

BUSH | MURPHY

SERVICE INFORMATION

PROVISIONAL

BUSH MODELS

BS 3043

AS 3643

STEREO MUSIC CENTRES

SPECIFICATION

GENERAL

Model BS3043A is a Stereophonic Music Centre consisting of two audio amplifiers, record player, radio unit and a compact cassette tape unit. The BS3043A is supplied with two shelf-mounting loudspeakers and operates on a mains supply of 240 volts 50 Hz.

The audio amplifiers are provided with independent bass and treble tone controls and are capable of an output of approximately 6 watts sinewave on each channel with the two channels being driven simultaneously. Provision has been made for use of a suitable pair of stereophonic headphones and a single microphone.

The radio unit has a coverage of three wavebands and incorporates a built-in stereo decoder for the reception of stereo broadcasts on the VHF waveband.

The three speed single-play record deck has a stereophonic stylus and is suitable for 78, 45 and 33 $\frac{1}{3}$ r.p.m. records. The pick-up arm incorporates a cueing lever.

The cassette tape unit comprises a four track, two channel stereophonic deck with automatic level control on recording.

DIMENSIONS

Height: 150 mm
Width: 670 mm
Depth: 352 mm

The above are overall dimensions including the plinth cover in its closed position.

WEIGHT: Main unit 8.2 kg. Loudspeakers 2.23 kg. each.

MAINS SUPPLY: 240 volts 50 Hz.

POWER CONSUMPTION: 50 watts nominal.

FUSES: 5 fitted (see circuit diagrams).

RECORD PLAYER UNIT: BSR type P170 fitted with a SC11M stereo cartridge which is suitable for mono or stereo recordings. The unit is fitted with a 2-pole motor and cueing lever.

POWER OUTPUT: Each channel, 6 watts with a tolerance of -1dB into a 4 Ω resistive load at 10% THD measured with a sinewave input 1000 Hz both channels driven simultaneously.

OUTPUT IMPEDANCE: 4 ohms per channel.

WAVEBAND COVERAGE:

LW 152 kHz to 265 kHz (1974 to 1132 metres).
MW 518 kHz to 1620 kHz (579 to 185 metres).
VHF 87.5 MHz to 104 MHz.

SENSITIVITY:

LW ≤ 3 mV/m for S/N ratio of 20dB.
MW ≤ 1 mV/m for S/N ratio of 20dB.
VHF ≤ 12 μ V at aerial socket for S/N ratio of 30dB.

INTERMEDIATE FREQUENCIES:

LW and MW 470 kHz ± 3.5 kHz.
VHF 10.7 MHz ± 0.03 MHz.

AERIALS:

LW and MW Internal ferrite rod.
VHF External aerial connected to a coaxial socket nominal impedance 75 Ω asymmetrical.

OSCILLATOR: The oscillator is high with respect to signal frequency on all bands.

CONTROLS, TUNER UNIT: Four slider controls, Volume left, Volume right, Bass and Treble. Seven push button controls, On/Off, Mono/Stereo, Gram, Tape, VHF, MW and LW. One rotary control, Tuning.

CONTROLS, RECORD PLAYER UNIT: Speed selector, Stop/Start/Auto lever, Record size selector and a cueing lever.

CONTROLS, CASSETTE TAPE UNIT: Six piano type keys, Stop/Eject, Pause, Fast Forward, Play, Rewind and Record.

AUTOMATIC FREQUENCY CONTROL: This facility is automatically provided when the VHF waveband is selected.

AUTOMATIC GAIN CONTROL: AGC is provided on the RF and Mixer stages for the LW and MW band.

HEADPHONE SOCKET: A jack socket is provided for use with stereo headphones. The insertion of a plug into this socket will automatically disconnect the loudspeakers.

MICROPHONE SOCKET: A jack socket is provided for mono recording from a microphone.

MONO/STEREO SWITCH: When this switch is set to "MONO", (out) the inputs to the two amplifiers are paralleled and the decoder is immobilised. When set to "STEREO", (in) the two amplifiers work independently of each other and the decoder is allowed to function.

CASSETTE UNIT MEASUREMENTS: The following measurements were taken at the speaker sockets, recording input being via the microphone socket. Fe₂O₃ tape was used unless stated otherwise.

Record/Playback Frequency Response: Recorded at -20dB with BASF C90 tape. 50 Hz to 10kHz ± 6 dB relative to the response at 333 Hz.

Cross-talk, channel to channel: > 30 dB at 1000 Hz.

Signal/Noise ratio Weighted (CCIR/ARM): Relative to maximum record level at 333 Hz. 250 nWb/m) > 42 dB. Measured according to DIN 45511.

Wow and Flutter: 0.2% measured according to DIN weighted.

Input level at maximum sensitivity for maximum record level: At microphone socket, 360 μ Volts.

Erasure capability: ≥ 55 dB measured using a 1000 Hz bandpass filter.

Recording Bias and Erase system: A.C. techniques are used for both of these functions. The bias oscillator frequency is nominally 56 kHz.

Tape speed: 47.6 mm/sec within -2% +3%.

Fast wind and rewind time: < 120 seconds using C60 cassette.

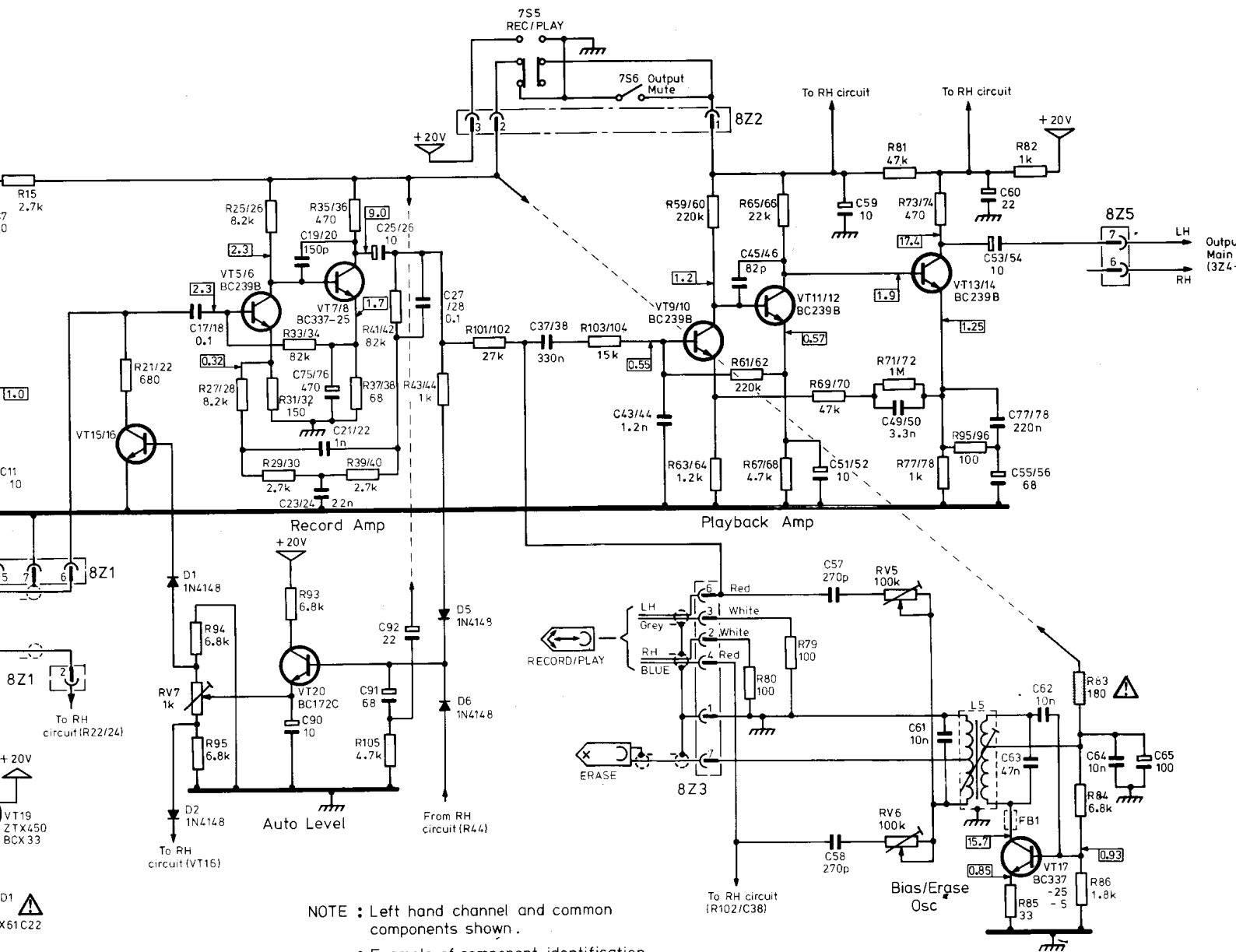



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- NOTE :** Left hand channel and common components shown.
- Example of component identification - R1/2 - R1 LH channel, R2 RH channel. Component with single ident e.g. R15 is common to both channel.
 - Circuit potentials taken from a typical unit, using a D.V.M, w.r.t. chassis.
 - Components marked  must, if changed, be replaced by RRI approved types fitted in the same manner as the original.

Transistor Connections

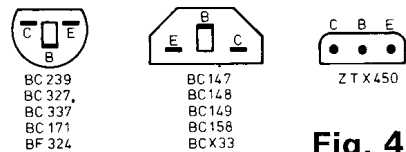


Fig. 4. CIRCUIT

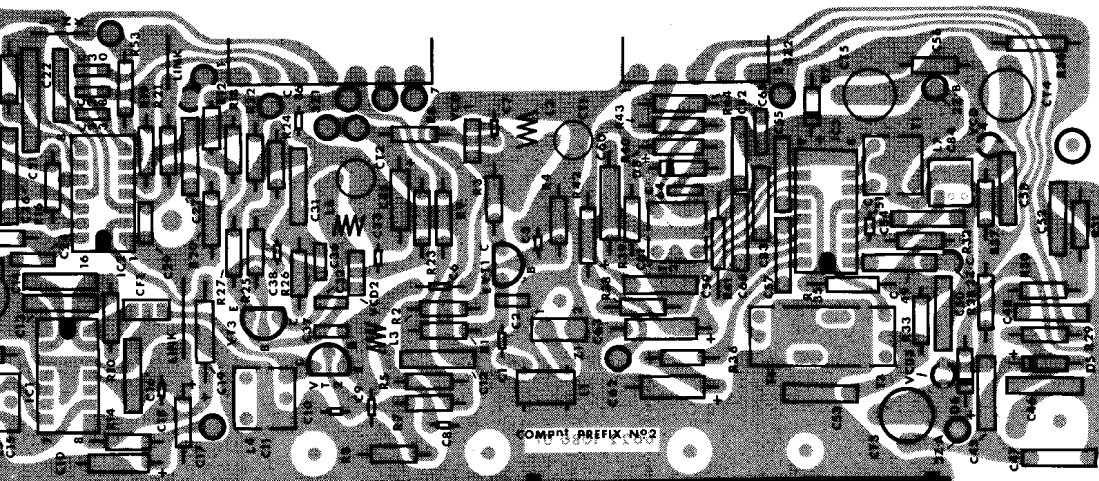
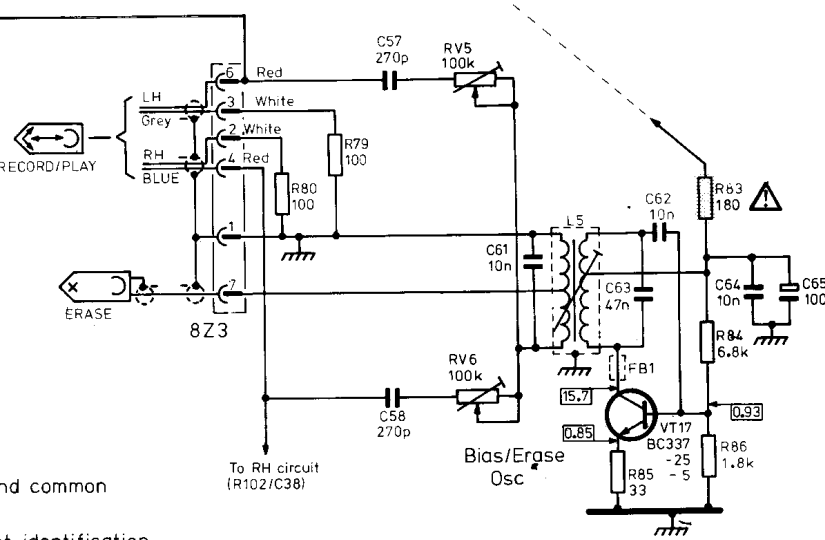
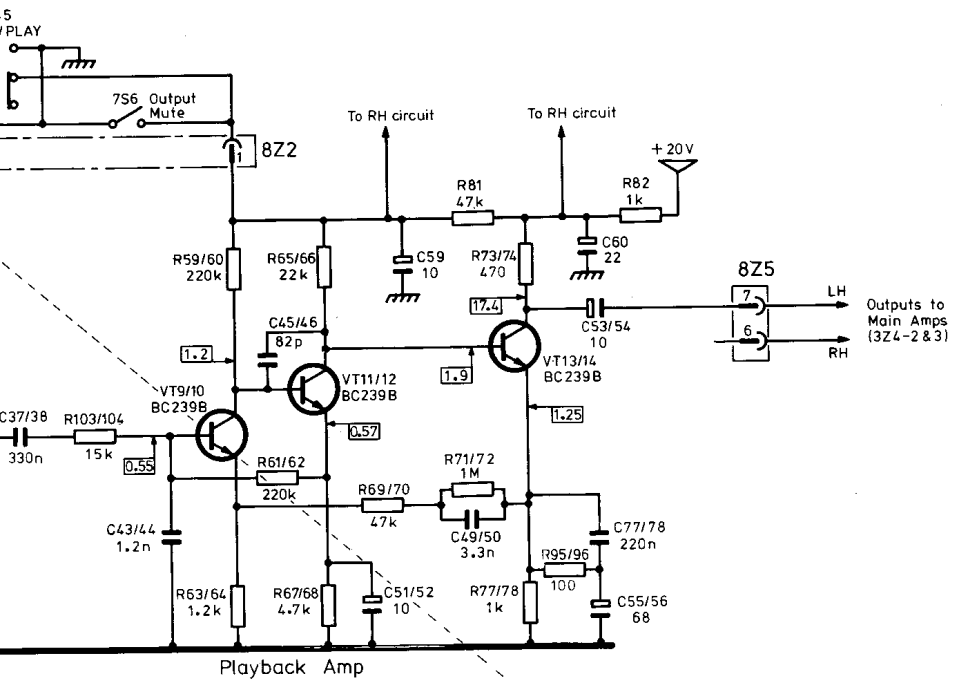


Fig. 5. TUNER AMPLIFIER



Transistor Connections

Transistor	Pin 1	Pin 2	Pin 3
BC 239	C	B	E
BC 327	C	B	E
BC 337	C	B	E
BC 171	C	B	E
BF 324	C	B	E
BC 147	E	B	C
BC 148	E	B	C
BC 149	E	B	C
BC 158	E	B	C
BCX33	E	B	C
Z T X 450	C	B	E

Fig. 4. CIRCUIT DIAGRAM R112C

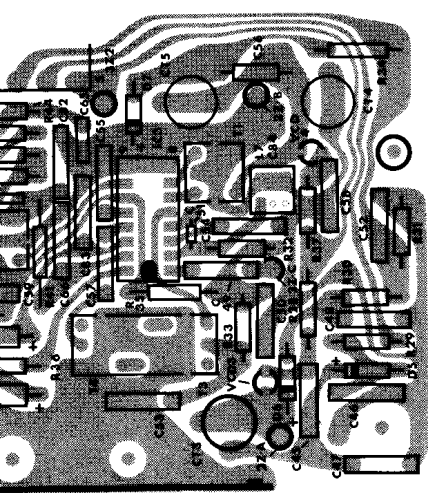
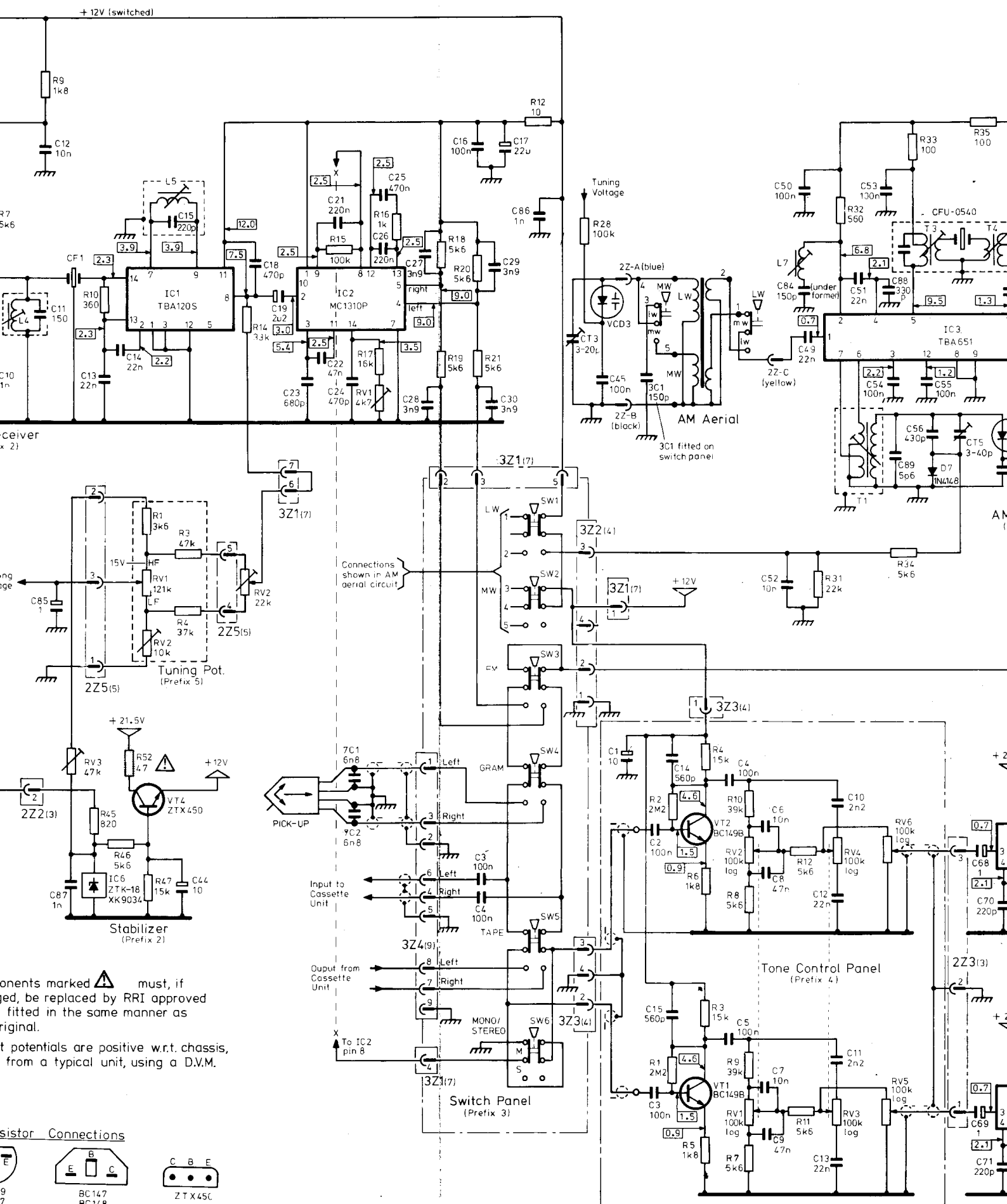
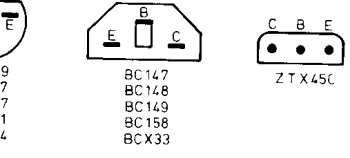


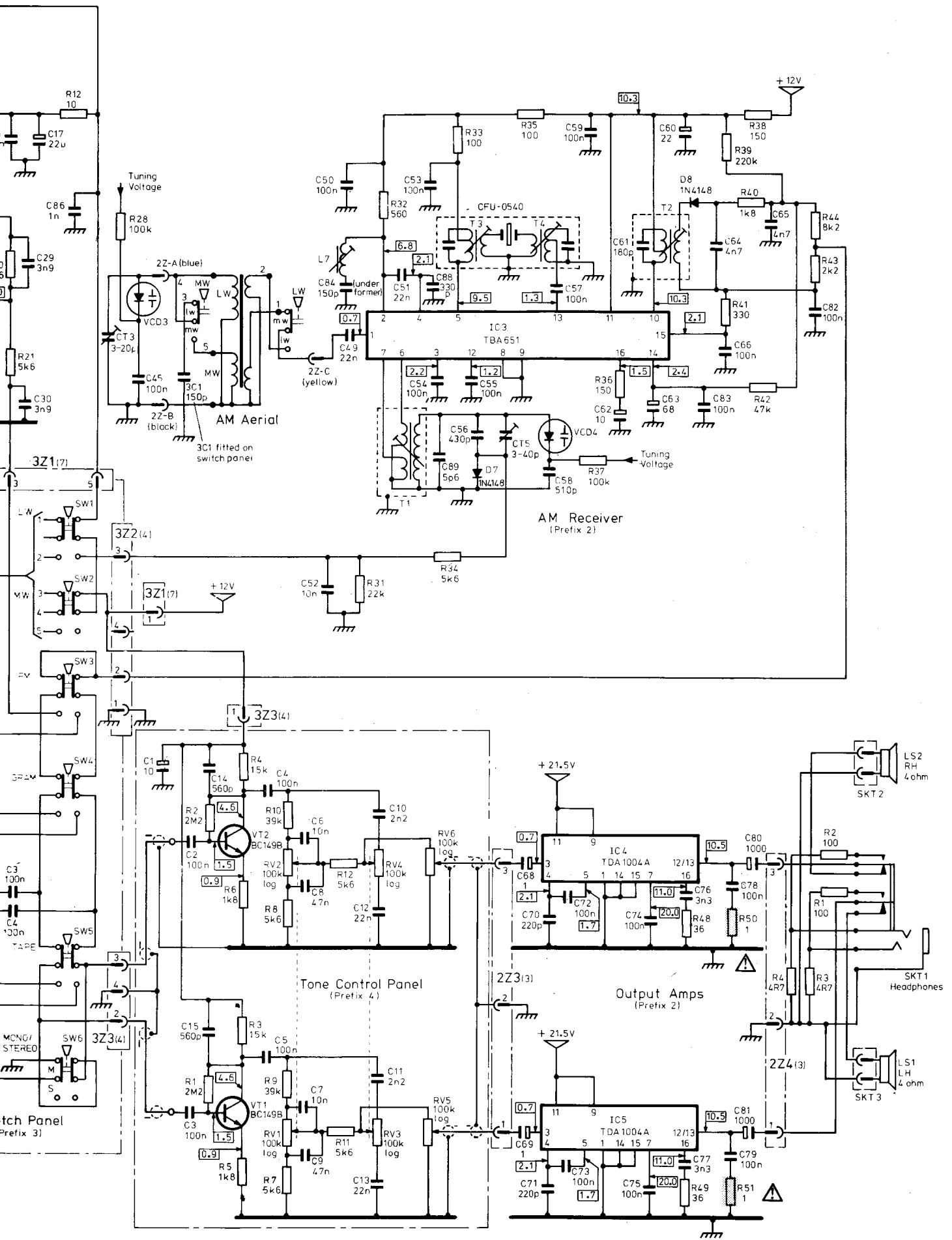
Fig. 5. TUNER AMPLIFIER BOARD R110



Transistor Connections



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