



SFU Software Installation V01.90

Your R&S SFU is delivered with the latest firmware version available. Firmware updates are provided via Rohde & Schwarz Home Page, Service Centers or Sales Offices.

The installation of a new firmware version can be performed either via the USB or the LAN interface.

The downloaded update files have to be stored on the memory stick for an update via the USB interface or can be transferred via the LAN interface (for faster updates LAN interface is recommended).

Appendix 1 of this document describes how to connect the R&S SFU to a network and how to access SFU drives.

If you want to make a backup before installing new firmware see **appendix 2** of this document.

The firmware update consists of twelve files. The version numbers in the file names vary with each update:

Firmware SFU:	SFU_01.90.00.00(Release).msi
Firmware RF Part:	SMU_Server_2.05.85.exe
Batch File:	FinishSetup.bat
GUI Framework:	GuiFramework.dll
SMU Parameter Adapter	SMUParameterAdapter.dll
SMU Database Mapper	SMUDatabaseMapper.dll
Boot Flash Tool	SFUBootFlash.msi
Data for Boot Flash	Distfile.cab
DACIFdrv.dll	DACIFdrv.dll
SfuMMIMain.dll	SfuMMIMain.dll
Version History	SFU_FW_Version_History.pdf
Install Complete SFU	InstallCompleteSFU.exe

If Analog Realtime Modulations (ATV) are used with the SFU the following file is necessary too:

Video-Signals	AtvVideoBasic_01.82.00.00.msi
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ATV Predefined Signals (SFU-K199) as well are available.

Delivery is carried out with a separate DVD:

ATV Predefined Signals	Atv_Predef_01.80.00.00.msi
	Atv_Predef2_01.80.00.00.msi
	Atv_Predef3_01.80.00.00.msi
	Atv_Predef4_01.80.00.00.msi
	Atv_Predef5_01.80.00.00.msi

The Update is performed under control of the Windows XP embedded operating system. Windows XP can only be accessed if a mouse and an optional external keyboard is connected.

Firmware Installation

1. Switch off instrument
2. Connect mouse and/or external keyboard to the USB interface.
3. Switch on instrument.
4. Access Windows XP embedded desktop.
 - Wait until the R&S SFU firmware has booted and the application has started.

Operation with mouse

- Click the Close button of the R&S SFU Application. The Windows XP Embedded desktop is displayed.

Operation with keyboard

- Press ALT F4 to close the application. The Windows XP Embedded desktop is displayed.

5. Copy update files.
 - Open folder with update files using the **Windows Explorer**.
 - Delete all files in **D:\SFU\Installations** except the files **Atv_Predefx_01.*.msi** if no newer version is available.
 - Copy update files to **D:\SFU\Installations**.
 - If available copy new **AtvVideoBasic_01.*.msi** and **Atv_Predefx_01.*.msi** to **D:\SFU\Installations**.
 - Change to **D:\SFU\Installations**.
6. Install new firmware version.
 - Execute **InstallCompleteSFU.exe**.
 - Start the update process with **OK**.



Example

- In the first step the previous FW is deinstalled automatically.
- A reboot is carried out with following "chkdsk"
- After the boot the new FW is installed. A reboot will be carried out.
- After that the boot eeproms in the SFU are checked and reprogrammed if necessary.

- If so, the SFU is shut down again and you have to proceed with step 7.
 - Otherwise the SFU-FW will be restarted.
 - With the first start of the SFU-FW an “Adjustment All” is carried out automatically.
 - Wait until R&S SFU firmware is operational.
7. Install new firmware version (if PCI boot eeproms have been reprogrammed).
- Finish the reprogramming of the boot flashes by switching on the SFU.
 - The SFU-FW will be started.
 - With the first start of the SFU-FW an “Adjustment All” is carried out automatically.
 - Wait until R&S SFU firmware is operational.

Install SW options

- Press the **SETUP** key on the instrument front panel, select **Software Options**. Chapter 4 of the operating manual describes how to install the options. You can activate the manual by pressing the HELP key on the instrument or the F1 key on the external keyboard.
- Restart the instrument.

Appendix 1 : Connecting the R&S® SFU to a Network (LAN)

This Section is an extract of the SFU manual:

The R&S® SFU is equipped with a network connection and can be connected to an Ethernet LAN (Local Area Network).

Connecting to the Network

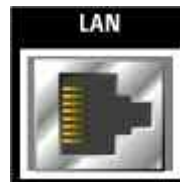


Caution:

We recommend that you co-ordinate the connection of the instrument to the network with the network administrator. Any errors that occur during the connection process can affect the entire network.

The instrument should be switched off (standby mode) when you connect and disconnect the network cable. This is the only way to ensure that the network connection is reliably detected and any disruptions during the operation of the instrument are avoided.

The instrument is connected to the LAN using a standard RJ-45 cable via the LAN interface on the rear of the instrument.



Networks with DHCP

The R&S® SFU is preconfigured for networks using the dynamic host configuration protocol (DHCP). In such networks, the R&S® SFU is automatically assigned a free IP address. In this case, identification in the network is based on the use of a unique computer name.

Every R&S® SFU is assigned an individual computer name at the factory. You can view and modify this name in the WindowsXP® **Start - My Computer** menu.

Networks that assign fixed IP addresses

In networks that assign fixed IP addresses, it is usually the network administrator who handles this process. The fixed IP address must be entered under WindowsXP® **Start - Control Panel**.

Point-to-point connections

To set up a single network (a LAN connection between an R&S® SFU and a single computer without integration into a larger network), an IP address needs to be assigned to the R&S® SFU and the computer. The IP addresses 192.168.xxx.yyy are available for use here. xxx and yyy can assume values of 1 to 254, and the value for the subnet mask is 255.255.255.0.

In this case, a standard RJ-45 cross-over cable is required for the connection.

User parameters

For the R&S® SFU, the standard user name is “**Instrument**”. The user name is used for autologin when the instrument is started up and for manual remote operation. The password is also “**Instrument**”. The network administrator must grant authorization to this user to determine what network directories and resources can be accessed by the R&S® SFU.

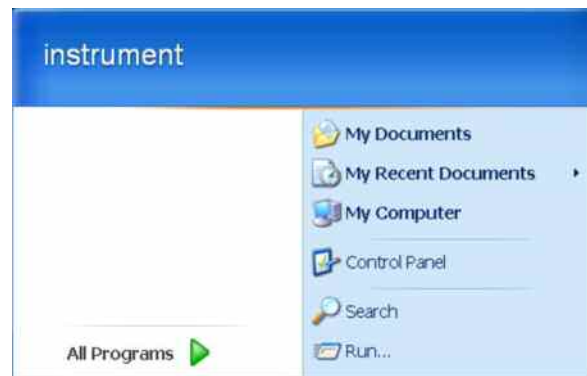
Preparations

The instrument is configured for network operation in the menus of the WindowsXP® embedded operating system. The operating system can be accessed only when an external keyboard is connected. We recommend using a mouse for more convenient operation. Power down the instrument prior to connecting the keyboard and mouse so that the operating system with properly recognize them.

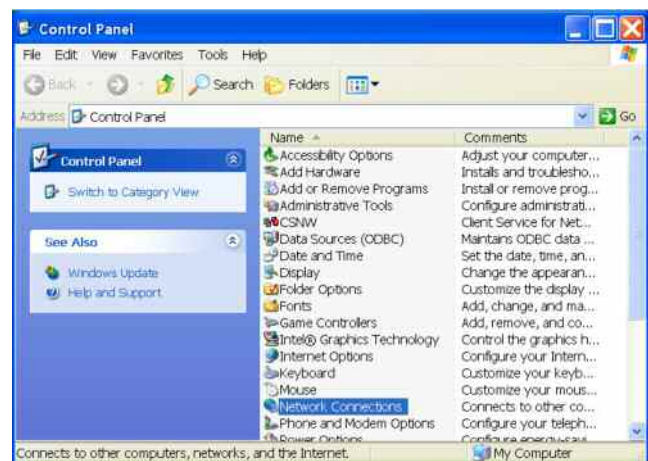
1. Switch off the instrument
2. Connect the external keyboard and mouse to the USB interface
3. Switch on the instrument

Entering the IP address

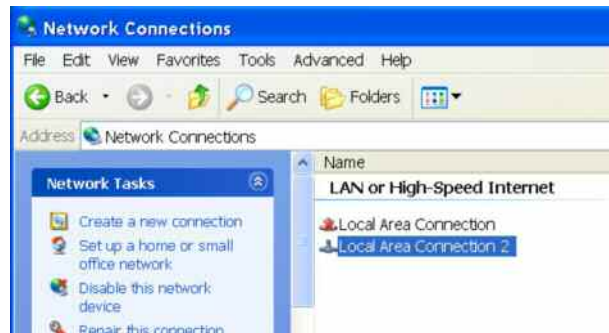
1. Press the **Windows** key on the external keyboard (next to the CTRL key) to call up the start menu.



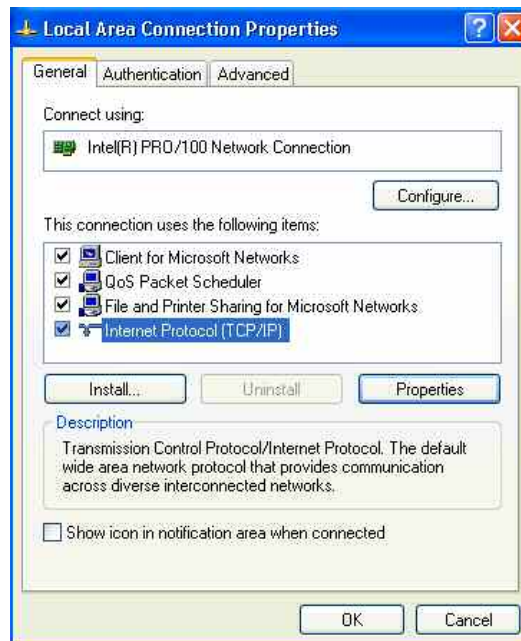
2. Click on **Control Panel** and then **Network**



3. In the **Network Connections** menu, click on **LAN Area Connection 2** on the right.

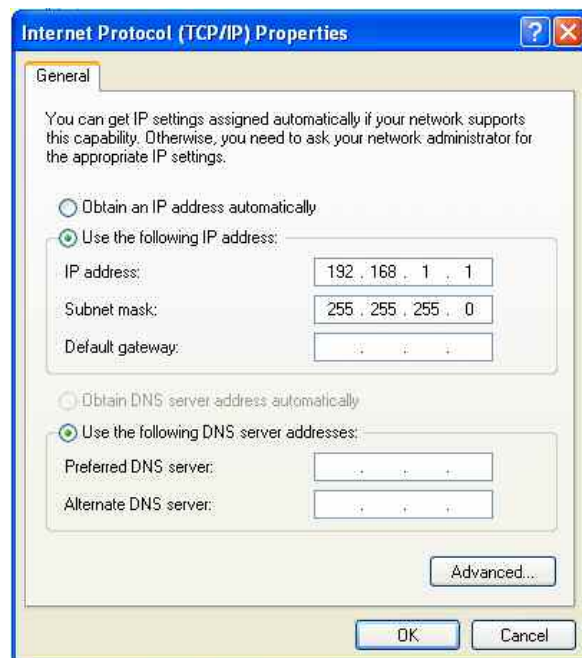


4. In the **General** tab activate **Properties**. In the field **This connection uses the following items**: mark the **Internet Protocol (TCP/IP)** item and then click on the **Properties** button.



5. In the **Internet Protocol (TCP/IP) Properties** menu, enter the IP address in the field **Use the following IP address** (you should ask your network administrator if you need more information). Finish by clicking on **OK** in all of the menus.

The default setting will be **Obtain an IP address automatically** (DHCP = Dynamic Host Configuration Protocol).



Sharing and Accessing SFU Drives

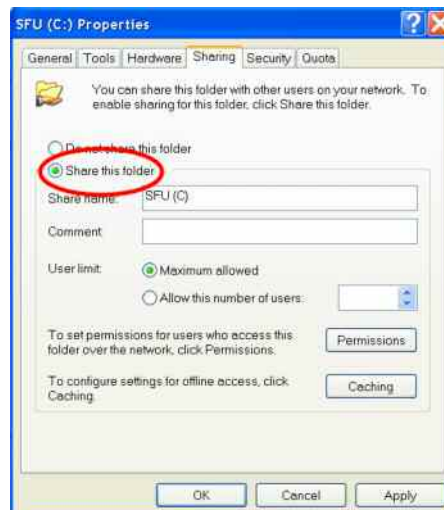
Access to SFU drives is managed using a system of access authorizations. Complete integration of the R&S® SFU into a larger network is complex due to the access authorizations involved and is normally performed by a network administrator.

However, access to the R&S® SFU hard drives is relatively simple.

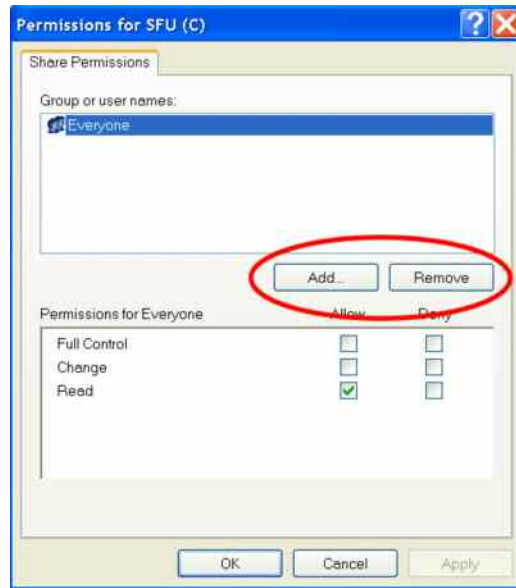
1. Select the directory in question on the R&S® SFU using Windows Explorer and use the right mouse button to call up the **Sharing and Security** menu.



2. In the **Sharing** panel, activate the **Share this folder** checkbox.



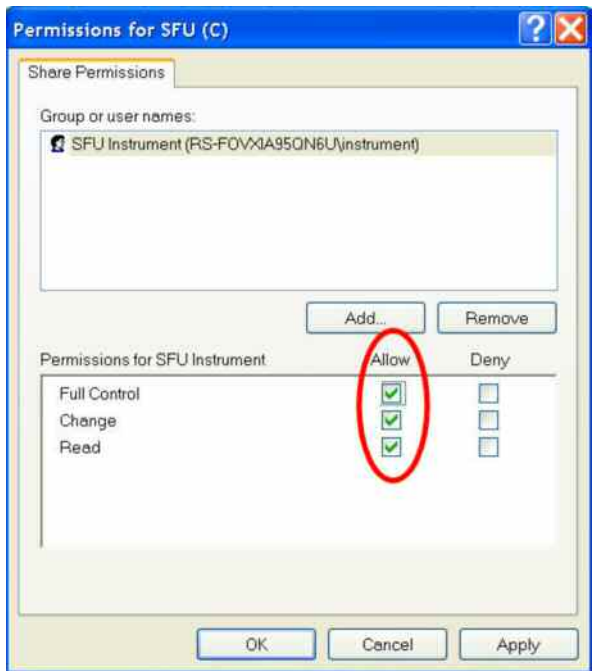
3. Select **Permissions** and remove user Everyone



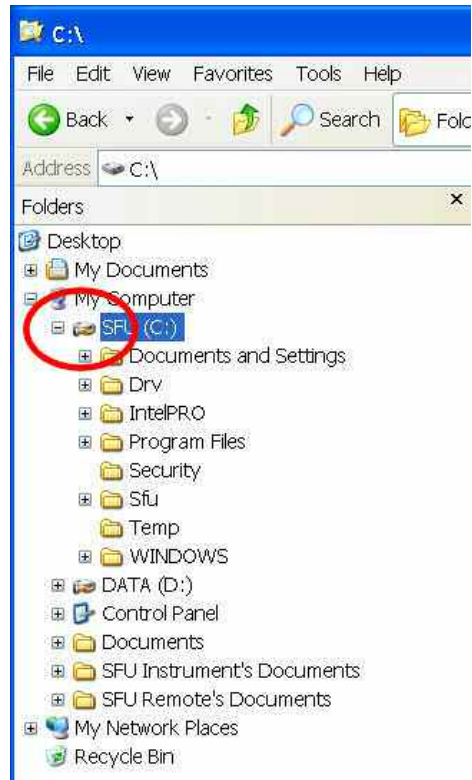
4. **Add** the user instrument.



5. **Allow** Full Control / Change and Read.



6. Shared Drives are marked now. Use the same procedure for Drive D if necessary



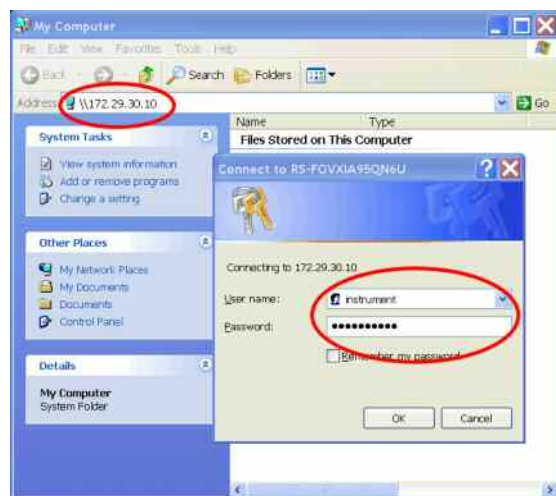
7. On your PC open the Windows Explorer and enter the IP-Address of the SFU in the form \\xx.xx.xx.xx.

Enter

User **instrument**

and

password **instrument**



8. The shared directories should appear, and you can copy the update files to **..lsfulinstallations**.

Appendix 2 : Windows XP Recovery and Backup Partition

R&S® SFU provides a backup and recovery partition. A backup of the factory system partition (C:\) is stored per default and can be recovered in case of a system crash.

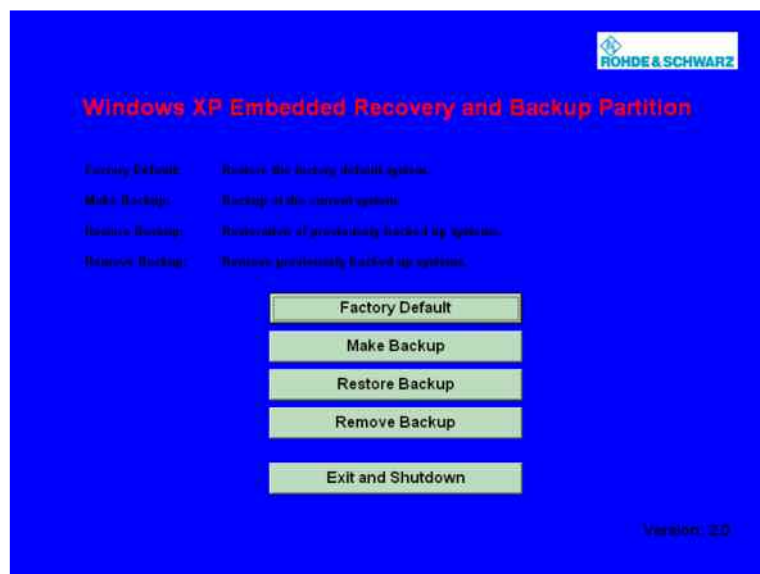
In addition, backups of up to 5 firmware versions can be stored on this partition. It is e.g. possible to backup the current system partition prior to a firmware update or to provide different system configurations for different environments. When recovered, the system partition (C:/) is deleted, formatted and written newly. The data partition (D:\) is not affected.

Note: Please ignore the following message if it appears during backup or recovery and do not restart your instrument, i.e. select 'No':



Call the Windows XP Recovery and Backup Partition Menu

1. Switch the instrument off and on again
2. In the boot menu select line **SFU Backup/Recovery** with the **up/down cursors**.
3. Open **Windows XP Recovery and Backup Partition** menu by pressing the **rotary knob**.
The menu shows the available selections for the recovery and backup partition:



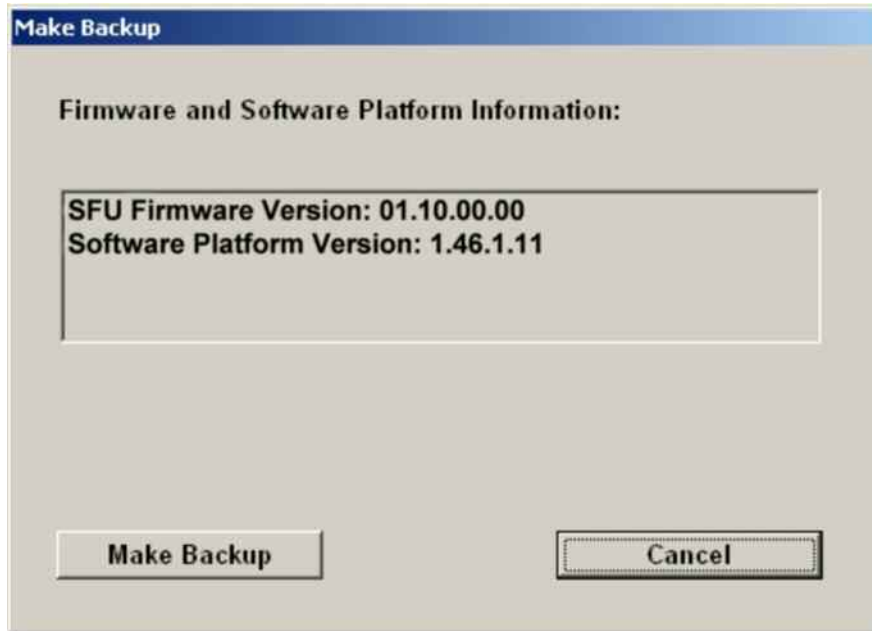
Windows XP Embedded Recovery and Backup Partition Menu

Notes: As of this dialog the mouse should be only worked with.

Backup Current System Partition

1. Activate the **Make Backup** button in the **Windows XP Recovery and Backup Partition** menu with the mouse.

The menu shows the current versions of the firmware and the software platform.



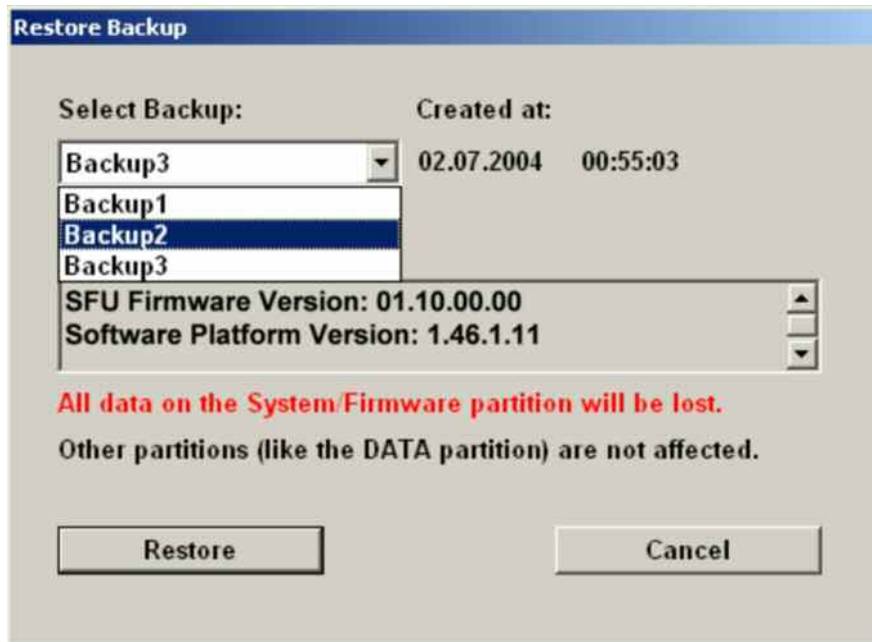
Backup Current System Partition

2. Activate the **Make Backup** button with mouse.
After the backup the **Windows XP Recovery and Backup Partition** menu appears again.
3. Activate the **Exit and Shutdown** button with mouse

Recover Selected Version of System Partition

1. Activate the **Restore Backup** button in the **Windows XP Recovery and Backup Partition** menu with the mouse to recover a selected version of the system partition.

The menu shows the versions of the firmware and the software platform of the backup displayed in the **Select Backup** window.



Recover Selected Version of System Partition

2. Select the **Select Backup** window with the mouse.
3. Select the backup to be restored with the mouse.
4. Activate the **Restore** button with mouse

The script which is performed during recovery is displayed.
After the recovery the instrument is shut down and switched off.

Recover Factory Default

1. Activate the **Factory Default** button in the **Windows XP Recovery and Backup Partition** menu with the mouse to recover the factory version of the system partition.

The menu shows the versions of the firmware and the software platform on delivery.



Recover Factory Default

5. Activate the **Restore now** button with the mouse.

The script which is performed during recovery is displayed.

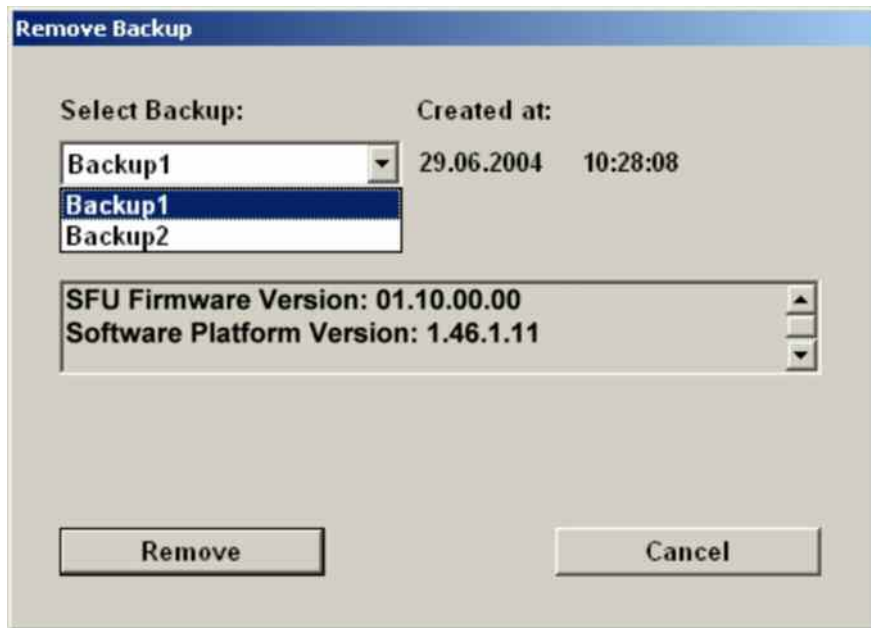
After the recovery the instrument is shut down and switched off.

Delete Backups

Up to five backups in addition to the factory default can be stored on the recovery partition. To provide space for new backups it might be necessary to remove older backups. The factory default cannot be deleted.

1. Activate **Remove Backup** button in the **Windows XP Recovery and Backup Partition** menu with the mouse to delete a selected backup.

The menu shows the versions of the firmware and the software platform of the backup displayed in the **Select Backup** window.



Delete Backups

2. Select the **Select Backup** window with the mouse.
3. Select the backup to be deleted with the mouse.
4. Activate the **Remove** button with the mouse

After the deletion, the instrument returns to the **Remove Backup** menu as long as backups are still available. If the last backup is deleted the **Windows XP Recovery and Backup Partition** menu opens again.

5. Activate the **Cancel** button with the mouse

The **Windows XP Recovery and Backup Partition** menu opens.

6. Activate the **Exit and Shutdown** button with the mouse.