

CITY of NOVI CITY COUNCIL

**Agenda Item C
July 7, 2008**

SUBJECT: Approval to award purchase and installation of a Broadcast Pix Slate 2100 SD A/V Room Switcher to Roscor Corporation Michigan, the sole bidder, for \$35,072.

SUBMITTING DEPARTMENT: Neighborhood and Business Relations *SW*

CITY MANAGER APPROVAL: *[Signature]*

EXPENDITURE REQUIRED	\$ 35,072
AMOUNT BUDGETED	\$ 13,995 & \$459
APPROPRIATION REQUIRED	\$20,618 (will be included in first budget amendment)
LINE ITEM NUMBER	101-295.00-980.000 & 101.295-740.000

BACKGROUND INFORMATION:

In mid-May, audiovisual staff encountered a problem with the switcher in the A/V Room and determined the equipment must be replaced. The switcher controls the ability to move from one camera to another, display graphics, and show PowerPoint and overhead presentations. After much discussion with A/V staff and reviewing functionality of existing equipment, it was determined to replace the switcher with an enhanced piece of equipment which would remove a majority of the outdated equipment in the control room and eliminate the necessity for a new character generator approved in the FY 08/09 Budget. The estimated cost of the character generator was \$13,995.

A bid package was placed on Bid Net and following a mandatory pre-qualification bid meeting with three vendors in attendance, only one proposal was received. One of the vendors could not supply the specified equipment and the other could not complete the project due to an already full work load.

The sole bidder, Roscor, is familiar with the A/V Room and has performed work for the City in the past. Following an equipment build phase of approximately 50-60 days, Roscor will remove all existing unnecessary equipment, install all new equipment, rewire the system as needed, complete a system orientation and training program for A/V staff, and provide a one-year parts and labor warranty.

RECOMMENDED ACTION: Approval to award purchase and installation of a Broadcast Pix Slate 2100 SD A/V Room Switcher to Roscor Corporation Michigan, the sole bidder, for \$35,072.

	1	2	Y	N
Mayor Landry				
Mayor Pro Tem Capello				
Council Member Crawford				
Council Member Gatt				

	1	2	Y	N
Council Member Margolis				
Council Member Mutch				
Council Member Staudt				



cityofnovi.org

**CITY OF NOVI, MICHIGAN
PURCHASING DEPARTMENT**

45175 W. TEN MILE RD.
NOVI, MI 48375
(248) 347-0446

BROADCAST PIX SLATE 2100 SD A/V ROOM SWITCHER

SIGNATURE FORM

Bid submitted by:

Name (printed) Edward A. Jones Title: VP - Finance

Company (Legal Registration) Roscor Corporation

Address 1061 Feehanville Drive

City Mount Prospect State IL Zip 60056

Telephone 847-299-8080 Fax 847-299-4206

E-mail sales@rosacor.com

Signature *Edward A. Jones* Date June 20, 2008

For information on responding to this bid, contact Sue Morianti – Purchasing Manager, at smorianti@cityofnovi.org

Submittal of Bids: Bids must be delivered prior to the due date and time specified above to the City of Novi, Purchasing Department, 2nd floor, 45175 W. Ten Mile Rd., Novi, Michigan 48375. Bids must be submitted by person or mail. Faxed quotations will not be accepted.

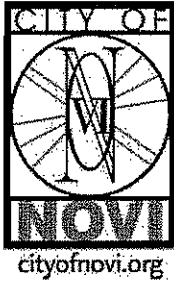
THE BID ENVELOPE MUST BE IDENTIFIED WITH THE FULL BID NAME AND DUE DATE.

THIS PAGE IS PAGE ONE OF THE PROPOSAL FORM. FAILURE TO SUBMIT PRICING ON THE PROPOSAL FORM PROVIDED BY THE CITY OF NOVI MAY CAUSE THE BID TO BE CONSIDERED NON-RESPONSIVE AND INELIGIBLE FOR AWARD.

NOTICE TO BIDDERS:

The City of Novi officially distributes bid documents through the Michigan Intergovernmental Trade Network (MITN). **Copies of bid documents obtained from any other source are not considered official copies.** The City of Novi cannot guarantee the accuracy of any information not obtained from the MITN website and is not responsible for any errors contained by any information received from alternate sources. Only those vendors who obtain bid documents from the MITN system are guaranteed access to receive addendum information, if such information is issued.

If you obtained this document from a source other than the source indicated, it is recommended that you register on the MITN site, www.govbids.com, and obtain an official copy.



**CITY OF NOVI
PROPOSAL FORM**

We the undersigned as bidder, propose to furnish to the City of Novi, according to the conditions and instructions attached hereto and made a part thereof according to the attached terms and conditions.

**BROADCAST PIX SLATE 2100 SD
A/V ROOM SWITCHER**

A. Broadcast Pix Slate 2100 SD Switcher with Option #47 (More Analog I/O) and Option #801 (Hitachi Cam Control) NO SUBSTITUTIONS	\$	<u>25,832.00</u>
B. One (1) 27" Flat Screen LCD monitor	\$	<u>650.00</u>
C. One (1) 15" Flat Screen LCD monitor	\$	<u>196.00</u>
D. Two (2) DVD player/recorder	\$	<u>960.00</u>
E. Installation	\$	<u>5,529.00</u>
TOTAL	\$	<u>33,167.00</u>

Estimated 45-60 Days A.R.O. but will have to be
Delivery date confirmed with Roscor's Projects Department at
time of order.

**We acknowledge receipt of the following Addendums:
(please indicate numbers below)**

Comments: 1) See Roscor Proposal LW48-1482 for specific equipment
make and model numbers.

2) See Section 2 of our proposal for OPTIONAL Broadcast Pix
ON-SITE TRAINING.

Signature:

Edward A. Jones

Edward A. Jones, VP - Finance



QUOTATION

Date: June 23, 2008

Page: 1 of 3

To

Sue Morianti
City of Novi
45175 W. Ten Mile
Novi MI 48375
Phone: (248) 347-0460 Fax: (248) 347-0446

Quote: LW48-1482
Sales Rep: Larry Walker
Payment Terms: Special Terms See Below
Freight Terms: FOB Destination
Valid For: 30 Days

Quotation Summary: City of Novi - Broadcast Pix Slate 2100SD A/V Room Switcher RFQ

<i>Item</i>	<i>P/N</i>	<i>Description</i>	<i>Qty.</i>	<i>Unit Price</i>	<i>Ext. Price</i>
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Section 1: Broadcast Pix Switcher Equipment

1.1	Broadcast Pix 2100d Slate 2100 SD	1	\$ 23,719.00	\$ 23,719.00
	SD IME switcher, with control panel and iBoB. Features switcher, multi-view, character generator, clip store, graphics stores, AutoAspect, fail-safe on-air, owners manual, and hardware. Note standard warranty is 1-year parts and labor.			
1.2	Broadcast Pix 47 Analog I/O Includes 4 Analog Inputs And 1 Output (Composite, S, YUV) Includes 2 YUV/Composite And 3 Composite Cables	1	\$ 1,293.00	\$ 1,293.00
1.3	Broadcast Pix 801 Hitachi Camera Control Controls Up To 9 Hitachi Cameras, RS485 Converter	1	\$ 820.00	\$ 820.00
1.4	Broadcast Pix 624 2100 Extended Warranty. Adds An additional Year Of Parts And Labor To 2100	1	\$ 0.00	\$ 0.00
	NOTE: NO CHARGE ITEM (\$2,000.00 Value)			
1.5	ViewSonic VA503b 15" LCD Monitor	1	\$ 196.00	\$ 196.00
1.6	ViewSonic VX2835wm 28" Widescreen LCD Monitor	1	\$ 650.00	\$ 650.00
1.7	JVC SR-MV45US DVD-R & S-VHS/VHS Dual Deck Recorder	2	\$ 480.00	\$ 960.00

<i>Item</i>	<i>P/N</i>	<i>Description</i>	<i>Qty.</i>	<i>Unit Price</i>	<i>Ext. Price</i>
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1.8		Roscor SYSTEMINTEGRATION Roscor System Integration	1	\$ 5,529.00	\$ 5,529.00
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To complete the following:

- 1) Remove all existing old equipment that will not be reused in the system.
- 2) Install new Broadcast Pix Switcher, ViewSonic Monitors and JVC DVD-R/VHS Decks in customer supplied racks or console.
- 3) Re-wire system as needed. Existing cables between the Control Room and the Council Chambers to be reused where ever possible.
- 4) Complete system check-out and testing.
- 5) Complete system orientation training.
- 6) Complete Roscor System Acceptance Agreement.
- 7) Provide As-Built Drawings

Broadcast Pix Switcher Equipment Section Total: \$ 33,167.00

Section 2: Optional Training Services

2.1		Broadcast Pix 601 On site Training - Day 1	0	\$ 1,905.00	\$ 0.00
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First day includes expenses in North America. Note a minimum of one month notice is required.

All prices quoted in U.S. Dollars

Total: \$ 33,167.00

All Sales are subject to our Standard Terms & Conditions.

Quote Total: \$ 33,167.00

<i>Item</i>	<i>P/N</i>	<i>Description</i>	<i>Qty.</i>	<i>Unit Price</i>	<i>Ext. Price</i>
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Roscor Project Terms

TERMS: 10% Deposit is required with the order; the balance is due NET 15 Days from completion of the installation. A service charge of 1.5% per month will be added to accounts 30 days or more past due.

Freight and Insurance from the point of origin to destination will be prepaid and added unless other arrangements are specified.

"THIS QUOTATION IS VALID FOR 30 DAYS"

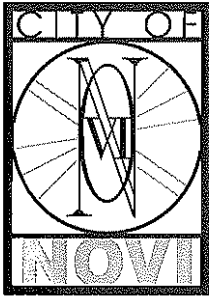
I have read the attached Terms and Conditions.

Accepted for _____

by _____
Name & Title

Accepted for Roscor _____

by _____



MEMORANDUM

TO: CLAY PEARSON, CITY MANAGER
FROM: SHERYL WALSH, COMMUNITY RELATIONS MANAGER
SUBJECT: COUNCIL CHAMBERS A/V EQUIPMENT
DATE: MAY 27, 2008

Following the City Council Meeting on May 12th, audiovisual staff encountered a problem with the switcher in the A/V Room. After several attempts to correct/fix the equipment, it has been determined that the more than nine year old piece of equipment must be replaced.

The switcher controls the ability to move from one camera to another, display graphics, and show PowerPoint and overhead presentations. This piece of equipment is vital to the audiovisual operations and ability to cablecast meetings in a quality format. Without the switcher, staff only has the ability to cablecast one camera shot and has been using a wide shot format for meetings.

A rental switcher has been secured from a local vendor at the cost of \$400 per day. We are only paying for the days the equipment is in use and are using it with exemplary discretion (i.e. have only used it once since installation on May 19th for the City Council Meeting).

After much discussion with A/V staff, it is recommended we replace the switcher with an enhanced piece of equipment called a Broadcast Pix. The equipment's estimated cost of \$35,000 would eliminate the necessity for a character generator (approximately \$9,000) requested and approved in the 2008-2009 Budget and increase the functionality of the A/V control panel.

We are developing equipment specifications and are working with Purchasing Manager Sue Morianti to place the item on Bid Net. It is anticipated the item will be placed on the July 7th City Council Agenda.

Since the Broadcast Pix is an integral part of the A/V Room functionality and will serve the capacity of a few key system components, before installing the equipment in the current A/V Room, we will be investigating the possibility of converting one of the coat "closets" in the Council Chambers to the A/V Room. I look forward to discussing further this possibility once we have an idea as to the cost of such a relocation.

If you have any questions, please let me know.

Slate
Switchers
HD & SD

The Switcher Redefined



Slate is a Live Integrated Production System



Broadcast Pix

Slate is a Live Integrated Production System



(PS) Production Switcher (MV) Multi-View Monitoring (CG) Character Generator (CS) Clip Store





Slate is a Live Integrated Production System

Live video production used to mean assembling an expensive control room and hiring a team to run it. Now Slate switchers from Broadcast Pix have an entire control room built-in. Slate's file based architecture streamlines workflow by integrating with the rest of your studio. Now it's easy to create high-end live television, even working solo.

Now one person can create compelling live television on a switcher with a built-in character generator, clip store and monitoring of outputs and sources. Now clips and graphics can flow into your switcher from your edit bays. Options can extend control to robotic cameras and audio mixers. When you still want a team, Slate gracefully expands.

Slate combines the human interface and on-air robustness of a switcher with the power and flexibility of a contemporary workstation. It's so complete that you just add cameras and a monitor.

HD, SD, Analog or Hybrid

Slate is exceptionally multi-format. Choose an HD/SD model, or SD digital only, or analog, or mixed formats. All processing is 10 bit for pristine quality. HD inputs/output formats include 1080i, 720p, SD, DVI and VGA. And all models can use 16:9 and 4:3 content interchangeably, without distorting native aspect ratios.

Over 700 Installations in over 50 Countries

Broadcast Pix is based near Boston, Massachusetts, with regional offices throughout North America and in Europe. Join the over 700 broadcasters, webcasters, production houses, stadiums, trucks, schools, churches and towns using Broadcast Pix in over 50 countries. It's the new way to switch.



Broadcast
News, sports and events on major networks worldwide



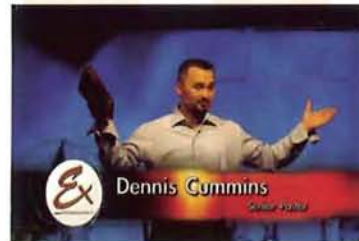
Entertainment
Sports, stadiums and theaters



Corporate
Training, webcasts, presentations and events at leading corporations



Government
From city council meetings to military training



Faith
Projection and cable in all six continents



Mobile
Broadcast vehicles, flight packs and staging.






Education
From distance learning to events and announcements



Slate 100



Slate Models

Slate switchers are available with three different panels. The Slate 100 uses a custom keyboard. A 1M/E panel is used on the Slate 1000, 2100 and 3000. The Slate 5000 features a large 2M/E panel. The 2100, 3000, 5016 and 5032 models include an integrated router or iBoB for enhanced I/O and redundancy. You can upgrade in the field from any model to any model, including upgrading any SD model to HD.

	Slate 100	Slate 1000 to Slate 3000	Slate 5000
	 <ul style="list-style-type: none"> • 1 M/E Switcher, with custom keyboard • Inputs: 4 or 8 live inputs, 1-2 clips and 5 graphics, and 3-6 keyers/DVEs • Multi-View Monitoring • 1-2 channel Clip Store • Inscrber CG • AutoAspect 16:9 & 4:3 	 <ul style="list-style-type: none"> • 1 M/E Switcher, with 1 M/E control panel • Inputs: 4 to 32 live inputs, 1-2 clips and 5 graphics, and 3-6 keyers/DVEs • Multi-View Monitoring • 1-2 channel Clip Store • Inscrber CG • AutoAspect 16:9 & 4:3 * Included on some models 	 <ul style="list-style-type: none"> • 2 M/E Switcher, with 2 M/E control panel • Inputs: 8 to 32 live inputs, 2 clips and 5 graphics, and 6 keyers/DVEs • Multi-View Monitoring • 2 channel Clip Store • Inscrber CG • AutoAspect 16:9 & 4:3 * Included on some models
HD	Slate 100 HD	Slate 1000 HD Slate 3016 HD Slate 3032 HD	Slate 5008 HD Slate 5016 HD Slate 5032 HD
SD HD ready	Slate 100 SD	Slate 1000 SD Slate 2100 SD Slate 3016 SD Slate 3032 SD	Slate 5008 SD Slate 5016 SD Slate 5032 SD

HD, SD, Analog, DVI, Files...

Slate switchers can be ordered with a broad combination of input formats. Output many formats simultaneously.

Slate HD

Switcher / Multi-View / CG / Clip Store



16:9 & 4:3 simultaneously on hh HD models



1080i
720p
HD YPrPb
576i
480i
Analog
Y/C
YUV
DVI
VGA
16:9
4:3
Async
Sync
QuickTime
MPEG2
.tga
.bmp
.jpg
.gif
.png

1080i
1080p
720p
486i / 576i
Analog
Y/C
YUV
DVI
VGA
16:9
4:3

Slate 100 Switcher

In HD/SD, SD, Analog, or Hybrid

Easy Live TV

The Slate 100 is a complete live video production studio that is so affordable and easy to use that anyone can create great looking live television. It includes a switcher, CG, Multi-View and clip store.

The switcher is controlled from either the custom keyboard or the multi-view. If you display the multi-view on a touch screen then you can just touch the camera you want to bring it to preview. Touch the keys to add a graphic. Then just touch preview to bring composition to air.

It's so easy to learn that you can quickly teach a novice to create great looking live TV.



Custom Keyboard

The Slate 100 includes a custom keyboard version of the 1000's panel. It provides the tactile feel and fast-action switching which many prefer in live production. And it can instantly shift into normal keyboard mode for use with the CG and other applications. It's optional on larger Slate models.

SoftPanel

Any Slate model can also open a SoftPanel, a software version of the Slate 1000's innovative control panel. The same classic switcher layout. The same device control. It even has soft knobs and a 3 D joystick. It opens in a web browser, so you can be anywhere.



Integration of Switcher with...

(Whether you have a 100, 1000, 2100, 3000 or 5000)

Multi-View Monitoring

- View preview, program & camera sources, plus thumbnails of keys & libraries
- View tally status, transition rates & key settings

Clip Store

- On transition to air, auto-start clips & animations
- Use PixPad to view clip content libraries
- See active clip in source & keyer PixButtons

CG

- Use PixPad to view CG & select from libraries
- See active CG in source & keyer PixButtons
- On transition to air, auto-start roll & crawls
- Change crawl speed, even on-air

Still Store and Logo Store

- Use PixPad to view still & logo content libraries
- See active still & logo in source & keyer PixButtons
- Freeze an input, program or preview as a still
- Link chromakeys with stills for a virtual set

Camera Control

- Use joystick for tilt/pan/zoom, & PixPad for presets
- Use knobs for focus, iris & ccu settings

Slate 3000 Switchers

HD/SD or SD Only Maximum I/O and Fail-Safe

The Slate 3000 starts with a Slate 1000 and adds an integrated router for more I/O and redundancy, as well as a second channel of clip store. Broadcast Pix software provides integrated fail-safe switching and display of all sources on the multi-view.

Slate 3016 is available in HD/SD-SDI or SD-SDI only and includes a 16x16 router. It provides up to 16 live inputs, 2 channels of clips and 5 of graphics, and has 8 outputs for program, preview, clips or any (live) input. 2 inputs and outputs can be DVI or VGA for laptops and projectors.

Slate 3032 is HD/SD-SDI or SD-SDI only, and adds the ability to select up to 18 of its inputs in each show, and has 24 outputs.

Two switchers can share a central router by adding a Slate 1000 or Slate 100 to a Slate 3000 (or to a Slate 5016 or 5032) switcher. For larger facilities, this greatly simplifies wiring, lowers cost, and provides separate control points.

Options for Slate 3000 (and 5016, 5032):

- Remote aux control panel(s) 16x1
- Tally box for all live inputs



16x16 router
on a Slate 3016

Two Switchers can Share a Central Router



32x32 router
on a Slate 3032



Slate 2100 Switcher

SD with Analog and Fail-Safe

The Slate 2100 starts with a Slate 1000 and adds an iBoB (intelligent break-out-box) for more I/O and redundancy. It also includes a second channel of clip store.

The iBoB has 8 SD-SDI live inputs, four of which have built-in converters from analog composite, Y/C and component. Program and preview outputs are also in both SDI and analog. The iBoB also adds a downstream keyer for an external source, like a legacy CG. And it includes tally outputs. For the clip store it adds AES/EBU to the 1000's analog audio.

Add a Slate option card for 4 more inputs in HD, digital or analog.



iBoB on a Slate 2100

Fail-Safe On Air

Broadcast Pix switchers have unprecedented redundancies built in for 100% on-air performance.

Ride through a Panel Failure

If someone spills a drink on your panel and kills it in the middle of a show, you can still control everything on the included SoftPanel, or from the keyboard shortcuts. No other switcher provides this level of redundancy.

Ride Through a Workstation Stopping

On the Slate 5032, 5016, 3000 and 2100 you can still switch your cameras if the workstation should ever stop, thanks to a redundant serial connection from the panel to the router or iBoB. On the Slate 100, 1000 and 5008 your most important camera will automatically stay on air.

Ride Through a Power Supply Failure

The Slate 5000, 3000 and 2100 have redundant power supplies for the panel and router or iBoB, which are optional on other models. Redundant power for the Slate workstation is optional on all models.

Slate 5000 Switchers

In HD/SD, SD only, Analog, or Hybrid



2 M/E Live Integrated Production System

Sophisticated Live HD/SD Productions at a New Price Point

The Slate 5000 is the industry's first and only integrated production system to integrate 2 M/E functionality. It allows a single operator to run all aspects of a large, sophisticated 2 M/E live HDTV production, including complex graphics, animations, clips and effects, as well as control robotic cameras, audio mixers, and video servers. It is ideal for larger studios with more cameras in broadcasting, webcasting, stadiums, events and other larger venues. Available in HD/SD or SD only.

The new Slate 5000 2 M/E switcher has the switcher capabilities of the top, established 2 M/E production switchers on the market today. But the Slate 5000 is unique in that it also includes and integrates all of the functionality of an entire live production control room—switcher, CG, clips store, still store, multi-view monitoring, aspect ratio and format conversion, and video routing. It creates a dramatically more cost-effective price point, far lower than any alternative HD/SD or SD live production suite, which makes powerful live video productions suddenly affordable, in both equipment and staffing.



Slate 5000 Switchers

Big Switcher Features

Over 700 Broadcast Pix 1 M/E (Mix/Effect) switchers are in use in 50 countries. Now the Slate 5000 brings this popular live integrated production system to larger studios. The Slate 5000 has 16 source buttons per row, and can access 32 with a shift function. The Slate 5008 model uses all 16 source buttons with 8 cameras, 2 clip channels, 5 graphic channels and black. The Slate 5032 can support up to 32 cameras and 22 auxiliary outputs. For large facilities, a large router can serve multiple Slate 2M/E and or 1M/E switchers, which streamlines wiring and provides separate control points for TV, Internet, mobile, etc. Remote aux panels and tally boxes are also available, see page 7

6 keyers provide pristine keying, and each includes a DVE, which can create a box. Key priority can be changed on the fly. The keyers are exceptionally easy to fill from internal clip and graphic stores, or 2 keyers can be combined to support an external video and key input, such as a legacy CG.

2 M/Es for More Powerful Productions

The extra M/E is always available to build your next composition. It provides a handy workspace to maximize your creativity.

Or use the extra M/E to create a complex composition which you can then embed in the on-air M/E. For example, add a title to a camera in M/E1, and then squeeze it into a DVE box and show the camera with title composition for an over the shoulder box in M/E2 on air.

Or use the two M/Es independently to create two independent shows, such as a live event with two screens. Or, the second output might be as simple as having a different logo.

Unique Broadcast Pix Capabilities

The Slate 5000 is a break-through in 2M/E switchers:

- First 2M/E switcher to be a complete live video production system.
- First 2M/E studio that enables a solo operator or small team to create highly compelling live content.
- All keyers are available to both M/Es.
- Dual channel clip store is standard, with 30 hours of QuickTime or MPEG2 clips, or animations, with key and audio.
- Like all Slate switchers, a five channel graphic store and Inscribe CG is standard, as are integrated Memories and Scripts which recall integrated moves of all devices.
- Each source has direct access to AutoAspect controls to use 16:9 and 4:3 content interchangeably. Plus Slate 5000 hh models can simultaneously produce both 16:9 and 4:3 versions of a show at the same time.
- Fail Safe redundant panels, power, etc. (see page 7)
- Includes 3 SoftPanels to enable more operators. You can also add a 1 M/E panel to a 2 M/E system. These can be used remotely over a network or Internet.
- Slate 5000 multi-view shows all sources and keyers, plus dual device control library PixPads, on monitors of 1680x1050, 1366x768 or 1920x1080, as shown below. Attach up to 4 monitors.



Slate 5000 Models

All models include a control panel and workstation with Slate boards installed, and provide (M/E2) program, preview and M/E1 program outputs, and at least 1 fail-safe camera. An internal aux output can be created for an internal device like a clip store by forgoing 1 keyer. ME/1 foreground may be activated by forgoing 1 keyer. All hh models have 2 DVI/VGA video inputs and outputs and ha and hd models have 1. Model 5016 and 5032 add an integrated router for more live inputs, plus many auxiliary outputs for cameras, and fail-safe switching of cameras. (Monitors not shown, but 2-4 can be added).



Model 8 Live inputs
5008hh 8 HD/SD
5008hd 4 HD/SD, 4 SD
5008ha 4 HD/SD, 4 analog
5008dd 8 SD
5008da 4 SD, 4 analog
5008aa 8 analog



Model Live inputs
5016hh up to 16 HD/SD
5016dd up to 16 SD

Also adds:
- 6 aux outputs
- fail-safe switching



Model Live Inputs
5032hh up to 32 HD/SD
5032dd up to 32 SD

Also adds:
- 22 aux outputs
- fail-safe switching

Slate 5000 Switchers

M/E2

On-Air Program and Preview buses with access to all 6 keyers

M/E1 - Many ways to use:

- Set up your next composition
- Composition keyed into M/E2
- Or control a second output

16 Buttons per row

For 16 sources, or shift to access 32 sources

Destinations

Select a key or aux to fill and to access device controls for them



PixButtons

Displays in the buttons show device, file name and tally status at a glance (patent pending)

Two Source PixButton rows

See source contents, and press to set source's Aspect ratio correction and chromakey



Table top or in a cut-out.

Slate 5000 Switchers

Device Control A

Intimately control any clip store, graphic store, camera, server....

Device Control B

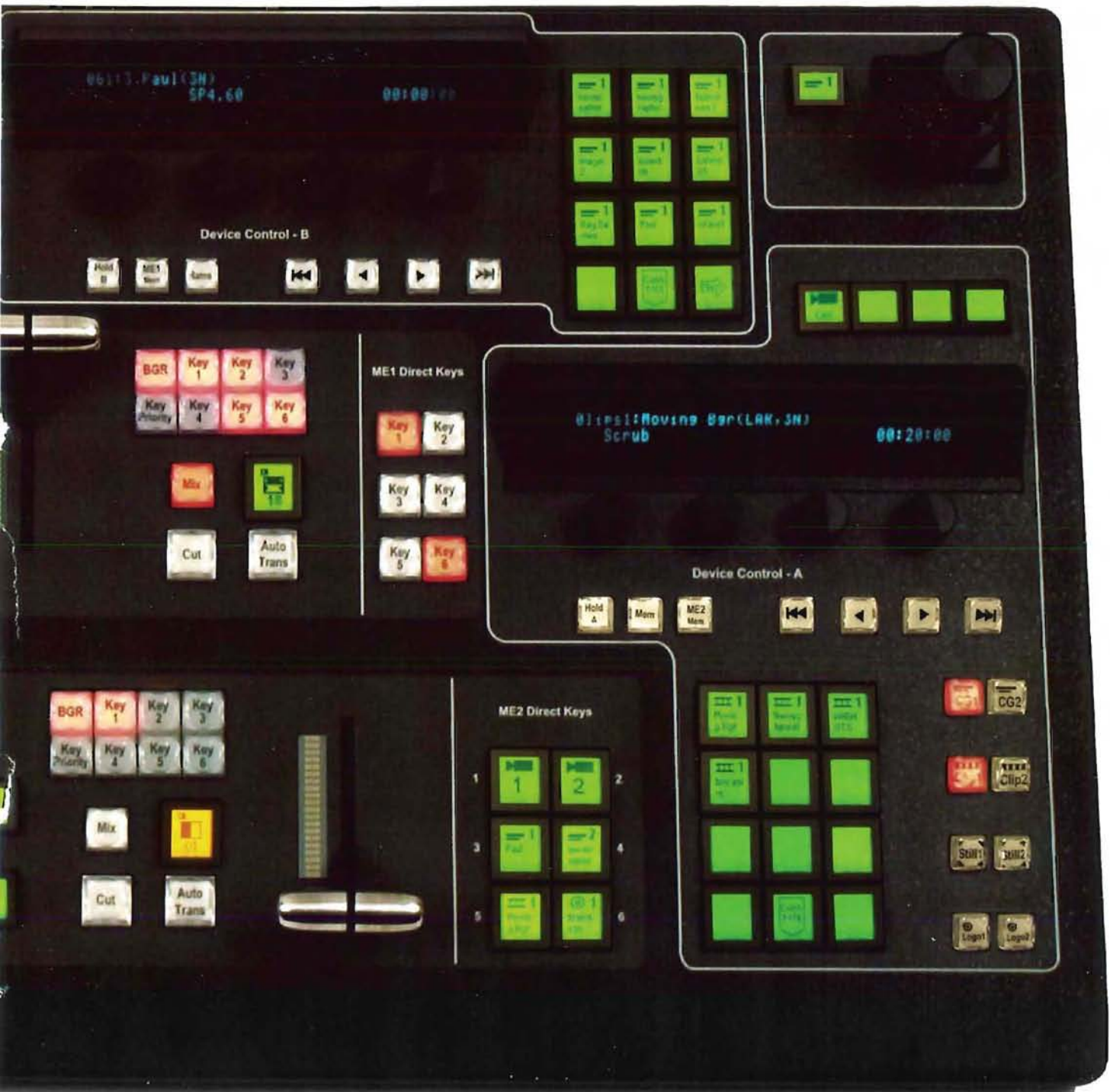
Control a keyer, Fx, aux, or use hold for a clip store,....

Integrated Memories

Recall switcher set-ups plus file names and attributes of clips & graphics

3 Axis Joystick

Use with either device controls for positioning DVE Boxes, keys, Cameras, ...



Alpha Wipes

Modern animated transitions with your logo and audio. Also do fades, wipes, DVE tpushes,...

Classic Next Transition

Complete control of which layers transition, style, and key priority

6 Universal Keyers

All keyers are available to both M/Es. PixButtons show device contents.

12 Device Selectors

Instant access to any clip or graphic store and external devices

Multi-View

Included on all models

Custom Layout on Wall Monitor



Monitoring

Every Slate includes on-screen monitoring of preview, program, keys and sources. Live inputs and clips have motion, and other sources use thumbnails. All live inputs are in full motion on the Slate 100 and 1000, while 7 are in full motion on larger models. They tally red on air, and orange on preview. Video monitors are not needed but can be added.

PixPad Thumbnail Libraries

You can find content easily on the PixPad which shows the library of thumbnails for any selected source, which correspond to the panel's PixPad buttons.

Use Any Size Monitor

Slate supports a wide variety of VGA monitors. On Slate 100 through 3000 models a personal monitor is recommended for the switcher operator with a factory layout of 1280x1024 or 1680x1050. You can also plug in a wall monitor: 1920x1080, 1440x900, 1366x768 or 1680x1050. You can even customize your layout with any monitor layout, clocks, clips counter, PixPads, etc. For Slate 5000 monitoring see page 9.

Dual or Quad Monitors for More Operators

All Slate switchers support dual monitors, so when you want a separate graphic station just add a monitor for the CG, and open a SoftPanel, a PixPad library, and even full motion source monitors. The quad-monitor option enables you to connect four monitors, as shown below.

Switcher



Wall Monitors



CG



Integration of Multi-View with...

Switcher

- Push-buttons for every source & key shown
- PixPad dynamically linked to thumbnail libraries
- Switch on the Multi-View itself with mouse or touchscreen to select keys, sources, take,...

Clip Store

- View clips in full motion on monitor
- View clip libraries & tally status
- View clip time code, countdown & attributes

CG

- View CG titles in keys & libraries
- View tally status of CG titles
- Right-click a CG thumbnail to edit "on the fly"

Still Store and Logo Store

- View loaded graphics, libraries & tally status
- Right-click a still or logo thumbnail to edit "on the fly"

Clip Store

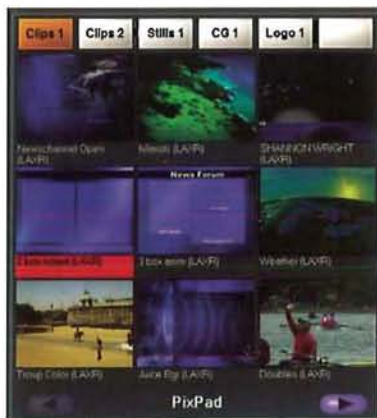
Included on all models

Built-in Clip Stores

All Broadcast Pix switchers have a built-in clip store, which play QuickTime and MPEG2 clips, animations or uncompressed digital clips. The Slate 100 and 1000 include one channel, and the second is optional. Two clip stores and 30 hours, are standard on the 2100, 3000 and 5000 models. Clips can have a key channel, that can be used in keyed transitions and animations.

Easy to Use

The PixPad on the switcher panel shows the names of the clips on the PixButtons, as shown at the right. The monitor wall can show the corresponding thumbnails, and provides full motion monitoring of the active clips in both channels. Selecting a clip is as easy as pushing its PixButton, or clicking on its thumbnail. Use the motion buttons to play.



Thumbnails PixPad



PixButtons on PixPad



Clip modifiers



Play, pause, rewind, scrub and timecode

Auto-Start

The clip stores are tightly coupled to the switcher so it's easy for a single operator to add lead-ins, bumpers, or any clips. Any clip or animation can be set to automatically start playing at the instant it is taken to air. No more careful cueing. No need for a second operator to insure your clips start when they are supposed to. Just press the Controls button on the clip PixPad and the clip modifiers appears. Then select Auto-Start. Also, set it to auto-stop when it comes off air, auto rewind, mark-in, mark-out, loop, or aspect ratio.

QuickTime, MPEG2 or Uncompressed

Load up to 60 hours of QuickTime (.mov encoded in DV, DVCPRO or H.264/MPEG-4 AVC) clips and MPEG2 clips onto the clip store over the 1 gigabit network, or from DVD or USB. This streamlines workflow. Record up to fifteen hours of uncompressed clips from any live input.

Animations

The clip store can instantly access and play spectacular animated titles and logos that were created on the built-in Inscribe CG. Or play animated backgrounds, either full screen or squeezed into a DVE box, such as behind a title. Import animations from all popular systems including Adobe Aftereffects, Artbeats, Apple, Digital Juice, Avid, Motion,... Other switchers either have no support for animations, or limit them in size and loading speed.

Audio

All clips can have audio, with 6 XLR connectors for analog stereo audio: one pair for recording onto the clip store, and two pairs for playing out two channels to send to your mixer. All clip stores also accept and playout audio embedded in the SD-SDI stream. The 2100 also adds digital audio AES/EBU.



Clip counter on Mult-View

Integration of Clip Store with...

Switcher

- On transition to air, auto-start clips & animations
- Use PixPad to view clip content libraries
- See active clip in source & keyer PixButtons

Multi-View Monitoring

- View clips in full motion on monitor
- View clip libraries & tally status
- View clip timecode, countdown & attributes

CG

- Create animated titles in CG, then play on the Clip Store
- Use Clip Store to add an animated background to a title

Still Store and Logo Store

- Take logo into CG, animate it, & play out on clip store



Inscriber Character Generator

Included on all models

Broadcast Quality

Create broadcast quality graphics with the Inscriber TitleMotion character generator (CG) that is included in every Broadcast Pix switcher. Inscriber from Harris is used worldwide to create stunning graphics in the most demanding broadcast applications. Enjoy superb anti aliased resolution of less than 16nS, sub pixel scrolling, fine-transparency, soft edge, shadows and glows, and animated titles.

Easy to Use

It has never been so easy to add great graphics to your productions. The CG includes templates that make novices look like pros. Just select one from the drop down menu, type in your text and save. Or create your own templates with Inscriber's powerful composition tools, or import one from Photoshop or another system.

On Air Updates

While a production is on-air you can right-click an existing graphic to edit it on the fly, or add new ones. Great for a surprise guest title, sports or a game show.

Create Logos, Stills & Animations

TitleMotion is a complete graphics system. Import digital photos and a wide variety of graphic formats, including .tga, .bmp, .gif, .jpg, .tif, and .png. In minutes you can grab a logo off a web site, add a shadow and animate it for a beautiful spinning logo. Create backgrounds and over the shoulder graphics for the still store.



Integration of CG with...

Switcher

- Use PixPad to view CG content libraries
- See active CG title in source & keyer PixButtons
- On transition to air, auto-start rolls and crawls
- Change crawl speed on-air with a knob
- Reposition any keyed graphic with a DVE

Multi-View Monitoring

- View CG titles in keys & libraries, with tally status
- Right-click on a CG thumbnail to edit "on the fly"

Clip Store

- Create animated titles & play as a clip

Still Store and Logo Store

- CG creates a still or logo

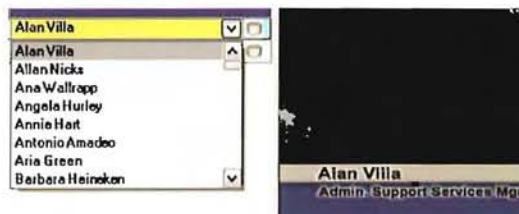
External Database

- CG Connect option couples an external database to the on-air CG, such as athletes' statistics & pictures.

CG Connect

Optional on all models, option 120

CG Connect links a CG template to a database. Just create the template you want, and tie its elements to an xml database on the Slate system, or to another computer on the network. Then select the data you want and it will automatically and instantly fill the CG page, even when on-air. Now when you have a database of names and titles, you do not have to re-key them. It's also great in all live sports applications, to keep score, or select a player and get all their stats and related graphics. You can even insert a clock into a CG page, and it will update on-air automatically.



Automatically fill a CG template from a database. Just click on the name, and both the name and title will fill, even on air.



CG Connect is great for all sports, and can do scores, and graphics.

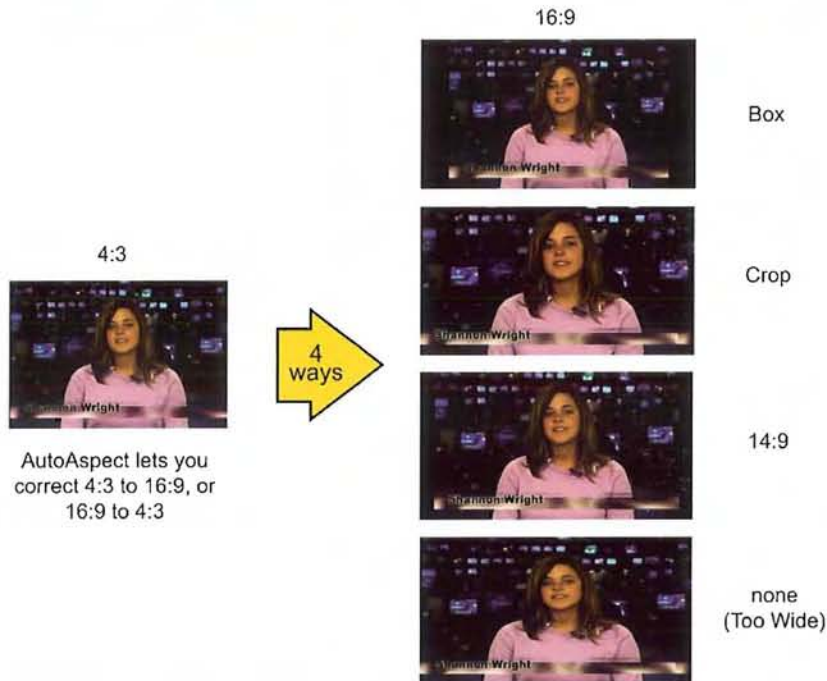
AutoAspect

Included on all models

Whether you are creating a widescreen 16:9 show, or a traditional 4:3 show, AutoAspect solves the many challenges of mixing 4:3 and 16:9 content in the same production.

Now 16:9 and 4:3 inputs, clips and graphics can be used interchangeably and mixed together in the same live production, while maintaining the native aspect ratio of each element. Conventional switchers can only stretch video when crossing aspect ratios, causing people to look too wide or too thin. Slate enables each input to be set to one of 4 aspect treatments: box, crop, 14:9 or none (anamorphic). And each clip and graphic in the libraries can be separately treated in these four ways.

While aspect treatment of inputs is standard, you can also simultaneously output 16:9 and 4:3 versions of the same 16:9 show with any Slate 100 HD, 1000 HD or 5008 HD models on which a second HD I/O board is installed, or on all Slate 3000 HD, 5016 HD or 5032 HD models. See picture on page 4.



Alpha Wipes

Included on all models

Switchers are known for great transitions. Slate switcher can not only do fades, wipes, and DVE moves, they can also do the latest alpha wipes, even with audio. Alpha wipes provide the contemporary look that formerly required a separate box. Alpha wipes are standard, and you can easily customize them, with your own logo, using any popular animation package. Your production will look just as polished as the richest network production. Play them from the built-in clip store using the alpha wipe script memories, so they fire off flawlessly every time. They can be silent, or can even add audio for a swoosh, or other sound effect. Your transitions no longer have to look "so 1990's".



Keyed alpha wipe transitions show the next video through the animation



Customize with your own logo

Still Stores and Logos

Included on all models

Select stills or logos to assign the device controls to it. And like clips and CGs, the names of the stills and logos show on the PixButtons and their thumbnails show on the monitor wall. Use five channels of stills and logos. Import a wide variety of formats: .tga, .bmp, .gif, .jpg, .tif, and .png. You can import pictures from a digital camera, download them from the Internet, or bring them in from the built-in Inscrber CG, or from other graphics packages like Photoshop.



PixPad of Stills

Integration of Still Stores & Logos with...

Switcher

- Use PixPad to see still & logo content libraries & select from them
- Active graphics in source & keyed PixButtons
- Couple stills & chromakeys for a virtual set

Multi-View Monitoring

- View loaded graphics, libraries & tally
- Right-click on a thumbnail to edit a still or logo "on the fly"

CG

- Create stills & logos in CG, including importing a wide variety of graphic formats

Clip Store

- Animate a logo in the CG, & play it out on the clip store

Camera Control

Optional on all models

Add camera control for the ultimate "one man band", and further reduce staffing requirements.

Press the Camera Control button on the panel and all of the device controls are instantly assigned to camera control. Use the PixPad to select the camera you wish to control and then to select preset camera positions. Or manually control a camera with the 3-axis joystick for tilt, pan and zoom. Push it a little to move slowly, or harder to move faster. Knobs control focus and iris. CCU (Camera Control Unit) functions, like white balance, can be accessed from the PixPad and knobs.

Sony Camera Control Option

Controls the Sony VISCA protocol including the Sony EVI HD1, BRC 300 and BRCH700 cameras illustrated at the right. Control up to 9 Sony cameras with 6 preset positions per camera.

Option 800 includes Broadcast Pix software and a cable to connect the workstation's serial output to the VISCA connector on the first camera for a 232 daisy chain. Option 811 (requires 800) adds a serial to 422 converter to increase camera runs from 60 feet (18 meters) to 4,000 feet (1,200 meters). Option 814 and 818 (both require 800) provide 4 or 8 serial ports to simplify wiring in a star configuration, rather than a daisy chain.

Hitachi Camera Control Option

Control up to 9 Hitachi cameras using their Eagle pan/tilt heads. Control up to 31 preset positions on each camera. Includes Broadcast Pix software and a serial to 485 converter (Option 801).



Presets and CCU controls on the PixPad



Sony Camera Control



Hitachi Camera Control



Integration of Camera Control with...

Switcher

- Use joystick to control tilt, pan & zoom
- Use knobs for focus, iris & CCU settings
- Use PixPad for preset positions & CCU settings

Multi-View Monitoring

- View cameras in full motion

CG with Script Memory

- Use a script memory to automatically recall a preset position & fade on its title with one button

Audio Follow - Audio Mixer Control

Optional on all models, option 880

Extend the "one-man-band" to audio. Audio-Follow-Video software enables an audio mixer to automatically follow all action on the Slate video switcher. Unlike conventional switchers that utilize antiquated ESAM protocols for Audio Follow, Broadcast Pix uses MIDI (Musical Instrument Digital Interface),

so it works with many audio mixers, and is much more affordable and yet more powerful. As each video source goes to air it triggers commands on the mixer, or even an entire mixer scene memory including volume, fade, pan an effects like echo and reverb. Includes USB to MIDI adapter.



Integration of Audio Control with...

Switcher

- Tie each video source to one or more audio sources, or an entire audio scene.

Clip Store

- Tie each channel to the mixer.

Teams

Included on all models

Slate is exceptional for solo use, but gracefully expands to team use. Some productions, like live sports, have so much spontaneous graphic action that a separate graphics operator is needed. All Slate systems support two monitors. On Slate 1000, 2100, 3000 and 5000 models, the switcher operator can use one monitor for the multi-view with panel, and the graphics operator can use the other with keyboard and mouse. Have more team members by adding the quad monitor option, and more SoftPanels. The physical and SoftPanels can be locked together, or be independent so one person can be on a clip store, while another is on a still store, another on a CG, etc. Operators can be anywhere on the network – in the studio, in the back room, even thousands of miles away, since the softpanel opens in a web browser (patent pending). On the Slate 100, team members can use a SoftPanel on another computer on the network.



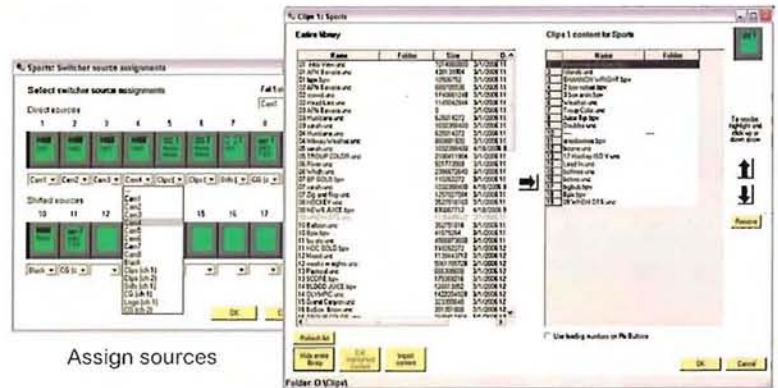
Switcher Operator

Graphics Operator

PixMaster

Included on all models

Slate switchers include a powerful pre-production tool called PixMaster, which enables a show to be rapidly prepared. PixMaster saves a tremendous amount of time compared to conventional studios where each device must be prepared independently. Assign the sources on the switcher. Open the content library for each source, select the graphics and clips for the show, and arrange their order. Import graphics, and resize and smooth if necessary. Manage Memories. Add devices to the show. Print out a listing of all show content.



Assign sources

Select the content for a show from the master library and arrange it.

Memories

Included on all models

Like any professional switcher, Slate has an extensive memory system; but unlike conventional switchers these memories can recall switcher parameters AND the exact content of graphics and clips and their attributes. For example, a single memory can recall a dual box, as shown here, including the key settings for each DVE box, and an animated background from the clip store and a crawl from the CG. The recall also can remember if the animation and crawl are set to auto-start when taken to air, and the speed of the crawl. Powerful script memories recall a sequence of moves. For example, with one press you can select a camera on preview, change its preset position, bring it to air, fade on its specific title from the CG store, and fade off the title.



Dual Box Memory

PixButton on the Mem PixPad

PowerAux

Optional on all models, standard on 5000

Create the most powerful Aux output on any switcher, to essentially give you two different program outputs. On conventional switchers, the auxiliary outputs show only a simple background image. PowerAux enables Slate switchers to produce an advanced auxiliary output with up to six keyers applied. This is ideal for producing two simultaneous shows from the same switcher, for two different audiences.

Channel Branding



TV & Internet



Projector & Cable TV



Slate Specifications

Video

- HD I/O: 720p/59.94, 720p/50, 1080i/59.94, 1080i/50
- SD I/O: SMPTE 259M
- DVI I/O: DVI-D, DVI-I, VGA
- DVI I/O formats by adding a DVI cable: HD analog component (input only), 1080p (output only via HDMI)
- Processing: component 10-bit 576p/486p
- Analog I/O has 10-bit conversion
- NTSC or PAL switchable
- 4:3 or 16:9 switchable
- Requires analog reference

Low Delay

	Milliseconds
	<u>NTSC / PAL</u>
• SD delay through system with genlocked cameras, even inside a DVE box and with AutoAspect on (1 SD frame)	33 ms / 40 ms
• Delay added by an asynchronous source	+ 33 ms / 40ms
• HD 720p for IMAG delay through system and projector with genlocked cameras	67 ms / 80 ms
• HD with 1080i and 720p for studio delay through system with genlocked cameras	100 ms / 120ms

Clip Audio

- All models: embedded in the SD-SDI stream SMPTE 272M, and analog stereo audio I/O
- 2100 adds: AES/EBU digital I/O

Workstation

- Software: Broadcast Pix, Inscrber TitleMotion CG, Windows XP
- Hardware: Slate boards, dual disks, r/w DVD/CD, keyboard, mouse
- Requires Monitor: (1680x1050 or 1280x1024 on 1 M/E models)
- Support second monitor: 1920x1080, 1680x1050, 1280x1024 or 1366x768

Weight

	100	1000	2100	3000	5000
• Lbs	48	56	68	65	75
• Kg	22	25	31	30	34

Power

	400	450	500	500	600
(watts)					

CG

- Anti aliased resolution <16nS
- Import formats: .psd, .tga, .bmp, .gif, .jpg, .tif, and .png

Dimensions

Workstation (on all models)	
• rack units	4
• inches	19x16.75x7
• centimeters	48x43x18
1M/E Panel (on 1000, 2100, 3000)	
• inches	8.5x12.5x5.5
• centimeters	47x32x14
2M/E Panel (on 5000)	
• inches	15.5x31x8
• centimeters	39x79x20
iBoB (on 2100)	
• rack units	6
• inches	19x10.5x3
• centimeters	48x27x8
Routers (on 3000, 5016, 5032)	
• 16x16 Router	1 RU
• 32x32 Router	2 RU

Slate Video I/O

Sources can be synchronous and /or asynchronous, to support a wide range of inputs from broadcast cameras to DVD players.

Slate 100, 1000, and 5008

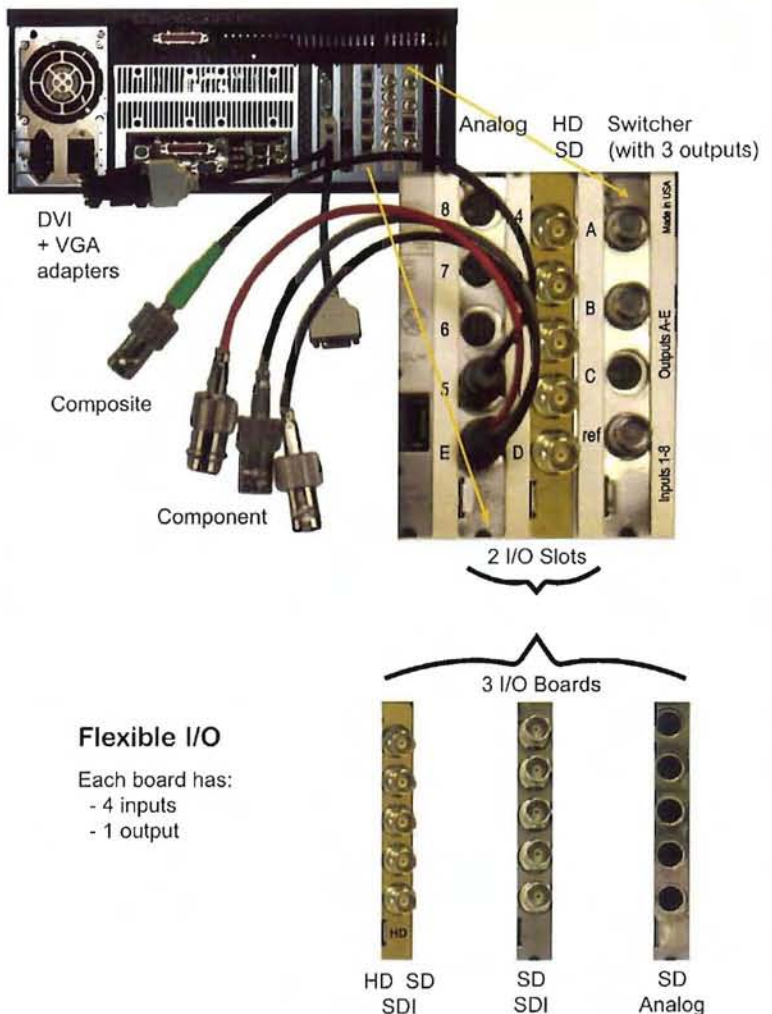
Live inputs from cameras and other external sources attach to the back of the workstation. Inside, they are combined with clips, animations and graphics playing on the system's disk drives.

The switcher board on the right, does the processing and contains 2 SDI video outputs, 1 analog video output and an analog reference input. There are also 2 slots for I/O boards for any combination of HD/SD SDI, SD SDI or analog boards, each of which adds 4 inputs and 1 output. The HD/SD board also adds a DVI and VGA converter to convert 1 of its inputs and/or the HD output, if desired. SDI connections are BNCs, while analog connections accept S and use breakouts to BNCs for composite and component.

On the Slate 100 and 1000, an optional second I/O board can be installed in any format, to increase capacity to 8 live inputs and 5 outputs. For example, the illustration shows a system with both an HD/SD SDI board and an analog board. (This second board is standard on the Slate 5008.)

Slate 3000, 2100, 5016, and 5032

As described on page 7 and 9, these models add an external I/O matrix (either a router or iBoB) to provide more I/O and fail-safe switching. These models include a Slate switcher board and two SDI input boards (one on 2100), and the various SDI inputs and outputs on these boards are connected to the external matrix. An optional second I/O board can be installed in the Slate 2100 for more I/O.



Flexible I/O

- Each board has:
- 4 inputs
 - 1 output

Options

● - included ○ - optional 1 - one included, more optional

100	1000	2100	3000	5000	Part #		
Switcher							
○	○	○	○	●	120	PowerAux	Enables 3 keys (6 keys with option 126) to be added to the Aux outputs
○	○	○	○	●	126	Keys 4,5 & 6	Adds 3 more keyers (key 4, 5 & 6), each with a DVE
○	○	●	○	○	28	Tally Box 8	Tally output for 8 live sources, plus 8 GP inputs
			○	○	29	Tally Box 24	Tally output for all live sources, for Slate 3000 and Slate 5000
○	○	○	○	○	140	8 Chromakeys	Increases standard 1 chromakey to 8, for creating a virtual set
●	○	○	○	○	5	Custom Keyboard	Upgrade standard keyboard to one lettered with shortcuts
○	1	1	1	1	10	Control Panel 1M/E	Broadcast Pix physical control panel 1M/E
				1	12	Control Panel 2M/E	Broadcast Pix physical control panel 2M/E
○	○	○	○	○	90	Tower workstation	Change rack-mounted workstation to tower
1	1	○	○	○	100	SoftPanel/Scripts	License for simultaneous control by a team member
○	○	1	1	1	103	3 SoftPanels/Scripts	Licenses for simultaneous control by team members, quantity 3
			○	○	18	Remote Aux Panel	Remote Aux Panel, 16x1, for Slate 3000 and Slate 5016, 5032

More Video I/O							
○	○	○			47	More Analog I/O	<i>Note: can add only one of 47, 48 or 49 to a 100, 1000 or 2100.</i> 4 analog inputs & 1 output (composite, S, YUV) – break-outs included
○	○	○			48	More Digital I/O	4 SD SDI inputs and 1 SD SDI output
○	○	○			49	More HD SD I/O	4 HD SD SDI inputs and 1 output (720p, 1080i, SD), 1 DVI/VGA I/O
1	1	1			46	YUV break-out	1 YUV break-out-cables to BNCs, for more component I/O
○	○	○	○	○	51	1080 HDMI Output Cable	DVI to 1080p HDMI output cable, requires HD I/O
○	○	○	○	○	52	HD Component Cable	HD analog component (YPrPb) to DVI input cable, requires HD I/O

CG, Clip Store, Multi-View							
1	1	1	1	1	160	Another Inscrber CG	Additional Inscrber TitleMotion Pro to create graphics on another PC
○	○	○	○	○	170	CG Connect	Connects on-air CG to an external database
○	○	●	●	●	301	Clip channel 2	Adds 2nd channel of clips, plus another 15 hours of storage
○	○	○	○	○	318	More Clip Storage	Up to 60 hours with larger disk drives - <i>Req 301</i>
○	○	○	○	○	340	Quad Monitors	Upgrade dual monitor support to quad monitors

External Device Control							
○	○	○	○	○	880	Audio Follow Video	Control most audio mixers via MIDI, so audio follows video action
○	○	○	○	○	800	Sony Cam Control	Control up to 9 Sony cameras, with VISCA protocol: daisy chain
○	○	○	○	○	811	422 converter for Sony	Serial to RS422 converter for Sony Camera control – <i>Requires 800</i>
○	○	○	○	○	814	422 star for Sony – 4	USB to RS422 box with 4 serial ports for Sony star - <i>Requires 800</i>
○	○	○	○	○	818	422 star for Sony – 8	USB to RS422 box with 8 serial ports for Sony star - <i>Requires 800</i>
○	○	○	○	○	801	Hitachi Cam Control	Control up to 9 Hitachi cameras: software and serial to RS485
○	○	○	○	○	823	360 Harris DDR Control	Control a 360 Systems or Harris server (VDCP protocol)

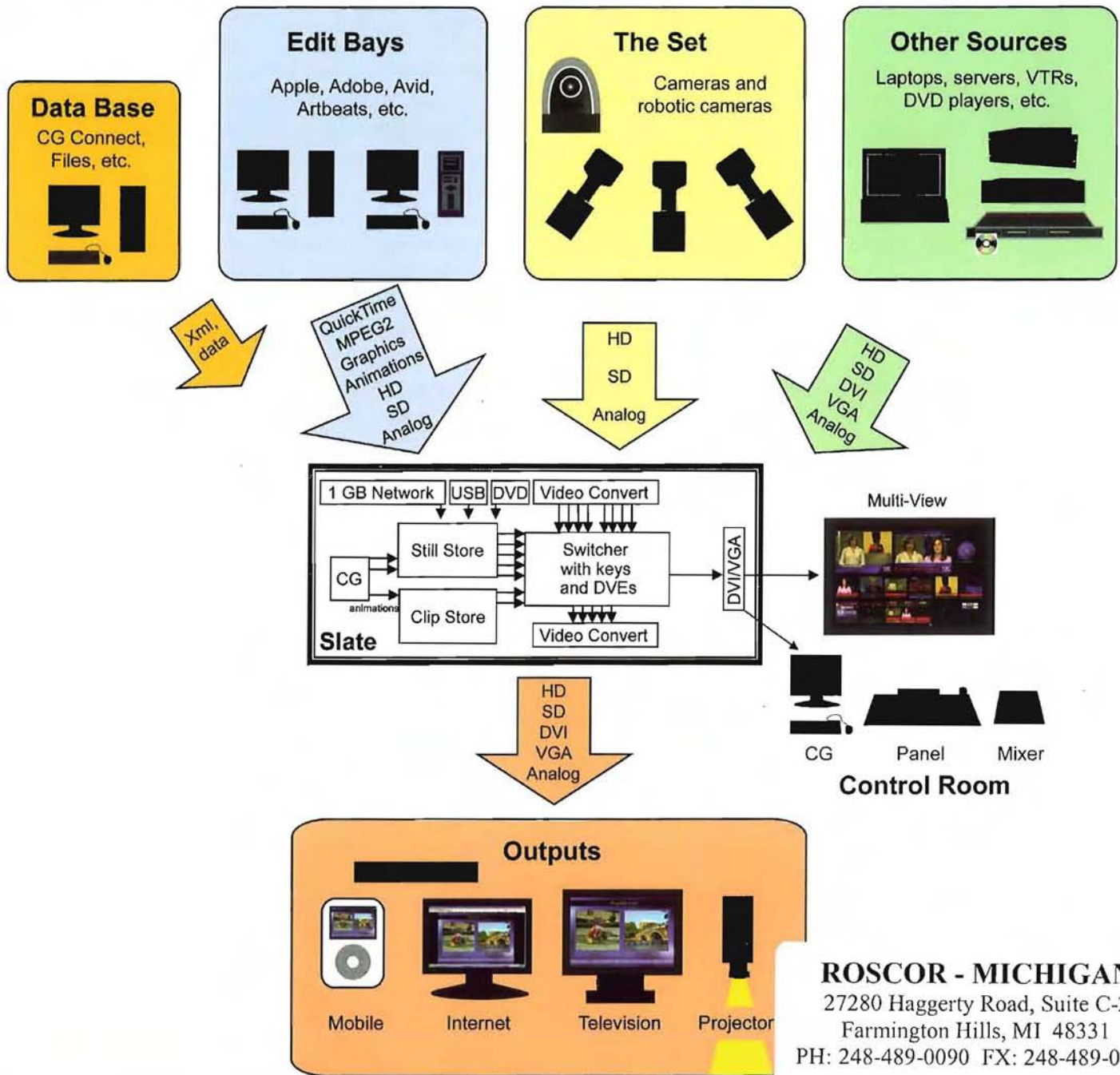
Redundant Power							
○	○	●	●	●	201	for Control Panel	Adds a second external redundant power supply
○	○	○	○	○	204	for Workstation	Adds a second internal, hot swappable, redundant power supply

Services							
○	○	○	○	○	601	On site Training 1	First Day. Includes expenses, with 4 week's notice
○	○	○	○	○	602	On site Training	Each additional day, to extend the training session in Option 601
○	○	○	○	○	620-6	Extended Warranty	Additional year of parts and labor
○	○	○	○	○	651	Extended Software	Additional year of free software upgrade
1	1	1	1	1	680	Owner's Manual	Additional hard-copy of owner's manual, 1 is included with system

Streamline Workflow

**Slate
Switchers**

Slate streamlines live video production workflow so you save time, save money, and make better television. This illustration shows a Slate 100, Slate 1000 or Slate 5008. Slate 2100, Slate 3000 and Slate 5016 and 5032 models add an external switching matrix for more I/O and redundancy.



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- | | | |
|-------------------------------|-----------------|----------------|
| • Northeast US and Canada | Boston, MA | 1-978-600-1104 |
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Broadcast Pix

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VX2835wm

28" WIDE (27.5" VIEWABLE)
MULTIFUNCTION LCD

WITH HDMI FOR HD QUALITY VIDEO

Desktop experience amplified.

ViewSonic's 28" VX2835wm widescreen (27.5" viewable) LCD amplifies your desktop experience. With ultra-fast 3ms response and integrated speakers and amp, the VX2835wm offers high-performance features that elevate your desktop to a whole new level. Work more productively on the EXPANSIVE 27.5" WIDESCREEN DISPLAY. Play more intensely with HD games, movies and videos in their native format. MULTIPLE VIDEO CONNECTIONS including HDMI let you SELECT THE BEST INPUT SOURCE for your digital entertainment. The high 800:1 contrast ratio (typ) and high 500 nits brightness (typ) produce remarkably bright and rich colors. Integrated digital speakers and VESA® wall-mount compliance save space and reduce desktop clutter. The VX2835wm is perfect for the serious gamer and movie aficionado who want a complete digital entertainment experience on the desktop.



WORK FASTER, PLAY SMARTER

- Full 27.5" viewable widescreen with 1920x1200 resolution
- True 1080p with HDMI for HD quality video
- ClearMotiv® 3ms video response time
Fast 3ms video response enables digital, HD broadcast-quality video
- Stylish slim-bezel design with glossy, piano-black finish
The thin bezel lets you see more without taking up valuable desktop real estate. The high neck and floating head design accentuate the visual experience.
- Multifunction LCD with OptiSync® digital/analog inputs
Digital HDMI input gives you the best possible connection to HD signals for movies, video and games. Multimedia input technology supports both digital (HDMI or DVI) and analog (VGA) signals.
- Ultra-high brightness and contrast
500-nit brightness (typ) and 800:1 contrast ratio (typ) for rich, detailed images, videos, and games.
- Multimedia enhanced
Save desk and workspace and enjoy rich, stereo sound with built-in stereo speakers.
- OnView® controls for superior screen adjustability
Screen adjustments are precisely made via an easy-to-use on-screen menu.
- Windows Vista approved
- ENERGY STAR® qualified



HDMI™
HIGH DEFINITION MULTIMEDIA INTERFACE



VIEWSONIC
PRODUCTS, PROGRAMS,
AND SERVICES

ViewSonic®
See the difference® 

VX2835wm

28" WIDE (27.5" VIEWABLE) MULTIFUNCTION LCD WITH HDMI FOR HD QUALITY VIDEO



LCD	Type	28" (27.5" viewable) Wide Color TFT Active Matrix LCD
	Display Area	23.4" horizontal x 14.6" vertical, 27.5" diagonal
	Optimum Resolution	1920x1200
	Contrast Ratio	800:1 (typ)
	Viewing Angles	160° horizontal, 160° vertical @ contrast ratio = 10:1
	Response Time	3ms gray-to-gray (avg); 5ms black-to-black (typ)
	Light Source	Long Life, 40,000 hrs. (typ)
	Brightness	500 cd/m ² (typ)
	Panel Surface	Anti-glare
VIDEO INPUT	Analog	RGB analog (75 ohms, 0.7 Vp-p)
	Digital	HDMI (with HDCP), component, composite, S-video
	Frequency	F _H : 24-82kHz, F _v : 50-65Hz
	Sync	H/V separated (TTL), composite, sync-on-green
COMPATIBILITY	PC	VGA up to 1920x1200 non-interlaced
	Mac™	Power Mac™ G3/G4/G5 up to 1920x1200
CONNECTOR	Analog/Digital	15-pin mini D-sub/HDMI
	Power	3-pin AC plug (CEE22)
AUDIO	Speakers	2x3-watt
	Amp	3-watt
POWER	Voltage	AC 100-240V, 50-60Hz (auto switch)
	Consumption	64W (typ)
CONTROLS	Basic	Power, ↑, down, trs, 2
	OnView™	Auto image adjust, brightness, contrast, input select, audio adjust, ViewMatch™ color adjust (sRGB, 9300K, 6500K-default, 5400K, user color - RGB), information (resolution, H, frequency, V, frequency, pixel clock, mode number, serial number), manual image adjust (H, size, H, position, V, position, Fine tune, sharpness, aspect ratio, option), PIP, PBP setup menu (language, resolution notice, OSD position, OSD timeout, OSD background, sleep), memory recall
OPERATING CONDITIONS	Temperature	4-13°C (20-55°C)
	Humidity	20-85% (non-condensing)
DIMENSIONS (W x H x D)	Physical with stand	26.1" x 22.8" x 12.1" (662mm x 578mm x 305mm)
	Physical without stand	26.1" x 19.3" x 3.4" (662mm x 489mm x 87mm)
WEIGHT	Net with stand	26.5 lb. (12.0 kg)
	Net without stand	18.8 lb. (8.5 kg)
	Gross with stand	31.6 lb. (14.3 kg)
REGULATIONS	UL, cUL, FCC-B, CB, CE, ENERGY STAR®, NOM, NEMKO/GS (covers TUV/GS), NEMKO ERGO (covers TUV/ERGO), ISO 14001-2 & MPR II, MPR II, GOST-R + 20 original copies, hygienic, SASO, PC8C, VCCI, BSMI, CCC, PSB, C-TICK, Argentina-S, Green Mark, RoHS, TCO'06	
RECYCLE/DISPOSAL	This computer's product contains mercury. Please dispose of in accordance with local, state and federal laws.	
POWER MANAGEMENT	Meets TCO'06 and ENERGY STAR® standards	
PACKAGE CONTENTS	LCD display, power cable, 15-pin VGA video cable, audio cable, HDMI to DVI-D cable, Quick Start Guide, ViewSonic Wizard CD	
WARRANTY	Three-year limited warranty on LCD, parts and labor	



ViewSonic Corporation's QMS & EMS have been registered to ISO 9001 & ISO 14001, respectively, by the British Standards Institution.

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*Adapter may be required. Analog adapter available from ViewSonic. Specifications subject to change without notice. Selection, offers and programs may vary by country, see your ViewSonic representative for complete details. Windows Vista and the Windows Vista logo are trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries. Corporate names, trademarks stated herein are the property of their respective companies. Copyright © 2007 ViewSonic Corporation. All rights reserved. [13363-00B-01/07] VX2835wm-1

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JVC®

The Perfect Experience / —

PROFESSIONAL DVD VIDEO RECORDER /
S-VHS VIDEO RECORDER COMBO DECK

SR-MV45



A DVD Recorder and S-VHS VCR in a Single Deck,
In One Convenient Package.



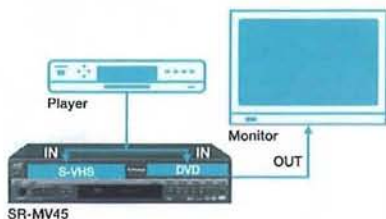
- ◆ Simultaneous Recording function records programs on both DVD and VCR decks from the same input source
- ◆ Full Auto Repeat disc authoring
- ◆ Live Memory and Live Check functions
- ◆ Remote control code input terminal
- ◆ DVD and S-VHS/VHS playback
- ◆ Super MPEG Processors
 - Pre-processor (DVD) • Post-processor (DVD)
- ◆ Last function memory
- ◆ Mode lock
- ◆ Time counter display
- ◆ i.LINK connection (DV input)



◆ Simultaneous Recording from a single source to both VCR and DVD decks

If you ever need to make recordings of a single source on both DVD disc and S-VHS tape simultaneously, the SR-MV45 has a solution. The Simultaneous Recording function can record programs on both DVD and VCR decks from the same input source. Additionally, it allows recording from two different sources on two separate media.*

* The SR-MV45 has no built-in tuner



◆ Full Auto Repeat disc authoring

The Auto Repeat function is very convenient when constant or repeated video playback is required such as when DVD discs are used for digital signage or storefront demos.

◆ Live Memory and Live Check functions

Ideal for live events, the Live Memory function lets you playback scenes to check any performance during the actual recording of the event. With the DVD-RAM's rewriting capability, video can be recorded from a camcorder to the DVD-RAM, enabling simultaneous recording and playback. Viewing missed scenes will not interrupt the recording. The Live Check function displays real-time images in a sub-window.

◆ Extended control commands

A remote input terminal (3.5mm miniplug) allows connection of a wired remote control unit. This is convenient if you need to control the unit from a distance.

- Play, Stop, Pause, FFFWD, REW, Skip forward, Skip reverse, Record
- VCR / DVD Transport Status: Counter, Remain
- Chapter fwd, Chapter rev
- Menu, Enter, left, right, up, and down direction keys
- Transport Status: Remain time
- Direct Playback Speed Control (Fast/Slow)
- Transport Status: Title, Chapter
- Fwd/Rev Field Step
- 30sec. Skip, Instant review (-7sec.)
- Recording Mode Select
- Audio Select, Subtitle Select
- Direct Input selection: L-1 (C), L-1 (S), F-1 (C), F-1 (S), DV
- Finalize DVD-R

◆ Re-archiving from analog media

Digital archiving onto DVD from existing analog tapes (e.g. S-VHS/VHS) is easy on the SR-MV45, making it ideal for educational use.

◆ Last function memory

The SR-MV45 memorizes the last function in its memory and resumes operation from that point. Even if the power is turned off at the end of the day, mode settings remain valid and will be automatically recreated, making this feature especially useful in professional video editing studios.

◆ Operation Lock mode

Inadvertent key operation can be prevented by engaging the Operation Lock mode. This mode is engaged by holding the F1 button down for more than 5 seconds.

◆ Time counter display

The SR-MV45 displays time counter information while editing or dubbing recordings on both the DVD and S-VHS decks.

◆ i.LINK connection (DV input)

Signals from external DV sources and NLE systems can be recorded via the i.LINK Terminal. These signals are converted in real-time to an MPEG-2 signal for DVD and analog video signal for VHS.

SR-MV45 Components

◆ Front Panel



◆ Rear Panel



Specifications

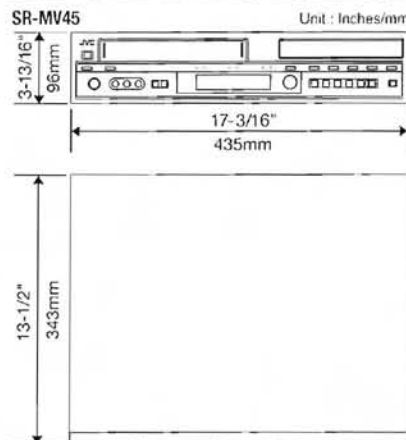
GENERAL	
Power requirement	AC 120 V~, 60Hz
Power consumption	
Power on	52 W
Power off	2.7 W
Temperature	
Operating	5°C to 35°C (41°F to 95°F)
Storage	-20°C to 60°C (-4°F to 140°F)
Operating position	Horizontal only
Dimensions (W x H x D)	17-3/16" x 3-13/16" x 13-1/2" (435 mm x 96 mm x 343 mm)
Weight	12.1 lbs (5.5 kg)
Input / Output	
S-video input	Y: 0.8 - 1.2 Vp-p, 75 ohms C: 0.2 - 0.4 Vp-p, 75 ohms
S-video output	Y: 1.0 Vp-p, 75 ohms C: 0.3 Vp-p, 75 ohms
Video input	0.5 - 2.0 Vp-p, 75 ohms (pin jack)
Video output	1.0 Vp-p, 75 ohms (pin jack x 1, BNC x 1)
Audio input	-8 dB, 50 kohms (pin jack) Corresponding to mono (left)
Audio output	-8 dB, 1 kohms (pin jack)
i.Link	4-pin for DV input
Component video output	Y: 1.0 Vp-p, 75 ohms C, C, P, P: 0.7 Vp-p, 75 ohms Corresponding to copy protection
Remote input	3.5 mm in diameter
Digital audio output	Optical: -18 dBm, 660 nm Coaxial: 0.7 Vp-p, 75 ohms Corresponding to Dolby Digital and DTS Digital Surround Bit stream Selectable in digital audio output setting menu

VIDEO/AUDIO (DVD Deck)

Recording format	
DVD-RAM	DVD Video Recording format
DVD-R	DVD-Video format
DVD-RW	DVD-Video format, DVD Video Recording format
Recording time: Maximum 8 hours (with 4.7 GB disc)	
XP	Approx. 1 hour
SP	Approx. 2 hours
LP	Approx. 4 hours
EP	Approx. 6 hours
FR	Approx. 1 hour-8 hours
Audio recording system	Dolby Digital (2 ch) Linear PCM (XP mode only)
Video recording compression system	MPEG2 (CBR/VBR)
VIDEO/AUDIO (VCR Deck)	
Signal system	NTSC color signal and EIA monochrome signal, 525 lines/60 fields
Recording system	DA4 (Double Azimuth) head helical scan system
Format	S-VHS/VHS NTSC standard
Maximum recording time	
SP	210 min. with ST-210 video cassette
EP	630 min. with ST-210 video cassette
Signal-to-noise ratio	45 dB
Horizontal resolution	230 lines
Frequency range	
Normal	70Hz to 10,000Hz
Hi-Fi audio	20Hz to 20,000Hz
ACCESSORIES	
Provided accessories	Audio cable, S-video cable, Infrared remote control unit, "AA" battery x 2

Specifications shown are for SP mode unless otherwise specified.

Dimensions



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Printed in Japan

ICN-0359

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