



HD Safe Area Generator and Video Measurement Tool

Operators Manual



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Overview

The Shootview HD Safe Area Generator is the most feature rich, yet easy to use safe area generator (SAG) and video measurement tool available.

Designed for high end production and postproduction environments the device has all of the common safe area markers and geometry test patterns as well as the capability for users to build their own custom cages or video blanking templates for specific applications. The custom cage build tool comes complete with a pixel accurate read out for precise design and custom labeling for ease of identification in operation. The same technology is also deployed a pixel accurate measurement device for measuring in vision graphical objects for compliance

The Shootview SAG has (optional) 4:4:4 support for high end operation yet features the simple control panel and comprehensive help menu such that a novice operator may access all of the features and tools.

The Control Panel & Basic Operation

When safely installed and cabled to video source and destination monitor, switch on the unit. The device will take a few seconds to boot and will display the following message:

*Safe Area Generator HD
If you need help at any time press
extend followed by **help**
Press any Button to Continue*

The device is now ready. Viewing the control panel from left to right the LEDs and shadow buttons are described below:

Line Standard LEDs

Appropriate LED is illuminated to show the input video line standard. Video standard detection is automatic.

Extend

This button puts the unit in extended mode for programming and advanced functions; in this mode the button functions are as marked on the lower ledged. See Extended Functions, below, for full details of extended functions on page. The following are the normal operation of the SAG and button functions are described by the ledged above the buttons.

Raster & Help

This button is used to select the aspect ratio of the raster of the input video signal, either 4:3 or 16:9. This button is active with 625 (PAL) and 525 (NTSC) inputs only, in any HD format the aspect ratio is locked to 16:9 and may not be changed.

Input Aspect Ratio LEDs

Displays the status of the input image aspect ratio as set above.

Cage B/W

This button switches the cages in vision between black and white level.

Level

This button switches between the three level levels of cages. Each click of this button will select the next level. L1 cages are the primary television cages, the L2 cages are the film and geometry cages and the L3 are the user defined cages - see programming L3 cages.

Level Status LEDs

Shows which level the cages control panel is set to.

The remaining 9 buttons, arranged in 3 groups of 3 have differing functions at each of the different levels and are arranged thus:

4:3 Graphics This button switches on the following safe area cages:

- L1 – 4:3 safe graphics;
- L2 – 1.55:1 Film Cut-Out (4:3 525/625 Only);
- L3 – User Set Cage 1.

4:3 Action This button switches on the following safe area cages:

- L1 – 4:3 safe action;
- L2 – 1.66:1 Film Cut-Out (4:3 525/625 Only);
- L3 – User Set Cage 2.

4:3 Cut Out This button switches on the following safe area cages:

- L1 – 4:3 cut-out (for a 4:3 input raster this is picture blanking);
- L2 – 1.75:1 Film Cut-Out (4:3 525/625 Only);
- L3 – User Set Cage 3.

14:9 Graphics This button switches on the following safe area cages:

- L1 – 14:9 safe graphics;
- L2 – 1.77:1 Film Cut-Out (4:3 525/625 Only);
- L3 – User Set Cage 4.

14:9 Action This button switches on the following safe area cages:

- L1 – 14:9 safe action;
- L2 – 1.85:1 Film Cut-Out;
- L3 – User Set Cage 5.

14:9 Cut Out This button switches on the following safe area cages:

- L1 – 14:9 cut-out;
- L2 – 2.35:1 Film Cut-Out;
- L3 – User Set Cage 6.

16:9 Graphics This button switches on the following safe area cages:

- L1 – 16:9 safe graphics;
- L2 – Centre Cross;
- L3 – User Set Cage 7.

16:9 Action This button switches on the following safe area cages:

- L1 – 16:9 safe action;
- L2 – Circle;
- L3 – User Set Cage 8.

16:9 Cut Out This button switches on the following safe area cages:

- L1 – 16:9 cut-out (for a 16:9 input raster this is picture blanking);
- L2 – no function;
- L3 – User Set Cage 9.

The cage buttons have a touch on / touch off action and any cages from any level may be simultaneously displayed in vision. To aid operation each cage has a label which is displayed by a press and hold of any of the 9 cage buttons.

Extended Functions

Extend

When the LED mounted in the extend button is lit the device is in extended mode, the control panel buttons now have the functions as described by the ledged below the buttons.

Help

This displays the in-vision help menu which provides operational details on all functions of the HD Safe Area Generator. To exit help press the raster /help button once again, the help menu is active when the button mounted LED is lit. Use the up and down buttons to scroll through the help text pages as required.

Info

Information as to the input video standard are shown on-screen. The input standard (e.g. 1080i 50) and format (e.g. 4:2:2 YUV) are displayed in a black dialogue box. Click this button again to switch off the display.

Measure

This button puts the device into measure mode. Two sets of cross hairs (one set being solid lines and the other being dotted) and a small On Screen Display (OSD) will be displayed in vision. See *Measure Tool* below for operational details.

No

This is the 'no' button used in cage programming mode, see *Cage Programming* below for further information. This button has no function in Measure mode.

Store

This button is used in cage programming mode, see *Cage Programming* below for further information. This button has no function in Measure mode.

Programming Keys

Yes

This is the 'yes' key and is used in cage programming.

Left

This is the 'left' key and is used in cage programming.

Option

This is the 'option' key and is used in cage programming.

Right

This is the 'right' key and is used in cage programming.

Down

This is the 'down' key and is used in cage programming.

Swap

This is the 'swap' key and is used in cage programming.

Up

This is the 'up' key and is used in cage programming.

Cage Programming

The SAG has 9 user definable cages which are stored at L3. To build and set a user defined cage:

Press the extend button, then; Press one of the nine cage buttons; this is the destination under which the new cage will be stored. The LED in the button will flash to denote programming mode.

Now press **option** to display the user defined cage options: Type, Box and Drawing. Use the **up** and **down** buttons to scroll between these – the currently selected option is highlighted yellow on the OSD. Select 'Type' to change the position of the on screen text, use the **left** and **right** keys to select between, bottom right, top right, centre, top left and bottom left.

Select Box to change the appearance of the cage on screen. There are four settings available here, either solid lines, 3 different types of dashed lines or blanking. In the case of blanking everything outside of the designed cage is blanked. Use the **left** and **right** buttons to select.

Select 'Drawing' to change the method by which the cage is drawn on screen. The options here, selected by using the **left** and **right** buttons, are: Linked and Free. A Linked cage is one which is constituent equidistant horizontal and vertical lines with an origin at the centre of the screen. Use the **right** button to move the vertical lines inward and the **left** button to move them outward from the centre. Use the **up** button to move the horizontal lines toward the centre of the screen and the **down** button to

expand them. A Free cage allows the two diagonally opposite right angles of the cage to be moved independently. The **left**, **right**, **up** and **down** buttons are used in the same way as for a Linked cage and the swap button is used to switch between the right-angles of the cage.

Press **option** again when the desired selections have been made, the label editor will now be displayed. This allows a user generated cage to be given a label for ease of identification in vision. Use the **left** and **right** buttons to move horizontally through the character positions of the label and use the **up** and **down** keys to scroll through the letter of the alphabet, press **option** when complete. Now select either *small* or *large* characters using the **left** button to toggle press **option** when complete and position the label, **option** to complete.

Now position the cage using the position keys as described above. When complete press the **store** button. Press the **yes** button to confirm or **no** to quit the programming mode without storing the designed cage.

Video Measurement Tool

Press the extend button, then; The LED in the measure button will illuminate when in measure mode. The screen will show two sets of cross-hairs, one comprising of solid lines and one dotted lines. A small OSD will also be in vision, this displays the following measurement information: The absolute position (and actual line number for interlaced video) of the horizontal and vertical lines expressed as lines and pixels, the gap between the dotted and solid lines expressed as lines and pixels as well as a percentage of the whole image raster. Additionally the aspect ratio of the 'box' within the two cross-hairs will be shown. Press the measure again to leave the measurement tool.

Appendix I – Table of Cages

| Cage Button | Level 1 | Level 2 | Level 3 |
|--------------------|----------------------------|---------------------------------------|---------------------------|
| 1 | 4:3 Safe Graphics | 1.55:1 Film Cut-Out (525/625 Only) | User definable cage 1. |
| 2 | 4:3 Safe Action | 1.66:1 Film Cut-Out (525/625 Only) | User definable cage 2. |
| 3 | 4:3 Cut Out (blanking) | 1.75:1 Film Cut-Out (525/625 Only) | User definable cage 3. |
| 4 | 14:9 Safe Graphics | 1.77:1 Film Cut-Out (525/625 Only) | User definable cage 4. |
| 5 | 14:9 Safe Action | 1.85:1 Film Cut-Out (525/625 Only) | User definable cage 5. |
| 6 | 14:9 Cut Out (blanking) | 2.35:1 Film Cut-Out | User definable cage 6. |
| 7 | 16:9 Safe Graphics | Centre Cross | User definable cage 7. |
| 8 | 16:9 Safe Action | Circle | User definable cage 8. |
| 9 | 16:9 Cut Out (blanking) | No function | User definable cage 9. |

Appendix II – Safety



The Shootview Safe Area Generator conforms to the following standards:

1. **Electromagnetic Compatibility Immunity Standard BS 50082-1:1992**
2. **Electromagnetic Compatibility Emission Standard BSEN 50081-1:1992**

General Safety

This unit must be earthed and should only be used with the supplied mains cord.

Voltages contained within the unit may be lethal under certain circumstances. The mains power supply must be removed prior to servicing. Maintenance should only be carried out by suitably qualified personnel.