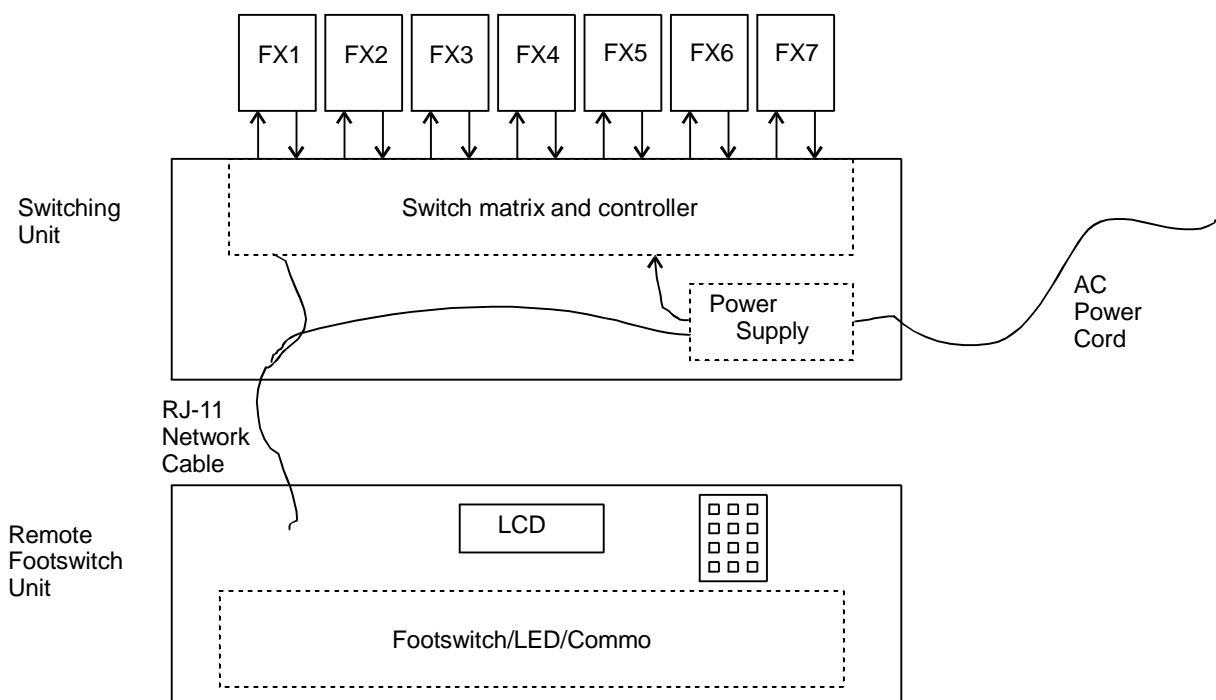


Programmable FX Switcher



Switching Unit (SU) contains power supply for system and intelligent audio switching. Receives serial communications from Remote Footswitch Unit which tells it which FX to connect, and in which order.

Remote Footswitch Unit (RFU) contains footswitch sensing and LED control, as well as LCD display and keypad for programming.

Connection between the two units is by eight conductor RJ-11 patch cord. These cords are readily available in lengths up to 50'/15M. Four conductors carry serial communications from RFU to SU. Four conductors carry raw power from SU to RFU. This allows redundant contacts.

Serial communications is by current loop using standard MIDI hardware for opto isolation. Communications protocol is unique (not MIDI) but MIDI could be used at some point.

Eight footswitches is the largest immediately practical number. One of these is reserved for true bypass on the SU. The SU does this with a relay that is normally in the true bypass position with no power applied, so the system fails bypassed if power dies. That leaves seven available patches.

Patch means a concatenation of one to seven FX loops in any order. For reference, the FX loops are numbered one to seven. The signal comes into the SU and is then passed through either the true bypass relay or the switching matrix. The programmed order of FX loops that the signal passes through is a unique patch. For instance, the signal might be passed through FX loops in the order 1, 2,3,4,5,6,7 and that sequence could be assigned to patch number 5. Patch 4 might consist of the signal passing through FX loops 4,3,6 in that order.

It's important to distinguish between a patch number and a FX loop number. Patch 1 is permanently assigned to true bypass. Patches 2 through 7 may be programmed. A useful way to think of this is that a patch can be specified by the patch number and the list of FX loops in order. For instance, Patch 5 above could be written P5 F1234567, and Patch 4 above could be written P4 F436.

Since only one instance of a FX loop exists, it is not possible to loop a signal through it twice, so something like P2 F3523 is not possible, and is not programmable as a result of error checking in the programming interface.

The FX loop jacks are hooked up as "normalised" insert jacks. That means that the jacks themselves are wired in a manner that causes the signal to pass through from the out jack to the in jack. If no effect is plugged into the jacks, any programming of that FX loop just passes the signal through unchanged. Any number of actual effects can be connected in series to a FX loop.

Programming User Interface for Programmable FX Switcher

