

Firmware Release 5.86

(32-Bit-WINDOWS version)

for the Signal Generators
SMIQ02B, SMIQ03B, SMIQ04B and SMIQ06B
WITH OPTION SM-B50,
SMIQ03S and SMIQ03HD

**This firmware version is ONLY for the models explicitly mentioned above!
Do not update other SMIQ models because it is not guaranteed that elder
models have enough FLASH memory and/or RAM.**

Contents

1) Important Notes	2
2) Installation Software	2
3) Prerequisites concerning the PC	2
4) Connection between PC and SMIQ	2
4.1) Update via RS 232 (COM1 or COM2)	2
4.2) Update via IEC/IEEE bus (GPIB)	3
5) Procedure of a firmware update	3
6. New and modified Functions	5
7. Problems Eliminated	6
Appendix: Contact to our hotline	6

1) Important Notes

This package contains the firmware as well as the context sensitive help systems for the generators: SMIQ0xB and SMIQ03HD. As these generators are equipped with flash EPROM's the software can be loaded and updated without opening the equipment.

This firmware is only for SMIQs equipped with the front module option SM-B50, (fast CPU, BOARD VAR 8 or higher; "VAR 10" could be displayed only as "VAR :"). The variant of the CPU board can be identified by keeping the number key '0' or '5' pressed while the generator is switched on (third line on the display of the SMIQ).

Since autumn 1999 all SMIQ0xB are equipped with the former option SM-B50 as standard.

Information about this firmware version and it's differences to the previous ones can be found in the file HISTORY.TXT.

2) Installation Software

The software consists of two parts. One part is the loader for the firmware and the second part is the firmware itself. You have to install the loader only once. The loader connects the file extension ".rspkg" with the R&S update program so that you must only double click the firmware file "*.rspkg" to run our update program. You can choose if you want to update the firmware via RS232 (COM1 or COM2) or via IEC/IEEE bus.

3) Prerequisites concerning the PC

A 32-bit-WINDOWS operating system (WINDOWS 95/98/2000 or NT) is running on your PC and about 5 MByte free space on your hard disk is required.

4) Connection between PC and SMIQ

The update via IEC/IEEE bus is faster (about 2 min) but requires more preconditions.
The update via RS232 is slower (about 15 min) but always possible.

4.1) Update via RS 232 (COM1 or COM2)

The generator provides a connection plug with 9 poles. Pinning as well as electrical and mechanical specifications correspond to the 9-pole-plug of a PC. For the connection to the PC a crossed cable (a so-called null modem cable) with a female 9-pole-plug at each end is needed.

A cable according to these specifications is available from Rohde & Schwarz. The order number is 1050.0346.00. This well shielded cable can be used for remote control too.

SMIQ generators provide three serial connectors, named 'SER DATA', 'BER' and 'RS 232'. Be sure to use the connector 'RS 232' for the firmware update.

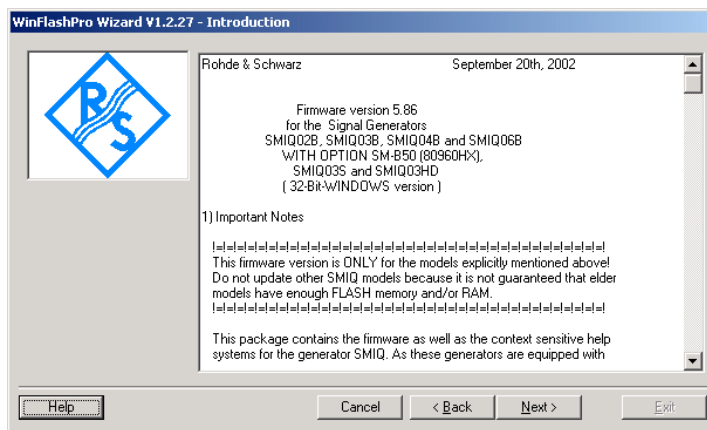
4.2) Update via IEC/IEEE bus (GPIB)

Connect your PC and the SMIQ with a standard IEC/IEEE cable. You have to use a IEC/IEEE card from National Instruments with drivers from NI-488.2 version 1.60 or higher. Other configurations can cause problems and destroy calibration data!

This update mode is supported with SMIQ boot EPROM version V1.30HX or higher (you can see the version if you switch on the SMIQ while pressing the number key '0' or '5').

5) Procedure of a firmware update

- **Preparation**
Start your WINDOWS Explorer and copy the self-extracting file into a new directory. Executing the file will extract the data into the same directory.
- **Installing the firmware loader**
Double click in your explorer the file "R&S_WinFlashPro.exe". This starts the installation program. Follow the instructions given by the installation process (normally you can answer all questions with the default suggestion). The firmware loader is now installed on your PC.
- **Running the firmware update process**
Double click in your explorer the file "smiq_hx_5_86.rspkg". This starts the firmware update process.

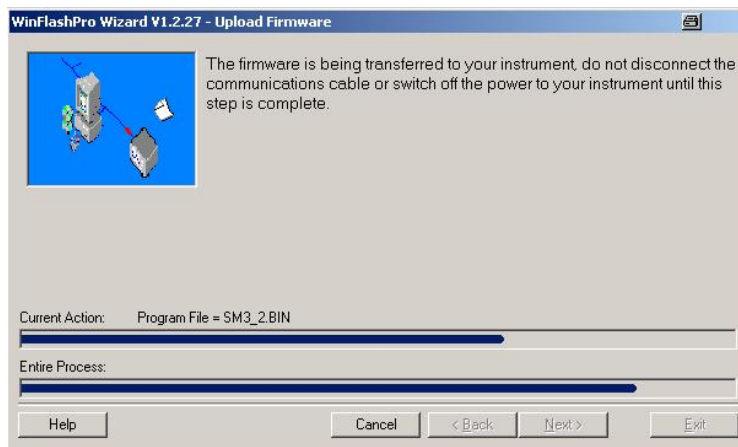


Follow the instructions given by the program. You only have to choose the communication port (COM1, COM2 or GPIB) and the language of the help files of the generator (English or German).

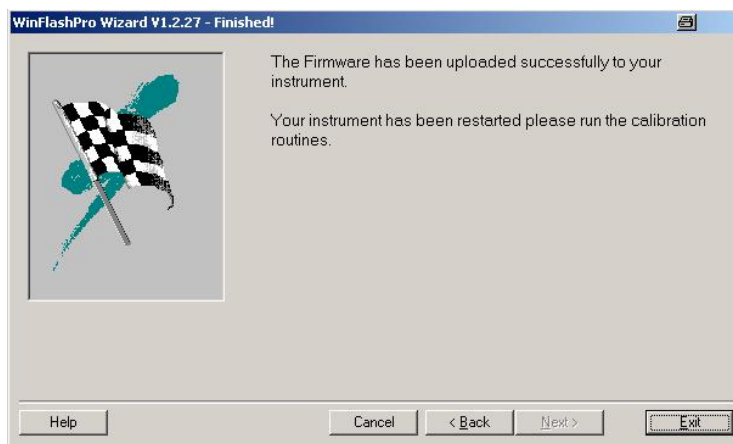
Connect the generator with the PC as written in the line below the selection boxes, switch on the generator with the correct button pressed ('5' for RS 232 or '6' for GPIB). When this is done, then click the EXECUTE button in the program.



Now the firmware update is running.



Some minutes later, when the update is finished, the following window appears:

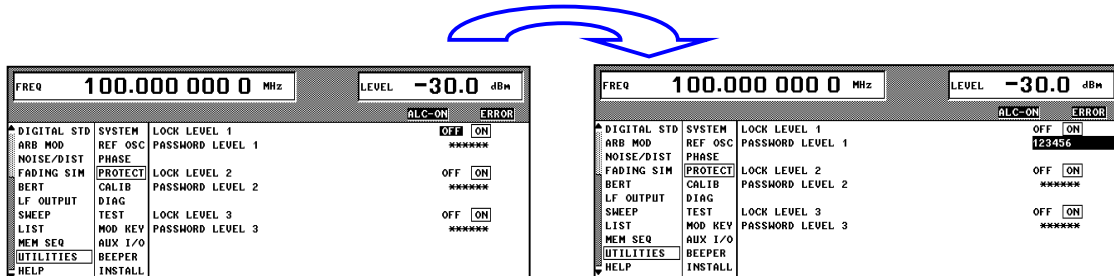


When the update is done the SMIQ starts automatically.

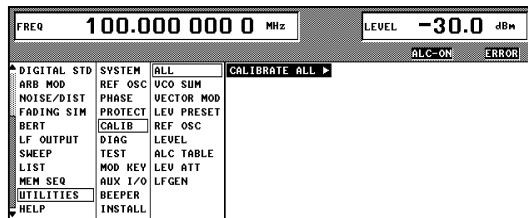
- **Internal calibration**

Alarm messages appearing on the display are the consequence of missing calibration data. The calibrations can be carried out without external measuring instruments:

Unlock protection level 1 in the menu UTILITIES/PROTECT by switching to OFF. The cursor automatically jumps down to line PASSWORD LEVEL 1. Type in "123456" and press the ENTER button.



Execute the calibrations from the menu UTILITIES/CALIB/ALL. The generator should be in a warmed-up condition (at least 30 minutes switched on). After the calibration all errors will disappear.



6. New and modified Functions

- Digital standard WCDMA/3GPP with option SMIQB48:
 - Coded PRACH and PCPCH implemented
- DIGITAL MOD
 - menu DIGITAL MOD-MODULATION: new parameter FSK Offset (defines an offset of the mid frequency with a FSK modulation)
 - improved settling time for FSK deviation, symbol rate ... to allow correct dirty transmitter measurements for Bluetooth
- Miscellaneous:
 - menu UTILITIES-DIAG-BASEBAND: display of the base band level of the modulation signal
 - Overrange warnings implemented, if the output level is out of specification
 - new menu UTILITIES-CALIB-IQ SKEW for calibrating the IQ skew for the option SMIQB60 (service function only; for elder devices there is an application program available; please refer to the application note 1GP45_1E available from www.rohde-schwarz.com)

7. Problems Eliminated

- AMIQ CTRL: "System halt" when stepping into the menu and an AMIQ is connected (problem only with version 5.80); fixed
- Using version V5.80 with IQMOD Var 2, 4 or 6 produces an error message from the MCODE (block data error); fixed
- LIST: Sometimes wrong output level when using WCDMA/3GPP with output PEP level higher than 8.0 dBm and delta between minimum and maximum list level greater 20 dB; fixed
- WCDMA/3GPP with link direction UP/REVERSE: System hang up possible when sending a base station parameter with channel number 1 to 6 via IEEE bus; fixed
- WCDMA/3GPP with option SMIQB48:
no selection of a TPC datalist possible via IEEE bus; fixed
(new command: :SOURCE:W3GP:MST1:TPC:DSEL "listname")

Appendix: Contact to our hotline

Any questions and ideas concerning the instrument are welcome to our hotline:

Phone: ++49-1805-124242

FAX: ++49-89-4129-13777

e-mail: CustomerSupport@rsd.rohde-schwarz.com