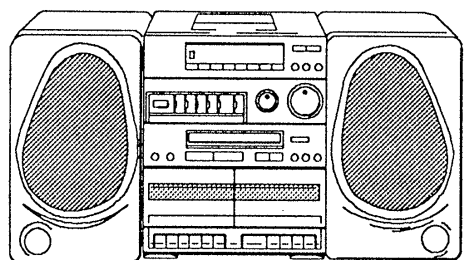


aiwa



NSX-210



CARRY COMPONENT SYSTEM

- BASIC TAPE MECHANISM: TN-21ZSW
- BASIC CD MECHANISM: KSL-2101 ABM

- TYPE: Z

This service manual contains service information for only altered section of Model CA-B500(D)/CA-DW500 (LH,H,U,E,Z) if requiring other service information, see the service manual of Model CA-DW500 (Z).(S/M Code No.0195)

SERVICE MANUAL

SPECIFICATIONS

TUNERSECTION

FM 87.5-108.0 MHz
Antenna: Whip antenna
522-1,611 kHz (9 kHz)
530-1,600 kHz (10 kHz)
MW Antenna: Ferrite bar antenna
153-288 kHz
LW Antenna: Ferrite bar antenna

AMPLIFIERSECTION

Power output 5 W + 5 W (4 ohms, EIAJ)
Max.: 7 W + 7 W
FTC rule
3.75 Watts per channel, Min.
RMS at 4 ohms, from 80 Hz
to 20,000 Hz, with no more
than 3 % distortion

Input sensitivity (load impedance)
MIC: 2 mV (10 kohms)
CD/LINE IN: 300 mV
(47 kohms)

Power requirements
AC 230 V, 50/60 Hz

Power consumption
30 W

CDPLAYERSECTION

Disc Compact disc
Scanning Method Non contact optical scanner
(semiconductor laser appli-
cation)
Laser Semi conductor laser
 $\lambda = 780 \text{ nm}$
Rotation speed Approx. 500-200 rpm/CLV
Error correction Cross Interleave, Reed
Solomon code
No. of channels 2 channels
D.A. conversion 16 bit linear
Frequency response 40-20,000 Hz $^{+2}$
 $^{-6}$ dB

CASSETTEDECKSECTION

Track format 4 tracks, 2 channels
Frequency response Normal tape: 50-12,000 Hz
Signal to noise ratio 50 dB (Normal tape)
Wow and flutter 0.2 % (WRMS)
Tape speed 4.8 cm/sec (1 7/8 ips)
Rewind time 120 sec (C-60)
Fast forward time 120 sec (C-60)
Recording system AC bias
Erasure system AC erase
Motor DC motor x 1
Heads Record/playback head x 1
(deck 1)
Erasur head x 1 (deck 1)
Playback head x 1 (deck 2)

COMMONSECTION

Dimensions (W X H X D)
625 x 305 x 245 mm
(24 5/8 x 12 1/8 x 9 3/4 in.)
Weight 7.2 kg (15.8 lbs)
(not including batteries)

SPEAKER

Cabinet type 2-way Bass reflex type
Speaker 120 mm (4 3/4 in.)
cone type woofer
27 mm (1 1/8 in.)
ceramic type tweeter
Impedance 4 ohms
Allowable max. Input 12 W
Dimensions (W x H x D)
185 x 305 x 220 mm x 2
(7 3/8 x 12 1/8 x 8 3/4 in.)
Weight 1.5 kg (3.3 lbs) x 2

• Design and specifications are
subject to change without notice.

ALTERLATION PARTS LIST

ELECTRICAL MAIN PARTS LIST

DESCRIPTION で判断できない物は“REFERENCE NAME LIST”を参照してください。
 If can't understand for Description please kindly refer to “REFERENCE NAME LIST”.

REF. NO	PART NO.	カンリ NO.	DESCRIPTION	REF. NO	PART NO.	カンリ NO.	DESCRIPTION
IC				C49	87-018-131-080		CAP, TC-U 1000P-50 B
				C50	87-018-104-080		CAP, TC-U 10P-50 SL
	87-017-680-010	IC, TA8176SN		C51	87-010-402-080		CAP, E 2.2-50 SME
	87-017-882-010	IC, LA1831		C52	87-010-401-080		CAP, E 1-50 SME
	87-001-376-010	IC, LC7218		C53	87-010-404-080		CAP, E 4.7-50 SME
	87-017-681-010	IC, TA8126S					
TRANSISTOR				C54	87-018-608-080		CAP, TC-U 0.047-50
	89-319-233-080	TR, 2SC1923(O)		C55	87-018-133-080		CAP, TC-U 4700P-16 X
	87-026-288-080	TR, DTA143XS		C56	87-018-131-080		CAP, TC-U 1000P-50 B
	87-026-486-080	TR, DTA144TS		C57	87-010-401-080		CAP, E 1-50 SME
	89-501-614-080	FET, 2SK161Y		C58	87-010-401-080		CAP, E 1-50 SME
	87-026-219-080	TR, DTA144ES					
	89-502-464-080	FET, 2SK246Y		C59	87-018-112-080		CAP, TC-U 30P-50 SL
	89-318-154-080	TR, 2SC1815Y		C60	87-018-111-080		CAP, TC-U 27P-50 SL
DIODE				C61	87-018-134-080		CAP, TC-U 0.01-16 Y
	87-020-465-080	DIODE, 1SS133		C62	87-015-952-080		CAP, E 2.2-50 LL
	87-020-605-080	DIODE, 1SS135		C64	87-010-263-080		CAP, E 100-10
	87-027-286-080	ZENER, HZ5C1					
TUNER C. B				C65	87-018-134-080		CAP, TC-U 0.01-16 Y
BPF1	87-030-254-080	FLTR, BPMB6AT		C66	87-018-119-080		CAP, TC-U 100P-50 B
C1	87-018-106-080	CAP, TC-U 15P-50 SL		C67	87-018-119-080		CAP, TC-U 100P-50 B
C2	87-018-106-080	CAP, TC-U 15P-50 SL		C68	87-018-119-080		CAP, TC-U 100P-50 B
C4	87-018-134-080	CAP, TC-U 0.01-16 Y		C69	87-018-119-080		CAP, TC-U 100P-50 B
C5	87-018-106-080	CAP, TC-U 15P-50 SL		C70	87-018-131-080		CAP, TC-U 1000P-50 B
C6	87-018-134-080	CAP, TC-U 0.01-16 Y		C71	87-018-131-080		CAP, TC-U 1000P-50 B
C7	87-018-134-080	CAP, TC-U 0.01-16 Y		C73	87-010-374-080		CAP, E 47-10
C8	87-018-102-080	CAP, TC-U 6.8P-50 SL		C74	87-010-263-080		CAP, E 100-10
C9	87-018-097-080	CAP, TC-U 2.2P-50 SL		C75	87-018-124-080		CAP, TC-U 270P-50 B
C10	87-018-102-080	CAP, TC-U 6.8P-50 SL					
C11	87-018-131-080	CAP, TC-U 1000P-50 B		C76	87-018-196-080		CAP, TC-U 1500P-16 X
C12	87-018-134-080	CAP, TC-U 0.01-16 Y		C78	87-018-134-080		CAP, TC-U 0.01-16 Y
C13	87-018-134-080	CAP, TC-U 0.01-16 Y		C79	87-010-221-080		CAP, E 470-10
C14	87-018-134-080	CAP, TC-U 0.01-16 Y		C80	87-018-132-080		CAP, TC-U 2200P-16 X
C15	87-018-119-080	CAP, TC-U 100P-50 B		C81	87-018-132-080		CAP, TC-U 2200P-16 X
C16	87-018-097-080	CAP, TC-U 2.2P-50 SL					
C17	87-018-134-080	CAP, TC-U 0.01-16 Y		C82	87-010-545-080		CAP, E 0.22-50
C18	87-018-099-080	CAP, TC-U 3.9P-50 SL		C83	87-010-545-080		CAP, E 0.22-50
C19	87-018-125-080	CAP, TC-U 330P-50 B		C84	87-018-202-080		CAP, TC-U 6800P-16 X
C21	87-010-544-080	CAP, E 0.1-50		C85	87-018-202-080		CAP, TC-U 6800P-16 X
C22	87-018-106-080	CAP, TC-U 15P-50 SL		C86	87-018-118-080		CAP, TC-U 82P-50 UJ
C23	87-018-131-080	CAP, TC-U 1000P-50 B					
C24	87-018-134-080	CAP, TC-U 0.01-16 Y		C87	87-018-109-080		CAP, TC-U 22P-50 SL
C25	87-018-134-080	CAP, TC-U 0.01-16 Y		C88	87-018-109-080		CAP, TC-U 22P-50 SL
C27	87-018-205-080	CAP, TC-U 0.022-25 F		C90	87-018-134-080		CAP, TC-U 0.01-16 Y
C28	87-018-134-080	CAP, TC-U 0.01-16 Y		C91	87-010-260-080		CAP, E 47-25 SME
C29	87-018-205-080	CAP, TC-U 0.022-25 F		C92	87-018-121-080		CAP, TC-U 150P-50 B
C30	87-018-104-080	CAP, TC-U 10P-50 SL					
C31	87-018-131-080	CAP, TC-U 1000P-50 B		C93	87-018-115-080		CAP, TC-U 47P-50 SL
C32	87-018-121-080	CAP, TC-U 150P-50 B		C110	87-018-122-080		CAP, TC-U 180P-50 B
C33	87-018-118-080	CAP, TC-U 82P-50 UJ		CF1	87-008-264-010		FLTR, SFE10.7MS2-A
C34	87-018-205-080	CAP, TC-U 0.022-25 F		CF2	87-008-264-010		FLTR, SFE10.7MS2-A
C36	87-018-126-080	CAP, TC-U 390P-50 B		CT1	87-011-221-080		CAP, TRIMMER 30P VCT 51
C37	87-018-174-080	CAP, TC-U 18P-50 UJ					
C38	87-018-205-080	CAP, TC-U 0.022-25 F		CT2	87-011-219-080		CAP, TRIMMER 10P
C39	87-018-205-080	CAP, TC-U 0.022-25 F		L1	87-003-133-010		COIL, 0.22UH
C40	87-018-205-080	CAP, TC-U 0.022-25 F		L2	87-006-217-010		COIL, RF FM 4-1/2 TS
C41	87-018-205-080	CAP, TC-U 0.022-25 F		L3	87-003-098-080		COIL, 2.2UH
C42	87-018-134-080	CAP, TC-U 0.01-16 Y		L4	87-006-217-010		COIL, RF FM 4-1/2 TS
C43	87-010-403-080	CAP, E 3.3-50 SME					
C44	87-018-608-080	CAP, TC-U 0.047-50		L5	87-007-253-010		COIL, OSC LW PS
C45	87-010-405-080	CAP, E 10-50 SME		L6	87-007-304-010		COIL, OSC MW-H PS
C46	87-018-134-080	CAP, TC-U 0.01-16 Y		L7	87-005-239-080		COIL, 100UH
C47	87-018-134-080	CAP, TC-U 0.01-16 Y		L8	87-005-239-080		COIL, 100UH
C48	87-010-248-080	CAP, E 220-10 SME		L9	87-007-272-010		COIL, OSC DC-DC
				L10	87-005-239-080		COIL, 100UH
				L11	80-CD4-661-110		BAR ANT, AM-E J
				MFT1	87-008-460-010		FLTR, CFMT450PS
				SFR1	87-024-175-080		SFR, 47K DIA6 V
				VC1	87-002-730-010		VAR1-CAP, SVC203SPA
				VC2	87-002-730-010		VAR1-CAP, SVC203SPA
				VC3	81-754-634-010		VAR1-CAP, KV1260TS2
				VC4	81-754-634-010		VAR1-CAP, KV1260TS2
				X1	87-030-217-010		XTAL 7.2MHz
				X2	87-008-500-010		CDA10.7MG43A-A
				X3	87-030-218-010		CERAMIC, KBR457HS15

MECHANICAL PARTS LIST

DESCRIPTIONで判断できない物は“REFERENCE NAME LIST”を参照してください。
If can't understand for Description please kindly refer to “REFERENCE NAME LIST”.

REF. NO	PART NO.	カブリ NO.	DESCRIPTION
1	S1-023-230-903		CAB, FRONT (210Z)

■ SPEAKER LIST

DESCRIPTIONで判断できない物は“REFERENCE NAME LIST”を参照してください。
If can't understand for Description please kindly refer to “REFERENCE NAME LIST”.

REF. NO	PART NO.	カブリ NO.	DESCRIPTION
1	S1-028-770-101		PANER, SPKR L (BLK) (210Z)
1	S1-028-780-101		PANER, SPKR R (BLK) (210Z)
2	S2-009-430-101		GRILL, SPKR (R) (210Z)
2	S2-009-440-101		GRILL, SPKR (L) (210Z)

■ ACCESSORIES/PACKAGE LIST

DESCRIPTIONで判断できない物は“REFERENCE NAME LIST”を参照してください。
If can't understand for Description please kindly refer to “REFERENCE NAME LIST”.

REF. NO	PART NO.	カブリ NO.	DESCRIPTION
1	S4-400-192-000		INSTRUCTION MANUAL
2	S1-400-123-000		CORD, POWER AC

TRANSISTOR ILLUSTRATION



ECB

2SC1815
2SC1923



ECB

DTA143XS
DTA144ES
DTA144TS



DSG

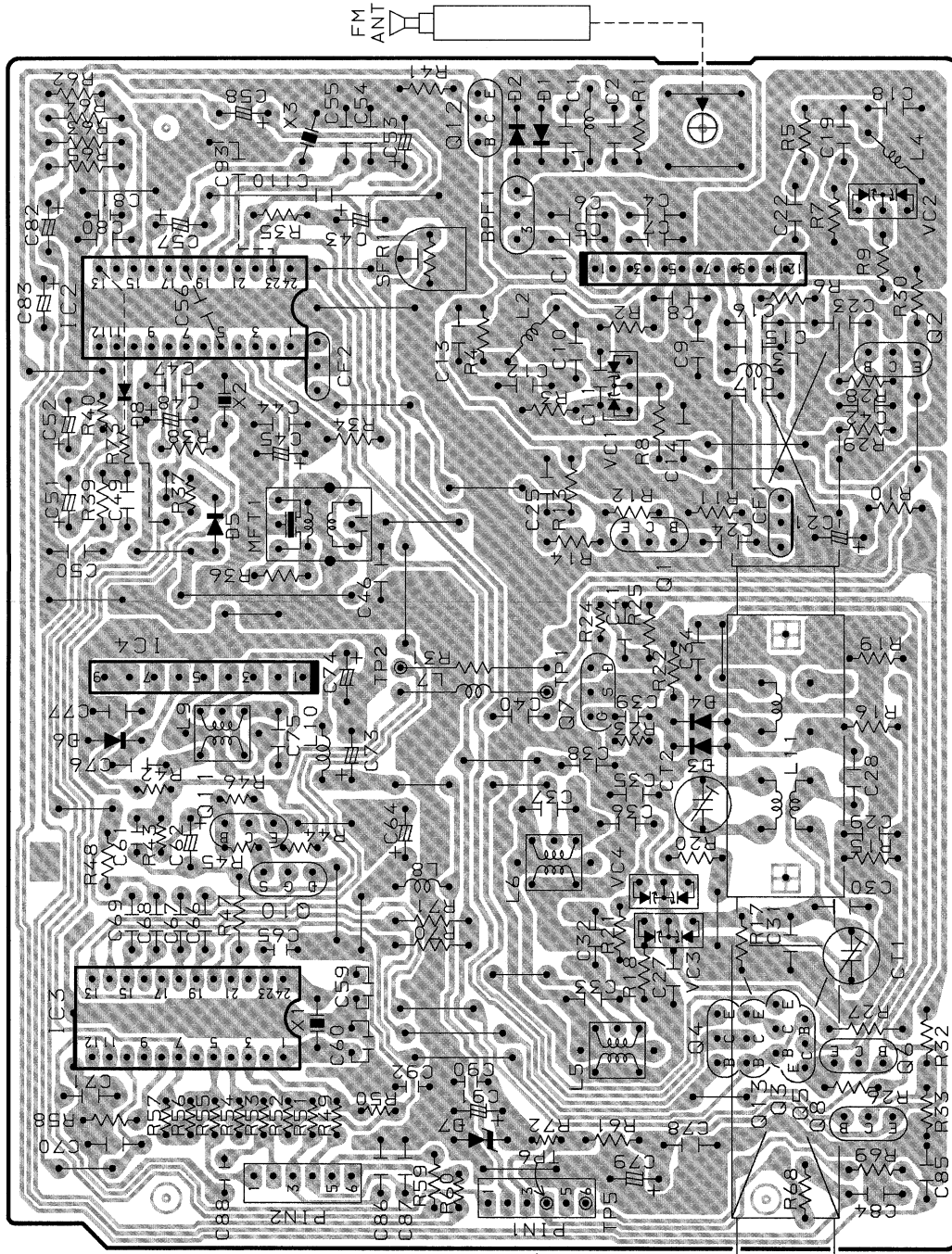
2SK161



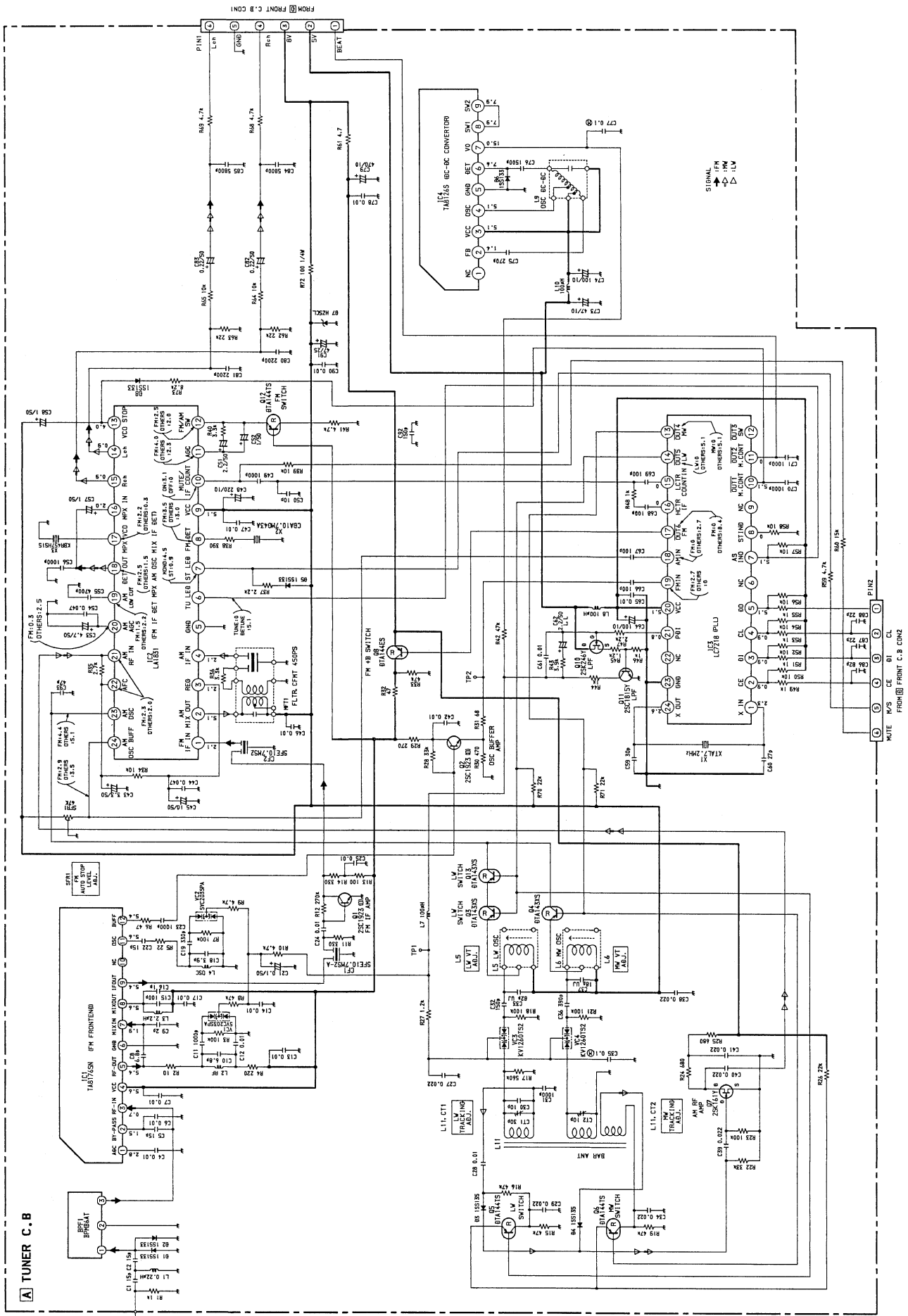
SGD

2SK246

A TUNER C.B

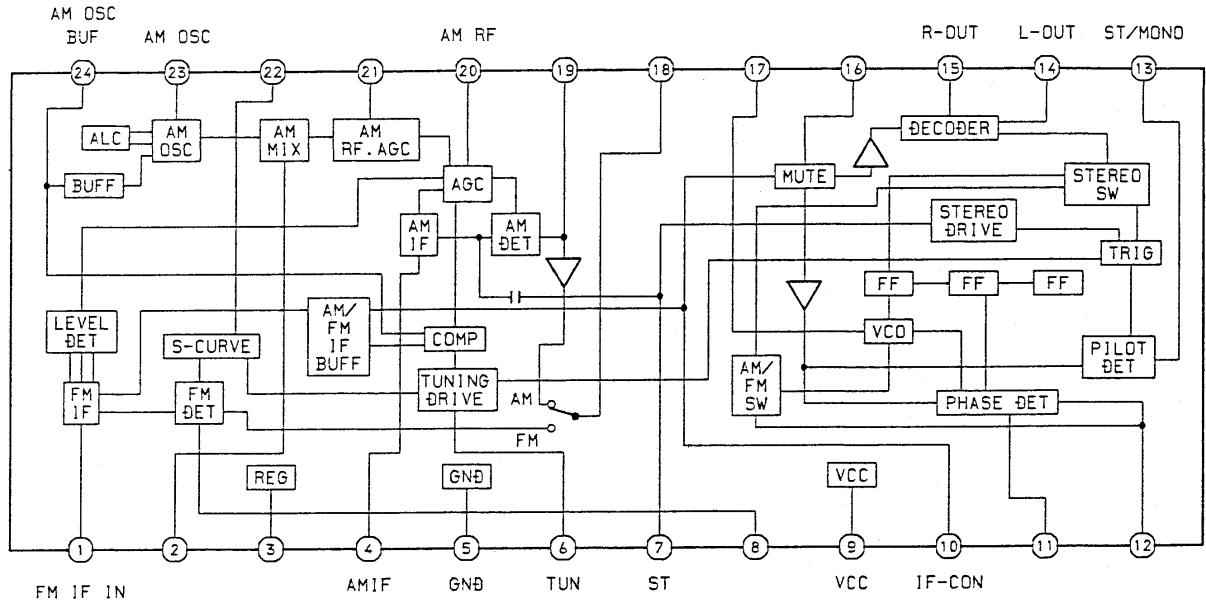


SCHEMATIC DIAGRAM

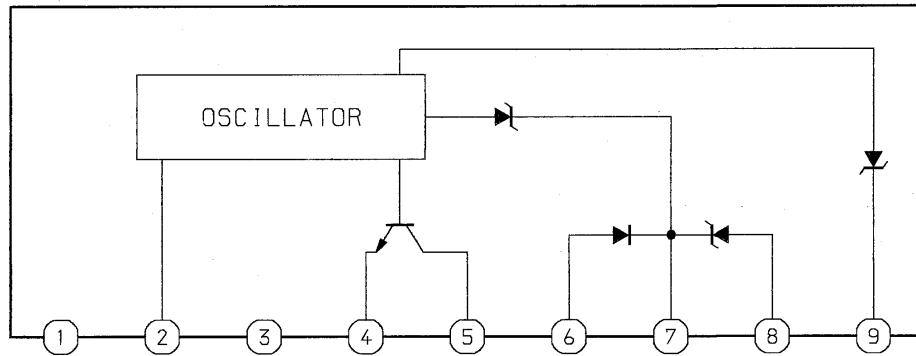


IC BLOCK DIAGRAM

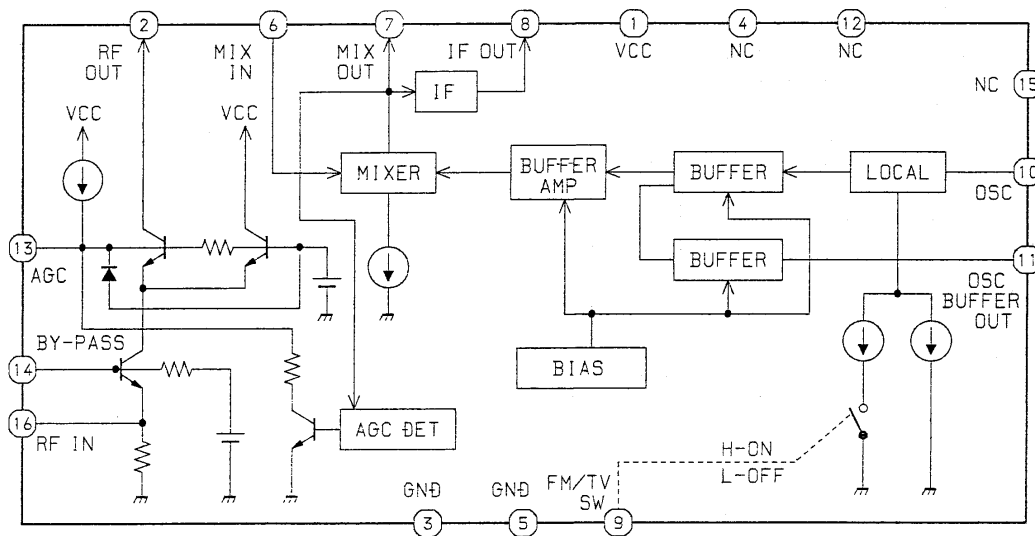
IC,LA1831



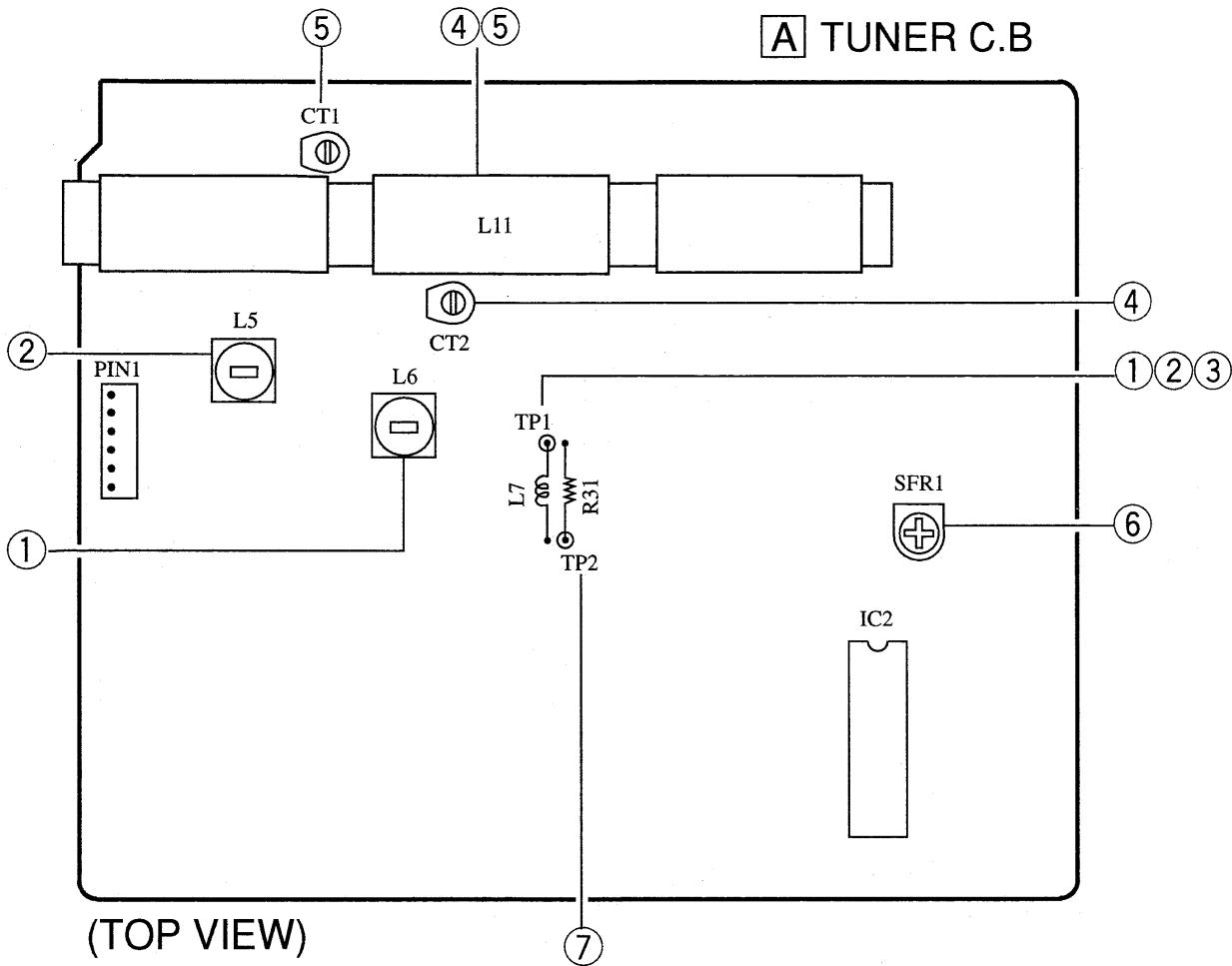
IC,TA8126S



IC,TA8176SN



ELECTRICAL ADJUSTMENT



<RADIO SECTION>

1. MW VT Adjustment

Settings: · Test point: TP1
 · Adjustment location: L6
 Method: Set to MW, 522kHz and adjust so that the test point becomes $1.4V \pm 0.01V$.

2. LW VT Adjustment

Settings: · Test point: TP1
 · Adjustment location: L5
 Method: Set to LW, 153kHz and adjust so that the test point becomes $1.9V \pm 0.01V$.

3. FM VT Check

Settings: · Test point: TP1
 Method: Set to FM, 87.5MHz and check so that the test point becomes $3.4V \pm 0.3V$.

4. MW Tracking Adjustment

L11603kHz
 CT2.....1404kHz

5. LW Tracking Adjustment

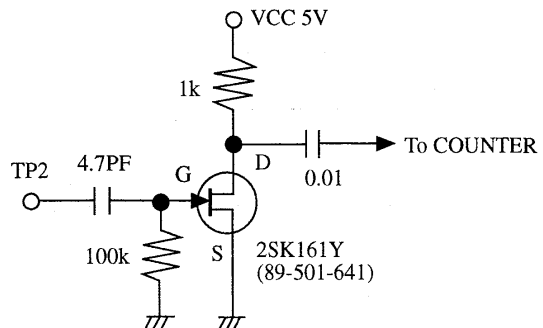
L11153kHz
 CT1.....288kHz

6. FM AUTO STOP LEVEL Adjustment

Settings: · Adjustment location: SFR1
 · Input level: $31 \pm 5dB$
 Method: Set to FM, 98.0MHz and adjust TUNED Indicator (LCD1) to light on by SFR1. After that, TUNED Indicator (LCD1) goes out by 2dB down.

7. FM OSC FREQ. Check

Settings: · Test point: TP2
 Method: Connect a buffer to TP2. Set to FM 87.5MHz and check that the frequency at test point becomes $65.3 \pm 0.01MHz$.



PRACTICAL SERVICE FIGURE

<RADIO SECTION>

Sensitivity:	
(IHF, THD 3%)	FM Less than 24dB (98MHz)
(S/N 10dB)	MW 50 ± 4 dB (999kHz)
(S/N 10dB)	LW 54 ± 4 dB (207kHz)
Intermediate frequency:	FM 10.7MHz
	AM 450kHz
FM stereo separation:	27 ± 3 dB (98MHz)

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-FOTR	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-VR	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
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
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
サージサプレッサ	SERGESUPPRESSOR
セラコン	CAP,CERA

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-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, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL
ジグアーム	ARM,SHAFT
ジグガイド	GUIDE,SHAFT
ストラップ	STRAP
トクナベ	S-SCREW
ヒンジ	HINGE
ヒンジビス	S-SCREW
ビスセレート	SCREW,SERRART

サービス技術ニュース	
番号	連絡内容
G -- --	
G -- --	
G -- --	

アイワ株式会社
AIWA CO.,LTD.

912162

Tokyo Japan