

TCM-S68V

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model
E Model



Model Name Using Similar Mechanism	NEW
Tape Transport Mechanism Type	MT-S63

SPECIFICATIONS

Recording system 2-track 1 channel monaural
Frequency response 250 – 6,300 Hz
Speaker Approx. 3.6 cm (17/16 in.) dia.
Power output 130 mW (at 10% harmonic distortion)
Input Microphone input jack (minijack) sensitivity 0.2 mV for 3 k Ω or lower
Impedance microphone
Output Earphone jack (minijack) for 8 – 300 Ω earphone
Power requirements 3 V DC, two R6 (size AA) batteries
DC IN 3V jack accepts:
• Sony AC power adaptor AC-E30M AC power adaptor (not supplied)
for use on:

Canada, US	120 V AC, 60 Hz
U.K.	240 V AC, 50 Hz
European countries, E	220 V AC, 60 Hz or 220 V AC, 50 Hz

• Sony DCC-E130L car battery cord (not supplied) for use on 12 V car battery.

Battery life

Batteries	Recording
Sony batteries SUM-3 (NS)	Approx. 4 hours
Sony alkaline batteries AM3(N)	Approx. 12 hours

Dimensions

Approx. 93.6 x 120.1 x 39.1 mm (w/h/d) (3 3/4 x 4 7/8 x 1 9/16 in.)
incl. projecting parts and controls

Mass

Approx. 285g (10.1 oz.)
incl. batteries

Optional accessories

Car battery cord DCC-E130L
Monaural earphone ME-81, ME-L82
Connecting cord RK-G64HG
Electret condenser microphone ECM-T10 (Except US)
Electret condenser microphone ECM-011 (US)
AC power adaptor AC-E30M

Your dealer may not handle some of the listed optional accessories. Please ask the dealer for detailed information.

Design and specifications subject to change without notice.

Note

This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.



CASSETTE-CORDER
SONY®

Operating with Batteries

When to replace the batteries

When the batteries become weak, the REC/BATT indicator will glow faintly and the playback sound will become distorted or unstable.

In this case, replace both batteries with new ones.

Concerning the battery life, see "Specifications".

Operating on House Current

Note on the AC power adaptor

Use only the AC-E30M AC power adaptor (not supplied).

Do not use any other AC power adaptor.

Polarity of the plug
(Unified polarity type)



Note

Power will be supplied through the AC power adaptor or the car battery cord when it is connected to the unit instead of the installed batteries.

Make sure that the AC power adaptor or the car battery cord is disconnected from the unit when you wish to use the unit with the installed batteries.

SERVICE NOTE

● Repairing printed resistor

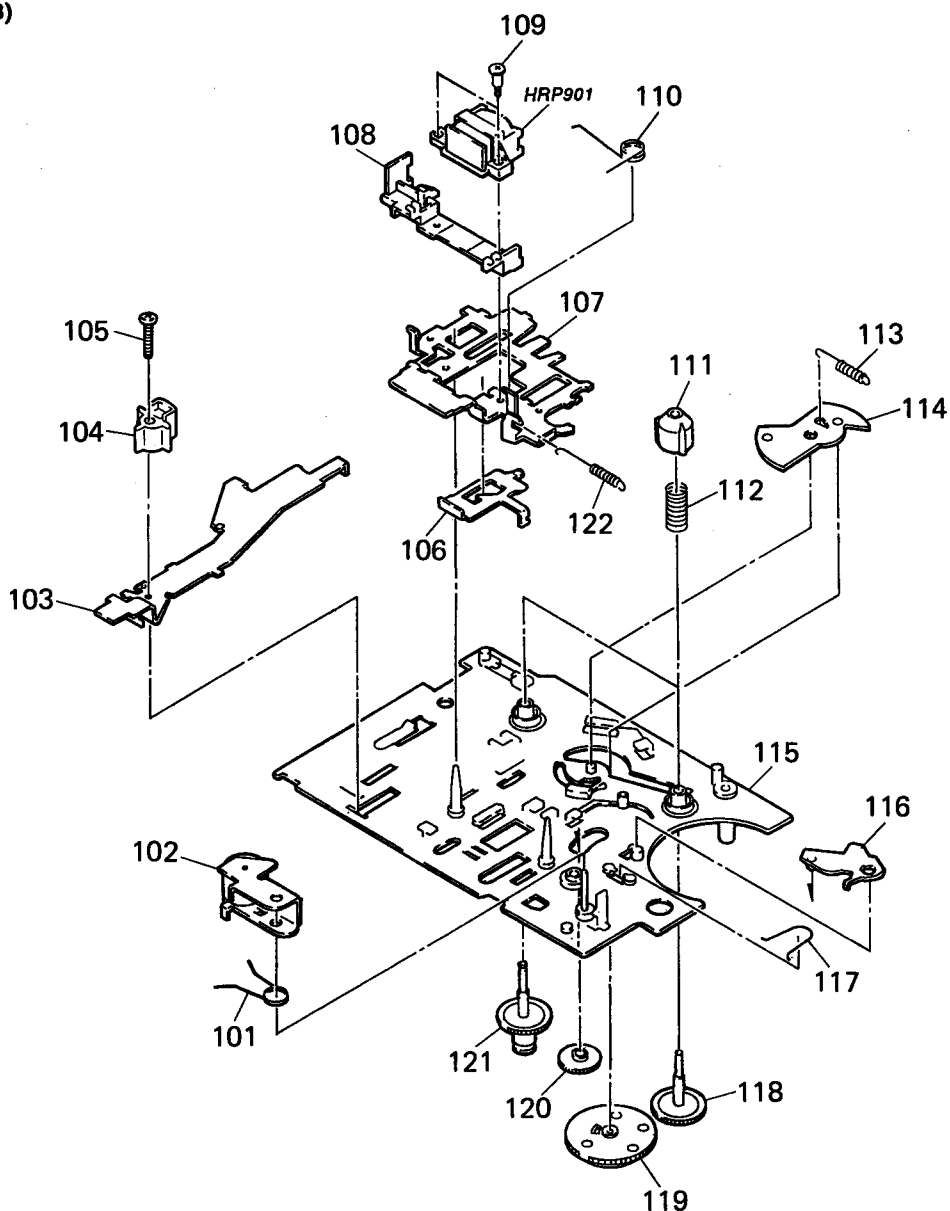
Cut both side of the resistor and solder the carbon resistor having same value in place of printed one of the conductor side.

1/32W carbon resistor is supplied for the replacing part of the printed resistor.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

5-3. MECHANISM SECTION-2
(MT-S63)



Ref. No.	Part No.	Description	Remark
101	3-385-726-01	SPRING	
102	X-3366-062-1	ASSY, PINCH ARM	
* 103	3-385-724-01	LEVER, REC	
104	X-3366-061-1	ASSY, E/H C	
105	3-385-725-01	SCREW	
* 106	3-385-719-01	PLATE, PLAY	
* 107	3-385-718-01	CHASSIS, HEAD	
108	3-385-721-01	GUIDE, HEAD	
109	3-385-723-01	SCREW	
110	3-385-720-01	SPRING	
111	3-385-716-01	REEL	
112	3-385-715-01	SPRING	

Ref. No.	Part No.	Description	Remark
113	3-385-717-01	SPRING	
114	X-3366-060-1	ASSY, CENTER ARM	
115	X-3366-058-1	ASSY, MECHA CHASSIS	
116	X-3366-059-1	ASSY, PLAY ARM	
117	3-385-712-01	SPRING	
118	3-385-713-01	GEAR, REEL	
119	X-3366-065-1	ASSY, GEAR FR	
120	3-385-729-01	GEAR, PLAY	
121	3-385-714-01	GEAR, REEL	
122	3-385-756-01	SPRING	
HRP901 1-543-607-21 HEAD, MAGNETIC (REC/PB)			

CUE SW

MAIN

SECTION 6 ELECTRICAL PARTS LIST

NOTE :

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms
METAL : Metal-film resistor
METAL OXIDE : Metal oxide-film resistor
F : nonflammable

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
In each case, u : μ , for example :
uA.... : μ A...., uPA.... : μ PA....
uPB.... : μ PB...., uPC.... : μ PC....
uPD.... : μ PD....
- CAPACITORS
uF : μ F
- COILS
uH : μ H

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref.No.	Part No.	Description	Remark
		CUE SW BOARD, COMPLETE *****	
*	1-646-500-11	CUE SW (PRC) BOARD < SWITCH >	
	S301 1-571-887-21	SWITCH, KEY BOARD (CUE MARKER) *****	
*	A-3016-289-A	MAIN BOARD, COMPLETE *****	
*	3-385-856-01	CUSHION (LED) < CAPACITOR >	
C101	1-126-301-11	ELECT 1uF	20% 50V
C102	1-126-160-11	ELECT 1uF	20% 50V
C103	1-162-950-11	CERAMIC CHIP 56PF	5% 50V
C104	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V
C105	1-126-157-11	ELECT 10uF	20% 16V
C106	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C107	1-104-402-21	ELECT 220uF	20% 4V
C108	1-124-635-00	ELECT 220uF	20% 4V
C109	1-126-163-11	ELECT 4.7uF	20% 50V
C110	1-162-963-11	CERAMIC CHIP 680PF	10% 50V
C111	1-163-989-11	CERAMIC CHIP 0.033uF	10% 25V
C112	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C113	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C114	1-124-635-00	ELECT 220uF	20% 4V
C115	1-164-346-11	CERAMIC CHIP 1uF	16V
C116	1-124-430-00	ELECT 22uF	20% 4V
C117	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C118	1-126-163-11	ELECT 4.7uF	20% 50V
C119	1-162-968-11	CERAMIC CHIP 0.0047uF	10% 50V
C120	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V
C122	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V
C123	1-126-154-11	ELECT 47uF	20% 6.3V
C124	1-124-463-00	ELECT 0.1uF	20% 50V

Ref.No.	Part No.	Description	Remark
C126	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
C127	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
C128	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C129	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V
C130	1-124-635-00	ELECT 220uF	20% 4V
C131	1-164-346-11	CERAMIC CHIP 1uF	16V
C132	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V
C133	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C134	1-162-960-11	CERAMIC CHIP 220PF	10% 50V
C137	1-164-490-11	CERAMIC CHIP 0.068uF	16V
C301	1-126-163-11	ELECT 4.7uF	20% 50V
C302	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C303	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C304	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C305	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C306	1-164-346-11	CERAMIC CHIP 1uF	16V
C307	1-164-346-11	CERAMIC CHIP 1uF	16V
C308	1-164-346-11	CERAMIC CHIP 1uF	16V
C401	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C402	1-162-968-11	CERAMIC CHIP 0.0047uF	10% 50V
C403	1-164-005-11	CERAMIC CHIP 0.47uF	25V
C501	1-126-157-11	ELECT 10uF	20% 16V
C502	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C503	1-164-245-11	CERAMIC CHIP 0.015uF	10% 25V
C504	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V
C505	1-126-157-11	ELECT 10uF	20% 16V
C506	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C601	1-126-160-11	ELECT 1uF	20% 50V
< CONNECTOR >			
CN101	1-580-919-11	JACK, DC (POLARITY UNIFIED TYPE) (DC IN 3V)	
< DIODE >			
D101	8-719-800-76	DIODE 1SS226	
D102	8-719-800-76	DIODE 1SS226	
D401	8-719-812-41	LED TLR124 (REC/BATT)	

Ref. No.	Part No.	Description	Remark
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< IC >

IC101	8-759-701-02	IC NJM2073M	
IC501	8-759-701-51	IC NJM2072M	
IC601	8-759-801-12	IC LA5523	

< JACK >

J101	1-569-215-31	JACK (MIC)	
J102	1-569-215-31	JACK (EAR)	

< JUMPER RESISTOR >

JR1	1-216-295-00	METAL CHIP	0	5%	1/10W
JR3	1-216-296-00	METAL CHIP	0	5%	1/8W
JR4	1-216-296-00	METAL CHIP	0	5%	1/8W
JR5	1-216-296-00	METAL CHIP	0	5%	1/8W
JR6	1-216-296-00	METAL CHIP	0	5%	1/8W
JR7	1-216-296-00	METAL CHIP	0	5%	1/8W
JR9	1-216-295-00	METAL CHIP	0	5%	1/10W
JR10	1-216-296-00	METAL CHIP	0	5%	1/8W
JR11	1-216-296-00	METAL CHIP	0	5%	1/8W
JR15	1-216-296-00	METAL CHIP	0	5%	1/8W
JR16	1-216-295-00	METAL CHIP	0	5%	1/10W
JR17	1-216-296-00	METAL CHIP	0	5%	1/8W
JR18	1-216-295-00	METAL CHIP	0	5%	1/10W
JR20	1-216-295-00	METAL CHIP	0	5%	1/10W
JR21	1-216-296-00	METAL CHIP	0	5%	1/8W
JR24	1-216-295-00	METAL CHIP	0	5%	1/10W
JR25	1-216-296-00	METAL CHIP	0	5%	1/8W
JR27	1-216-296-00	METAL CHIP	0	5%	1/8W
JR29	1-216-296-00	METAL CHIP	0	5%	1/8W
JR30	1-216-296-00	METAL CHIP	0	5%	1/8W

< TRANSISTOR >

Q101	8-729-402-32	TRANSISTOR	2SD1819A-R
Q102	8-729-402-32	TRANSISTOR	2SD1819A-R
Q103	8-729-402-93	TRANSISTOR	UN5214-TW
Q301	8-729-403-27	TRANSISTOR	XN4401
Q302	8-729-402-96	TRANSISTOR	UN5114
Q303	8-729-402-32	TRANSISTOR	2SD1819A-R
Q304	8-729-402-33	TRANSISTOR	2SD1819A-S
Q305	8-729-420-16	TRANSISTOR	XN1214
Q306	8-729-402-32	TRANSISTOR	2SD1819A-R
Q401	8-729-402-84	TRANSISTOR	XN4601
Q501	8-729-425-21	TRANSISTOR	UN5119
Q502	8-729-402-81	TRANSISTOR	XN4501
Q503	8-729-402-81	TRANSISTOR	XN4501

Ref. No.	Part No.	Description	Remark
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< RESISTOR >

R101	1-216-822-11	METAL CHIP	1.2K	5%	1/16W
R102	1-249-441-11	CARBON	100K	5%	1/4W
R103	1-249-424-11	CARBON	3.9K	5%	1/4W
R104	1-249-438-11	CARBON	56K	5%	1/4W
R105	1-249-438-11	CARBON	56K	5%	1/4W
R106	1-249-418-11	CARBON	1.2K	5%	1/4W
R107	1-216-838-11	METAL CHIP	27K	5%	1/16W
R108	1-249-430-11	CARBON	12K	5%	1/4W
R109	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R110	1-249-409-11	CARBON	220	5%	1/4W
R111	1-249-409-11	CARBON	220	5%	1/4W
R112	1-216-801-11	METAL CHIP	22	5%	1/16W
R113	1-216-813-11	METAL CHIP	220	5%	1/16W
R114	1-216-793-11	METAL GLAZE	4.7	5%	1/16W
R115	1-216-800-11	METAL GLAZE	18	5%	1/16W
R116	1-249-405-11	CARBON	100	5%	1/4W
R117	1-216-853-11	METAL CHIP	470K	5%	1/16W
R119	1-249-429-11	CARBON	10K	5%	1/4W
R120	1-249-423-11	CARBON	3.3K	5%	1/4W
R121	1-249-417-11	CARBON	1K	5%	1/4W
R122	1-249-408-11	CARBON	180	5%	1/4W
R123	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R125	1-249-405-11	CARBON	100	5%	1/4W
R126	1-215-442-00	METAL	7.5K	1%	1/6W
R129	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R301	1-216-833-11	METAL CHIP	10K	5%	1/16W
R302	1-216-835-11	METAL CHIP	15K	5%	1/16W
R303	1-249-419-11	CARBON	1.5K	5%	1/4W
R304	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R305	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R306	1-249-405-11	CARBON	100	5%	1/4W
R307	1-216-853-11	METAL CHIP	470K	5%	1/16W
R308	1-216-861-11	METAL CHIP	2.2M	5%	1/16W
R309	1-216-834-11	METAL CHIP	12K	5%	1/16W
R310	1-216-857-11	METAL CHIP	1M	5%	1/16W
R311	1-216-835-11	METAL CHIP	15K	5%	1/16W
R312	1-216-835-11	METAL CHIP	15K	5%	1/16W
R313	1-216-835-11	METAL CHIP	15K	5%	1/16W
R314	1-216-857-11	METAL CHIP	1M	5%	1/16W
R315	1-216-843-11	METAL CHIP	68K	5%	1/16W
R316	1-249-417-11	CARBON	1K	5%	1/4W
R317	1-216-840-11	METAL CHIP	39K	5%	1/16W
R401	1-216-856-11	METAL CHIP	820K	5%	1/16W
R402	1-249-429-11	CARBON	10K	5%	1/4W
R403	1-249-408-11	CARBON	180	5%	1/4W
R404	1-249-418-11	CARBON	1.2K	5%	1/4W
R405	1-216-845-11	METAL CHIP	100K	5%	1/16W

MAIN	SLIDE SW (PRC)
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Ref. No.	Part No.	Description	Remark
R501	1-216-833-11	METAL CHIP	10K 5% 1/16W
R502	1-249-429-11	CARBON	10K 5% 1/4W
R503	1-216-831-11	METAL CHIP	6. 8K 5% 1/16W
R504	1-216-833-11	METAL CHIP	10K 5% 1/16W
R507	1-249-425-11	CARBON	4. 7K 5% 1/4W
R508	1-249-429-11	CARBON	10K 5% 1/4W
R509	1-249-429-11	CARBON	10K 5% 1/4W
R510	1-249-429-11	CARBON	10K 5% 1/4W
R601	1-216-832-11	METAL CHIP	8. 2K 5% 1/16W
R602	1-216-994-11	METAL GLAZE	13K 5% 1/16W
R603	1-216-230-00	METAL GLAZE	22K 5% 1/8W
R604	1-216-834-11	METAL CHIP	12K 5% 1/16W
R605	1-216-829-11	METAL CHIP	4. 7K 5% 1/16W
R606	1-216-829-11	METAL CHIP	4. 7K 5% 1/16W
R607	1-216-842-11	METAL CHIP	56K 5% 1/16W
< VARIABLE RESISTOR >			
RV101	1-223-293-11	RES, VAR, CARBON 50K (VOL)	
RV601	1-238-665-11	RES, ADJ, CERMET 22K (TAPE SPEED)	
< SWITCH >			
S101	1-571-151-11	SWITCH, SLIDE (REC/PB)	
S102	1-571-478-11	SWITCH, SLIDE (VOR)	
S601	1-570-675-11	SWITCH, SLIDE (PAUSE/SWITCH)	
S602	1-692-397-21	SWITCH, SLIDE (FAST PB/SWITCH)	
< THERMISTOR >			
TH601	1-808-980-11	THERMISTOR	
< THERMISTOR(POSITIVE) >			
THP601	1-810-007-11	THERMISTOR, POSITIVE	

*	1-646-499-11	SLIDE SW (PRC) BOARD	

< SWITCH >			
S103	1-572-581-11	SWITCH, SLIDE (MIC SENS)	

MISCELLANEOUS			

8	1-548-582-11	COUNTER, TAPE (SMALL TYPE)	
HRP901	1-543-607-21	HEAD, MAGNETIC (REC/PB)	
M901	X-3366-095-1	MOTOR, ASSY	
MIC901	1-542-142-11	MICROPHONE, BUILT-IN	
S104	1-692-400-11	SWITCH, LEAF (POWER)	
SP901	1-544-657-11	SPEAKER (3. 6CM)	

Ref. No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS	

*	3-387-183-01	CUSHION (TOP) (US)	
*	3-387-184-01	CUSHION (BOTTOM) (US)	
	3-756-196-11	MANUAL, INSTRUCTION	
		(ENGLISH, FRENCH, SPANISH, PORTUGUESE)	
		(Canadian, AEP, UK, E, Saudi Arabia, Tourist)	
	3-756-196-21	MANUAL, INSTRUCTION (ENGLISH) (US)	
	3-756-196-41	MANUAL, INSTRUCTION	
		(GERMAN, DUTCH, SWEDISH, ITALIAN) (AEP)	