

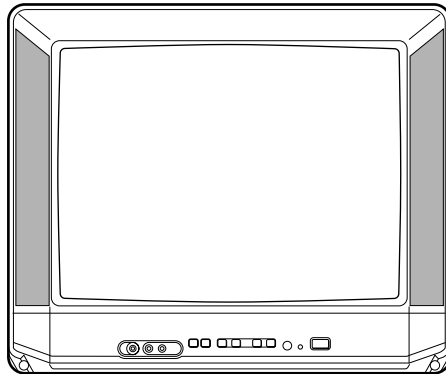


TV-C143 TV-C148 TV-C208

KE, KER

SHR

SHR



SERVICE MANUAL

COLOR TELEVISION

MODEL	TYPE
TV-C143	KEJL6C1M, KERJL4L
TV-C148	SHRJL1L, SHRJ4L, SHRJL6L
TV-C208	SHRJ4L

- This Service Manual is the "Revision Publishing" and replaces "Simple Manual" TV-C143(KE,KER) / TV-C148(SHR) / TV-C208(SHR), (S/M Code No. 09-003-419-0T4).
- This Service Manual does not include "NOTICES BEFORE REPAIRING", "DISASSEMBLY INSTRUCTIONS" and "ADJUSTMENT". These items will be issued in the next Supplement.

aiwa
S/M Code No. 09-003-419-0R2

REVISION
DATA

SPECIFICATIONS

Tuner System	Frequency synthesized tuner	Video Input/Output	1 Vp-p 75 ohms
TV System	TV-C143/203: PAL(B/G,D/K), SECAM(B/G,D/K,K1)	Audio Input	0.5 Vrms., 33 kohms
	TV-C148/208: PAL(B/G,H,I,D/K), NTSC(M), SECAM(B/G,I,D/K,K1)	Audio Output	0.5 Vrms., less than 2.2 k ohms
Video input color system	PAL, SECAM, NTSC _{3,58} , NTSC _{4,43}	Speakers	77 mm (3 in.) round
Channel Coverage	VHF: E2 to E12, R1 TO R12 UHF: 21 to 69 CATV: S1 TO S41	Operatiing Voltage	110 V - 240 V AC, 50/60 Hz
Program Memory	100	Power Consumption	TV-C203/208: 85 W TV-C143/148: 80 W
Antenna Input	75 ohms, unbalanced	Earphone Jack	Monaural-mini jack
Picture Tube	TV-C203/208: 20" TV-C143/148: 14"	Operating Temperature	5 °C – 40 °C
Screen Size	TV-C203/208: 404.4(W) X 303.3(H) mm (16 X 12 in.) 480 mm (diagonal) (19 in.) TV-C143/148: 280.8(W) X 210.6(H) mm (11 ¹ / ₈ X 8 ³ / ₈ in.) 335.4MM (diagonal) (13 ¹ / ₄ in.)	Operating Humidity	35 % – 80 %
		Dimensions	TV-C203/208: 510 (W) X 425 (H) X 483.5 (D) mm (20 ¹ / ₈ x 16 ³ / ₈ x 19 ¹ / ₈ in.) TV-C143/148: 364 (W) X 315 (H) X 365.5 (D) mm (14 ³ / ₈ x 12 ¹ / ₂ x 14 ¹ / ₂ in.)
		Weight	TV-C203/208: 18.2 kg (40 lbs.) TV-C143/148: 9.2 kg (20.2 lbs.)

• Design and specifications are subject to change without notice.

ACCESSORIES / PACKAGE LIST

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-JB6-901-110	IB, KER (ERAP)	-M<KERJ4L>
1	8Z-JB8-901-010	IB, KE (T)	C143-T<KEJL6C1M>
1	8Z-JB6-903-010	IB, SH (ECAP)	- M<SHR>
2	8Z-JB6-951-010	RC UNIT,	RC-ZVT15
3	86-LB3-610-010	ANT ASSY,	TV 5 SEC (PAL)

ELECTRICAL MAIN PARTS LIST

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC				C29	87-010-403-080		CAP, ELECT 3.3-50V
	8Z-JB6-601-010		IC, TMP87CP38N-1B47	C30	87-010-403-080		CAP, ELECT 3.3-50V
	87-A20-611-080		IC, M51943BSL-700A	C32	87-018-115-080		CAP, CER 47P-50V
	87-A90-111-010		RCR UNIT, GP1U281Y	C33	87-018-115-080		CAP, CER 47P-50V
	87-A21-433-010		IC, KS24C041I	C34	87-018-119-080		CAP, CER 100P-50V
	87-A21-165-010		IC, TB1240AN	C35	87-018-119-080		CAP, CER 100P-50V
	87-A21-166-010		IC, TA1275AZ	C36	87-010-263-080		CAP, ELECT 100-10V
	87-A20-527-010		IC, KIA7805PI	C101	87-010-404-080		CAP, ELECT 4.7-50V
	87-A21-285-010		IC, TDA7056B	C102	87-018-134-080		CAPACITOR, TC-U 0.01-16
	87-070-237-010		IC, LA7832	C103	87-018-134-080		CAPACITOR, TC-U 0.01-16
	87-A20-517-010		IC, STR-86707	C104	87-010-384-080		CAP, ELECT 100-25V
	87-A20-364-010		IC, KIA7809PI	C105	87-010-263-080		CAP, ELECT 100-10V
	87-020-881-080		IC, NJM78L05A	C110	87-018-134-080		CAPACITOR, TC-U 0.01-16
	87-017-804-010		IC, BU4052BC	C201	87-018-131-080		CAP, CER 1000P-50V
				C204	87-010-401-080		CAP, ELECT 1-50V
TRANSISTOR				C205	87-018-119-080		CAP, CER 100P-50V
	87-026-610-080		TR, KTC3198GR	C206	87-A10-307-080		CAP, M 0.1-50 J
	87-A30-090-080		FET, 2SK2541	C211	87-010-384-080		CAP, ELECT 100-25V
	87-026-609-080		TR, KTA1266GR	C212	87-018-134-080		CAPACITOR, TC-U 0.01-16
	89-334-674-580		TR, 2SC3467 D/E	C213	87-018-134-080		CAPACITOR, TC-U 0.01-16
	87-A30-323-010		TR, 2SD2599<143, 148>	C214	87-018-134-080		CAPACITOR, TC-U 0.01-16
	87-A30-041-110		TR, SE115N	C215	87-010-405-080		CAP, ELECT 10-50V
	89-332-712-010		TR, 2SC3271F<208>	C216	87-A10-295-080		CAP, M 0.01-50 J
	87-A30-322-010		TR, 2SD2586<208>	C217	87-010-401-080		CAP, ELECT 1-50V
				C219	87-010-400-080		CAP, ELECT 0.47-50V
DIODE				C221	87-018-134-080		CAPACITOR, TC-U 0.01-16
	87-017-963-080		DIODE, TVR5G	C222	87-010-260-080		CAP, ELECT 47-25 M 11L SME
	87-A40-291-080		DIODE, 1N4148 (CPT)	C301	87-010-400-080		CAP, ELECT 0.47-50V
	87-070-150-080		ZENER, MTZJ33D	C302	87-010-405-080		CAP, ELECT 10-50V
	87-A40-438-080		ZENER, MTZJ4.7A	C303	87-018-134-080		CAPACITOR, TC-U 0.01-16
	87-A40-235-080		ZENER, MTZJ9.1C	C304	87-010-263-080		CAP, ELECT 100-10V
	87-A40-234-080		ZENER, MTZJ5.6A	C305	87-010-405-080		CAP, ELECT 10-50V
	87-017-978-080		DIODE, 1N4003	C306	87-010-544-080		CAP, ELECT 0.1-50V
	87-A40-328-010		DIODE, GBU4JL	C308	87-010-400-080		CAP, ELECT 0.47-50V
	87-A40-286-080		DIODE, RGP10JE-5025	C309	87-010-401-080		CAP, ELECT 1-50V
	87-A40-450-090		DIODE, RU 1P	C310	87-A10-307-080		CAP, M 0.1-50 J
	87-A40-465-090		DIODE, FR202	C311	87-A10-307-080		CAP, M 0.1-50 J
	87-070-111-060		DIODE, RU30A	C312	87-018-134-080		CAPACITOR, TC-U 0.01-16
	87-A40-345-080		ZENER, MTZJ10C	C313	87-010-382-080		CAP, ELECT 22-25V
	87-A40-800-080		DIODE, FR104-F	C314	87-018-134-080		CAPACITOR, TC-U 0.01-16
MAIN C.B				C315	87-010-263-080		CAP, ELECT 100-10V
BPF201	87-A90-337-010		FLTR, SAW OFW-K2959M<143>	C316	87-010-404-080		CAP, ELECT 4.7-50V
BPF201	87-A90-670-010		FLTR, SAW OFW-K6265K<148, 208>	C317	87-010-401-080		CAP, ELECT 1-50V
C1	87-018-119-080		CAP, CER 100P-50V	C318	87-018-134-080		CAPACITOR, TC-U 0.01-16
C2	87-010-260-080		CAP, ELECT 47-25V	C319	87-010-263-080		CAP, ELECT 100-10V
C3	87-010-401-080		CAP, ELECT 1-50V	C320	87-018-134-080		CAPACITOR, TC-U 0.01-16
C6	87-018-104-080		CAP, TC-U 10P-50 SL	C321	87-010-384-080		CAP, ELECT 100-25V
C7	87-018-104-080		CAP, TC-U 10P-50 SL	C322	87-018-115-080		CAP, CER 47P-50V
C8	87-010-405-080		CAP, E 10-50 M 11L SME	C323	87-010-405-080		CAP, ELECT 10-50V
C9	87-A11-148-080		CAP, TC U 0.1-50 Z F	C324	87-018-115-080		CAP, CER 47P-50V
C10	87-018-119-080		CAP, CER 100P-50V	C325	87-010-235-080		CAP, E 470-16 SME
C11	87-018-123-080		CAP, CER 220P-50V	C326	87-018-134-080		CAPACITOR, TC-U 0.01-16
C12	87-010-263-080		CAP, ELECT 100-10V	C327	87-A10-307-080		CAP, M 0.1-50 J
C13	87-018-134-080		CAPACITOR, TC-U 0.01-16	C328	87-A10-307-080		CAP, M 0.1-50 J
C15	87-010-401-080		CAP, ELECT 1-50V	C329	87-A10-307-080		CAP, M 0.1-50 J
C16	87-010-260-080		CAP, ELECT 47-25V	C330	87-018-106-080		CAP, TC-U 15P-50 SL
C18	87-018-119-080		CAP, CER 100P-50V	C331	87-A10-287-080		CAP, M 2200P-50 J
C19	87-018-119-080		CAP, CER 100P-50V	C332	87-010-545-080		CAP, ELECT 0.22-50V
C20	87-010-400-080		CAP, ELECT 0.47-50V	C333	87-018-104-080		CAP, TC-U 10P-50 SL
C21	87-018-119-080		CAP, CER 100P-50V	C334	87-018-104-080		CAP, TC-U 10P-50 SL
C22	87-018-119-080		CAP, CER 100P-50V	C335	87-018-104-080		CAP, TC-U 10P-50 SL
C23	87-018-119-080		CAP, CER 100P-50V	C336	87-A10-301-080		CAP, M 0.033-50 J
C24	87-018-121-080		CAP, CER 150P-50V	C337	87-A10-291-080		CAP, M 4700P-50 J
C25	87-018-121-080		CAP, CER 150P-50V	C338	87-018-134-080		CAPACITOR, TC-U 0.01-16
C26	87-018-121-080		CAP, CER 150P-50V	C339	87-010-401-080		CAP, ELECT 1-50V
C27	87-018-121-080		CAP, CER 150P-50V	C340	87-018-119-080		CAP, CER 100P-50V
				C341	87-018-121-080		CAP, CER 150P-50V
				C342	87-010-401-080		CAP, ELECT 1-50V
				C343	87-A10-285-080		CAP, M 1500P-50 J
				C344	87-010-400-080		CAP, ELECT 0.47-50V

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C345	87-018-123-080		CAP, CER 220P-50V	CF207	87-008-578-080		FLTR,TPS6.5MB2<143>
C346	87-018-123-080		CAP, CER 220P-50V	CF208	87-008-573-080		FLTR,CER TPS4.5MB2<148,208>
C347	87-A10-298-080		CAP,M 0.018-50 J	CF209	87-008-578-080		FLTR,TPS6.5MB2<148,208>
C349	87-018-116-080		CAP,TC U 56P-50	CN102	87-009-035-010		CONN,7P PH M
C350	87-018-134-080		CAPACITOR,TC-U 0.01-16	CN401	87-A60-457-010		CONN,4P V TID-X
C401	87-010-385-080		CAP, ELECT 220-25V	CN601	87-099-675-010		CONN,5P V V
C402	87-010-401-080		CAP, ELECT 1-50V	△ CN801	82-481-649-010		PLUG,2P MINI(*)
C406	87-A10-307-080		CAP,M 0.1-50 J	△ CN802	87-A61-045-010		CONN,2P V THL-P
C407	87-010-382-080		CAP, ELECT 22-25V	CNA301	8Z-JB6-613-010		CONN ASSY,6P V TV-NK 2.0
C408	87-010-402-080		CAP, ELECT 2.2-50V	CNA401	84-LB3-692-010		CONN ASSY,4P-SP-1
C450	87-010-405-080		CAP, ELECT 10-50V	D1	87-A40-422-010		LED,SLP-581D-51 Y-G/R
C451	87-010-401-080		CAP, ELECT 1-50V	△ F801	87-035-458-01G		FUSE, 4A 250V T 218
C452	87-010-405-080		CAP, ELECT 10-50V	FB802	87-003-223-080		FERRITE BEAD BL02RN2
C454	87-010-401-080		CAP, ELECT 1-50V	FB805	87-003-223-080		FERRITE BEAD BL02RN2
C455	87-010-260-080		CAP, ELECT 47-25V	FB806	87-003-223-080		FERRITE BEAD BL02RN2
C456	87-010-235-080		CAP,E 470-16 SME	△ FC801	87-033-213-080		CLAMP, FUSE
C457	87-010-405-080		CAP, ELECT 10-50V	△ FC802	87-033-213-080		CLAMP, FUSE
△ C601	87-010-974-080		CAP,CER 220P-500 B	HL1	84-LB3-216-010		HLDR,LED
C602	87-A10-469-080		CAP,CER 2200P-500 K B DD10	J401	87-A60-680-010		JACK,PIN 4P Y-BLK HTJ-036-22
△ C603	87-010-976-080		CAP,CER 1000P-500 B	J402	87-A60-329-110		JACK,3.5 BLK MONO W/SW
C605	87-A10-448-090		CAP,M/P 0.47-250 J<143,148>	J403	87-A61-079-010		JACK,PIN 2P BLK-Y W/O SW
C605	87-A11-054-010		CAP,M/P 0.68-250 J B32652<208>	L1	87-005-738-080		COIL,47UH J SP02
C606	87-A11-252-090		CAP,M/P 8200P-1.6K H<143,148>	L2	87-005-742-080		COIL,100UH J SP02
C606	87-A11-253-090		CAP,M/P 0.01-1.6K H B32652<208>	L3	87-005-730-080		COIL,10UH J SP02
C607	87-012-397-090		CAP,CER 1000P-2K<143,148>	L4	87-005-730-080		COIL,10UH J SP02
C607	87-012-399-010		CAP,CER 1500P-2K<208>	L101	87-005-440-080		COIL,47UH FLR50
C609	87-A10-307-080		CAP,M 0.1-50 J	L102	87-005-730-080		COIL,10UH J SP02
C651	87-018-127-080		CAP, CER 470P-50V	L202	87-005-729-080		COIL,8.2UH J SP02<148,208>
C652	87-A10-207-080		CAP,TCS 0.01-50KBUP050	L202	87-005-730-080		COIL,10UH J SP02<143>
C656	87-A10-281-080		CAP,M 680P-50 J	L203	87-005-730-080		COIL,10UH J SP02<148,208>
C657	87-018-115-080		CAP, CER 47P-50V	L204	87-005-729-080		COIL,8.2UH J SP02<143>
C658	87-018-131-080		CAP, CER 1000P-50V	L207	87-005-729-080		COIL,8.2UH J SP02<148,28>
C659	87-010-247-080		CAP, ELECT 100-50V	L208	87-005-730-080		COIL,10UH J SP02<148,208>
C663	87-010-397-090		CAP,E 1000-35 M SME	L210	8Z-JB6-617-010		COIL,VCO KHIC-TB1240AN
C664	87-010-401-080		CAP, ELECT 1-50V	L211	87-005-740-080		COIL,68UH J SP02
△ C801	87-A10-688-010		CAP,M/P 0.22-275 K (B81133)	L301	87-005-740-080		COIL,68UH J SP02
△ C802	87-A10-688-090		CAP,M/P 0.22-275 K (B81133)	L302	87-005-730-080		COIL,10UH J SP02
△ C806	87-A10-519-010		CAP,CER 4700P-4K M E KX	L303	87-005-730-080		COIL,10UH J SP02
C808	87-A10-372-090		CAP,E 150-400 M SMH<143,148>	L305	87-005-432-080		COIL,10UH
C808	87-A10-646-090		CAP,E 220-400 SMH25.4*40<208>	L602	87-A50-467-010		COIL,2.2MH CW8A
C809	87-010-385-080		CAP, ELECT 220-25V	L801	8Z-JB8-640-010		DGC,14 90 HMVRK
C810	87-010-381-080		CAP, ELECT 330-16V	L802	87-A50-466-010		COIL,390UH CRCH-106
C811	87-018-131-080		CAP, CER 1000P-50V	△ LF801	8Z-JB6-670-010		FLTR,LINE HJC-FET24S
C812	87-A10-490-080		CAP,M/P 0.022-630 K MMC	△ PR802	87-A90-473-080		PROTECTOR,3.5A 491SERIES 60V
C813	87-A10-832-010		CAP,CER 1000P-1K K R LONG	△ PS801	87-A30-096-010		P-TR,TLP721F
C814	87-A10-832-010		CAP,CER 1000P-1K K R LONG	△ PS802	87-A30-096-010		P-TR,TLP721F
C816	87-A10-832-010		CAP,CER 1000P-1K K R LONG	△ PT801	8Z-JB6-627-010		PT,SWT ZJB-6
C817	87-010-384-080		CAP, ELECT 100-25V	R110	87-A00-586-090		RES,M/F 12K-2W J B02SJ
C819	87-010-263-080		CAP, ELECT 100-10V	R402	87-A00-582-090		RES,M/F 2.2-1W J B01SJ
C821	87-010-396-080		CAP,E 470-35 SME	R608	87-A00-225-090		RES,M/F 2.2K-5W J RSV5
C822	87-A11-148-080		CAP,TC U 0.1-50 Z F	R610	87-A00-584-090		RES,M/F 100-2W J B02SJ
C823	87-A12-051-090		CAP,E 100-160 M SK	R803	87-A00-555-010		RES,CEM 2.2-10W J MPC722
C825	87-A10-469-080		CAP,CER 2200P-500 K B DD10	R804	87-A00-224-090		RES,SD 8.2M-1W J CE
C827	87-010-387-080		CAP,E 470-25 SME	R805	87-A00-303-090		RES,M/F 82K-3W J RSS
C831	87-016-644-080		CAP,E 10-100 SSL	R806	87-A00-573-090		RES,CEM 0.33-5W J MPC71
C832	87-010-396-080		CAP,E 470-35 SME<143,148>	R808	87-A00-579-090		RES,M/F 22-1/2W J B0S2J
C832	87-010-397-090		CAP,E 1000-35 SME<208>	R812	87-A00-589-090		RES,M/F 100K-3W J B03SJ
C834	87-010-381-080		CAP, ELECT 330-16V	R815	87-A00-050-060		RES,FUSE 2.2-1W J
C835	87-010-382-080		CAP, ELECT 22-25V	R817	87-A00-050-060		RES,FUSE 2.2-1W J
C839	87-010-384-080		CAP, ELECT 100-25V	R818	87-A00-051-060		RES,FUSE 2.7-1W J<143,148>
C840	87-A10-733-090		CAP,E 220-160 M SK	R818	87-029-131-090		RES,FUSE 1-1W J<208>
CF201	87-008-574-080		FLTR,CER SFSH4.5MCB<148,208>	R821	87-A00-050-060		RES,FUSE 2.2-1W J
CF202	87-A90-223-080		FLTR,SFSH6.0MCB<148,208>	R831	87-029-023-090		FUSE RESISTOR 1/4W 47
CF203	87-008-575-080		FLTR,CFSFSH5.5MCB<143>	SCR801	87-A91-641-010		VRIS, SIOV-S14K300
CF203	87-008-576-080		FLTR,CFSFSH6.5MCB<148,208>	SW1	87-A90-712-080		SW,TACT EVQ11L07K
CF204	87-008-576-080		FLTR,CFSFSH6.5MCB<143>	SW3	87-A90-712-080		SW,TACT EVQ11L07K
CF204	87-008-575-080		FLTR,CFSFSH5.5MCB<148,208>	SW4	87-A90-712-080		SW,TACT EVQ11L07K
CF205	87-008-577-080		FLTR,TPS5.5MB2<143>	SW5	87-A90-712-080		SW,TACT EVQ11L07K
CF205	87-A90-224-080		FLTR,TPS6.0MB<148,208>	SW6	87-A90-712-080		SW,TACT EVQ11L07K
CF206	87-008-577-080		FLTR,TPS5.5MB2<148,208>	△ SW801	87-A91-410-010		SW,AC PUSH 1-1-1 ESB92SH1B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
T601	8Z-JB6-605-010		TRANS, HD TB8B
△T602	8Z-JB8-626-010		FBT, MSU1FVK202<143,148>
△T602	8Z-JB6-616-010		FBT, KFT3AA243X<208>
△THP801	87-A91-485-010		POS-THMS,DGC3R300N27C<143,148>
△THP801	87-A91-405-010		POS-THMS,T209-B80-A10<208>
TU101	87-A91-495-010		TU UNIT, ENV59D58G3-38.0MHZ
X1	87-030-212-080		CERA LOCK CST8.0M
X301	8Z-JB6-619-080		VIB,XTAL 4.43MHZ A0443S

NK C.B

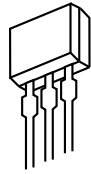
C503	87-018-125-080		CAP, CER 330P-50V<143,148>
C503	87-018-126-080		CAP,TC U 390P-50 K B UP050<208>
C504	87-018-125-080		CAP, CER 330P-50V<143,148>
C504	87-018-126-080		CAP,TC U 390P-50 K B UP050<208>
C507	87-018-127-080		CAP, CER 470P-50V<143,148>
C507	87-018-128-080		CAP,TC U 560P-50 K B UP050<208>
C508	87-010-379-080		CAP, ELECT 22-16V
CN502	87-A60-485-010		CONN,2P V LV GRA
R510	87-A00-586-090		RES,M/F 12K-2W J BO2SJ
R515	87-A00-586-090		RES,M/F 12K-2W J BO2SJ
R531	87-A00-586-090		RES,M/F 12K-2W J BO2SJ
S0501	86-LBR-670-010		SOCKET,CRT 9P HPS1521<208>
S0502	86-LBU-670-010		SOCKET,CRT 9P CVT3326 1603<148>
S0502	8Z-JB4-670-010		SOCKET,CRT 9P CVT3327 1603<143>

TRANSISTOR ILLUSTRATION



E C B

KTA1266
KTC3198



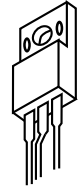
S D G

2SK2541



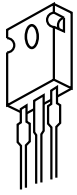
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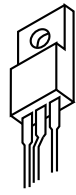
E C B

2SD2586
2SD2599



E C B

2SC3271



1 2 3

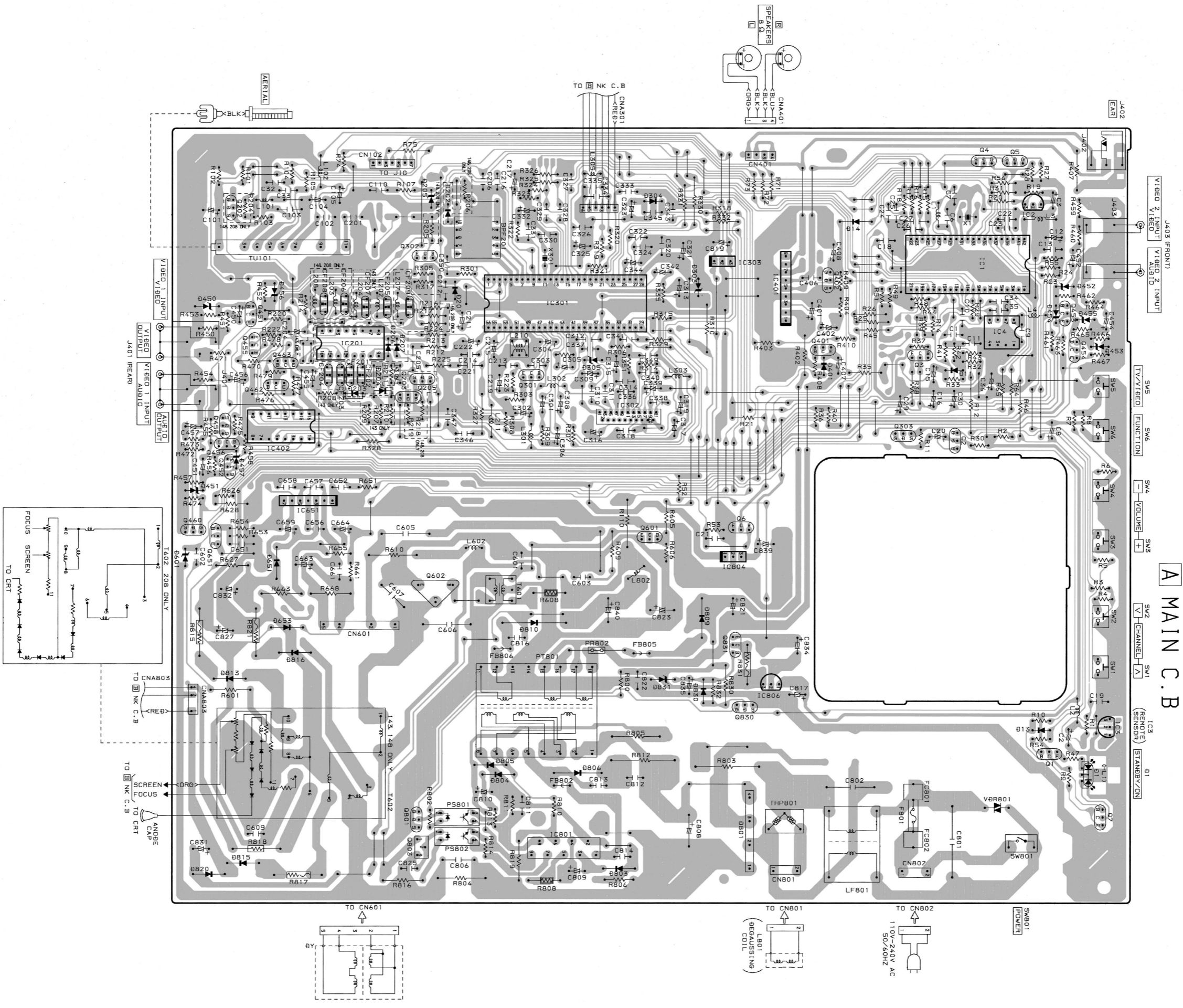
SE115N

1. SENSE
2. COLLECTOR
3. GROUND

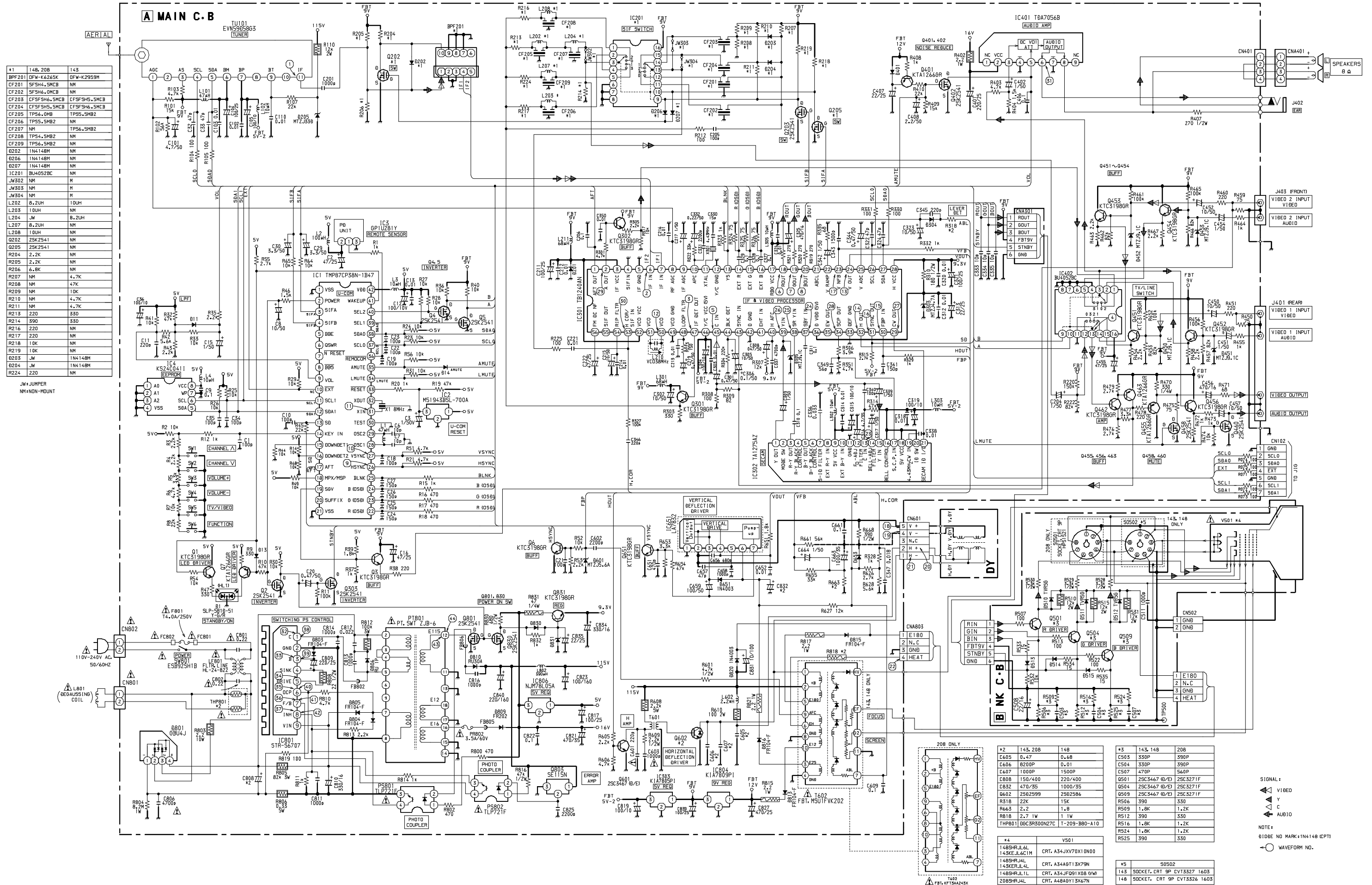
WIRING - 1 (MAIN)

32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

A B C D E F G H I J K L M N O P Q R S T U



SCHEMATIC DIAGRAM (MAIN/NK)

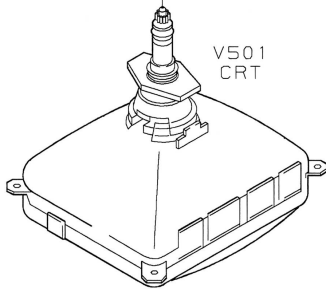
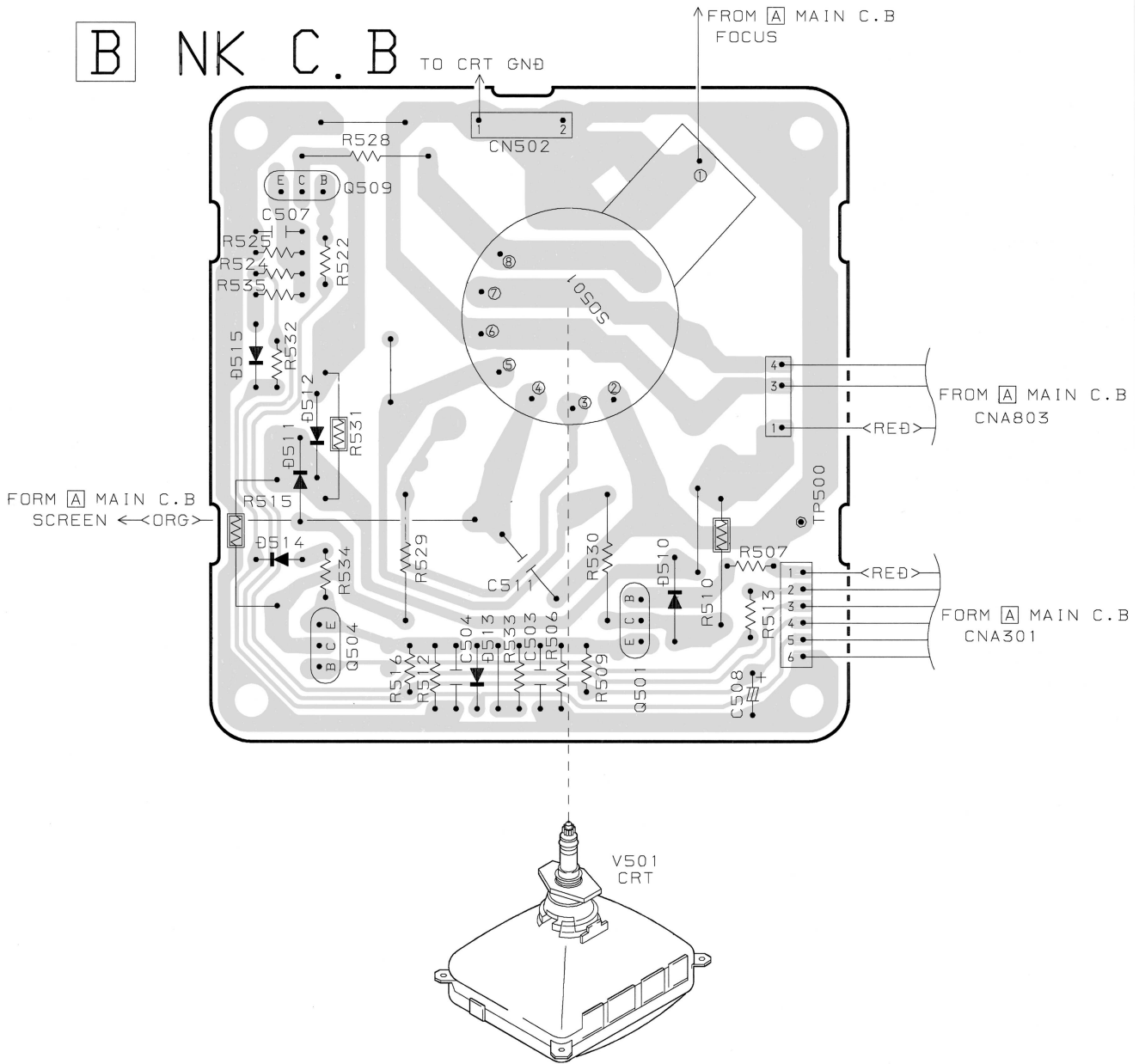


WIRING - 2 (NK) <TV-C208>

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
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B NK C. B TO CRT GND

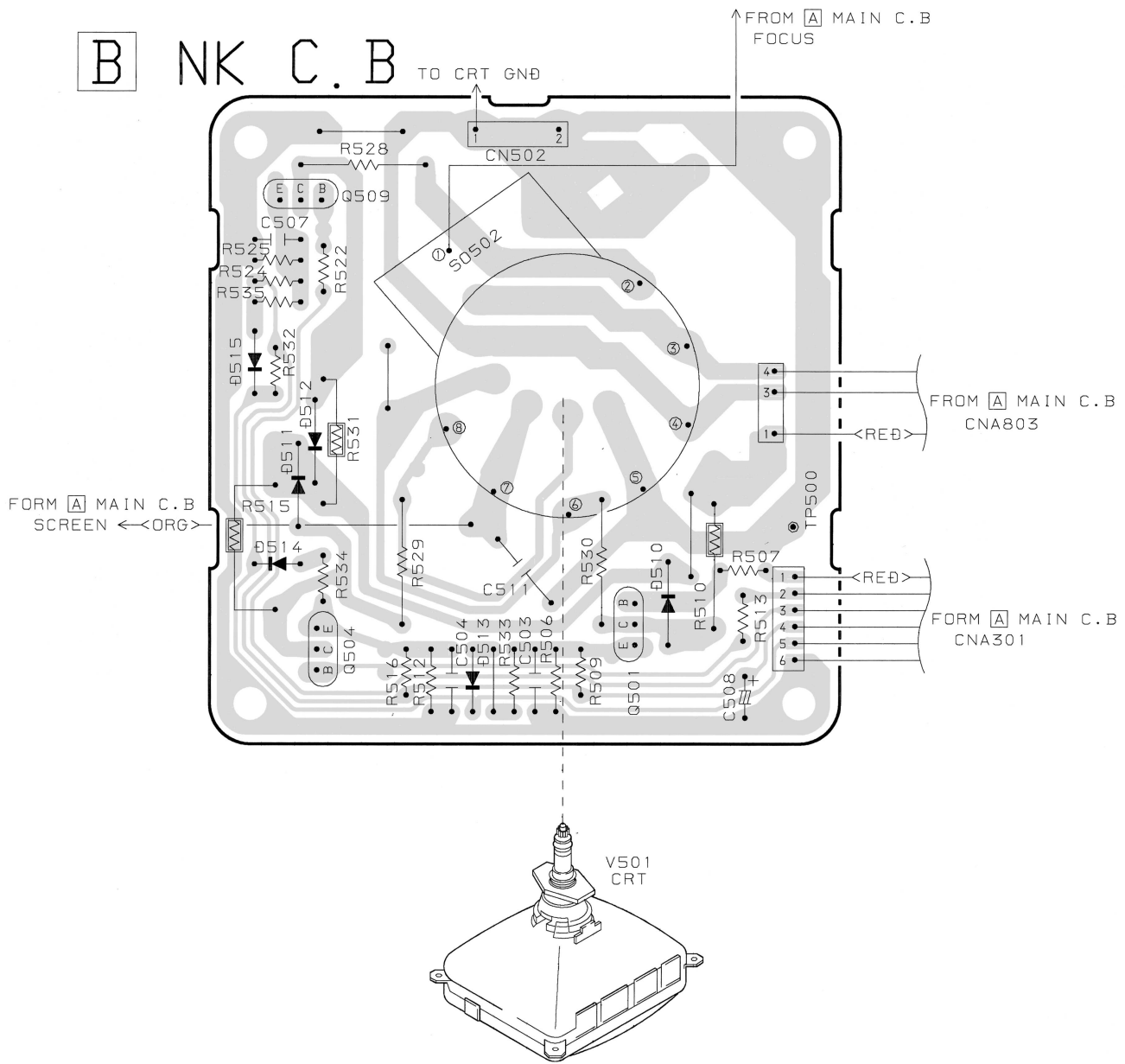


WIRING - 3 (NK) <TV-C143,TV-C148>

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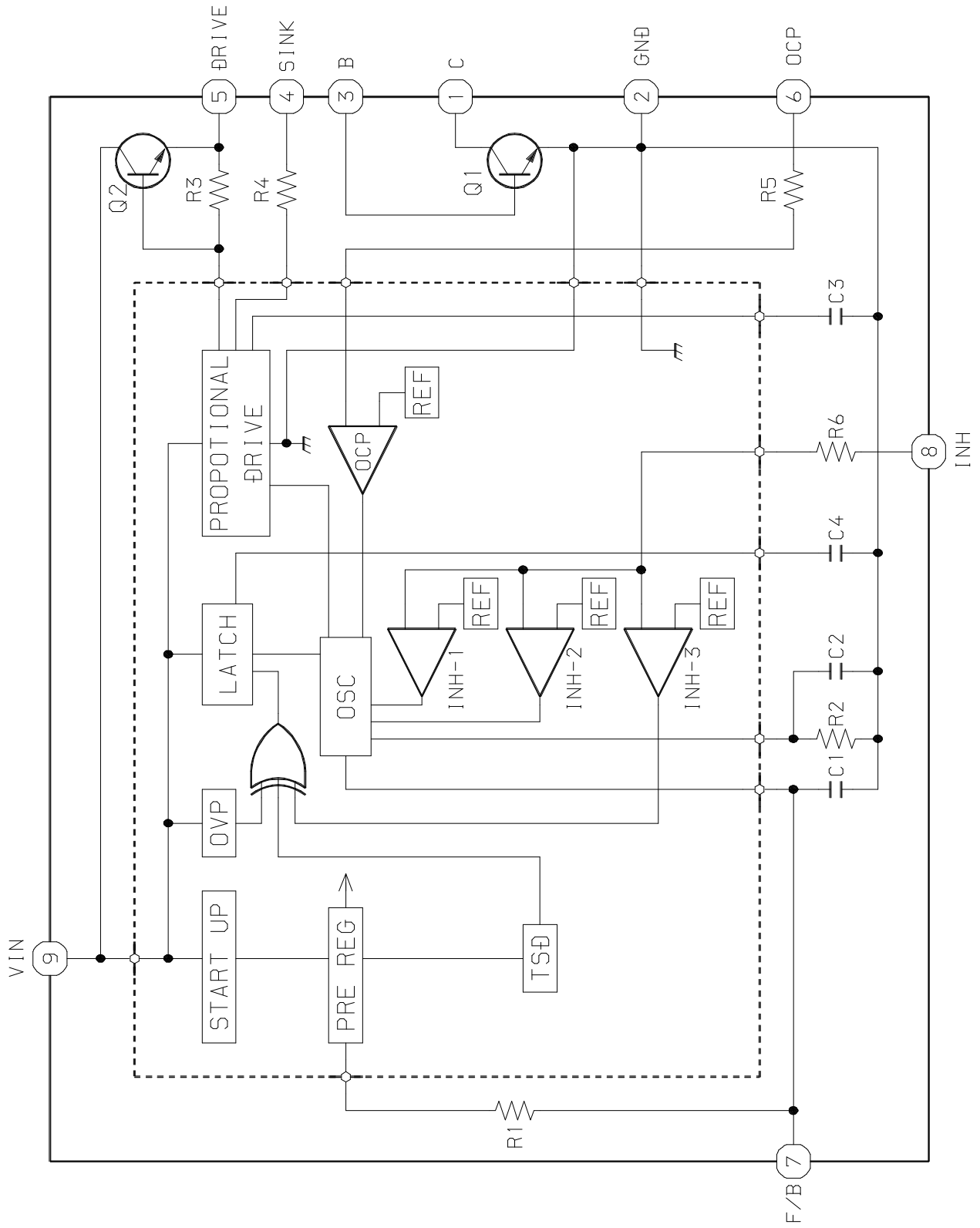
A
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B NK C.B



IC BLOCK DIAGRAM

IC,STR-S6706

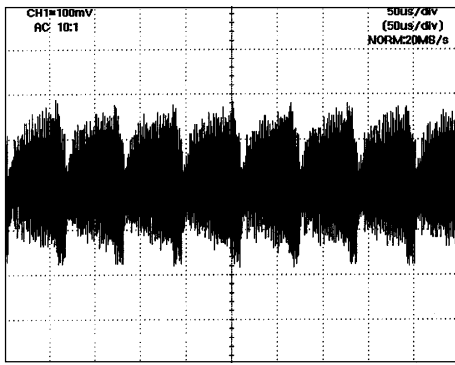


WAVEFORM

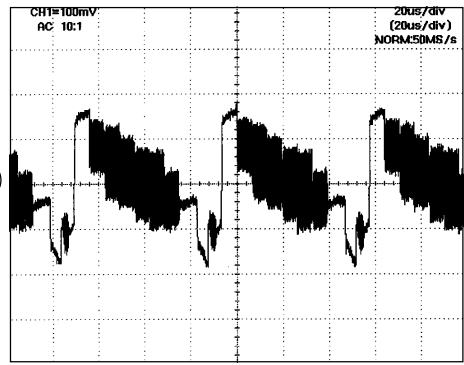
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TUNER: 224.25 MHz PAL 60dB μ , LINE-IN: 1Vp-p PAL color bar

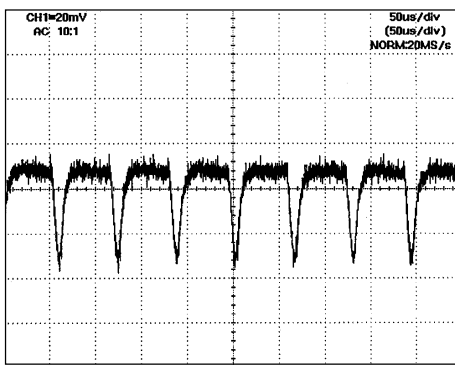
① TU101 PIN11 (IF)



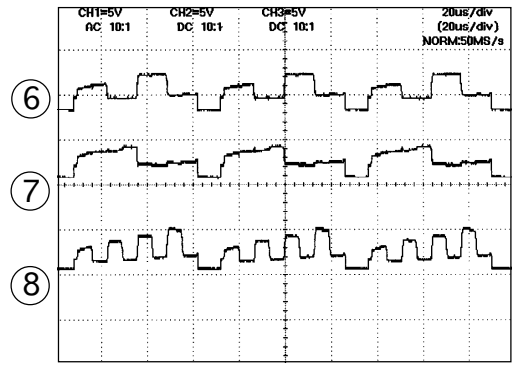
⑤ IC301 PIN45 (C IN)



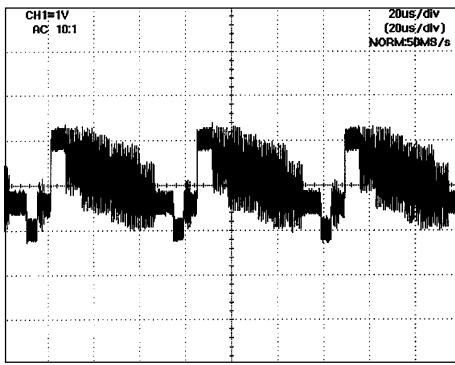
② IC301 PIN6 (IF IN)



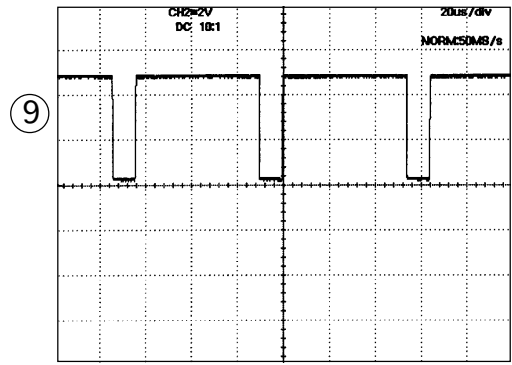
⑥ IC301 PIN18 (R OUT) ⑦ IC301 PIN19 (G OUT)
⑧ IC301 PIN20 (B OUT)



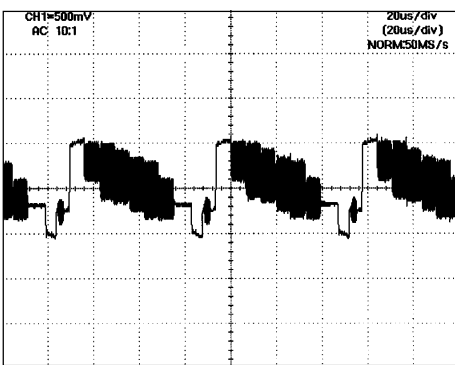
③ IC301 PIN47 (IF DET OUT)



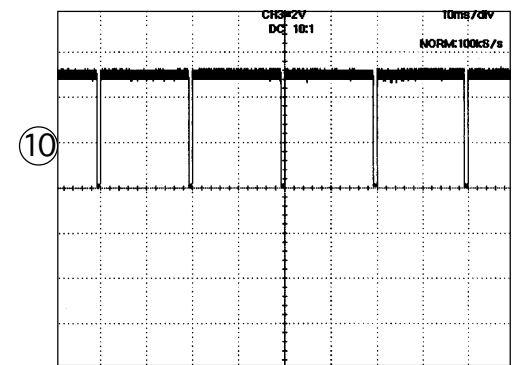
⑨ IC1 PIN26 (HSYNC)



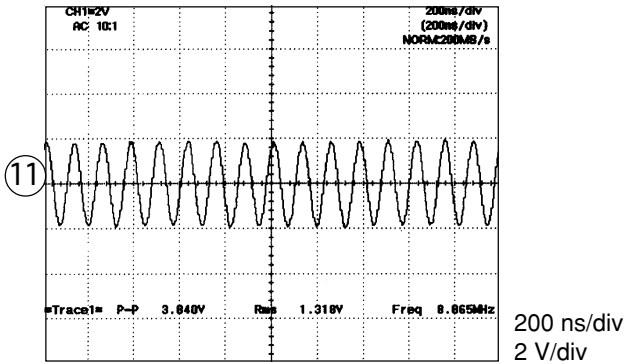
④ IC402 PIN13



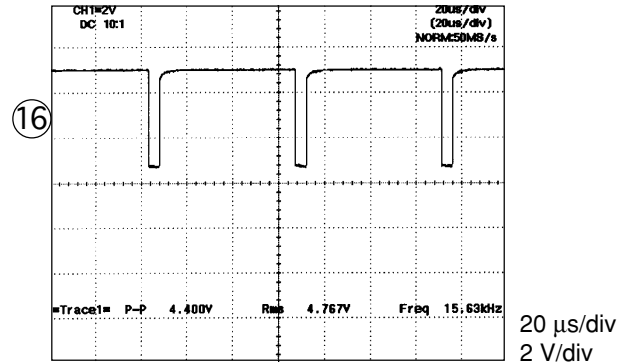
⑩ IC1 PIN27 (VSYNC)



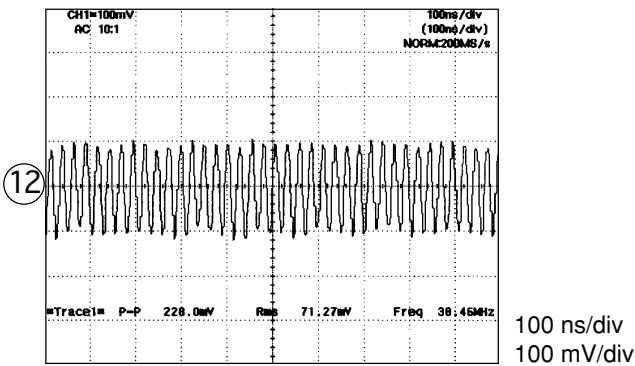
①① IC1 PIN31 (XIN)



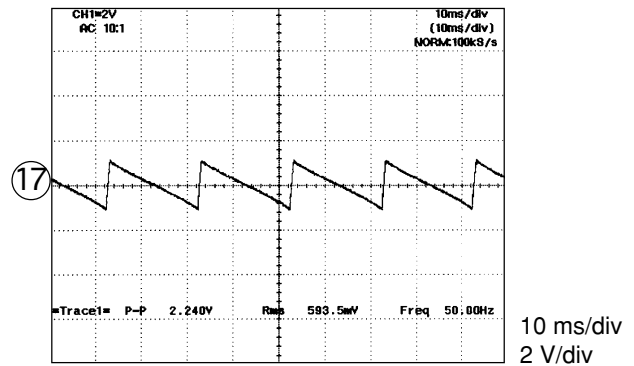
①⑥ IC 301 PIN31 (SYNC OUT)



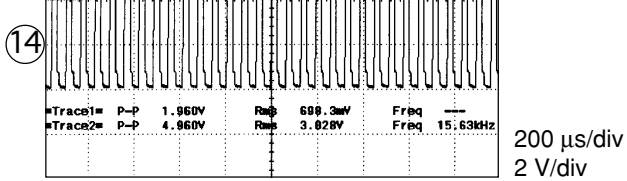
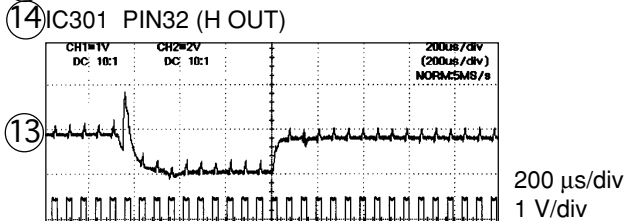
①② IC301 PIN50 (VCO)



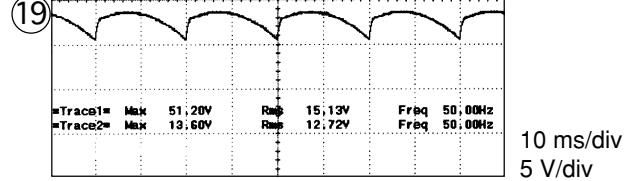
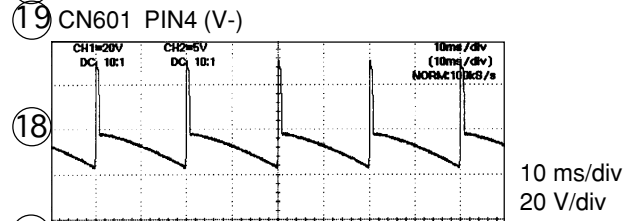
①⑦ IC301 PIN23 (V.NFB)



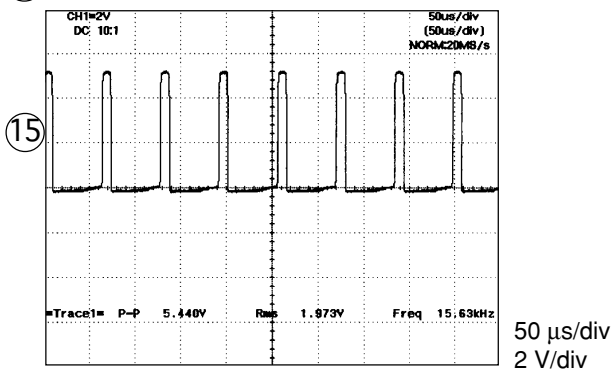
①③ IC301 PIN24 (V OUT)



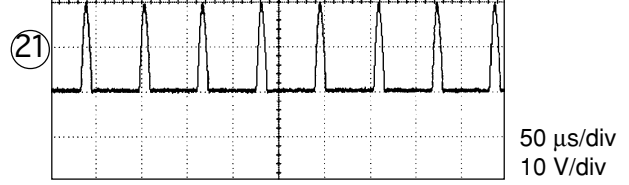
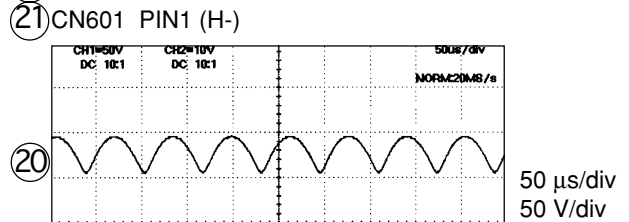
①⑧ CN601 PIN5 (V+)



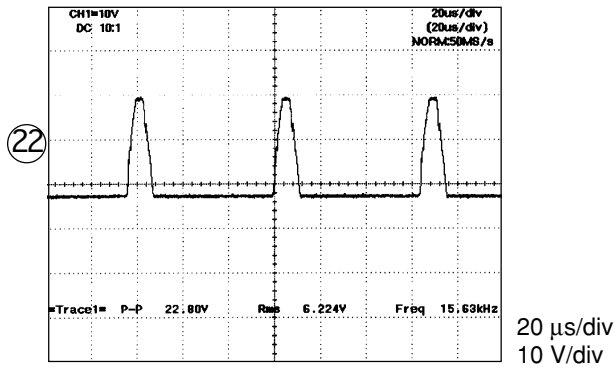
①⑤ IC301 PIN30 (FBP IN)



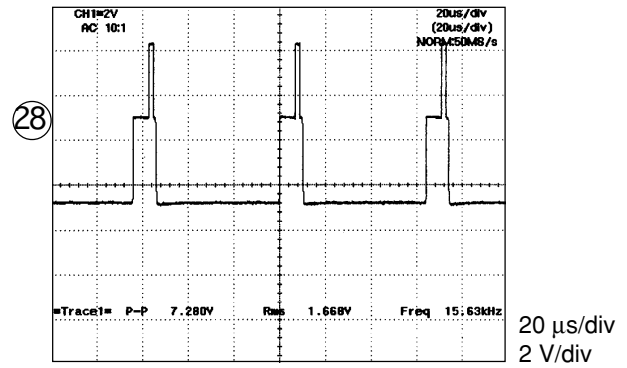
②① CN601 PIN2 (H+)



22 CNA803 PIN4 (HEAT)

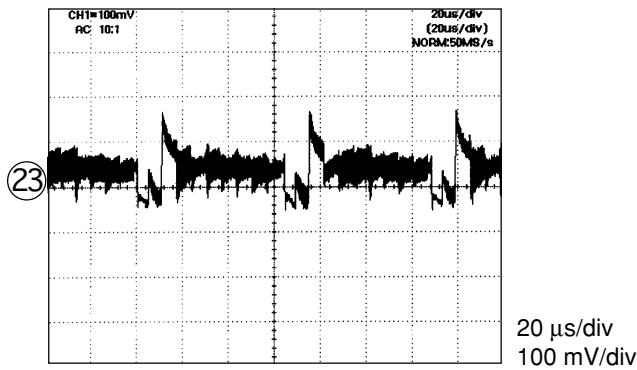


28 IC 301 PIN34 (SCP OUT)



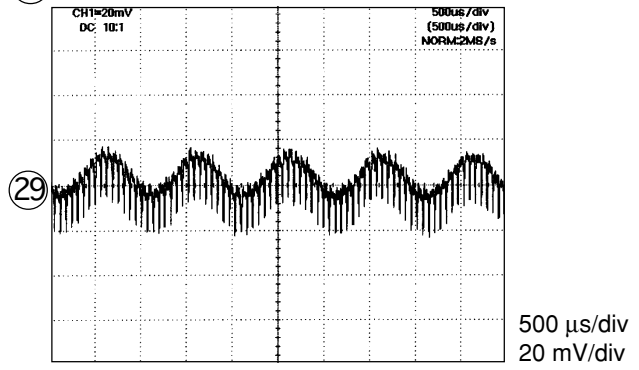
INPUT : SECAM COLOR BAR

23 IC302 PIN13 (C IN)

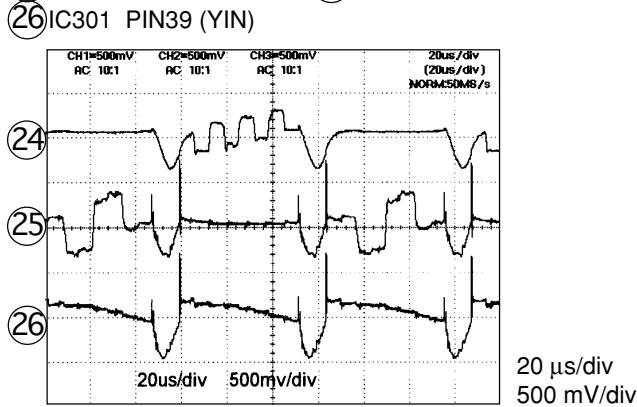


<AUDIO SECTION>

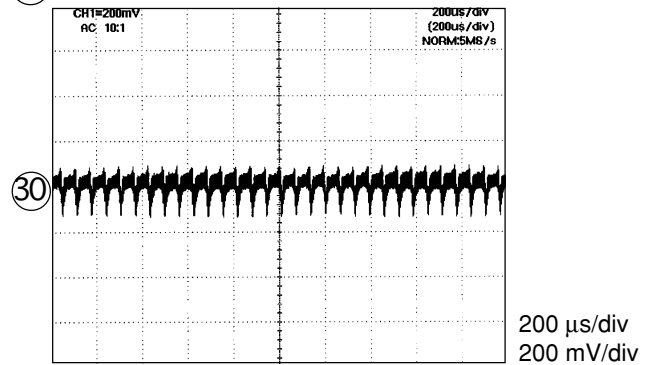
29 IC301 PIN2 (AOUT)



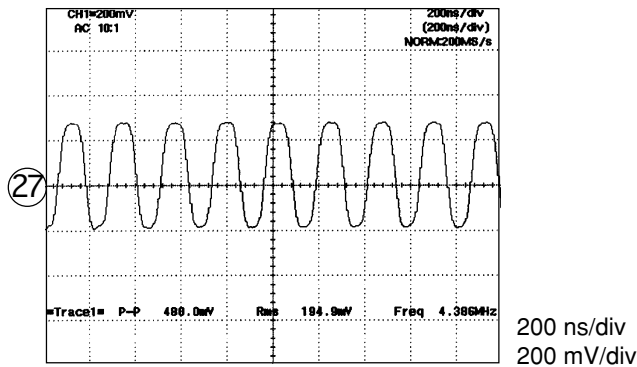
24 IC301 PIN37 (SB YIN) 25 IC301 PIN38 (SR YIN)



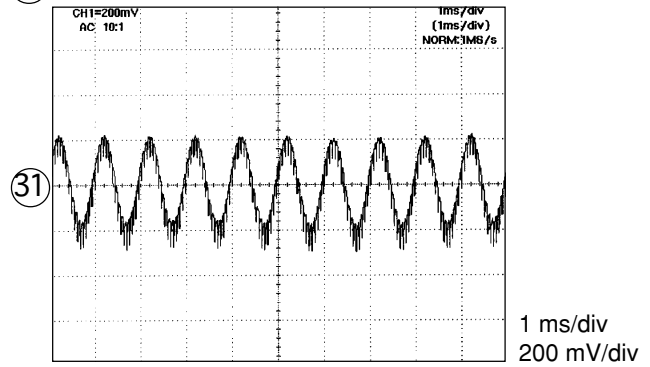
30 IC301 PIN53 (H COR / SIF IN)



27 IC301 PIN29 (CW OUT)



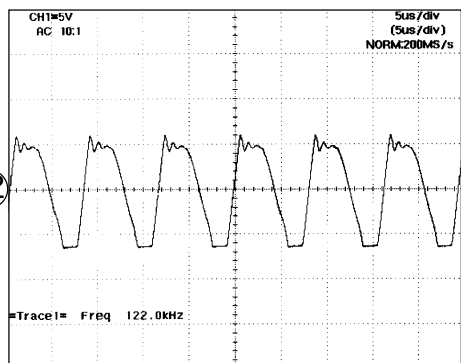
31 IC401 PIN6 (SPEAKER OUT)



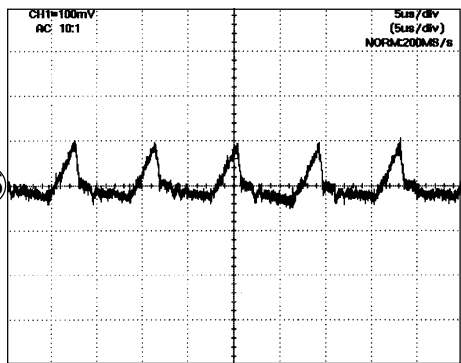
<POWER SUPPLY SECTION>

(230V AC) PROBE GND CONNECTED TO PS HOT GND

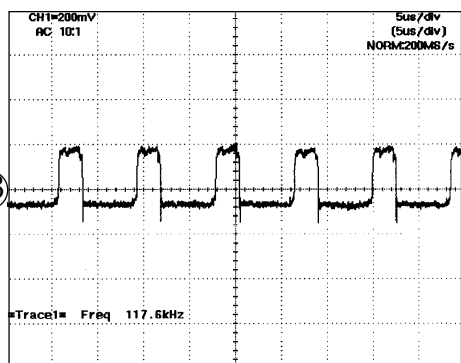
32 IC801 PIN1 (C)



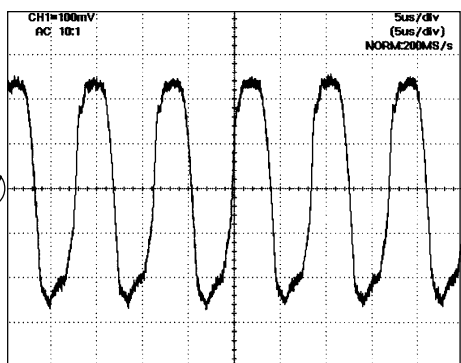
36 IC801 PIN7 (F/B)



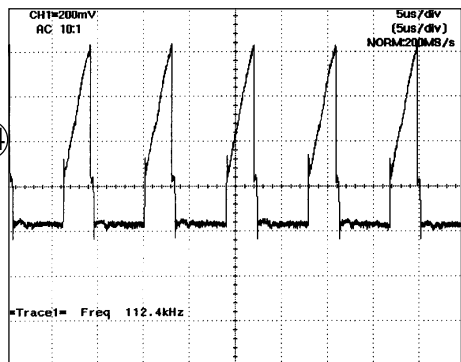
33 IC801 PIN3 (B)



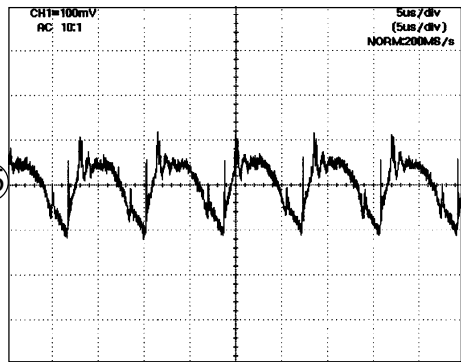
37 IC801 PIN8 (INH)



34 IC801 PIN5 (DRIVE)

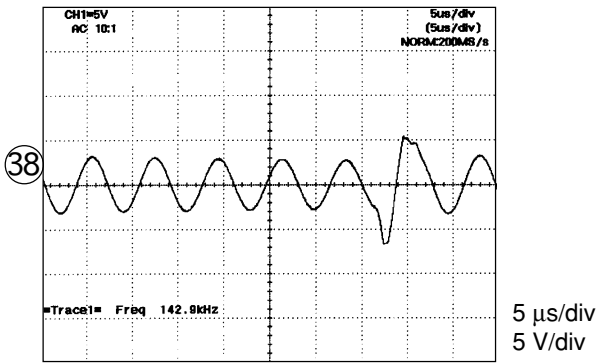


35 IC801 PIN6

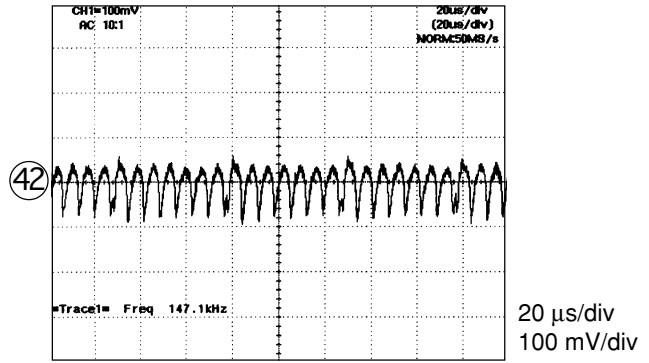


(230V AC STANDBY) PROBE GND CONNECTED TO PS HOT GND

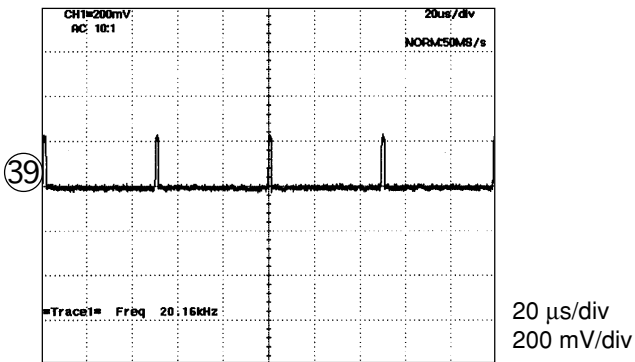
③⑧ IC801 PIN1 (C)



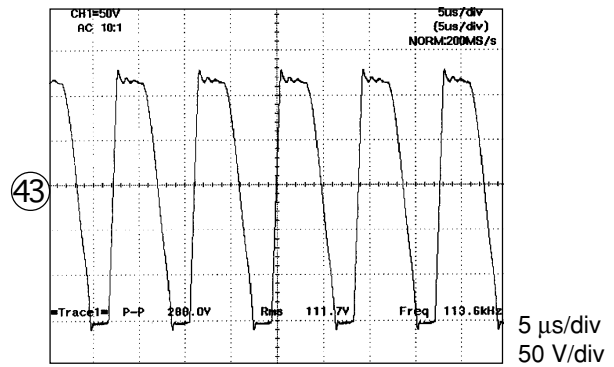
④② IC801 PIN8 (INH)



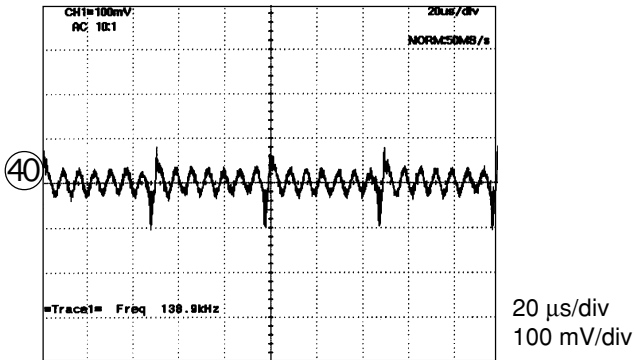
③⑨ IC801 PIN3 (B)



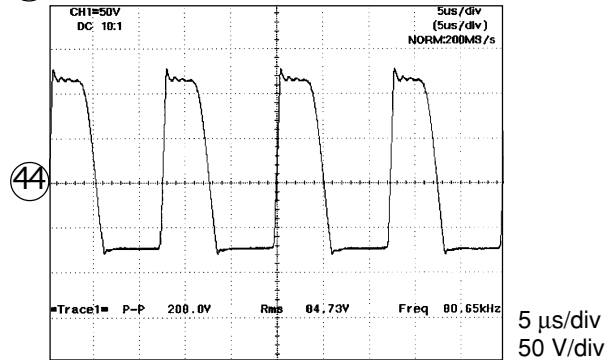
④③ PT801 PIN12 (E115) [AC 230V]



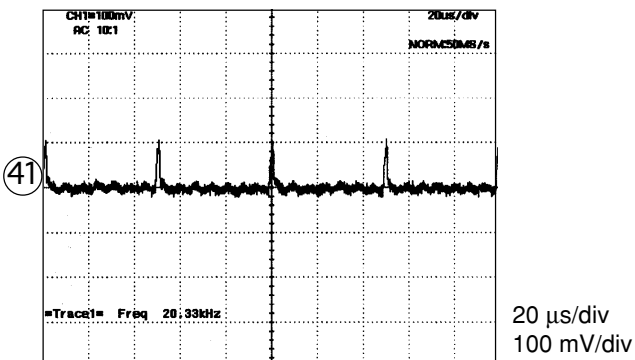
④④ IC801 PIN6 (OCP)



④④ PT801 PIN12 (E115) [AC 110V]



④① IC801 PIN7 (F/B)



IC DESCRIPTION

IC, TMP87CP38N-1B47

Pin No.	Pin Name	I/O	Description
1	VSS	-	Connected to Gnd.
2	POWER	O	During standby mode, "H" level is inserted to switch off "H" deflection & high voltage.
3	SIFA	O	Sound IF filter selection control signal out. (Refer to table 2)
4	SIFB	O	Sound IF filter selection control signal out. (Refer to table 2)
5	SIFC	-	Not used.
6	QSWR	-	Not used.
7	NC	-	Not connected.
8	$\overline{\text{BBS}}$	-	Not used.
9	VOL	O	Volume control output.
10	$\overline{\text{EXT}}$	-	Not used.
11	SCL1	O	Sync clock between micon & EEPROM.
12	SDA1	I/O	Data bus between micon & EEPROM.
13	SD	I	Sync signal input pin for detection.
14	KEY	I	Input key is detected by monitor.
15	DOWNDT1	I	Power down detection input.
16	DOWNDT2	-	Not used.
17	AFT	I	AFT voltage input pin.
18	BIASDET	-	Connected to 5V supply through a resistor.
19	SGV	O	Test signal output when test mode.
20	SUFFIX	-	Not used.
21	GND	-	Connected to GND.
22	R (OSD)	O	OSD red output.
23	G (OSD)	O	OSD green output.
24	B (OSD)	O	OSD blue output.
25	BLNK	O	OSD blanking signal output.
26	HSYNC	I	OSD horizontal synchronised signal input.
27	VSYNC	I	OSD vertical synchronised signal input.
28	OSC1	I	Connected to osc coil.
29	OSC2	I	Connected to osc coil.
30	GND	-	Connected to ground.
31	XIN	I	8 MHz clock input.
32	XOUT	O	8 MHz clock output.
33	$\overline{\text{RESET}}$	I	Used to reset the micon when power up.
34	LMUTE	O	"H" to mute the line out signal.
35	AMUTE	O	"H" to mute the audio signal.
36	$\overline{\text{REMOCON}}$	I	Remote control signal is led to this pin.
37	SCL0	I	Sync clock for I ² c bus.
38	SDA0	I/O	Data in/out for I ² c bus.
39	SEL1	O	A/V input/output selection. (Refer to table 1)
40	SEL2	O	A/V input/output selection. (Refer to table 1)
41	WAKEUP	O	During sleep mode switch on green LED.
42	VCC	-	5V supply.

Table 1. Selecting AV mode

IC402	PIN10	PIN9
TUNER	L	L
AV1	L	H
AV2	H	L

Table 2. Selecting tuner sound IF filter

IC201	PIN10	PIN9
4.5MHZ	L	L
5.5MHZ	L	H
6.0MHZ	H	H
6.5MHZ	H	L

IC, TB1240AN

Pin No.	Pin Name	I/O	Description
1	AFT OUT	O	The terminal for AFT output and self-adj output.
2	A OUT	O	Audio output pin.
3	IF VCC	-	Vcc of PIF circuit.
4	SIF IN	I	SIF input pin. (Connected to GND)
5	IF GND	-	GND of PIF circuit.
6	IF IN	I	IF signal input.
7	IF IN	I	IF signal input.
8	RF AGC	O	RF AGC output.
9	IF AGC	-	The terminal to be connected with an IF AGC filter.
10	APC	-	APC filter of chroma for demodulation.
11	XTAL	I	4.43MHz crystal oscillator.
12	Y/C GND	-	GND of Y/C circuit.
13	YS	I	The terminal for switching of analog RGB mode and fast half tone.
14	EXT R	I	Analog red signals input.
15	EXT G	I	Analog green signals input.
16	EXT B	I	Analog blue signals input.
17	RGB VCC	-	Vcc of RGB circuit.
18	ROUT	O	R signals output.
19	GOUT	O	G signals output.
20	BOUT	O	B signals output.
21	ABCL	I	ABL/ACL control.
22	V RAMP	-	Connected with cap to make V.RAMP signal.
23	V NFB	I	Input of V.sawteeth signal feedback.
24	V OUT	O	Vertical drive signal output.
25	V AGC	-	V.AGC cap.
26	SCL	I	I ² C bus clock input.
27	SDA	I/O	I ² C bus data input/output.
28	H VCC	-	Vcc of vertical circuit.
29	CW OUT	I/O	PAL/NTSC ID output and SECAM ID input.
30	FBP IN	I	FBP input.
31	SYNC OUT	O	Composites sync output.
32	H OUT	O	Horizontal drive signal output.

Pin No.	Pin Name	I/O	Description
33	DEF GND	-	GND of deflection circuit.
34	SCP OUT	O	Sand castle pulse (VD+HD+GP) output.
35	EW OUT	O	E-W output. (not used)
36	D VDD (5V)	-	Vdd of digital block.
37	SB YIN	I	B-Y signals input.
38	SR YIN	I	R-Y signals input.
39	YIN	I	Y signal input.
40	H AFC	-	H.AFC filter.
41	EHT IN	I	The terminal for EHT. (not used)
42	D GND	-	GND of digital block.
43	SYNC IN	I	Input of the synchronous separation circuit.
44	BLK DET	-	The terminal to be connected with an Black Det filter.
45	C IN	I	Input of chroma signals.
46	Y/C VCC (5V)	-	Vcc of Y/C circuit.
47	IF DET OUT	O	Composite video signal and SIF signal detected in IF circuit.
48	LOOP FLTR	-	Loop filter for IF PLL.
49	VCO GND	-	GND of VCO and SIF circuit.
50	VCO	-	The terminal connected with a tank coil for IF VCO.
51	VCO	-	The terminal connected with a tank coil for IF VCO.
52	VCO VCC	-	Vcc of IF VCO and SIF.
53	H COR/ SIF IN	I	H.curve correction and SIF input.
54	RIP FLTR	-	Connected with cap to stabilize the performance of SIF injection-lock circuit.
55	SIF OUT	O	Output of 2nd SIF signal. (not used)
56	FM DC NF	I	The terminal for FM DC negative feedback and AGC filter for L-SECAM.

IC, TA1275AZ

Pin No.	Pin Name	I/O	Description
1	Y OUT	O	The output pin for Y signal.
2	MODE SW	O	The pin for controlling the Y processing mode: to Vcc: 5.5MHz trap ; open: 5.5MHz trap + D.L ; to GND: DL. (not used)
3	R-Y OUT	O	The output pin for demodulated R-Y signal.
4	R-Y BLACK CONTROL	I	The pin for controlling the black offset level. (not used)
5	B-Y OUT	O	The output pin for demodulated B-Y signal.
6	B-Y BLACK CONTROL	I	The pin for controlling the black offset level. (not used)
7	S-ID FILTER	I	The pin for connecting the SECAM ident filter capacitor.
8	EXT R-Y IN	I	The input pin for external R-Y signal. (not used)
9	5V VCC	-	The Vcc pin for Y/C processing block.
10	EXT B-Y IN	I	The input pin for external B-Y signal. (not used)
11	GND	-	The Gnd pin.
12	Fo-ADJ FILTER	I	The pin for connecting a capacitor for automatic adjusting circuit.
13	C IN	I	The chroma signal input pin.
14	BELL-ADJ FILTER	I	The pin for connecting a capacitor for the bell filter fo, 4.286MHz.
15	Y IN	I	The Y signal input pin.
16	BELL CONTROL	I	The pin for selecting the bell filter fo. fo + 70KHz: open ; fo + 35KHz : 20k to GND ; fo: to GND.(Connected to Pin 18)
17	S.C.P. IN	I	The pin to input the sand castle pulse, SCP.
18	5V VCC	-	Vcc pin for logic block.
19	4.43MHz CW IN	I	The pin for input 4.43MHz of carrier wave for self adjustment circuit.
20	ID SW	I	The switch pin for selecting the ID detection mode. (Connected to Pin 18) H + V: connected to Vcc ; Auto search: opened ; H: connected to GND.
21	SECAM ID I/O	I/O	The interface pin to the main processor.

VOLTAGE CHART

VIDEO INPUT : PAL COLOR BAR 1V_{p-p}

AUDIO INPUT : 1V_{p-p}

REF NO.	B		C		E	
	STANDARD	STANDBY	STANDARD	STANDBY	STANDARD	STANDBY
Q1	0	0	4.9	5.0	-	-
Q3	0	0	9.0	0	0	0
Q6	0	0	4.1	5.0	0	0
Q7	4.9	1.75	-	1.8	4.9	2.45
Q301	5.2	0	8.9	0	4.6	0
Q302	4.1	0	9.0	0	3.5	0
Q401	12.2	0.9	0	1.54	12.0	1.54
Q451	3.8	0	9.0	0	3.2	0
Q452	3.7	0	9.0	0	3.1	0
Q453	3.8	0	9.0	0	3.2	0
Q454	3.8	0	9.0	0	3.2	0
Q455	4.7	0	0	0	5.4	0
Q456	3.0	0	9.0	0	2.4	0
Q462	3.2	0	8.3	0	2.6	0
Q463	8.3	0	4.7	0	9.0	0
Q501	3.0	0	143.0	114.0	2.8	0
Q504	3.1	0	141.0	114.0	2.85	0
Q509	3.1	0	140.0	114.0	2.9	0
Q601	0.4	0	66.0	115.0	0	0
Q602	0	0	20.0	114.0	0	0
Q651	0	0	4.75	5.0	0	0
Q831	10.0	0.2	14.9	14.0	9.4	0

REF NO.	G		D		S	
	STANDARD	STANDBY	STANDARD	STANDBY	STANDARD	STANDBY
Q2	5.0	0	0	5.0	0	0
Q4	0	4.9	9.0	0	0	0
Q5	4.9	4.9	0	0	0	0
Q202	8.8	0.3	0	0	0	0
Q203	0	0	9.0	0	0	0
Q205	4.9	0	0	0	0	0
Q303	0	0	9.0	0	0	0
Q402	0	2.4	0.7	0	0	0
Q458	0	2.5	5.4	0	0	0
Q460	0	2.5	0.3	0	0	0
Q801	0	5.0	16.0	0.2	0	0
Q830	0	5.0	10.0	0.3	0	0

	STANDARD (1)	STANDBY (1)	STANDARD (2)	STANDBY (2)	STANDARD (3)	STANDBY (3)
Q803	114.4	115	76.2	60.0	0	0

LINE IN: 1 V_{p-p} PAL COLOR BAR

TUNER: 224.25 MHz PAL COLOR BAR (60 dB μ)

IC1, TMP87CP38N-1B47

PIN NO.	LINE IN	TUNER	STANDBY
1	0	0	0
2	4.9	4.9	0
3	4.9	4.9	-
4	0	0	-
5~6	4.9	4.9	-
7	4.9	4.9	0.3
8	4.9	4.9	0.35
9	0.8	1.16	2.17
10~12	4.9	4.9	4.9
13	4.5	4.2	0
14	4.9	4.9	4.9
15	0	0	0
16	2.46	2.4	2.46
17	2.46	2.9	0
18	4.9	4.9	0
19	0	0	0
20	-	-	0
21~25	0	0	0
26	4.1	4.1	4.9
27	4.7	4.7	4.9
28~29	4.9	4.9	4.9
30	0	0	0
31	2.1	2.1	2.1
32	2.4	2.4	2.4
33	4.9	4.9	4.9
34	0	0	2.5
35	0	0	2.9
36~39	4.9	4.9	4.9
40	0	4.8	4.9
41	0	0	0.1
42	4.9	4.9	4.9

IC2, M51943BSL-700A

PIN NO.	LINE IN	TUNER	STANDBY
1	4.9	4.9	4.9
2	0	0	0
3	4.9	4.9	4.9

IC3, GP1U281Y

PIN NO.	LINE IN	TUNER	STANDBY
1~2	4.9	4.9	4.9
3	0	0	0

IC4, SLA24C04-D

PIN NO.	LINE IN	TUNER	STANDBY
1~4	0	0	0
5~6	4.9	4.9	4.9
7	0	0	0
8	4.9	4.9	4.9

IC201, BU4052BC

PIN NO.	LINE IN	TUNER	STANDBY
1	4.4	2.9	0
2	3.1	2.1	0
3	2.4	1.6	0
4~5	4.5	3.0	0
6~8	0	0	0
9	9.0	8.9	0
10	0	0	0
11~15	-	-	0
16	9.0	9.0	0

IC301, TB1240AN

PIN NO.	INPUT PAL CB	INPUT NTSC CB	INPUT SECAM CB	TUNER	STANDBY
1	2.4	2.4	2.4	2.55	0
2	4.2	4.2	4.2	4.2	-
3	8.6	8.6	8.6	8.6	0
4~5	0	0	0	0	0
6	0.7	0.5	0.6	0.6	-
7	2.0	2.0	2.0	2.0	0
8	7.0	7.0	7.0	7.0	0
9	7.6	7.6	7.6	4.6	0.29
10	2.4	2.4	2.0	2.4	0.28
11	3.4	3.4	3.4	3.3	0.2
12~13	0	0	0	0	0
14	2.7	2.7	2.7	2.7	0.2
15~16	2.7	2.7	2.7	2.7	0.25
17	8.8	8.8	8.8	8.8	0
18	2.5	2.7	2.4	2.4	0
19	2.4	2.6	2.3	2.3	0
20	2.3	2.4	2.2	5.9	0
21	6.0	6.0	6.0	6.0	0
22	4.1	4.1	4.1	4.1	0.27
23	4.7	4.7	4.7	4.7	0
24	0.8	0.8	0.8	0.8	0
25	1.6	1.7	1.7	1.6	0.27
26	4.8	4.8	4.8	4.7	4.9
27	4.8	4.8	4.8	4.8	4.9
28	9.2	9.2	9.2	9.2	0
29	3.4	3.4	1.5	3.4	0.2
30	0.7	0.7	0.7	0.7	0
31	4.6	4.6	4.6	4.6	0
32	2.1	2.1	2.1	2.1	0
33	0	0	0	0	0
34	1.2	1.2	1.2	1.2	0
35	3.5	3.5	3.5	3.5	0
36	4.8	4.8	4.8	4.8	0
37	2.5	2.5	2.5	2.5	0
38	2.5	2.5	2.5	2.5	-0.2
39	2.8	2.8	2.8	2.8	0
40	7.2	7.2	7.1	7.2	0
41	0.4	0.4	0.4	0.45	0
42	0	0	0	0	0.1
43	2.8	2.8	2.8	2.9	0

PIN NO.	INPUT PAL CB	INPUT NTSC CB	INPUT SECAM CB	TUNER	STANDBY
44	1.7	1.7	1.7	1.7	0
45	0	0	0	0	0
46	4.9	4.9	4.9	4.9	0
47	5.4	5.4	5.4	3.6	0.27
48	4.55	4.55	4.6	3.9	0
49	0	0	0	0	0
50~51	7.8	7.8	7.8	7.8	0
52	8.6	8.6	8.6	8.6	0
53	4.6	4.6	4.6	4.6	0
54	5.6	5.6	5.6	5.6	0.3
55	3.5	3.5	3.5	3.5	0
56	4.6	4.6	4.6	4.6	-

IC302, TA1275AZ

PIN NO.	LINE IN	TUNER/P	TUNER/S	STANDBY
1	2.8	2.6	2.6	-
2	2.0	2.0	2.0	0
3	2.6	2.4	2.4	0
4	2.5	2.5	2.5	0
5	2.6	2.5	2.4	-
6	2.5	2.5	2.5	0
7	2.0	2.0	4.3	-
8	2.6	2.6	2.6	0
9	4.9	4.9	4.9	0
10	2.6	2.6	2.6	0
11	0	0	0	0
12	2.7	2.8	2.7	0.2
13	4.3	4.3	4.3	0
14	2.4	2.4	2.5	0.2
15	2.8	2.5	2.5	0.2
16	4.9	4.9	4.9	0
17	0.7	0.7	0.7	0
18	4.9	4.9	4.9	0
19	2.7	2.7	2.7	0
20	4.9	4.9	4.9	0
21	1.6	1.6	1.5	-

IC303, KIA7805PI

PIN NO.	LINE IN	TUNER	STANDBY
1	9.0	9.0	0
2	0	0	0
3	5.0	5.0	0

IC401, TDA7056B

PIN NO.	LINE IN	TUNER	STANDBY
1	-	-	-
2	16.7	16.7	14.0
3	2.4	2.4	2.4
4	0	0	0
5	0.7	0.7	0
6	7.9	7.9	6.7
7	0	0	0
8	7.9	7.9	6.7
9	-	-	-

IC402, BU4052BC

PIN NO.	LINE IN	TUNER	STANDBY
1	2.9	2.5	0
2	3.1	3.1	0
3	3.0	2.4	0
4~5	3.2	3.2	0
6~8	0	0	0
9	9.0	0	0
10	0	0	0
11	3.2	3.2	0
12~15	3.2	3.1	0
16	9.0	9.0	0

IC651, LA7832

PIN NO.	LINE IN	TUNER	STANDBY
1	0	0	0
2	12.5	12.7	0
3	25.2	25.2	-
4	0.8	0.8	0
5	0.8	0.8	-
6	25.0	25.0	0
7	1.5	1.5	0

IC801, STR-S6707

PIN NO.	LINE IN	TUNER	STANDBY
1	299.0	295.0	290.0
2	0	0	0
3	-0.17	-0.16	-0.4
4	0.4	0.43	0
5	0.9	0.98	0
6	0	0	0
7	0.2	0.2	0.16
8	0.94	0.9	0
9	7.7	7.8	6.9

* Voltmeter GND connected to HOT GND.

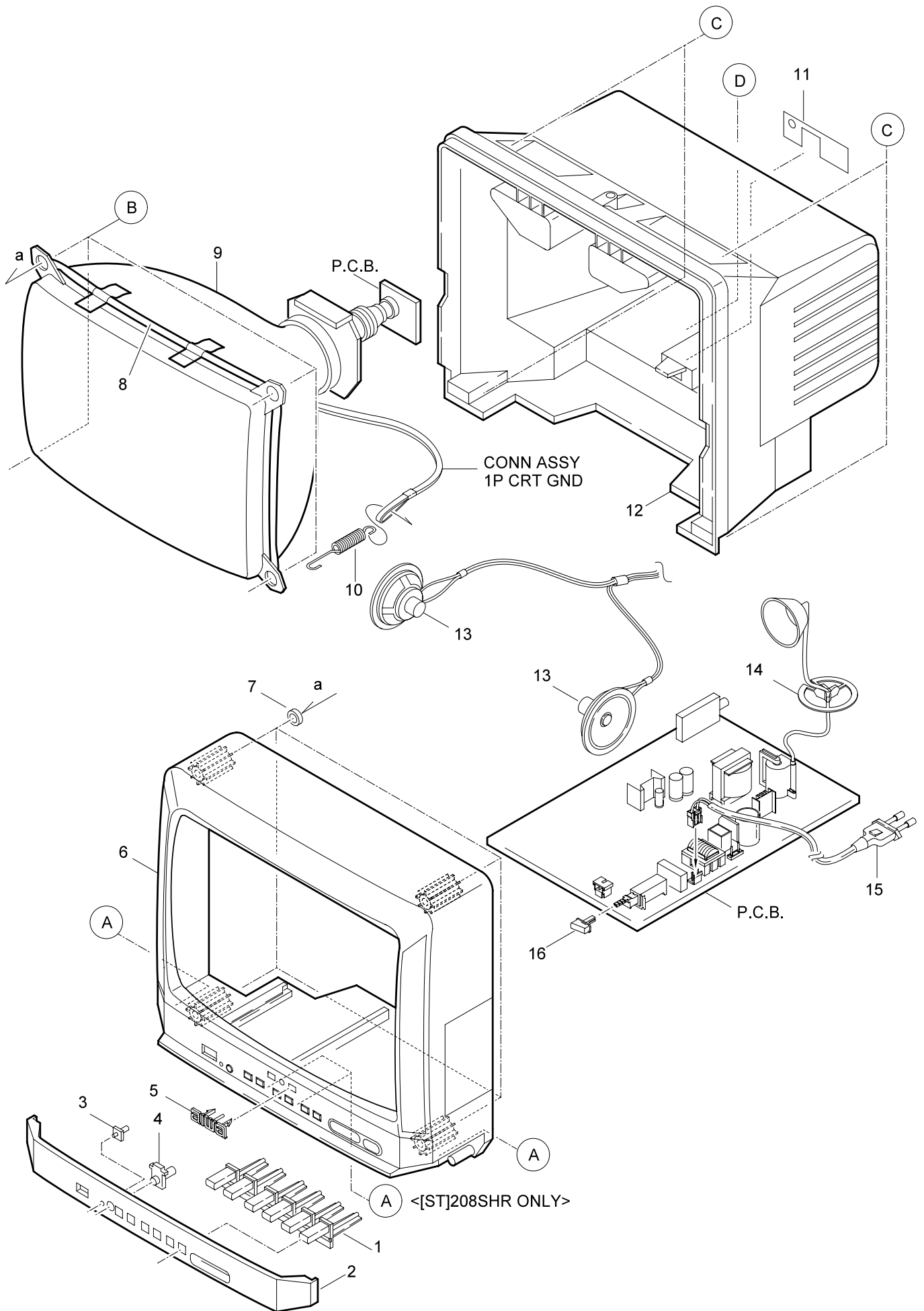
IC804, KIA7809PI

PIN NO.	LINE IN	TUNER	STANDBY
1	12.2	12.2	0.9
2	0	0	0
3	9.0	9.0	0

IC806, NJM78L05A

PIN NO.	LINE IN	TUNER	STANDBY
1	5.0	5.0	5.0
2	0	0	0
3	16.7	16.7	14.0

MECHANICAL EXPLODED VIEW 1 / 1



MECHANICAL EXPLODED PARTS LIST 1 / 1

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-JBV-005-010		KEY,MAIN<EXCEPT 208>
1	8Z-JBT-005-010		KEY,MAIN<208>
2	8Z-JB8-002-210		PANEL,FR C143KER<[L]143KER,[L]143KE>
2	8Z-JB8-010-210		PANEL,FR C148SHR<EXCEPT [L]143KER,[L]143KE,208>
2	8Z-JB6-009-210		PANEL,FR C208SHR<208>
3	8Z-JBV-008-010		LENS,LED<EXCEPT 208>
3	8Z-JBT-008-010		LENS,LED<208>
4	8Z-JBV-009-010		LENS,RC<EXCEPT 208>
4	8Z-JBT-009-010		LENS,RC<208>
5	87-054-087-010		BADGE,AIWA 40<EXCEPT 208>
5	87-054-086-010		BADGE,AIWA 52.5<208>
6	8Z-JB8-001-110		CABI,FR 2SP<[ST]148SHR>
6	8Z-JB8-016-010		CABI,FR 2SP BL<EXCEPT [ST]148SHR,208>
6	8Z-JB6-001-010		CABI,FR 2SP<208>
7	8Z-JBS-205-010		W-G,10-20-2
△	8Z-JB8-640-010		DGC,14 90HM VRK<EXCEPT 208>
△	8Z-JB6-625-010		DGC,20 150HM VRK<208>
△	86-LB7-606-010		CRT,A34AGT 13X79N<[ST]148SHR,[L]143KER>
△	87-JBT-625-010		CRT,A34JFQ 91X08 (VW)<[L]148SHRJ>
△	86-LB7-608-010		CRT,A34JXV70X10N00<[L]143KE,[L]148SHR>
△	87-JB9-602-010		CRT,A48AGY13X67N<208>
10	84-LB3-205-010		SPR-E,EARTH
11	8Z-JB8-005-010		PLATE,REAR 4HL
12	8Z-JB8-004-010		CABI,REAR 4HL<EXCEPT 208>
12	8Z-JB6-004-010		CABI,REAR 4HL<208>
13	8Z-JBV-641-010		SPKR,F 80 80HM 2W
14	87-A90-848-010		HLDR,HV CABLE DIT<EXCEPT [L]143KE>
△	8Z-JB6-695-010		AC CORD SET,KE BLK
16	8Z-JBV-007-110		BTN,POWER 2<EXCEPT 208>
16	8Z-JBT-007-110		BTN,POWER 2<208>
A	87-067-680-010		BVI T3+3-10
B	87-078-203-110		S-SCREW,W5-25<EXCEPT 208>
B	86-LBB-206-010		S-SCREW,ASSY TV5-40 W20<208>
C	87-067-844-010		BVT2+4-16 BLK
D	87-067-761-010		TAPPING SCREW, BVT2+3-10

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange	GM	Metallic Green
YM	Metallic Yellow	DM	Metallic Orange		

アイワ株式会社 〒110-8710 東京都台東区池之端1-2-11 ☎03(3827)3111 (代表)
AIWA CO.,LTD. 2-11, IKENOHATA 1-CHOME, TAITO-KU, TOKYO 110, JAPAN TEL:03 (3827) 3111