

aiwa



CX-N380



COMPACT DISC STEREO SYSTEM

- BASIC TAPE MECHANISM : 2ZM - 3PR3N
- BASIC CD MECHANISM : KSL - 2101ABM
- TYPE: E, EZ

SYSTEM	CD - CASSEIVER	REMOTE CONTROLLER	SPEAKER
-	CX - N380	RC - TN380	SX - N400

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SPECIFICATIONS

<FM section>

Frequency range	87.5 MHz to 108 MHz
Usable sensitivity (IHF)	1.93 μ V (75 ohms) 16.8 dBf
Alternate channel selectivity	50 dB (400 kHz)
Signal-to-noise ratio	STEREO: 68 dB MONO: 73 dB
Harmonic distortion	0.3 % (MONO), 1 kHz 0.5 % (STEREO, L-R), 1 kHz
Frequency response	50 Hz to 15 kHz (+0.5 dB, -5 dB)
Stereo separation	33 dB at 1 kHz
Antenna	75 ohms (unbalanced)

<MW section>

Frequency range	531 (530) kHz to 1602 (1710) kHz
Usable sensitivity	360 μ V/m
Selectivity	22 dB (9 kHz)
Signal-to-noise ratio	53 dB (100 dB input)
Antenna	Loop antenna

<LW section>

Frequency range	144 kHz to 290 kHz
Sensitivity	1400 μ V/m
Antenna	Loop antenna

<Timer section>

Program timer	On-timer, free setting
Sleep timer	Setting in 10-minute increments, 240 minutes maximum

<Amplifier section>

Power output	30 W + 30 W (8 ohms, T.H.D. 1% 1kHz)
Harmonic distortion	0.06% (15W, 1kHz, 8 ohms)
Input terminal	VIDEOAUX: 150 mV (adjustable) MIC: 1.9 mV/10 ks
Output terminal	SUPER WOOFER: 1.55 V

<Cassette deck section>

Track format	4 tracks, 2 channels
Frequency response	CrO ₂ tape: 50 - 18000 Hz Normal tape: 50 - 15000 Hz
Signal-to-noise ratio	60 dB (DOLBY NR, CR, CrO ₂ , 1000 peak level)
Tape speed	4.8 cm/sec. (1 7/8 ips)
Recording system	AC bias
Erase system	AC erase
Motor	DC servo motor x 1
Heads	Playback head x 1 (deck 1) Recording/playback/erase head x 1 (deck 2)

<CD player section>

Disc	Compact disc
Scanning method	Non-contact optical scanner (semiconductor laser)
Laser	Semiconductor laser (λ = 780 nm)
Rotation speed	Approx. 500 rpm - 200 rpm (CLV)
Error correction	Cross Interleave, Reed Solomon code
No. of channels	2 channels
D-A conversion	1-bit linear
Wow/Flutter	Unmeasurable
Signal-to-noise ratio	90 dB (1 kHz, 0 dB)
Harmonic distortion	0.05% (1 kHz, 0 dB)

<Speaker system>

(These values are for one speaker.)

Cabinet type	3-way, bass reflex (magnesium casted type)
Speaker	120 mm (5 1/8 in.) cone type woofer 50 mm (2 in.) cone type tweeter 20 mm (3/4 in.) ceramic type super tweeter
Impedance	6 ohms
Music power	40 W
Output sound pressure level	87 dB/W/m
Dimensions (W x H x D)	180 x 302 x 220 mm (7 1/8 x 12 x 8 7/8 in.)
Weight	2.6 kg (5 lbs. 12 oz)

<Common section>

Power requirements	AC 230 V 50 Hz
Power consumption (System total)	156 W
Dimensions (W x H x D)	Main unit: 200 x 305 x 340 mm (10 1/8 x 12 1/8 x 13 1/2 in.) System: 620 x 305 x 340 mm (24 7/8 x 12 1/8 x 13 1/2 in.)
Weight	Main unit: 8 kg (17 lbs. 4 oz) System: 11.2 kg (24 lbs. 11 oz)

* Design and specifications are subject to change without notice.

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
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* The word "BBE" and the "BBE" symbol  are trademarks of BBE Sound, Inc.
Under license from BBE Sound, Inc.

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This unit employs laser. Therefore be sure to follow carefully the instructions below when servicing.

WARNING!!

WITHIN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION, BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK UP BLOCK.



- Caution: Invisible laser radiation when span and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!

Laitteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa aiheuttaa käyttäjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersträilylle.

WARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvisning, kan användaren utsättas för osynlig laserstråling, som överstiger gränsen för laserklass 1.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ATTENTION

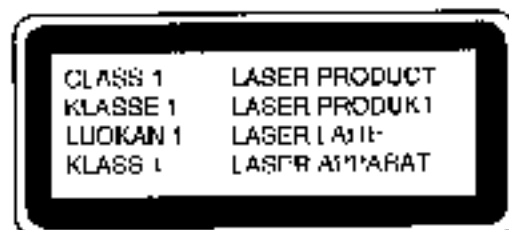
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL

Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

The Compact Disc player is classified as a CLASS 1 LASER product.

The CLASS 1 LASER PRODUCT label is located on the rear exterior.



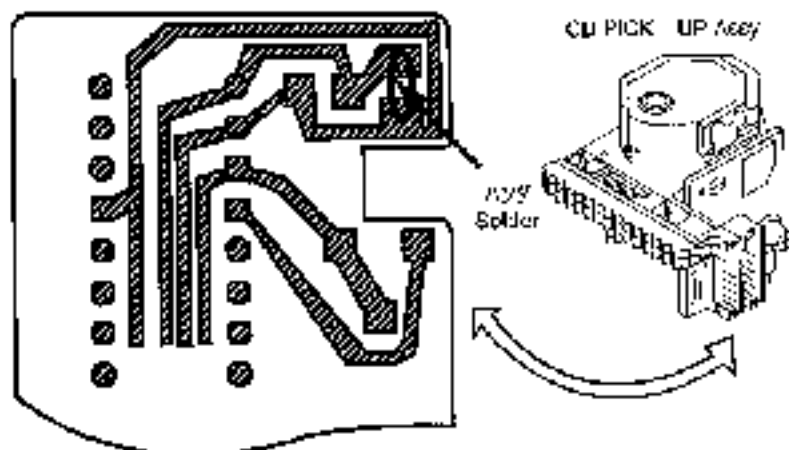
Precaution to replace Optical block

(KSS-210A)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use the clothes do not touch the diode.

- 1) After the connection, remove solder shown in figure below.

PICK - UP Assy P.C.B.



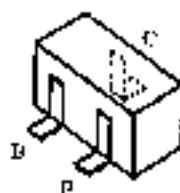
ELECTRICAL MAIN PARTS LIST

If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

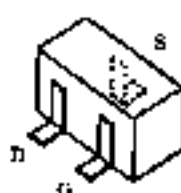
REF. NO.	PART NO.	UNIT NO.	DESCRIPTION	REF. NO.	PART NO.	UNIT NO.	DESCRIPTION
11				07-020-121-000			C-07000, 125111
	87-017-585-080	11, 10145438		07-001-535-000			WIRE, 125111 (7-72)
	87-017-345-010	10, 071-2830		87-001-540-000			SENER, 125111
	87-017-585-010	10, 071-2830		87-020-121-000			C-07000, 125111
	87-017-101-000	10, 071-2830		87-027-091-000			SENER, 125111
	57-001-982-010	10, 14724 8					
	57-002-569-010	10, 071-2830		57-002-730-000			WIRE, 125111
	57-001-590-010	10, 071-2830-2		57-027-205-000			SENER, 125111
	57-017-729-010	10, 071-2830		57-017-092-000			SENER, 125111
	57-002-727-010	10, 071-2830		57-017-560-000			WIRE, 125111
	57-002-901-080	10, 071-2830					
	87-001-874-010	10, 071-2830					
	87-017-670-010	10, 071-2830					
	87-017-449-010	10, 071-2830					
	87-002-444-010	10, 071-2830					
	87-017-898-080	10, 071-2830					
	07-002-247-010	10, 071-2830					
	87-002-957-080	10, 071-2830					
	87-001-670-080	10, 071-2830					
	87-001-176-010	10, 071-2830					
	07-017-114-010	10, 071-2830					
	57-020-434-010	10, 071-2830					
	57-002-610-010	10, 071-2830					
TRANSISTOR							
	57-026-201-020	C 16, 071-2830					
	57-026-461-020	10, 071-2830 (33)					
	57-026-600-020	10, 071-2830					
	57-027-124-020	C 16, 071-2830					
	57-109-521-020	10, 071-2830					
	57-015-702-010	10, 071-2830					
	57-021-610-080	10, 071-2830					
	57-027-124-080	10, 071-2830					
	57-109-665-080	10, 071-2830					
	57-015-236-080	10, 071-2830					
	57-101-266-080	10, 071-2830					
	57-121-226-080	10, 071-2830					
	57-121-232-080	10, 071-2830					
	57-121-261-080	10, 071-2830					
	57-002-466-080	10, 071-2830					
	57-111-625-080	10, 071-2830					
	57-111-317-080	10, 071-2830					
	57-111-965-080	10, 071-2830					
	57-002-464-080	10, 071-2830					
	57-111-154-080	10, 071-2830					
	57-021-442-080	10, 071-2830					
	57-021-214-080	10, 071-2830					
	57-021-219-080	10, 071-2830					
	57-121-143-080	10, 071-2830					
	57-001-028-080	10, 071-2830					
	57-121-011-080	10, 071-2830					
	57-111-155-080	10, 071-2830					
	57-001-434-580	10, 071-2830					
DIODE							
	87-020-165-080	10, 071-2830					
	87-002-225-010	10, 071-2830					
	87-017-011-080	10, 071-2830					
	87-002-671-080	10, 071-2830					
	87-002-571-080	10, 071-2830					
	87-017-910-080	10, 071-2830					
	87-017-245-080	10, 071-2830					
	87-017-912-080	10, 071-2830					
	87-017-911-080	10, 071-2830					
	87-020-027-080	10, 071-2830					

REF. NO.	PART NO.	KARI NO.	DESCRIPTION	REF. NO.	PART NO.	KARI NO.	DESCRIPTION
C804	87-010-111-080	C-CAP,S	3P-50 OH	28002	87-005-747-C11	2F,V82G07,P	
C805	87-010-112-080	C-CAP,S	4P-50 OH	3250	87-049-055-C11	PACK,5.1 M/S	
C806	87-010-143-030	C-CAP,S	1P-30 CE	3253	87-099-475-C10	PACK, EIC 1P BOX N/P	
C807	87-010-143-050	C-CAP,S	1P-50 CE	3254	87-030-210-C10	TRANSIST,6TTR	
C808	87-010-146-080	C-CAP,S	100P-50 OH	3255	87-073-616-C10	PACK,1P 2P	
C809	87-010-197-080	C-CAP,S	0.01-25 B	3801	87-133-235-010	TRANSIST,AKT (2)	
C810	87-010-197-080	C-CAP,S	0.01-25 B	3802	87-154-639-010	CONDUCTOR 3X 1/2" (30)	
C811	87-010-149-080	C-CAP,S	5P-50 CE	3201	87-125-360-019	COIL, 10H	
C812	87-010-412-080	C-CAP,S	15P-50 CE	3202	87-015-356-019	COIL, 10H	
C813	87-010-197-080	C-CAP,S	0.01-25 B	3401	87-113-131-000	COIL,10H 1	
C814	87-010-197-080	C-CAP,S	0.01-25 B	3402	87-011-131-080	COIL,10H 1	
C815	87-010-197-080	C-CAP,S	0.01-25 B	3403	87-011-132-080	COIL,22MH-1	
C816	87-010-197-080	C-CAP,S	0.01-25 B	3404	87-011-132-080	COIL,22MH-1	
C817	87-010-197-080	C-CAP,S	0.01-25 B	3405	87-011-132-080	COIL,22MH-1	
C818	87-010-197-080	C-CAP,S	0.01-25 B	3406	87-011-132-080	COIL,22MH-1	
C819	87-010-197-080	C-CAP,S	0.01-25 B	3407	87-011-132-080	COIL,22MH-1	
C820	87-010-260-080	C-CAP,S	0.01-25 B	3702	87-006-235-010	COIL,22MH-1	
C821	87-010-197-080	C-CAP,S	0.01-25 B	3741	87-006-259-010	COIL,22MH-1	
C822	87-010-513-080	C-CAP,S	0.01-25 B	3742	87-031-612-010	COIL,22MH-1	
C823	87-010-197-080	C-CAP,S	0.01-25 B	3801	87-006-261-010	COIL,22MH-1	
C824	87-010-197-080	C-CAP,S	0.01-25 B	3802	87-006-261-010	COIL,22MH-1	
C825	87-010-197-080	C-CAP,S	0.01-25 B	3803	87-006-261-010	COIL,22MH-1	
C826	87-010-197-080	C-CAP,S	0.01-25 B	3804	87-006-261-010	COIL,22MH-1	
C827	87-010-197-080	C-CAP,S	0.01-25 B	3805	87-006-261-010	COIL,22MH-1	
C828	87-010-197-080	C-CAP,S	0.01-25 B	3806	87-006-261-010	COIL,22MH-1	
C829	87-010-197-080	C-CAP,S	0.01-25 B	3807	87-006-261-010	COIL,22MH-1	
C830	87-010-197-080	C-CAP,S	0.01-25 B	3808	87-006-261-010	COIL,22MH-1	
C831	87-010-197-080	C-CAP,S	0.01-25 B	3809	87-006-261-010	COIL,22MH-1	
C832	87-010-197-080	C-CAP,S	0.01-25 B	3810	87-006-261-010	COIL,22MH-1	
C833	87-010-197-080	C-CAP,S	0.01-25 B	3811	87-006-261-010	COIL,22MH-1	
C834	87-010-197-080	C-CAP,S	0.01-25 B	3812	87-006-261-010	COIL,22MH-1	
C835	87-010-197-080	C-CAP,S	0.01-25 B	3813	87-006-261-010	COIL,22MH-1	
C836	87-010-197-080	C-CAP,S	0.01-25 B	3814	87-006-261-010	COIL,22MH-1	
C837	87-010-197-080	C-CAP,S	0.01-25 B	3815	87-006-261-010	COIL,22MH-1	
C838	87-010-197-080	C-CAP,S	0.01-25 B	3816	87-006-261-010	COIL,22MH-1	
C839	87-010-197-080	C-CAP,S	0.01-25 B	3817	87-006-261-010	COIL,22MH-1	
C840	87-010-197-080	C-CAP,S	0.01-25 B	3818	87-006-261-010	COIL,22MH-1	
C841	87-010-197-080	C-CAP,S	0.01-25 B	3819	87-006-261-010	COIL,22MH-1	
C842	87-010-197-080	C-CAP,S	0.01-25 B	3820	87-006-261-010	COIL,22MH-1	
C843	87-010-197-080	C-CAP,S	0.01-25 B	3821	87-006-261-010	COIL,22MH-1	
C844	87-010-197-080	C-CAP,S	0.01-25 B	3822	87-006-261-010	COIL,22MH-1	
C845	87-010-197-080	C-CAP,S	0.01-25 B	3823	87-006-261-010	COIL,22MH-1	
C846	87-010-197-080	C-CAP,S	0.01-25 B	3824	87-006-261-010	COIL,22MH-1	
C847	87-010-197-080	C-CAP,S	0.01-25 B	3825	87-006-261-010	COIL,22MH-1	
C848	87-010-197-080	C-CAP,S	0.01-25 B	3826	87-006-261-010	COIL,22MH-1	
C849	87-010-197-080	C-CAP,S	0.01-25 B	3827	87-006-261-010	COIL,22MH-1	
C850	87-010-197-080	C-CAP,S	0.01-25 B	3828	87-006-261-010	COIL,22MH-1	
C851	87-010-197-080	C-CAP,S	0.01-25 B	3829	87-006-261-010	COIL,22MH-1	
C852	87-010-197-080	C-CAP,S	0.01-25 B	3830	87-006-261-010	COIL,22MH-1	
C853	87-010-197-080	C-CAP,S	0.01-25 B	3831	87-006-261-010	COIL,22MH-1	
C854	87-010-197-080	C-CAP,S	0.01-25 B	3832	87-006-261-010	COIL,22MH-1	
C855	87-010-197-080	C-CAP,S	0.01-25 B	3833	87-006-261-010	COIL,22MH-1	
C856	87-010-197-080	C-CAP,S	0.01-25 B	3834	87-006-261-010	COIL,22MH-1	
C857	87-010-197-080	C-CAP,S	0.01-25 B	3835	87-006-261-010	COIL,22MH-1	
C858	87-010-197-080	C-CAP,S	0.01-25 B	3836	87-006-261-010	COIL,22MH-1	
C859	87-010-197-080	C-CAP,S	0.01-25 B	3837	87-006-261-010	COIL,22MH-1	
C860	87-010-197-080	C-CAP,S	0.01-25 B	3838	87-006-261-010	COIL,22MH-1	
C861	87-010-197-080	C-CAP,S	0.01-25 B	3839	87-006-261-010	COIL,22MH-1	
C862	87-010-197-080	C-CAP,S	0.01-25 B	3840	87-006-261-010	COIL,22MH-1	
C863	87-010-197-080	C-CAP,S	0.01-25 B	3841	87-006-261-010	COIL,22MH-1	
C864	87-010-197-080	C-CAP,S	0.01-25 B	3842	87-006-261-010	COIL,22MH-1	
C865	87-010-197-080	C-CAP,S	0.01-25 B	3843	87-006-261-010	COIL,22MH-1	
C866	87-010-197-080	C-CAP,S	0.01-25 B	3844	87-006-261-010	COIL,22MH-1	
C867	87-010-197-080	C-CAP,S	0.01-25 B	3845	87-006-261-010	COIL,22MH-1	
C868	87-010-197-080	C-CAP,S	0.01-25 B	3846	87-006-261-010	COIL,22MH-1	
C869	87-010-197-080	C-CAP,S	0.01-25 B	3847	87-006-261-010	COIL,22MH-1	
C870	87-010-197-080	C-CAP,S	0.01-25 B	3848	87-006-261-010	COIL,22MH-1	
C871	87-010-197-080	C-CAP,S	0.01-25 B	3849	87-006-261-010	COIL,22MH-1	
C872	87-010-197-080	C-CAP,S	0.01-25 B	3850	87-006-261-010	COIL,22MH-1	
C873	87-010-197-080	C-CAP,S	0.01-25 B	3851	87-006-261-010	COIL,22MH-1	
C874	87-010-197-080	C-CAP,S	0.01-25 B	3852	87-006-261-010	COIL,22MH-1	
C875	87-010-197-080	C-CAP,S	0.01-25 B	3853	87-006-261-010	COIL,22MH-1	
C876	87-010-197-080	C-CAP,S	0.01-25 B	3854	87-006-261-010	COIL,22MH-1	
C877	87-010-197-080	C-CAP,S	0.01-25 B	3855	87-006-261-010	COIL,22MH-1	
C878	87-010-197-080	C-CAP,S	0.01-25 B	3856	87-006-261-010	COIL,22MH-1	
C879	87-010-197-080	C-CAP,S	0.01-25 B	3857	87-006-261-010	COIL,22MH-1	
C880	87-010-197-080	C-CAP,S	0.01-25 B	3858	87-006-261-010	COIL,22MH-1	
C881	87-010-197-080	C-CAP,S	0.01-25 B	3859	87-006-261-010	COIL,22MH-1	
C882	87-010-197-080	C-CAP,S	0.01-25 B	3860	87-006-261-010	COIL,22MH-1	
C883	87-010-197-080	C-CAP,S	0.01-25 B	3861	87-006-261-010	COIL,22MH-1	
C884	87-010-197-080	C-CAP,S	0.01-25 B	3862	87-006-261-010	COIL,22MH-1	
C885	87-010-197-080	C-CAP,S	0.01-25 B	3863	87-006-261-010	COIL,22MH-1	
C886	87-010-197-080	C-CAP,S	0.01-25 B	3864	87-006-261-010	COIL,22MH-1	
C887	87-010-197-080	C-CAP,S	0.01-25 B	3865	87-006-261-010	COIL,22MH-1	
C888	87-010-197-080	C-CAP,S	0.01-25 B	3866	87-006-261-010	COIL,22MH-1	
C889	87-010-197-080	C-CAP,S	0.01-25 B	3867	87-006-261-010	COIL,22MH-1	
C890	87-010-197-080	C-CAP,S	0.01-25 B	3868	87-006-261-010	COIL,22MH-1	
C891	87-010-197-080	C-CAP,S	0.01-25 B	3869	87-006-261-010	COIL,22MH-1	
C892	87-010-197-080	C-CAP,S	0.01-25 B	3870	87-006-261-010	COIL,22MH-1	
C893	87-010-197-080	C-CAP,S	0.01-25 B	3871	87-006-261-010	COIL,22MH-1	
C894	87-010-197-080	C-CAP,S	0.01-25 B	3872	87-006-261-010	COIL,22MH-1	
C895	87-010-197-080	C-CAP,S	0.01-25 B	3873	87-006-261-010	COIL,22MH-1	
C896	87-010-197-080	C-CAP,S	0.01-25 B	3874	87-006-261-010	COIL,22MH-1	
C897	87-010-197-080	C-CAP,S	0.01-25 B	3875	87-006-261-010	COIL,22MH-1	
C898	87-010-197-080	C-CAP,S	0.01-25 B	3876	87-006-261-010	COIL,22MH-1	
C899	87-010-197-080	C-CAP,S	0.01-25 B	3877	87-006-261-010	COIL,22MH-1	
C900	87-010-197-080	C-CAP,S	0.01-25 B	3878	87-006-261-010	COIL,22MH-1	
C901	87-010-197-080	C-CAP,S	0.01-25 B	3879	87-006-261-010	COIL,22MH-1	
C902	87-010-197-080	C-CAP,S	0.01-25 B	3880	87-006-261-010	COIL,22MH-1	
C903	87-010-197-080	C-CAP,S	0.01-25 B	3881	87-006-261-010	COIL,22MH-1	
C904	87-010-197-080	C-CAP,S	0.01-25 B	3882	87-006-261-010	COIL,22MH-1	
C905	87-010-197-080	C-CAP,S	0.01-25 B	3883	87-006-261-010	COIL,22MH-1	
C906	87-010-197-080	C-CAP,S	0.01-25 B	3884	87-006-261-010	COIL,22MH-1	
C907	87-010-197-080	C-CAP,S	0.01-25 B	3885	87-006-261-010	COIL,22MH-1	
C908	87-010-197-080	C-CAP,S	0.01-25 B	3886	87-006-261-010	COIL,22MH-1	
C909	87-010-197-080	C-CAP,S	0.01-25 B	3887	87-006-261-010	COIL,22MH-1	
C910	87-010-197-080	C-CAP,S	0.01-25 B	3888	87-006-261-010	COIL,22MH-1	
C911	87-010-197-080	C-CAP,S	0.01-25 B	3889	87-006-261-010	COIL,22MH-1	
C912	87-010-197-080	C-CAP,S	0.01-25 B	3890	87-006-261-010	COIL,22MH-1	
C913	87-010-197-080	C-CAP,S	0.01-25 B	3891	87-006-261-010	COIL,22MH-1	
C914	87-010-197-080	C-CAP,S	0.01-25 B	3892	87-006-261-010	COIL,22MH-1	
C915	87-010-197-080	C-CAP,S	0.01-25 B	3893	87-006-261-010	COIL,22MH-1	
C916	87-010-197-080	C-CAP,S	0.01-25 B	3894	87-006-261-010	COIL,22MH-1	
C917	87-010-197-080	C-CAP,S	0.01-25 B	3895	87-006-261-010	COIL,22MH-1	
C918	87-010-197-080	C-CAP,S	0.01-25 B	3896	87-006-261-010	COIL,22MH-1	
C919	87-010-197-080	C-CAP,S	0.01-25 B	3897	87-006-261-010	COIL,22MH-1	
C920	87-010-197-080	C-CAP,S	0.01-25 B	3898	87-006-261-010	COIL,22MH-1	
C921	87-010-197-080	C-CAP,S	0.01-25 B	3899	87-006-261-010	COIL,22MH-1	
C922	87-010-197-080	C-CAP,S	0.01-25 B	3900	87-006-261-010	COIL,22MH-1	
C923	87-010-197-080	C-CAP,S	0.01-25 B	3901	87-006-261-010	COIL,22MH-1	
C924	87-010-197-080	C-CAP,S	0.01-25 B	3902	87-006-261-010	COIL,22MH-1	
C925	87-010-197-080	C-CAP,S	0.01-25 B	3903	87-006-261-010	COIL,22MH-1	
C926	87-010-197-080	C-CAP,S	0.01-25 B	3904	87-006-261-010	COIL,22MH-1	
C927	87-010-197-080	C-CAP,S	0.01-25 B	3905	87-006-261-010	COIL,22MH-1	
C928	87-010-197-080	C-CAP,S	0.01-25 B	3906	87-006-261-010	COIL,22MH-1	
C929	87-010-197-080	C-CAP,S	0.01-25 B	3907	87-006-261-010	COIL,22MH-1	
C930	87-010-197-080	C-CAP,S	0.01-25 B	3908	87-006-261-010	COIL,22MH-1	
C931	87-0						

TRANSISTOR ILLUSTRATION



DTA114TK
DTA143EK
DTA144WK
DTC114YK
2SA1162
2SC1629
2SC2712
2SC2714
2SC3326
RN1404



2SK302
2SK543(4/5)



2SA952K
2SA1296GR
2SC1815GR/Y
2SC2001K
2SC3268GR
2SC3331T/TU
KTA1266GR
KTC3198GR



2SK246BL/Y



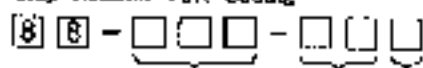
2SB1370E



2SA933S(RS)
2SC1740(RS)
DTA144ES/WK
DTA114YS

チップ抵抗部品コード/CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



A
抵抗部品コード
Resistor Code

桁表示
Figure
抵抗値
Value of resistor

チップ抵抗
Chip resistor

Wattage 容量	Tape 種類	Tolerance 許容誤差	Symbol 記号	Dimensions/寸法 (mm)				Resistor Code : A 抵抗コード : A
				Form/外形	L	W	t	
1/32W	1608	±5%	CJ		1.6	0.8	0.35	108
1/10W	2125	±5%	CJ		2	1.25	1.45	118
1/8W	3126	±5%	CJ		3.2	1.6	0.5 ~0.7	128

Pin No.	Pin Name	I/O	Description
1	O-PLL-CE	O	PLL IC (IC 7218) chip enable output for tuner
2	-	-	Not used
3	O-STBCM	O	Strobe signal for shift register (4194, MAIN C.B.)
4	O-DATA(M)	O	Serial data for shift register, PLL IC (IC 7218, MAIN C.B.)
5	O-CLK(M)	O	Clock signal for shift register, PLL IC (IC 7218, MAIN C.B.)
6	I-HOLD	I	When the AC power is not supplied and the input is L, the controller is held. (Clock stop and memory maintain)
7	RESET	I	Reset input
8	I-STEREO	I	Stereo ON signal input.
9	I-TUNP/LOC	I	Tuner Stereo Detect input/IF control serial data input.
10	VSS1	-	Gnd.
11	CF1	-	576MHz oscillation circuit.
12	CF2	-	
13	VDD1	-	Power supply (+5.5V)
14	I-KEY1	I	Key matrix input.
15	I-KEY2	I	Key matrix input.
16	I-KEY2	I	Key matrix input.
17	I-CDLW	I	CD tray OPEN/CLOSE switch signal.
18	-	-	Not used
19	I-M3S	I	Music sense input signal.
20	-	-	Not used
21	I-MIC	I	Mic input signal.
22	I-TMBASP	I	Clock pulse (8Hz) input from PLL IC (IC 7218)
23	I-SENSP(CD)	I	CD control
24	I-RMC	I	Remote control input.
25-32	G8-G1	O	FL display grid output
33-34	P23-P24	O	FL display segment output
35	-	-	Not used
36	-	-	Not used
37-40	P72-P19	O	FL display segment output.
41	VDD2	-	Power supply (+5.5V)
42	-VP	-	Negative pulldown voltage.
43	P18/I-SW.CST1	O/I	FL display segment output / Deck 1 Cassette switch input.
44	P17/I-SW.AUTO1	O/I	FL display segment output / Deck 1 Auto stop signal input.
45	P16/I-SW.CAM1	O/I	FL display segment output / Deck 1 Cam switch input.
46	P15/I-SW.RECB2	O/I	FL display segment output / Deck 2 Side B Rec switch input.
47	P14/I-SW.RECA2	O/I	FL display segment output / Deck 2 Side A Rec switch input.
48	P13/I-SW.CST2	O/I	FL display segment output / Deck 2 Cassette switch input.
49	P12/I-SW.AUT1/2	O/I	FL display segment output / Deck 2 Auto Stop signal input.
50	P11/I-SW.CAM2	O/I	FL display segment output / Deck 2 Cam switch input.
51	P10/I-PM(WIDE)	O/I	FL display segment output / FM Wide select input.

Pin No.	Pin Name	I/O	Description
52	P11-AMST	O/I	FL display segment output / AM Stereo select input.
53	P21-AM10K	O/I	FL display segment output / AM 10KHz step select input.
54	P31-LW	O/I	FL display segment output / Long Wave select input.
55	P41-SW	O/I	FL display segment output / Short Wave select input.
56	P51-RBE	O/I	FL display segment output / RRB select input.
57	P6	O	FL display segment output.
58	P7	O	FL display segment output.
59	P8	O	FL display segment output.
60	P9	O	FL display segment output.
61	O-CLOSE(CD)	O	CD tray CLOSE signal.
62	O-OPEN(CD)	O	CD tray OPEN signal.
63	GPQ(B)	O	Graphic Equalizer control signal.
64	GPQ(A)	O	Graphic Equalizer control signal.
65	O-KEYSCAN	O	Switch scan tuning output.
66	O-SOL1	O	Deck 1 Plunger ON/OFF output.
67	O-SOL2	O	Deck 2 Plunger ON/OFF output.
68	O-MOTOR	O	Deck motor ON/OFF output.
69	O-STR(F)	O	Stereo signal for shift register (4094, FRONT C.B.).
70	O-DATA(F)	O	Serial data for shift register (4094, FRONT C.B.).
71	O-CLK(F)	O	Clock signal for shift register (4094, FRONT C.B.).
72	O-POWER	O	Power ON/OFF control.
73	VSS2	-	Gnd
74	-	-	Not used
75	O-DATA(CD)	O	CD control data output.
76	O-XT-L(CD)	O	CD control data latch output.
77	O-CLK(CD)	O	Clock signal for CD control data.
78	I-SUBQ(CD)	I	Sub Q data input from CD IC. (CXD2518Q).
79	O-SCLK(CD)	O	Clock signal for Sub-Q data input.
80	O-MUTE	O	System mute.

0-01-11-00 1-00-11-00
0-01-11-00 1-00-11-00

IC, CXD2518Q

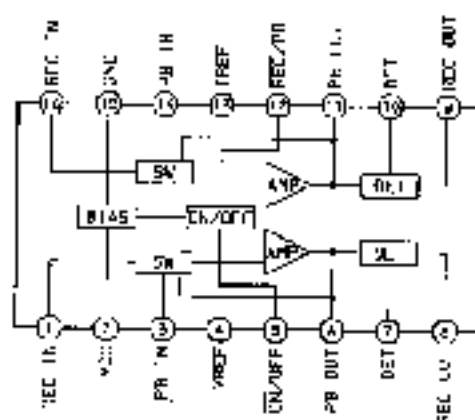
Pin No.	Pin Name	DO	Description
1	SCYR	O	Outputs high signal when either subcode sym. S0 or S1 is detected (not used)
2	SBSO	O	Sub P to W serial output (not used)
3	EXCK	I	SBSO readout clock input (connected to VDD)
4	SQSO	O	SubQ 80-bit serial output
5	SQCK	I	SQSO readout clock input
6	MUTE	I	High : mute; low : release. (connected to GND)
7	SENS	O	SENS output to CPU (LC 866432V).
8	XRST	I	System reset. Reset when low.
9	DATA	I	Serial data input from CPU (LC 866432V).
10	XLAT	I	Latch input from CPU (LC 866432V). Serial data is latched at the falling edge.
11	CLOCK	I	Serial data transfer clock input from CPU (LC 866432V).
12	VSS	-	GND
13	STIN	I	Sense input from SSP (CXA1782H).
14	CNTN	I	Track jump count signal input.
15	DATO	O	Serial data output to SSP (CXA1782BQ).
16	XLTO	O	Serial data latch output to SSP (CXA1782BQ). Latched at the falling edge.
17	CLKO	O	Serial data transfer clock output to SSP (CXA1782BQ).
18	TEST?	I	Test pin; normally connected to VDD.
19	SPOB	I	Microcomputer extended interface (input B). (connected to SW1)
20	SPOC	I	Microcomputer extended interface (input C). (connected to VDD)
21	SPOD	I	Microcomputer extended interface (input D). (connected to VDD)
22	XLON	O	Microcomputer extended interface (output). (not used)
23	FOK	I	Frame OK input. Used for SENS output and the servo auto sequencer.
24	MON	O	Spindle motor on/off control output.
25	MUP	O	Spindle motor servo control.
26	MDS	O	Spindle motor servo control. (not used)
27	LOCK	O	CPS is sampled at 400 Hz; when LPS is high, this pin outputs a high signal. If GFS is low eight consecutive samples, this pin outputs low.
28	TEST	I	TEST pin. Normally connected to GND.
29	PLLQ	O	Master PLL (slave = digital PLL) filter output.
30	PLLI	I	Master PLL filter input.
31	PCO	O	Master PLL charge pump output.
32	VDD	-	Digital power supply for DSP (+5V).
33	AVSS1	-	Analog GND for DSP.
34	CLTV	I	Master PLL VCO control voltage input.
35	AVDD1	-	Analog power supply for DSP (+5V).
36	RF	I	RF signal input
37	BIAS	I	Constant current input of asymmetry compensation circuit.
38	ASYI	I	A symmetry compensation circuit comparator voltage input.
39	ASYO	O	B FM full-swing output (low = VSS, high = VDD).
40	ASVE	I	Compensation of: high; asymmetry compensation aa. (connected to VDD)

Pin No.	Pin Name	I/O	Description
41	WDCK	O	D/A interface for 48-bit slot. Word clock (2FS). (not used)
42	LRCK	O	D/A interface for 48-bit slot. LR clock (FS).
43	LRCKI	I	LR clock input for DAC. (48-bit slot)
44	PCMD	O	D/A interface. Serial data (FS's complement, MSB first).
45	PCMDI	I	Audio data input for DAC. (48-bit slot)
46	BCK	O	D/A interface. Jst clock.
47	BCKI	I	Bit clock input for DAC. (48-bit slot)
48	GTOP	O	GTOP output. (not used)
49	XUDF	O	XUDF output. (not used)
50	XPLCK	O	XPLCK output. (not used)
51	GFS	O	GFS output. (not used)
52	RFCK	O	RFCK output. (not used)
53	VSS	-	GND.
54	C2PO	O	C2PO output. (not used)
55	XRAOF	O	XRAOF output. (not used)
56	MNTS	O	MNTS output. (not used)
57	MNTI	O	MNTI output. (not used)
58	MNTD	O	MNTD output. (not used)
59	RSIT	O	2/3 frequency divider output for Pins 73 and 74. (not used)
60	C4M	O	4.2336 MHz output. (not used)
61	DOUT	O	Digital Out output
62	EMPHI	O	Outputs high signal when the playback effect has emphasis, low signal when no emphasis.
63	EMPHI	I	DAC de-emphasis on/off. High: on, low: off.
64	WICK	O	WICK (wire frame clock) output. (not used)
65	ZEROL	O	No-sound data detection output; high when "no audio" data is detected. (Left channel) (not used)
66	ZEROR	O	No-sound data detection output; high when "no audio" data is detected. (Right channel) (not used)
67	DTSI	I	Test pin 1 for DAC; normally low. (connected to GND)
68	VDD	-	Digital power supply for DAC. (+5V)
69	LPWM	O	Left channel PWM output. (Forward phase)
70	NRPWM	O	Left channel PWM output. (Reverse phase)
71	AVDD2	-	Power supply for left channel PWM driver. (+5V)
72	AVDD3	-	Power supply for crystal. (+5V)
73	XTA1	I	33.8688 MHz crystal oscillation circuit input.
74	XTA0	O	33.8688 MHz crystal oscillation circuit output.
75	AVSS3	-	GND for crystal.
76	AVSS2	-	GND for PWM driver.
77	RRPWM	O	Right channel PWM output. (Reverse phase)
78	RPWM	O	Right channel PWM output. (Forward phase)
79	DTIS	I	DAC test pin 2; normally low. (connected to GND)
80	DTIS	I	DAC test pin 3; normally low. (connected to GND)

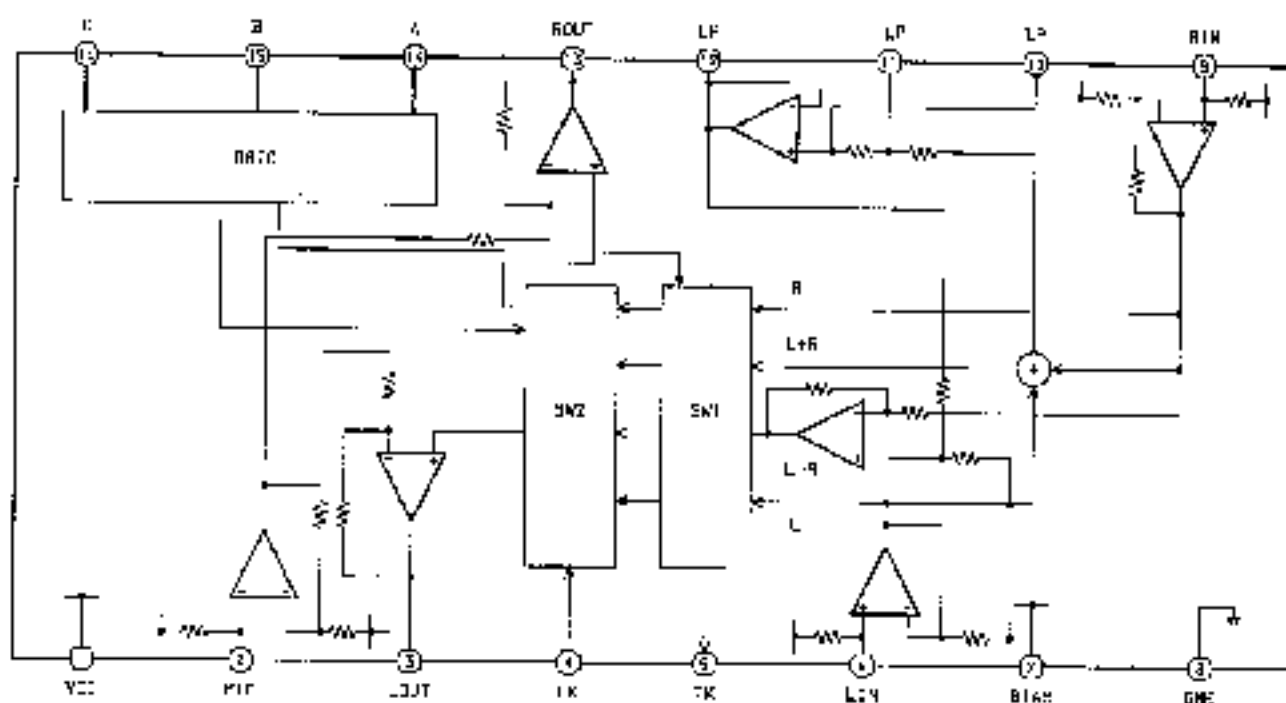
IC, LC7218

Pin No.	Pin Name	I/O	Description
1	X-IN	-	A crystal oscillator (7.2MHz) is connected between these pins.
24	X-OUT	-	
2	PIJ. CHS	I	To enable the IC. Active "H".
3	DI	I	Digital data input from CPU (LC866428V) when relevant key is operated. Active "H".
4	CLK	I	To clock in the data DI.
5	DO	O	Digital data output to CPU (LC866428V).
6	-	-	Not used.
7	TUNE	I	Receives "L" from CPU (LC866428V) when station is tuned.
8	ST	I	Receives "L" from CPU (LC866428V) when stereo is obtained.
9	T-BASE	O	Outputs a reference clock signal (8Hz) for the clock.
10	MUTE	O	To control internal speaker.
11	MODE	O	Outputs "H" when stereo is switched.
12	SW2FM1	O	Not used.
13	FM/AM	O	Outputs "L" if "AM" & "H" is FM.
14	MW	O	Outputs "L" when MW is selected.
15, 16	IFM	I	General purpose counter input.
17	FM2	O	Outputs "L" when a FM broadcast is received.
18	AM-I	I	Receives the AM local oscillator frequency signal.
19	FM-I	I	Receives the FM local oscillator frequency signal.
20	VDD	-	Supply to IC.
21	E.O	O	PLL charge pump output.
22	-	-	Not used.
23	VSS	-	Ground.

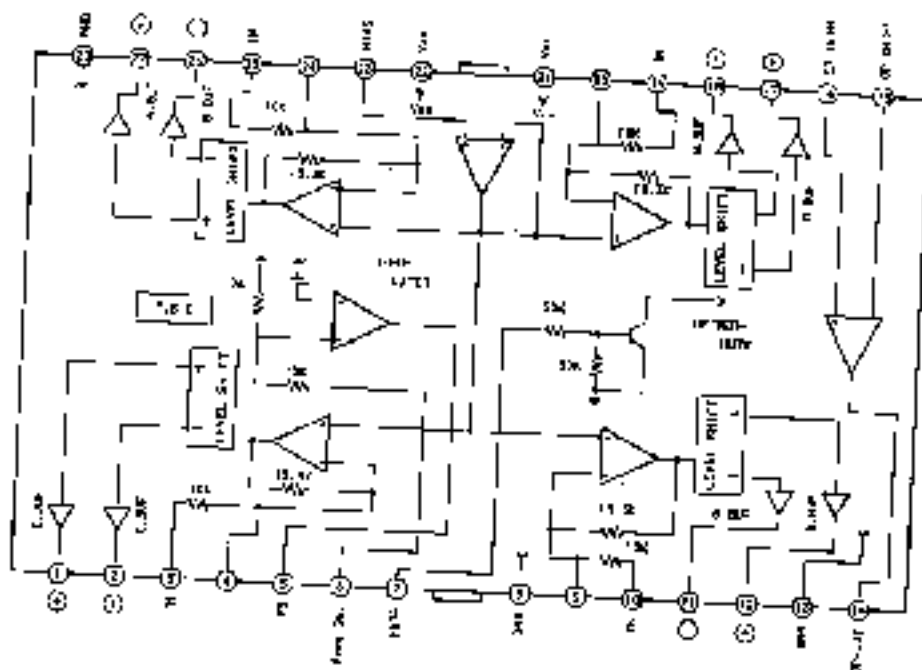
IC BLOCK DIAGRAM
IC, HA12134A



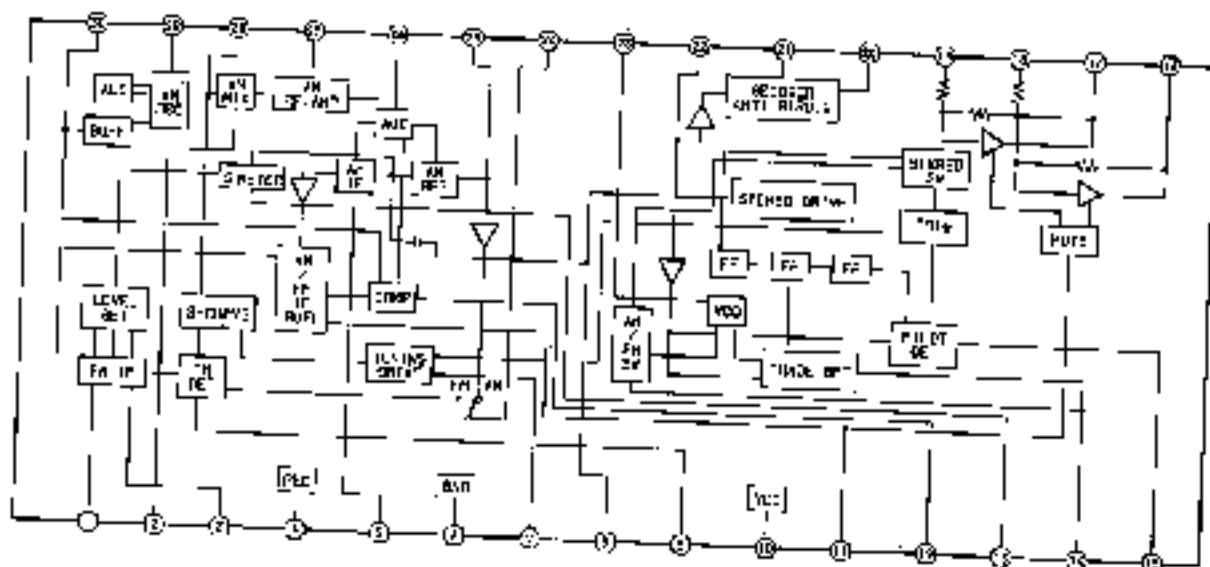
IC, BA3637



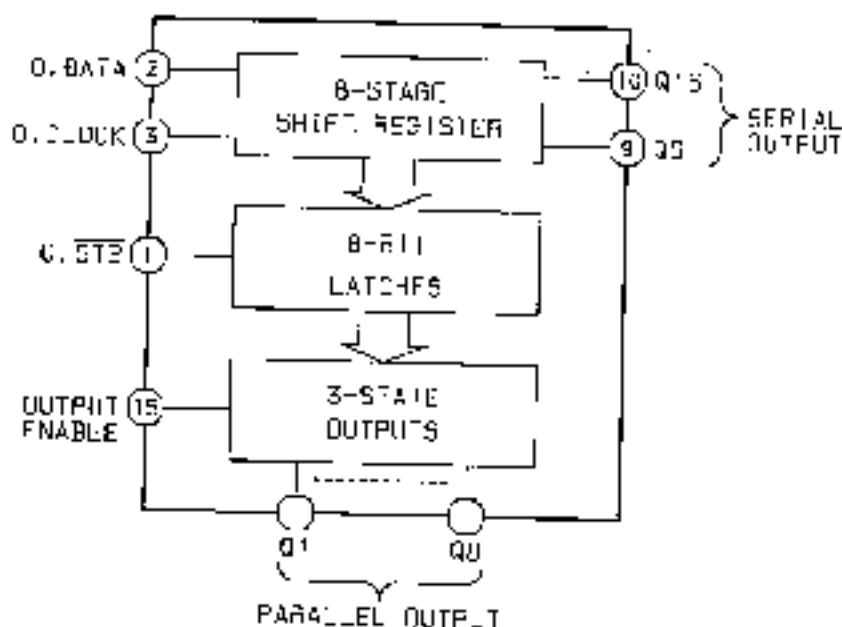
IC, BA5397FP



IC, LA 1836



IC, BU4094B
IC, BU4094BF



Q1: D. ECLBY DV Q5: D. PLAY
Q2: D. DCLBY C Q6: D. PB2
Q3: D. EXT. REC Q7: D. LEB
Q4: D. INT. REC Q8: D. RYT

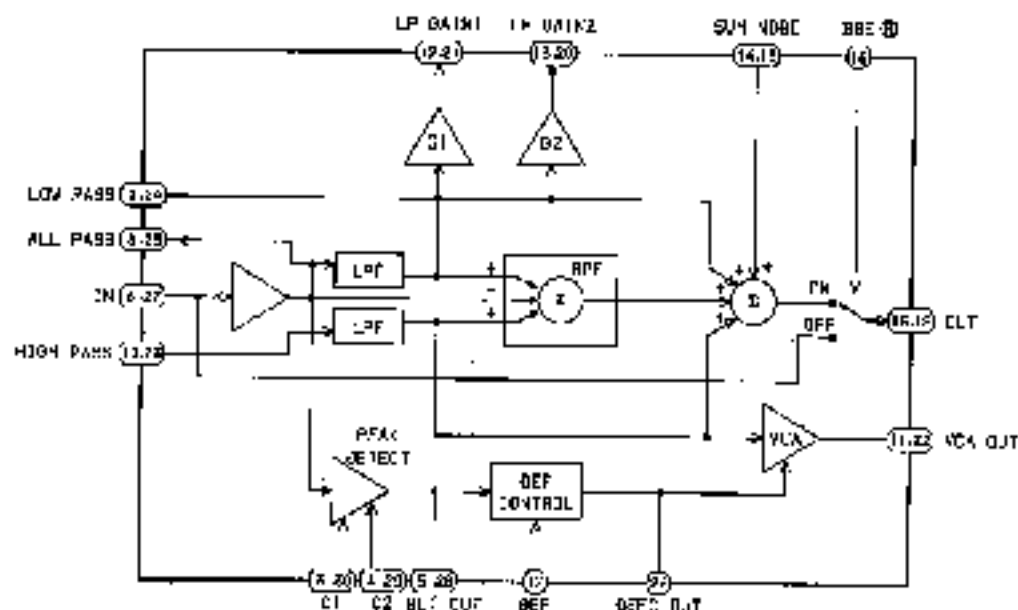
TRUTH TABLE

CLOCK	OUTPUT ENABLE	STROBE	DATA	PARALLEL OUTPUTS		SERIAL OUTPUTS	
				Q1	Q0	Q5	Q'S
L	L	X	X	Z	Z	Q7	NO CHG.
L	L	X	X	Z	Z	NO CHG.	Q5
L	H	L	X	NO CHG.	NO CHG.	Q7	NO CHG.
L	H	-	L	L	Qn-1	Q7	NO CHG.
L	H	H	H	H	Qn-1	Q7	NO CHG.
L	H	X	X	NO CHG.	NO CHG.	NO CHG.	Q5

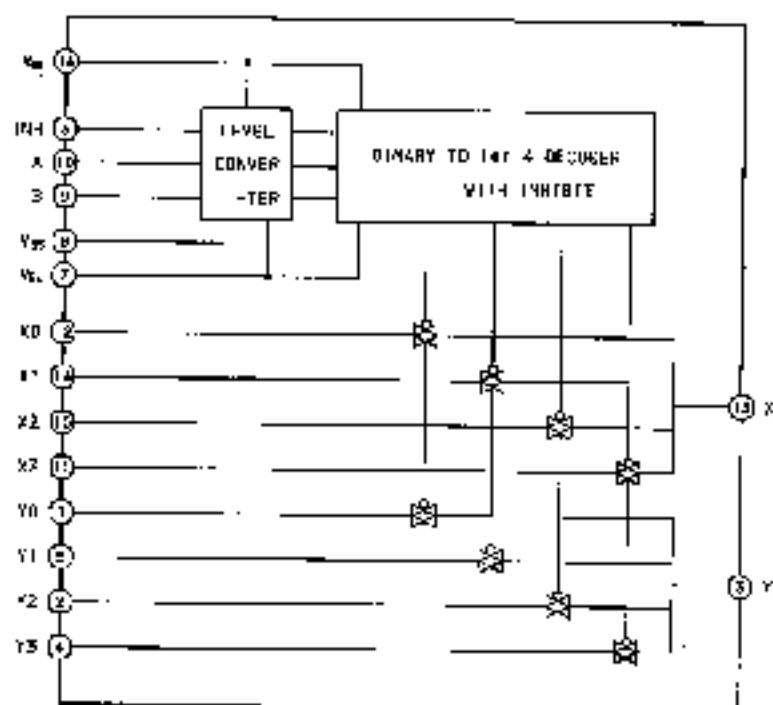
Z = HIGH IMPEDANCE

X = DON'T CARE

IC, XR1071CP



IC, BU4052B
IC, BU4052BF



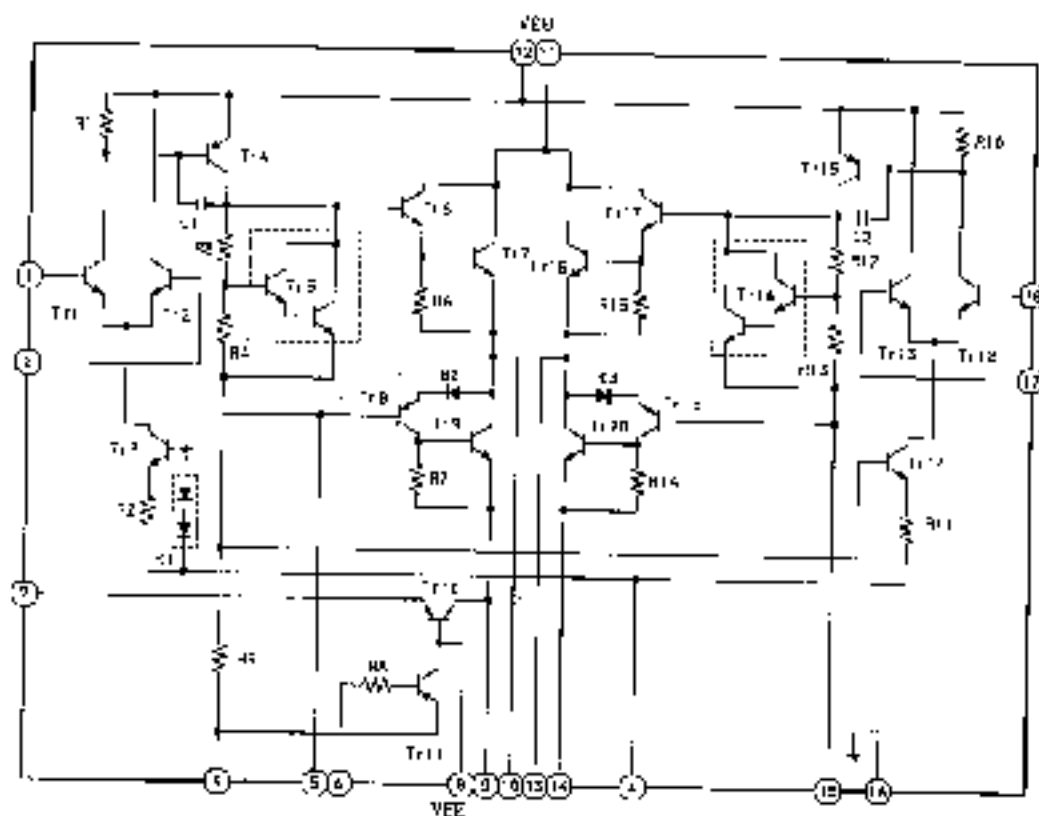
TRUTH TABLE

INPUT	A	B	CM SW, TC-1
L	L	L	X1, Y1
L	H	L	X1, Y2
L	L	H	X2, Y1
L	H	H	X2, Y2
H	X	X	NONE

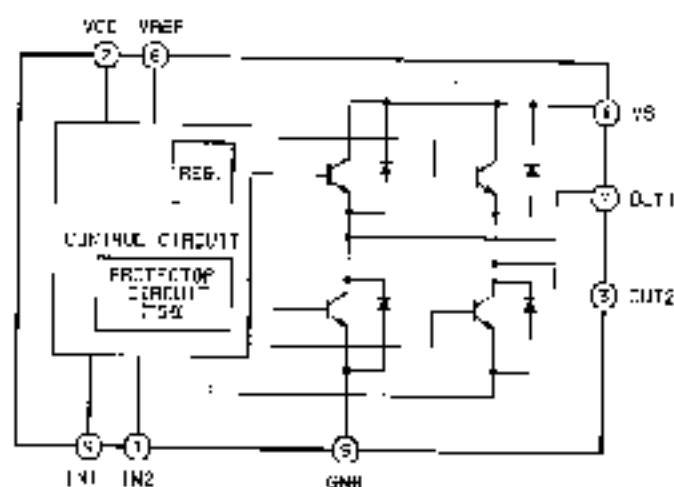
X=Don't Care

IC, STK4142-MK2

IC



IC, TA7291B



TRUTH TABLE

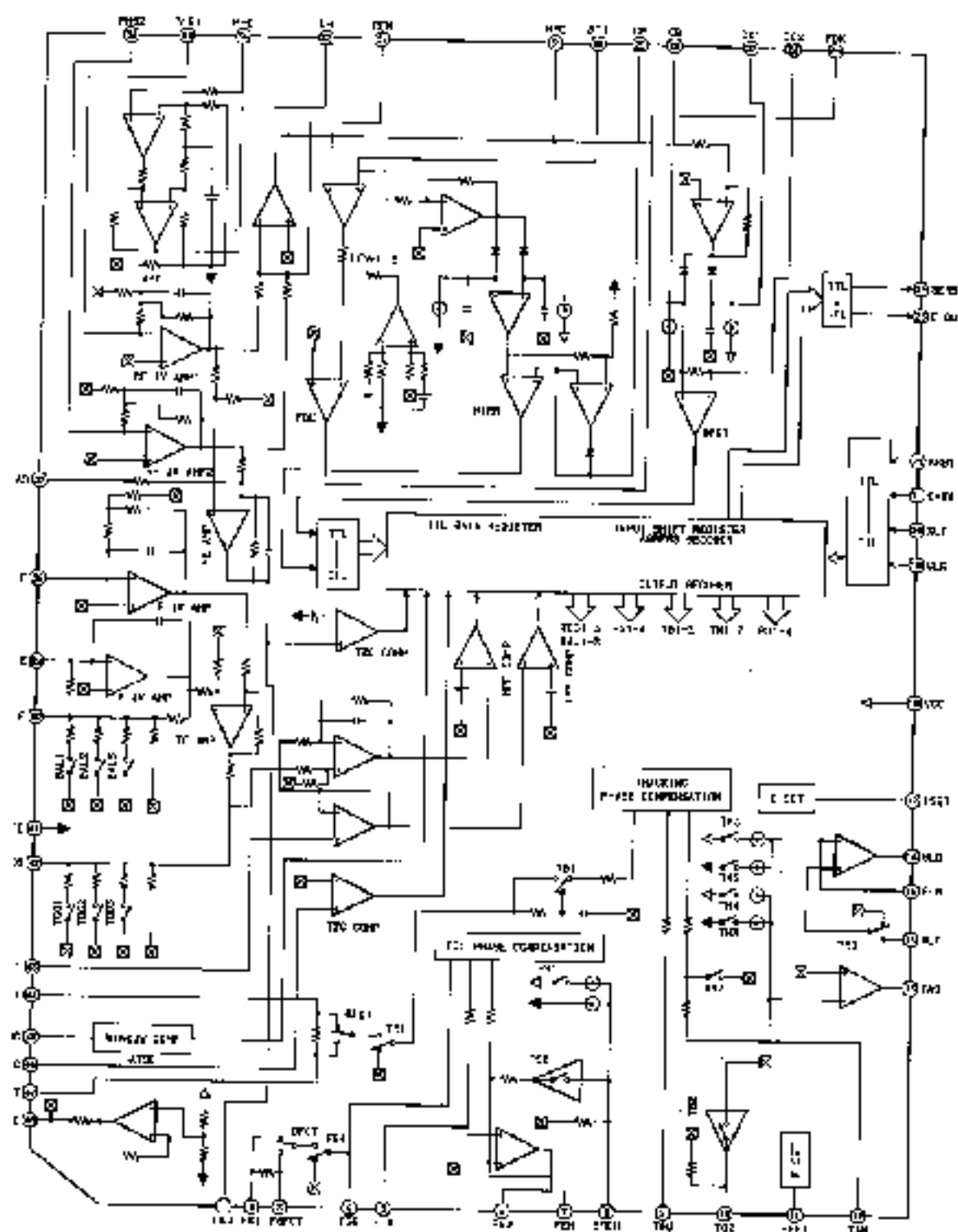
INPUT		OUTPUT		MODE
IN1	IN2	OUT1	OUT2	
0	0	∞	∞	STOP
1	0	H	L	CV
0	1	L	H	CCW
1	1	L	L	BRAKE

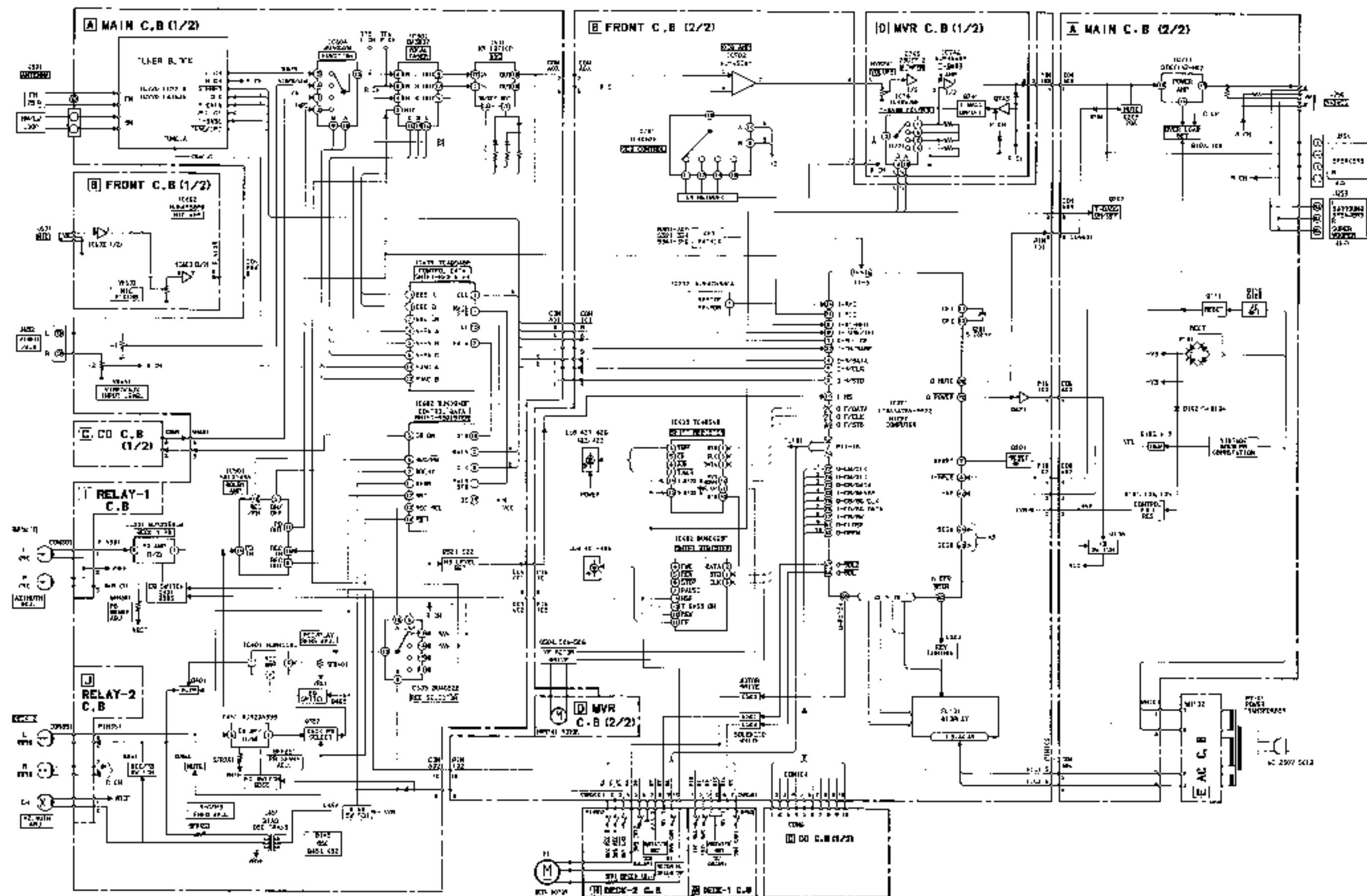
∞ : HI IMPEDANCE

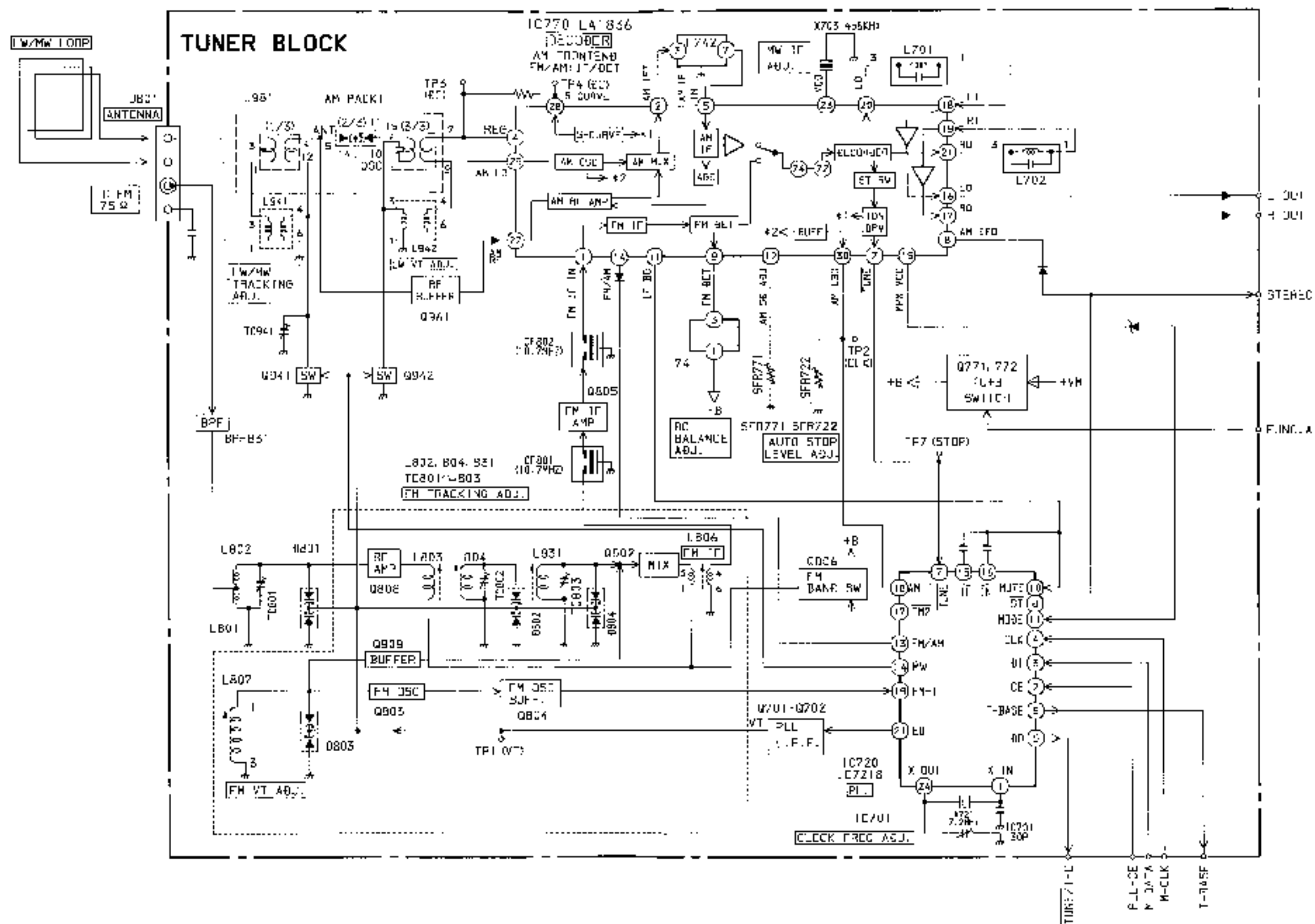
H/L : INPUT "H" ACTIVE

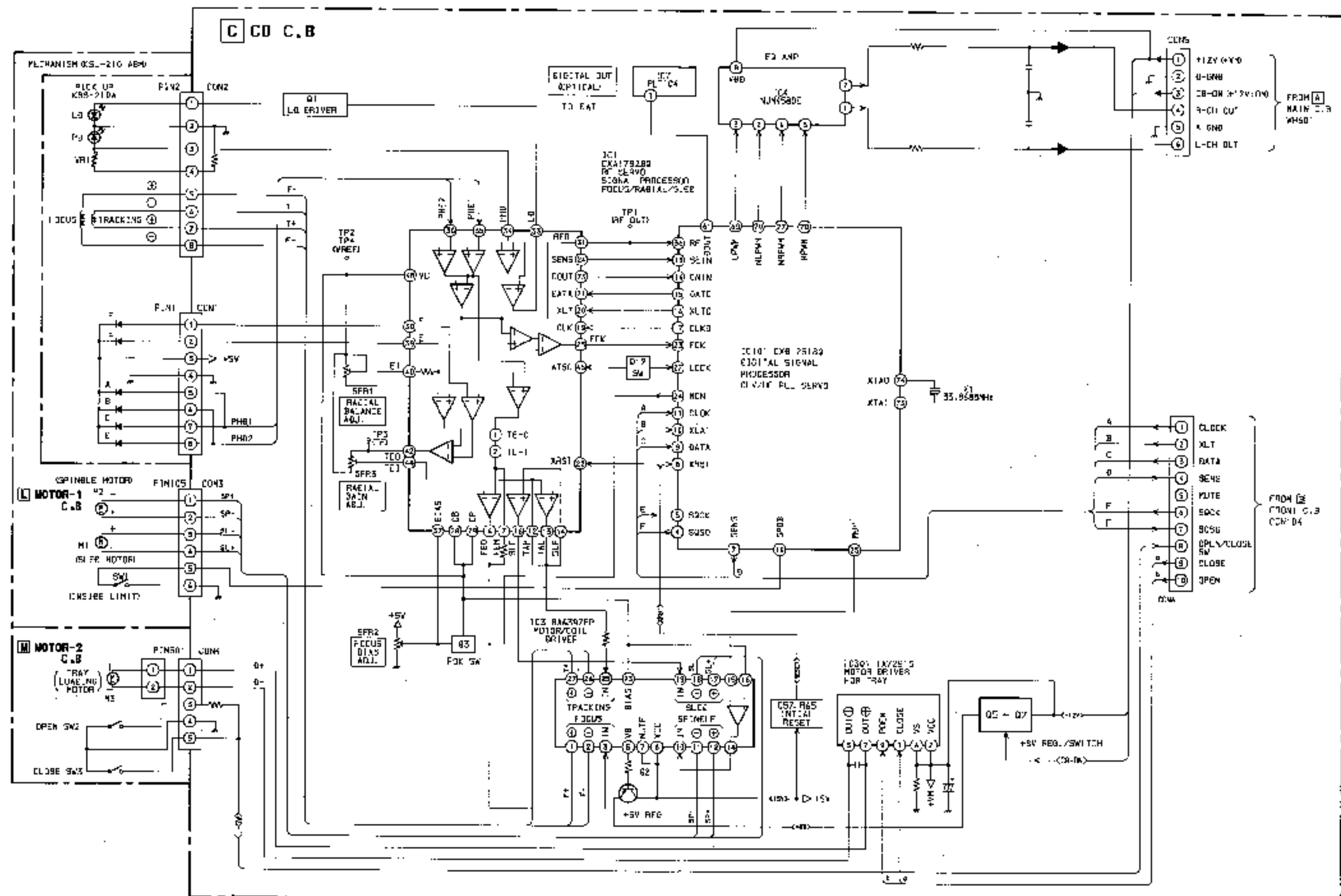
1782B0

BLOCK D











A
B
C
D
E
F
G
H
I
J

A MAIN C.B

FROM RELAY-1 C.B

FROM RELAY-2 C.B

FIN501

FIN501

FIN501

FIN501

J201
ANTENNAJ202
ANTENNAJ203
ANTENNAV7A51
VIDEO P.A. X
IMP. LEVELV7A51
VIDEO P.A. X
IMP. LEVELTO
C.B. CURSV7A51
VIDEO P.A. X
IMP. LEVELV7A51
VIDEO P.A. X
IMP. LEVELJ204
SUPER-
VOL-UMJ205
SUPER-
VOL-UMJ206
SUPER-
VOL-UMJ207
SUPER-
VOL-UMJ208
SUPER-
VOL-UMJ209
SUPER-
VOL-UMJ210
SUPER-
VOL-UMJ211
SUPER-
VOL-UMJ212
SUPER-
VOL-UMJ213
SUPER-
VOL-UMJ214
SUPER-
VOL-UMJ215
SUPER-
VOL-UMJ216
SUPER-
VOL-UMJ217
SUPER-
VOL-UMJ218
SUPER-
VOL-UM

E AC C.B

TO FRONT C.B
TO REAR C.B
TO FRONT C.B
TO REAR C.BJ200
PHONESJ200
PHONESJ200
PHONES



1

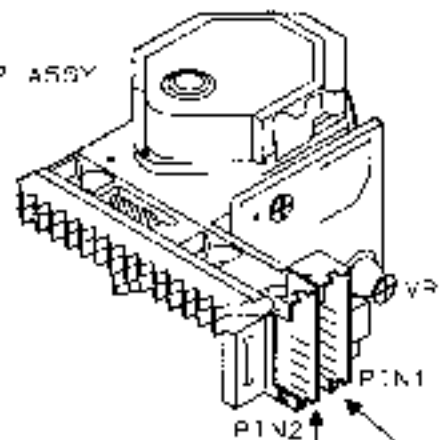
41
27.6 11.18



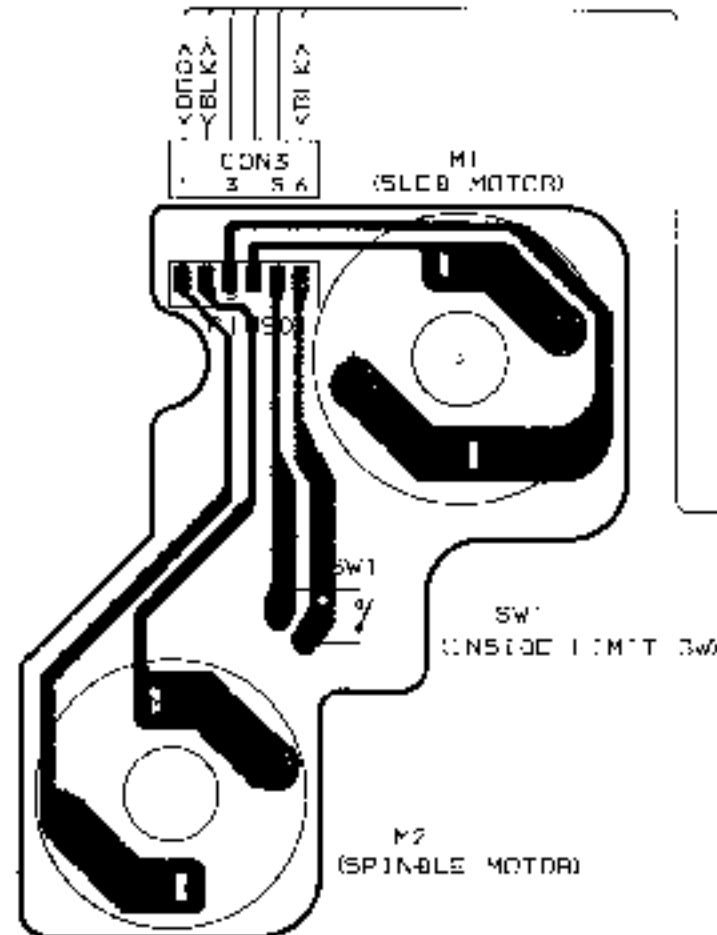
A
B
C
D
E
F
G
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I
J

C CØ C.B

PICK UP ASSY

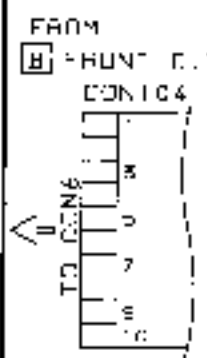
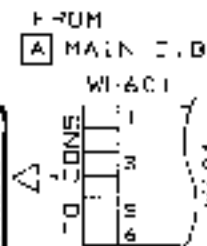
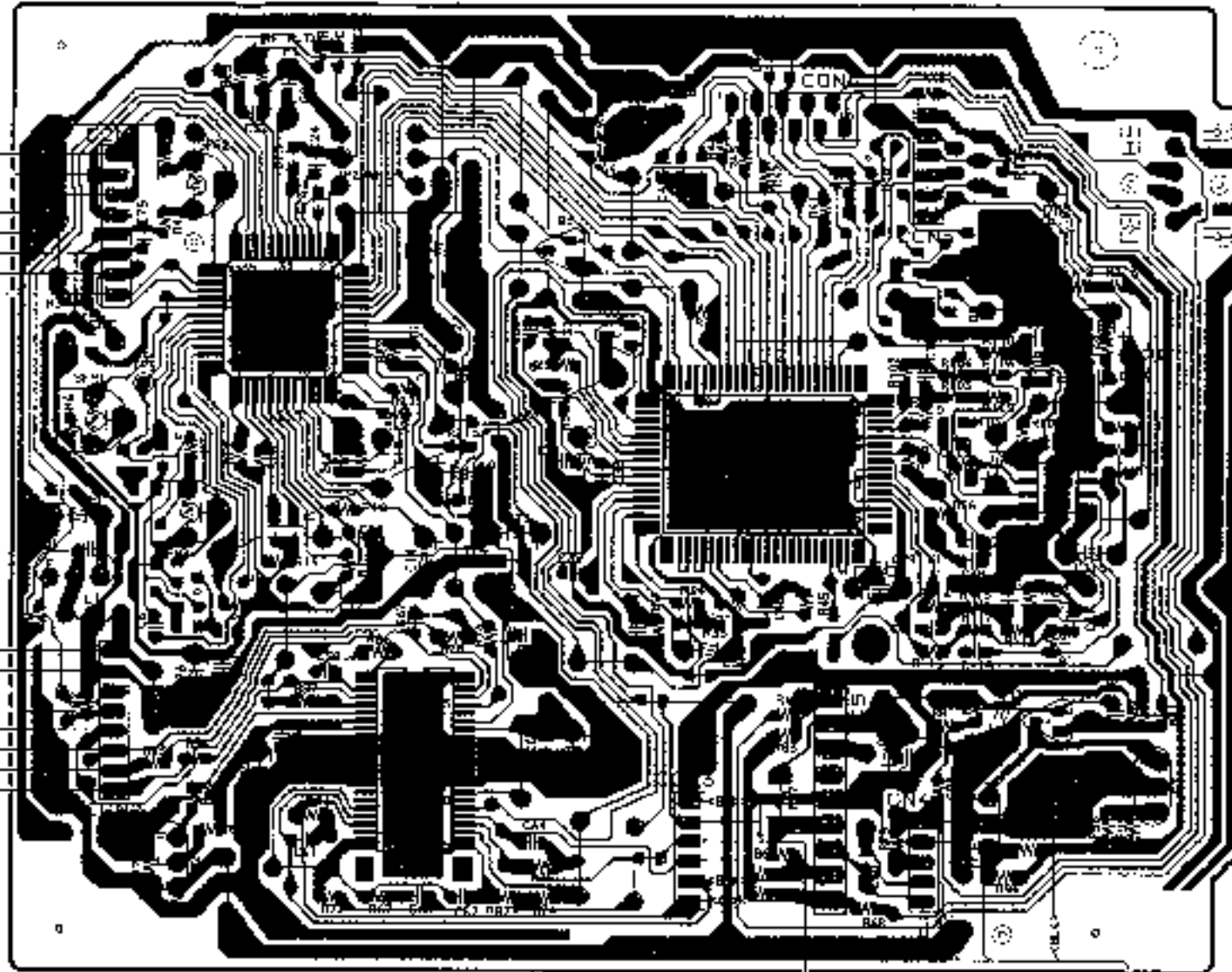


K MOTOR-1 C.B



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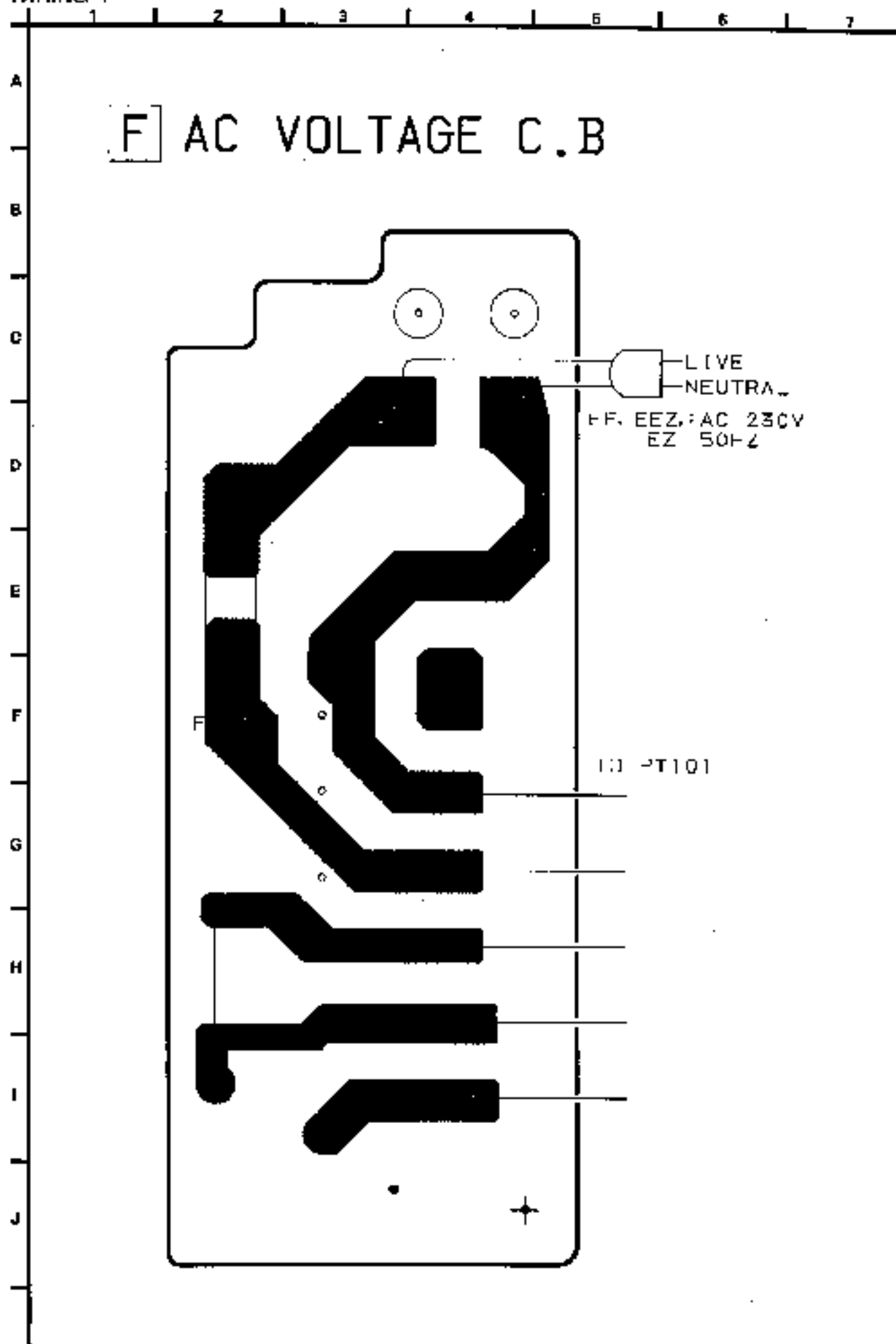
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L MOTOR-2 C.B

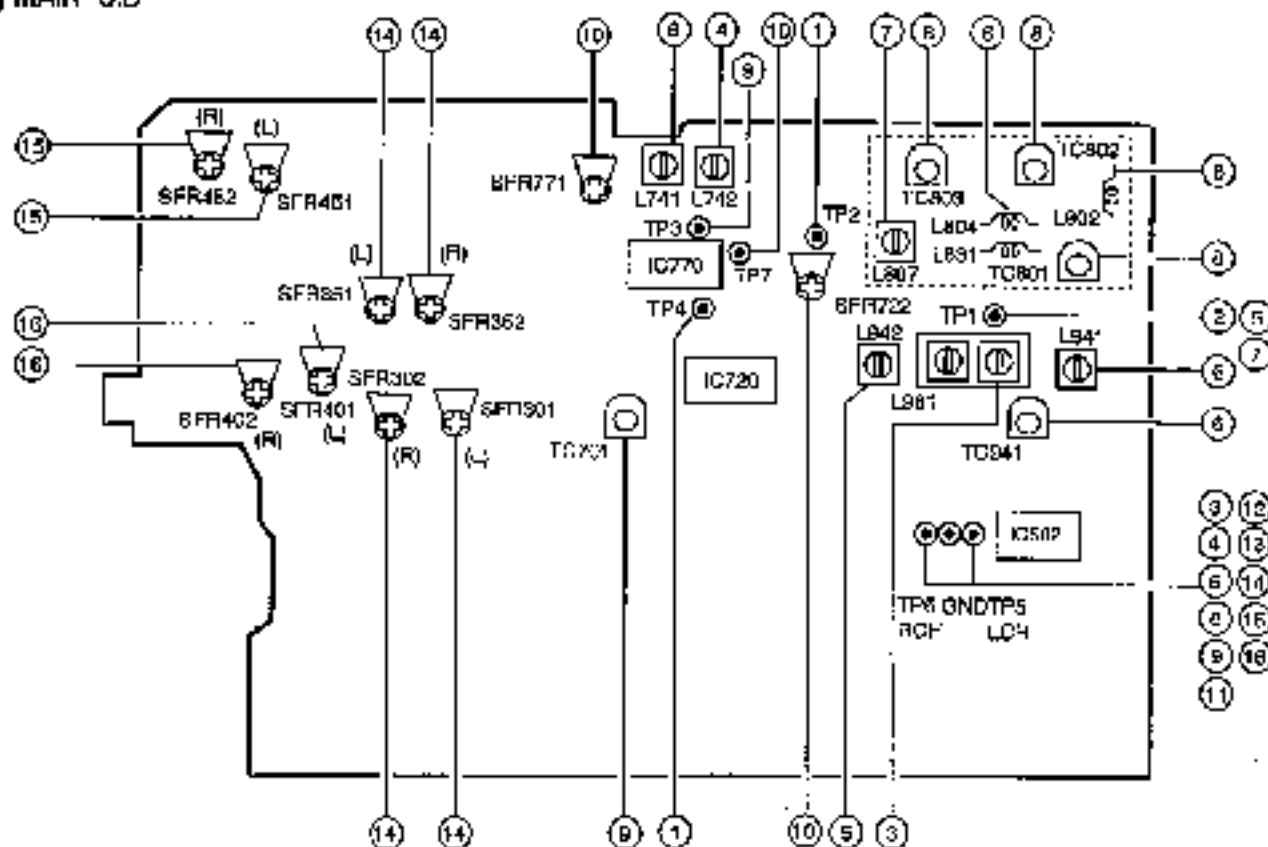


WIRING-4

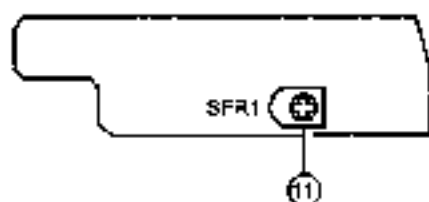


ADJUSTMENT -1 <TUNER,DECK>

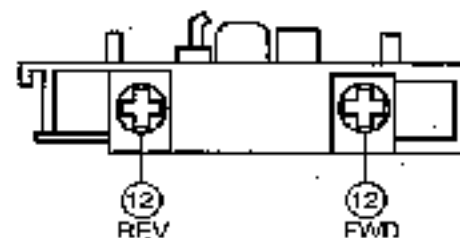
A MAIN C.B



H DECK-2 C.B



DECK-1 P, DECK-2 R / P / E HEAD



<TUNER SECTION>

1. Clock Frequency Adjustment

Settings : *Test point : TP2 (CLK IC770 pin30)

*Adjustment location : TC901

Method : Set to MW 1602kHz and adjust TC901 so that the test point becomes 2052kHz $\pm$ 0.01kHz

2. MW VF Check

Settings : *Test point : TP1 (VF)

Method : Set to MW 1602kHz and check that the test point is 7.0V $\pm$ 1.0V.

3. MW Tracking Adjustment

Settings : *Test point : TP5, TP6

*Adjustment location : L981

Method : Set to MW 999kHz and adjust L981 that the test point becomes maximum.

4. AM IF Adjustment

Settings : *Test point : TP5, TP6

1.742 150kHz

5. LW V.I. Adjustment

Settings : *Test point : TP1 (V.I.)

*Adjustment location : L942

Method : Set to LW 144kHz adjust L942 so that the test point becomes 1.50V $\pm$ 0.05V.

6. LW Tracking Adjustment

Settings : *Test point : TP5, TP6

*Adjustment location :

L941 144kHz

TC941 290kHz

Method : Set up TC941 in center frequency adjustment. The level at 144kHz is adjusted to MAX by L941. Then the level at 290kHz is adjusted to MAX by TC941.

7. FM VT Adjustment

Settings : *Test point : TP1 (VT)

*Adjustment location : L807

Method : Set to FM 87.5MHz and adjust L807 so that the test point becomes 1.00V $\pm$ 0.05V.

8. FM Tracking Adjustment

Settings : *Test point : TP5,TP6

TC801, TC802, TC803 108MHz

L802, L804, L831 87.5MHz

9. DC Balance/MONO Distortion Adjustment

Settings : *Test point : TP3, TP4 (DC balance)

TP5, TP6 (Distortion)

*Adjustment location : L741

*Input level : 54dB

Method : Set to FM 98.0MHz and adjust L741 so that the voltage between TP3 and TP4 becomes 0V10.0 $\pm$ V. Next, check that the distortion is less than 1.5%.

10. Auto Stop Level Adjustment

FM

Settings : *Test point : TP7

*Adjustment location : SFR722

*Input level : 20dB

Method : Set to FM 98.0MHz and adjust voltage low (about 0.01V) by SFR722. After that voltage high (about 7.0V) out by 2dB down.

AM

Settings : *Test point : TP7

Adjustment location : SFR771

Input level : 50dB

Method : Set to AM 999kHz and adjust voltage low (about 0.01V) by SFR771. After that voltage high (about 7.0V) out by 2dB down.

<TAPE SECTION>

11. Tape Speed Adjustment

Settings : *Test tape : TTA-100

*Test point : TP5, TP6

*Adjustment location : SFR1

Method : Play back the test tape by DECK 2 and adjust SFR1 so that the frequency counter reads 3000Hz $\pm$ 5Hz.

12. Head Azimuth Adjustment

Settings : *Test tape : TTA-310

*Test point : TP5, TP6

*Adjustment location : Head azimuth adjustment screw

Method : Play back the 10kHz signal of the test tape and adjust screw so that the output becomes maximum. Next, perform on each FWD PLAY and REV PLAY mode.

13. PB Frequency Response Check (Deck 1, Deck 2)

Settings : *Test tape : TTA-310

*Test point : TP5, TP6

Method : Play back the 315Hz and 10kHz signals of the test tape and check that the output ratio of the 10kHz signals is with respect to that of the 315Hz signal is $\pm$ 2dB.

14. PB Sensitivity Adjustment

Settings : *Test tape : TTA-300

*Test point : TP5, TP6

*Adjustment location : SFR301 (DECK1, Lch)

SFR303 (DECK1, Rch)

SFR351 (DECK2, Lch)

SFR352 (DECK2, Rch)

Method : Play back the test tape and adjust SFRs so that the output level of the test point becomes 58mV.

15. RTC / PB Frequency Response Adjustment

Settings : *Test tape : TTA-631

*Test point : TP5, TP6

*Input signal : 1kHz/10kHz (LINE IN)

*Adjustment location : SFR451 (Lch)

SFR452 (Rch)

Method : Apply 1kHz signal and RTC mode. Then adjust attenuator so that the level at the TP5, TP6 becomes 4.0mV. Record and play back the 1kHz and 10kHz signals and adjust SFRs so that the output level of 10kHz signal becomes 1dB $\pm$ 0.5dB for 1kHz signal.

16. RBC / PB Sensitivity Adjustment

Settings : *Test tape : TTA-601

*Test point : TP5, TP6

*Input signal : 1kHz (LINE IN)

*Adjustment location : SFR401 (Lch)

SFR402 (Rch)

Method : Apply 1kHz signal and RBC mode. Then adjust attenuator so that the level at the TP5, TP6 becomes 4.0mV. Record and play back the 1kHz and adjust SFRs so that the output is 4.0mV $\pm$ 0.5dB.

PRACTICAL SERVICE FIGURE

<TUNER SECTION>

<FM SECTION>

HF Sensitivity : $4\mu\text{B} \pm 6\text{dB}$ (87.5MHz)
 (THD 3%) $2\mu\text{B} \pm 6\text{dB}$ (98.0MHz)
 $5\mu\text{B} \pm 6\text{dB}$ (108.0MHz)

S/N 50dB Quietude sensitivity :
 $20\text{dB} \pm 5\text{dB}$ (87.5/98.0/108.0MHz)

Signal to noise ratio : More than 64dB (98.0MHz)
 Distortion : Less than 1.2% (98.0MHz)
 Stereo separation : More than 25dB (98.0MHz)
 Intermediate frequency : 10.7MHz

<MW SECTION>

Sensitivity : $5\mu\text{B} \pm 7\text{dB}$ at 613kHz
 (S/N 20dB) $5\mu\text{B} \pm 6\text{dB}$ at 999kHz
 $5\mu\text{B} \pm 6\text{dB}$ at 1404kHz

Distortion : Less than 1.5% at 1000kHz
 Less than 1.5% at 999kHz

Stereo separation : More than 12dB (400kHz)
 Intermediate frequency : 450kHz

<LW SECTION>

Sensitivity : $6\mu\text{B} \pm 5\text{dB}$ (144kHz)
 (S/N 20dB) $6\mu\text{B} \pm 5\text{dB}$ (198kHz)
 $6\mu\text{B} \pm 5\text{dB}$ (290kHz)

Distortion : Less than 1.5% (198kHz)
 Intermediate frequency : 450kHz

<TAPE SECTION>

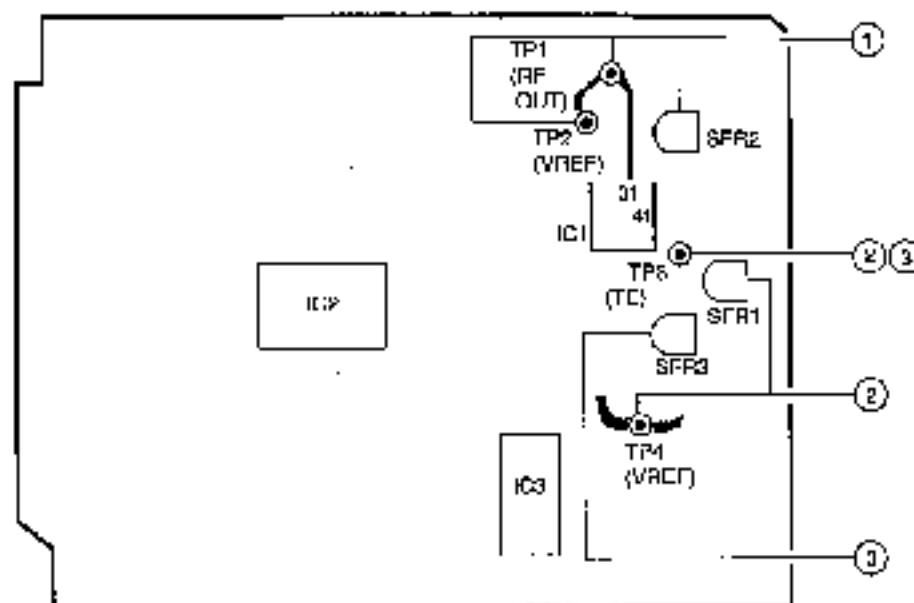
Tape speed : 3600Hz $\pm 4\text{Hz}$
 Wow & flutter : Less than 0.2% (W.R.M.S.)
 Take-up torque : 30 ~ 55g-cm (FWD,REV)
 FF torque : 75 ~ 170g-cm
 Rew torque : 75 ~ 170g-cm
 Back tension : 3 ~ 6g-cm (FWD,REV)
 PB Output level : $1.2\text{V} \pm 1.5\text{dB}$ (SP OUT)
 REC/PB Output level : $2.0\text{V} \pm 2.0\text{dB}$ (SP OUT)
 Distortion (REC/PB) : Less than 2.0% (NORMALLY2)
 Noise level(PH) : Less than 80mV/100mV
 (DOLBY B NR ON/OFF
 CrO2, Vol MAX.)
 Less than 100mV/150mV
 (DOLBY B NR ON/OFF
 NORM. Vol MAX.)

Noise level(REC/PB) : Less than 13mV/53mV
 (DOLBY B NR ON/OFF
 CrO2, SP OUT 2V)
 Less than 16mV/35mV
 (DOLBY B NR ON/OFF
 NORM. SP OUT 2V)

Crosstalk : More than 60dB (1kHz,0VU)
 Channel separation : More than 40dB (1kHz,0VU)
 Erasing ratio : More than 60dB (125Hz)
 REC bias frequency : 85kHz
 Test tape : NORMAL: TTA-601
 CrO2: TTA-610

ADJUSTMENT- 2 <CD>

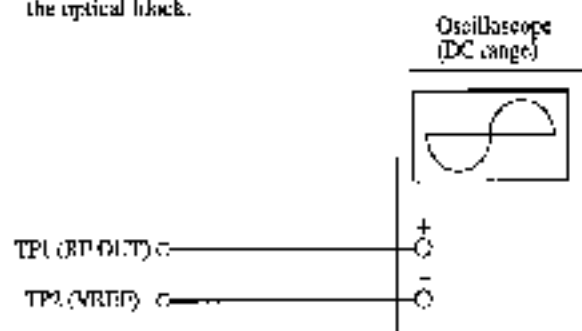
C CD C.B



<CD SECTION>

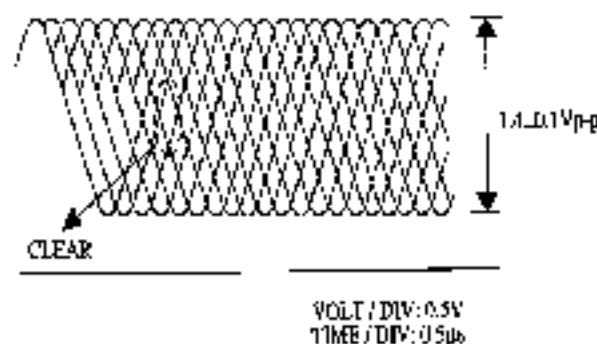
1. Focus Bias Adjustment

Make the focus bias adjustment when replacing and repairing the optical block.

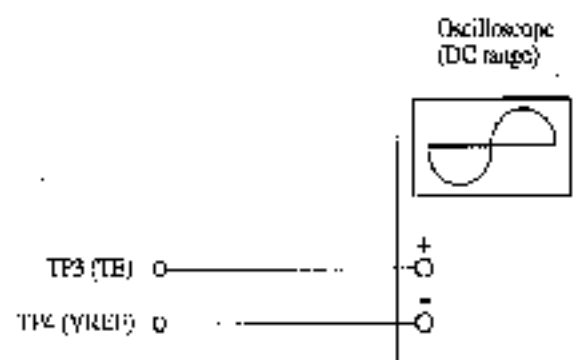


- 1) Connect an oscilloscope to the test points TP1 (RF OUT) and TP2 (VREF).
- 2) Turn on the power switch.
- 3) Insert test disc TCD-782 (VDS-18) and play back the second composition.
- 4) Adjust SFR2 so that the level of RF to be maximum and clear.

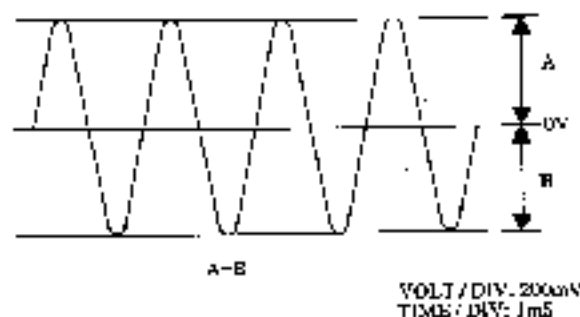
RF signal waveform



2. Tracking Balance Adjustment



- 1) Connect an oscilloscope to the test points TP3 (TE) and TP4 (VREF).
- 2) Turn on the power switch.
- 3) Insert test disc TCD-782 (VDS-18) and play back the second composition.
- 4) Connect the intermediate point of SFR3 to TP4 (VREF).
- 5) Adjust SFR1 so that the waveform on the oscilloscope is vertically symmetrical as figure shown in the figure below.
- 6) Remove the connected wire.



Tracking Gain Adjustment

Visual analysis is necessary in order to perform this adjustment exactly. However, this gain has a margin, so even if it is slightly off, there is no problem. Therefore, do not perform this adjustment. Focus/tracking gain determines the pick-up follow-up (vertical and horizontal) relative to mechanical noise and mechanical shock when 2-axis device operates. However, as these reciprocate, the adjustment is at the point where both are satisfied.

- When gain is raised, the noise increases when the 2-axis device operates increases.
- When gain is lowered, it is more susceptible to mechanical shock and skipping occurs more easily.

When gain adjustment is off, the symptoms below appear

Symptoms \ Gain	Focus	Tracking
The time until music starts seems longer for STOP/PAUSE or automatic selection (Buttons pressed.) (usually takes about 2 seconds.)	low	low or high
Disc does not start and disc begins to rotate for STOP/PAUSE or automatic selection (Buttons pressed.)		low
Disc stops to rotate shortly after STOP → PLAY.	low or high	
Sound is interrupted during PLAY, or time counter display stops.	-	low
More noises during the 2-axis device operation.	high	high

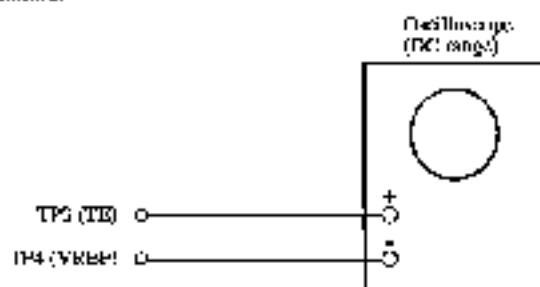
following is simple adjustment method.

Simple adjustment =

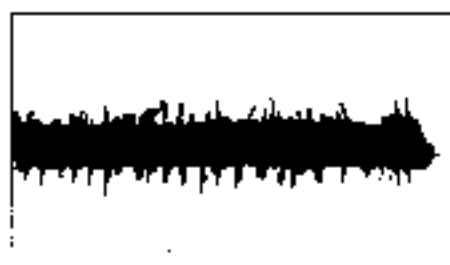
be: Since exact adjustment cannot be performed, remember the positions of the controls before the performing the adjustment.

If the positions after the simple adjustment are only a little different, return the controls to the original position.

Procedure:



- 1) Keep the set horizontal. (If the set is not kept horizontally, this adjustment cannot be performed due to the gravity against the 2-axis device.)
- 2) Insert test disc TCD-782 and play back the second reproduction.
- 3) Connect an oscilloscope to TP3 (TE) and TP4 (VREF).
- 4) Adjust SFR3 so that the waveform appears as shown in the figure below. (tracking gain adjustment)



VOLT / DIV: 50mV
TIME / DIV: 1μs

Low tracking gain

(The fundamental wave appears as compared with the waveform adjusted)



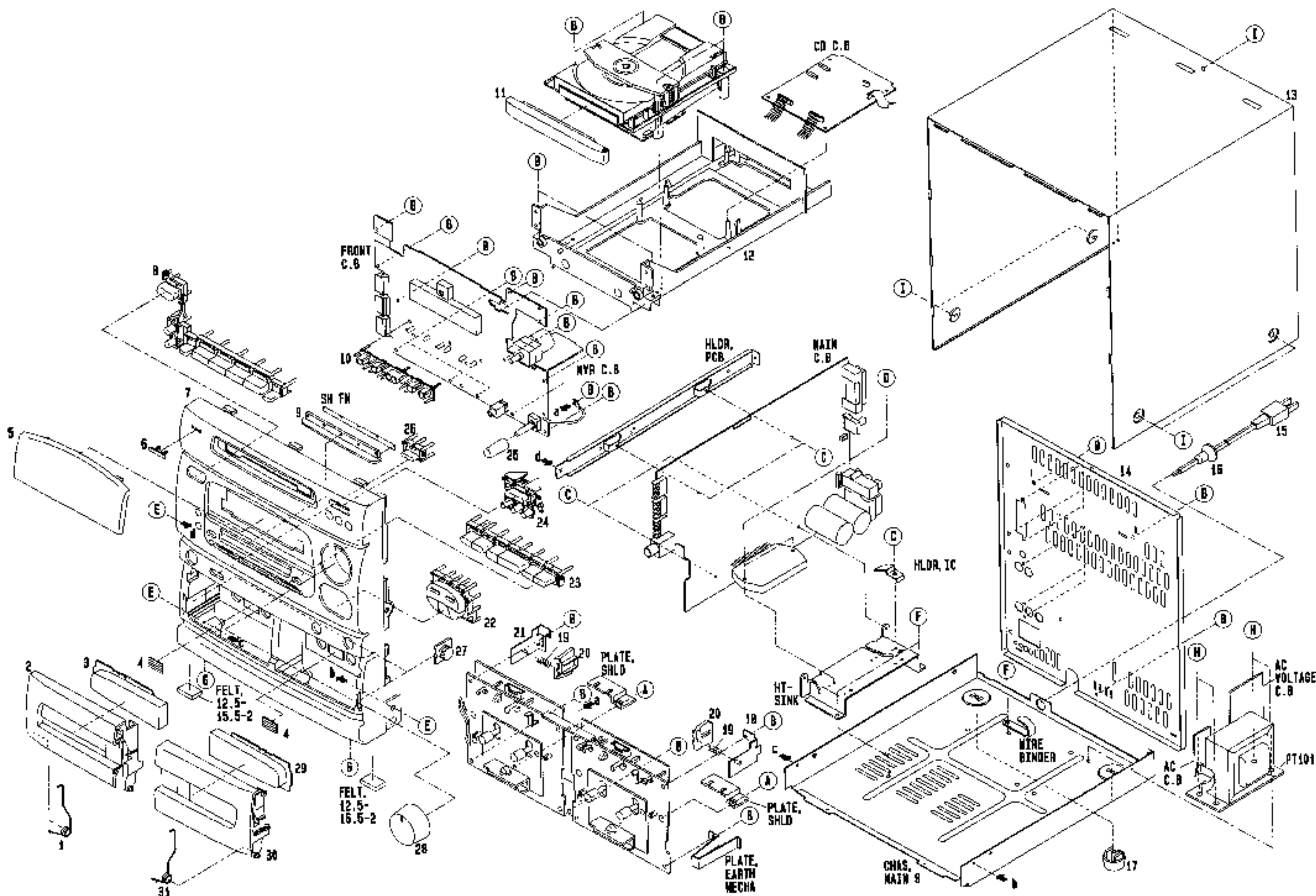
VOLT / DIV: 50mV
TIME / DIV: 1μs

High tracking gain

(The frequency of the fundamental wave is higher than in low gain)



VOLT / DIV: 50mV
TIME / DIV: 1μs



REF. NO. PART NO.

1 03-M04-218-
2 03-M04-014-
3 03-M04-048-
4 03-M04-080-
5 03-M04-061-

6 02-M04-067-
7 03-M04-003-
8 03-M04-029-
9 03-M04-052-
10 03-M04-610-

11 03-M04-006-
12 03-M04-213-
13 02-M04-036-
14 03-M04-014-
15 03-M04-611-

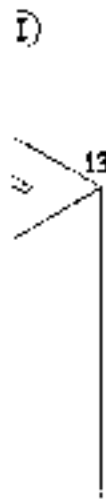
16 07-050-016-
17 07-085-185-
18 07-085-221-
19 02-M04-226-
20 02-M04-228-

21 02-M04-229-
22 02-M04-227-
23 03-M04-039-
24 03-M04-012-
25 03-M04-022-

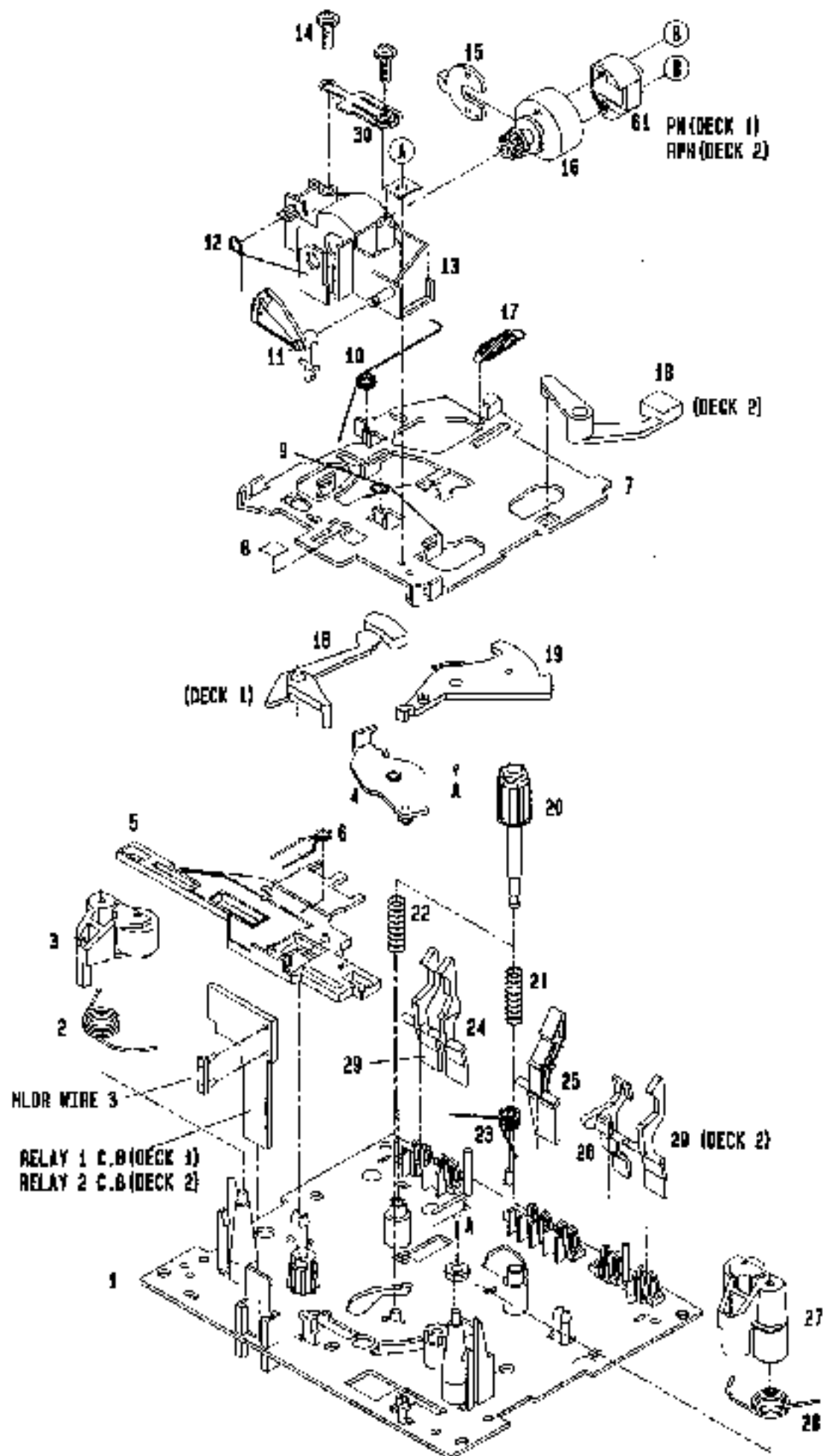
MECHANICAL PARTS LIST 1/1

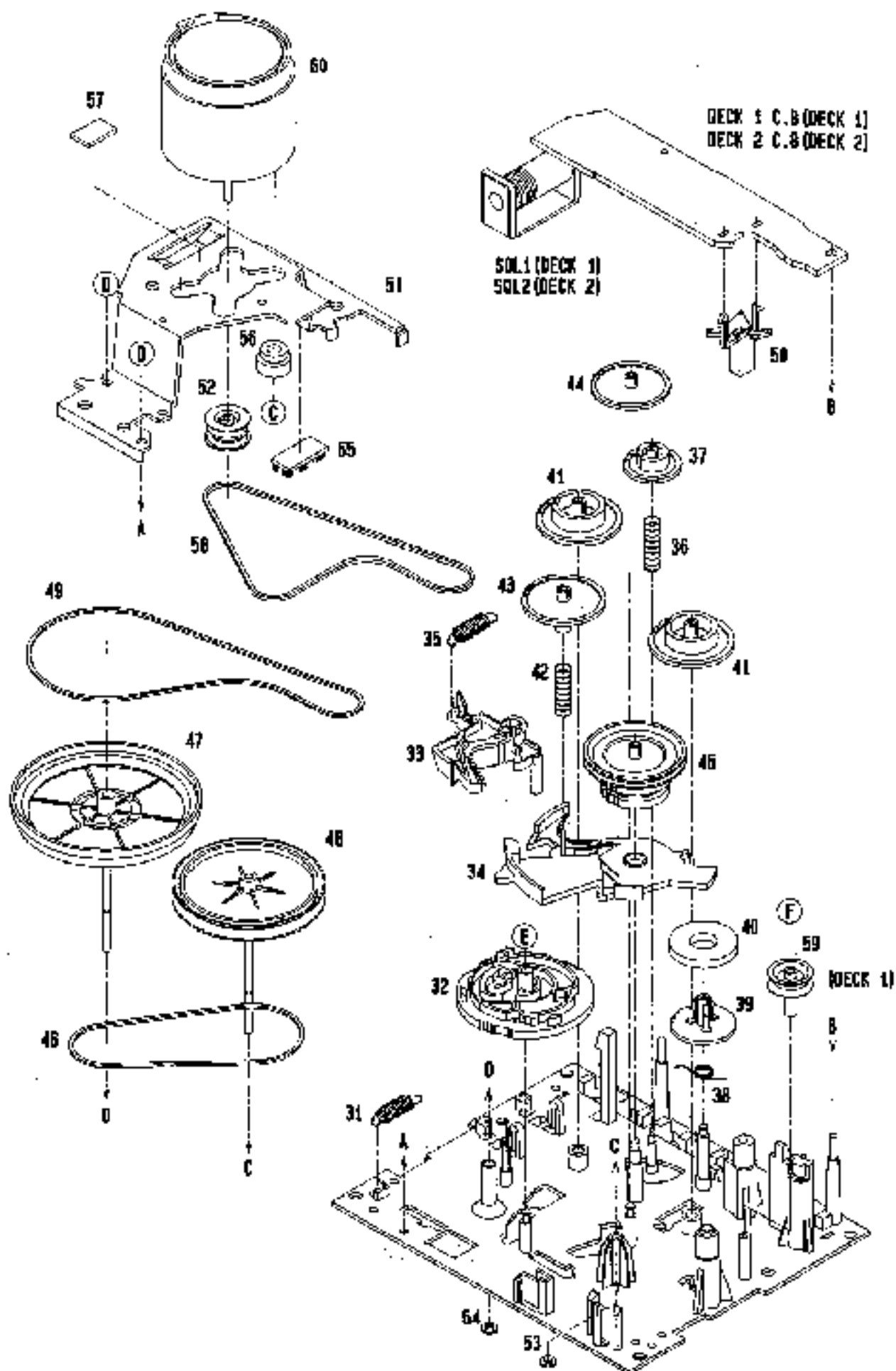
If can't understand for Description, please kindly refer to "REFERENCE NAME LIST".

REF NO	PART NO	QTY NO.	DESCRIPTION	REF NO	PART NO	QTY NO.	DESCRIPTION
1	83-MEC-218-019		SPR T ELECT L	25	83-MEC-020-019		SWOB, HIC
2	83-MEC-019-019		BOX, CASE RD	26	83-MEC-030-019		KEY, VF
3	83-MEC-044-019		WINDOW, CASE R	27	87-063-145-019		OIL-SUCKER 150
4	81-532-044-019		LBC, CASE COMPT	28	82-MF7-010-019		SWOB, VOL
5	83-MEC-041-019		WINDOW, DISPLAY	29	83-MEC-047-019		WINDOW, CASE L
6	83-MEC-067-019		DAWNC, ALPHA 50M	30	83-MEC-020-019		BOX, CASE Lb
7	83-MEC-031-019		CAB FR B	31	83-MEC-219-019		SPR T ELECT R
8	83-MEC-029-019		KEY, POWER	A	87-571-032-019		VCT#2-3
9	83-MEC-052-019		IND, FX	B	87-067-793-019		SVT2-1-10 W/O SLOTT
10	83-MEC-614-019		GUIDE, FLAT	C	87-067-579-019		SVT2-1-8 W/O SLOTT
11	83-MEC-016-019		PANEL, CD	D	87-067-698-019		SVT2-3-18
12	83-MEC-213-019		HOLE, CD FR	E	87-591-094-019		QTY#1-5 GOLD
13	81-MF5-034-019		CAD, STEEL G	F	87-067-638-019		SVT213-8
14	83-MEC-014-019		PANEL REAR BEHIND<BS>	G	87-067-716-019		SVT1-1-6 BLK
14	83-MEC-013-019		PANEL REAR BEHIND<BS, REAR>	H	87-074-019-019		S-SCREW, IT+4-6
15	87-050-914-019		AC COOLD ASSY, E	I	87-067-641-019		QTY#2-8 W/O SLOTT BLK
16	87-089-182-019		BUSHING, AC CORD				
17	87-089-221-019		SOFT, S13-5				
18	82-MF5-224-019		HOLE, LOCK 1M				
19	82-MF5-224-019		SPB-C, LOCK				
20	82-MF5-224-019		PLATE, LOCK				
21	82-MF5-221-019		HOLE, LOCK 2M				
22	83-MEC-019-019		SET COQ ASSY				
23	83-MEC-012-019		SET, FLAT				
24	83-MEC-012-019		SET, OPEN				



TAPE MECHANISM EXPLODED VIEW 1/1



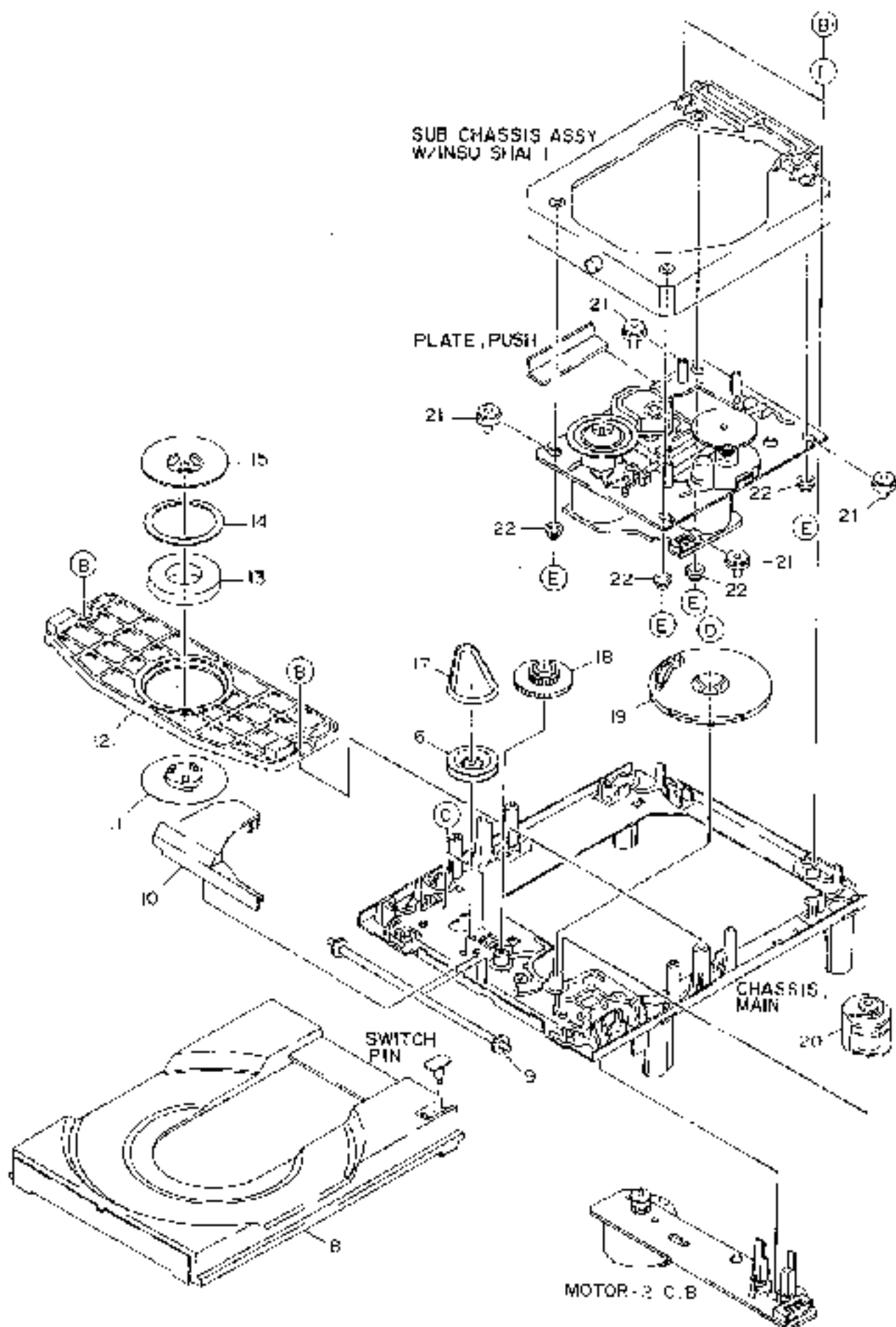


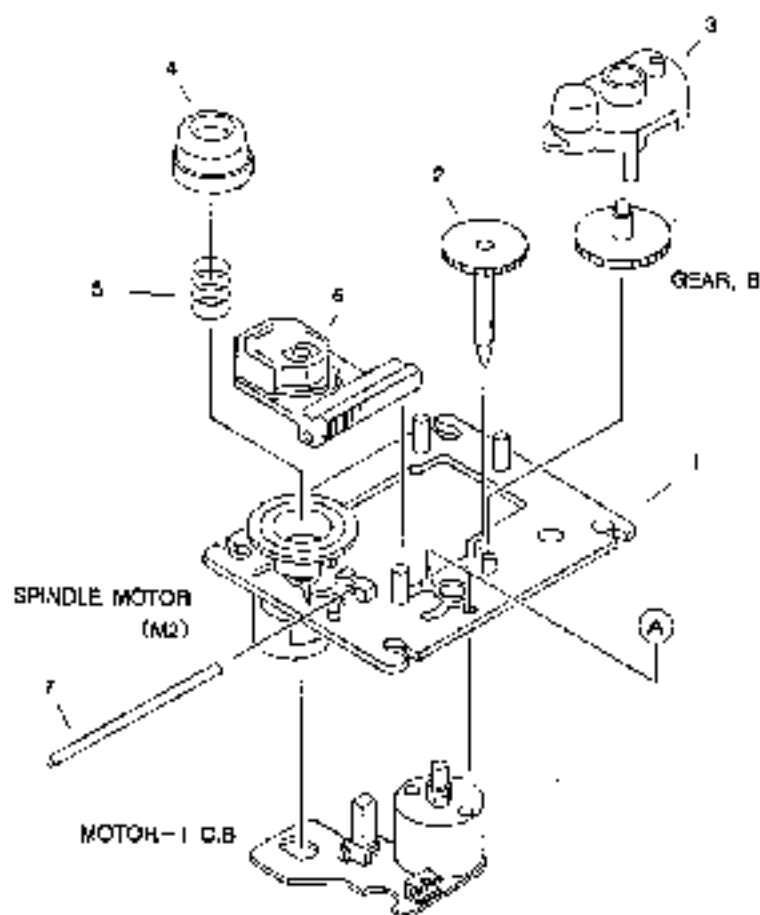
TAPE MECHANISM PARTS LIST 1/1

If can't understand the Description please kindly refer to "REFERENCE NAME LIST".

REF. NO.	PART NO.	NAME NO.	DESCRIPTION	REF. NO.	PART NO.	NAME NO.	DESCRIPTION
1	82-2H3-213-110		GEAR ASSY, P (DECK 1)	19	82-2H1-220-210		GEAR, IDLER
2	82-2H1-293-010		GEAR ASSY, R (DECK 2)	46	82-2H3-217-010		RING PULLEY 2
3	82-2H1-258-010		SPR-T, PINCH L	47	82-2H1-216-210		GEAR, RUBER
4	82-2H1-248-110		LVR ASSY, PINCH L	48	82-2H1-214-010		SPR-C, FB
			FLATE ASSY, LINE	49	82-2H1-215-010		GEAR, FR
5	82-2H1-266-010		LVR, DCR				
6	82-2H1-214-010		SPR-T, DLR	44	82-2H1-226-010		GEAR, RER
7	82-2H1-206-210		CHAS, 2BAU	45	82-2H1-228-010		SLIP DISC ASSY
8	82-018-014-010		SH, 5-3-0.05	46	82-2H1-261-110		BELT, FR
9	82-2H1-269-010		SPR-T, FBG	47	82-2H1-207-210		FLY-WHL ASSY, R (DECK 2)
				48	82-2H1-209-210		FLY-WHL ASSY, R2 (DECK 1)
10	82-2H1-219-010		SPR-T, LINE				
11	82-2H1-210-010		GEAR, H T	49	82-2H1-234-110		FLY-WHL ASSY, L (DECK 2)
12	82-2H1-213-010		SPR-T, HEAD	50	82-2H1-207-210		FLY-WHL ASSY, L2 (DECK 1)
13	82-2H1-207-010		GUIDE, TYPE	49	82-2H1-206-010		WHL, X
14	82-2H1-283-210		S-SCREEN, AT/MUCH	50	82-2H1-245-210		WHL, LG
				51	82-2H1-201-010		BELT, MC
15	82-2H1-201-010		PLATE, HEAD				
16	82-2H1-201-010		SPR, HEAD	52	82-2H1-202-010		PULLEY, MOT 2H
17	82-2H1-211-010		SPR-E, HB	53	82-2H1-288-010		SE, 1.41-1.2-0.5 BELT
18	82-2H1-263-110		LVR, EXCIT L (DECK 1)	54	82-2H1-243-010		SE, 1.75-1.5-0.5 BELT
19	82-2H1-264-010		LVR, EXCIT R (DECK 2)	55	82-2H1-230-010		SE, 2210
				56	82-2H1-242-010		CASE-G, 2113, 7-9-1.2
19	82-2H1-222-010		LVR, FLAY				
20	82-2H1-217-110		RUBER TABLE	57	82-2H1-281-010		CASE-G, 1-8-0.8
21	82-2H1-248-110		SPR-C, BI	58	82-2H1-205-010		BELT, L
22	82-2H1-285-110		SPR-C, BI L	59	82-2H1-204-010		PULLEY, COPIER (DECK 1)
23	82-2H1-257-010		SPR-C, CAS	60	82-2H1-245-010		MOT, 2210 10(N1)
				41	82-2H1-296-010		HEAD, FR 2210-2210 (2H)
24	82-2H1-241-110		LVR, MC				
25	82-2H1-242-010		LVR, CAS	41	82-2H1-293-010		HEAD, FR 2210-2210 (2H)
26	82-2H1-243-010		LVR, STOP	A	82-2H1-244-410		UT1+2-3
27	82-2H1-253-110		LVR ASSY, PINCH R	B	82-2H1-245-010		UT1, 6-7
28	82-2H1-259-010		SPR-T, PINCH R	C	82-2H1-246-010		B-800K, MOTOR
				D	82-2H1-247-010		UT1+2, 6-3
29	82-2H1-240-110		LVR, REC (DECK 2)				
30	82-2H1-298-010		SPR-P, START	E	82-2H1-248-010		PR, 2.15-1.8-0.5 BELT
31	82-2H1-255-110		SPR-P, LVR DIR	F	82-2H1-249-010		PR, 1.05-1.0-0.25 BELT
32	82-2H1-221-110		WHL, CAN				
33	82-2H1-237-110		LVR, TRIG				
34	82-2H1-224-110		LVR, FB				
35	82-2H1-205-010		SPR-E, TRIG 2				
36	82-2H1-277-010		SPR-C, FLAY				
37	82-2H1-225-010		GEAR, FLAY				
38	82-2H1-256-110		SPR-T, FA				

CD MECHANISM EXPLODED VIEW 1/1



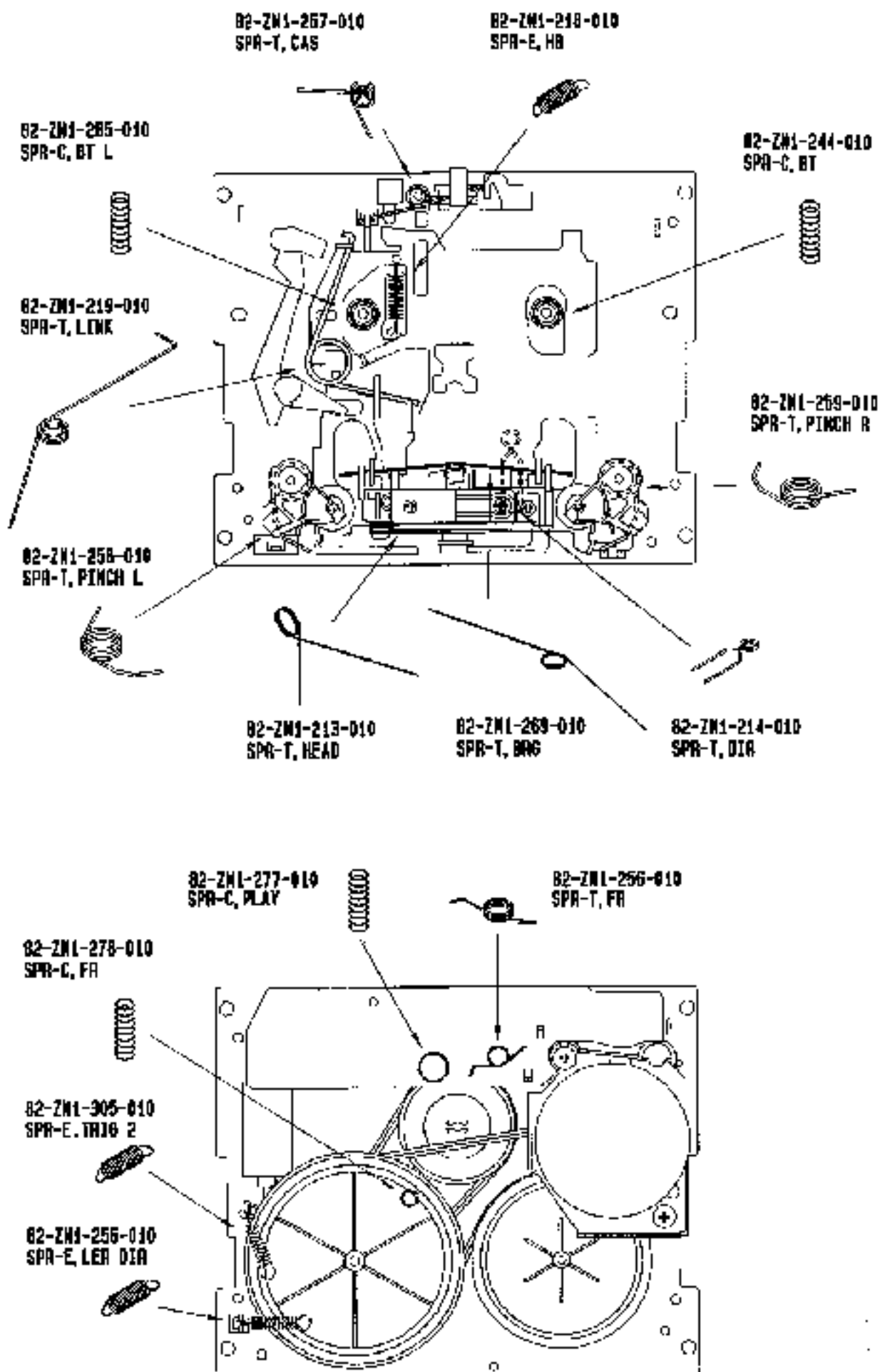


CD MECHANISM PARTS LIST 1/1

If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO.	PART NO.	NAME NO.	DESCRIPTION	REF. NO.	PART NO.	NAME NO.	DESCRIPTION
1	92-625-513-010		P.I CRASS ASSY W/MOTOR	16	92-625-276-011		POSSLY MOUNTING
2	92-625-103-020		BEARING	17	92-653-307-001		LN BRIC
3	92-625-544-010		COVER	18	92-625-274-011		GEAR MIDDLE
4	92-625-187-010		RING CENTER	19	92-625-285-030		DRIVE GEAR
5	92-625-191-010		SPRING COMPRESSION	20	92-625-283-021		CONTROL CAR
6	98-848-127-110		OPTICAL PICK UP 625-4915	21	92-625-278-011		INSULATOR
7	94-917-565-010		SHIRT SLIP	22	92-625-280-011		SPRING
8	92-625-283-010		TRAY	A	87-261-032-210		F-2-1
9	92-625-275-010		GEAR TRAY	B	87-761-074-411		VPT2 2.6-8
10	92-625-282-010		GEAR COVER	C	92-625-279-011		C42-6-2.5
11	2-625-236-030		CHINSENG PULLEY	D	87-761-079-411		VPT2 2.6-16
12	92-625-284-010		CHINSENG PLATE	E	92-644-410-021		SCREEN BRCH10A
13	31-452-491-210		HANGER	F	93-464-123-041		WASHER
14	32-625-341-010		DANGER				
15	32-625-277-010		WAGE CHECK				

SPRING APPLICATION POSITION



SPEAKER PARTS LIST

If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO.	PART NO.	NAME NO.	DESCRIPTION
1	82-MSE-810-010		CERAMIC
2	83-MSE-001-010		PANEL FR.L
3	83-MSE-002-010		PANEL FR.R
4	83-MSE-007-010		UNIT FRANK ASSY
5	83-MSE-009-010		DIAPHRAGM
6	83-MSE-604-010		SPEAKER TWEETER
7	83-MSE-616-010		SPEAKER CORD

ACCESSORIES/PACKAGE LIST

If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO.	PART NO.	NAME NO.	DESCRIPTION
1	83-MSE-902-918		12, BSP-121
2	83-MSE-903-918		12, BSP-121
3	83-MSE 701-919		BC-TW 300EX
4	87-006-268-919		AM LOOP ANT MC(UD)
5	87-043-106-919		FM, WIRE ANT 121

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FILTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE-SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VH	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
EXCAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SENS	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VAR	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, REM	PTR, REMT
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPEAK	SPEAKER
SW, LVR	SWITCH, LEVER
SW, POTRY	SWITCH, POTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESIVE	SHEET ADHESIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CNT	CONTROL
CURSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBR	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
IDL	HANDOFF
HIMERN	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HIT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BAT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SFR	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLEY, LOAD MOTOR
RBN	PISTON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPH	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SF	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL

サービス技術ニュース	
番号	更新内容
G- -	
G- -	
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