# Supplement A
# to Operating Manual
# Test Receiver FSET
# (Firmware Version 4.03 and higher)

## Dear Customer,

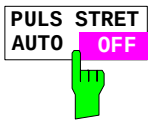
The new firmware offers a number of extensions that are not yet described in the operating manual. They are explained on the following pages. The new functions concern :

- Pulse stretcher in receiver mode
- Additional softkeys in receiver mode
- Level Adjust in receiver mode

## Pulse Stretcher in Receiver Mode

The *PULS STRET ON/OFF* softkey is now available in the receiver mode.

*MODE – RECEIVER* left side menu:



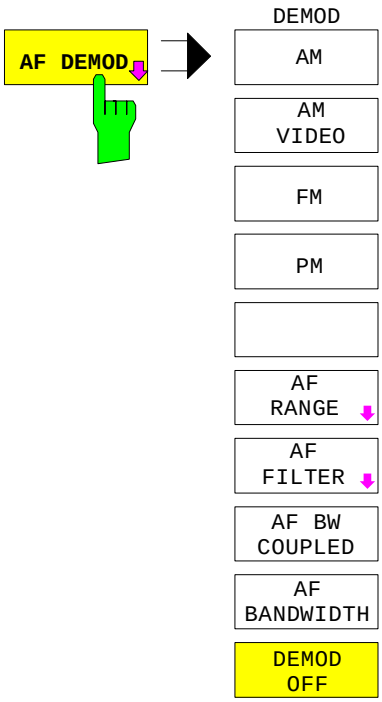

The *PULS STRET AUTO/OFF* softkey switches the pulse stretcher at IF bandwidths > 5 MHz on or switches it off for all bandwidths.

(see also description of softkey in the operating manual, Chapter "Setting and Coupling the Coupling Resolution, Video Bandwidth and Sweep Time" - SWEEP key group in analyzer mode)

## New Softkeys in AF DEMOD Menu in Receiver Mode

The *AF BW COUPLED*, *AF BANDWIDTH* and *AF RANGE* softkeys are now available in the receiver mode.

*CONFIGURATION MODE – RECEIVER* sub menu:




The *AF BW COUPLED* softkey switches the coupling between receiver bandwidth and audio bandwidth on and off.

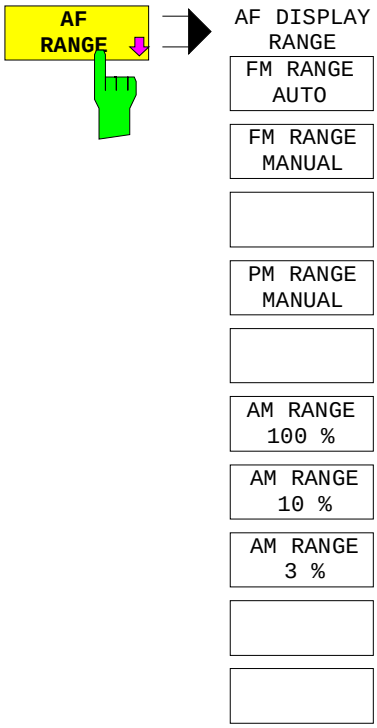
IEC/IEEE-bus command

```
:[SENSe<1|2>:]BWIDth:DEMod:COUPling ON|OFF
```

The *AF BANDWIDTH* softkey activates the entry of the audio bandwidth. Entries for audio bandwidth can always be made, however they influence the RBW only if *AF BW COUPLED* is active.

IEC/IEEE-bus command

```
:[SENSe<1|2>:]BWIDth:DEMod 100 kHz
```



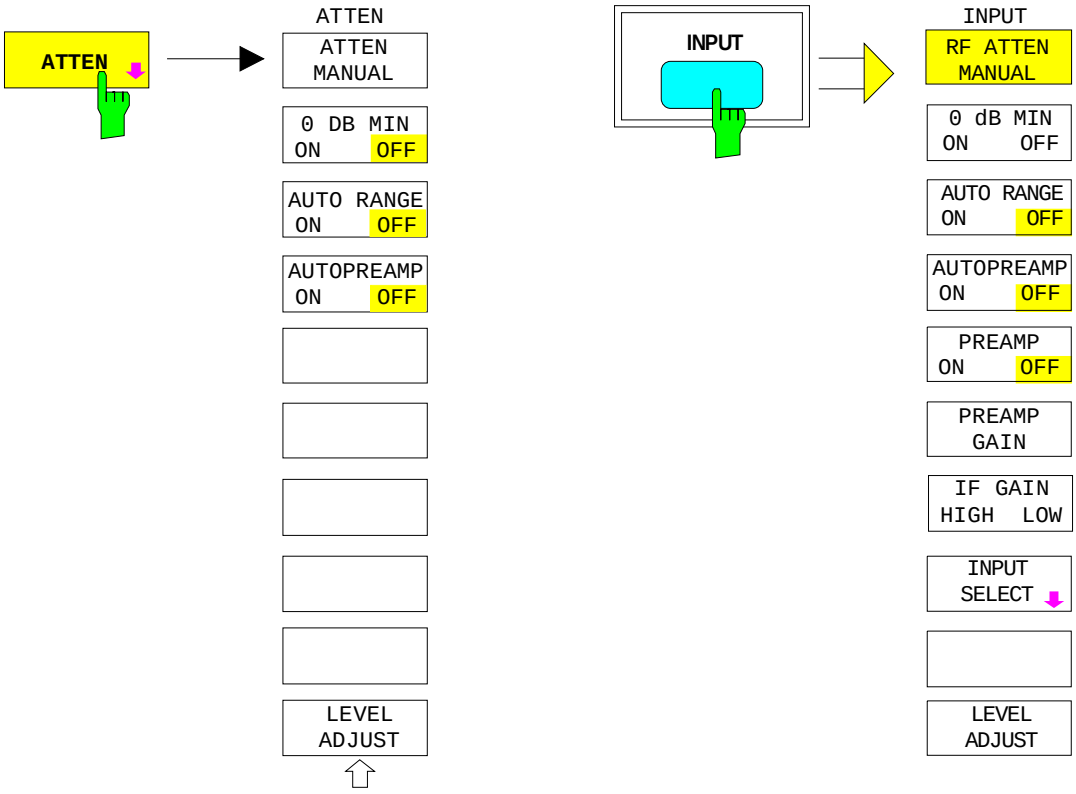

The *AF RANGE* softkey opens the submenu for setting the measurement range. The measurement range determines the scaling of the output level at the AF/FM OUTPUT connector on the rear panel.

With FM demodulation, this corresponds to the maximum frequency deviation range. With phase demodulation, this corresponds to the maximum phase deviation range, and with AM demodulation to the maximum modulation depth range.

For a detailed description of the submenu see chapter "AF Demodulation" in the operating manual.

## LEVEL ADJUST in Receiver Mode

*CONFIGURATION MODE - RECEIVER* menu and *INPUT* menu:



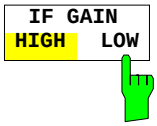
The *LEVEL ADJUST* softkey activates a single autorange procedure by means of which the level of the detector with the highest display value is to be brought to the upper 10 dB of the display range. This procedure is analogous to regular autoranging except for the permissible level window which is limited.

If the measurement time is >1 sec, it is set to 1 sec for autoranging.

The regular autorange function is not automatically deactivated. It remains in the state that was active before LEVEL ADJUST, i.e. it uses the usual level window again after LEVEL ADJUST. If the signal level varies, the regular autorange function can therefore change the result of the single LEVEL ADJUST function.

IEC bus command `:INPut:ATTenuation:AUTO ONCE`

## INPUT Menu: New Softkey IF GAIN HIGH LOW




The *IF GAIN HIGH/LOW* softkey increases the IF gain by additional 20 dB if the coresponding resources are available.

IEC/IEEE-bus command
`:INPut:ATTenuation:AUTO:MODE NORMal | LDIStortion 8high)`

## New IEC/IEEE-Bus Commands

The new firmware has been extended by the following IEC/IEEE-bus command:

**INPut:ATTenuation:AUTO** ONCE

This command initiates a single autorange in the receiver mode (see softkey LEVEL ADJUST).

**Example:** `"INP:ATT:AUTO ONCE"`

**Features:** *RST value: -
SCPI: device-specific

The command is an "event" and this is why it has no *RST value and no query form.

**:CALCulate<1|2>:LIMit<1...8>:ACTive?**

This command queries the name of all activated limit lines. The names are output in alphabetical order. If no limit line is activated, an empty string will be output. The numeric suffixes in CALCulate<1|2> and LIMit<1 to 8> are not significant.

**Example:** `":CALC:LIM:ACT?"`

**Features:** *RST value: -
SCPI: device-specific

The following IEC/IEEE-bus command is now available for receiver mode also:

**:INPut<1|2>:ATTenuation:AUTO:MODE** NORMal | LDIStortion

This command increases the IF gain by additional 20 dB for `LDIStortion` if the coresponding resources are available.

**Example:** `":INP:ATT:AUTO:MODE LDIS"`

**Features:** *RST value: NORMal
SCPI: device-specific

## Safety Instructions for the Removable Harddisk



When using the *Removable Harddisk* please observe the following:

- Always keep your *Removable Harddisk* in the plastic case included in this package.
- Do not drop your *Removable Harddisk*.
- Do not expose it to moisture, to extreme temperatures, or to a strong magnetic field.
- Do not squeeze the external cover of the *Removable Harddisk*.
- Do not affix additional labels.
- Do not remove the existing label or write anything on to it.