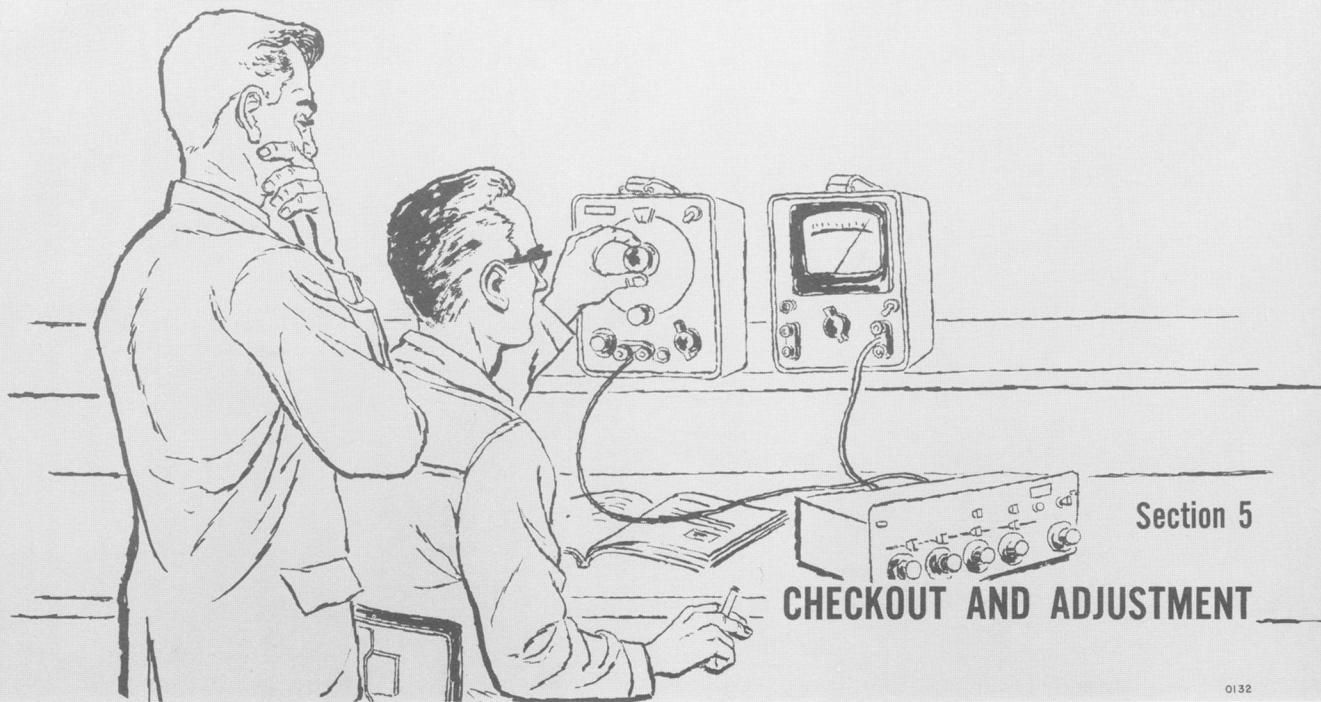


Section 5 **CHECKOUT AND ADJUSTMENT**



Section 5

CHECKOUT AND ADJUSTMENT

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GENERAL

In the following checkout and adjustment procedures, each input and each channel should be treated separately. That is, check microphone 1 input through channel A first, then microphone 1 input through channel B followed by microphone 2 input through channel A, etc. The sequence (which input and which channel is checked first) is unimportant.

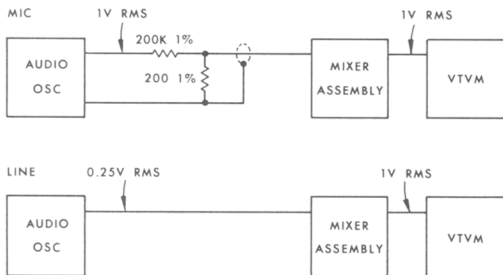
Test equipment required for proper checkout and adjustment consists of an ac vacuum tube voltmeter capable of indicating rms voltages of 0.004 or less (Hewlett-Packard Model 400D or equivalent) and an audio oscillator with stable output from 50 cps to 15KC (Hewlett-Packard Model 200A or equivalent).

OVERALL GAIN MEASUREMENT

With all front panel level controls set at maximum and with the LEVEL SET controls (screwdriver adjust) set at their nominal positions, a 1.0 volt output is achieved with a -55 dbm microphone input or with a -10 db line input. Because the db scale of the Hewlett-Packard Model 400D is calibrated with respect to a reference level of one milliwatt into 600 ohms and the nominal characteristic input impedance of the microphone preamplifiers is 200 ohms (a difference of 5 db), the gain from the microphone input *appears* to be 60 db using the test set-up illustrated.

NOTE

There is an adjustment of ± 10 db from this nominal gain and if a different setting of the LEVEL SET controls is used, the input and/or output levels shown on the test set-up illustration will have to be modified accordingly.



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Response and gain measurement set-up

Step 1:

Connect the audio oscillator and the vtm as shown in the test set-up. Set the oscillator at 500 cps.

Step 2:

Set all front panel level controls at maximum.

Step 3:

Set the oscillator output level at 1 volt rms for the microphone input or 0.25 volt rms for the line input. Output of the mixer assembly should be 1 volt rms as read on the vtvm. (See NOTE above.)

OVERALL GAIN ADJUSTMENT

To set the overall gain of the mixer assembly to the nominal value (or any other value within 10 db of the nominal), use the following procedure.

Step 1:

Connect the audio oscillator and the vtvm as shown in the test set-up. Set the oscillator at 500 cps.

Step 2:

Set all front panel level controls at maximum.

Step 3:

Set the oscillator output level at 1 volt rms for the microphone input or 0.25 volt rms for the line input. (See NOTE in the GAIN MEASUREMENT paragraph.)

Step 4:

Adjust the LEVEL SET control to produce a 1 volt rms output as read on the vtvm. (See NOTE in the GAIN MEASUREMENT paragraph.)

FREQUENCY RESPONSE MEASUREMENT

Step 1:

Connect the audio oscillator and the vtvm as shown in the test set-up. Set the oscillator at 500 cps.

Step 2:

Set all front panel level controls at maximum.

Step 3:

Set the oscillator output level at 1 volt rms for the microphone input or 0.25 volt rms for the line input (or to the value used in setting the gain in the GAIN ADJUSTMENT paragraph).

Step 4:

Make a frequency response check by using at least ten discrete frequencies between 30 and 15,000 cps. The output level of the mixer assembly should not vary more than plus or minus one db from the normal output.