

Realignment of the Grundig Stereo Decoder 6

The circuitry of the GRUNDIG Automatic Stereo Decoder 6 is corresponding to the one of the Automatic Decoder 5, we have discussed it's function in Vol. August 1963, pages 570/571 and in October 1963, pages 624-625. We discussed the special technology found in the Decoder 6 in the Vol. December 1965, page 985.

The Stereo Decoder 6 is a component found in all following Grundig music systems - Stereomeister 35, Stereomeister 35M, Stereomeister 300, Stereomeister 3000
It also can be connected to a number of sets found in a comprehensive table on page 1001 of the December 1965 volume. On page 1000 in the same volume, we have informed about adding a Stereo decoder to a set, in general.

Alignment of the Automatic – Decoder 6

For an alignment, the following list of measuring instruments is necessary:

- Stereocoder SC 1, AF (tone) Generator TG 11, Oscilloscope W 2/13 with probe, low pass filter fg = 15 kHz, input impedance => 500 kOhms, audio frequency (tube) voltmeter TV 1.

Alignment is (appropriately) done in connection with the matching radio receiver. The radio has to be tuned correctly, if available, the fine tuning (AFC ?) has to be switched on and the Stereo button has to be activated.

The alignment position of all cores is located on the face facing towards the flange.

Step 1. Alignment 63 kHz Sperrkreis (Rejection circuit ?) BV9235-503

Connect AF generator 63 kHz over a 4,7 kOhm resistor to decoder input pin 3 of the input connector. Output voltage of AF generator 1,5 Veff, oscilloscope with probe on connector marked X (see image Lageplan, view vom underneath). Set / tune G to a minimal reading on the oscilloscope.

Step 2. Alignment Side band Circuit BV 9235-504

Connect Stereo coder to antenna input. Activate buttons "HF" (high frequency), "300 Hz" and "S". Oscilloscope with probe on connector marked Y (see Lageplan, view from underneath). Tune H for maximum sidebands and a clean intersection, the oscilloscope will be externally synchronised (triggered?) from the Stereocoder SC 1.

Step 3. Alignment 19 kHz BV 9235-501 and 38 kHz circuit BV 9235-502

Connect Your measuring devices as found before. Press only the buttons "HF" and "Pilot" on the Stereocoder. Adjust J and K for a maximum oscilloscope reading. Press the buttons "300 kHz" and "S" additionally. Adjust the 19 kHz circuit J for maximum modulation degree.

Step 4. Alignment of the response sensitivity of Automatic mono/stereo switching circuit R23

Connect the Stereocoder to pin 3 of the input socket. Activate the button "Pilot". Adjust the output volatge of the Stereocoder to 140 mVeff by means of the AF tube voltmeter.

In case, the Stereo indicator is already alight, reduce the control R23 until the Stereo indicator will go out and slowly increase, until it will go on again.

Step 5. Alignment of crosstalk suppression (?) R21, R31 and R32

Connect Stereocoder to antenna input socket, activate pushbuttons "HF", "Pilot" and "2500 Hz". Connect the AF tube voltmeter to the NF output on pin 1 of the connector by adding a low pass filter in between. Adjust to a minimal reading by carefully adjusting R21 and R31 alternately.

Activate the Button "L" in addition to the settings according to the description

above. Connect the AF tube voltmeter to the AF output (pin 2) of the connector by adding the low pass filter in between, again. Adjust R32 to a minimum reading. These adjustments have to be repeated alternatively.

The alignment procedure in steps 1 – 4 can also be done without using a radio receiver. In Step 1, connect the AF generator directly to the decoder input, output voltage of the AF generator set to 0,7 Veff.

In steps 2 and 3 connect the Stereo coder output directly to decoder input. The output voltage should read around 300 mV eff when only the button "Pilot" on the Stereocoder is activated. Step 4 procedure following the description above.

The alignment for perfect rejection of crosstalk can only be performed in connection with a radio receiver.

Fig. 2: Situation of Alignment points

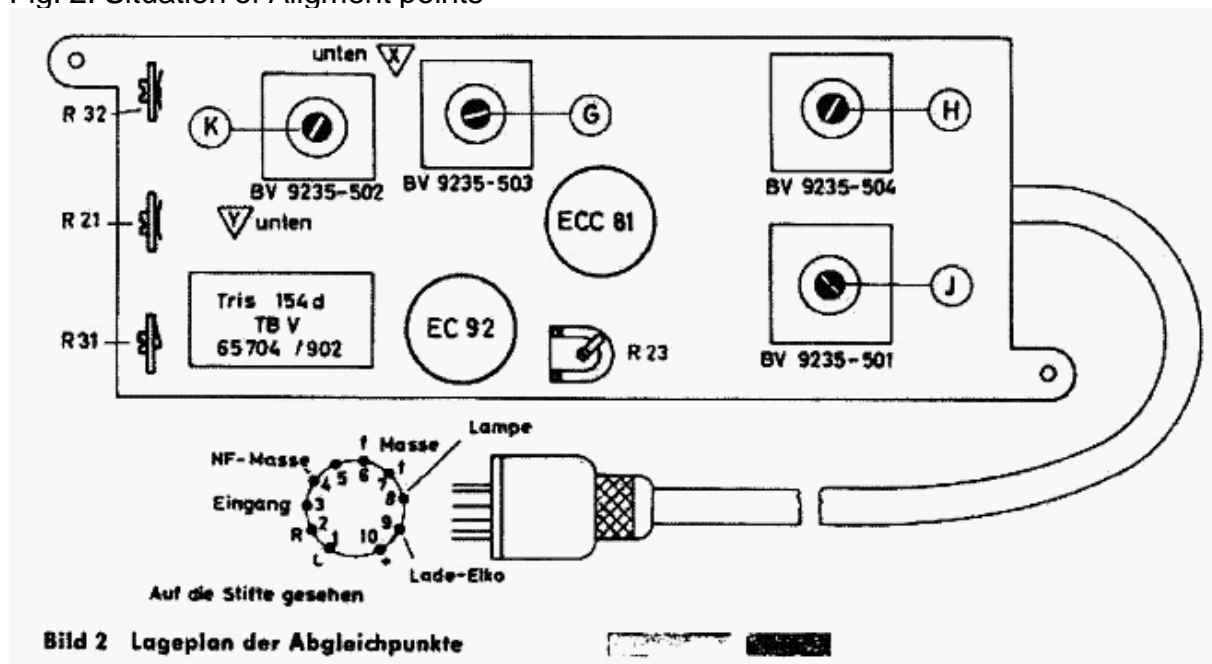


Fig. 3: Situation of Measuring points / connectors (PCB seen from underneath)

