

FL3 INSTRUCTIONS FOR USE (TO BE USED
TOGETHER WITH DATA SHEET FOR MODEL FL2)

Introduction

Model FL3 contains the same filters as Model FL2 plus an automatic notch filter. Instructions for operating all the filters except the auto notch are given in the FL2 data sheet which is supplied with both Models FL2 and FL3. The following notes are intended to describe the operation of the auto notch only and are therefore applicable only to Model FL3 or to a model FL2 which has been converted to Model FL3 by installation of the model FL2/A conversion kit.

Installation

Model FL3 should be wired up and installed exactly as described for Model FL2 except that the permitted power supply range is limited to between 10 and 15 volts. It is important not to exceed 15 volts since damage could be caused to the auto notch module.

Operation

The auto notch function is intended for removing unwanted tones or whistles from speech signals. The auto notch filter is permanently connected immediately before the audio power amplifier in Model FL3, but it can be by-passed by the small black push button marked "AUTO NOTCH". When the button is out the auto notch filter is by-passed. When it is pressed in the audio signal passes through the auto notch filter and whenever the filter locks onto a tone (as shown by illumination of LED to the left of the black button) the tone will be removed.

Since the auto notch filter is affected only by the black button, it may be used together with any of the normal operating modes selected by the white push buttons. Normally however, it is best to keep the auto notch filter by-passed (button out) except in "SSB" mode. Otherwise, if for example the auto notch is selected when using the "CW" mode, it will tend to lock onto and remove the desired CW signal.

To summarise:

1. When listening to speech signals using the "SSB" mode it is convenient to leave the auto notch permanently switched into circuit (black button in). Then whenever a whistle appears the auto notch will lock onto it and remove it.

2. Whenever the auto notch has locked onto a signal, the left hand LED will illuminate. This may happen even if the auto notch filter is switched to bypass. Thus when receiving CW in "CW" mode it is normal for the LED to illuminate intermittently.
3. Remember to bypass the auto notch (button out) when receiving CW or RTTY.

Other Points

The auto notch filter has been designed to locate^d and track even quite weak signals. However, it does need a certain minimum signal (see FL3 data sheet) and if the circuit appears not to lock very successfully it may be because the volume control is turned too low on the associated receiver.

Assuming that the receiver volume control is set adequately high, the majority of annoying heterodynes will be strong enough for the filter to remain locked even despite the presence of speech. With very weak heterodynes the filter may lose lock when loud speech is present at the same time. This can be beneficial as the filter will then sweep its full range and will lock onto any other heterodyne which may be present and which may be louder and more annoying.

The auto notch filter will lock onto whichever tone it encounters first during its sweeping mode (that is whenever the lock light is off). If more than one tone is present it is possible that the auto notch will neglect the most serious whistle and remove a weaker one. In such cases it may be better to use the manual notch filter (see FL2 instructions) to remove the chosen tone. The auto notch will still be active and will be able to remove a second tone at the same time.

In some cases the filter will remove a whistle so quickly that the operator may not even realise that one has appeared. However the left hand LED will always illuminate whenever the filter is tracking a whistle. The bypass switch can then be operated if desired to check on the effectiveness of the filter.

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