

## FOX3MRD for Windows An Emulator to Replace the Foxboro MRD 450/460 Video Controller



The MRD 450/460 Video Controller, built by ADDS for Foxboro in the mid-70s and also known as the Foxboro Model 7803A, functions as an operator interface device for the FOX3 minicomputer, which is still used, for example, in power generation control systems dating from that period.

The MRD builds text and graphics displays on a slow-scan RGB monitor by processing commands and data received from the FOX3 over a serial or parallel communications link. Parallel versions of the MRD are output-only devices, but serial versions are able to accept input from a parallel connected keyboard and route keyboard data to the FOX3 over the serial link. While ADDS provided a keyboard for use with the serial MRD, Foxboro sometimes substituted a keyboard customized for a specific application. Foxboro's F7861A keyboard is pictured below.



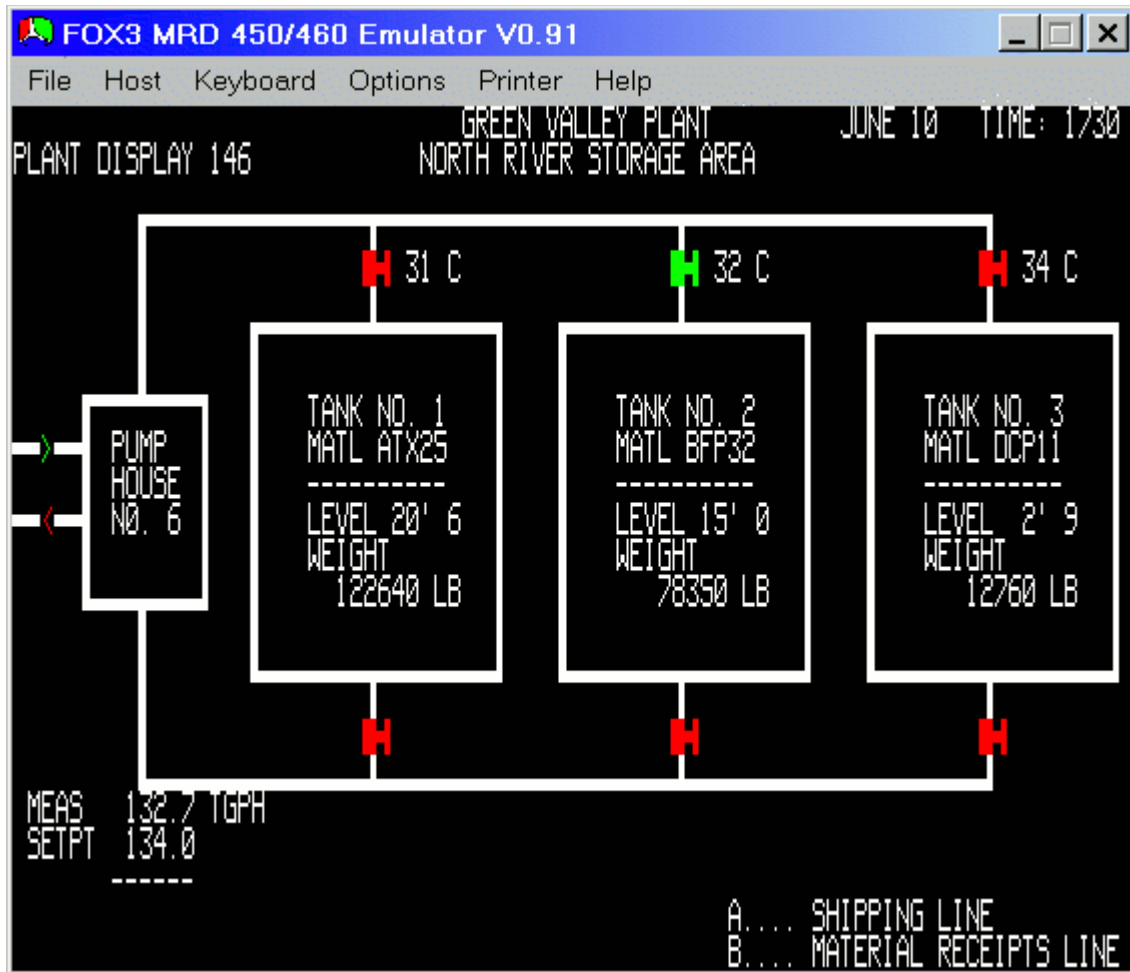
The MRD now presents users with a maintenance problem, not only because spare parts and repair expertise are scarce, but also, and especially, because of the difficulty of finding replacement slow-scan monitors for it.

To solve this problem, Mirador Software has developed emulation software that allows an ordinary Windows PC and monitor to replace both the MRD and its associated slow-scan monitor. The emulator faithfully replicates the MRD displays on readily available low-cost hardware, and it supports the use of either the PC keyboard or the original parallel keyboard for operator input. The emulator has been successfully field tested on a FOX3 system.

The emulator allows replacing the following MRD configurations:

- MRD 450 32 line text display, 50Hz refresh, serial communications
- MRD 460 24 line text display, 60Hz refresh, serial communications

Below is a typical screen from the emulator.



When using a PC keyboard to emulate the Foxboro F7861A keyboard, the PC keyboard keys are assigned Foxboro key functions as shown below:

