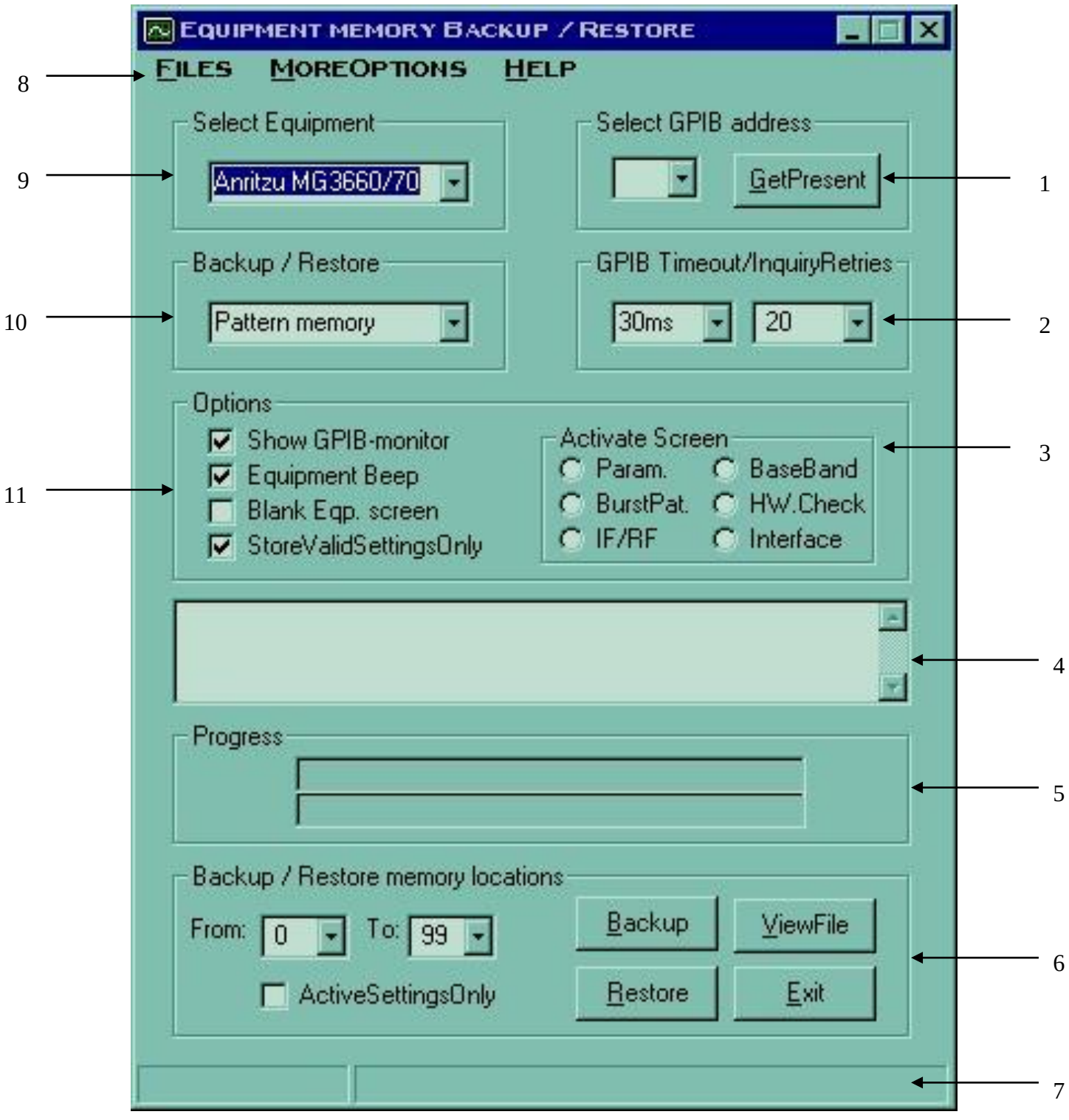
Equipment memory Backup/Restore

Første gang man har spildt en halv arbejdsdag på manuelt at genindtaste alle setup-data i et kompliceret testudstyr, f.eks. fordi dets backupbatteri svigter, skynder man sig at lave et Backup/Restore-program.

'Mini how to'



1) Select GPIB address:
Pressing 'Get present' button will add all active GPIB addresses to the ComboBox and display the accompanying Equipment ID in TextBox 4) if available. The figure shown in the ComboBox is used by the program to address the Equipment.

2) GPIB Timeout/InquiryRetries:

- ComboBox 1: GPIB Timeout is default set to 30mS in order to speed-up the Backup process. Invalid enquiries occur leading to timeout periods.
- ComboBox 2: When a command is transferred to the selected Equipment, a loop starts waiting for a 'ready response'. ComboBox 2 specifies the max number of unresponsive enquires to be performed. A to low figure can lead to unsuccessful Restore but speed up the Restore process. If set to 0, no enquiries are performed.

3) Activate Screen:
Makes it possible to activate the different equipment-windows (if ever needed).

4) TextBox:
All activity is echoed to this TextBox.

5) Progress:
During Backup:

- The upper indicator shows the Frame/Slot backup progress.
- The lower indicator shows the Memory location backup progress. During Restore:
- The upper indicator shows the number of lines performed in the Backup file.

6) Backup / Restore -memory locations:

- Specify the memory location span to backup (unassigned memory-locations are ignored), or check 'ActiveSettingsOnly' to backup the present settings only. (Backup settings only).
- Pressing 'Backup' will prompt for a filename and location for the generated Backup file before the Backup process starts. The Backup file is a plain ASCII-file.
- Pressing 'Restore' will prompt for a filename and location of the Backup file to be Restored.
- Select 'ViewFile' to view (or edit) a Backup file in Notepad.

7) Status Bar:
Showing the Memory location, Frame and Slot numbers currently being processed.

8) Menu Line:
'More Options/Single Commands' makes it possible to apply single commands/enquires.

9) Select Equipment:
Select the Equipment to memory Backup or Restore. (At present time only Anritsu MG3660/70 is available).

10) Backup / Restore:
Select what to Backup/Restore. (At present time, only the Pattern memory is available).

11) Options:

- Check the 'Show GPIB-monitor' to monitor the GPIB data flow.
- Check the 'Equipment Beep' to enable equipment beep. (Does not reflect the present Equipment state). Equipment beep is disabled during Backup since non-valid inquiries are sent to Equipment leading to error beep, and on-screen error messages. Please ignore these error messages.
- Check the 'Blank Eqp. Screen' to … . A radical way to ignore the above-mentioned on-screen error messages. (Does not reflect the present Equipment state).
- Check 'StoreValidSettingsOnly' to exclude the non-valid inquiry responses from being added to the Backup file.

Remarks:

1. Due to an error in (our) Anritsu generators it is unfortunately not possible to pass BNCH user sequence information via GPIB. The enquiry command 'BNCH?', mentioned in the programming manual, lead to a 'Command error' message, and an empty string returned. After restore, the BNCH,USER location will contain: 800 0000 0000 0000 0000 0000 0000 0000 (or perhaps the old contents). If wanted it's possible manually to ad the missing BNCH, USER contents to the Backup file. Press 'ViewFile', select a Backup file and move to the relevant frame and slot (NB! GPIB Slot numbers starts at 0 => FRAME18, SLOTNO 0 = Frame18, Slot 1) and insert a line (ex.: next to "SB2 BNCH") with the desired contents like: "BNCH #H8000000E1E10000000000000000000000". Whenever Anritsu finds a solution to this problem, the program is prepared for handling the BNCH? enquiry.

2. Another annoying item is the missing possibility to pass the memory location label name via GPIB. One way to overcome this problem could be to decode the BNCH contents in order to compose an informative label name (not possible, ref. note 1.), another solution could be to prompt for user input. In the present version, the memory location is giving a name like: MEM_x, where x is the source memory location number. As described in note 1. it's possible to apply another label name by editing the Backup file. (ex.: "BSAV 5,'NewName'"). NB! Max 8 characters is used.

3. The backup file contains information of the source memory location number, in order to put data back to the same location during Restore. By editing xx in the backup file command "BSAV xx,'MEM_xx'", a new destination location can be applied.

4. Backup / Restore using the 'ActiveSettingsOnly' selection may be useful as an alternative to the internal Memory storage. (Especially when Anritsu solves the missing BNCH? problem).