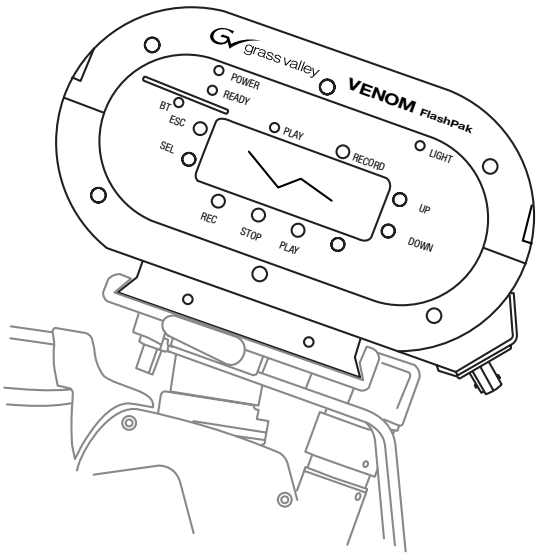
User's Guide

3922 496 30561 February 2007 v4.0



DCR 4000

Venom FlashPak

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Declaration of Conformity

We, Grass Valley Nederland B.V., Kapittelweg 10, 4827 HG Breda, The Netherlands, declare under our sole responsibility that this product is in compliance with the following standards:

- EN60065 : Safety

- EN55103-1: EMC (Emission)

- EN55103-2: EMC (Immunity)

following the provisions of:

a. the Safety Directives 73/23//EEC and 93/68/EEC
b. the EMC Directives 89/336/EEC and 93/68/EEC

FCC Class A Statement

This product generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause interference to radio communications.

It has been tested and found to comply with the limits for a class A digital device pursuant to part 15 of the FCC rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment.

Operation of this product in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

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Website

Visit the Grass Valley public website to download the latest user's guide updates and additional information about your broadcast product:

www.thomsongrassvalley.com

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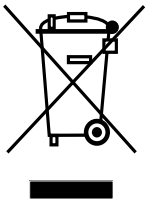


Grass Valley's innovation and excellence in product design also extends to the programs we've established to manage the recycling of our products. Grass Valley has developed a comprehensive end-of-life product take back program for recycle or disposal of end-of-life products. Our program meets the requirements of the European Union's WEEE Directive and in the United States from the Environmental Protection Agency, individual state or local agencies.

Grass Valley's end-of-life product take back program assures proper disposal by use of Best Available Technology. This program accepts any Grass Valley branded equipment. Upon request, a Certificate of Recycling or a Certificate of Destruction, depending on the ultimate disposition of the product, can be sent to the requester.

Grass Valley will be responsible for all costs associated with recycling and disposal, including freight, however you are responsible for the removal of the equipment from your facility and packing the equipment ready for pickup.

For further information on the Grass Valley product take back system please contact Grass Valley at + 800 80 80 20 20 or +33 1 48 25 20 20 from most other countries. In the US and Canada please call 800-547-8949 or 530-478-4148. Ask to be connected to the EH&S Department. In addition, information concerning the program can be found at:

www.thomsongrassvalley.com/environment

Important information

Read this information carefully before installing this equipment and retain them for future reference. Read and comply with the warning and caution notices that appear in the manual

Any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Safety Summary

This informaton is intended as a guide for trained and qualified personnel who are aware of the dangers involved in handling potentially hazardous electrical/electronic equipment. It is not intended to contain a complete list of all safety precautions which should be observed by personnel in using this or other electronic equipment.

The installation of this equipment involves risks both to personnel and equipment and must be performed only by qualified personnel exercising due care.

Whenever it is likely that safe operation is impaired, the apparatus must be made inoperative and secured against any unintended operation. The appropriate servicing authority must then be informed. For example, safety is likely to be impaired if the apparatus fails to perform the intended function or shows visible damage.

Warnings

Warnings indicate danger that requires correct procedures or practices to prevent death or injury to personnel.

- Do not modify this equipment.
- Installation of this equipment must only be performed by qualified personnel.
- To prevent risk of overheating, ventilate the units correctly.
- In case of an emergency ensure that the power is disconnected.
- Mount equipment so that power lead can be accessed to disconnect power.
- Any interruption of the protection conductor inside or outside the apparatus, or disconnection of the protective earth terminal, is likely to make the apparatus dangerous. Intentional interruption is prohibited.
- Use only fuses of the type and rating specified.
- To prevent fire or shock hazard, do not expose the unit to rain or moisture. Note that the unit is not waterproof.
- There are no user servicable parts inside. Refer servicing to qualified personnel only or contact your local Grass Valley representative.
- Whenever it is likely that safe operation is impaired, the apparatus must be made inoperative and secured against any unintended operation.

Cautions

Cautions indicate procedures or practices that should be followed to prevent damage or destruction to equipment or property.

- Always switch off the camera before changing the power supply.
- Be extremely careful with the connectors between the camera head and the adapter. Do not allow the guide pins to damage the pins of the connector. Follow these steps in the order given. Tightening the screws in the wrong order could result in mechanical damage to the camera. Loosening the screws in the wrong order could result in mechanical damage to the camera.
- Do not subject the unit to severe shocks or vibration.
- Do not expose the unit to extremes of temperature.
- Do not leave the unit in direct sunlight or close to heating appliances for extended periods.
- Connection panel position in the rack should ensure that the plug and power cord are within easy reach for switching off purposes.
- To prevent risk of overheating, ventilate the product correctly.
- Connect the product only to a power source with the specified voltage rating.

Chapter 1

Installation

1.1 Introduction

Venom FlashPak is a solid-state recorder designed to be used in conjunction with Grass Valley's Viper FilmStream Camera. The use of Venom gives an on-board recording capability matched to the outputs of the Viper, with full quality uncompressed recording of all formats supported by Viper.

Venom FlashPak mounts on to Viper using a docking adaptor, which gives direct connection such that a FlashPak can be quickly removed and replaced. Each recording is given a "Take" number and metadata can be attached to identify and describe each Take.

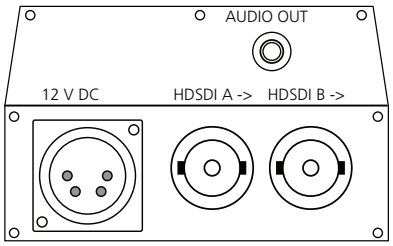
After recording, data is downloaded directly from Venom into a long-term storage device and backup recordings can also be made. After data has been transferred, the Venom can be erased and re-used immediately.

1.2 Specifications

General	
Power requirements (battery supply used)	14 Vdc
Power requirements (external supply used)	14 Vdc, 4A Note: when the Viper and Venom are powered from the same power supply max. supplied current should be 8A.
Power consumption (typical)	23 W (standby), 26 W (playback), 28 W (record)
Operating temperature	-10°C to +40°C (14°F to +104°F) Note: below 0°C (32°F) allow the device 10 minutes of warming up time before specifications are met.
Storage temperature	-20°C to +60°C (-4°F to +140°F)
Weight (approx.)	2.3 kg (4.6 lbs.)
Dimensions	235 (L) x 90 (W) x 145 mm (H)
Video	
S/N ratio (Y-signal)	typical 58 dB TBC
Modulation depth	55%
Storage	
Technology	solid-state flash memory
Recorder/video format	auto-sensing to follow output from camera (all Viper modes are supported)
Quantization	10-bit
Recording time	up to 15 min. (HDTV), up to 10 min. (FilmStream)
Connectors	
Video output	26-pin multicore connector
Docking connector	D-type 24 pin (7 coaxial, 23 regular)
HDSDI output	2x BNC, SMPTE 292M, 0.8 Vpp, 1.5Gb/s, 75Ω
Dual HDSDI output	2x BNC, SMPTE 292M, 0.8 Vpp, 1.5Gb/s, 75Ω
Audio monitor output	3.5mm phono jack, line level
DC input (docking plate)	XLR 4-pin male, 14 Vdc (battery) or 15 Vdc (external)
DC input (recorder)	XLR 4-pin male, 14 Vdc (battery) or 15 Vdc (external)
Reference input	BNC, on docking adapter
Time code input	Standard 5 pin Lemo timecode connector (suits Lockit box or similar) on docking adapter.
Bluetooth interface	provides access to metadata, transport control, clip selection and playback functions.

1.3 Connectors and switches

1.3.1 Connectors on Venom

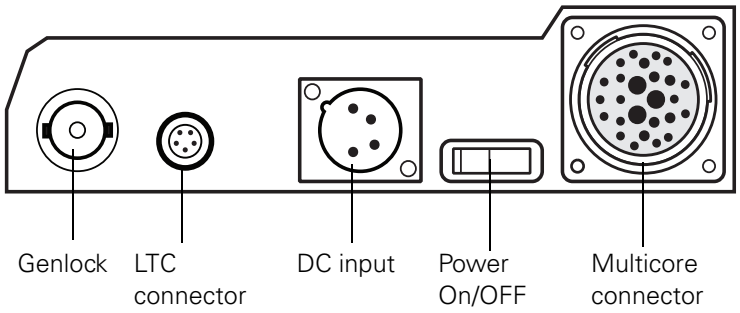


HDSDI A & B : BNC connectors give playback or monitoring outputs according to the format recorded. When a Dual Link 4:4:4 signal is used, these two connectors give one Dual Link output. If a single HDSDI (4:2:2) format is recorded, these give two identical outputs.

12V DC: input XLR-4p used when Venom is not mounted on the camera, e.g. for playback.

Audio out: 3.5mm Jack stereo output for two audio channels

1.3.2 Connectors on Docking Adaptor



Genlock: BNC connector. Genlock signal can be either HD Tri-level sync, or Analog Black reference. The genlock signal must be of the same format as that selected on the camera.

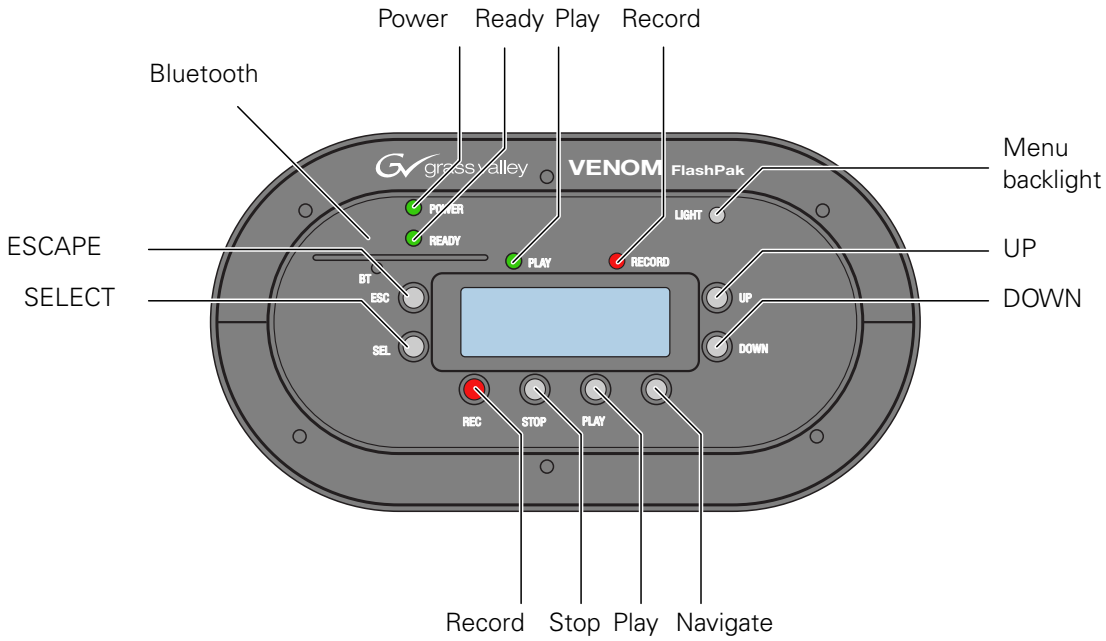
Timecode: Standard 5-pin Lemo LTC connector for external time code signal (input + output).

DC Input: XLR 4 pin connector for 12V DC input.

Multicore connector: 26 pin connection for cable to Viper camera.

1.4 Controls on Venom FlashPak

All main controls are located on the side panel of the Venom



1.4.1 Menu navigation buttons

UP, DOWN	Moves the cursor through the items of a menu.
SELECT	Selects the currently selected item.
ESCAPE	Returns to the previous level
Menu backlight	Switches on the backlight of the LCD screen.

1.4.2 Transport (clips) buttons

Record	Starts the recording of a clip.
Stop	Stops the recording of a clip.
Play	Plays back the currently selected clip number.
Navigate	Used for special menu functions

1.4.3 LED Indicators

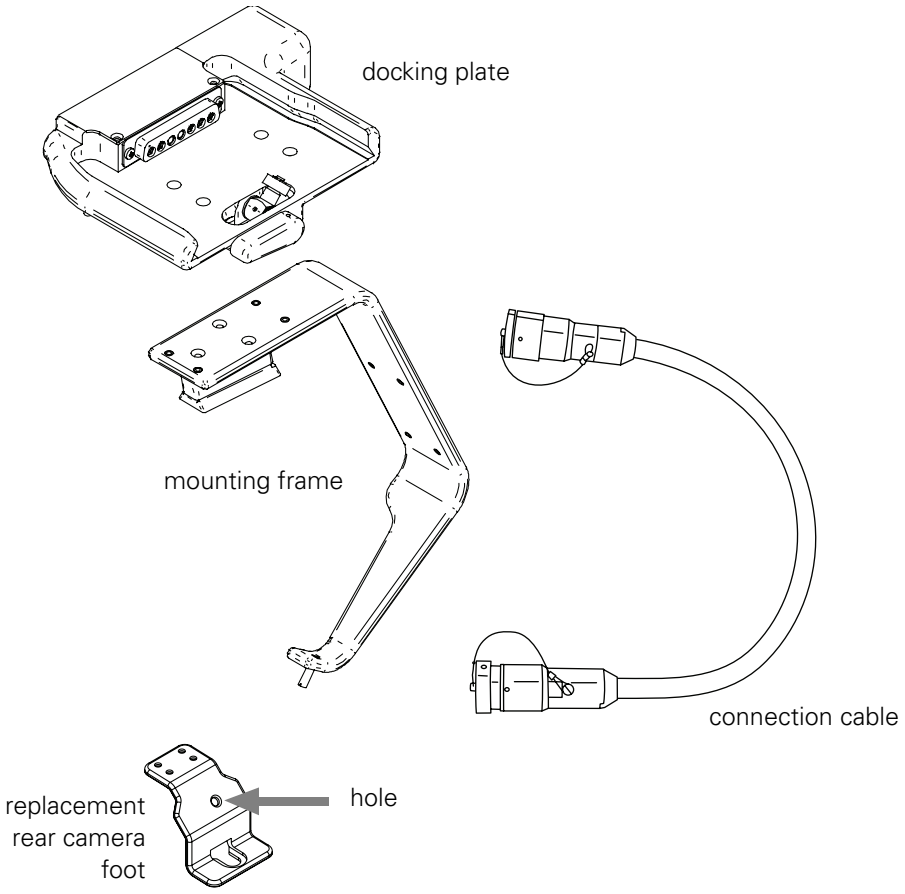
Bluetooth (blue)	On	Bluetooth connection is present.
	Off	Bluetooth connection is NOT present.
Power (green)	On	The Venom is powered and switched on.
	Off	The Venom is not powered or switched off.
	Blinking	Operating temperature is too high (>70°C) or the voltage is too low (<10.0V)
Ready (green)	On	The system is ready to record a clip.
	Off	No recording time left. Recording is not possible.
	Blinking	Remaining recording time is less than 30 sec.
Play (green)	On	The currently selected clip is played back. The PLAY ON status is sent out as TALLY OUT to the field recorder.
	Off	Playback has stopped
Record (red)	On	The Venom is recording a clip. The RECORD ON status is sent out as TALLY CAM to the camera where it is used for displaying in the viewfinder and for switching on the Tally light.
	Off	When the system runs out of memory the recording stops and the Venom returns to the idle state.
	Blinking	The Venom is recording a clip but remaining recording time is less than 30 sec.

1.5 Assembly

1.5.1 Docking kit for Venom

The LDK 6506/30 Docking Kit contains the following parts:

- Docking Plate;
- Mounting Frame;
- Connecting cable (50 cm);
- Replacement rear camera foot;
- 4x mounting bolts.



Replacement rear camera foot

Before attaching the Mounting Frame to the camera, check the existing rear camera mounting foot. If it does not have a hole, replace it with the replacement foot supplied. Remove the existing foot by undoing four screws. Use these screws and washers to attach the replacement mounting foot to the bottom of the camera.

1.5.2 Assembling the Docking Kit

The Docking Plate can be mounted on the Mounting Frame in either of two positions. It is fixed in place using the four screws supplied.

To mount the Venom on top of the Viper, the Docking Plate is fixed using the four holes on the Mounting Frame nearest the V-Block. If you wish to mount the Venom behind the camera, then the Docking Plate is fixed using the four holes at the rear of the Mounting Frame. Check the orientation of the plate relative to the camera position. The Multicore connector must be towards the rear or base of the mounting frame.

Top mounting position

Rear mounting position

Connect the cable to the camera before attaching the Mounting Frame to the camera. Insert the connector fully, aligning the red dots on both parts, and turn the locking ring to firmly hold it in place.

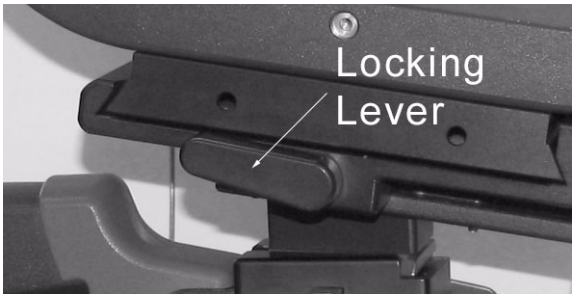
Attach the Mounting Frame to the camera by first inserting the locating pin in the hole on the camera mounting foot, then push the V-plate firmly forward into the camera's V-block until the locking bar clicks into place.

Connect the multicore cable to the connector on the Docking Plate. The red dots must be aligned and the cable pushed fully into the connector.

To correctly align the cable it is necessary to twist the cable so that it forms a loop. This ensures that the cable does not have too sharp a corner and does not put strain on the connectors. The following pictures show how the cable is routed in each case.

1.5.3 Mounting Venom

Locate Venom by sliding the foot into the docking plate (do not push it fully into the connector). Rotate the locking lever clockwise to clamp the Venom into position.



Caution

Always switch off the power on the Venom docking adapter before removing or connecting the Venom unit.

1.5.4 Connecting power

Single supply

Power is supplied to the Venom docking adapter from an external DC power supply. From the Venom docking adapter power can be supplied both to the Venom and the Viper via the multicore cable. In this case, no separate power supply is needed for the camera. The source switch must be set to the **Multicore** position.

When an external DC power supply is used to power both the Venom and the Viper use a DC power supply that can supply at least 14 V~ 8A continuous.

Dual supply

Connect a DC power supply to the Venom docking adapter to power the Venom unit. When the Venom is powered separately use a DC power supply that can deliver at least 14 Vdc ~ 4A continuous.

Connect a DC power supply to the **DC IN** power socket on the Viper rear connector panel. This socket accepts a DC supply of 12V Nominal (11V to 17V) to power the camera. Nominal power consumption is 44W.

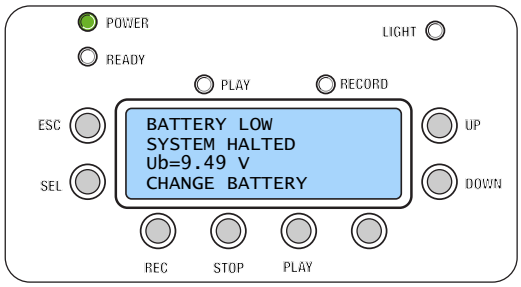
☞ Note

Keep the power cable to the Docking Plate as short as possible (less than 2 m is recommended).

If power loss occurs during recording the current take will be lost. If it occurs while erasing Takes, the erase process will need to be repeated once power has been restored. If the power is lost while playing back a Take, or in idle mode, no data is lost or affected.

Battery pack

If a battery pack is used and the system voltage drops below 10.0V, the power LED on the Venom flashes to give a warning. If the voltage falls below 9.5V, the Venom system will close down and show the following message on the display:



1.6 Synchronizing with other devices

When the Viper and Venom are to be synchronized with other cameras for a multi-camera shoot or with other devices such as audio recorders or motion control rigs, it is necessary to connect Genlock and/or Time Code.

1.6.1 Genlock

The Genlock signal required is HD Tri-level sync or Analog black reference, which must be connected to the Venom via the docking plate BNC connector, not to the Viper. The reference signal used must be of the same format as that selected on the camera.

1.6.2 Time Code

Both an internal TC run mode and an external TC mode are available:

- Internal run mode: time code is set to actual real time code. From the start, time code is generated and recorded in sync with the incoming video signal. During PLAY the time code is sent to the LTC output.
- Time code is set to the time code of the external TC generator.

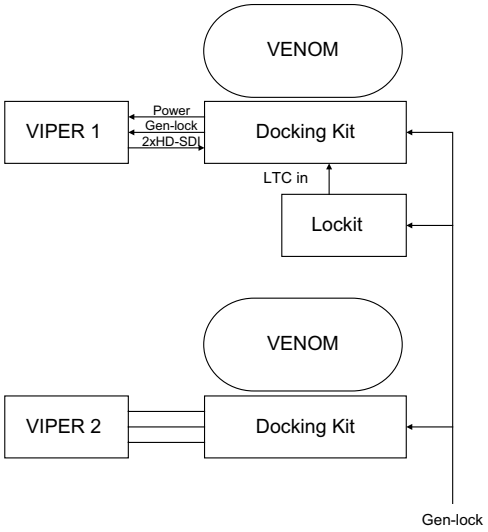
1.7 Time code applications

1.7.1 Stand-alone Viper-Venom configuration

Only one Viper plus Venom is being used. A real time clock is available inside the Venom. This clock is used to create the SMPTE time code. The clock can be adjusted in the menu TIME & DATE on the LCD screen.

1.7.2 Multiple Viper-Venom configuration with single Lockit box

In this configuration, more than one Viper-Venom combination is used. In this case, the method mentioned above is not accurate enough. An external master clock is needed to synchronize the time codes of the Venom recorders. The diagram below shows the mechanism that is available:



A Lockit box is connected to the first camera system containing a Viper and a Venom recorder. Both the Lockit box and the Venom docking plate receive a genlock signal on their reference input. The Lockit box outputs the time code (according to SMPTE 266M standard) to the Venom via a connector on the docking plate. In this way the Venom takes over the time code of the Lockit box.

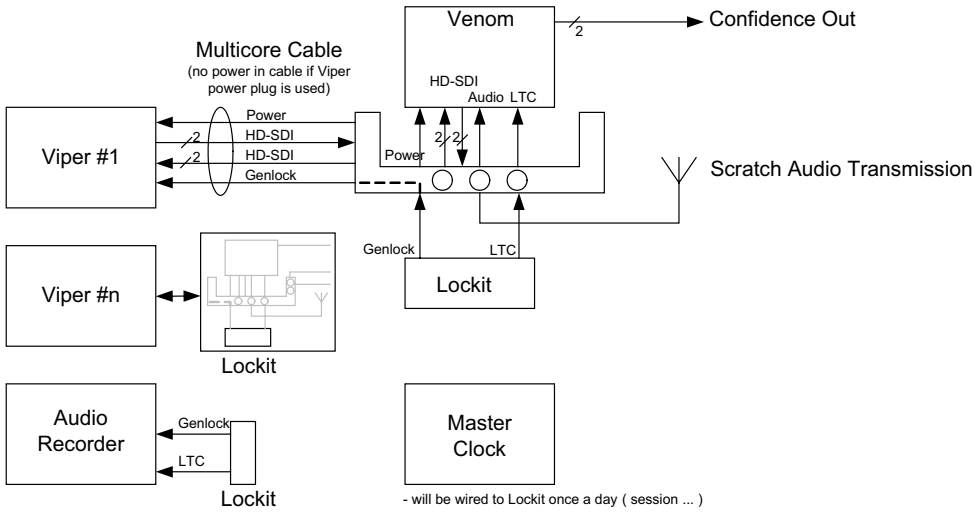
The LTC input is removed and connected to the docking plate of the next camera system and this one takes over the time code of the Lockit box. The Venoms in system 1 and system 2 are now running with the same time code. In this way the time code can be synchronized in a multiple camera environment.

☞ Note

The time code is lost if the Flashpak is switched off. It needs to be jammed again after being switched on. Refer to chapter 2.1.2 to find more information about the external time code status.

1.7.3 Multiple Viper-Venom configuration with multiple Lockit boxes

The mechanism described under 2 had the disadvantage that the time code and synchronization are lost when the camera and Venom are switched off. In a 'battery powered situation' this often occurs. So solve this, we have to use a Lockit box for each Viper - Venom combination. This is shown in the diagram below:



At the start of a working day, all Venom-Viper combinations are brought together. The Lockit boxes are connected to a master clock (this can be one of the Lockit boxes), and to one reference (gen-lock) signal. This way all Lockit boxes are synchronized both in the reference signal and in the time code. Each Viper-Venom camera is connected to a Lockit box, which provides both the gen-lock and LTC-in signal to the docking plate. The clock in the Lockit box is stable enough to allow for synchronization at the start of a working day only. When the Viper and Venom are switched off, the internal clock in the Lockit box continues running.

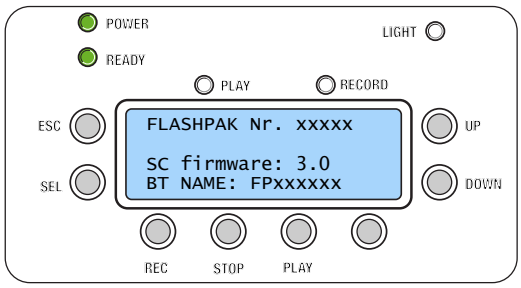
*) Lockit is a registered trademark of Ambient Recording GmbH, Germany.

Chapter 2

Using Venom with Viper

2.1 Initial Screen Displays

When power is first connected, the following screen will appear for approximately 3 seconds.



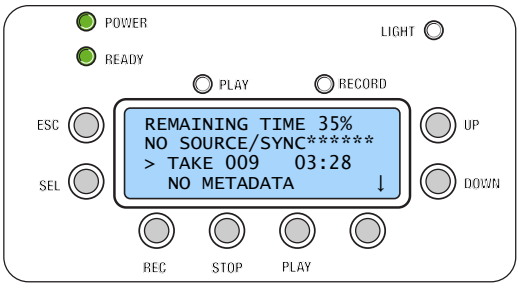
This screen gives information about the status of the installed firmware, also the Manufacturer's Serial number of the FlashPak is shown as FlashPak Nr xxxxx and the Bluetooth identification name for the FlashPak as FPxxxxx

After the internal initialisation has taken place and the FlashPak is ready for use, the LCD screen will show one of the following displays depending on whether or not there is a source signal.

☞ **Note**

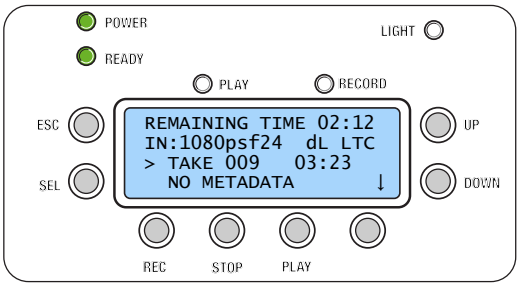
When operating with temperatures below 0°C (32°F) allow the system 10 minutes warming up time before it becomes fully operational.

2.1.1 Idle Screen without source signal



The remaining recording capacity is shown as a percentage of total storage.

2.1.2 Idle Screen with source signal



When a source signal is present, the display shows the format of the signal. Additionally an indication of which signal is in use is given by 'dL' for a Dual Link signal and 'sL' indication for a Single Link signal. For more information see 'Formats Recorded on Venom'.

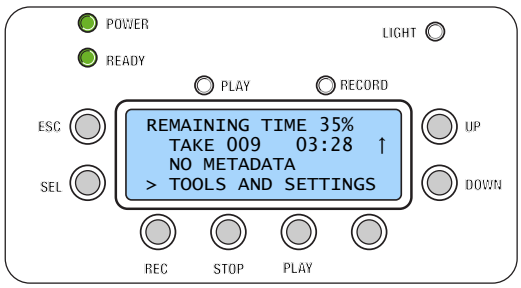
The presence of a timecode signal at the LTC input is indicated as follows:

indication	description
...	no external timecode signal present
LTC	timecode signal present
JAM	timecode signal was present but is now disconnected

The remaining recording capacity is shown as the time available for the current input signal format.

On the left of the screen the cursor (>) shows the current line. Up and down arrows on the right hand side show when further menu options can be displayed by pressing [UP] or [DOWN].

On pressing [DOWN] twice the display will scroll to show the "Tools & Settings" menu.



Pressing [Select] will open the next level for the line indicated by the cursor (>)

See section 3 for details of the menu structure and navigation

2.2 Formats recorded on Venom

The Venom FlashPak can record all formats that can be output from a Viper FilmStream Camera. FilmStream gives the highest quality recording, but the intended workflow of the production or the need for longer record times may make an alternative format the better choice. For details of the formats see the Viper User's Guide; the recording times available in each case are shown in the table below.

Table 2-1. Video formats and recording time

#	Viper mode	#	Venom mode	Recording time (min.)	
				FilmStream dual link	HDstream single link
1	1080i50	1	1080i50/psf25	10:06	15:07
2	1080i59	2	1080i59/psf29	8:25	12:37
3	1080psf23SW	3	1080psf23	10:32	15:45
4	1080psf24SW	4	1080psf24	10:31	15:46
5	1080psf25SW	1	1080i50/psf25	10:06	15:06
6	1080psf29SW	2	1080i59/psf29	8:26	12:37
7	1080i59-23	2	1080i59/psf29	8:25	12:37
8	720p50	5	720p50	11:19	16:55
9	720p59	6	720p59	9:27	14:07
10	720p59-23	6	720p59	9:26	14:07
11	720p50-25	5	720p50	11:20	16:54
12	720p59-29	6	720p59	9:27	14:06

When the camera and recorder are switched on, the LCD display shows the line and frame rate for the format being received.

Different Takes on one Venom FlashPak can be of different formats. During record or play, the remaining time display is adjusted according to the current input format.

2.3 Making a recording

Before recording check the READY indicator on the side panel. When there is more than 30 sec. of recording time left the indicator is GREEN. When there is less than 30 sec. left the indicator is blinking. When there is no recording time left the indicator is OFF. In this case, recording is not possible. Erase one or more takes to free up space.

If needed, before recording, send the metadata information from your PDA.

To START Recording, press either the VTR button on the lens, the VTR Start button on the side of the camera, or the REC button on the Venom FlashPak.

During recording check the RECORD indicator on the side panel. When there is more than 30 sec. of recording time left the indicator is RED. When there is less than 30 sec. left the indicator is blinking. When there is no recording time left the indicator is OFF. In this case, recording stops.

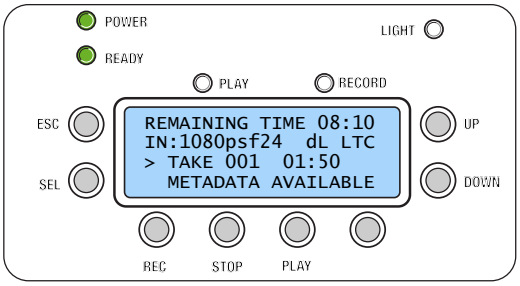
STOP Recording using the same device, so if the lens or camera button was used to start recording, either one of these can be used to stop, but if recording was started on the Venom, it must also be stopped by pressing STOP on the Venom.

☞ Note

Because it is necessary to reduce noise during recording, the cooling fan is set to low speed while recording is in progress. The fan will run at full speed again when recording stops.

2.3.1 Recording Display

Before recording starts the idle display will show remaining recording time and the last Take number and duration.

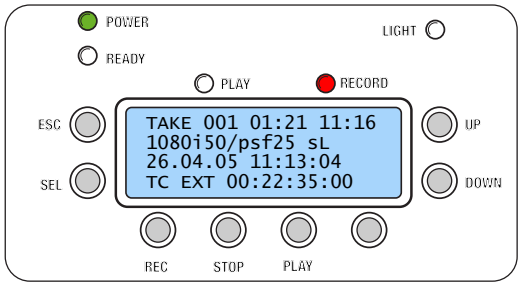


When recording starts, the first available Take number will be used. If an earlier Take has been erased, that number will be re-used otherwise the next number in sequence will be used.

Note

If metadata is to be recorded for the new take, it must be sent to the FlashPak before the take is recorded. See section about metadata for more information.

During recording the display shows Date and Time (starting) , the duration of this Take, available record time remaining for the current format and the time code (External or Internal). Record Light on Venom will be lit and the Tally lights on the camera will be active.



When recording is stopped, the system is immediately available to start the next Take.

Note

In the event of power loss during a recording, either by removal of the power source or by battery power being below the 9.5V threshold, the Take being recorded will be lost. All previously completed Takes will be safeguarded and the FlashPak will recover when power is restored.

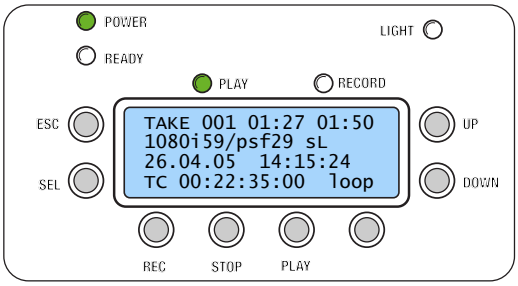
2.4 Playback from Venom

Recorded material can be played back from Venom immediately after recording has stopped, by pressing PLAY.

Output is by Dual Link HDSDI, or single HDSDI according to the format, using the two BNC connectors on the Venom and connecting to a suitable monitor. This output will be in the same format as the recorded signal.

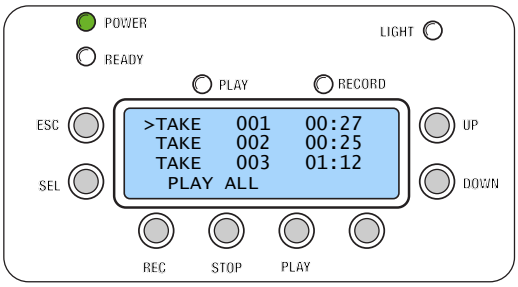
Audio output is from the stereo jack plug on the Venom.

During playback the display will show the date and timecode, format and take number. Counters show both the elapsed time and the remaining time for the Take being played.



In addition to playing back the last Take, any previous Take can be played by pressing [SEL] when the left hand arrow is pointing at the Take number as shown in the Idle Menu.

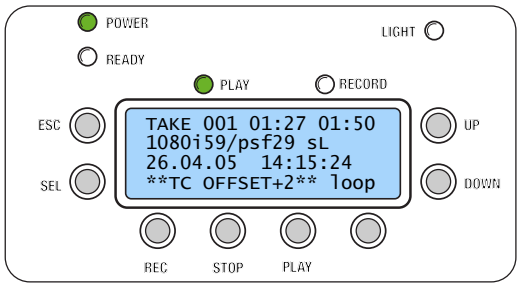
All Takes are then displayed with their durations and the required Take can be chosen using [UP] and [DOWN] buttons and pressing [SEL], then [PLAY].



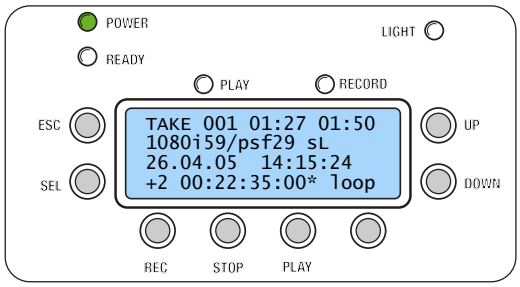
At the end of the take list is PLAY ALL. If this is selected all Takes will be played in sequence.

From the "Tools & Settings" Menu, a play loop function can be set ON or OFF. If this is set ON, the selected Take or All Takes will be played continuously until [STOP] is pressed. The playback screen shows 'loop' or 'all' in the bottom right corner.

From the "Tools & Settings" Menu, a timecode offset can be set. If the selected offset is 0 (no offset) the indication TC is shown on the bottom left of the screen. When the selected offset is not 0 the following warning message will be displayed during the first 2 seconds of playback:



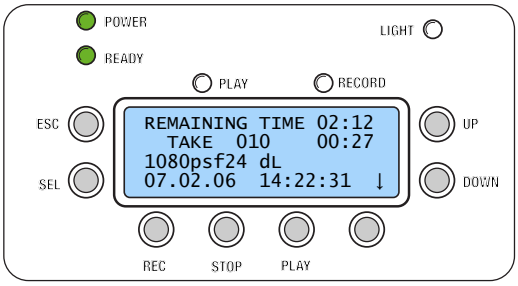
After two seconds, the playback screen will look as follows (the offset value is shown at the bottom left of the playback screen):

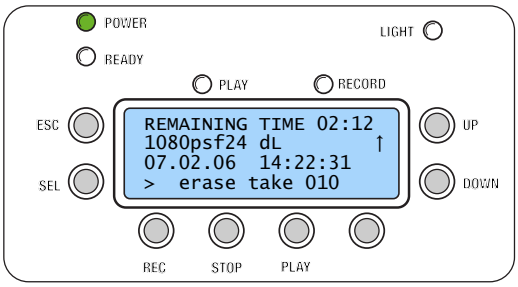


2.5 Erasing Takes

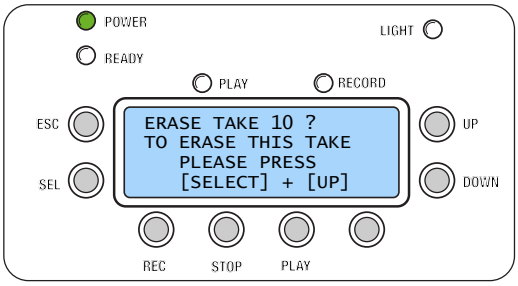
Once a recording has finished, or a Take has been played back, the Take can be erased immediately.

When the down arrow is shown next to the [DOWN] button, press [DOWN] to show the message "Erase Take"





Pressing [SEL] will show a further message asking for confirmation.



To erase the selected Take, the two buttons [SEL] and [UP] must be pressed at the same time.

After erasing, press any key to return to the Take menu.

From the Idle menu, any Take can be selected in the same way as for playback and then erased as above.

Only the currently selected Take can be erased in this way, if it is required to erase All Takes, this can only be achieved through the "Tools & Settings" Menu.

☞ Note

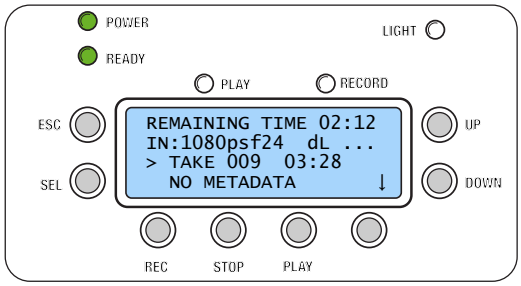
In the event of power loss during any ERASE process, either by removal of the power source or by battery power being below the 9.5V threshold, the erasing may not have been completed correctly.

After such a power loss, when power has been restored, repeat the erase process to ensure the recording space is completely cleared.

Chapter 3

Menu Structure

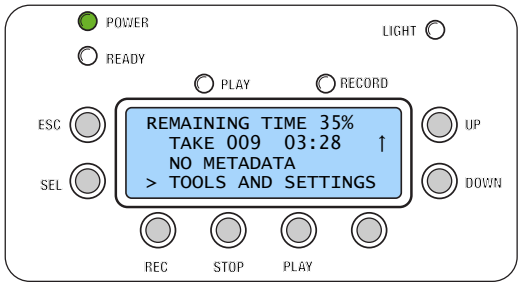
From the Idle screen, further menus are available



All menu navigation is carried out by means of the four buttons: [UP], [DOWN], [ESC] and [SEL] (select). The cursor is a right pointing '>' at the left hand side of the screen. At the right of the screen a down arrow or up arrow shows whether there are more options which can be reached by means of the [UP] and [DOWN] buttons.

Pressing [SEL] opens the selected menu item and moves to the next level down in the structure, while pressing [ESC] returns to the previous level.

In the Idle screen shown above, the cursor is pointing at the currently selected TAKE. Pressing [DOWN] once moves the cursor to the Metadata selection, and pressing [DOWN] again causes the screen to scroll to show the next line, as shown here

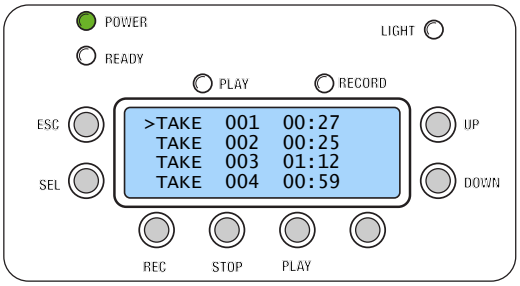


There are three lines available on the top menu level:

- TAKE
- METADATA
- TOOLS AND SETTINGS

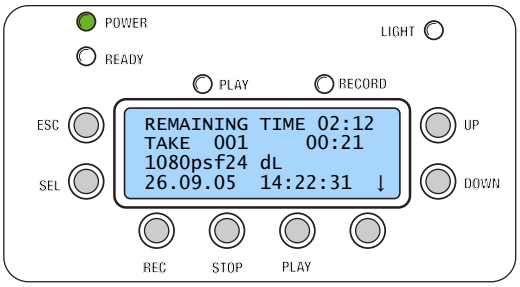
3.1 Take menu

Selecting opens a screen showing all recorded takes and their durations.



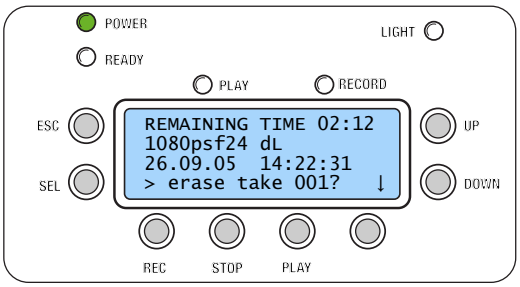
Using [DOWN], moves to the required Take Number. At the end of the take list is PLAY ALL. If this is selected all Takes will be played in sequence.

[SEL] opens the Take Information screen.

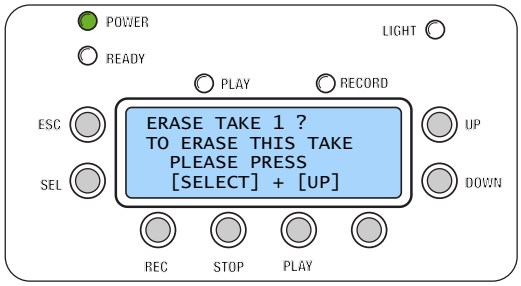


The selected take can now be played back using the [PLAY] button, or erased.

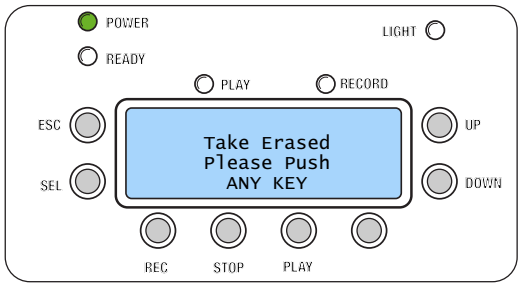
Press [DOWN] to give the 'ERASE TAKE' option



Press [SEL] to erase the take. For safety you are asked to confirm erasing by pressing two buttons simultaneously.

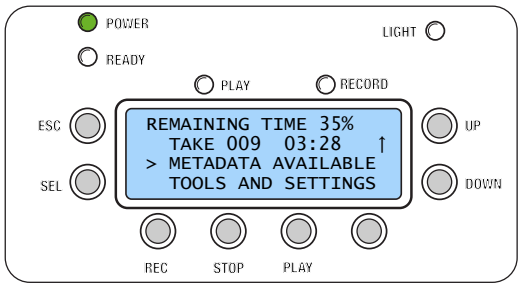


The following confirmation message appears, after which pressing any key will return you to the Take list screen.



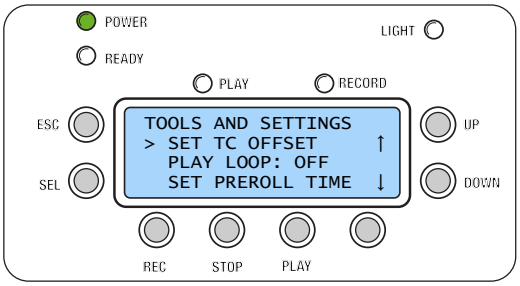
3.2 Metadata menu

This shows whether metadata will be recorded (provided that next step is "start RECORD"). METADATA AVAILABLE means available for next recording.



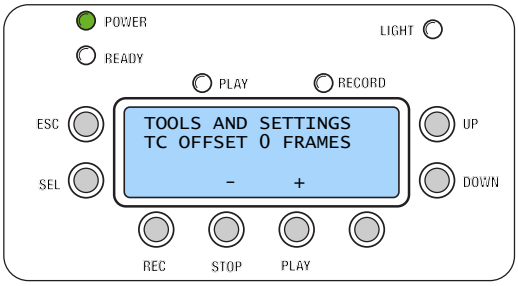
3.3 Tools & Settings menu

Press [SEL] to display the first three items:



SET TC OFFSET: This menu is used to set the offset value for the generated timecode. The offset is applied to the LTC output connector during playback.

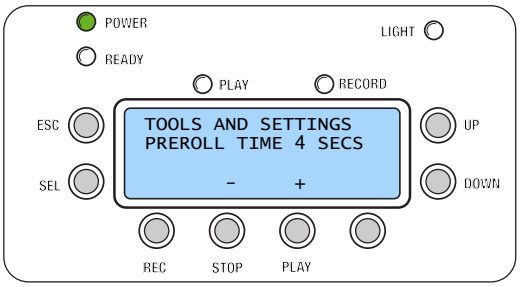
Press [SEL] to enter the offset.



Press [PLAY] to increase or [STOP] to decrease the value. The offset can be changed from -2 to +2 frames relative to the timecode. Press [ESC] to return to the Tools and Settings menu.

PLAY LOOP: When this is set ON the selected Take or All Takes will play continuously until [STOP] is pressed. Press [SEL] to toggle between ON and OFF.

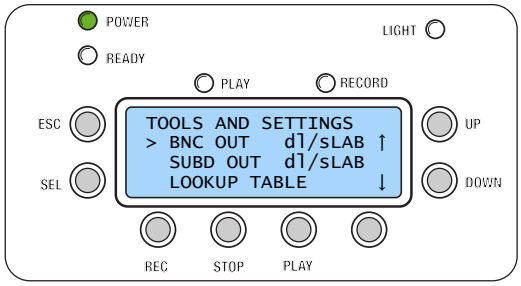
SET PREROLL TIME: On playback, the Venom can be set to give a preroll to allow external devices to synchronise. Press [SEL] to allow preroll time entry.



Press [PLAY] to increase or [STOP] to decrease preroll time. Each press changes the value by 1 second in the range 0 to 8 seconds.

Press [ESC] to return to the Tools and Settings menu.

Scrolling down shows the next three items

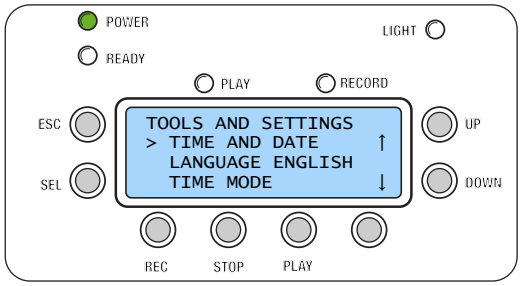


BNC OUT & SUBD OUT: The output mode for these connectors can be set as indicated by the table below. Press [SEL] to toggle through the different output modes.

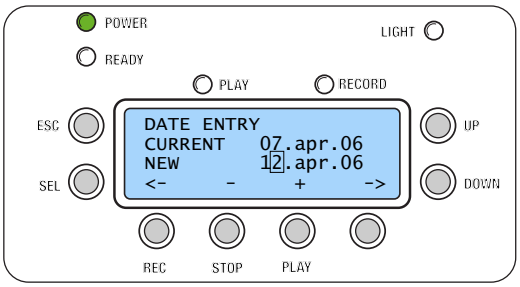
Output mode:	Dual link recorded:	Single link recorded:
dL/sLA	Dual link HDSDI output	Single link on output A, output B is switched off.
Cf/sLA	Viewing output	Single link on output A, output B is switched off.
sL/sLAB	Dual link HDSDI output	Single link on output A and output B simultaneously
Cf/sLAB	Viewing output	Single link on output A and output B simultaneously

LOOKUP TABLE: This is a factory default setting. It can not be changed.

Scrolling downs shows the next items:

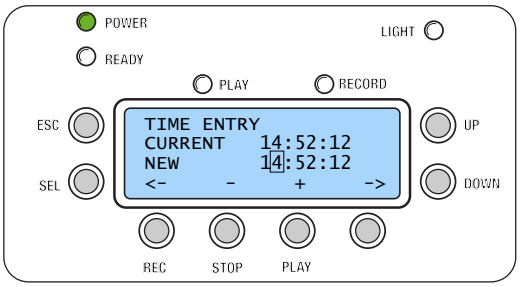


TIME AND DATE: [SEL] to enter the date:
The current date set is shown as "Current". Entry of the new date is by means of the square cursor and buttons



The cursor is moved by using the [REC] button to move left and the [spare] button to move right. [STOP] will decrease the value, [PLAY] will increase it.

To move to Time Entry, press [SEL]

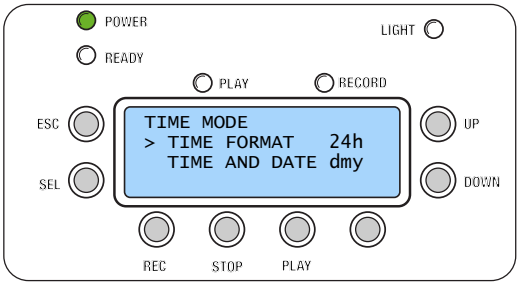


Time is entered in the same way as Date.

When entry is finished, press [ESC] to return to Tools & Settings menu.

LANGUAGE: Press [SEL] to toggle the display language between English and German.

TIME MODE: This menu contains settings for Time and Date formats.



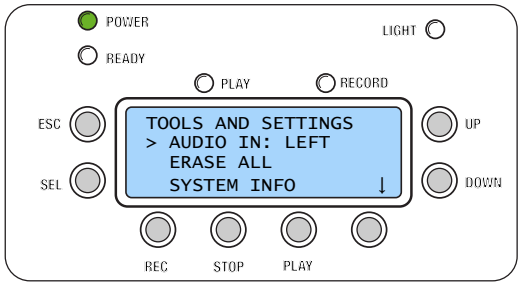
TIME FORMAT: Press [SEL] to toggle between 24h and 12h clock display. When 12h is selected time will be displayed as AM/PM.

TIME AND DATE: Press [SEL] to toggle between date formats; dmy or mdy.

When entry is finished, press [ESC] to return to Tools & Settings menu.

Scrolling down show the next items:

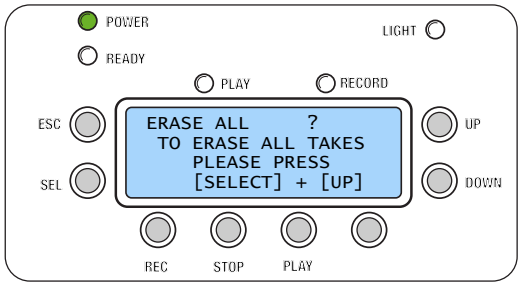
AUDIO IN: Press [SEL] to choose between LEFT, RIGHT and STEREO. The default setting is LEFT. This is the channel supplied by the Viper.



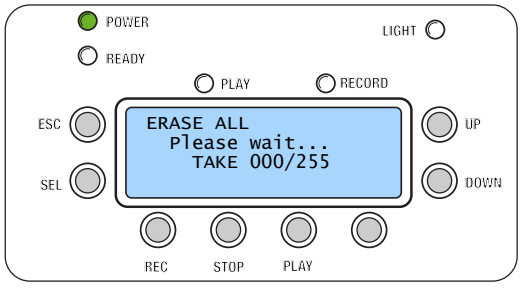
Menu selection:	Audio IN: stereo	Audio IN: Left	Audio IN: Right
recorded L channel	Input L	Input L	Input R
recorded R channel	Input R	Input L	Input R

ERASE ALL: To erase all takes on this FlashPak, press [SEL]

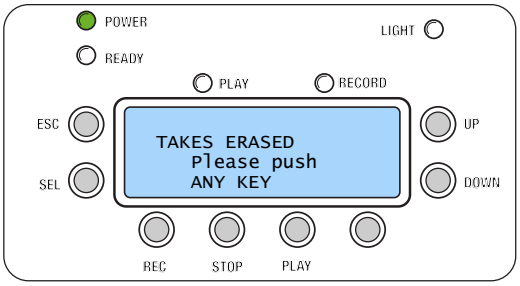
You will be asked to confirm the operation.



To confirm erasing all takes, press [SEL] and [UP] buttons together.



When erasing is complete a confirmation message is displayed.

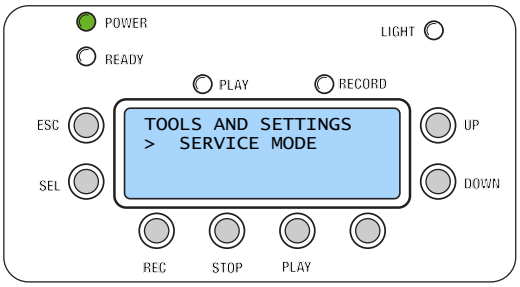


Press any key to return to the Tools and Setting menu.

SYSTEM INFO: Press [SEL] to display current information about the system. This information may be required in case of any technical support questions.

Press [DOWN] to list information about the Flashpak system: serial number, Bluetooth name, Bluetooth firmware, software versions, boards firmware, boards identification.

Scrolling down show the item:



SERVICE MODE: This is reserved for service personnel use and is password protected.

Press [ESC] to return to the Idle screen.

Chapter 4

Metadata

Venom FlashPak contains the ability to record Metadata for each take. According to the application used, this can include Production information, names of the participants and other identification details.

Before recording a Take, the information for Metadata is compiled off-line and transmitted to Venom via Bluetooth. This data is then saved as part of the Take and cannot later be edited or deleted without deleting the Take.

There are many systems available for compiling Metadata, the following describes a particular system using a PDA.

4.1 Connecting to Venom

When the PDA is switched on, it searches for other Bluetooth devices within range, and displays a list.

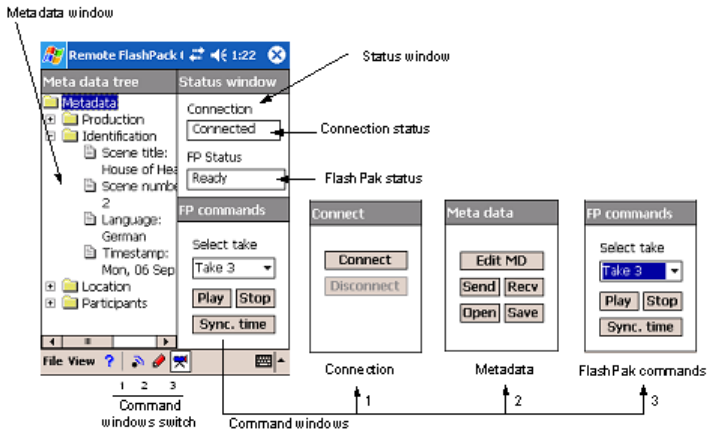
Venom FlashPaks available will be shown as FP plus a number. This is the unique Bluetooth identity number shown when the Venom is switched on, and is preset at the factory.

Select the appropriate Venom FlashPak

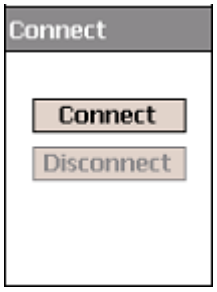
The main interface windows are then shown as below. There are three main sections:

- Metadata Window

– Status Window
– Command Windows



Select the Connect window to connect to the selected Venom FlashPak.



Once connection is established, the Status window will show the current state of the Venom - Ready / Record / Play.

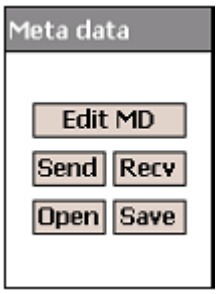
4.2 Accessing Take information

Selecting the FP Commands window will show Takes already recorded.

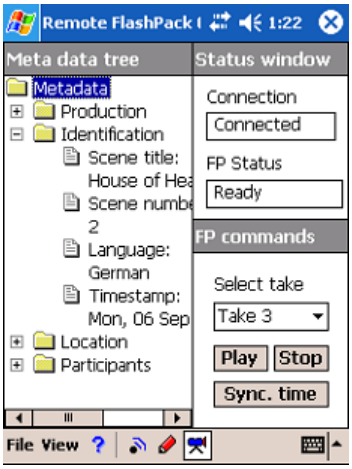
When a Take is selected it can be viewed using the PDA as a remote control to PLAY and STOP that Take provided the Venom is currently in Ready mode, and not already playing or recording.

Also in the FP commands window, Sync.Time sends the current time from the PDA to synchronize the internal clock on Venom.

The Metadata window gives access to existing Metadata and allows entry and transmission of new Metadata.



After a TAKE has been selected [Recv] will download existing Metadata from that Take on the FlashPak. This will be shown in a tree structure in the main Metadata window.

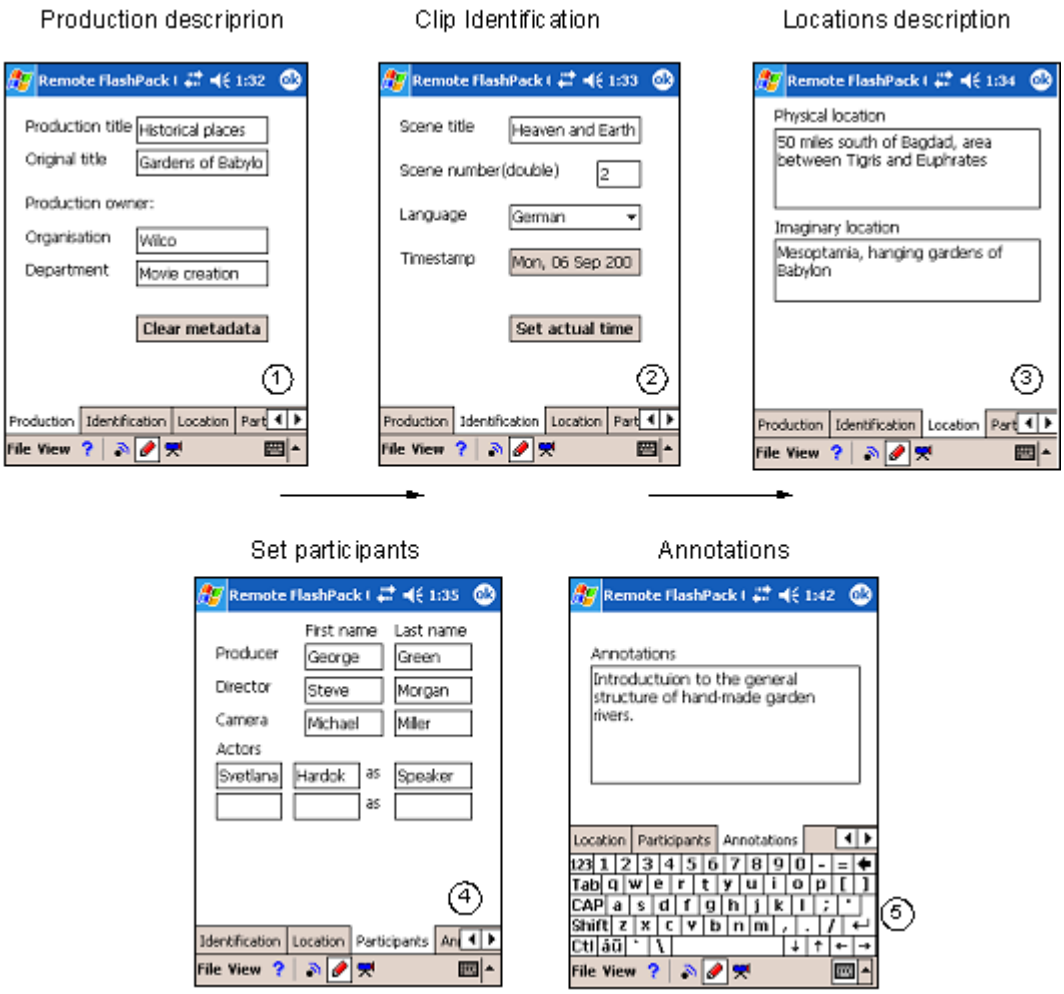


Existing data can be opened for editing by selecting [Edit MD]. By using this function, Metadata from one take can be used as a basis for the information needed on the next take, e.g. taking the data from Take 1 and just changing it to Take 2 may be sufficient for a repeat shot.

The [Open] command opens Metadata files stored on the PDA for editing.

4.3 Entering or Editing Metadata

The same windows are used for either entering new Metadata or editing existing Metadata. There are 5 windows:



Production Description: Overall information about the title and ownership of the production.

Clip Identification: Information about the Scene.

Locations Description: Actual and Imaginary locations.

Participants: Identification of Producer, Director, Camera operator and Actors involved in the scene.

Annotations: Additional notes as required.

The edited Metadata information can now be saved as a file on the PDA using the [Save] command.