1097A FILTER

DESCRIPTION AND USE

1. GENERAL

1.01 The 1097A filter (Fig. 1) is a narrowband filter designed for use with the 147C amplifier. This permits toning and pair identification where noise or power influence is a problem. The 1097A filter will filter out power line interference and other electrical noise while amplifying the test tone.

1.02 The 1097A filter is precisely tuned to a frequency of 577.5 Hz. The filter must be used ONLY with a precision tone source such as found in the KS-14103 L6 breakdown test set or the 138A test set. IF USED WITH ORDINARY TONE SOURCE, UNSATISFACTORY AND INTERMITTENT OPERATION WILL RESULT.

1.03 Section 634-200-450 covers the use of the 138A test set.

2. DESCRIPTION AND USE

2.01 The 1097A filter is housed in a molded plastic case 1 1/2 inches by 1 3/4 inches by 3 3/4 inches and weighs approximately 1/4 pound. A cord and plug assembly is permanently attached to the filter. The filter snaps on the side of the 147C amplifier and plugs into the amplifier REC jack. The filter is provided with an output jack for connection to a headset.

2.02 The 1097A filter contains no batteries but is powered from the 147C amplifier through the REC jack. Both units are turned on by plugging the 1097A filter into the REC jack of the 147C amplifier as shown in Fig. 2. Operation of the 1097A filter requires a 147C amplifier because the 147B amplifier DOES NOT supply the necessary battery voltage. TO CONSERVE THE BATTERY, UNPLUG THE 1097A FILTER FROM THE 147C AMPLIFIER WHEN THE UNITS ARE NOT BEING USED.

2.03 The output of the tone source and the gain of the amplifier must be adjusted to obtain the best performance of the amplifier-filter combination.

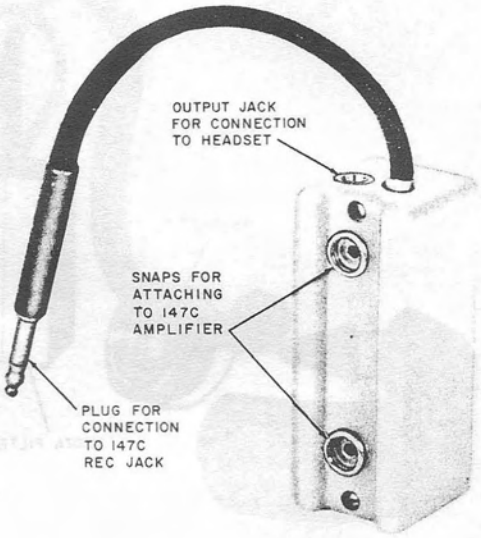

Fig. 1—1097A Filter

The recommended method is to first adjust the gain of the 147C amplifier while listening to the noise level directly out of the amplifier before the 1097A filter has been inserted. The tone source may or may not be attached to the pair to be tested, but only the noise level is important for this adjustment. The pickup device (probe or exploring coil) connected to the input of the 147C is placed near the cable and the gain adjusted until the noise level at the headset is loud or until saturation occurs. The gain is then adjusted back to one-half this value and the 147C amplifier is ready to operate.

2.04 Next, the tone source is adjusted for a low level, usable tone at the headset with the 1097A filter connected. If the tone is to be applied at a remote location where adjustment is difficult,

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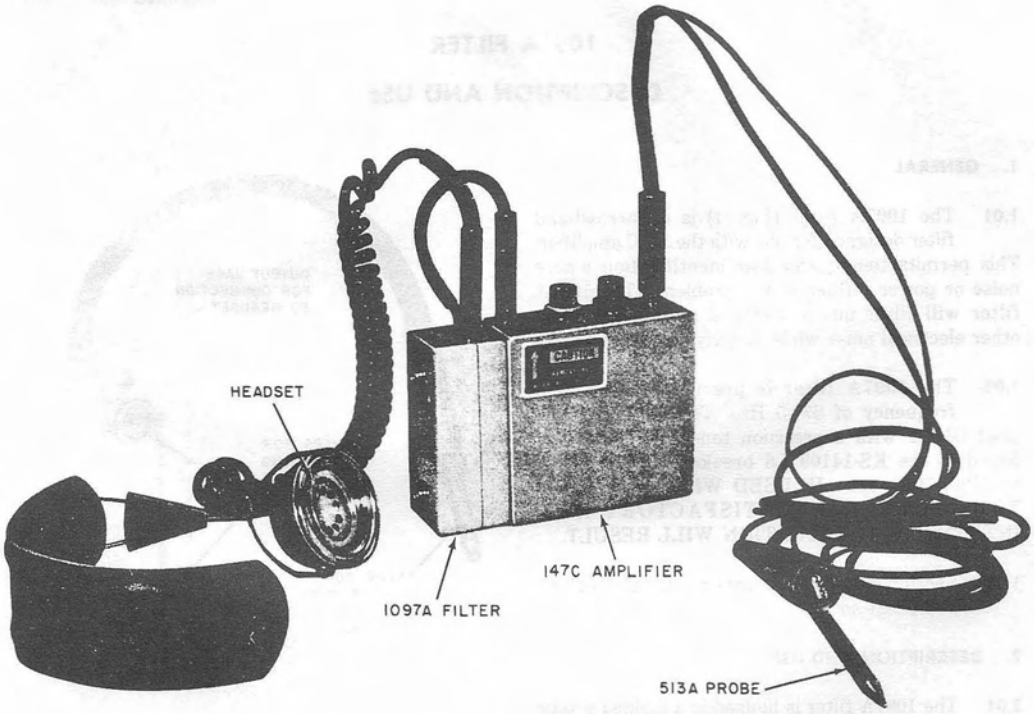

Fig. 2—1097A Filter Attached to 147C Amplifier

the tone level is set at the time the tone source is connected. The 147C amplifier gain is then readjusted slightly from the above setting to obtain the proper tone level at the headset. Set tone level high for electrically noisy environments and low for quiet areas.

2.05 With the 147C amplifier and tone source adjusted, fault location and pair identification operations may proceed.