

Service Document **Exchange Set**

YACHT BOY 10 WR5401

Service Manual
Sicherheit
Safety
Materialnr./Part No. 720108000001



Es gelten die Vorschriften und Sicherheitshinweise gemäß dem Service Manual "Sicherheit", Materialnummer 720108000001, sowie zusätzlich die eventuell abweichenden, landesspezifischen Vorschriften!



The regulations and safety instructions shall be valid as provided by the "Safety" Service Manual, part number 720108000001, as well as the respective national deviations.

ALIGNMENT INSTRUCTIONS

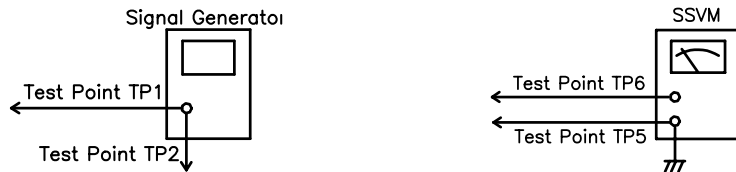
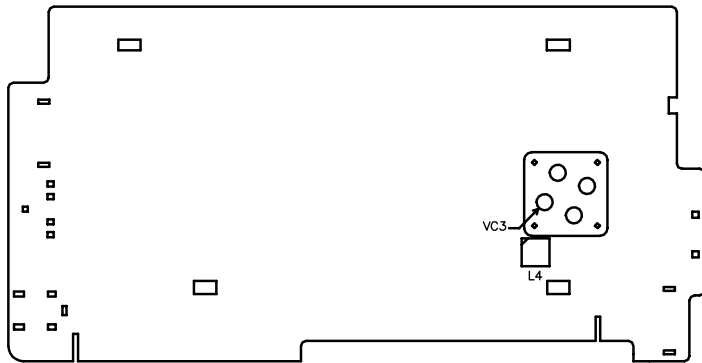
(1) ALIGNMENT FOR FM FREQUENCY RANGE

- a. Required Instruments
 FM RF signal generator
 SSVM

b. Alignment Procedure

Mode	Adjustment	Procedure
FM	L4 VC3	(1) Set the power switch to the ON position.
		(2) Connect a SSVM to the TP5 and TP6.
		(3) Connect the FM signal generator to the input terminal of the rod antenna (TP1, TP2)
		(4) Set the signal of the signal generator to the standard FM band, with frequency deviation to 22.5 kHz modulation.
		(5) With the tuning gang fully closed, set the signal generator to 87.35 MHz ± 0.15 MHz and adjust L4 for a maximum reading on the SSVM.
		(6) With the tuning gang fully open, set the signal generator to 108.25 MHz ± 0.25 MHz and adjust VC3 for a maximum reading on the SSVM.
		(7) Repeat Steps 5 and 6 until the best sensitivity is obtained at both frequencies.

c. Instrument Connection



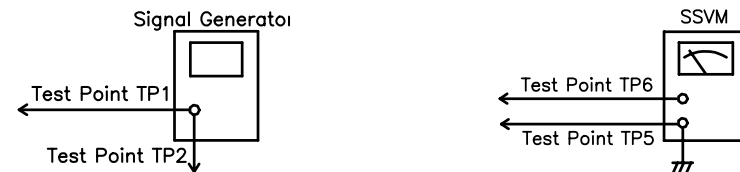
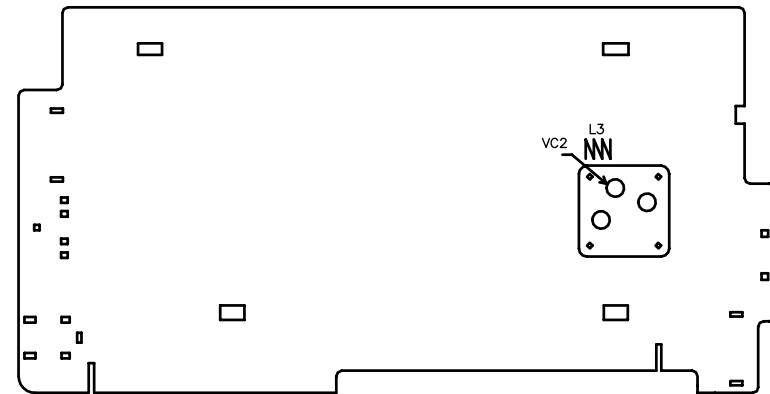
(2) ALIGNMENT FOR FM SENSITIVITY

- a. Required Instruments
 FM/AM RF Signal Generator
 SSVM

b. Alignment Procedure

Mode	Adjustment	Procedure
FM	L3 VC2	(1) Set the power switch to the ON position.
		(2) Connect a SSVM to the speaker. (TP5, TP6)
		(3) Connect the FM signal generator to the input terminal of the rod antenna (TP1, TP2)
		(4) Set the signal of the signal generator to the standard FM band, with frequency deviation to 22.5kHz modulation.
		(5) With the tuning gang fully closed, set the signal generator to 90 MHz and adjust L3 (stretch or squeeze) for a maximum reading on the SSVM.
		(6) With the tuning gang fully open, set the signal generator to 106 MHz and adjust VC2 for a maximum reading on the SSVM.
		(7) Repeat steps 5 and 6 until the best sensitivity is obtained at both frequencies.

c. Instrument Connection



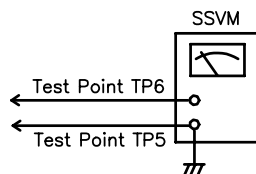
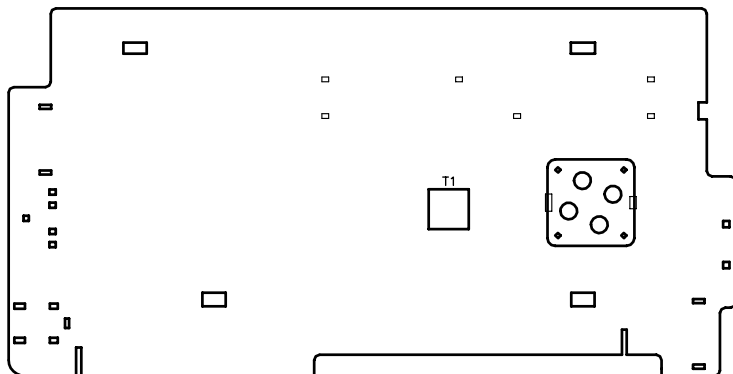
(3) ALIGNMENT FOR AM IF

- a. Required Instruments
 AM RF Signal Generator
 SSVM

b. Alignment Procedure

Mode	Adjustment	Procedure
AM	T1	(1) Set the power switch to the ON position. (2) Connect a SSVM to the TP5, TP6. (3) Connect the AM signal generator to the loop antenna. (4) Set the signal generator to 460 kHz, with 30% modulation. Set the tuning gang fully closed, and adjust T1 for a maximum reading on the SSVM.

c. Instrument Connection



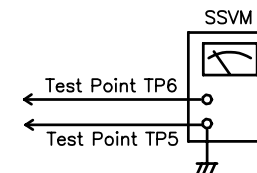
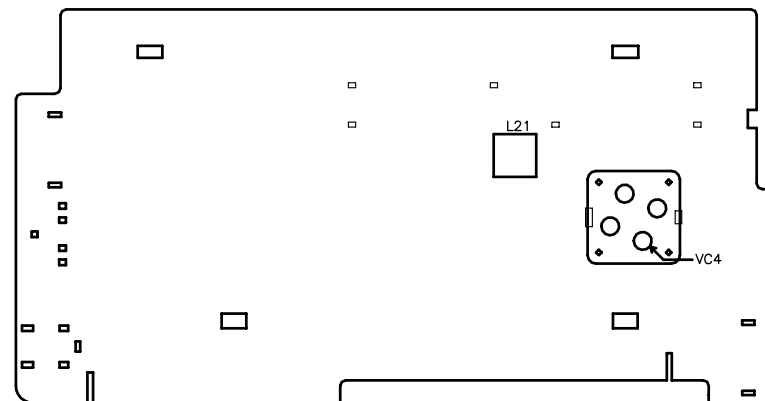
(4) ALIGNMENT FOR AM FREQUENCY RANGE

- a. Required Instruments
 AM RF Signal Generator
 SSVM

b. Alignment Procedure

Mode	Adjustment	Procedure
MW	L21 VC4	(1) Set the power switch to the ON position. (2) Connect a SSVM to the TP5, TP6. (3) Connect an AM RF signal generator to the loop antenna. (4) Set the signal generator to 516.5 kHz with 30% modulation. Set the tuning gang fully closed, and adjust L21 for maximum reading on the SSVM. (5) Set the signal generator to 1631.5 kHz. Set the tuning gang fully open and adjust VC4 for a maximum reading on the SSVM. (6) Repeat Steps 4 and 5 until the best sensitivity is obtained at both frequencies.

c. Instrument Connection



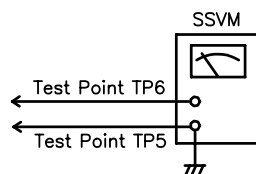
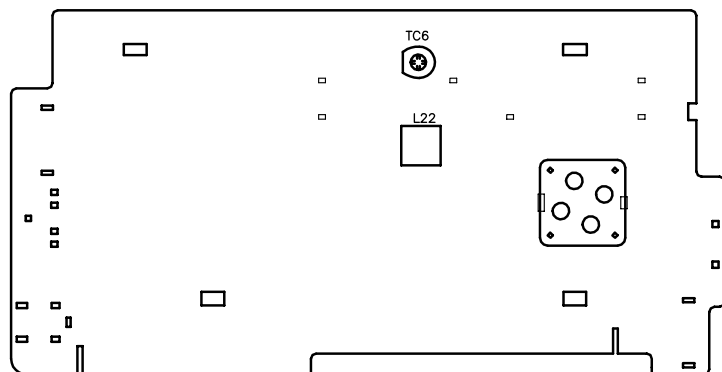
(5) ALIGNMENT FOR AM FREQUENCY RANGE

- a. Required Instruments
 AM RF Signal Generator
 SSVM

b. Alignment Procedure

Mode	Adjustment	Procedure
LW	L22 TC6	(1) Set the power switch to the ON position. (2) Connect a SSVM to the TP5, TP6. (3) Connect a AM RF signal generator to the loop antenna. (4) Set the signal generator to 138.5 kHz with 30% modulation. Set the tuning gang fully closed, and adjust L22 for maximum reading on the SSVM. (5) Set the signal generator to 293.5 kHz. Set the tuning gang fully open and adjust TC6 for a maximum reading on the SSVM. (6) Repeat Steps 4 and 5 until the best sensitivity is obtained at both frequencies.

c. Instrument Connection



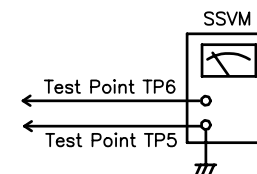
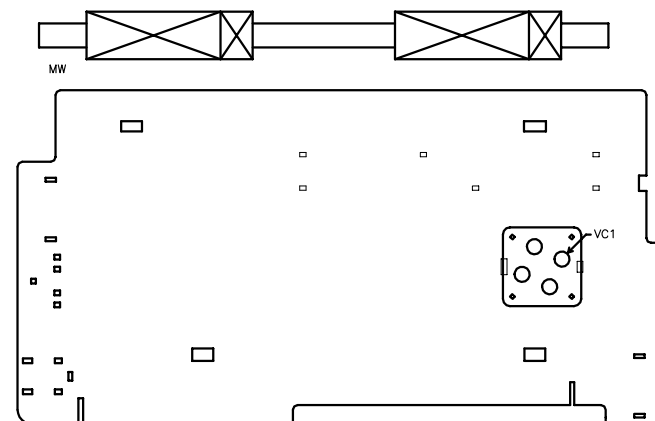
(6) ALIGNMENT FOR AM SENSITIVITY

- a. Required Instruments
 AM RF Signal Generator
 SSVM

b. Alignment Procedure

Mode	Adjustment	Procedure
MW	L6 VC1	(1) Set the power switch to ON position. (2) Connect a SSVM to the TP5, TP6. (3) Connect the AM RF signal generator to the loop antenna. (4) Set the signal generator to 558 kHz, with 30% modulation. Set the tuning gang fully closed and adjust L6 for a maximum reading on the SSVM. (5) Set the signal generator to 1440 kHz. Set the tuning gang fully open and adjust VC1 for a maximum reading on the SSVM. (6) Repeat steps 4 and 5 until the best sensitivity is obtained at both frequencies.

c. Instrument Connection



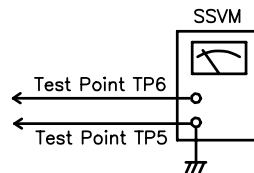
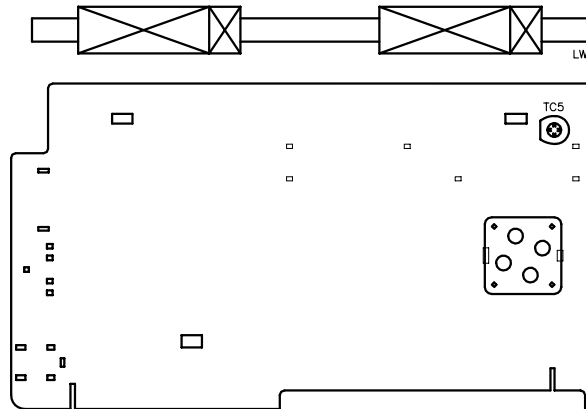
(7) ALIGNMENT FOR AM SENSITIVITY

- a. Required Instruments
 AM RF Signal Generator
 SSVM

b. Alignment Procedure

Mode	Adjustment	Procedure
LW	L6 TC5	(1) Set the power switch to ON position. (2) Connect a SSVM to the TP5, TP6. (3) Connect the AM RF signal generator to the loop antenna. (4) Set the signal generator to 153 kHz, with 30% modulation. Set the tuning gang fully closed and adjust L6 for a maximum reading on the SSVM. (5) Set the signal generator to 261 kHz. Set the tuning gang fully open and adjust TC5 for a maximum reading on the SSVM. (6) Repeat steps 4 and 5 until the best sensitivity is obtained at both frequencies.

c. Instrument Connection



(8) OSCILLATOR ALIGNMENT FOR REMAINDER OF SW BANDS

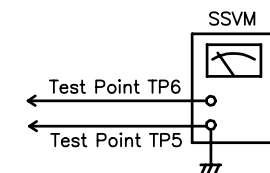
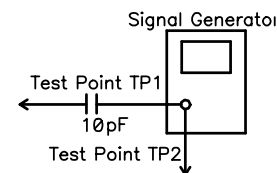
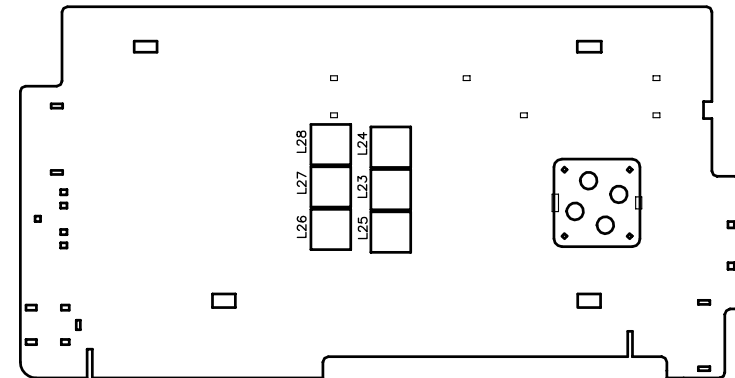
- a. Required Instruments
 AM RF Signal Generator
 SSVM

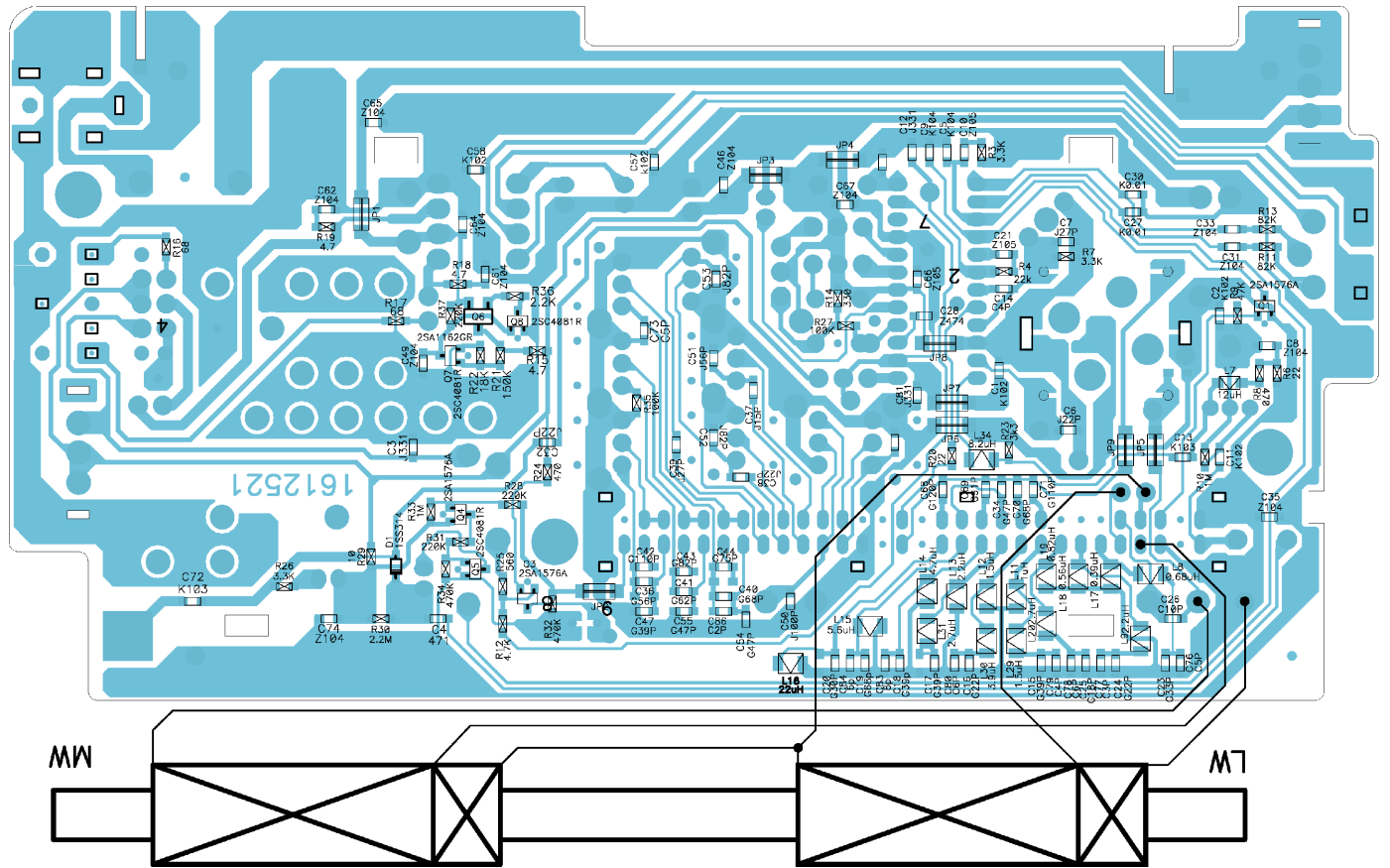
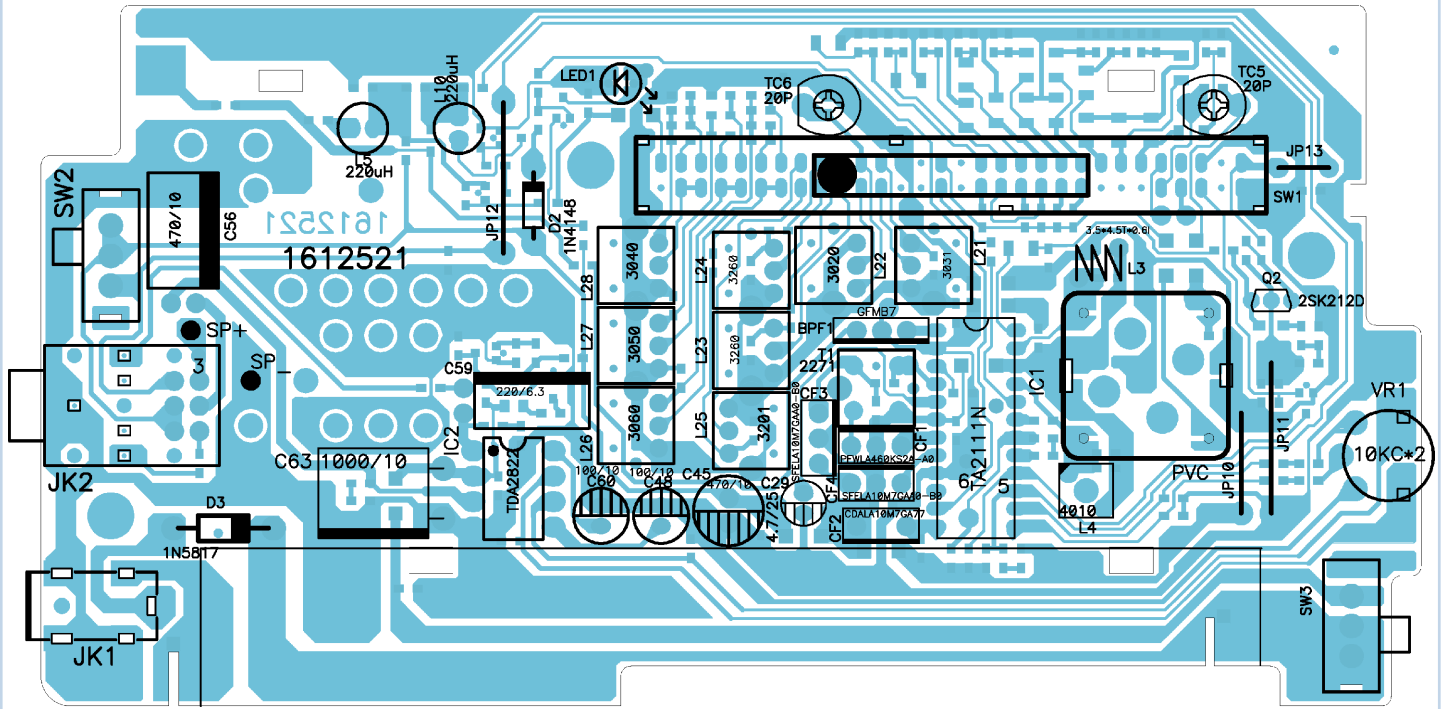
b. Alignment Procedure

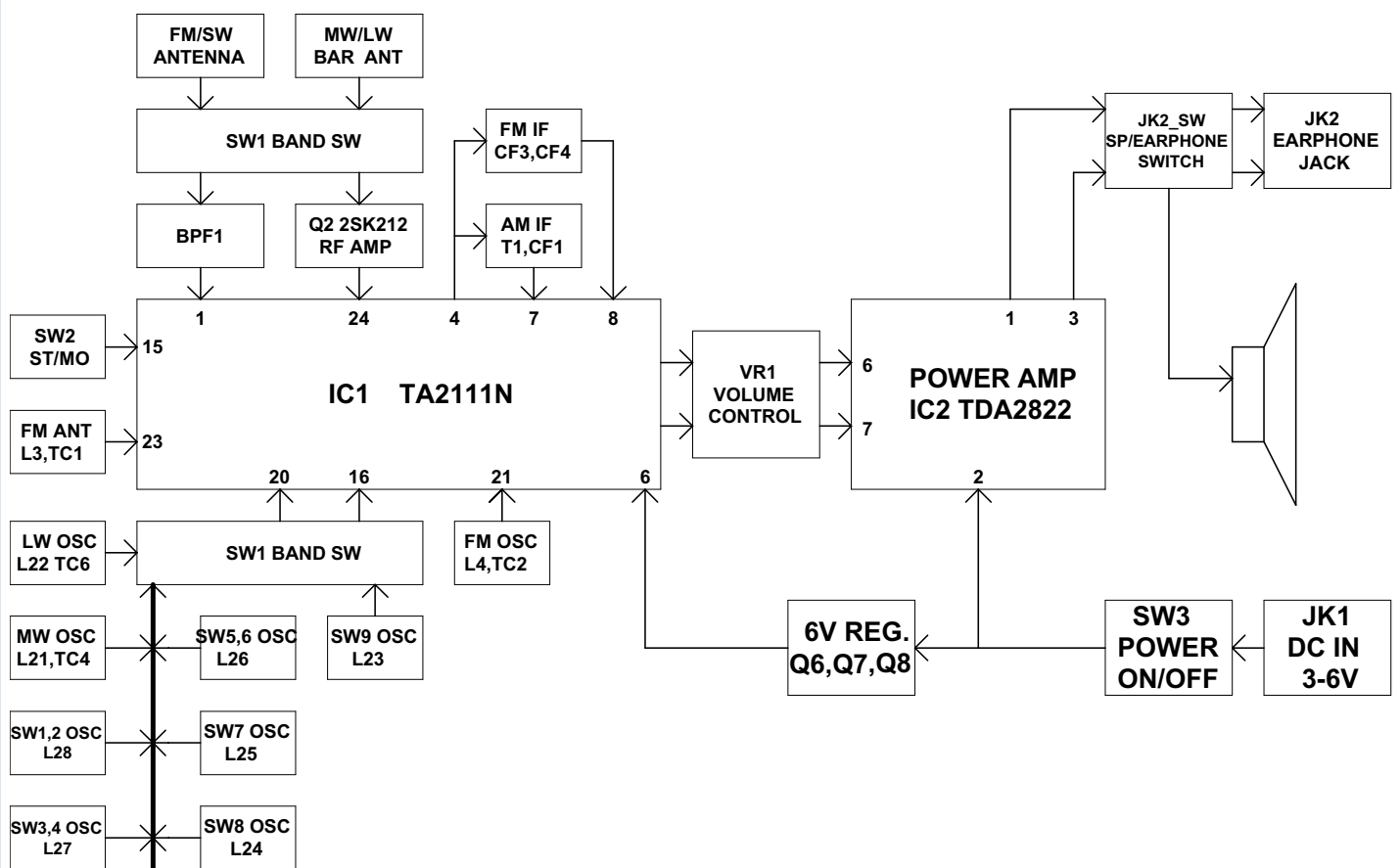
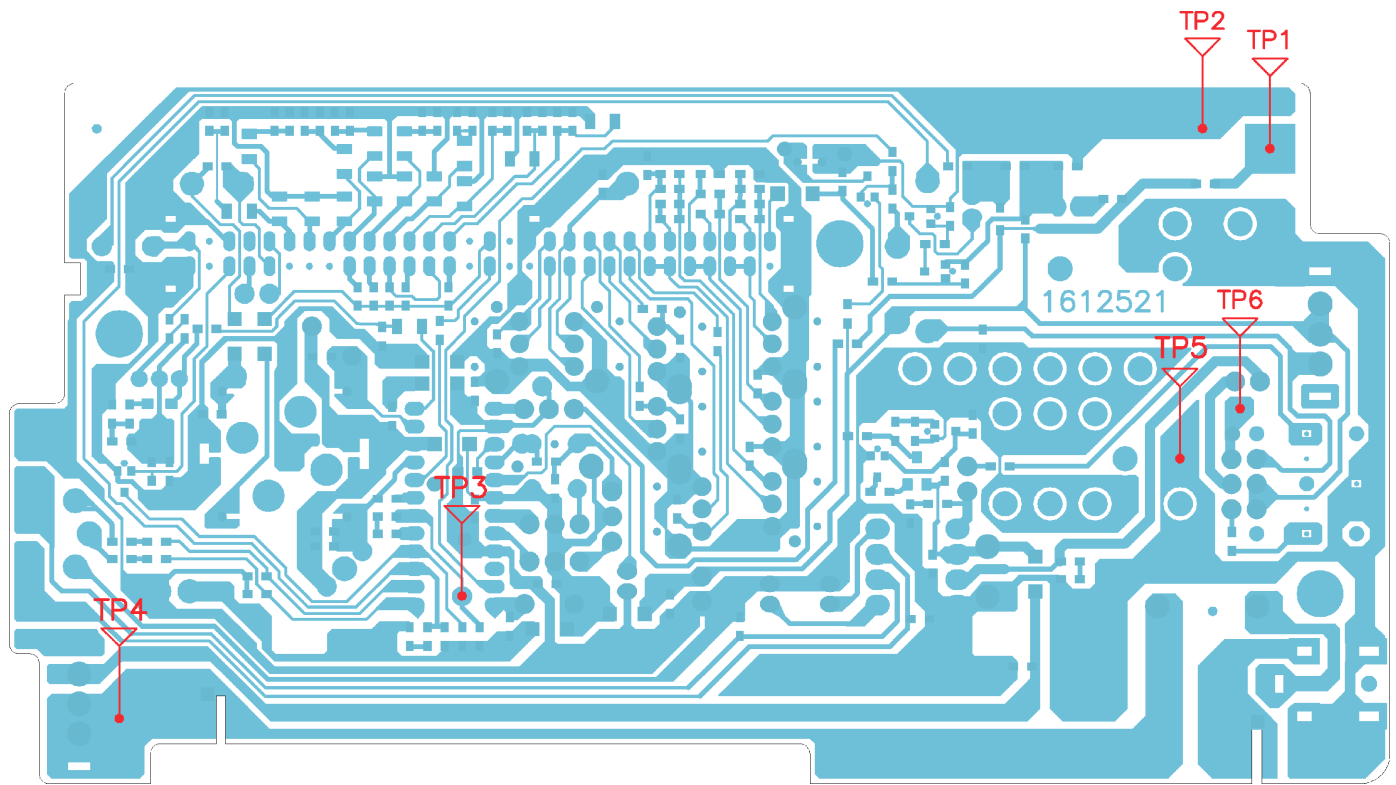
Mode	Procedure
75m ↓ 12m	(1) Set the power switch to ON position. (2) Connect a SSVM to the TP5, TP6. (3) Connect a signal generator with a 10pF dummy antenna. (TP1, TP2) (4) Set the signal generator's frequency as noted below (use 1kHz, 30% modulation). (5) With the tuning gang fully closed, adjust the appropriate coils noted below for maximum reading on the SSVM.

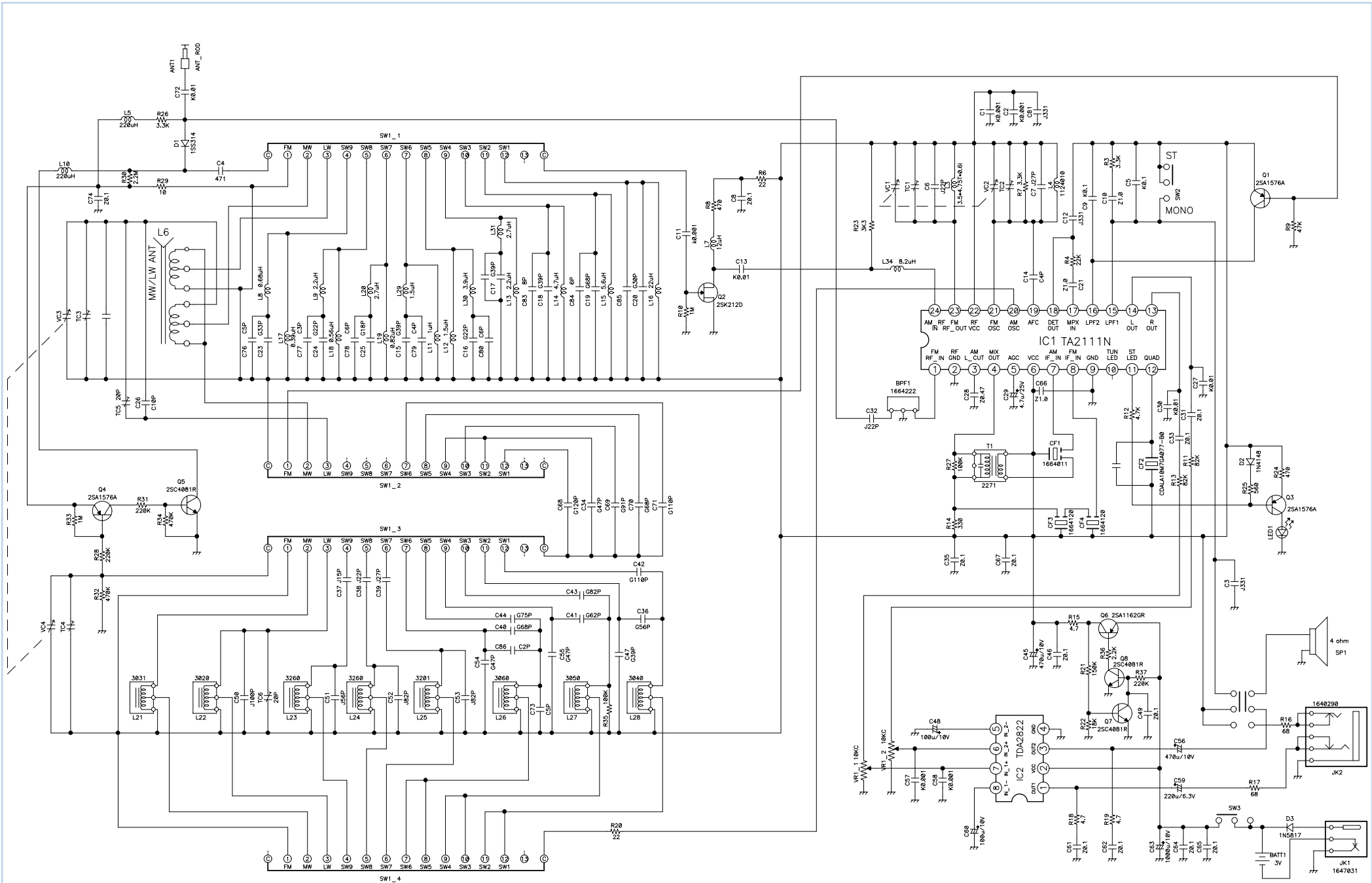
Mode	Generator Frequency	Adjustment
75m	3.85 MHz	L28
49m	5.80 MHz	L28
41m	7.00 MHz	L27
31m	9.30 MHz	L27
25m	11.43 MHz	L26
22m	13.43 MHz	L26
19m	15.00 MHz	L25
16m	17.32 MHz	L24
13m	21.20 MHz	L23

c. Instrument Connection



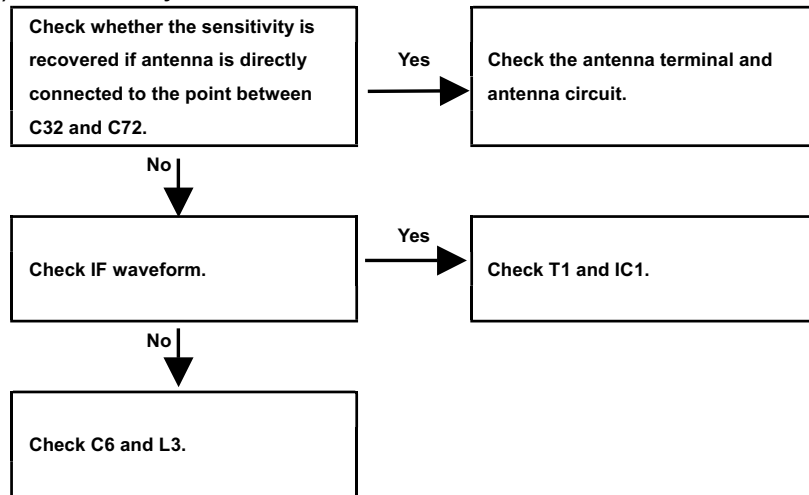




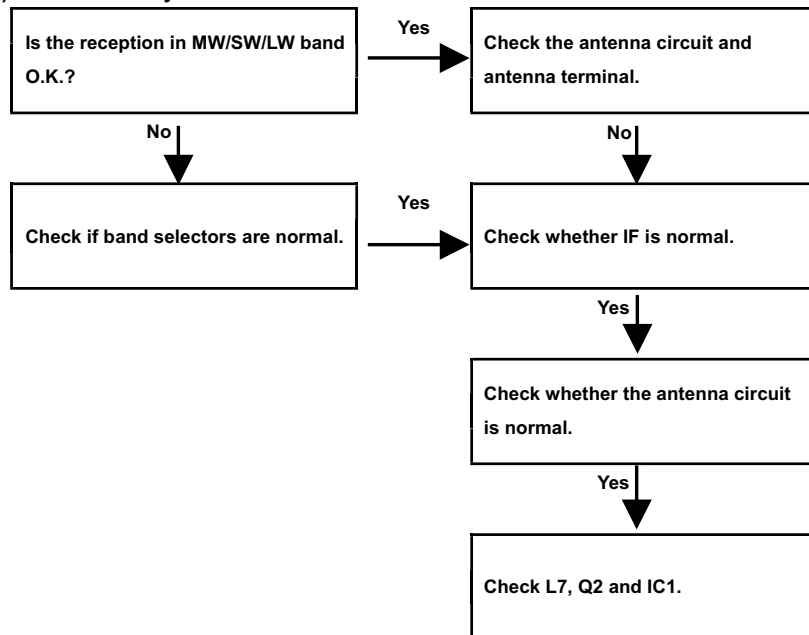


TROUBLESHOOTING FLOW CHART

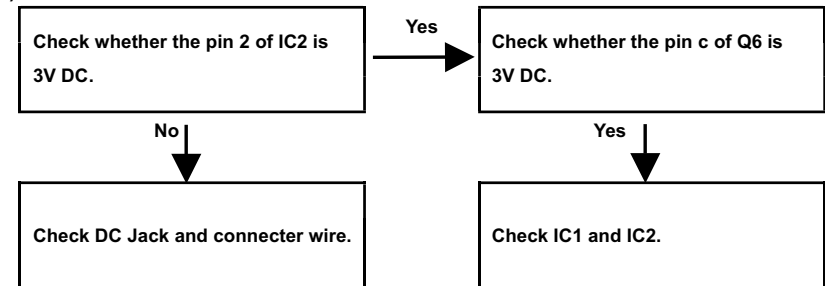
(1) Weak sensitivity on FM mode



(2) Weak sensitivity in AM band



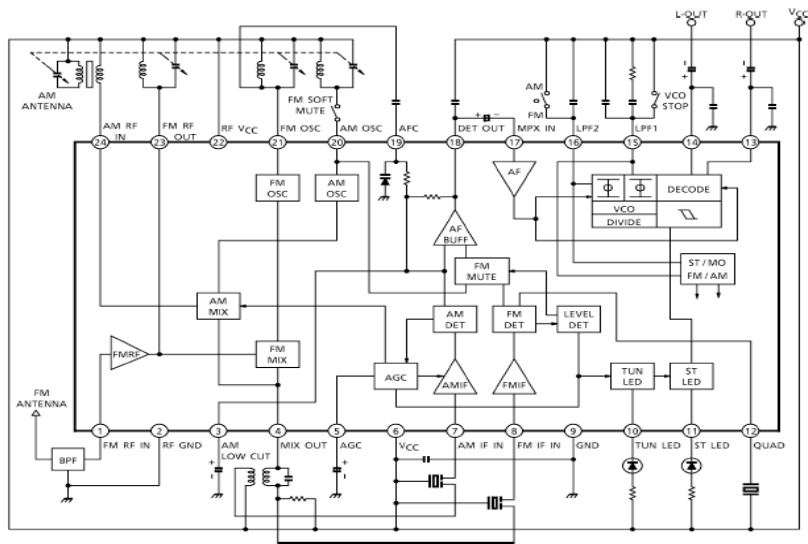
(3) Power can not be turned on



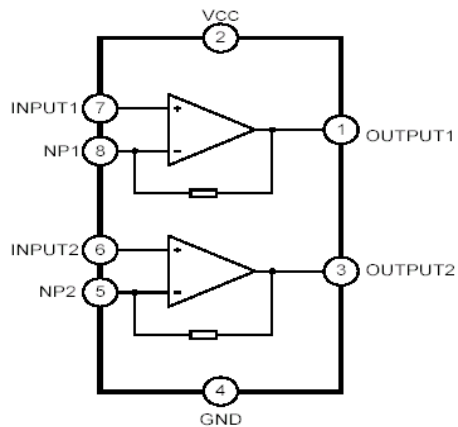
IC CIRCUIT BLOCK DIAGRAM

IC AND TRANSISTOR VOLTAGE CHART

1. IC1-TA2111N



2. IC2-TDA2822



IC1-TA2111N

PIN	FM	AM
1	0.8	0
2	0	0
3	0.4	1
4	2.4	2.8
5	0	0
6	2.9	2.9
7	2.3	2.3
8	2.9	2.9
9	0	0
10	2.7	2.7
11	2.7	2.7
12	2.3	2.3
13	1.2	1.2
14	1.2	1.2
15	2.9	2.9
16	2.9	2.9
17	0.7	0.7
18	1.0	1.0
19	0.9	0.9
20	2.9	2.9
21	2.9	2.9
22	2.9	2.9
23	2.9	2.9
24	2.9	2.9

IC2- TDA2822

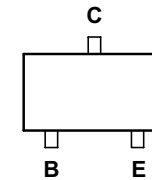
PIN	FM	AM
1	1.25	1.25
2	3	3
3	1.25	1.25
4	0	0
5	0.55	0.55
6	0	0
7	0	0
8	0.55	0.55

Transistor

		FM	AM
Q1	C	2.1	2.9
	B	2.9	2.3
	E	2.9	2.9
Q2	G	0	0
	D	1.6	1.6
	S	0	0
Q3	C	1.5	1.5
	B	2.1	2.1
	E	2.7	2.7
Q4	C	0	0
	B	2.9	2.9
	E	2.9	2.9

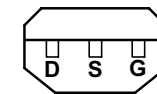
		FM	AM
Q5	C	2.7	2.7
	B	0	0
	E	0	0
Q6	C	2.9	2.9
	B	2.2	2.2
	E	3	3
Q7	C	0.6	0.6
	B	0.3	0.3
	E	0	0
Q8	C	0.1	0.1
	B	0.6	0.6
	E	0	0

Transistors



2SA1576A
2SC4081R
2SA1162GR

(E:Emitter C:Collector B:Base S:Source G:Gate D:Drain)

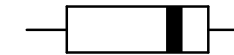


2SK212D

Diodes



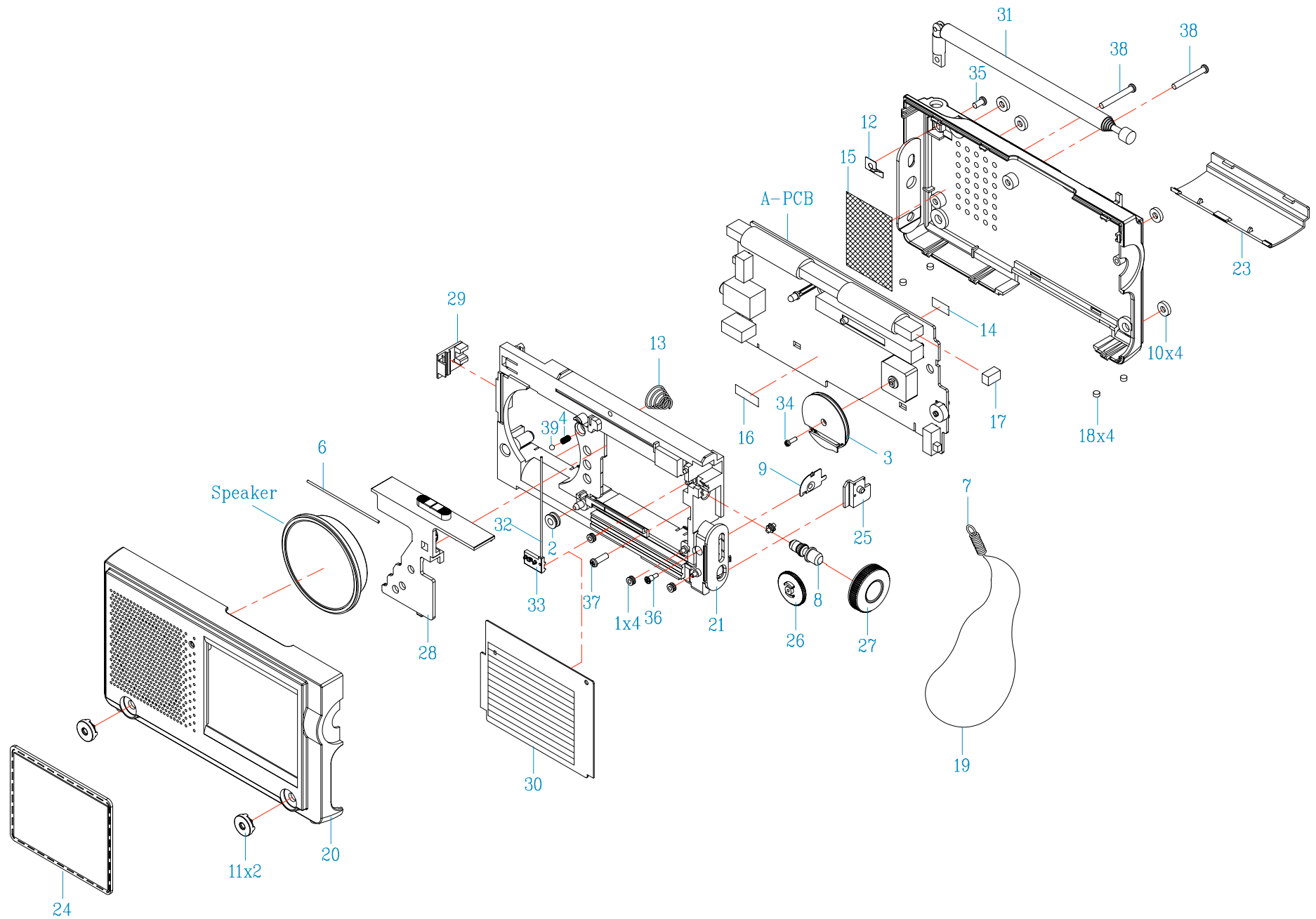
1N4148



1S5817



1SS314



GRUNDIG

Ersatzteilliste
Spare Parts List

AUDIO/HIFI

11 / 2003

YACHT BOY 10 WR5401

MATERIAL-NR. / PART NO.: 755112205000
BESTELL-NR. / ORDER NO.: GRO0250 CHROM/CHROME

POS. NR. POS. NO.	ABB. FIG.	MATERIAL-NR. PART NUMBER	ANZ. QTY.	BEZEICHNUNG (D)	DESCRIPTION (GB)
		755112205000		YACHT BOY 10 WR5401 CHROM TAUSCHGERAET	YACHT BOY 10 WR5401 CHROME EXCHANGE SET
		759545015100		DECKEL BATTERIE	BATTERY COVER
		720114035000		BEDIENUNGSANLEITUNG D/GB/F/I/P/E/NL/PL/DK/S/FIN	INSTRUCTION MANUAL D/GB/F/I/P/E/NL/PL/DK/S/FIN

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ÄNDERUNGEN VORBEHALTEN / SUBJECT TO ALTERATION