

HITACHI

SERVICE MANUAL

TY

No. 405EGF

D-E4

(U,C,VK,BS,SA,W)

FZ-21A chassis

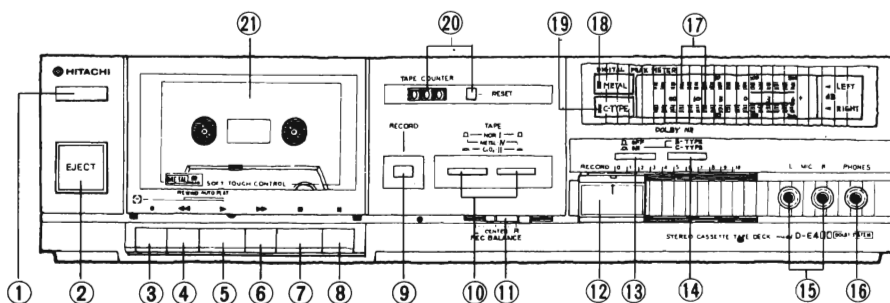
This manual indicates only those portions which differ from Service Manual No. 368EGF (D-E2), since the contents are the same as the D-E2 except the parts described below. Then this model has two colors of silver and black.

When servicing this model, it is strongly recommended that this manual be used together with Manual No. 368EGF.

Dieses Handbuch enthält nur die Teile, die sich vom Wartungs-Handbuch Nr. 368EGF (D-E2) unterscheiden. Der Inhalt gleicht dem D-E2 mit Ausnahme der unten beschriebenen Teile. Dieses Modell ist in den beiden Farben Silber und Schwarz erhältlich. Bei Wartungsarbeiten an diesem Modell wird empfohlen, dieses Handbuch zusammen mit dem Handbuch Nr. 368EGF zu verwenden.

Ce manuel n'indique que les parties qui diffèrent du Manuel de Service No. 368EGF (D-E2), car le contenu est identique à celui du D-E2, sauf les parties décrites ci-après. Ce modèle présente deux couleurs, argent et noir. Pour l'entretien de ce modèle, il est vivement conseillé d'utiliser ce manuel ensemble avec le Manuel No. 368EGF.

RECEIVED JUN 2 5 1984



CONTENTS

SPECIFICATIONS	2
FEATURES	3
BLOCK DIAGRAM	4
EXPLODED VIEW	5
PRINTED WIRING BOARD	6
CIRCUIT DIAGRAM	7
REPLACEMENT PARTS LIST	9

INHALTSVERZEICHNIS

TECHNISCHE DATEN	2
MERKMALE	3
BLOCKHEMA	4
EXPLOSIONANSICHT	5
PRINT PLATTEN	6
SCHALTPLAN	7
ERSATZTEILLISTE	9

TABLE DES MATIERES

FICHE TECHNIQUE	3
CARACTERISTIQUES	3
SCHEMA	4
VUE EXPLOSÉE	5
PLAN DE BASE	6
PLAN DE CIRCUIT	7
TABLEAU DESPIECES	9

KEY TO ILLUSTRATIONS

- ① POWER STAND-BY SWITCH
- ② EJECT BUTTON
- ③ RECORD BUTTON
- ④ REWIND BUTTON
- ⑤ PLAYBACK BUTTON
- ⑥ FAST FORWARD BUTTON
- ⑦ STOP BUTTON
- ⑧ PAUSE BUTTON
- ⑨ RECORDING INDICATOR
- ⑩ TAPE SELECT SWITCHES
- ⑪ RECORDING BALANCE CONTROL
- ⑫ RECORDING LEVEL CONTROL
- ⑬ DOLBY* NR SWITCH
- ⑭ DOLBY B/C NR SELECT SWITCH
- ⑮ MICROPHONE JACKS
- ⑯ HEADPHONE JACK
- ⑰ LEVEL METERS
- ⑱ METAL TAPE INDICATOR
- ⑲ DOLBY* C-TYPE INDICATOR
- ⑳ TAPE COUNTER/RESET BUTTON
- ㉑ CASSETTE HOLDER

Regler und Bedienungselemente

- ① Netz/Bereitschafts-Schalter
- ② Auswurfaste
- ③ Aufnahmetaste
- ④ Rücklauftaste
- ⑤ Weidergabetaste
- ⑥ Schnellvorlauftaste
- ⑦ Stoptaste
- ⑧ Pausetaste
- ⑨ Aufnahmeanzeige
- ⑩ Bandsortenwähler
- ⑪ Aufnahme-Balanceregler
- ⑫ Aufnahmepegelregler
- ⑬ Dolby*-NR-Schalter
- ⑭ Dolby-B/C-NR-Wahlschalter
- ⑮ Mikrofonbuchsen
- ⑯ Kopfhörerbuchse
- ⑰ Pegelmesser
- ⑱ Metallband-Anzeige
- ⑲ Dolby C*-Anzeige
- ⑳ Bandzählwerk/Rückstellaste
- ㉑ Cassetlenhalter

Guide des illustrations

- ① Interrupteur stand-by (attente) d'alimentation
- ② Touche d'éjection
- ③ Touche d'enregistrement
- ④ Touche de rebobinage
- ⑤ Touche de lecture
- ⑥ Touche d'avance rapide
- ⑦ Touche d'arrêt
- ⑧ Touche de pause
- ⑨ Témoin d'enregistrement
- ⑩ Sélecteurs de bande
- ⑪ Réglage de balance à l'enregistrement
- ⑫ Commande de niveau d'enregistrement
- ⑬ Interrupteur de Dolby* NR
- ⑭ Sélecteur dolby B/C NR
- ⑮ Prises de microphone
- ⑯ Prise de casque d'écoute
- ⑰ Indicateurs de niveau
- ⑱ Indicateur de bande métallique
- ⑲ Indicateur Dolby de type C
- ⑳ Touche de compteur de repérage/remise sur zéro
- ㉑ Trappe à cassette

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT.

STEREO CASSETTE TAPE DECK

March 1984

TOYOKAWA WORKS

SAFETY PRECAUTIONS

The following precautions should be observed when servicing

1. Since many parts in the unit have special safety related characteristics, always use genuine Hitachi's replacement parts. Especially critical parts in the power circuit block should not be replaced with other makers. Critical parts are marked with Δ in the circuit diagram.
2. Before returning a repaired unit to the customer, the service technician must thoroughly test the unit to ascertain that it is completely safe to operate without danger of electrical shock.

SPECIFICATIONS

Track System:	4 track 2 channel stereo	Input Sensitivity and Impedance:	Line in: 80 mV, 50 kohms Microphone: 0.4 mV (Suitable microphone impedance 300 ohms to 5 kohms)
Tape:	Cassette tape	Output Level and Impedance:	Line out: 500 mV (Suitable Load Impedance 50 kohms or more) Headphone: 60 mV (8 ohms) (Suitable Load Impedance 8 ohms to 2 kohms)
Tape Speed:	4.75 cm/s	Distortion:	1% (1 kHz, 160 nWb/m)
Recording System and Bias Frequency:	AC bias, 85 kHz	Crosstalk:	60 dB (at 1 kHz) or more
Erasing System:	AC erase	Power Supply:	AC 120 V, 60 Hz (U, C) ~ 220 V, 50 Hz (VK) ~ 240 V, 50 Hz (BS, SA) ~ 110-120 V / 200-240 V 50, 60 Hz (W)
Erase Ratio:	65 dB (at 1 kHz) or more	Power Consumption:	9.5 W (Except W) 10W (for W)
Frequency Response:	NOR-I: 20 Hz to 15 kHz 30 Hz to 14 kHz (± 3 dB)* CrO ₂ -II: 20 Hz to 16 kHz 30 Hz to 15 kHz (± 3 dB)* METAL-IV: 20 Hz to 17 kHz 30 Hz to 16 kHz (± 3 dB)*	Dimensions:	435 (W) x 110 (H) x 218 (D) mm
Signal to Noise Ratio:	Dolby NR OFF: 58 dB Dolby B NR ON: 66 dB Dolby C NR ON: 72 dB (A weighted, Reference 3% T.H.D.) Dolby NR OFF: 57 dB* Dolby B NR ON: 65 dB* Dolby C NR ON: 71 dB*	Weight:	3.3 kg
Wow and flutter:	0.07% (WRMS) 0.2%*		

* According to DIN 45 500

Specifications are subject to change without notice for performance improvement.

SICHERHEITSMASSNAHMEN

Bei Wartungsarbeiten sind die folgenden Sicherheitsmaßnahmen zu beachten.

1. Da verschiedene Teile dieses Gerätes Sicherheitsfunktionen aufweisen, nur Original-Hitachi-Ersatzteile verwenden. Kritische Teile im Netzteil sollten nicht durch ähnliche Teile anderer Hersteller ersetzt werden. Alle kritischen Teile sind im Schaltplan mit dem Symbol Δ gekennzeichnet.
2. Vor der Auslieferung eines reparierten Gerätes an den Kunden muß der Wartungstechniker das Gerät einer gründlichen Prüfung unterziehen, um sicherzustellen, daß sicherer Betrieb ohne die Gefahr von elektrischen Schlägen gewährleistet ist.

TECHNISCHE DATEN

Spursystem:	4-Spur, 2-Kanal-Stereo	Eingangsempfindlichkeit und -Impedanz:	LINE IN: 80 mV, 50 kOhm oder mehr Mikrofon: 0,4 mV (Geeignete Mikrofon-Impedanz 300 Ohm bis 5 kOhm)
Tonband:	Cassetten-Tonband	Ausgangspegel und Impedanz:	LINE OUT: 500 mV (Geeignete Lastimpedanz 50 kOhm oder mehr) Kopfhörer: 60 mV (8 Ohm) (Geeignete Lastimpedanz 8 Ohm bis 2 kOhm)
Bandlaufgeschwindigkeit:	4,75 cm/s	Klirrgrad:	Weniger als 1,0% (1 kHz, 160 nWb/m)
Aufnahmesystem und Vormagnetisierungsfrequenz:	HF-Vormagnetisierung, 85 kHz	Übersprechdämpfung:	60 dB (bei 1 kHz) oder mehr
Löschsystem:	HF-Löschung	Spannungsversorgung:	Netz 120 V, 60 Hz (U, C) ~ 220 V, 50 Hz (VK) ~ 240 V, 50 Hz (BS, SA) ~ 110-120 V / 200-240 V, 50, 60 Hz (W)
Löschdämpfung:	65 dB (bei 1 kHz) oder mehr	Leistungsaufnahme:	9,5 W (Außer W) 10W (für W)
Frequenzgang:	NOR-I: 20 Hz bis 15 kHz 30 Hz bis 14 kHz (± 3 dB)* CrO ₂ -II: 20 Hz bis 16 kHz 30 Hz bis 15 kHz (± 3 dB)* METAL-IV: 20 Hz bis 17 kHz 30 Hz bis 16 kHz (± 3 dB)*	Abmessungen:	435 (B) x 110 (H) x 218 (T) mm
Fremdspannungsabstand:	Ohne Dolby NR: 58 dB Mit Dolby-B-NR: 66 dB Mit Dolby-C-NR: 72 dB (A bewertet, Bezug 3% Klirrfaktor) Ohne Dolby NR: 57 dB* Mit Dolby-B-NR: 65 dB* Mit Dolby-C-NR: 71 dB*	Gewicht:	3,3 kg
Gleichlaufschwankungen:	0,07% (WRMS) 0,2%*		

* Nach DIN 45 500

Änderungen der technischen Daten im Sinne ständiger Verbesserung vorbehalten.

PRÉCAUTIONS DE SÉCURITÉ

Les précautions suivantes doivent être observées chaque fois qu'une réparation doit être faite.

1. Etant donné que de nombreux composants de l'appareil possèdent des caractéristiques relatives à la sécurité, utiliser uniquement des pièces de rechange d'origine Hitachi pour effectuer un remplacement. Ceci se rapporte notamment aux pièces critiques du bloc d'alimentation qui ne doivent en aucun cas être remplacées par celles d'autres fabricants. Les pièces critiques sont accompagnées du symbole Δ dans le schéma de montage.
2. Avant de retourner l'appareil répare au client, le technicien doit procéder à un essai complet pour s'assurer qu'il ne présente aucun danger de chocs électriques.

FICHE TECHNIQUE

Système de piste:	4 pistes, 2 canaux stéréo	Sensibilité d'entrée et impédance:	Entrée de ligne: 80 mV, 50 kohms Microphone: 0,4 mV (Impédance de microphone correcte de 300 ohms à 5 kohms)
Bande:	Bande en cassette	Niveau de sortie et impédance:	Sortie de ligne: 500 mV (Impédance de charge correcte de 50 kohms ou plus) Casque d'écoute: 60 mV (8 ohms) (Impédance de charge correcte de 8 ohms à 2 kohms)
Vitesse de défilement:	4,75 cm/seconde	Distortion:	Moins de 1,0% (à 1 kHz, 160 nWb/m)
Système d'enregistrement et fréquence de polarisation:	Polarisation C.A., 85 kHz	Diaphonie:	60 dB (à 1 kHz) ou plus
Système d'effacement:	Effacement C.A.	Alimentation:	CA 120 V, 60 Hz (U, C) ~ 220 V, 50 Hz (VK) ~ 240 V, 50 Hz (BS, SA) ~ 110-120 V / 200-240 V, 50, 60 Hz (W)
Rapport d'effacement:	65 dB (à 1 kHz) ou plus	Consommation électrique:	9,5 W (Sauf W) 10W(pourW)
Réponse en fréquence:	NOR-I: De 20 Hz à 15 kHz De 30 Hz à 14 kHz (±3 dB)* CrO ₂ -II: De 20 Hz à 16 kHz De 30 Hz à 15 kHz (±3 dB)* METAL-IV: De 20 Hz à 17 kHz De 30 Hz à 16 kHz (±3 dB)*	Dimensions:	435 (L) x 110 (H) x 218 (P) mm
Rapport signal/bruit:	Avec Dolby NR OFF: 58 dB Avec Dolby B NR ON: 66 dB Avec Dolby C NR ON: 72 dB (Pondéré A, référence 3% D.H.T.) Avec Dolby NR OFF: 57 dB* Avec Dolby B NR ON: 65 dB* Avec Dolby C NR ON: 71 dB*	Poids:	3,3 kg
Pleurage et scintillement:	0,07% (WRMS) 0,2%*		* D'après DIN 45 500

Ces caractéristiques peuvent être modifiées sans préavis pour amélioration des performances.

FEATURES

1. Soft touch operation by simply pressing buttons lightly.
2. Recording and playback head suitable for metal tape.
3. Built-In Dolby NR B/C circuit.
4. Rewind autoplay.
5. Timer Recording and timer play back.
6. Dolby C-type indicator.
7. Metal tape indicator.

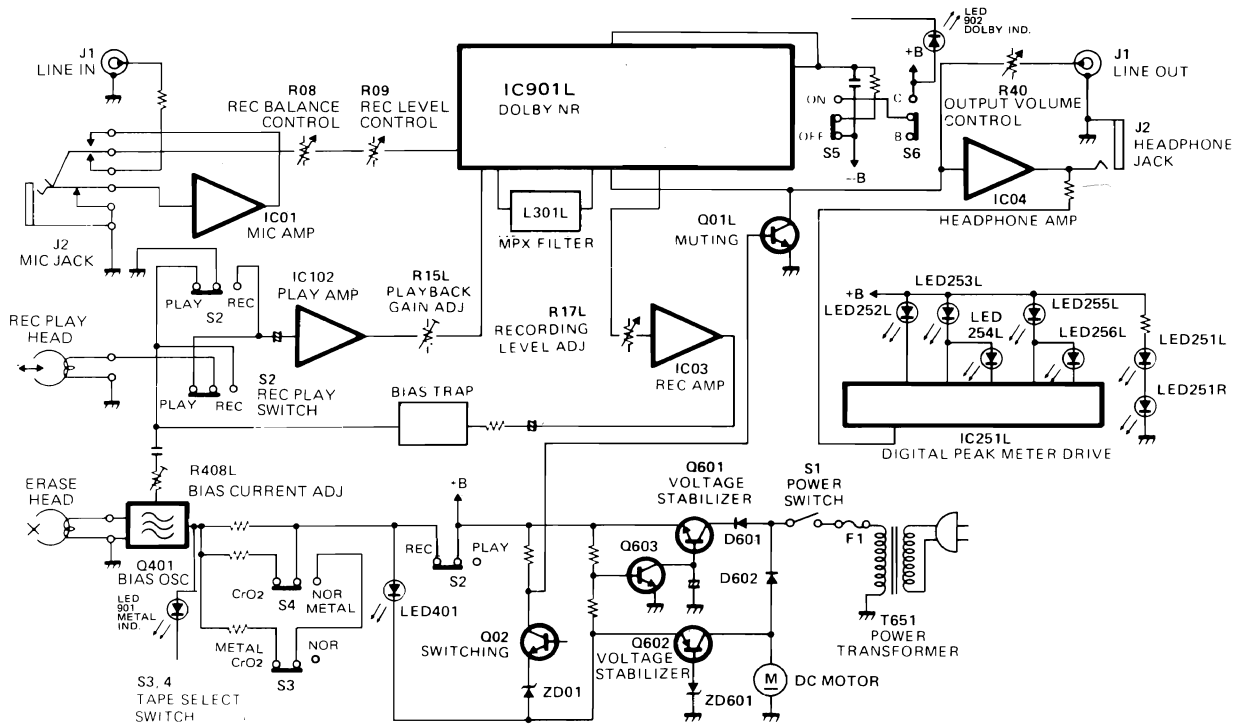
MERKMALE

1. Leichtgängige Kurzhubtasten, die auf Antippen reagieren.
2. Aufnahme/Wiedergabe-Kopf, für Metallband geeignet.
3. Eingebauter Dolby-NR-B/C-Schaltkreis.
4. Automatische Rückspul-Wiedergabe.
5. Schaltuhr-Aufnahme und Schaltuhr-Wiedergabe.
6. Dolby C-Anzeige.
7. Metallband-Anzeige.

CARACTERISTIQUES

1. Fonctionnement aisé grâce à des touches sensibles.
2. Les têtes d'enregistrement et de lecture sont appropriées aux bandes METAL.
3. Incorporation d'un circuit réducteur de bruit Dolby de type B/C.
4. Lecture automatique après reboilage.
5. Enregistrement et lecture par chronomètre.
6. Indicateur Dolby de type C.
7. Indicateur de bande métallique.

BLOCK DIAGRAM · BLOCKSCHMA · SCHEMA



Test and Check Tapes: Prüf- und Meßbänder: Bandes d'essai et de vérification

for US, CS
 NORMAL alignment tape (UDtape)
 CHROME alignment tape (EXtape)
 HITACHI METAL tape (MEtape)
 except US, CS
 IEC STANDARD TAPE I (Nor.)
 IEC STANDARD TAPE II (CrO₂)
 IEC STANDARD TAPE IV (Metal)

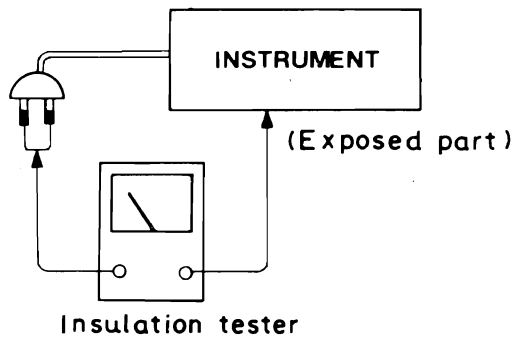
für US, CS
 Normal-Abgleichband (UD-Band)
 Chromdioxid-Abgleichband (EX-Band)
 HITACHI Reineisenband (ME-Band)
 außer US, CS
 IEC-Standard Band I (Normalband)
 IEC-Standard Band II (Chromdioxidband)
 IEC-Standard Band IV (Reineisenband)

pour US et CS
 Bande d'étalonnage NORMAL (bande UD)
 Bande d'étalonnage CHROME (bande EX)
 Bande METAL HITACHI (bande ME)
 sauf US,CS
 STANDARD IEC TAPE I (Nor.)
 STANDARD IEC TAPE II (CrO₂)
 STANDARD IEC TAPE IV (Métal)

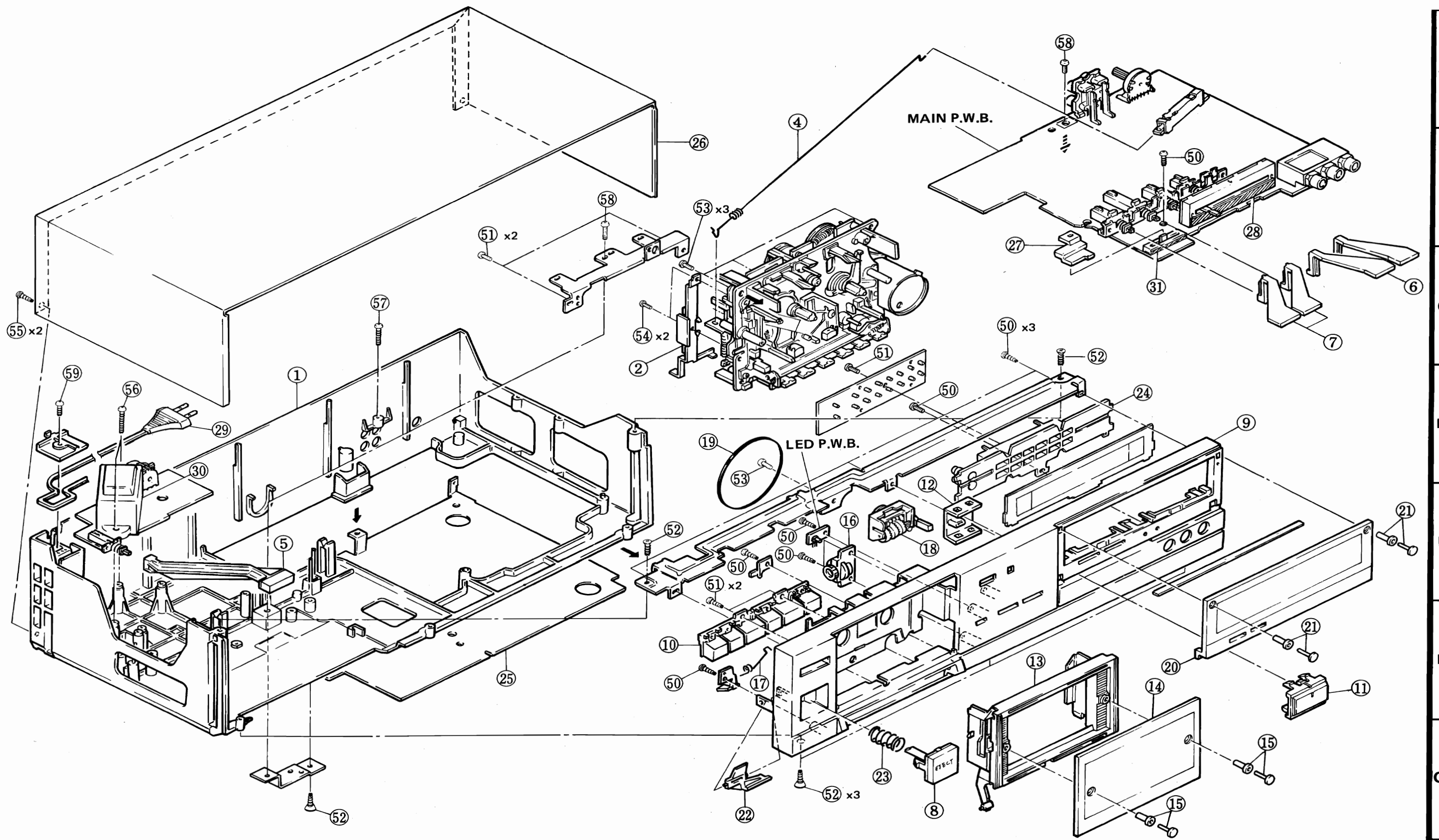
Check that exposed parts are acceptably insulated from the supply circuit before returning the instrument repaired to the customer.

• Checking method

Power switch is set to ON.
 Next, measure the resistance value between the both poles of attachment cup (Power supply plug) and the exposed parts (Parts such as Knob, Cover, etc. where the customer is easy to touch.) and check that the resistance value is 500 kohms or more.



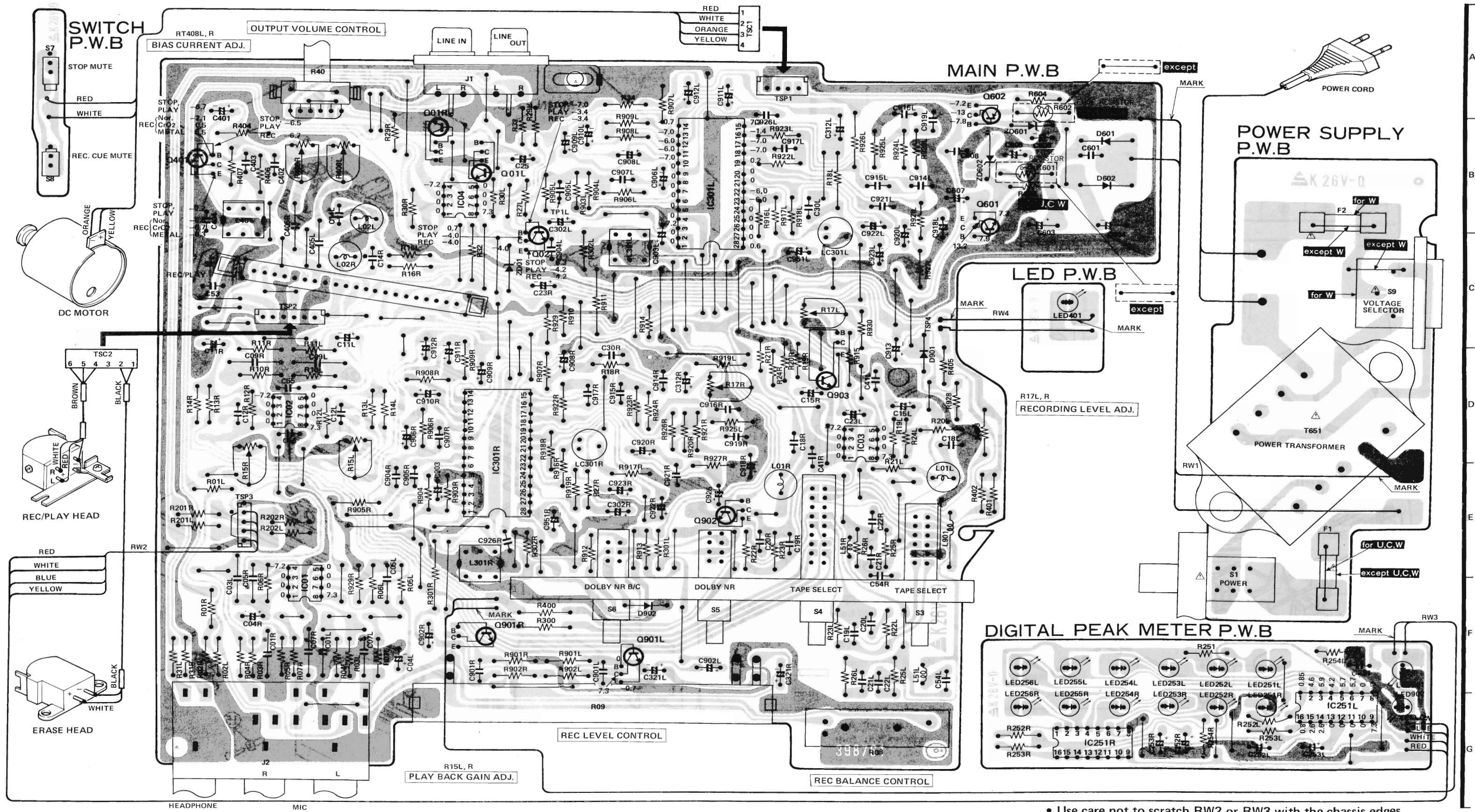
EXPLODED VIEW (Cabinet) · EXPLOSIONANSICHT (Chassis) · VUE EXPLOSEE (Doffret)



A
B
C
D
E
F
G

1 2 3 4 5 6 7 8 9

- *: Axial lead cylindrical ceramic capacitor.
- *: Zylindrischer Keramik Kondensator mit axialer Zuleitung.
- *: Condensateur céramique cylindrique à conducteur axial.

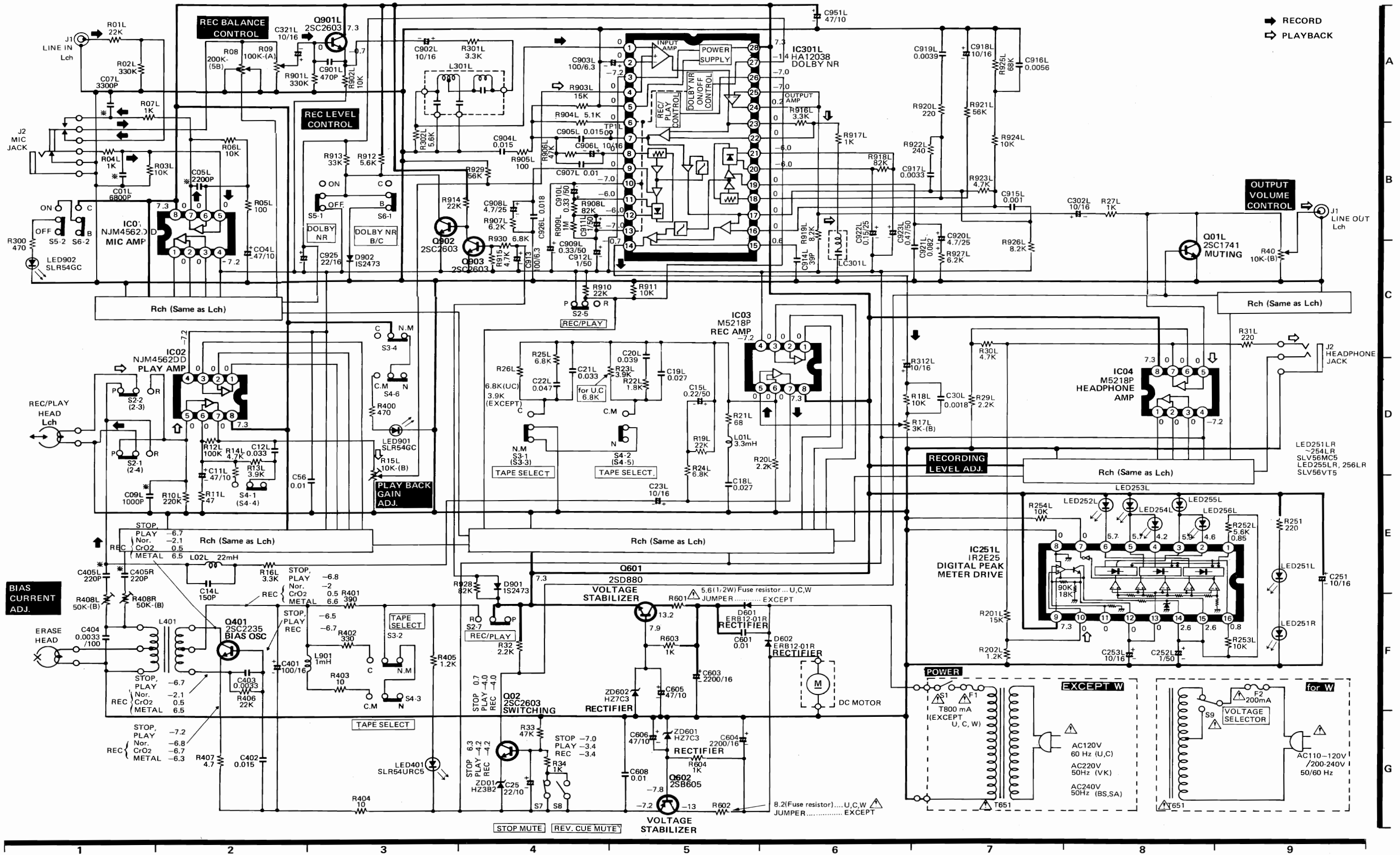


• Use care not to scratch RW2 or RW3 with the chassis edges.

CIRCUIT DIAGRAM · SCHALTPLAN · PLAN DE CIRCUIT

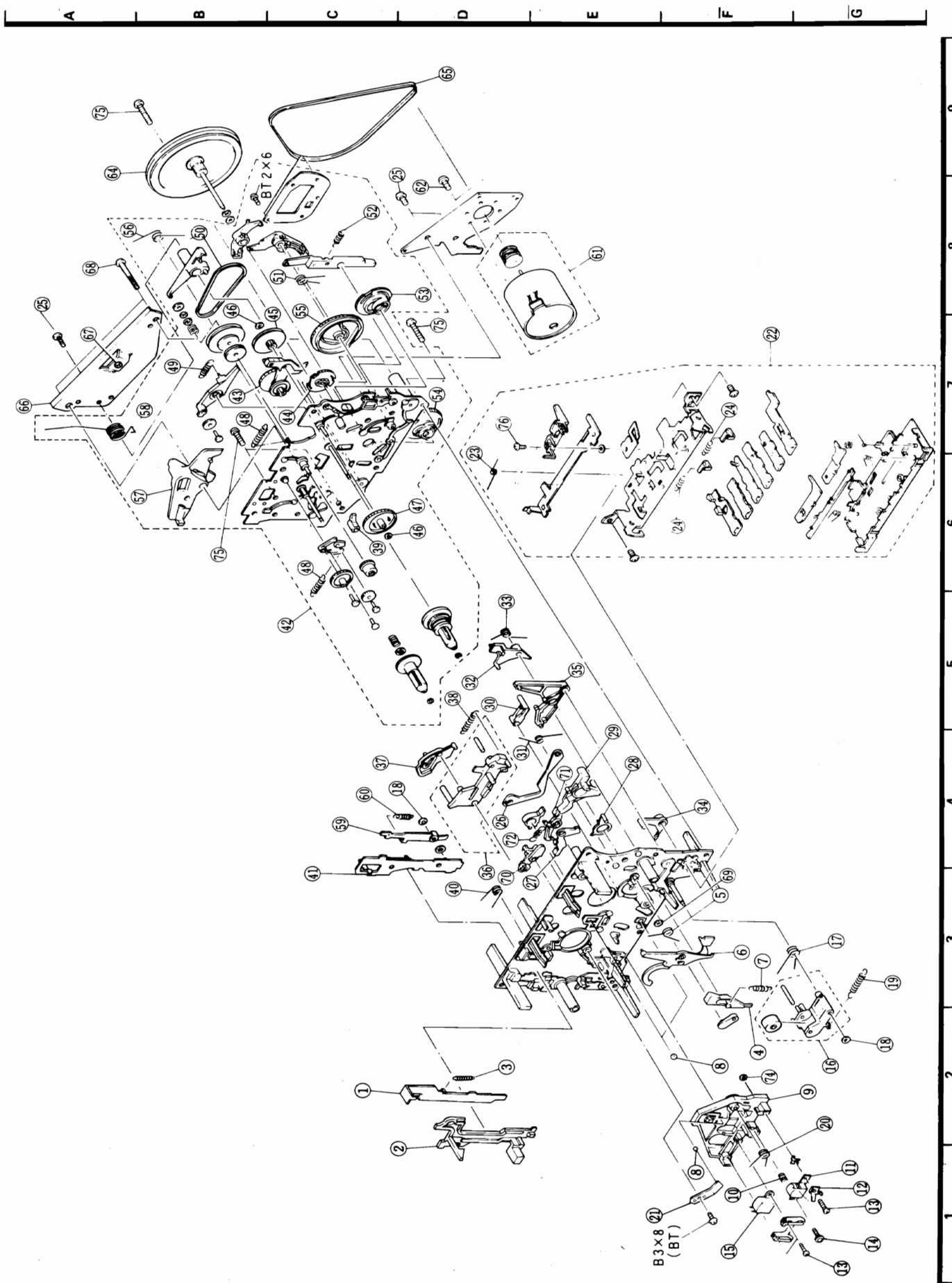
- *: Axial lead cylindrical ceramic capacitor.
- *: Zylindrischer Keramikkondensator mit axialer Zuleitung.
- *: Condensateur céramique cylindrique à conducteur axial.

CAUTION
Use the electrolytic capacitors with explosion-proof valve when the diameter of them is more than 10 mmφ.



→ RECORD
⇄ PLAYBACK

EXPLODED VIEW (Cassette Chassis) · EXPLOSIONSANSICHT (Chassetten Tonbandgerät) · VUE EXPLOSÉE (Magnéphone)



REPLACEMENT PARTS LIST · ERSATZTEILLISTE · TABLEAU DES PIÈCES

CABINET CHASSIS

UB: US black model

ITEM No.	PART No.	DESCRIPTION	ITEM No.	PART No.	DESCRIPTION
1	4088743	Mold chassis ass'y (for U, C, UB)	21	4901821	Sheet
	4088741	Mold chassis ass'y (for VK, BS, SA, ZS)	22	3296701	Eject lever
	4088742	Mold chassis ass'y (for W)	23	3362631	Eject spring
2	4449921	REC arm ass'y	25	3161393	Bottom cover
3	3942385	Leg.	26	4434191	Upper cover (except UB)
4	4448742	REC wire (B)		4434195	Upper cover (for UB)
5	3296634	Power button ass'y (for U, C, UB)	27	3296651	Balance knob
	3296635	Power button ass'y (for W, ZS, VK, BS, SA)	28	4701728	Spacer A
6	3296661	Dolby button (Silver) (except UB)	29	2718114	Power supply cord (for U, C)
	3296664	Dolby button (Black) (for UB)		2749584	Power supply cord (for BS)
7	3296671	T select button		2718092	Power supply cord (for ZS, W)
8	3957187	Eject button ass'y		2718091	Power supply cord (for VK)
9	3200386	Front panel ass'y (for U, C)		2717952	Power supply cord (for SA)
	3200387	Front panel ass'y (for W, ZS, VK, BS, SA)	30	2248212	Power transformer (T65 1) (for U, C)
	3200762	Front panel ass'y (for UB)		2248213	Power transformer (T65 1) (for VK, ZS)
10	3296759	Operation key ass'y		2248214	Power transformer (T65 1) (for BS, SA)
11	3296681	REC knob		2248215	Power transformer (T65 1) (for W)
12	3298671	REC body (N)	50	8691408	3φ × 8 BT bind screw
13	3956891	Cassette holder (except UB)	51	8699306	2.6φ × 6 BT bind screw
	3956872	Cassette clear (except UB)	52	4577831	3φ × 10 BT flat head screw
	3956895	Cassette holder (for UB)	53	4567411	3φ × 6 DT bind screw
	3956879	Cassette clear (for UB)	54	8711108	2φ × 8 pan head screw
15	3947541	Nylon rivet (B)	55	8698410	3φ × 10 BT bind screw (Silver)
16	3900881	Oil damper		8699410	3φ × 10 BT bind screw (Black)
17	3365033	Holder spring	56	8691416	3φ × 16 BT bind screw
18	2788254	Tape counter	57	8691412	3φ × 12 BT bind screw
19	4688573	Counter belt	58	4567452	3φ × 8 DT bind screw
20	3958627	Blind (except UB)	59	4567433	3φ × 10 BT flat head screw (Black)
	3958623	Blind (for UB)			

CASSETTE CHASSIS

ITEM No.	PART No.	DESCRIPTION	ITEM No.	PART No.	DESCRIPTION
1	7345871	Record prevention slider	39	6773333	Search stopper
2	6771344	Eject slider	40	6548281	Spring
3	6301011	Lock lever spring	41	7345807	Record slider ass'y
4	6773822	Record sensor arm	42	6775964	Turntable holder ass'y
5	6547923	Spring	43	6771365	Take up arm ass'y
6	6773832	Auto stop sensor arm	44	6432212	Pause PA gear
7	6300595	Spring (for record sensor arm)	45	6422773	Auto stop pulley
8	0948492	2φ ball	46	7786115	Auto stop cam gear
9	6771335	Head plate	47	6432073	Auto stop cam gear
10	6321733	Spring (C) (for head height adjustment)	48	6301331	Spring
11	5449032	Record/Playback head	49	6301101	Spring
12	7339962	Earth plate (C)	50	6355504	Belt
13	7780913	2φ × 10 bind tapping screw	51	6547561	Spring
14	7781004	Record/Playback head fixing screw	52	6301001	Spring (for P lock arm)
15	5445531	Erase head	53	6432054	FF PA gear
16	6771073	Pressure roller arm ass'y	54	6432061	Rewind PA gear
17	6547692	Spring (for pressure roller)	55	6432044	Play PA gear
18	7778859	Polyslider washer	56	6548121	Spring
19	6301101	Spring	57	6771245	Record PA arm
20	6547571	Head plate spring	58	6548861	Spring
21	7345882	Head plate holder	59	7345994	Record lever
22	6059763	Button ass'y	60	6300599	Spring (for record lever)
23	6547642	Spring	61	7043321	Motor ass'y
24	6300181	Spring for lever	62	7783471	2.6φ × 2.5 bind screw
25	8691408	3φ × 8 BT bind screw	63	6355841	Belt
26	7345892	Timing lever	64	6974174	Flywheel ass'y
27	7345913	Return lever	65	6357581	Flywheel belt
28	7345862	Prevention lever	66	7345834	Flywheel supporting plate
29	6774221	Review cue arm (B)	67	7788063	Polyslider washer
30	6771082	Tension arm	68	7781147	3φ × 30 BT screw
31	6547622	Spring	69	7786623	Polyslider washer
32	6774211	Pause trigger (B)	70	6771102	Brake arm (supply) L ass'y
33	6548261	Spring	71	6771111	Brake arm (take up) R ass'y
34	6774201	Auto stop arm (B)	72	6543811	Brake arm spring
35	6771474	Function arm	73	6772843	Arm holder
36	6771414	Play arm ass'y	74	8821231	2φ nut
37	6774231	Review cue switch arm (B)	75	8691414	3φ × 14 BT bind screw
38	6301233	Spring	76	8699306	2φ × 8 pan head screw

REPLACEMENT PARTS LIST · ERSATZTEILLISTE · TABLEAU DES PIÈCES

SYMBOL No.	PART No.	DESCRIPTION			SYMBOL No.	PART No.	DESCRIPTION		
CAPACITORS									
C01 L,R	0240105	Cylindrical ceramic	6800pF ±30%	25V	C910 L,R	0252803	Electrolytic	0.33μF	50V
C04 L,R	0252325	Electrolytic	47μF	10V	C911 L,R	0252811	Electrolytic	1μF	50V
C05 L,R	0240102	Cylindrical ceramic	2200pF ±30%	50V	C912 L,R	0252811	Electrolytic	1μF	50V
C07 L,R	0240103	Cylindrical ceramic	3300pF ±30%	50V	C913	0252231	Electrolytic	100μF	6.3V
C09 L,R	0240012	Cylindrical ceramic	1000pF ±10%	50V	C914 L,R	0208674	Ceramic, discal	39pF ±5%	50V
C11 L,R	0252325	Electrolytic	47μF	10V	C915 L,R	0274011	Mylar, film	0.001μF ±10%	50V
C12 L,R	0275014	Mylar, film	0.033μF ±10%	50V	C916 L,R	0274035	Mylar, film	0.0056μF ±10%	50V
C14 L,R	0208688	Ceramic, discal	150pF ±5%	50V	C917 L,R	0274014	Mylar, film	0.0033μF ±10%	50V
C15 L,R	0252802	Electrolytic	0.22μF	50V	C918 L,R	0252571	Electrolytic	10μF	16V
C18 L,R	0275033	Mylar, film	0.027μF ±10%	50V	C919 L,R	0274234	Mylar, film	0.0039μF ±10%	50V
C19 L,R	0275033	Mylar, film	0.027μF ±10%	50V	C920 L,R	0252615	Electrolytic	4.7μF	25V
C20 L,R	0275034	Mylar, film	0.039μF ±5%	50V	C921 L,R	0275036	Mylar, film	0.082μF ±10%	50V
C21 L,R	0275014	Mylar, film	0.033μF ±10%	50V	C922 L,R	0252804	Electrolytic	0.15μF	50V
C22 L,R	0275015	Mylar, film	0.047μF ±5%	50V	C923 L,R	0252805	Electrolytic	0.47μF	50V
C23 L,R	0252521	Electrolytic	10μF	16V	C925	0252522	Electrolytic	22μF	16V
C25	0252322	Electrolytic	22μF	10V	C926 L,R	0275032	Mylar, film	0.018μF ±10%	50V
C30L,R	0274032	Mylar, film	0.0018μF	50V	C951 L,R	0252325	Electrolytic	4.7μF	10V
C41L,R	0209723	Ceramic, discal	47pF ±10%	80V	RESISTORS				
C56	0244171	Ceramic, discal	0.01μF +80% -20%	50V	R01 L,R	0129635	Carbon film	22kΩ ±5%	SRD 1/4P
C251	0252521	Electrolytic	10μF	16V	R02 L,R	0129673	Carbon film	330kΩ ±5%	SRD 1/4P
C252 L,R	0252811	Electrolytic	1μF	50V	R03 L,R	0129617	Carbon film	10 kΩ ±5%	SRD 1/4P
C253 L,R	0252521	Electrolytic	10μF	16V	R04 L,R	0129601	Carbon film	1kΩ ±5%	SRD 1/4P
C302 L,R	0252521	Electrolytic	10μF	16V	R05 L,R	0129561	Carbon film	100Ω ±5%	SRD 1/4P
C321 L,R	0252521	Electrolytic	10μF	16V	R06 L,R	0129631	Carbon film	10kΩ ±5%	SRD 1/4P
C401	0252531	Electrolytic	100μF	16V	R07 L,R	0129601	Carbon film	1kΩ ±5%	SRD 1/4P
C402	0275012	Mylar, film	0.015μF ±10%	50V	R10 L,R	0129669	Carbon film	220kΩ ±5%	SRD 1/4P
C403	0274014	Mylar, film	3300pF ±10%	50V	R11 L,R	0129547	Carbon film	47Ω ±5%	SRD 1/4P
C404	0279324	Mylar, film	3300pF ±5%	100V	R12 L,R	0129661	Carbon film	100kΩ ±5%	SRD 1/4P
C405 L,R	0240004	Cylindrical ceramic	220pF ±10%	50V	R13 L,R	0129615	Carbon film	3.9kΩ ±5%	SRD 1/4P
C601	0244171	Ceramic, discal	0.01μF +80% -20%	50V	R14 L,R	0129617	Carbon film	4.7kΩ ±5%	SRD 1/4P
C603	0252542	Electrolytic	2200μF	16V	R16 L,R	0129613	Carbon film	3.3kΩ ±5%	SRD 1/4P
C604	0252542	Electrolytic	2200μF	16V	R18 L,R	0129639	Carbon film	22kΩ ±5%	SRD 1/4P
C605	0252325	Electrolytic	47μF	10V	R19 L,R	0129661	Carbon film	100kΩ ±5%	SRD 1/4P
C606	0252325	Electrolytic	47μF	10V	R20 L,R	0129609	Carbon film	2.2kΩ ±5%	SRD 1/4P
C608	0244171	Ceramic, discal	0.01μF +80% -20%	50V	R21 L,R	0129551	Carbon film	68Ω ±5%	SRD 1/4P
C901 L,R	0209723	Ceramic, discal	470pF ±10%	50V	R22 L,R	0129607	Carbon film	1.8kΩ ±5%	SRD 1/4P
C902 L,R	0252521	Electrolytic	10μF	16V	R23 L,R	0129615	Carbon film	3.9kΩ ±5%	SRD 1/4P
C903 L,R	0252231	Electrolytic	100μF	6.3V	R24 L,R	0129621	Carbon film	6.8kΩ ±5%	SRD 1/4P
C904 L,R	0275012	Mylar, film	0.015μF ±10%	50V	R25 L,R	0129621	Carbon film	6.8kΩ ±5%	SRD 1/4P
C905 L,R	0275012	Mylar, film	0.015μF ±10%	50V	R26 L,R	0129621	Carbon film	6.8kΩ ±5%	SRD 1/4P
C906 L,R	0252571	Electrolytic	10μF	16V		0129615	Carbon film (except U,C,UB)	3.9 kΩ ±5%	SRD1/4 P
C907 L,R	0275011	Mylar, film	0.01μF ±10%	50V	R27 L,R	0129601	Carbon film	1kΩ ±5%	SRD 1/4P
C908 L,R	0252615	Electrolytic	4.7μF	25V	R29 L,R	0129609	Carbon film	2.2kΩ ±5%	SRD 1/4P
C909 L,R	0252803	Electrolytic	0.33μF	50V	R30 L,R	0129617	Carbon film	47kΩ ±5%	SRD 1/4P
					R31 L,R	0129569	Carbon film	220Ω ±5%	SRD 1/4P
					R32	0129609	Carbon film	2.2kΩ ±5%	SRD 1/4P
					R33	0129647	Carbon film	47kΩ ±5%	SRD 1/4P
					R34	0129601	Carbon film	1kΩ ±5%	SRD 1/4P
					R201 L,R	0129635	Carbon film	15kΩ ±5%	SRD 1/4P
					R202 L,R	0129603	Carbon film	1.2kΩ ±5%	SRD 1/4P
					R251	0129569	Carbon film	220Ω ±5%	SRD 1/4P

SYMBOL No.	PART No.	DESCRIPTION		
R252 L,R	0129619	Carbon film	5.6 k Ω	$\pm 5\%$ SRD 1/4P
R253 L,R	0129631	Carbon film	10 k Ω	$\pm 5\%$ SRD 1/4P
R254 L,R	0129631	Carbon film	10k Ω	$\pm 5\%$ SRD 1/4P
R300	0129571	Carbon film	270 Ω	$\pm 5\%$ SRD 1/4P
R301 L,R	0129631	Carbon film	3.3 k Ω	$\pm 5\%$ SRD 1/4P
R302 L,R	0129619	Carbon film	5.6 k Ω	$\pm 5\%$ SRD 1/4P
R400	0129571	Carbon film	270 Ω	$\pm 5\%$ SRD 1/4P
R401	0129575	Carbon film	330 Ω	$\pm 5\%$ SRD 1/4P
R402	0129573	Carbon film	330 Ω	$\pm 5\%$ SRD1/4P
R403	0100631	Carbon film	10 Ω	$\pm 5\%$ SRD1/4P
R404	0100631	Carbon film	10 Ω	$\pm 5\%$ SRD1/4P
R405	0129603	Carbon film	1.2 k Ω	$\pm 5\%$ SRD1/4P
R406	0129639	Carbon film	22 k Ω	$\pm 5\%$ SRD 1/4P
R407	0129517	Carbon film	4.7 Ω	$\pm 5\%$ SRD 1/4P
R601	0170427	Carbon film (for U, C)	10 Ω	$\pm 5\%$ SRD 1/2P
R601	0113827	Metal (Fuse resistor) (for U, C)	6.8 Ω	$\pm 5\%$ RN 1/2B
R602	0100633	Carbon film (for U, C)	12 Ω	$\pm 5\%$ SRD1/4P
R602	0118448	Metal (Fuse resistor) (for W)	8.2 Ω	$\pm 5\%$ RN 1/4B
R603	0129601	Carbon film	1 k Ω	$\pm 5\%$ SRD 1/4P
R604	0129601	Carbon film	1 k Ω	$\pm 5\%$ SRD 1/4P
R901 L,R	0129673	Carbon film	330 k Ω	$\pm 5\%$ SRD 1/4P
R902 L,R	0129631	Carbon film	10 k Ω	$\pm 5\%$ SRD 1/4P
R903 L,R	0129635	Carbon film	15 k Ω	$\pm 5\%$ SRD 1/4P
R904 L,R	0129618	Carbon film	5.1 k Ω	$\pm 5\%$ SRD 1/4P
R905 L,R	0129561	Carbon film	100 Ω	$\pm 5\%$ SRD 1/4P
R906 L,R	0129647	Carbon film	47 k Ω	$\pm 5\%$ SRD 1/4P
R907 L,R	0129620	Carbon film	6.2 k Ω	$\pm 5\%$ SRD 1/4P
R908 L,R	0129653	Carbon film	82 k Ω	$\pm 5\%$ SRD 1/4P
R909 L,R	0129701	Carbon film	1 M Ω	$\pm 5\%$ SRD 1/4P
R910	0129639	Carbon film	22 k Ω	$\pm 5\%$ SRD 1/4P
R911	0129631	Carbon film	10 k Ω	$\pm 5\%$ SRD 1/4P
R912	0129619	Carbon film	5.6 k Ω	$\pm 5\%$ SRD 1/4P
R913	0129643	Carbon film	33 k Ω	$\pm 5\%$ SRD 1/4P
R914	0129639	Carbon film	22 k Ω	$\pm 5\%$ SRD 1/4P
R915	0129617	Carbon film	4.7 k Ω	$\pm 5\%$ SRD 1/4P
R916 L,R	0129613	Carbon film	3.3 k Ω	$\pm 5\%$ SRD 1/4P
R917 L,R	0129601	Carbon film	1k Ω	$\pm 5\%$ SRD 1/4P
R918 L,R	0129653	Carbon film	82 k Ω	$\pm 5\%$ SRD 1/4P
R919 L,R	0129623	Carbon film	8.2 k Ω	$\pm 5\%$ SRD 1/4P
R920 L,R	0129569	Carbon film	220 Ω	$\pm 5\%$ SRD 1/4P
R921 L,R	0129649	Carbon film	56 k Ω	$\pm 5\%$ SRD 1/4P
R922 L,R	0129570	Carbon film	240 Ω	$\pm 5\%$ SRD 1/4P
R923 L,R	0129617	Carbon film	4.7 k Ω	$\pm 5\%$ SRD 1/4P
R924 L,R	0129631	Carbon film	10 k Ω	$\pm 5\%$ SRD 1/4P
R925 L,R	0129651	Carbon film	68 k Ω	$\pm 5\%$ SRD 1/4P
R926 L,R	0129623	Carbon film	8.2 k Ω	$\pm 5\%$ SRD 1/4P
R927 L,R	0129620	Carbon film	6.2 k Ω	$\pm 5\%$ SRD 1/4P
R928	0129653	Carbon film	82 k Ω	$\pm 5\%$ SRD 1/4P
R929 L,R	0129649	Carbon film	56 k Ω	$\pm 5\%$ SRD 1/4P
R930	0129621	Carbon film	6.8k Ω	$\pm 5\%$ SRD 1/4P

SYMBOL No.	PART No.	DESCRIPTION
ICs & TRANSISTORS		
IC01	2387281	NJM4562DD
IC02	2387281	NJM4562DD
IC03	2387301	M5218P
IC04	2387301	M5218P
IC251 L,R	2387291	IR2E25
IC301 L,R	2369401	HA12038
Q01 L,R	2329316	2SC1741-QR
Q02	2328652	2SC1740-LN
Q401	2317782	2SC2235-Y
Q601	2317803	2SP880
Q602	232873	2SB605-LA
Q901 L,R	2328652	2SC1740-LN
Q902	2328652	2SC1742-LN
Q903	2328652	2SC1742-LN
DIODES		
D601	233762	ERB12-01R
D602	233762	ERB12-01R
D901	2338081	1S2473
D902	2338081	1S2473
ZD01	2337615	HZ-3B-2
ZD601	2337549	HZ-7C-3
ZD602	2337549	HZ-7C-3
LED251 L,R	2397188	SLV56MC5
LED254 L,R	2397188	SLV56MC5
LED255 L,R	2397189	SLV56VT5
LED256 L,R	2397189	SLV56VT5
LED401	2338505	SLR-54URC5
LED901	2338501	SLR-54GC
LED902	2338501	SLA-54GC
VARIABLE RESISTORS		
R08	0166541	200 k Ω -(B) (REC BALANCE)
R09	0166612	100 k Ω -(A) (REC LEVEL)
R15 L,R	0158955	10 k Ω -(B) (PLAYBACK LEVEL)
R17 L,R	0158953	2 k Ω -(B) (REC LEVEL)

SYMBOL No.	PART No.	DESCRIPTION
R40	0199511	10 k Ω -(B) (OUTPUT VOLUME)
R408 L,R	0158957	50 k Ω -(B) (BIAS CURRENT)
COILS		
L01 L,R	2227991	Choke coil 3.3 mH (REC PEAK)
L02 L,R	2228004	Trap coil 22 mH (BIAS TRAP)
L301 L,R	2228021	Dolby filter
LC301 L,R	2135624	Trap coil 19 mH
L401	2136441	Bias OSC coil (BIAS OSC)
L901	2227355	Choke coil
MISCELLANEOUS		
J1	2678348	4P US pin jack
J2	2678026	Jack (for MIC, HEADPHONE)
S1	2638778	Power switch
S2	2627484	Slide switch
S3 to S6	2639895	Push switch
S9	2618741	Voltage selector switch (for W)
S7	2639151	Push switch (STOP MUTE)
S8	2639152	Push switch (REV CUE MUTE)
F1	2727198	Fuse T800 mA (for VK, BS, SA)
F2	2727812	Fuse T200 mA (for W)
for ACCESSORIES		
	2703111	Patch cord
	2658361	E socket adaptor (for W)

**HITACHI SALES EUROPA GmbH**

Postfach 801060 Rungedamm 2, 2050 Hamburg 80,
West Germany
Tel. 040-734 11-0

HITACHI SALES (U.K.) Ltd.

Hitachi House, Station Road, Hayes, Middlesex UB3
4DR, England
Tel. 01-848-8787

HITACHI SALES SCANDINAVIA AB

Rissneleden 8, Box 7138, 172-07 Sundbyberg, Sweden
Tel. 08-98 52 80

HITACHI SALES NORWAY A/S

Oerebekk 1620, Gressvik, P.O. Box 46, N-1601,
Fredrikstad, Norway
Tel. 032-28255

SUOMEN HITACHI OY

Takojankatsu 5, 15800 Lahti 80, Finland
Tel. Lahti 44 241

HITACHI SALES A/S

Kuldysen 13, DK-2630, Taastrup, Denmark
Tel. 02-999200

HITACHI SALES A.G.

Bahnhofstrasse, 19, 5600 Lenzburg, Switzerland
Tel. 064-513621

HITACHI SALES WARENHANDELS GMBH

A-1180/Wien, Kreuzgasse 27, Austria
Tel. 0222-439367

HITACHI SALES ITALIANA, S.P.A.

Via Cristoforo Colombo 49, Trezzano sul naviglio
(Milano), Italy
Tel. 02-44 59 031

HITACHI SALES BELGIUM S.A.

56, Chaussee de Namur B-1400 Nivelles, Belgium
Tel. (003267) 227181

HITACHI SALES IBERICA, S.A.

Gran Via Carlos Tercero, 101, 1-1, Barcelona-28,
Spain
Tel. 330-8652

HITACHI MAROC (RADIO TV ELECTRO-MANAGER), S.A.

Rue du Havre, Casablanca, Morocco
Tel. 30-73-68, 30-73-57

HITACHI CANARIAS S.A.

Calle San-Francisco No. 19, Santa Cruz de Tenerife
Canary Islands
Tel. 24-64-98

HITACHI SALES (HELLAS) LTD.

110 Syngrou St., Athens, Greece
Tel. 9219082, 9233469

HITACHI SALES (MALAYSIA) SDN. BHD.

17, Jalan 20/16, Petaling Jaya, Selangor, Malaysia
Tel. 762523, 769918, 769836, 762594

HITACHI (SINGAPORE) PTE., LTD.

Room B, C & D, 15th Floor, Yen San Building
268 Orchard Road, Singapore 9, Singapore
Tel. 7378244, 7379826

HITACHI SALES (THAILAND) LTD.

2242-48, New Petchburi Road, Bangkapi, Hueykuang
Bangkok, Thailand
Tel. 314-2741

HITACHI ELECTRIC SERVICE CO., (HONG KONG) LTD.

4th Floor Leun Tai Industrial Bldg., 72-76 Kwai Cheong
Road Kwai Chung N.T., Hong Kong
Tel. 240126

HITACHI SALES AUSTRALIA PTY LTD.

153 Keys Road, Moorabbin, Victoria 3189 Australia
Tel. 555-8722

HITACHI SALES CORPORATION OF AMERICA

Eastern Regional Office
1290 Wall Street West, Lyndhurst, New Jersey 07071, U.S.A.
Tel. 201-935-8980

Mid-Western Regional Office

1400 Morse Ave., Elk Grove Village, Ill. 60007, U.S.A.
Tel. 312-593-1550

Southern Regional Office

510 Plaza Drive, College Park, Georgia 30349, U.S.A.
Tel. 404-763-0360

Western Regional Office

401 West Artesia Boulevard, Compton, California 90220 U.S.A.
Tel. 213-537-8383

HITACHI SALES CORPORATION OF HAWAII, INC.

3219 Koapaka Street, Honolulu, Hawaii 96819, U.S.A.
Tel. 808-836-3621

HITACHI (HSC) CANADA INC.

3300 Trans-Canada Highway, Pointe Claire, Quebec,
H9R 1B1, Canada
Tel. 514-697-9150

Hitachi Sales Centroamericana, S.A.

San Rafael de Escazu, (Apartado 10272), San Jose,
Costa Rica
Tel. 28-20-11, 28-00-37

Hitachi Sales Corporation de Panama, S.A.

Nuevo Reparto E1 Carmen, Calle Ramon Arias y Calle B
Edificio Brasil 100, (Apartado 7657) Panama 5
Panama City, Rep. of Panama
Tel. 61-3100, 61-4305

Hitachi Sales de Chile Cia., Ltda.

Av. Mexico, 0183, Casilla 9793, Correo Central
Santiago, Chile
Tel. 774165

HITACHI-FRANCE S.A.

95-101 Rue Charles Michels,
93200 SAINT-DENIS,
France
Tel. 821 6015

HITACHI LTD. TOKYO JAPAN

Head Office: THE HITACHI ATAGO BLDG.
No. 15-12, 2-Chome Nishi-Shinbashi
Minato-Ku, Tokyo 105, Japan
Tel. Tokyo (03) 502-2111