

Choosing the Right Master Control Switcher for Your Application

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The master control switcher is an essential part of the program output chain in any broadcast facility. In addition to providing basic switching facilities for making transitions between program sources, the master control switcher provides channel branding (logo insertion), audio mixing for voice-over announcements, monitoring of program and preset sources, automation interface, and Emergency Alert System (EAS) message insertion. There is a wide variety of switchers available, with a range of features in addition to the basic ones listed above.



There are two primary criteria for choosing the switcher for a specific application. The first is the amount of manual operation that the switcher may be required to support. In many cases, a channel's program schedule is fixed and manual intervention is limited to emergency overrides in the event of either a fault in the playout equipment or a problem with the program material itself.

In other cases, the channel's operation may be interrupted by unscheduled news coverage, sports coverage that runs past the scheduled time, or any number of other similar events that require manual operation.

The second criterion is the complexity of the channel branding, promotional material, or other program elements that the switcher must insert into the program stream. For more complex elements, the master control switcher may be required to handle animated graphics, multiple simultaneous key insertions, playback of prerecorded audio/video clips, and DVEs such as the commonly used squeezeback effects.

For simple applications, a master control switcher such as the MC-400 from Utah Scientific is ideal. The switcher offers two keyers with optional internal logo storage, HD/SD switchable operation, a full range of transitions, automation interface, an integrated audio clip playback system, and an optional integrated EAS message insertion facility for both text and audio.

This switcher is packaged as an output card for the UTAH-400 router so that it can be installed in an existing router frame with access to all of the sources available in the router and no need for installation of a separate frame.

The MC-400 card is also available in the MC-40 package, a self-contained 8-input master control switcher in a compact 1RU frame.

For the more complex requirements, Utah Scientific's MC-4000 provides all of the basic features of the MC-400, plus two additional keyers, audio/video clip playback, and

optional squeezeback and graphics systems for a fully integrated package that supports the most demanding operational requirements.

As important as it is to choose the right signal processing platform, it's also important to select the right control panel for the application. In fact, this choice makes a big difference in the operational success of the system.

For simple applications, a very simple control panel is appropriate. Dedicated to the operation of a single program channel, it occupies less space in the control room console and may be the best choice. The Utah Scientific MCP-40 and MCP-400 are excellent examples of dedicated panels.



Multichannel operation places an additional set of demands on the master control system. In many cases, a single operator is required to monitor and control a number of channels simultaneously. In these cases, it is essential that the system allows the operator to switch between channels of the control panel quickly and reliably as well as receive immediate feedback from the system. The MCP-2020 Master Control Panel from Utah Scientific provides full control facilities for a multi-channel environment with a panel layout that is logical, intuitive, and easy to operate.



Additional flexibility can be provided by a "soft" or virtual control panel. Run by mouse or touch-screen, it is useful in special situations such as a supervisory control in a multichannel operation.

The master control switcher is your security blanket, giving you the ability to handle emergency situations with ease. As an essential component of your program output chain, the master control switcher must be chosen wisely. For more information on master control switchers, visit www.utahscientific.com.

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