Presmaster 100 master control switcher

Miranda's Presmaster 100 master control switcher provides unmatched multi-channel control, channel branding performance, and ease of use.

Presmaster is a powerful master control switching and channel branding system designed for automated, multi-channel environments.

The affordable *Presmaster* range is based on the *Imagestore* automated master control and channel branding system (see page 14). All video and audio processing functions, including mixing, keying, DVE transitions, character generation and voice-overs, are performed by one or more *Imagestores*. The *Presmaster 100* panel can operate up to two *Imagestores* per transmission channel to provide control of up to five discrete video layers.

Features

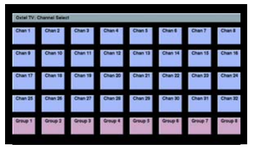
- Digital master control switcher for automated and manual environments
- Up to 200 transmission channels can be controlled from one panel
- Fast and easy to use interface with large, color touch screen display
- Rapid access to up to 80 source inputs fed from an external dedicated router or a large station router
- Full group digital audio A/B mixing plus two stereo voice-overs, with optional multi-group mixing
- Up to four keying layers for inserting channel branding animations, stills and clocks
- Storage for up to 8000 full frames of video and up to 400 minutes of digital stereo audio
- Remote browsing and distribution of channel branding images and audio using Miranda's Windows 95/98/00/NT™ based *Media Distribution System*
- Picture-in-picture squeeze and reveal transitions with *Squeezy* DVE option
- *Easytext* automated character generator option renders Unicode characters in real-time from serial or Ethernet data
- Station clock and timer
- Full bypass capability and comprehensive redundancy
- Machine control and full group audio metering
- Compact 7RU 19" rack and desk mountable panel

Easy multi-channel control

The *Presmaster 100* panel is highly intuitive, and is based on traditional master control design. All the controls requiring instant action have dedicated keys but set-up and monitoring functions are presented by a color touch screen display. Each core functional area has an associated 'hot' key which instantly presents the information relevant to that function on screen. Interaction with the screen is by touch or by 'hard' navigation keys and a rotary control. This approach keeps the panel compact and neat but also fast and easy to operate.

Round 'hot' keys activate the color touch-screen display

Up to 200 automated channels can be controlled by one or more *Presmaster 100* operators, although the system is equally suited to manual and single transmission channel operation.



Easy to use channel selection interface

As an operator switches between transmission channels, *Presmaster's* input buses will immediately reflect the sources relevant to the channel, along with the mixing and channel branding set-ups for the channel. The next transition to be performed by the automation will also be indicated on the panel.

Video and audio switching

The switcher can be used with large external station routers shared among multiple channels, or a small external router dedicated to a single channel. Operators can 'scroll' through up to 80 inputs of a large router, and 10 feeds can be accessed and identified on the panel at any one time. Sources can be changed quickly by operators, or grouped for specific programs, to ensure fast and easy operation.

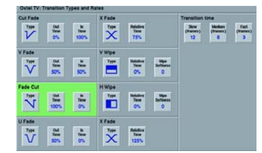
Presmaster is operated on an 'arm and take' basis, allowing complex multi-layer transitions combining mixing, keying, DVE transitions and voice-overs to be performed effectively.

Switching can be performed by cut, fade and wipe autotransitions, or by manual T-bar, using 'audio follow video' or independent audio mixing. Three mix transition rate pre-sets are fully adjustable.

Sources can be grouped for specific programs

When mixing to a Preset source that requires pre-roll, the 'Take' switch will not activate the transition until the specified pre-roll time (once entered into the system).

Separate 'Fade to black' and 'Fade to silence' controls are provided. With the *Easysound* digital audio mixer option fitted to *Imagestore*, *Presmaster* provides control of full group digital audio A/B mixing and two stereo voice-overs, using either embedded audio or separate stereo AES pairs. Up to 400 minutes of digital stereo audio inserts and voice-overs can be stored and played out per transmission channel with the *Easyplay* option.

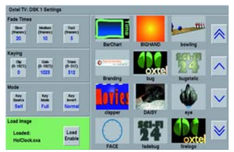


Mix transitions can be adjusted swiftly

Presmaster allows audio input and master gain levels to be fully adjusted via the touch screen. The voice-over characteristics, including ducking and output levels, are also fully controllable. A 'lead audio' capability allows the next audio source to be added to the program audio prior to a full mix, simplifying transition timing. The audio mixing capabilities can be strengthened with *Easysound Stand-alone*, an audio mixer extender, to allow multi-group mixing for multi-lingual audio and cinematic, multi-channel surround sound, including 5.1 audio.

Powerful channel branding

Multiple powerful channel branding features include up to four keying layers, which can insert stills and animations plus in-vision clocks and timers. The standard configuration, with a single *Imagestore* per channel, provides two layers of keying. A further two layers of keying can be provided with a second *Imagestore* per transmission channel (in series). Each *Imagestore* provides storage for up to 4000 animations, stills or clocks.

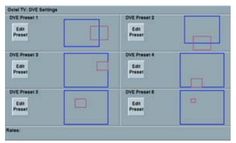


Browsing, editing and loading the channel branding media with Presmaster

Presmaster's display can present the channel branding images in poly-photo format, with easy image browsing and loading using the touch screen controls. The images' keying characteristics and the layer transition rates can also be readily adjusted from the touch screen.

The channel branding media can be loaded quickly and directly from a graphics preparation area via Ethernet using Miranda's Windows 95/98/00/NT™ based *Media Conversion Software*. The optional *Media Distribution System* adds a remote image deletion and poly-photo image browsing capability.

The *Squeezy* agile DVE option is suitable for picture-in-picture, squeeze and reveal effects, such as 'over the shoulder' news transitions, and squeezes for schedules, credits and news flashes. The *Presmaster* panel provides six DVE presets which can be edited from the touch screen. Automated and manual character generation can also be performed with *Presmaster* using the *Easytext* option (see page 20)



Editing DVE presets

Video and audio previewing

Presmaster provides full video and audio previewing. The preview output of the *Imagestores* can show the end point of the next mix transition, along with a full, animated preview of up to four keying layers. When a DVE transition is 'armed', the end point of the transition is also shown on the preview output.

Dedicated audio controls allow monitoring of the Program and Preset buses, as well as the voice-over pre-fades. High resolution, color audio metering bars are presented on *Presmaster's* LCD screen in true Peak Program Metering (PPM) format for easy full group audio monitoring.

Full group PPM audio metering

Additional panel controls

Presmaster 100 also has dedicated areas for automation system intervention, machine control, and monitoring the station clock.

The panel's automation controls, subject to the system in operation, provide the capability to intervene in a playlist, halting a schedule, skipping events, and subsequently re-starting the schedule. The automation system can also be disengaged from the panel.

Dedicated machine controls allow a VTR to be controlled directly from the panel, for example, in an emergency situation. When a VTR source is selected on the Preset bus, the specific VTR will be indicated on the machine control display. The VTR can be controlled via the dedicated keys or via the rotary switch which operates as a shuttle wheel. A 'Roll' switch plays the VTR associated with the selected Preset.

The station clock output is displayed in a dedicated window, and an associated timer display allows counting up/down for timing transitions or other events.

Remote monitoring information is provided by the *Presmaster* system's EDH output option.

System architecture

Presmaster features a robust and highly scalable architecture (see diagram). In a multi-channel environment, one or more *Presmaster 100* panels are connected to one or more *Presmaster Control Systems* to provide interfacing to the *Imagestore* master control and channel branding systems, the external router(s), the automation system and VTRs. The *Presmaster 100* can also directly control VTRs dedicated to the panel.

Up to 50 *Presmaster Control Systems* can be linked to each *Presmaster* 100 panel, providing control of up to 200 transmission channels (four transmission channels can be controlled by each *Presmaster Control System*).

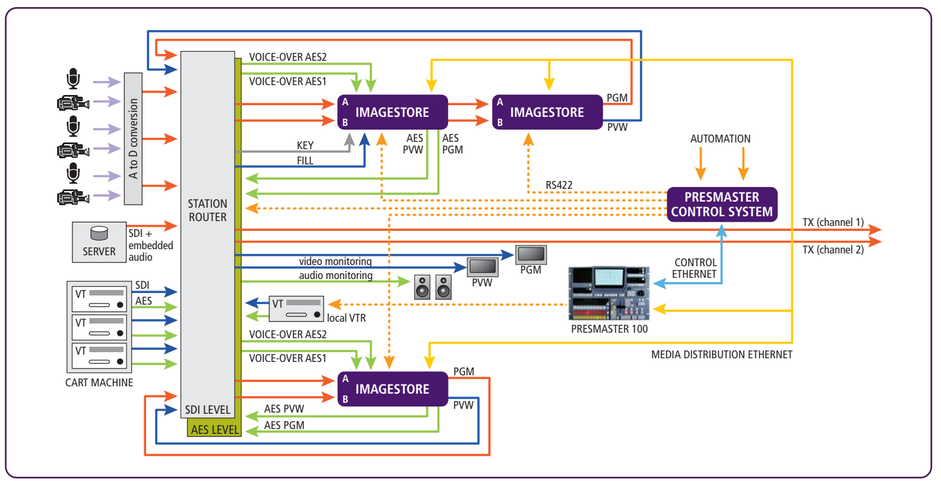
The control linkage between the *Presmaster* panels and the *Presmaster Control System* is by high speed Ethernet. A second, separate Ethernet network is used for distributing the *Imagestore* media library information to the *Presmaster* panel to allow thumb-nail browsing.

Each transmission channel has a separate RS422 control signal from the automation system to a *Presmaster Control System*, and a dedicated RS422 control signal from the *Presmaster Control System* to each *Imagestore*. RS422 links are also used for the router and VTR control.

SDI sources with embedded audio, and sources with separate AES audio, can all be accommodated with the *Presmaster* system. The *Presmaster Control System* source database controls the association of SDI and AES signals, and also performs router source naming.

Presmaster Control System interfacing unit

Typically, *Imagestore* program and preview outputs (video and audio) are fed back to the router infrastructure to simplify video and audio monitoring, and to provide a bypass path.

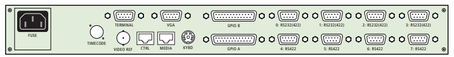


Multi-channel Presmaster system (two transmission channels shown)

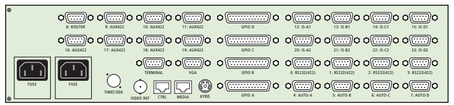
Entry level configuration

An entry level, single transmission channel *Presmaster* system comprises the *Presmaster 100* panel, a *Presmaster Control System* plus an *Imagestore* fitted with the NET-003 Ethernet interface and the *MIX-2000* A/B video mixer. In a multi-channel environment, a *Presmaster* Control System is required for every four transmission channels.

This core system can be expanded with the *Easysound* digital audio mixer, the *Easysound Stand-alone* audio mixer extender, and multiple channel branding options, including image library enlargement, two additional keying layers, the *Squeezy* DVE, the *Easytext* character generator, in-vision clock/timer insertion, and digital audio storage.



Presmaster 100 rear panel



Presmaster Control System rear panel

Presmaster technical specifications overview

Video inputs	➤ Program A, program B (from external router), fill and key inputs. ➤ Mixer preview and preset inputs from router to preview monitors.	➤ All component SDI 270 MHz to SMPTE 259M-C BNC (625/525 compatible). ➤ Proc-amp/color field generators on each video input.
Video outputs	➤ Program, mixer/keyer preview and program A copy outputs. ➤ Optional analog composite mixer/keyer preview output.	➤ All component SDI 270 MHz to SMPTE 259M-C BNC. ➤ Copy feed fully equalised and regenerated.
Video mixing	➤ *MIX-2000* A/B mixer option provides cut, fade and wipe transitions.	
Audio mixing	➤ *Easysound* digital audio mixer option provides full group A/B mixing plus two stereo voice-overs (embedded and AES/EBU). Multi-lingual, multi-group audio mixing and cinematic multi-channel surround sound, including 5.1 audio, can be performed with *Easysound Stand-alone*.	
Keying capabilities	➤ Two keying layers can insert animations, stills and clocks.	➤ Two additional keying layers with optional second *Imagestore*.
DVE	➤ Agile, two input *Squeezy* DVE option can perform picture-in-picture and squeeze and reveal type transitions	
Character generation	➤ *Easytext* automated character generator option renders Unicode characters in real-time from serial or Ethernet data using a single keying layer	
Image storage	➤ 40 full frames of image storage, expandable up to 4000 full frames per *Imagestore*.	
Animation playout memory	➤ 32MB+32MB (program+preview) memory per *Imagestore*, expandable up to 256MB+256MB.	
Audio storage	➤ *Easyplay* option provides storage for 40 minutes of digital audio, expandable up to 200 minutes per *Imagestore*, for voice-overs and other inserts.	
References	➤ LTC reference and video reference to *Presmaster Control System & Imagestores* (+/- 7 lines analog black & burst).	
Bypass	➤ Optional MBP-002 mechanical bypass for *Imagestore* allows program A input to pass unaffected in event of power supply failure.	
Diagnostics	➤ *Imagestore* and *Presmaster Control System* provide front panel indication of internal temperature, voltages, phase lock loop, configuration and operating history.	
Physical	*Presmaster:* ➤ 7 RU 19" rack or desk mountable panel ➤ Weight 7.0 Kg (15.4 lbs) ➤ Operating temperature 0-40˚C ➤ Power: 90-240V, 60Hz or 50Hz, 50W	*Presmaster Control System:* ➤ 2 RU 19" rack mount frame ➤ Weight 8.0 Kg (17.6 lbs) ➤ Operating temperature 0-40˚C ➤ Power: 90-240V, 60Hz or 50Hz, 50W
Processing	➤ 10-bit 4:2:2 SDI	
Interfacing	➤ Ethernet links between *Presmaster 100, Presmaster Control System(s),* and *Imagestores.* ➤ *Imagestore,* automation, router and VTR control from *Presmaster Control System* via RS422, RS485 or RS232.	

Presmaster ordering information

Entry system	
PM1	➤ *Presmaster 100* master control switcher panel
PCS-001[1]	➤ *Presmaster Control System*
IS2	➤ *Imagestore* automated master control and channel branding system
NET-003	➤ *Imagestore* Ethernet interface (co-axial & RJ45 twisted pair)
MIX-2000	➤ A/B video mixer
Options	
MEM-400V	➤ *Imagestore* image library expansion to 400 images/full frames plus 2 x 64MB animation playout memory
MEM-2000V	➤ *Imagestore* image library expansion to 2000 images/full frames plus 2 x 128MB animation playout memory
MEM-4000V	➤ *Imagestore* image library expansion to 4000 images/full frames plus 2 x 256MB animation playout memory
SQZ-2000	➤ *Squeezy* DVE
CPV-001[2]	➤ *Imagestore* analog composite mixer/keyer preview
MBP-002	➤ *Imagestore* mechanical by-pass
ET1[3]	➤ *Easytext* automated character generator
Bugclock	➤ In-vision analog/digital clock or timer
EDH-001	➤ EDH output option
MDS-001[4]	➤ *Media Distribution System* (browsing and distribution software)
Audio options	
ES2	➤ *Easysound* digital audio mixer
EP1	➤ *Easyplay* digital audio storage and playout system
MEM-200A	➤ Audio storage expansion to 200 minutes (per *Imagestore*)
ES2-SA	➤ *Easysound Stand-alone* audio mixer extender
Further keying layer options	
IS2-B[5]	➤ Second *Imagestore* for additional two keying layers (per transmission channel)
NET-003	➤ Ethernet interface for optional second *Imagestore*

[1] A *PCS-001* is needed for each group of four transmission channels.

[2] Ordering *CPV-001* will replace the standard SDI mixer/keyer preview output

[3] *Easytext* is supplied without TT fonts: these are exported from authoring PC as part of design using free Text-Builder program

[4] *MDS-001* requires each *Imagestore* to be fitted with *NET-003* Ethernet interface

[5] The IS2-B includes a B-input module which is essential for preview loop-through in the 4 key-level *Presmaster* system