Firmware

After power-up the controller module in the P7001 USB+ Interface is running in Standby mode. It monitors the traffic on the USB interface and key presses on the Front Panel of the DPO. Just like the original controller, there are global commands which are processed with high priority at all times, and contextual events that are processed according to the currently active program.

Global Commands

Button 15

Program Call Button 15 is defined as the RESET button. Pressing this button breaks the actual running program and jumps back to the last navigation menu.

Data Handling Buttons

Not implemented yet.

In an upcoming version of the firmware, the Data Handling Buttons "Store", "Hold", "Send", "Receice" and "Start" will trigger waveform data transfers between the P7001 and the Controller.

On-screen Menus

The original Controller for the DPO booted into TEK SPS Basic. The operators could either program their own software or load and execute existing programs like Pulse Parameter Analysis or Linearity Analysis.

For the moment, the P7001 USB+ Interface does not provide a BASIC environment. But it has some build-in programs and test routines which can be reached by using the Progam Call Buttons. On-screen menus help to navigate through the internal structure.

Main Menu

The Main Menu can be reached from the Standby mode by pressing the Program Call Button 1 three times within 5 seconds.

The desired program will be started by pressing the associated Program Call Button.

Button	Program to start
1	Yellow Program Card
2	Pulse Parameter Analysis
4	Graphics Demo
9	Calibration
13	Program Version
14	Joke of the day
15	Reset / Goto previous Menu

Calibration Menu

The interface firmware provides programs which are needed for proper calibration of the DPO. The programs are described in detail in the Tektronix manual "Checkout Software", 070-1612-00. Flowcharts can be found in the System and Calibration Manual, 070-1600-00.

Button	Program to start
1	X-Y Display Waveform
2	Calibration Pattern
9	RAM Test
15	Reset / Goto previous Menu