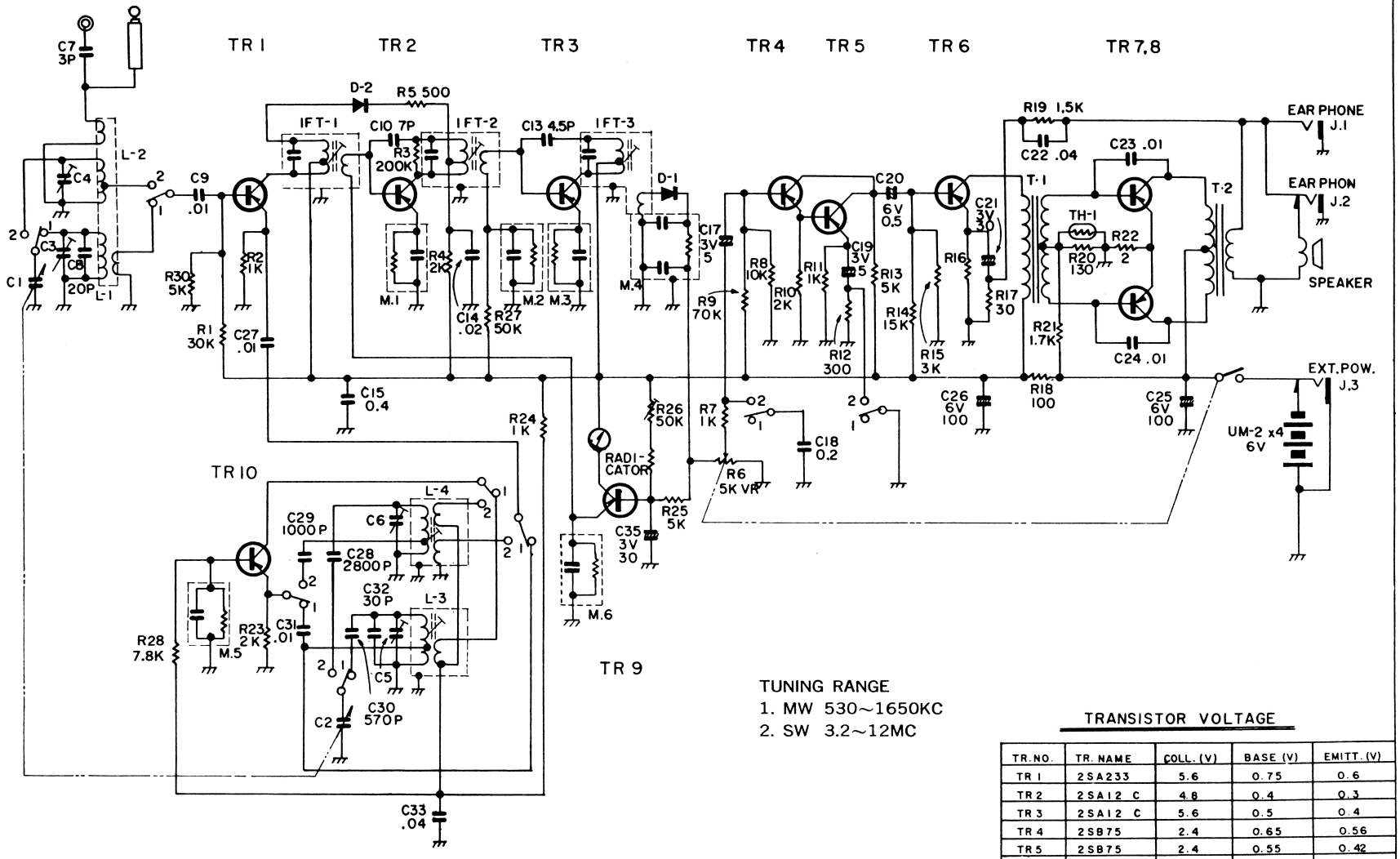

TUNING RANGE
1. MW 530~1650KC
2. SW 3.2~12MC

TRANSISTOR VOLTAGE

TR.NO.	TR. NAME	COLL. (V)	BASE (V)	EMITT. (V)
TR 1	2SA233	5.6	0.75	0.6
TR 2	2SA12 C	4.8	0.4	0.3
TR 3	2SA12 C	5.6	0.5	0.4
TR 4	2SB75	2.4	0.65	0.56
TR 5	2SB75	2.4	0.55	0.42
TR 6	2SB75	5.0	0.85	0.7
TR 7	2SB156	6	0.18	—
TR 8	2SB156	6	0.18	—
TR 9	2SA12 A	5.5	0.6	0.4
TR 10	2SA351	3.8	2.2	2.1

S175

ALIGNMENT INSTRUCTION

Should it become necessary at any time to check the alignment of this receiver, proceed as follows;

1) Connect an output meter across the speaker voice coil lugs.
2) Set volume control for maximum.
3) Use the lowest setting of signal generator capable of producing adequate indication on the lowest scale of output meter.
4) Use a non-metallic alignment tool.
5) Repeat adjustments to insure good results.

ALIGNMENT CHART

AM Alignment Signal generator				Receiver		Adjust
Step	Band	Connection to receiver	Input signal frequency	Dial setting	Remarks	
1	M.W.	Connect signal generator through a 10KΩ dummy to the antenna tuning condenser. Ground lead to the receiver chassis.	Exactly 455KC. (400%, 30%, AM modulated.)	Tuning gang fully open. (minimum capacity)	Adjust for maximum output on speaker voice coil lugs.	3rd- IF Trans. core IFT-3 2nd-IF Trans. core IFT-2 lst-IF Trans. core IFT-1
2	M.W.	Use radiating loop. Loop of several turns of wire, or place generator lead close to receiver for adequate signal pickup. Connect generator output to one end of this wire.	Exactly 520KC. (400%, 30%, AM modulated.)	Tuning gang fully closed. (maximum capacity)	Same as step 1.	MW Oscillator core L3
3	M.W.	Same as step 2.	Exactly 1680KC. (400%, 30%, AM modulated.)	Tuning gang fully open. (minimum capacity)	Same as step 1.	MW Oscillator trimmer C5
4	M.W.	Same as step 2.	Exactly 600KC. (400%, 30%, AM modulated.)	600 KC	See NOTE A.	MW Antenna coil L1
5	M.W.	Same as step 2.	Exactly 1400KC. (400%, 30%, AM modulated.)	1400 KC	Same as step 4.	MW Antenna trimmer C3
6	M.W.	Repeat steps 2, 3, 4 and 5 until no further improvement is obtained.				
7	S.W.	Same as step 2.	Exactly 3.05MC (400%, 30%, AM modulated.)	Tuning gang fully closed. (maximum capacity)	Same as step 1.	SW Oscillator core L4
8	S.W.	Same as step 2.	Exactly 2.2MC (400%, 30%, AM modulated.)	Tuning gang fully open. (minimum capacity)	Same as step 1.	SW1 Oscillator trimmer C6
9	S.W.	Same as step 2.	Exactly 3.5MC (400%, 30% ,AM modulated.)	3.5MC	Same as step 4.	SW1 Antenna coil L2
10	S.W.	Same as step 2.	Exactly 10MC (400%, 30%, AM modulated.)	10MC	Same as step 4.	SW1 Antenna trimmer C4
11	S.W. 1	Repeat steps 7, 8, 9 and 11 until no further improvement is obtained.				

Sharp

MODEL

BX-516

SPECIFICATIONS

Frequency Range
- MW ..... 530~1650KC
- SW ..... 3.2~12MC

Intermediate Frequency 455KC
Power Supply 6V
Power Output
- Undistorted 350mW
- Maximum 500mW

Speaker ..... 3½" P.D.S.
Transistor Complement
- TR. 1 2SA233 ..... Mixer
- TR. 2 2SA12C ..... 1st IF Amplifier
- TR. 3 2SA12C ..... 2nd IF Amplifier
- TR. 4 2SB75 ..... 1st AF Amplifier
- TR. 5 2SB75 ..... 2nd AF Amplifier
- TR. 6 2SB75 ..... AF Driver
- TR. 7 2SB156 ..... Output
- TR. 8 2SB156 ..... Output
- TR. 9 2SA12A ..... AGC & Indicator
- TR. 10 2SA351 ..... Oscillator

GENERAL DESCRIPTION

The circuitry used in this portable radio incorporates 10 transistors, 3 diodes and 1 thermistor. A bar antenna feeds the MW broadcast signal to the mixer. A rod antenna feeds the SW broadcast signal to the mixer.

Local oscillator voltage is fed back to the mixer.

After going through 2 IF amplifiers and 1 diode detector, the signal passes through a 5 transistor audio amplifier.

An AM amplified AGC voltage is fed back to 1st IF amplifier.

CHASSIS REMOVAL

1. Remove the battery.
2. Remove the back cover by removing 2 screws located on the back cover.
3. Remove the indicator.
4. Remove 5 screws located on the chassis.
5. Free the chassis from the cabinet and pull the chassis out of the cabinet.

SHARP BX-516

NOTE

Check alignment of receiver antenna coil by bringing a piece of powdered iron (such as a coil slug) near the antenna loop stick, then a piece of brass. If powdered iron increases output, loop requires more inductance. If brass increase output, loop requires less inductance. Change loop inductance by sliding the bobbin toward the center of ferrite core to increase inductance, or away to decrease inductance.

DIAL CORD STRINGING