Technical Guide

3rd Generation RDMS™ Scripting

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Specifications subject to change without notice.

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1   3rd Generation RDMS™ Scripting

Scripts execute at power up and after mode changes, before any command line commands can be entered.

The 3rd Generation RDMS™ script command is **SCR**.

SCR ? provides online documentation.

There are four script files divided into two categories, System and Mode, and two access levels, Factory and User, as described in Table 1.

Table 1: Script Files

Category	Access Level
System: sysf	System factory
System: sysu	System user
PCMFM: modf	PCMFM factory
PCMFM: modu	PCMFM user

There are only two System script files across all modes, and they execute in all modes. Mode files execute only in the Boot mode in which they were recorded.

1.1   Modes

The RDMS™ modes have a Boot mode and an Operation mode.

The Operation mode is a sub-mode of the Boot mode. A Boot mode is the combination of the FPGA configuration and the embedded firmware. The Operation mode is a subconfiguration of the embedded firmware. Some Boot modes only have a single operation mode. Other Boot modes have multiple operation modes.

For example:

- PCMFM has a single operation mode.
- MhCPM has a single operation mode.
- SOQPSK has two operation modes: SOQPSK and SOQPSK/LDPC.
- STC has two operation modes: STC and SOQPSK/STC.

A mode script executes in all Operation modes of a Boot mode. Individual Operation modes do not have individual scripts. The mode script for SOQPSK executes in *both* SOQPSK and SOQPSK/LDPC. There is no way to have separate commands in SOQPSK and SOQPSK/LDPC. The implication is that if the same setting needs to be a different value for SOQPSK and SOQPSK/LDPC, it cannot be done using scripting.

1.1.1 Factory and User Scripts

The factory scripts are intended to be set at the Quasonix factory to override default values or configurations in the shipping product before those values or configurations can be integrated into a shipping firmware release.

User scripts are available to the user for what ever purpose they choose.

Factory scripts are **NOT** erased when settings are erased using the PER or PERA commands. User scripts **ARE** erased with PER or PERA commands.

1.2 Scripting Command Help

The SCR command help:

SCR ?

Displays and controls script information

SCR [DIR [<f>[<f>...]]|LIST <f>[<f>...]|RUN <f>[<f>...]]

> **DIR [<f>[<f>...]]** - Display all script files containing <f> in name or description

> **LIST <f>** - Display contents of script file <f>

> **RUN <f>[<f>...]** - Run script file(s) <f>, ALL for all scripts

SCR [REC <f>|APND <f>|EDIT <f> <l>[<e>]|RENUM <f>[<s>[<c>]]|REMOVE <f> <f>[<t>]]

> **REC <f>** - Record script file <f>

> **APND <f>** - Append script file <f>

> **EDIT <f> <l>[<e>]** - Edit/Insert line <l> or edit line <l> to <e>

> **REMOVE <f> <t>[<t>]** - Remove line(s) numbered <f> to (optionally) <t> in file <f>

> **RENUM <f>[<s>[<c>]]** - Renumber script file <f> starting at <s> (10) and by <c> (10)

SCR [ERASE <f>[<f>...]]

> **ERASE <f>[<f>...]** - Erase script file(s) <f>, ALL for all scripts

>> where <f> is either modu or sysu.

> **REC <f>** - Record script file <f>

>> This will erase the existing script and start recording a new one.

> **APND <f>** - Append script file <f>

>> This will append new commands to the end of an existing script.

> **EDIT <f> <l>[<e>]** - Edit/Insert line <l> or edit line <l> to <e>

Individual lines in a script file are identified by line number. This will either insert a new numbered line, where the line number is not in the file yet and lower than the number of the last line in the file, or will replace an existing line.

This only operates on a single line.

REMOVE <f> <t>[<t>] - Remove line(s) numbered <f> to (optionally) <t> in file <f>

This removes lines from <f> to <t>.

RENUM <f>[<s>[<c>]] - Renumber script file <f> starting at <s> (10) and by <c> (10)

This renumbers the lines starting at 10 and increments by 10. This makes space to insert new lines.

When a script is recorded using **SCR REC <f>**, it puts the system in Script Recording mode. Any commands entered will not be executed, but entered into the script file.

Recording is ended by entering a double colon **::**

Recording is aborted by pressing **CTRL-C**. Note that when a new script is started, the old one is erased. Aborting the new script **will not** restore the old script.

1.2.1   Scripting Example

An example to set frequency and bitrate:

(execute **SCR REC modu**)

PCMFM$scr rec modu

Recording:

> **::** to stop recording
>
> CTRL-C to abort

 10:

(enter **FR 2225**)

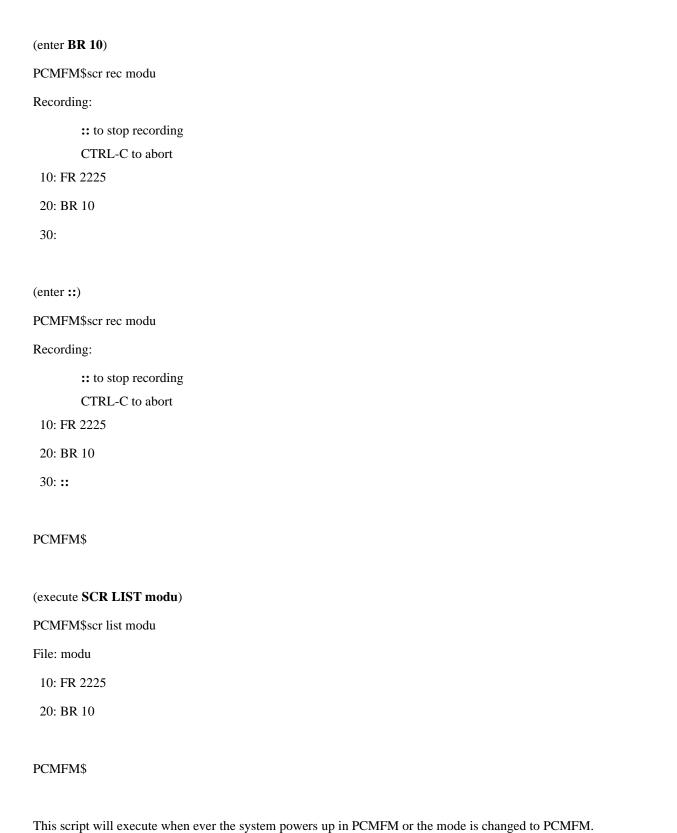PCMFM$scr rec modu

Recording:

> **::** to stop recording
>
> CTRL-C to abort

 10: FR 2225

 20:

(enter **BR 10**)

PCMFM$scr rec modu

Recording:

      :: to stop recording

      CTRL-C to abort

  10: FR 2225

  20: BR 10

  30:

(enter **::**)

PCMFM$scr rec modu

Recording:

      :: to stop recording

      CTRL-C to abort

  10: FR 2225

  20: BR 10

  30: **::**

PCMFM$

(execute **SCR LIST modu**)

PCMFM$scr list modu

File: modu

  10: FR 2225

  20: BR 10

PCMFM$

This script will execute when ever the system powers up in PCMFM or the mode is changed to PCMFM.

(execute **SCR ERASE modu**)

PCMFM$scr erase modu

Erasing: modu

PCMFM$

This will erase the mode user script.

CAUTION: Executing a Mode command in a script will terminate the current script and cause the mode to be changed and any scripts to be executed. This can result in an endless loop.