STABILOCK 4031 4032

# Duplex FM/ΦM stage

**Hardware Option 229 062 to 229 072**

**Operating Instructions**

Doc. Version: 0112-100-A

Acterna Muenchen GmbH, Gutenbergstr. 2 – 4, D-85737 Ismaning

☎ +49 (89) 9 96 41-0 Fax: +49 (89) 9 96 41-160

Supplement to operating manual; file under Chapter 9

9

# Duplex FM/ΦM Stage

The standard synthesizer of STABILOCK is used either by the signal generator (RX operating mode) or by the test receiver (TX operating mode) of the Communication Test Set. In the DUPLEX operating mode, which calls for transmission and reception at the same time, the signal generator works with the standard synthesizer. So a second synthesizer is necessary for the test receiver. Besides this synthesizer the duplex stage includes a mixer and its own IF conditioning. Demodulation and other signal conditioning are handled by the test receiver like in the simplex TX mode. The received duplex signal is coupled out directly following the RF socket.

## Variants of the duplex stage

The duplex stage is available in a variety of models designed to match the STABILOCK equipped with various different hardware options. The table below indicates which duplex stage matches which hardware option. Please note that the Communication Test Set can be fitted with one duplex stage only. If you want to operate more than one of the hardware options stated below, you must bear in mind that this is only possible with duplex stage 229 072 which is part of the hardware option FEX (Frequency EXtension).

| Duplex stage | Use for | Note |
|---|---|---|
| 229 062 | ACPM | not for D-AMPS, GSM, TDMA, Tetra, FEX |
| 229 063 | D-AMPS, GSM | not for ACPM, TDMA, Tetra, FEX |
| 229 066 | TDMA I/Q-450 | not for ACPM, D-AMPS, GSM, Tetra, FEX |
| 229 067 | Tetra I/Q-380 | not for ACPM, D-AMPS, TDMA, FEX |
| 229 072 | FEX | **also for ACPM, D-AMPS, GSM, TDMA, Tetra** |

## Operation

Once the duplex stage has been incorporated, the basic duplex mask can be called up. The "Basic Duplex Mask" section (Chapter 12) tells you how to call up the mask and the meanings of the fields and softkeys. The usual operating rules apply; but with [FREQUENCY] you can only access the `RF Frequency` entry field in the RX part of the mask. The corresponding field in the TX part of the mask (tuning frequency of the test receiver) can only be accessed with the cursor keys.

## Technical data

See data sheet

# Installation of duplex stage

| | |
|---|---|
| 1. | Switch off the Communication Test Set and withdraw the power cable. |
| 2. | Tip STABILOCK so that it is resting on the rubber reinforcement on its rear. |
| 3. | Undo the retaining screws of the bottom half of the unit's shell and remove the shell. |
| 4. | Unscrew the cover plate that you can see on the right next to the loudspeaker. |
| 5. | Withdraw cables 40 and 49 from sockets Bu 40 and Bu 49 (see figure). |
| 6. | Connect cable 58 (duplex connecting cable) to the socket in the chassis (see figure). |
| 7. | Slide the duplex stage as far as it will go into the slot that is provided for it. |
| 8. | Press the clamps down firmly and join cables 40, 49, 58 to their corresponding sockets. Replace the cover plate and the bottom half of the unit's shell. |
| 9. | Reconnect the power cable. |

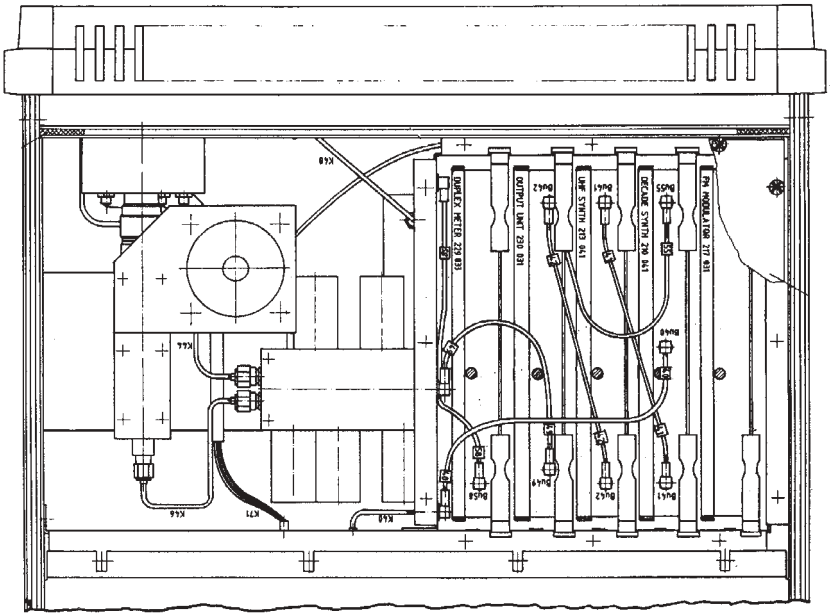


**Fig. 9.1:** Partial view of chassis with bottom half of shell and cover plate removed. Cables 40 and 49 have to be undone to install the duplex stage.

# Operational check

| | |
|---|---|
| 1. | Perform a total reset. |
| 2. | Call up the OPTIONS mask with (OPTIONS) and check whether the installation of the duplex stage is indicated. |
| 3. | Call up the Duplex mask. |

Cross-references:

Chapter 3, Operating Rules, "Working with channel numbers, Duplex mode".
Chapter 4, Duplex Measurements, "Basic Duplex Settings".
Chapter 11, Training with Duplex Mask.
Chapter 12, sections "Basic Duplex Mask", "Duplex Specials".