



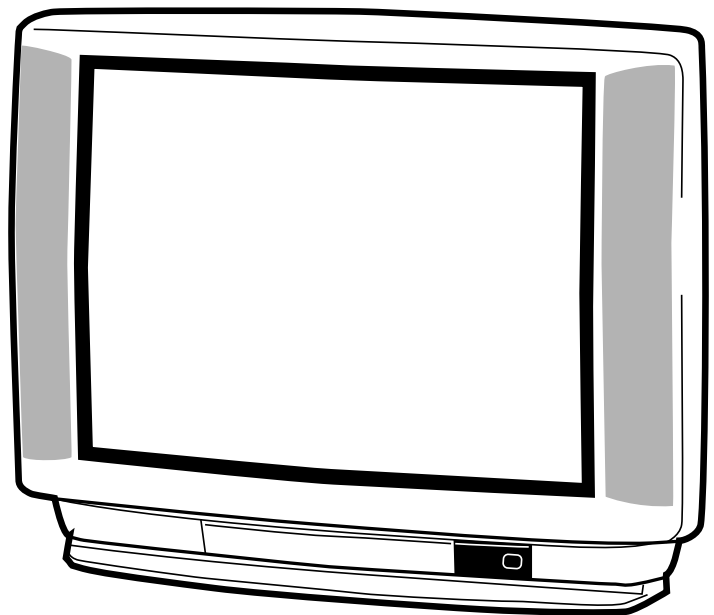
Colour Television Service Manual

CE28B4-c

Model CE28B4-C

Service Ref.No. CE28B4-C-01

PRODUCT CODE: 111339503
SERVICE MANUAL SUPPLEMENT
Chassis No. EB4-A



SERVICE MANUAL SUPPLEMENT
THIS SUPPLEMENT SHOULD BE FILED WITH THE ORIGINAL SERVICE MANUAL FOR CE28B4-C-00.

SERVICE MANUAL SUPPLEMENT
FOR ALL INFORMATION NOT CONTAINED IN THIS SUPPLEMENT PLEASE REFER TO THE ORIGINAL SERVICE MANUAL FOR CE28B4-C-00. THIS SUPPLEMENT ONLY CONTAINS DIFFERENCES BETWEEN SERVICE REFERENCE NUMBERS.

Give complete "SERVICE REF. NO." for parts order or servicing, it is shown on the rating sheet on the cabinet back of the TV set.

Note
This TV receiver will not work properly in foreign countries where the television transmission system and power source differ from the design specifications. Refer to the specifications for the design specifications

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SAFETY PRECAUTION

- 1: An isolation transformer should be connected in the power line between the receiver and the AC line when a service is performed on the primary of the converter transformer of the set.
- 2: Comply with all caution and safety-related notes provided on the cabinet back, inside the cabinet, on the chassis or the picture tube.

- 3: When replacing a chassis in the cabinet, always be certain that all the protective devices are installed properly, such as, control knobs, adjustment covers or shields, barriers, isolation resistor-capacitor networks etc. Before returning any television to the customer, the service technician must be sure that it is completely safe to operate without danger of electrical shock.

X-RADIATION PRECAUTION

The primary source of X-RADIATION in the television receiver is the picture tube. The picture tube is specially constructed to limit X-RADIATION emissions. For continued X-RADIATION protection, the replacement tube must be the same type as the original including suffix letter. Excessive high voltage may produce potentially hazardous X-RADIATION. To avoid such hazards, the high voltage must be maintained within specified limit. Refer to this service manual, high voltage adjustment for specific high voltage limit. If high voltage exceeds specified limits, take necessary corrective action. Carefully follow the instructions for +B1 volt power supply adjustment, and high voltage adjustment to maintain the high voltage within the specified limits.

PRODUCT SAFETY NOTICE

Product safety should be considered when a component replacement is made in any area of a receiver. Components indicated by mark \triangle in the parts list and the schematic diagram designate components in which safety can be of special significance. It is particularly recommended that only parts designated on the parts list in this manual be used for component replacement designated by mark \triangle . No deviations from resistance wattage or voltage ratings may be made for replacement items designated by mark \triangle .

SPECIFICATIONS

Power source	AC 220~240V, 50Hz
Television system	System B/G
Colour system	PAL
Receiving channel	VHF: E2-E12 CATV: X, Y, Z, S1-S41 UHF: #21~69
Aerial input impedance	75ohm
AV terminal	
21 Pin SCART Terminal	AV1:CENELEC standard (S-Video Input) AV2:CENELEC standard
Sound output(Music)	9 watts x 2
Picture tube (Visible picture diagonal)	70cm diagonal, 110 degree 66cm
Dimensions (WxHxD)	736 x 596 x 500mm
Weight	31.6 Kg

CHASSIS ELECTRICAL PARTS LIST

Product safety should be considered when a component replacement is made in any area of a receiver. Components indicated by a Δ mark in this parts list and the circuit diagram show components whose value have special significance to product safety. It is particularly recommended that only parts specified on the following parts list be used for components replacement pointed out by the mark Δ .

Note: Parts order must contain Service Ref. No., Part No., and descriptions.

Ref. No.	Part No.	Description
<p>Read description in the Capacitor and Resistor as follows:</p>		
<p>CAPACITOR</p> <p>CERAMIC 100P K 50V</p> <p style="margin-left: 40px;">Rated Voltage</p> <p style="margin-left: 40px;">Tolerance Symbols:</p> <p style="margin-left: 40px;">Less than 10PF</p> <p style="margin-left: 40px;">A: Not specified B: ± 0.1PF C: ± 0.25PF</p> <p style="margin-left: 40px;">D: ± 0.5PF F: ± 1PF G: ± 2PF</p> <p style="margin-left: 40px;">R: ± 0.25-0PF S: ± 0-0.25PF E: ± 0-1PF</p> <p style="margin-left: 40px;">More than 10PF</p> <p style="margin-left: 40px;">A: Not specified B: $\pm 0.1\%$ C: $\pm 0.25\%$</p> <p style="margin-left: 40px;">D: $\pm 0.5\%$ F: $\pm 1\%$ G: $\pm 2\%$</p> <p style="margin-left: 40px;">H: $\pm 3\%$ J: $\pm 5\%$ K: $\pm 10\%$</p> <p style="margin-left: 40px;">L: $\pm 15\%$ M: $\pm 20\%$ N: $\pm 30\%$</p> <p style="margin-left: 40px;">P: ± 100-0% Q: ± 30-10% T: ± 50-10%</p> <p style="margin-left: 40px;">U: ± 75-10% V: ± 20-10% W: ± 100-10%</p> <p style="margin-left: 40px;">X: ± 40-20% Y: ± 150-10% Z: ± 80-20%</p> <p style="margin-left: 40px;">Rated value: P=pico farad, U=Micro farad</p> <p>Material:</p> <p>CERAMICCeramic</p> <p>MT-PAPERMetalized Paper</p> <p>POLYESTERPolyester</p> <p>MT-POLYESTMetalized Polyester</p> <p>POLYPROPolypropylene</p> <p>MT-POLYPROMetalized Polypropylene</p> <p>COMPO FILMComposite film</p> <p>MT-COMPOMetalized Composite</p> <p>STYRENEStyrene</p> <p>TA-SOLIDTantalum Solid</p> <p>AL-SOLIDAluminium Solid</p> <p>ELECTElectrolytic</p> <p>NP-ELECTNon-polarised Electrolytic</p> <p>OS-SOLIDAluminium Solid with Organic Semiconductive Electrolytic</p> <p>DL-ELECTDouble Layered Electrolytic</p>		
<p>RESISTOR</p> <p>CARBON 4.7K J A 1/4W</p> <p style="margin-left: 40px;">Rated Wattage</p> <p style="margin-left: 40px;">Performance Symbols:</p> <p style="margin-left: 40px;">A: General B: Non flammable Z: Low noise</p> <p style="margin-left: 40px;">Other: Temperature coefficient</p> <p style="margin-left: 40px;">Tolerance Symbols:</p> <p style="margin-left: 40px;">A: $\pm 0.05\%$ B: $\pm 0.1\%$ C: $\pm 0.25\%$ D: $\pm 0.5\%$</p> <p style="margin-left: 40px;">F: $\pm 1\%$ G: $\pm 2\%$ J: $\pm 5\%$ K: $\pm 10\%$</p> <p style="margin-left: 40px;">M: $\pm 20\%$ P: ± 5-15%</p> <p style="margin-left: 40px;">Rated value, ohms:</p> <p style="margin-left: 40px;">K: 1,000, M: 1,000,000</p> <p>Material:</p> <p>CARBONCarbon</p> <p>MT-FILMMetal Film</p> <p>OXIDE-MTOxide Metal Film</p> <p>SOLIDComposition</p> <p>MT-GLAZEMetal Glaze</p> <p>WIRE WOUNDWire Wound</p> <p>CERAMIC RES.....Ceramic</p> <p>FUSIBLE RESFusible</p>		
<p style="text-align: center;">Service Ref. No. CE28B4-C-01</p> <p>Chassis construction</p> <p>OUT OF CIRCUIT BOARD -013F7SDV</p> <p>1AA0B10H048D0 ASSY, PWB, MAIN F7SDVC</p> <p>1AA0B10H04700 ASSY, PWB, HARMONICS EB4 AC</p> <p>1AA0B10E48900 ASSY, PWB, CRT F3SS</p> <p>1AA0B10E230BB ASSY, PWB, AUDIO F2RT</p> <p>1AA0B10E230BA ASSY, PWB, SIF F2RT</p> <hr style="border-top: 1px dashed black;"/> <p>ASSY,PWB,MAIN F7SDVC 1AA0B10H048D0</p> <p>(DIFFERENCES)</p> <p>CAPACITOR</p> <p>C222 DELETED</p> <p>C222A 404 045 6605 NP-ELECT 2.2U M 50V</p> <p>DIODE</p> <p>D271 407 099 5214 ZENER DIODE MTZJ5. 1B</p> <p>D352 407 063 9514 ZEN DIODE</p> <p>D431 407 063 9613 ZENER DIODE MTZJ9. 1A</p> <p>D464 407 063 8715 ZENER DIODE MTZJ5. 1C</p> <p>D466 407 099 7812 ZENER DIODE MTZJT- 77- 20A</p> <p>D619 407 063 8319 ZENER DIODE MTZJ11C</p> <p>RESISTOR</p> <p>R602 DELETED</p> <p>COIL</p> <p>L601 DELETED</p> <p>L601A 645 019 3873 LINE FILTER-SAMMHA TECOM</p> <p>MISCELLANEOUS</p> <p>A1901 DELETED</p> <p>A1901A 645 028 1044 REMO REC SPS-443- 1- E</p> <p>KG- 1 645 008 4058 TERMINAL PLUG</p> <p>KG- 2 645 008 4058 TERMINAL PLUG</p> <p>1AA0B10H04700 ASSY,PWB,HARMONICS EB4 AC</p> <p>COIL</p> <p>Δ L1601 645 042 6735 CHOKE, ETQR42T004B PANA</p> <p>RESISTOR</p> <p>Δ R1600 402 075 1508 WIRE WOUND 1R0 KA 5W</p> <p>MISCELLANEOUS</p> <p>Δ K16K- 1 645 008 4058 TERMINAL PLUG</p> <p>Δ K16K- 2 645 008 4058 TERMINAL PLUG</p>		

SANYO

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