

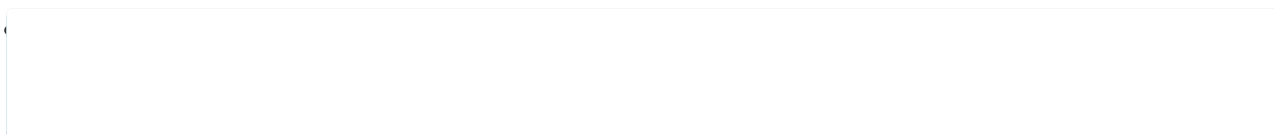


Sanyo VCC-ZM400P Service Manual

Colour ccd camera

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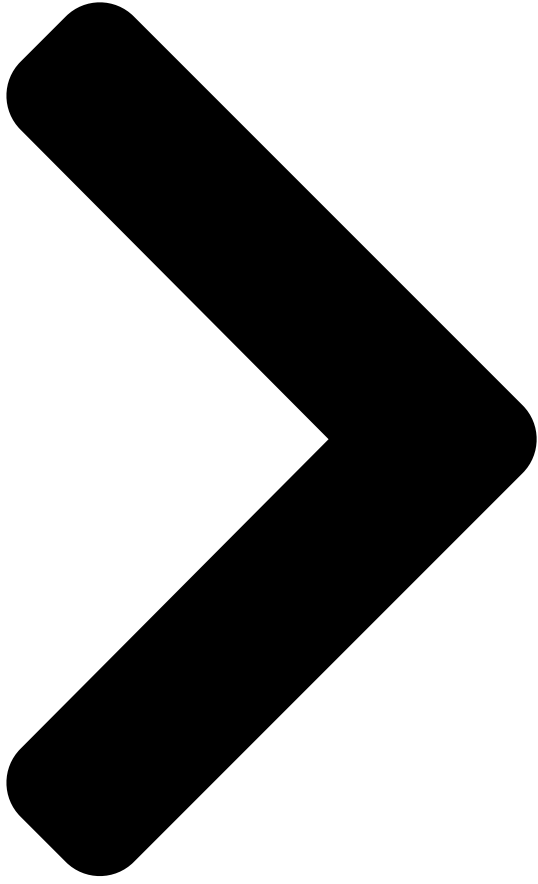
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SERVICE MANUAL

COLOUR CCD Camera

SPECIFICATIONS

Pickup device: 1/4", Effective pixels: 752 (H) x 582 (V)

Horizontal resolution: Over 520 TV lines

Lens: x22 zoom lens, f=3.6-79.2 mm (F1.6-3.8),

Electronic zoom and gearing, Zoom speed setting possible

Electronic zoom: 16 power (combined with optic zoom gives 352 power max)

Max zoom magnification setting possible, Vertical resolution ON/OFF setting

Autofocus: AUTO/MANUAL, AF area setting possible (3 step)

Iris control: AUTO/MANUAL, 1/2 EV steps

Synchronization method: Internal synchronization/Line lock, V phase adjustment possible

Lowest image illumination: 1.2 lx (F 1.6, AGC gain at maximum, COLOR mode)

0.06 lx (F 1.6, B/W mode)

0.04 lx (F1.6, x32 electronic sensitivity increased, COLOUR mode)

0.002 lx (F 1.6, x32 SENSE UP, B/W mode)

S/N: Over 48dB

Backlight compensation: Multi-spot evaluative metering

5 spot centerweighted average metering, 48 multi-spot metering

Day/Night: AUTO/COLOR/B/W settings available

Electric shutter: • Fast shutter speed mode (SHORT);

1/50, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000

• Slow shutter speed mode (LONG); x1, x2, x4, x8, x16, x32

Electronic sensitivity boosting: AUTO/OFF, works with auto iris, Up to x32 max setting possible

White balance: ATW/AWC/MWB, AGC gain: OFF/-6/±0/+6/+9/+12/+15 dB

Motion detector: ON/OFF, ON allows setting of detection patterns on a 48 zone screen for

6 motion settings (size, masking, sensitivity, zoom, interval, alarm sign)

Privacy masking: ON/OFF, max of 4 masked locations, Password lock possible

Alarm input/output (back panel control terminals): Alarm input: 1 (for external alarm switch)

Alarm output: 1 (for sending a signal to the system controller or an alarm

detection device such as a buzzer)

Mirror image effect: Horizontally (H), vertically (V), horizontally and vertically (HV)

Camera ID: ON/OFF, 16 characters

View settings: 9 (0-8) screen files can be established, and each file can set

7 capturing characteristics such as iris

Communications: Coaxial control, RS-485

Operational temperature/humidity: -10 - 50 °C/below 90 % RH

Power source: 24 V AC, 50 Hz/12-15 V DC, Power consumption: 4.5 W, Weight: 380 g

The components designated by a symbol (!) 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.

L5AD2/XE

PRODUCT SAFETY NOTICE

FILE NO.

VCC-ZM400P

(Product Code : 117 118 00)

(Europe)

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REFERENCE No. SM5310469

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Related Manuals for Sanyo VCC-ZM400P

[Security Camera Sanyo VCC-ZM400P Instruction Manual](#)

Colour ccd zoom camera (67 pages)

[Color Camera Sanyo VCC-4594P Instruction Manual](#)

Color ccd camera (19 pages)

[Color Camera Sanyo VCC-6574P Instruction Manual](#)

Color ccd camera (20 pages)

[Color Camera Sanyo VCC-3700P Instruction Manual](#)

Color ccd camera (16 pages)

[Color Camera Sanyo VDC-C1572FP Instruction Manual](#)

Colour ccd camera b/w ccd camera (8 pages)

Summary of Contents for Sanyo VCC-ZM400P

[Page 1: Service Manual](#)

FILE NO. SERVICE MANUAL COLOUR CCD Camera VCC-ZM400P (Product Code : 117 118 00) SPECIFICATIONS (Europe) Pickup device: 1/4", Effective pixels: 752 (H) x 582 (V) Horizontal resolution: Over 520 TV lines Lens: x22 zoom lens, f=3.6-79.2 mm (F1.6-3.8), Electronic zoom and gearing, Zoom speed setting possible...

[Page 2](#) 1. DISASSEMBLY AND BOARD LOCATION 1. Three screws 2 x 4 2. Cabinet back 3. Three screws 3 x 4 4. Cover top 5. Two screws 3 x 6 6. Cover mounting 7. Two screws 3 x 4 8. Cover bottom 9.

[Page 3](#) 2-3. TABLE FOR SERVICING TOOLS 2. ADJUSTMENT 2-1. ADJUSTMENT CONDITION Ref. No. Name Part code 1. Use the 5,100K viewer for the subject. Color viewer VJ8-0007 2. Set the trigger signal of oscilloscope to VIDEO OUT, and Gray scale chart VJ8-0010 apply H sync unless specified.

[Page 4](#) 2-5. Lens Tracking Adjustment 2-8. Frequency Adjustment (L-L) Adjustment location: Adjustment location: CT201 (CA-2) Measuring location: Measuring location: TP201 (CA-2) Measuring equipment: Monitor display, siemens star chart Measuring equipment: Digital multi meter Subject: No designation Subject: No designation Adjusting method: Adjusting method: 1.

[Page 5](#) VR203 VR202 TP221 CT202 TP202 TP203 45 µsec CT252 CT201 TP201 100% TP200 CA-2 board (Side B) 2-11. CCD White Point Defect Detect Adjustment Measuring location: VIDEO OUT Measuring equipment: Monitor display Adjusting method: 1. Shield light with a lens cap to provide dark condition. 2.

[Page 6](#) 3. PARTS LIST LOCATION PARTS NO. DESCRIPTION LOCATION PARTS NO. DESCRIPTION ACCESSORIES & PACKING MATERIALS 6025 613 198 6169 CHASSIS FRONT (N.S.P.) 6030 613 198 6244 TERMINAL (N.S.P.) 9001 613 198 6176 7504 645 055 8665 LENS(ASSY) 9102 613 199 8025 INSTRUCTION MANUAL 7505 645 055 8672...

[Page 7](#) 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...

[Page 8](#) LOCATION PARTS NO. DESCRIPTION LOCATION PARTS NO. DESCRIPTION (CAPACITORS) COMPL PWB,CA-2 C2001 403 285 5003 TA-SOLID 1U M 25V 613 199 5598 C2002 403 164 0204 CERAMIC 0.1U Z 25V C2003 403 150 2106 NP-ELECT 4.7U M 25V

(SEMICONDUCTORS) C2004 403 164 0204 CERAMIC 0.1U Z 25V...

[Page 9](#) LOCATION PARTS NO. DESCRIPTION LOCATION PARTS NO. DESCRIPTION C2114 403 311 4505 CERAMIC 1000P K 50V R2056 401 226 1503 MT-GLAZE 0.000 ZA 1/16W R2057 401 226 2401 MT-GLAZE 560 JA 1/16W C2115 403 305 0001 TA-SOLID 10U M 10V C2140 403 346 2309 CERAMIC...

[Page 10](#) LOCATION PARTS NO. DESCRIPTION LOCATION PARTS NO. DESCRIPTION R2152 401 226 1503 MT-GLAZE 0.000 ZA 1/16W R2416 401 226 1503 MT-GLAZE 0.000 ZA 1/16W R2153 401 226 1503 MT-GLAZE 0.000 ZA 1/16W R2417 401 226 1503 MT-GLAZE 0.000 ZA 1/16W R2154 401 226 1503 MT-GLAZE 0.000 ZA 1/16W...

[Page 11](#) LOCATION PARTS NO. DESCRIPTION LOCATION PARTS NO. DESCRIPTION C3031 403 357 3302 CERAMIC 0.01U K 630V IC453 409 167 7202 IC NJM2406F C3032 403 358 7507 ELECT 100U M 50V IC454 409 305 3103 IC TC7W74FU C3101 403 333 3609 POS-SOLID 33U M 10V IC455...

[Page 12](#) LOCATION PARTS NO. DESCRIPTION LOCATION PARTS NO. DESCRIPTION R4050 401 105 0405 MT-GLAZE 100 JA 1/16W R4504 401 105 5301 MT-GLAZE 4.7K JA 1/16W R4051 401 105 5301 MT-GLAZE 4.7K JA 1/16W R4513 401 105 0405 MT-GLAZE 100 JA 1/16W R4052 401 105 5400 MT-GLAZE...

[Page 13](#) LOCATION PARTS NO. DESCRIPTION R5014 401 105 5301 MT-GLAZE 4.7K JA 1/16W R5015 401 105 5301 MT-GLAZE 4.7K JA 1/16W R5016 401 105 1204 MT-GLAZE 120K JA 1/16W R5017 401 105 0702 MT-GLAZE 100K JA 1/16W R5018 401 105 7909 MT-GLAZE 0.000 ZA 1/16W R5201 401 105 0603...

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[Page 15](#) NOTES: 1. All resistance values in "OHMS" unless otherwise noted. (K=1,000 ; M=1,000,000) μ 2. All capacitance values in " F" unless otherwise noted. μ p=pico farad ; μ u or U=micro farad μ 3. All inductance values in " H" unless otherwise noted. μ ...

[Page 16: Overall Wiring, Block Diagram & Circuit Diagrams](#)

OVERALL WIRING, BLOCK DIAGRAM & CIRCUIT DIAGRAMS OVERALL WIRING CN105 CN205 CCDI00 CCDI01 CCDI00 CCDI01 CN401 CCDI02 CCDI03 CCDI02 CCDI03 CA-1 CA-2 CA-4 CCDI04 CCDI05 CCDI04 CCDI05 CCDI06 CCDI07 CCDI06 CCDI07 CCD&CDS CCDI08 CCDI09 CCDI08 CCDI09 MAIN BOARD DC_IN I/O BOARD DC_GND ADCK_B ADCK_B...

[Page 17: Overall Circuit Block Diagram](#)

OVERALL CIRCUIT BLOCK DIAGRAM...

[Page 18](#) CA-1 CIRCUIT R1201 IC121 3.3V R1206 TC7SH08FU C1202 C1201 RS232_IN R1204 IC122 R1202 W1002 TC7SET08FU VIDEO OUT VIDEO OUT TP101 CN105 RS232_OUT R1203 TO CA-4 VIDEO OUT CN404 L1004 TP102 C1014 10;J VIDEO OUT CCDI00 CCDI0 0.I;F CN102 CCDI02 CCDI2 R1207 C1007 3.3V...

[Page 19](#) CA-1 CIRCUIT WAVEFORMS IC101 BLOCK DIAGRAM (ICX279) IC102 BLOCK DIAGRAM (CXD1267AN) TEST POINT TEST POINT WAVEFORM WAVEFORM LOCATION CPP3 CPP1 IC101-1 IC101-13 Charge Pump CPP2 2V/div 2V/div 20 s/div 50ns/div DCOUT DCIN XSHT VSHT IC101-2 IC101-14 5V/div 2V/div XSG1 20 s/div 50ns/div XSG2...

[Page 20](#) CA-2 CIRCUIT R2080 R2058 R2059 L2058 R2056 10;J Q2059 R2055 R2030 2SA1576A(R) AGND AGND AGND AGND 3.3V IG_DRIVE- R2053 L2055 Q2450 22;J C2058 AGND 10;10-T DTC115EU YAOUT CT-A ZOOM_SENS C2051 Q2058 22P;CH 2SC4081(R) AGND AGND Q2055 Q2060 AGND AGND 2SA1576A(R) 2SA1576A(R) AGND AGND...

[Page 21: Circuit](#)

CA-2 CIRCUIT [LEFT] C2026 C2019 4.7;10-T 10;6.3-T CT-A C2001 1;25-T CT-A C2018 Q2004 C2022 4.7;25-T 1000P;B CT-B2 C2002 0.1;F C2017 D2002 C2027 (2125) MA365(E) 0.1;B D2001 C2004 R2024 MA365(E) 0.1;F C2015 R2002 R2001 C2028 120K 22P;CH 0.1;B C2020 R2004 R2005 0.1;B C2502 8.2K...

[Page 22: Circuit](#)

CA-2 CIRCUIT [RIGHT] R2071 C2310 0.1;B C2312 0.1;B C2056 47;6.3 C2311 C2313 10;6.3-T CE-C R2337 C2070 10;10-T C2057 CT-A 4.7;10-T CT-A C2066 0.1;B R2060 180K R2061 100K R2063 R2062 R2064 R2066 C2059 10;10-T R2067 C2148 C2060 10;6.3-T 4.7;10-T C2149 0.1;B CT-A R2210 R2209...

[Page 23](#) CA-3 CIRCUIT CN303 CL30301 CL30302 CL30304 DC_IN DC_GND VIDEO OUT A_GND V_GRID CL30309 C3030 TO CA-4 CN401 CL30101 W3001 T3001 C3032 100;50 DC_GND CEE156 CL30103 CL30102 CL30104 3.3V L3101 D3101 100U RB060L-40 TO CA-4 VIN2 CN402 +3.3V Q3011 CN302 CL30201 2SD1767 D3015 3.3V...

[Page 24](#) CA-4 CIRCUIT L4506 CA-4 COMP. R4518 AGND AGND Q4010 100K R4514 C4-11800/L5AD2-XE 2SA1037AK R4163 R4082 8M LPF C4502 150P Q4011 TP401 2SC2412K L4503 R4513 C4508 R4503 1000P D4502 AGND Q4501 VBI_OUT DSH015 R4522 2SC4399(5) C4509 IC453 TP402 NJM2406F AGND COMPARATOR IC452 TC7S04F INV-AMP...

[Page 25](#) CA-5 CIRCUIT CA-5 1AV4J10HU280G C5-11800/L5AD2-XE CN501 ALARM IN AL_OUT CN511 C5011 470;4 L5001 VIDEO OUT 485A 485B MONOUT1 485GND Video out ZOOM 1AV4J11B0390N GND X GND X FOCUS DC_IN DC_IN V_PHASE D5001 LED+ LED- R5017 100K TP501 3.3V R5001 100K CN513 RIGHT R5015...

[Page 26](#) CA-4 CIRCUIT L4506 CA-4 COMP. R4518 AGND AGND Q4010 100K R4514 C4-11800/L5AD2-XE 2SA1037AK R4163 R4082 8M LPF C4502 150P Q4011 TP401 2SC2412K L4503 R4513 C4508 R4503 1000P D4502 AGND Q4501 VBI_OUT DSH015 R4522 2SC4399(5) C4509 IC453 TP402 NJM2406F AGND COMPARATOR IC452 TC7S04F INV-AMP...

[Page 27](#) CA-5 CIRCUIT CA-5 1AV4J10HU280G C5-11800/L5AD2-XE CN501 ALARM IN AL_OUT CN511 C5011 470;4 L5001 VIDEO OUT 485A 485B MONOUT1 485GND Video out ZOOM 1AV4J11B0390N GND X GND X FOCUS DC_IN DC_IN V_PHASE D5001 LED+ LED- R5017 100K TP501 3.3V R5001 100K CN513 RIGHT R5015...

[Page 28](#) PRINTED WIRING BOARDS (P.W.B.) CA-1 BOARD (SIDE B) CA-1 BOARD (SIDE A) 1AC4B10F3901AA SIDE B IC104 R1071 R1026 R1073 L1003 L1004 C1002 R1072 R1074 R1076 R1077 IC104 C1006 R1078 L1001 IC103 C1011 C1024 C1019 C1010 C1022 L1101 R1020 C1009 L1141 R1105 R1109 Q1101...

[Page 29](#) CA-3 BOARD (SIDE A) CA-3 BOARD (SIDE B) D3601 D3602 R3016 R3019 R3019 D3601 D3602 R3016 L3010 L3010 D3605 D3606 D3605 D3606 Q3010 C3112 1AC4B10F3901BA CA3 SIDE B L5AD2 1AC4B10F3901BA CA3 C3112 L5AD2 C3020 C3107 SIDE A R3132 R3130 R3130 C3022 C3110 R3105...

[Page 30](#) CA-5 BOARD (SIDE A) CN513 R5430 C5427 R5428 Q5402 R5426 IC541 C5420 C5422 C5001 L5001 C5203 R5424 C5206 S5002 CA-5 BOARD (SIDE B)

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