

Manual

ViewStream 300

Version 2.0

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Revision History

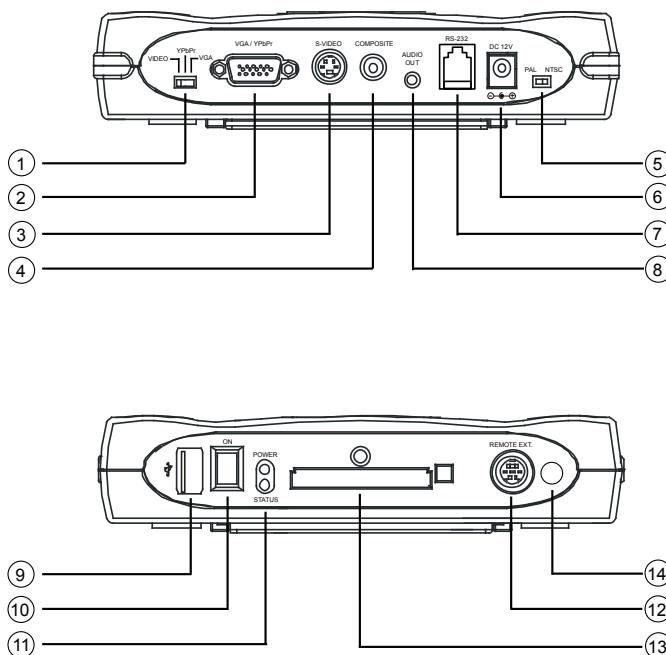
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June 2008	V1.0
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1 Introduction

The ViewStream 300 is a powerful yet easy to use commercial digital media player designed for retail point of purchase (POP) product promotions, product demonstration videos and similar applications such as museum information displays. It supports both normal video displays and PC monitors.

1.1 Guide to the ViewStream 300

Diagram 1 – ViewStream 300



Item	Description	Type / Use
1	Video / YPbPr / VGA switch	Output selection
2	VGA / YPbPr connector*	Standard VGA DB-15 female connector
3	S-Video output	Mini DIN 5-pin connector
4	Composite video output	RCA jack (yellow)
5	PAL / NTSC select switch	Video format / VGA output resolution selection
6	12V DC Power input jack	DC power jack. Center pin positive, 2.5mm diam.
7	RS-232 port^	Standard RJ-11 connector (6 pins)
8	Audio output – speaker out	Stereo phone jack (3.5mm)
9	USB connector	Standard USB type A
10	Power on/off switch	Rocker switch
11	Power and Status LED	On (green) / Off (clear)
12	Remote Ext.	8-pin mini DIN socket
13	CompactFlash Card socket & ejector	Type I & II compatible
14	IR receiver	For use with DV remote control

*An optional VGA to YPbPr cable (P/N: 426004800-3) is required

^An optional RJ-11 to RS-232 cable (P/N:426894301-3) is required.

2 Setup

When powered on the ViewStream 300 will automatically start to play video or still images found in the media folder of an installed Compact Flash (CF) card. Files will be played in alphanumeric order unless a playlist has been prepared.

Basic setup involves 4 main steps:

1. Installing a CF card with suitable media
2. Setting ViewStream switches appropriately
3. Connecting to a display and power
4. Switching on

The ViewStream 300 also offers a range of **Features**. For details of these see the Additional Functions section below.

2.1 Basic Setup Notes

The following provides a short introduction to the basic setup:

- **CF cards (Compact Flash):** The recommended brand is SanDisk, all capacities and speeds should be suitable. Other brands may also be acceptable.
- CF cards should be formatted using FAT32 before first use.
- All media files on the CF must be in a folder name “media”.
- **All media filenames must be in 8.3 format** (e.g. xxxxxxxx.xxx) though combinations with 7.3, 6.3 etc are fine.

Where: “8” is the maximum of alpha-numeric character to be used.
“3” is the file extension like .mpg / .jpg / .avi etc.

- Do not use any “Non alpha-numeric” characters like ‘~’, ‘_’, ‘-’, ‘&’, ‘^’, etc.

NOTE: If ‘Non alpha-numeric character’ or the ‘8.3’ format are not followed, the player will not recognize the playlist.

A Playlist is optional, for details as to preparation see the Additional Functions section below. Without a playlist, media will play in alpha-numeric order according to the filename.

- **Video:** The recommended encoding format is DivX at DVD equivalent resolutions, as follows:

PAL: 720 x 576

NTSC: 720 x 480

Bit Rate: 2 Mbit/s

Audio Bit Rate: 224 Kbit/s, 48 kHz at 16 bits sample rate

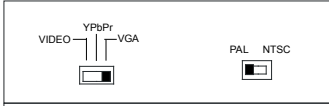
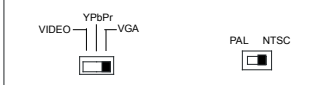
Frame Rate: PAL: 25 Hz / NTSC: 29.97 Hz



Codec: MPEG-4 DivX* 5.2 or higher

Typical filename extension: .avi

The ViewStream 300 is also MPEG-2 compatible. For further details of video format and codec compatibility see the **Specifications** section below.

- **JPEG still images:** A compression setting of medium to good is recommended.
Resolution settings:
 - For output to a widescreen display : 1280x960
 - For output to a standard 4:3 display: 640x480
- **Switch settings** (see diagram 1 in Introduction):
 - Output Selection:
 - Video: For connection using S-Video or Composite
 - YPbPr: For connection using Component YPbPr
 - VGA: For connection using standard VGA (ARGB)
 - PAL/NTSC selection: When using S-Video or Composite output connectors this should be set according to the input requirements of the video display being used.
 - VGA/YPbPr output resolution selection: With the combination of output selection switch and PAL/NTSC switch, you can select 640x480 or 1280x720 output resolution on VGA/YPbPr port*.

		VGA output resolution
		640 x 480
		1280 x 720

		YPbPr output resolution
		640 x 480
		1280 x 720

*An optional VGA to YPbPr cable (P/N: 426004800-3) is required

- **Display:** There is a very wide selection of displays on the market that are suitable for use with the ViewStream 300. Users are however recommended to consider the following:

- Video output resolution: The ViewStream only supports playback standard definition video, i.e. PAL & NTSC standards. Consequently a display with good scaling will produce optimal results.
- Aspect ratio: Many displays available are now widescreen type with an aspect ratio of 16:9. However PAL/NTSC is 4:3. Consequently video output to widescreen displays will be slightly stretched. In most cases this is not very noticeable but if it is a concern it can be compensated for during the video production and encoding process.
- Monitor adjustment: VGA output is currently set to 1280x720 resolution which may not be supported by all monitors. If the display looks reasonable but not perfect please use the OSD settings of the monitor to adjust image position and tuning (sometimes called phase). It may also be necessary to adjust image size.

OSD Configuration menu: In OSD configuration mode, you may need external buttons, 8-segmented touch screen or IR remote handset to operate.

- Use with external button or 8-segmented touch screen
 - To enter OSD configuration mode, holding button 8 and power on the VS-300 unit. The OSD menu screen will be shown as follow:

```
VOLUME 08          V1. 19. 00
  Y M D          H M S
2009 . 09 . 14 MON    21 : 00 : 12
ID NO: 0000
DATA LOGGING: OFF
OSD: ON
JPEG TRANS TYPE: OFF
SAVE AND EXIT
```

- Press button 8 to select option.
 - Press button 7 or button 6 for change value
 - Press button 7 or button 6 to confirm “SAVE AND EXIT”.
- Use with IR remote handset
 - To enter OSD configuration mode, holding “Display” key and power on the VS-300 unit. The OSD menu screen will be shown as follow:

```
VOLUME 08          V1. 19. 00
  Y M D          H M S
2009 . 09 . 14 MON    21 : 00 : 12
ID NO: 0000
DATA LOGGING: OFF
OSD: ON
JPEG TRANS TYPE: OFF
SAVE AND EXIT
```

- Press “Display” key to select option.
 - Press “+” or “-” key to change value.
 - Press “+” or “-” key to confirm “SAVE AND EXIT”.

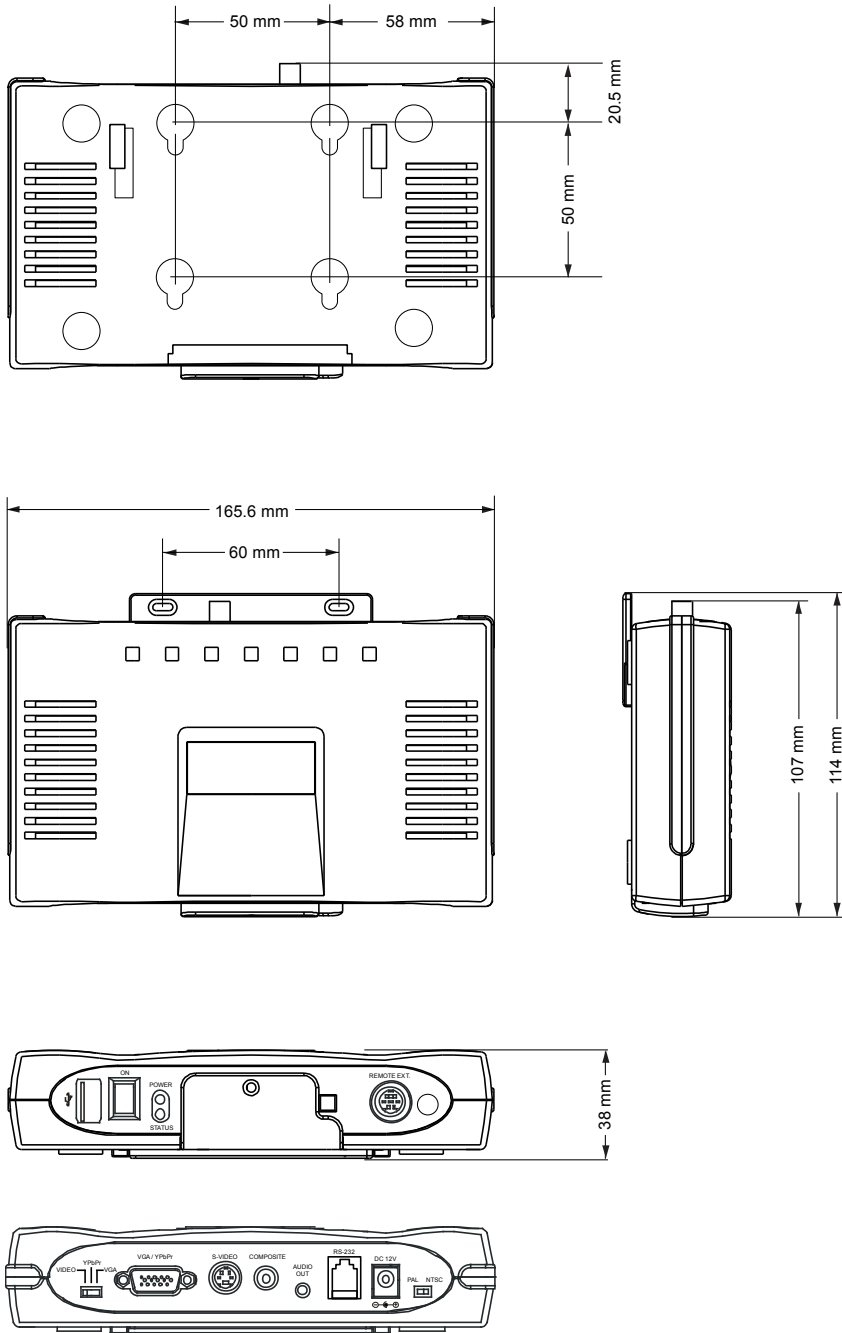
2.2 Additional Functions

The ViewStream 300 offers a wide selection of options as briefly introduced below. For more information on each of these please refer to the detailed application notes at www.dvsignage.com/support-home

As many of these functions are enabled using DV Studio it is also recommended to review the manual for DV Studio.

- **Playlist:** By default videos and still images play in alphanumeric order by filename. Using DV Studio, available for download from www.dvsignage.com/using-dv-studio files can be played in a specified order.
- **USB update:** The CF card content can be updated from a USB memory stick.
- **Scheduling:** Multiple playlists can be loaded and scheduled to play at specified times.
- **Motion sensor:** Motion sensors can be used to trigger playback of particular files or as people counters (see data logging).
- **Touch screen:** Up to 16 touch hotspots can be programmed using either a segment touch panel or analog touch panel.
- **External buttons:** External buttons can be added for track selection.
- **Barcode scanner:** A product barcode scanner can be supported with up to 1,000 referenced images or videos.
- **Data capture:** Details of all interactions with the player such as via the motion sensor, touch screen, buttons or barcode scanner can be recorded and stored on the CF card for later retrieval and analysis.
- **RS-232 protocol:** The ViewStream RS-232 port is complemented by a complete set of protocols allowing for both external device control and control by external devices.
- **Playback Sync:** The ability to synchronize file playback across multiple ViewStream 300.
- **Manual control:** For manual operation of playback functions a remote control handset is available as well as a selection of button options.
- **Transition effect:** There are 13 transition types on JPEG display can be selected.
- **Firmware upgrade:** From time to time the operating system of the ViewStream may be upgraded providing bug fixes and new features. For compatible hardware it is possible to install these upgrades through a simple process.
- **Customization:** Digital View provides customization services.

3 Dimensions



Unit in mm

4 Specifications

Playable formats	MPEG-1 (.mpg) Encoding bit rate: 1.15Mbit/s MPEG-2 (.mpg) Encoding bit rate: 5Mbit/s MPEG-4 DivX (.avi) Encoding bit rate: 2Mbit/s JPEG (.jpg) up to 1280x960 pixels
Storage media	Compact Flash memory card type I or II Recommended max capacity: 16GB, 32GB
Video output resolution	Composite / S-Video - 720x576(PAL), 720x480(NTSC) VGA / YPbPr – configurable to 1280x720 or 640x480
Audio volume	Controlled through OSD with switches attached
Speaker out	1.5W @4ohm stereo
Playback functions	Play / Stop / Pause / Repeat / Previous track / Next track / Volume / Mute Loop playback / Sequence play / Startup mode / Sleep mode
External I/O ports	RS-232 (9600, N-8-1) USB (content upload) Infra-red (use with DV IR handset, P/N:559000104-3) Remote Ext. (for 8-button & touch)
Transition effect	Total 13 transition types. (for JPEG only)
LEDs	Power LED (Green) Status LED (Green)
Watchdog	System level auto-reset
Real time clock	Battery-backup RTC
Power requirement	Regulated DC 12V input. 2.5mm center positive.
Power consumption	500mA @ 12V
Environmental	Operating temperature : 0°C to 50°C Relative humidity : 5%-95% relative humidity (Non-condensing)
Dimensions	165.6mm (W) x 107mm (D) x 38mm (H)
Weight (net)	250g

The following are the recommended encoding specifications for video content on the M3-300 and ViewStream 300.

MPEG-4 DivX specifications	Screen size (recommended)	4:3 screen (e.g. 640x480, 800x600, 1024x768, etc)
	Resolution	720x576(PAL) 720x480 (NTSC)
	Encoding bit rate	2Mbit/s
	Audio bit rate	224Kbit/s, 48kHz at 16bits sample rate
	Frame rate	PAL(25Hz), NTSC(29.97Hz)
	Codec	MPEG-4 DivX 5.2 or higher
	Typical filename extension	.avi
MPEG-2 specifications	Screen size (recommended)	4:3 screen (e.g. 640x480, 800x600, 1024x768, etc)
	Resolution	720x576(PAL) 720x480 (NTSC)
	Encoding bit rate	5Mbit/s
	Audio bit rate	224Kbit/s, 48kHz at 16bits sample rate
	Frame rate	PAL(25Hz), NTSC(29.97Hz)
	Codec	MPEG-2
	Typical filename extension	.mpg

Optimal JPG resolution on selected output			
JPEG specifications	16:9	Composite/S-video output	720x576(PAL) 720x480 (NTSC)
		VGA / YPbPr output	1280 x 960
	4:3	Composite/S-video output	720x576(PAL) 720x480 (NTSC)
		VGA / YPbPr output	640 x 480

5 FAQ (Frequently Asked Questions)

<p>Q: What CF cards are suitable ?</p> <p>A: SanDisk Compact Flash cards are recommended however many other brands are suitable.</p>
<p>Q: How do I format a CF card with FAT 32 ?</p> <p>A: This is a standard option in Windows XP and Vista disk format.</p>
<p>Q: How do I encode or prepare suitable video ?</p> <p>A: Settings equivalent to those used for making a DVD are recommended and many popular video editors have a DVD preset.</p>
<p>Q: How do I get video and still images to play in a particular order ?</p> <p>A: It is possible to create a playlist to specify the playback order by using DV Studio which can be downloaded from www.dvsignage.com/using-dv-studio</p> <p>What is DV Studio ? - An authoring tool from DV Signage for the creation of playlists and other additional functions possible with the ViewStream 300.</p>
<p>Q: Is manual operation possible ?</p> <p>A: Yes. Users can access manual operations using a DV Signage remote control or by connecting a set of external buttons. Refer to the Manual Control Application Note at www.dvsignage.com/support-home</p>
<p>Q: How do I get the most out the advanced features ?</p> <p>A: A good place to start is with the Application Notes on the website as these will explain how the various features work. In addition Digital View's sales support team can provide ideas and assistance.</p>
<p>Q: What customization is possible ?</p> <p>A: DV Signage provides both software and hardware customization services for – please contact DV Signage's sales support team for assistance.</p>
<p>Q: Why I noticed 'Vertical stripes' pattern on VGA output in some VGA monitors ?</p> <p>A: Since the timing of 1280x720 is not a standard timing fall in VESA specification (VGA specification). Therefore most of VGA monitors will handle this timing in its own way.</p>

When the vertical strips were found on the screen. That mean the VGA monitor connected to the ViewStream 300/M3-300 did not have the corresponding matched input timing mode. In this case, what we suggest to do is to adjust the phase frequency of the monitor until all the stripes have been removed.

Each VGA monitor should has the Phase frequency adjustment (or called 'H-size', 'H. Freq', etc) in OSD menu. Use this function to fine tune the phase until all the stripes are not seen. This adjustment only done once in the first time setup and the monitor should remember this phase settings.

Q: What is the best content (JPEG) resolution on VGA out ?

A: It depends on what VGA output resolution was set. If it was set to 1280x720, then recommend to use the JPEG with 1280x960 resolution. If the VGA output was set to 640x480, then the JPEG with 640x480 or 800x600 resolution is suggested.

Q: How do I get the faster switching time/response time between JPEGs on VGA output when a track is selected via button or touch ?

A: Select 640x480 output resolution on VGA output, and use the JPEG with 640x 480 or 800x600 resolution.

6 Troubleshooting

<p>Q: Nothing is displayed on the screen:</p> <p>A:</p> <ul style="list-style-type: none"><input type="checkbox"/> First check that all parts of the system are connected and powered on.<input type="checkbox"/> Check that the display is getting a signal from the ViewStream. This can be done by ensuring the ViewStream indicator LED is on then powering the ViewStream on & off, the display should flicker.<input type="checkbox"/> Ensure the media is compatible, see specifications.<input type="checkbox"/> Ensure media on the CF is in a folder named "media".<input type="checkbox"/> Ensure that files are in a compatible format.
<p>Q: The display has vertical lines in it:</p> <p>A:</p> <ul style="list-style-type: none"><input type="checkbox"/> This may happen when a monitor is connected using the VGA connector. It can be corrected using the Tuning or Phase function accessed via the OSD (On Screen Display) menu on the monitor.
<p>Q: The display is shifted to the side:</p> <p>A:</p> <ul style="list-style-type: none"><input type="checkbox"/> This may happen when a monitor is connected using the VGA connector. It can be corrected using the position adjustment controls function accessed via the OSD (On Screen Display) menu on the monitor.
<p>Q: Video is jerky:</p> <p>A:</p> <ul style="list-style-type: none"><input type="checkbox"/> It is likely that the video is encoded at a data rate too high for the player.
<p>Q: Video is very blocky:</p> <p>A:</p> <ul style="list-style-type: none"><input type="checkbox"/> Original content was low resolution<input type="checkbox"/> The video encoding settings are for a lower resolution. DVD settings are recommended.
<p>Q: Text is not readable:</p> <p>A:</p> <ul style="list-style-type: none"><input type="checkbox"/> It is likely that the text is too small however it is worth checking the encoding settings. DVD settings are recommended.
<p>Q: Audio playback is intermittent:</p> <p>A:</p> <ul style="list-style-type: none"><input type="checkbox"/> It is likely that the video is encoded at a data rate too high for the player.

WARRANTY

The products are warranted against defects in workmanship and material for a period of three (3) year from the date of purchase provided no modifications are made to it and it is operated under normal conditions and in compliance with the instruction manual.

The warranty does not apply to:

- Product that has been installed incorrectly, this specifically includes but is not limited to cases where electrical short circuit is caused.
- Product that has been altered or repaired except by the manufacturer (or with the manufacturer's consent).
- Product that has subjected to misuse, accidents, abuse, negligence or unusual stress whether physical or electrical.
- Ordinary wear and tear.

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CAUTION

Whilst care has been taken to provide as much detail as possible for use of this product it cannot be relied upon as an exhaustive source of information. This product is for use by suitably qualified persons who understand the nature of the work they are doing and are able to take suitable precautions and design and produce a product that is safe and meets regulatory requirements.

SAFETY INSTRUCTION

Do not use this product near water, for example, near a bathtub, wash bowl, kitchen sink, laundry tub, in a wet basement or near a swimming pool.

LIMITATION OF LIABILITY

The manufacturer's liability for damages to customer or others resulting from the use of any product supplied hereunder shall in no event exceed the purchase price of said product.

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Digital View
DV Signage
VIEWSTREAM 300

Contact Details

USA: 18440 Technology Drive
Building 130
Morgan Hill, CA 95037

Tel: (1) 408-782 7773
Sales: info@dvsignage.com

Fax: (1) 408-782 7883

EUROPE: The Lake House,
Knebworth Park,
Hertfordshire, SG3 6PY
UK

Tel: +44 (0)20 7631 2150
Sales: info@dvsignage.com

Fax: +44 (0)20 7631 2156

ASIA: 16th floor Millennium City 3
370 Kwun Tong Road
Kwun Tong
Hong Kong

Tel: (852) 2861 3615
Sales: hk@dvsignage.com

Fax: (852) 2520 2987

www.dvsignage.com

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