STABILOCK 4031 4032

2nd Modulation generator

Hardware Option 208 032

Operating Instructions

Doc. Version: 9501-100-B

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Supplement to operating manual; file under Chapter 9

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Introduction

Modulation generator GEN B is virtually identical to the standard AF generator GEN A. What are missing are the summing amplifiers with which GEN A can overlay its own AF signal with the signal from GEN B and another modulation signal.

Technical data

Identical to those of generator GEN A, see data sheet.

Operation

GEN B is switched on and off with [B/SAT] in the RX and TX operating modes. Once the generator is installed, the following fields appear in the basic mask:

`GEN B`	Entry field for signal frequency
`Mod`	Entry field for modulation level (RX mask)
`Lev`	Entry field for signal level (TX mask)

The fields are accessed as usual with the cursor keys if no entry field is open. As soon as GEN A is cut out, the fields can also be moved to with the keys for rapid access ([MOD FREQ] and [AM FM ΦM]).

GEN B signal paths

RX mode

In the RX mode the RX or TX signal path can be switched for GEN B by repeatedly striking [B/SAT].

- When the RX signal path is switched (front panel, green LED illuminated above B/SAT key), GEN B feeds the modulator of the STABILOCK signal generator. If generator GEN A is also switched on or an external modulation signal is coupled in with [EXT], there will be overlaying of the modulation. In this case the "MOD" meter shows the peak values of the sum modulation. You can also display the sum modulation as a curve by using the scope function of the STABILOCK.
- When the TX signal path is switched (front panel, red LED illuminated), the signal from GEN B appears AC-coupled on the MOD GEN socket (front panel).

TX mode

In the TX mode the TX signal path is always switched for GEN B, ie the AF signal appears AC-coupled on the MOD GEN socket (front panel). If other modulation-signal sources are active, the signal on the MOD GEN socket will be a sum signal, which can likewise be displayed using the scope function.

DUPLEX mode

In the DUPLEX mode too, GEN B can be switched to the RX or TX signal path by repeatedly striking [B/SAT]. The signal path that is actually selected is again shown by the LEDs. Only in the DUPLEX mode does this switching of the RX/TX signal path also govern the coupling of an external modulation signal with [EXT]. Generator GEN A is firmly switched to the RX signal path in the DUPLEX mode. For modulation overlaying the situation is as follows: all sources that are switched to the RX signal path feed the STABILOCK modulator; signals that are switched to the TX signal path appear as a sum signal on the MOD GEN socket (see figure).

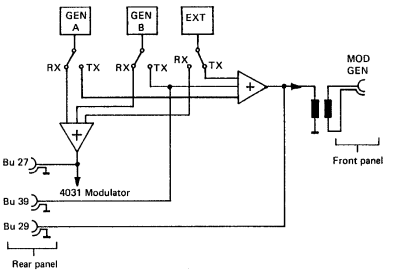

Fig. 9.1: Signal paths of modulation signals in the DUPLEX mode (symbolic representation).

Signal output on socket Bu 39

Socket 39 (Bu 39): DC-coupled output for the modulation signal of GEN B in TX mode (transmitter testing). Even with modulation overlay, only the GEN B signal is on Bu 39 (no sum signal). In this case the signals on Bu 39 and socket MOD GEN are no longer identical. In RX mode the signal on Bu 39 is undefined (see also Chapter 9).

Installation of generator stage GEN B

1. Switch off the Communication Test Set and withdraw the power cable.
2. Unscrew the cover plate at location 5 on the back panel.
3. Slide the GEN B stage along the guide as far as it will go into the slot that is provided.
4. Screw the stage firmly to the chassis.
5. Reconnect the power cable.

Operational check

1. Perform a total reset.
2. Call up the OPTIONS mask with (OPTIONS) and check whether the installation of GEN B is indicated.
3. Call up the RX mask. Switch GEN A off and GEN B on. Call up the RMS meter with [VOLT] and connect to the RX signal path with [RX MOD/MOD GEN].
4. Enter values in the mask fields `GEN B` and `Mod` ---> RMS meter must indicate f_{mod} and a level value.