

3.5.1.2 Key Elements

The manual operating concept of the R&S SMB enables the user to make settings as intuitively as possible and at the same time gives a permanent overview of characteristics of the generated signal and of the current instrument state. Numerous online help functions support user settings.

Block diagram

The block diagram is the core of the operating concept.

A graphics display shows the current configuration and the signal flow in the form of a block diagram. All graphical elements can be accessed for operation. An element is selected by means of the arrow keys and the associated setting function is called by pressing Enter. Required menus and graphs are displayed on the block diagram which is displayed again in the foreground whenever the [DIAGRAM] ([CTRL+D]) key is pressed.

The main characteristics of the RF signal, frequency and level, are permanently displayed in the header section of the screen and can be directly set in the display fields after the [FREQ] (CTRL+F) or [LEVEL] (CTRL+L) key is pressed. Status messages for the output signal are displayed in addition to frequency and level.



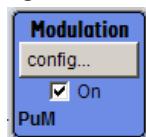
Operation via Graphical User Interface

- **Functional blocks**

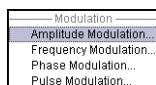
Menus are assigned to the specific function blocks in the block diagram. The function blocks represent elements of signal generation. Function blocks displayed with a blue frame can be directly switched on and off by means of the [TOGGLE ON/OFF] (CTRL+T) key. The menus of the highlighted function blocks can be called by pressing the [ENTER] key.

- **Example:**

The "Modulation" block contains all menus required for modulation signal configuration.

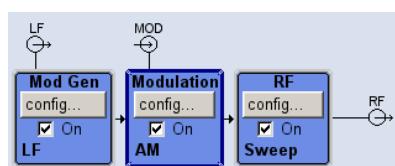


In this block all modulations can be selected.



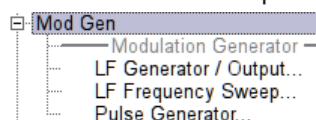
- **Signal flow**

The signal flow between the function blocks and the employed inputs and outputs are also shown.



- **Menu tree**

The menu tree can be opened and closed with the [MENU] (CTRL+M) key. The menu tree is organized in the same way as the directories under Windows. The function blocks correspond to the first directory level, the menus to subdirectories.



Operation corresponds to the Windows concept

To offer the user a familiar environment, operation is very similar to operation of Windows user interfaces. All menus and tables are made up of known elements, such as selection lists, check boxes and entry fields.

A blue frame indicates that the selected item is active. In the highlighted element, entries can be made.

Rotary knob



Operation is possible via front-panel keys, an external keyboard and the mouse. However, most of the settings can be easily made with the rotary knob:



- Turning the rotary knob shifts the entry focus to the target element.
- Pressing the rotary knob activates the selected entry field. Depending on the parameter, the submenu is called, the numeric value varied, the list entry selected or the check box activated or deactivated.
- If a value is entered, the entry is stored by another click on the rotary knob and the editing mode is exited.

Settings in subdialogs

A separate window is opened for each dialog and subdialog. The dialogs can be operated independently of each other, i.e. none of the dialogs requires that settings in other dialogs be completed before it can be closed. This ensures flexible operation at all times.

Keys with assigned simple functions

Most keys on the front panel of the R&S SMB directly perform a simple function.

Since a great number of settings can thus be made by a keystroke, operation is easy. For instance, the [CLOSE] (ESC) key closes the active menu; with the [RF ON/OFF] (CTRL+R) key the RF output signal can be switched on or off.