

Menu system, loader and LCD screen (XDK)

The XDK menu program is provided for users who want to change the menu for their own use. If you run XDK.XB, the XDK will appear to reset itself, as it is re-runs the menu; no other behaviour is expected.

The program uses SRAM, LCD, and SD/FAT16 files system software components to display the menu system.

The program uses the SD/FAT16 component to load images from the SD card into frame buffers in the SRAM.

The LCD component includes a thread, which reads frame data from the SRAM and buffers it locally. A *character buffer* thread calculates pixel values using a local character buffer. For each pixel in a frame, these two threads output data through a channel to a *blender thread* that does a simple blending operation. The *blender thread* outputs the blended pixel data to the LCD server thread, which provides the interface to the LCD.

The main menu program thread uses two channels to communicate with the LCD component, one for text and the other for graphics. The text channel adds characters to, and removes them from, the character buffer. The graphics channel is used for frame update commands and other system requirements.

