	K	.....10%
M	.....20%	N	.....30%	Z	.....+80% ~ -20%		

3. Capacitors

U : μ F P : pF

4. Inductors

UH : μ H MH : mH

5. N.S.P. : Not available as service parts.

LOCATION	PARTS NO.	DESCRIPTION
COMPL PWB,CA-1		
613 183 4606		
(CONNECTORS)		
CN102	645 007 7074	SOCKET,FPC 20P (N.S.P)
(SEMICONDUCTORS)		
Q1101	405 045 8200	TR 2SK443-6-TB
Q1131	405 092 4101	TR 2SC4081-R
(INTEGRATED CIRCUITS)		
IC102	409 366 9700	IC CXD1287AN
(DIODES)		
D1101	407 113 5609	DIODE DSH015
D1102	407 113 5609	DIODE DSH015
D1104	407 108 3801	DIODE DCG010
D1131	407 208 8409	PHOTO COUPLE GP1S93
(INDUCTORS)		
L1101	645 003 9423	INDUCTOR,12U J
(CAPACITORS)		
C1102	403 164 0204	CERAMIC 0.1U Z 25V
C1103	403 164 0204	CERAMIC 0.1U Z 25V
C1104	403 164 0204	CERAMIC 0.1U Z 25V
C1105	403 164 0204	CERAMIC 0.1U Z 25V
C1106	403 207 0307	CERAMIC 1U Z 16V
C1108	403 175 4109	ELECT22U M 16V
C1109	403 175 0705	ELECT33U M 25V
C1111	403 285 6406	TA-SOLID 1U M 35V
C1112	403 164 0204	CERAMIC 0.1U Z 25V
C1113	403 164 0204	CERAMIC 0.1U Z 25V
C1115	403 285 6901	TA-SOLID 22U M 6.3V
C1117	403 155 1807	CERAMIC 0.01U K 25V
C1118	403 285 4808	TA-SOLID 3.3U M 20V
C1131	403 155 1807	CERAMIC 0.01U K 25V
(RESISTORS)		
R1101	401 105 7503	MT-GLAZE 82K JA 1/16W
R1102	401 105 0702	MT-GLAZE 100K JA 1/16W
R1103	401 105 4700	MT-GLAZE 39K JA 1/16W
R1104	401 105 0405	MT-GLAZE 100 JA 1/16W
R1105	401 105 4801	MT-GLAZE 3.9K JA 1/16W
R1106	401 105 8005	MT-GLAZE 1M JA 1/16W
R1107	401 105 0702	MT-GLAZE 100K JA 1/16W
R1108	401 105 7305	MT-GLAZE 820 JA 1/16W
R1111	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1124	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R1131	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R1132	401 105 4106	MT-GALZE 3.3K JA 1/16W
R1133	401 105 2706	MT-GLAZE 220 JA 1/16W
(MISCELLANEOUS)		
	613 184 6975	SPACER,BLIND,D1131

LOCATION	PARTS NO.	DESCRIPTION
COMPL PWB,CA-2		
613 185 7230		
(CONNECTORS)		
CN201	645 007 6503	PLUG,2P (N.S.P)
CN202	645 004 9231	SOCKET,BNC 1P (N.S.P)
CN203	645 019 5983	SOCKET,30P (N.S.P)
CN211	645 007 7074	SOCKET,FPC 20P (N.S.P)
CN212	645 004 9231	SOCKET,BNC 1P (N.S.P)
(SEMICONDUCTORS)		
Q2004	405 047 5900	TR 2SD1622-S
OR	405 047 6006	TR 2SD1622-T
Q2005	405 092 4101	TR 2SC4081-R
Q2102	405 079 6302	TR 2SC4399-5
Q2111	405 092 4101	TR 2SC4081-R
Q2112	405 137 2000	TR 2SA1576A-R
Q2131	405 137 2000	TR 2SA1576A-R
Q2154	405 137 2000	TR 2SA1576A-R
Q2156	405 137 2000	TR 2SA1576A-R
Q2301	405 137 2000	TR 2SA1576A-R
Q2302	405 137 2000	TR 2SA1576A-R
Q2303	405 092 4101	TR 2SC4081-R
Q2304	405 137 2000	TR 2SA1576A-R
Q2305	405 137 2000	TR 2SA1576A-R
Q2312	405 092 4101	TR 2SC4081-R
Q2313	405 092 4101	TR 2SC4081-R
Q2316	405 092 4101	TR 2SC4081-R
Q2317	405 092 4101	TR 2SC4081-R
Q2381	405 092 4101	TR 2SC4081-R
Q2382	405 092 4101	TR 2SC4081-R
Q2715	405 092 4101	TR 2SC4081-R
Q2904	405 137 2000	TR 2SA1576A-R
Q2911	405 137 2000	TR 2SA1576A-R
(INTEGRATED CIRCUITS)		
IC211	409 142 2000	IC LA6358NM
IC220	409 155 8006	IC TC7S04F
IC221	409 155 8105	IC TC7SU04F
IC223	409 183 2007	IC CXD1159Q
IC224	409 250 9809	IC TC4W53F
IC228	409 275 6906	IC CXD1257AR-T6
IC229	409 142 2000	IC LA6358NM
IC231	409 223 9508	IC CXA1392R-T3
IC232	409 281 5306	IC CXA1390AR-T3
IC233	409 223 9409	IC CXA1391R-T3
IC234	409 307 6102	IC CXL1518N
IC235	409 228 9206	IC NJM2100M
IC236	409 228 9206	IC NJM2100M
IC264	409 434 5900	IC MM1226XF
IC274	409 250 9809	IC TC4W53F
IC275	409 167 7103	IC NJM2107F
IC276	409 250 9809	IC TC4W53F
IC277	409 142 2000	IC LA6358NM
IC278	409 281 4408	IC LM1881M

LOCATION	PARTS NO.	DESCRIPTION	LOCATION	PARTS NO.	DESCRIPTION
IC281	409 285 2202	IC LC9105B-705	C2231	403 285 4303	TA-SOLID 1U M 16V
IC282	409 142 2000	IC LA6359NM	C2232	403 164 0204	CERAMIC 0.1U Z 25V
IC283	409 171 2606	IC TC74HC02AF	C2233	403 155 1807	CERAMIC 0.01U K 25V
IC284	409 137 9007	IC TC4S81F	C2235	403 164 0204	CERAMIC 0.1U Z 25V
IC292	409 307 2302	IC TC7W74F	C2237	403 285 3603	TA-SOLID 4.7U M 6.3V
IC294	409 171 2606	IC TC74HC02AF	C2248	403 283 6309	CERAMIC 1U Z 10V
IC297	409 051 2900	IC TC4053BF	C2255	403 175 4505	ELECT47U M 6.3V
IC298	409 039 6302	IC NJM2903M	C2256	403 155 1807	CERAMIC 0.01U K 25V
		(DIODES)	C2257	403 155 1807	CERAMIC 0.01U K 25V
D2101	407 113 5609	DIODE DSH015	C2258	403 113 3805	CERAMIC 1000P K 50V
D2200	407 065 3906	LED SLP-135B-51	C2259	403 113 3805	CERAMIC 1000P K 50V
D2202	407 113 5609	DIODE DSH015	C2269	403 157 3601	CERAMIC 100P J 50V
D2205	407 099 2906	VARACTOR DI 1SV200-11	C2301	403 285 3504	TA-SOLID 3.3U M 6.3V
D2258	407 099 2906	VARACTOR DI 1SV200-11	C2302	403 164 0204	CERAMIC 0.1U Z 25V
D2601	407 187 5802	ZENER DIODE UDZ8.2B	C2303	403 285 3504	TA-SOLID 3.3U M 6.3V
D2602	407 187 5802	ZENER DIODE UDZ8.2B	C2304	403 164 0204	CERAMIC 0.1U Z 25V
D2631	407 187 5802	ZENER DIODE UDZ8.2B	C2306	403 218 7401	NP-ELECT 10U M 16V
D2632	407 187 5802	ZENER DIODE UDZ8.2B	C2307	403 218 7401	NP-ELECT 10U M 16V
D2801	407 113 5609	DIODE DSH015	C2308	403 164 0204	CERAMIC 0.1U Z 25V
D2802	407 113 5609	DIODE DSH015	C2309	403 164 0204	CERAMIC 0.1U Z 25V
D2835	407 113 5609	DIODE DSH015	C2312	403 285 3702	TA-SOLID 6.8U M 6.3V
D2836	407 113 5609	DIODE DSH015	C2313	403 157 2901	CERAMIC 47P J 50V
D2837	407 108 3801	DIODE DCG010	C2314	403 285 3702	TA-SOLID 6.8U M 6.3V
D2901	407 113 5609	DIODE DSH015	C2315	403 155 1807	CERAMIC 0.01U K 25V
		(CRYSTAL DEVICES)	C2316	403 164 0204	CERAMIC 0.1U Z 25V
X2201	636 036 6862	CRYSTAL,17MHZ	C2317	403 164 0204	CERAMIC 0.1U Z 25V
OR	645 017 6050	OSC,CRYSTAL 17.734475MHZ	C2322	403 285 3504	TA-SOLID 3.3U M 6.3V
X2202	645 007 6947	OSC,CRYSTAL 28.375KHZ	C2324	403 164 0204	CERAMIC 0.1U Z 25V
		(VARIABLE RESISTORS)	C2328	403 164 0204	CERAMIC 0.1U Z 25V
VR211	645 003 8655	VR,SEMI,10K N	C2331	403 283 6309	CERAMIC 1U Z 10V
VR221	645 003 6781	VR,SEMI,47K N	C2332	403 283 6309	CERAMIC 1U Z 10V
VR223	645 003 6781	VR,SEMI,47K N	C2333	403 281 5205	CERAMIC 0.22U Z 16V
VR236	645 003 8648	VR,SEMI,1K N	C2334	403 155 1807	CERAMIC 0.01U K 25V
VR237	645 003 8648	VR,SEMI,1K N	C2335	403 285 5003	TA-SOLID 1U M 25V
VR238	645 003 8655	VR,SEMI,10K N	C2336	403 285 5003	TA-SOLID 1U M 25V
VR241	645 003 6750	VR,SEMI,22K N	C2338	403 258 4200	ELECT22U M 6.3V
VR242	645 003 6750	VR,SEMI,22K N	C2341	403 164 0204	CERAMIC 0.1U Z 25V
VR244	645 003 6781	VR,SEMI,47K N	C2342	403 164 0204	CERAMIC 0.1U Z 25V
VR245	645 003 6781	VR,SEMI,47K N	C2343	403 283 6309	CERAMIC 1U Z 10V
VR246	645 003 6781	VR,SEMI,47K N	C2345	403 155 1807	CERAMIC 0.01U K 25V
VR247	645 003 6781	VR,SEMI,47K N	C2346	403 164 0204	CERAMIC 0.1U Z 25V
VR248	645 003 6781	VR,SEMI,47K N	C2347	403 283 6309	CERAMIC 1U Z 10V
VR251	645 003 6750	VR,SEMI,22K N	C2348	403 283 6309	CERAMIC 1U Z 10V
VR261	645 003 6781	VR,SEMI,47K N	C2352	403 164 0204	CERAMIC 0.1U Z 25V
		(TRIMMERS)	C2353	403 155 1807	CERAMIC 0.01U K 25V
CT201	645 005 0411	TRIMMER,30PF	C2354	403 164 0204	CERAMIC 0.1U Z 25V
CT202	645 005 0411	TRIMMER,30PF	C2355	403 175 0606	ELECT100U M 6.3V
		(INDUCTORS)	C2359	403 285 4303	TA-SOLID 1U M 16V
L2301	645 003 9423	INDUCTOR,12U J	C2360	403 164 0204	CERAMIC 0.1U Z 25V
		(TRANSFORMERS)	C2361	403 164 0204	CERAMIC 0.1U Z 25V
T2301	638 031 3187	FILTER 4MHZ	C2362	403 164 0204	CERAMIC 0.1U Z 25V
T2303	645 002 3965	FILTER,LP 4MHZ	C2363	403 164 0204	CERAMIC 0.1U Z 25V
		(CAPACITORS)	C2365	403 164 0204	CERAMIC 0.1U Z 25V
C2009	403 285 6802	TA-SOLID 10U M 6.3V	C2366	403 164 0204	CERAMIC 0.1U Z 25V
C2101	403 157 2901	CERAMIC 47P J 50V	C2367	403 164 0204	CERAMIC 0.1U Z 25V
C2103	403 285 3702	TA-SOLID 6.8U M 6.3V	C2368	403 164 0204	CERAMIC 0.1U Z 25V
C2104	403 155 1807	CERAMIC 0.01U K 25V	C2371	403 164 0204	CERAMIC 0.1U Z 25V
C2105	403 285 6802	TA-SOLID 10U M 6.3V	C2372	403 283 6309	CERAMIC 1U Z 10V
C2108	403 155 1807	CERAMIC 0.01U K 25V	C2373	403 283 6309	CERAMIC 1U Z 10V
C2112	403 285 6901	TA-SOLID 22U M 6.3V	C2374	403 164 0204	CERAMIC 0.1U Z 25V
C2113	403 164 0204	CERAMIC 0.1U Z 25V	C2375	403 283 6309	CERAMIC 1U Z 10V
C2114	403 285 6901	TA-SOLID 22U M 6.3V	C2376	403 283 6309	CERAMIC 1U Z 10V
C2150	403 155 1807	CERAMIC 0.01U K 25V	C2377	403 283 6309	CERAMIC 1U Z 10V
C2202	403 155 1807	CERAMIC 0.01U K 25V	C2378	403 164 0204	CERAMIC 0.1U Z 25V
C2206	403 215 2904	CERAMIC 0.022U K 25V	C2380	403 285 4303	TA-SOLID 1U M 16V
C2207	403 145 9905	CERAMIC 22P J 50V	C2381	403 164 0204	CERAMIC 0.1U Z 25V
C2208	403 113 3805	CERAMIC 1000P K 50V	C2382	403 164 0204	CERAMIC 0.1U Z 25V
C2210	403 153 9102	CERAMIC 5P C 50V	C2384	403 281 5205	CERAMIC 0.22U Z 16V
C2213	403 113 3805	CERAMIC 1000P K 50V	C2385	403 164 0204	CERAMIC 0.1U Z 25V
C2214	403 113 3805	CERAMIC 1000P K 50V	C2386	403 164 0204	CERAMIC 0.1U Z 25V
C2215	403 139 7306	CERAMIC 18P J 50V	C2387	403 164 0204	CERAMIC 0.1U Z 25V
C2217	403 153 9102	CERAMIC 5P C 50V	C2388	403 164 0204	CERAMIC 0.1U Z 25V
C2222	403 164 0204	CERAMIC 0.1U Z 25V	C2391	403 113 3805	CERAMIC 1000P K 50V
C2223	403 285 4303	TA-SOLID 1U M 16V	C2392	403 157 3601	CERAMIC 100P J 50V
C2224	403 155 1807	CERAMIC 0.01U K 25V	C2393	403 164 0204	CERAMIC 0.1U Z 25V
C2229	403 285 5003	TA-SOLID 1U M 25V	C2394	403 155 1807	CERAMIC 0.01U K 25V
C2230	403 164 0204	CERAMIC 0.1U Z 25V	C2395	403 285 4303	TA-SOLID 1U M 16V

LOCATION	PARTS NO.	DESCRIPTION
C2397	403 164 0204	CERAMIC 0.1U Z 25V
C2398	403 164 0204	CERAMIC 0.1U Z 25V
C2601	403 285 4303	TA-SOLID 1U M 16V
C2602	403 164 0204	CERAMIC 0.1U Z 25V
C2604	403 223 9308	ELECT470U M 6.3V
C2621	403 285 4303	TA-SOLID 1U M 16V
C2715	403 164 0204	CERAMIC 0.1U Z 25V
C2716	403 215 1006	CERAMIC 470P J 50V
C2717	403 164 0204	CERAMIC 0.1U Z 25V
C2718	403 258 4200	ELECT22U M 6.3V
C2719	403 164 0204	CERAMIC 0.1U Z 25V
C2742	403 113 3805	CERAMIC 1000P K 50V
C2743	403 315 5706	CERAMIC 0.47U Z 10V
C2744	403 164 0204	CERAMIC 0.1U Z 25V
C2783	403 256 0600	ELECT4.7U M 25V
C2784	403 164 0204	CERAMIC 0.1U Z 25V
C2785	403 164 0204	CERAMIC 0.1U Z 25V
C2787	403 150 2106	NP-ELECT 4.7U M 25V
C2801	403 164 0204	CERAMIC 0.1U Z 25V
C2802	403 155 1807	CERAMIC 0.01U K 25V
C2803	403 155 1807	CERAMIC 0.01U K 25V
C2804	403 164 0204	CERAMIC 0.1U Z 25V
C2805	403 155 1807	CERAMIC 0.01U K 25V
C2806	403 285 3603	TA-SOLID 4.7U M 6.3V
C2821	403 285 3603	TA-SOLID 4.7U M 6.3V
C2823	403 157 2901	CERAMIC 47P J 50V
C2832	403 157 3601	CERAMIC 100P J 50V
C2834	403 164 0204	CERAMIC 0.1U Z 25V
C2902	403 113 3805	CERAMIC 1000P K 50V
C2904	403 155 1807	CERAMIC 0.01U K 25V
C2905	403 155 1807	CERAMIC 0.01U K 25V
C2907	403 175 4505	ELECT47U M 6.3V
(RESISTORS)		
R2007	401 105 0603	MT-GLAZE 10K JA 1/16W
R2008	401 158 4009	MT-GLAZE 3.3 JA 1/16W
R2009	401 158 4009	MT-GLAZE 3.3 JA 1/16W
R2101	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2102	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R2103	401 105 0504	MT-GLAZE 1K JA 1/16W
R2104	401 105 2904	MT-GLAZE 22K JA 1/16W
R2105	401 105 0603	MT-GLAZE 10K JA 1/16W
R2106	401 105 0603	MT-GLAZE 10K JA 1/16W
R2107	401 241 5302	MT-GLAZE 10K DC 1/16W
R2111	401 105 8104	MT-GLAZE 56K JA 1/16W
R2113	401 255 3004	MT-GLAZE 11K DC 1/16W
R2114	401 241 5401	MT-GLAZE 12K DC 1/16W
R2117	401 250 5003	MT-GLAZE 100K DC 1/16W
R2118	401 105 1105	MT-GLAZE 12K JA 1/16W
R2121	401 105 4205	MT-GLAZE 33K JA 1/16W
R2131	401 105 5400	MT-GLAZE 47K JA 1/16W
R2132	401 105 5400	MT-GLAZE 47K JA 1/16W
R2154	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R2155	401 105 0504	MT-GLAZE 1K JA 1/16W
R2156	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R2157	401 105 1105	MT-GLAZE 12K JA 1/16W
R2158	401 105 8005	MT-GLAZE 1M JA 1/16W
R2159	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2174	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2177	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2200	401 105 0504	MT-GLAZE 1K JA 1/16W
R2205	401 105 0702	MT-GLAZE 100K JA 1/16W
R2207	401 105 0603	MT-GLAZE 10K JA 1/16W
R2208	401 105 8203	MT-GLAZE 88K JA 1/16W
R2211	401 105 4106	MT-GALZE 3.3K JA 1/16W
R2213	401 105 8005	MT-GLAZE 1M JA 1/16W
R2214	401 105 0405	MT-GLAZE 100 JA 1/16W
R2215	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2217	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R2218	401 105 2706	MT-GLAZE 220 JA 1/16W
R2221	401 105 3208	MT-GLAZE 270 JA 1/16W
R2222	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2223	401 105 8005	MT-GLAZE 1M JA 1/16W
R2229	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2231	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2235	401 105 0702	MT-GLAZE 100K JA 1/16W
R2236	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2237	401 105 2904	MT-GLAZE 22K JA 1/16W

LOCATION	PARTS NO.	DESCRIPTION
R2240	401 148 6006	MT-GLAZE 2.2 JA 1/16W
R2241	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2243	401 105 0306	MT-GLAZE 10 JA 1/16W
R2244	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2249	401 158 4009	MT-GLAZE 3.3 JA 1/16W
R2253	401 105 8005	MT-GLAZE 1M JA 1/16W
R2256	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2257	401 105 0900	MT-GLAZE 120 JA 1/16W
R2258	401 105 0702	MT-GLAZE 100K JA 1/16W
R2261	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2262	401 105 2102	MT-GLAZE 18K JA 1/16W
R2263	401 105 0603	MT-GLAZE 10K JA 1/16W
R2267	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R2270	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2271	401 105 0504	MT-GLAZE 1K JA 1/16W
R2277	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2280	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
R2281	401 113 4402	MT-GLAZE 75 JA 1/16W
R2290	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2291	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2294	401 105 5400	MT-GLAZE 47K JA 1/16W
R2298	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2301	401 105 3406	MT-GLAZE 27K JA 1/16W
R2302	401 105 0603	MT-GLAZE 10K JA 1/16W
R2303	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R2304	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R2305	401 105 0603	MT-GLAZE 10K JA 1/16W
R2306	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R2307	401 105 4809	MT-GLAZE 390K JA 1/16W
R2308	401 105 6001	MT-GLAZE 5.6K JA 1/16W
R2311	401 105 6100	MT-GLAZE 560K JA 1/16W
R2312	401 105 3406	MT-GLAZE 27K JA 1/16W
R2313	401 105 6100	MT-GLAZE 560K JA 1/16W
R2314	401 105 6001	MT-GLAZE 5.6K JA 1/16W
R2315	401 105 4106	MT-GALZE 3.3K JA 1/16W
R2316	401 105 4809	MT-GLAZE 390K JA 1/16W
R2317	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R2318	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R2321	401 105 0603	MT-GLAZE 10K JA 1/16W
R2322	401 105 0603	MT-GLAZE 10K JA 1/16W
R2323	401 148 6006	MT-GLAZE 2.2 JA 1/16W
R2324	401 105 0603	MT-GLAZE 10K JA 1/16W
R2325	401 105 0603	MT-GLAZE 10K JA 1/16W
R2326	401 105 3000	MT-GLAZE 220K JA 1/16W
R2327	401 105 3000	MT-GLAZE 220K JA 1/16W
R2328	401 105 3307	MT-GLAZE 2.7K JA 1/16W
R2329	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2330	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2331	401 105 0603	MT-GLAZE 10K JA 1/16W
R2334	401 158 4009	MT-GLAZE 3.3 JA 1/16W
R2335	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2337	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2338	401 105 0603	MT-GLAZE 10K JA 1/16W
R2341	401 105 4205	MT-GLAZE 33K JA 1/16W
R2342	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2344	401 105 0603	MT-GLAZE 10K JA 1/16W
R2345	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2346	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2347	401 105 0603	MT-GLAZE 10K JA 1/16W
R2348	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2351	401 105 0603	MT-GLAZE 10K JA 1/16W
R2352	401 105 0603	MT-GLAZE 10K JA 1/16W
R2353	401 105 3406	MT-GLAZE 27K JA 1/16W
R2354	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2356	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R2357	401 105 2904	MT-GLAZE 22K JA 1/16W
R2358	401 105 0504	MT-GLAZE 1K JA 1/16W
R2359	401 105 0504	MT-GLAZE 1K JA 1/16W
R2360	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R2361	401 105 0603	MT-GLAZE 10K JA 1/16W
R2362	401 105 0603	MT-GLAZE 10K JA 1/16W
R2363	401 105 0603	MT-GLAZE 10K JA 1/16W
R2364	401 105 4304	MT-GLAZE 330K JA 1/16W
R2365	401 105 1600	MT-GLAZE 15K JA 1/16W
R2367	401 105 3406	MT-GLAZE 27K JA 1/16W
R2368	401 105 1600	MT-GLAZE 15K JA 1/16W
R2371	401 105 5301	MT-GLAZE 4.7K JA 1/16W

LOCATION	PARTS NO.	DESCRIPTION
COMPL PWB,CA-3		
613 185 7247		
(CONNECTORS)		
CN302	645 019 5976	PLUG,30P (N.S.P)
CN303	645 004 9293	SOCKET,4P (N.S.P)
(SEMICONDUCTORS)		
Q3402	405 092 4101	TR 2SC4081-R
Q3403	405 137 2000	TR 2SA1576A-R
Q3517	405 092 4101	TR 2SC4081-R
Q3526	405 092 4101	TR 2SC4081-R
Q3531	405 014 4509	TR 2SC2412K-R
(INTEGRATED CIRCUITS)		
IC301	409 252 0309	IC CXD1216M
IC341	410 230 8309	IC TC74VHC221AF
IC342	409 251 4803	IC TC7W00F
IC351	409 142 2000	IC LA6358NM
IC352	409 155 7702	IC TC4S66F
IC353	410 230 8309	IC TC74VHC221AF
(DIODES)		
D3102	407 187 7608	ZENER DIODE UDZ3.9B
D3401	407 113 5609	DIODE DSH015
D3402	407 113 5609	DIODE DSH015
D3518	407 113 5609	DIODE DSH015
D3526	407 113 5609	DIODE DSH015
(VARIABLE RESISTORS)		
VR301	645 005 5805	VR,SEMI,10K S
VR302	645 005 5805	VR,SEMI,10K S
VR303	645 005 5805	VR,SEMI,10K S
VR311	645 003 8655	VR,SEMI,10K N
VR312	645 003 6781	VR,SEMI,47K N
(INDUCTORS)		
L3001	645 003 8983	INDUCTOR,0.22U M
L3401	645 003 9485	INDUCTOR,22U J
L3533	645 018 3553	INDUCTOR,1000 OHM
L3534	645 018 3553	INDUCTOR,1000 OHM
L3535	645 018 3553	INDUCTOR,1000 OHM
L3536	645 018 3553	INDUCTOR,1000 OHM
(CAPACITORS)		
C3001	403 164 0204	CERAMIC 0.1U Z 25V
C3002	403 172 6106	CERAMIC 270P J 50V
C3003	403 113 3805	CERAMIC 1000P K 50V
C3004	403 175 0606	ELECT 100U M 6.3V
C3101	403 164 0204	CERAMIC 0.1U Z 25V
C3103	403 155 1807	CERAMIC 0.01U K 25V
C3105	403 164 0204	CERAMIC 0.1U Z 25V
C3106	403 157 1904	CERAMIC 10P D 50V
C3107	403 157 1904	CERAMIC 10P D 50V
C3111	403 285 4303	TA-SOLID 1U M 16V
C3209	403 155 1807	CERAMIC 0.01U K 25V
C3211	403 155 1807	CERAMIC 0.01U K 25V
C3401	403 164 0204	CERAMIC 0.1U Z 25V
C3402	403 164 0204	CERAMIC 0.1U Z 25V
C3408	403 157 4202	CERAMIC 220P J 50V
C3409	403 113 3805	CERAMIC 1000P K 50V
C3411	403 155 1807	CERAMIC 0.01U K 25V
C3412	403 155 1807	CERAMIC 0.01U K 25V
C3521	403 285 3603	TA-SOLID 4.7U M 6.3V
C3525	403 155 1807	CERAMIC 0.01U K 25V
C3526	403 285 3504	TA-SOLID 3.3U M 6.3V
C3527	403 285 7809	TA-SOLID 0.47U M 35V
C3528	403 172 6502	NP-ELECT 0.47U M 50V
C3529	403 175 3300	ELECT 47U M 18V
C3531	403 164 0204	CERAMIC 0.1U Z 25V
C3532	403 175 3300	ELECT 47U M 18V
(RESISTORS)		
R3002	401 105 0504	MT-GLAZE 1K JA 1/16W
R3003	401 105 0603	MT-GLAZE 10K JA 1/16W
R3012	401 105 8005	MT-GLAZE 1M JA 1/16W
R3101	401 105 0504	MT-GLAZE 1K JA 1/16W
R3104	401 105 2805	MT-GLAZE 2.2K JA 1/16W
R3105	401 105 4601	MT-GLAZE 3.9K JA 1/16W
R3106	401 105 0504	MT-GLAZE 1K JA 1/16W
R3107	401 105 0504	MT-GLAZE 1K JA 1/16W
R3111	401 105 0504	MT-GLAZE 1K JA 1/16W
R3121	401 105 0405	MT-GLAZE 100 JA 1/16W
R3218	401 105 0603	MT-GLAZE 10K JA 1/16W

LOCATION	PARTS NO.	DESCRIPTION
R3401	401 105 0702	MT-GLAZE 100K JA 1/16W
R3402	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R3413	401 105 0405	MT-GLAZE 100 JA 1/16W
R3414	401 105 1800	MT-GLAZE 15K JA 1/16W
R3415	401 105 6001	MT-GLAZE 5.6K JA 1/16W
R3416	401 105 2706	MT-GLAZE 220 JA 1/16W
R3417	401 105 3901	MT-GLAZE 33 JA 1/16W
R3418	401 105 0603	MT-GLAZE 10K JA 1/16W
R3419	401 105 7305	MT-GLAZE 820 JA 1/16W
R3421	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R3515	401 105 0603	MT-GLAZE 10K JA 1/16W
R3516	401 105 2102	MT-GLAZE 18K JA 1/16W
R3517	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R3518	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R3521	401 105 6001	MT-GLAZE 5.6K JA 1/16W
R3522	401 105 0603	MT-GLAZE 10K JA 1/16W
R3523	401 105 0702	MT-GLAZE 100K JA 1/16W
R3524	401 105 3307	MT-GLAZE 2.7K JA 1/16W
R3525	401 105 2003	MT-GLAZE 1.8K JA 1/16W
R3527	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R3528	401 105 8005	MT-GLAZE 1M JA 1/16W
R3529	401 105 0504	MT-GLAZE 1K JA 1/16W
R3530	401 105 5202	MT-GLAZE 470 JA 1/16W
R3531	401 105 5202	MT-GLAZE 470 JA 1/16W
R3532	401 105 5202	MT-GLAZE 470 JA 1/16W
R3563	401 105 0702	MT-GLAZE 100K JA 1/16W
R3564	401 105 0702	MT-GLAZE 100K JA 1/16W
R3601	401 241 5401	MT-GLAZE 12K DC 1/16W
R3602	401 255 3004	MT-GLAZE 11K DC 1/16W
R3603	401 241 5302	MT-GLAZE 10K DC 1/16W
R3604	401 241 5302	MT-GLAZE 10K DC 1/16W
R3605	401 241 5203	MT-GLAZE 9.1K DC 1/16W
R3606	401 241 5609	MT-GLAZE 15K DC 1/16W
R3607	401 241 5302	MT-GLAZE 10K DC 1/16W
R3608	401 241 5401	MT-GLAZE 12K DC 1/16W
(SWITCHES)		
S3001	645 033 1404	SWITCH,SLIDE 4P-2T, IRIS
S3002	645 002 0551	SWITCH,SLIDE 2P-3T, E/BLC
S3003	645 000 3301	SWITCH,SLIDE 2P-2TX1, WHITE BALANCE
S3004	645 007 6886	SWITCH,DIP 1P-1TX4, ELEC.SHUTTER
S3006	645 000 3301	SWITCH,SLIDE 2P-2TX1, C-B/W
S3101	645 009 3692	SWITCH,SLIDE 2P-2T, SC-PHASE1
(FILTER)		
F3001	645 006 3404	FILTER,EMI 470PF

COMPL PWB,CA-4

613 185 7254

LOCATION	PARTS NO.	DESCRIPTION
(CONNECTORS)		
CN401	645 007 6978	PLUG,2P (N.S.P)
CN402	645 034 6583	PLUG,13P (N.S.P)
(SEMICONDUCTORS)		
Q4601	405 047 5800	TR 2SD1622-S
OR	405 047 6006	TR 2SD1622-T
Q4602	405 137 2000	TR 2SA1576A-R
Q4603	405 092 4101	TR 2SC4081-R
Q4611	405 137 2000	TR 2SA1576A-R
Q4612	405 137 2000	TR 2SA1576A-R
(INTEGRATED CIRCUITS)		
IC401	410 335 1403	IC UPD78011FGC-582-AB8
IC411	409 215 6805	IC LB1638M
IC412	409 415 0009	IC BMR03H-04
(DIODES)		
D4001	407 113 5609	DIODE DSH015
D4601	407 066 8702	DIODE SB10-05PCP
D4611	407 187 8805	ZENER DIODE UDZ20B
(CRYSTAL DEVICES)		
X4011	645 000 6692	OSC,CERAMIC 8.00MHZ
(INDUCTORS)		
L4601	645 009 1148	INDUCTOR,0.47U M
L4602	645 009 1148	INDUCTOR,0.47U M
L4603	645 021 0235	INDUCTOR,100U
(CAPACITORS)		
C4001	403 285 5003	TA-SOLID 1U M 25V
C4011	403 155 1807	CERAMIC 0.01U K 25V
C4012	403 285 6802	TA-SOLID 10U M 6.3V

LOCATION	PARTS NO.	DESCRIPTION
C4101	403 285 6802	TA-SOLID 10U M 6.3V
C4102	403 164 0204	CERAMIC 0.1U Z 25V
C4103	403 285 6802	TA-SOLID 10U M 6.3V
C4104	403 164 0204	CERAMIC 0.1U Z 25V
C4105	403 155 1807	CERAMIC 0.01U K 25V
C4509	403 285 6901	TA-SOLID 22U M 6.3V
C4512	403 219 3907	TA-SOLID 3.3U M 25V
C4516	403 258 2602	ELECT100U M 6.3V
C4603	403 217 1103	ELECT220U M 35V
C4604	403 150 2106	NP-ELECT 4.7U M 25V
C4605	403 094 8400	OS-SOLID 15U M 25V
C4606	403 233 0609	ELECT47U M 25V
C4611	403 233 1101	ELECT22U M 50V
C4612	403 069 5601	CERAMIC 0.01U K 50V
C4613	403 069 5601	CERAMIC 0.01U K 50V
(RESISTORS)		
R4001	401 105 5301	MT-GLAZE 4.7K JA 1/16W
R4002	401 105 0603	MT-GLAZE 10K JA 1/16W
R4011	401 241 5302	MT-GLAZE 10K DC 1/16W
R4012	401 241 2004	MT-GLAZE 1.2K DC 1/16W
R4015	401 241 5302	MT-GLAZE 10K DC 1/16W
R4016	401 241 1908	MT-GLAZE 1K DC 1/16W
R4020	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4027	401 241 5203	MT-GLAZE 9.1K DC 1/16W
R4028	401 241 5609	MT-GLAZE 15K DC 1/16W
R4032	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4036	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4038	401 241 5609	MT-GLAZE 15K DC 1/16W
R4041	401 105 0504	MT-GLAZE 1K JA 1/16W
R4042	401 105 0504	MT-GLAZE 1K JA 1/16W
R4043	401 105 0504	MT-GLAZE 1K JA 1/16W
R4044	401 105 0504	MT-GLAZE 1K JA 1/16W
R4051	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4052	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4101	401 036 1205	MT-GLAZE 22 JA 1/8W
R4102	401 036 1205	MT-GLAZE 22 JA 1/8W
R4103	401 036 1205	MT-GLAZE 22 JA 1/8W
R4104	401 036 1205	MT-GLAZE 22 JA 1/8W
R4105	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4533	401 105 4007	MT-GLAZE 330 JA 1/16W
R4602	401 177 2703	MT-GLAZE 6.8 JA 1/16W
R4603	401 105 6100	MT-GLAZE 560K JA 1/16W
R4604	401 105 1600	MT-GLAZE 15K JA 1/16W
R4605	401 105 0603	MT-GLAZE 10K JA 1/16W
R4606	401 105 7909	MT-GLAZE 0.000 ZA 1/16W
R4611	401 105 6001	MT-GLAZE 5.6K JA 1/16W
R4612	401 105 0603	MT-GLAZE 10K JA 1/16W
R4613	401 105 0603	MT-GLAZE 10K JA 1/16W
R4614	401 105 2102	MT-GLAZE 18K JA 1/16W
R4615	401 037 5202	MT-GLAZE 100 JA 1/10W
R4616	401 105 0603	MT-GLAZE 10K JA 1/16W
R4617	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
R4630	401 037 5004	MT-GLAZE 0.000 ZA 1/10W
(SWITCHES)		
S4101	645 009 3692	SWITCH,SLIDE 2P-2T
(MISCELLANEOUS)		
U4012	645 031 7620	UNIT,DC/DC CONVERTOR

ACCESSORIES

636 009 7841	LENS CAP
613 185 2570	INSTRUCTION MANUAL
△645 004 9262	PLUG,4P (N.S.P.)
613 172 5218	ACCESSORY CS-ADAPTOR
645 033 2791	ADAPTOR,AC-DC

PACKING MATERIALS

613 187 1014	CARTON CASE INNER
613 184 1659	CUSHION BAG
613 185 2563	CUSHION

SANYO

SANYO Electric Co., Ltd.
Osaka, Japan