Test Pattern Generator

Test Pattern Software
Version 8

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Hardware and Media—The Company will either repair or replace (at its option) any defective Hardware component or part, or Software Media, with new or like new Hardware components or Software Media. Components may not be necessarily the same, but will be of equivalent operation and quality.

Software Updates

Except as may be provided in a separate agreement between Drastic Technologies and You, if any, Drastic Technologies is under no obligation to maintain or support the Software and Drastic Technologies has no obligation to furnish you with any further assistance, technical support, documentation, software, update, upgrades, or information of any nature or kind.

Restrictions and Conditions of Limited Warranty

This Limited Warranty will be void and of no force and effect if (i) Product Hardware or Software Media, or any part thereof, is damaged due to abuse, misuse, alteration, neglect, or shipping, or as a result of service or modification by a party other than the Company, or (ii) Software is modified without the written consent of the Company.

Limitations of Warranties

THE EXPRESS WARRANTIES SET FORTH IN THIS AGREEMENT ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. No oral or written information or advice given by the Company, its distributors, dealers or agents, shall increase the scope of this Limited Warranty or create any new warranties.

Geographical Limitation of Warranty—This limited warranty is valid only within the country in which the Product is purchased/licensed.

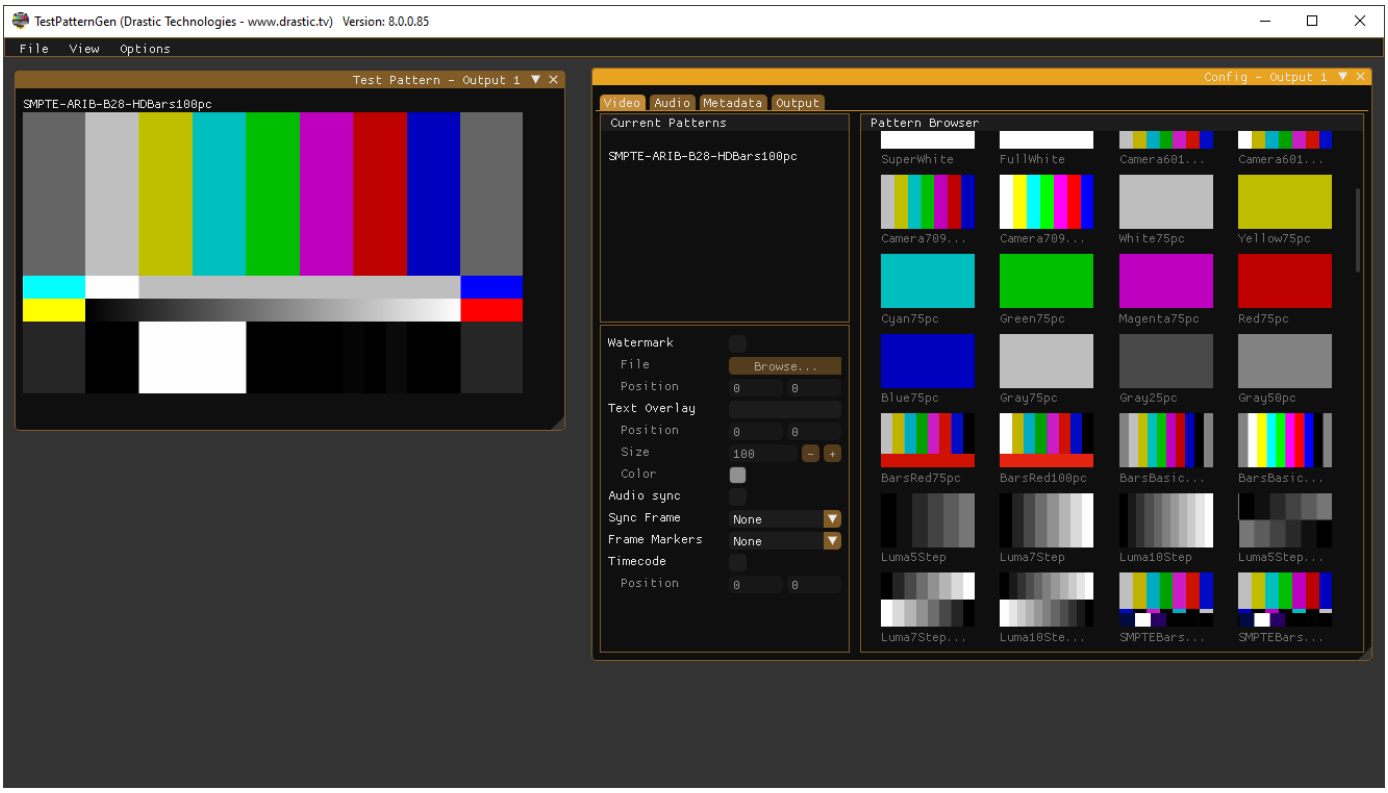
Limitations on Remedies—YOUR EXCLUSIVE REMEDIES, AND THE ENTIRE LIABILITY OF Drastic Technologies Ltd WITH RESPECT TO THE PRODUCT, SHALL BE AS STATED IN THIS LIMITED WARRANTY. Your sole and exclusive remedy for any and all breaches of any Limited Warranty by the Company shall be the recovery of reasonable damages which, in the aggregate, shall not exceed the total amount of the combined license fee and purchase price paid by you for the Product.

Damages

Drastic Technologies Ltd SHALL NOT BE LIABLE TO YOU FOR ANY DAMAGES, INCLUDING ANY LOST PROFITS, LOST SAVINGS, OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF YOUR USE OR INABILITY TO USE THE PRODUCT, OR THE BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, EVEN IF THE COMPANY HAS BEEN ADVISED OF THE POSSIBILITY OF THOSE DAMAGES, OR ANY REMEDY PROVIDED FAILS OF ITS ESSENTIAL PURPOSE.

Further information regarding this limited warranty may be obtained by writing:
Drastic Technologies Ltd
523 The Queensway, Suite 201
Toronto, ON, M8V 1J7
Telephone: (416) 255-5636

About Test Pattern Generator



Test Pattern Generator is a software based test pattern generator.

It provides 148 static test patterns and two motion test patterns, with customizable elements including watermark, text overlay, audio sync, sync frame, timecode, audio tones and beeps, and closed captions.

Supported outputs include: ScopeDirect AvVr3D (UnReal Engine), AJA, Bluefish444, Blackmagic, Matrox, NDI, and SMPTE 2110.

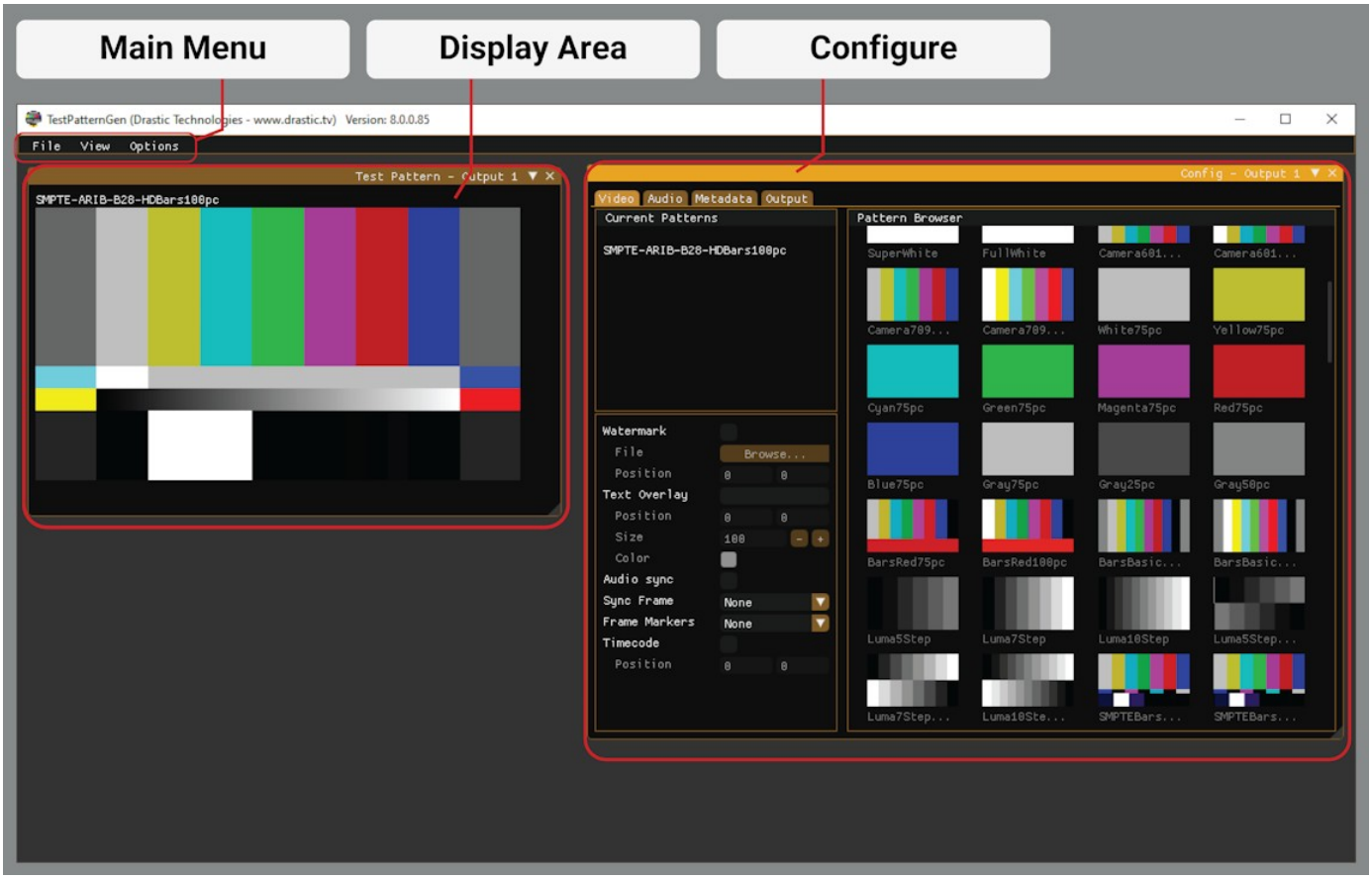
The user can set the video channel for output type, the frame type and size, compression, number of audio channels, audio frequency and bit depth, and the video signal format.

Test Patterns are useful for analyzing and calibrating lip sync (AV Sync), format conversion and compression artefacts, color space mismatch, chroma subsampling errors, frequency response, field order, clipping, bit depth, skin tones, linearity and gamma.

Reference

The reference section provides a detailed look at each of the elements in the **Test Pattern Generator** graphical user interface.

Main Interface Overview



Main Menu

File – save the configuration, or open a saved configuration.
View – add a new test pattern output, or remove all test pattern outputs.
Options – opens the settings window, where the user can set the “theme”, or look of the GUI. The user can also enable/disable the remote control feature here.

Display 1 – for each test pattern output that is added, a Display window is opened.

Config – once a Display window is open, the user can right click on it to open a Configure dialog, so they can set up the test pattern output.

Operations

Install the Software

Install **Test Pattern Generator** software on the system. Regardless of the delivery method, the software will be available at some level as an (executable) installable file. Double-click on the file, or right click and select **Open** from the context menu. Follow the prompts to set where the software should be installed and make other installation-specific decisions.

Upon completion of the install, please restart the system.

License Test Pattern Generator

We provide licenses via email.

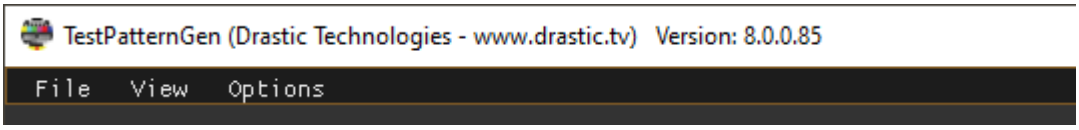
Run the licensing that is installed with the software. Generate a site code. Send it to us.

We will send back a key to enable a license on your system.

Details at licensing.

Run the Software

Run **Test Pattern Generator** software.



At the top of the Test Pattern Generator, the title bar provides the software name, a gratuitous mention of Drastic Technologies and their exemplary website, www.drastic.tv, and the version number of the software.

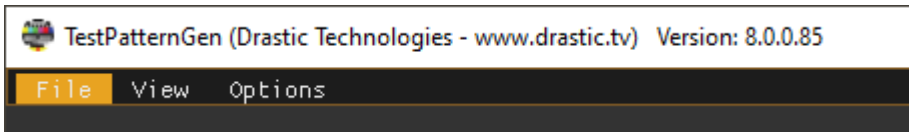
Test Pattern Generator provides three options via the main menu.

File menu – save the current setup or open an existing setup that has been saved.

View menu – add a test pattern output, or remove all test pattern outputs.

Options menu – opens the **Settings** window, where the user can set the theme, and/or enable/disable remote control.

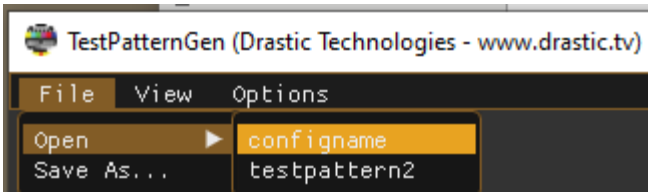
File Menu



File menu – clicking the file menu provides two options.

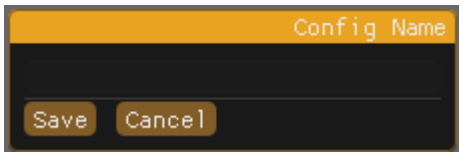
Open

Open – open a saved configuration file. Clicking the Open option should reveal a list of saved configuration files to choose from.

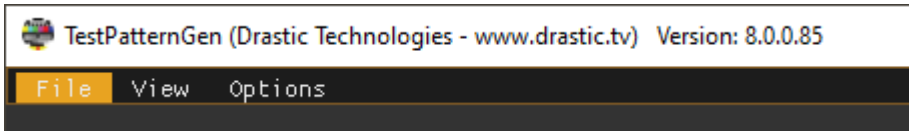


Save As

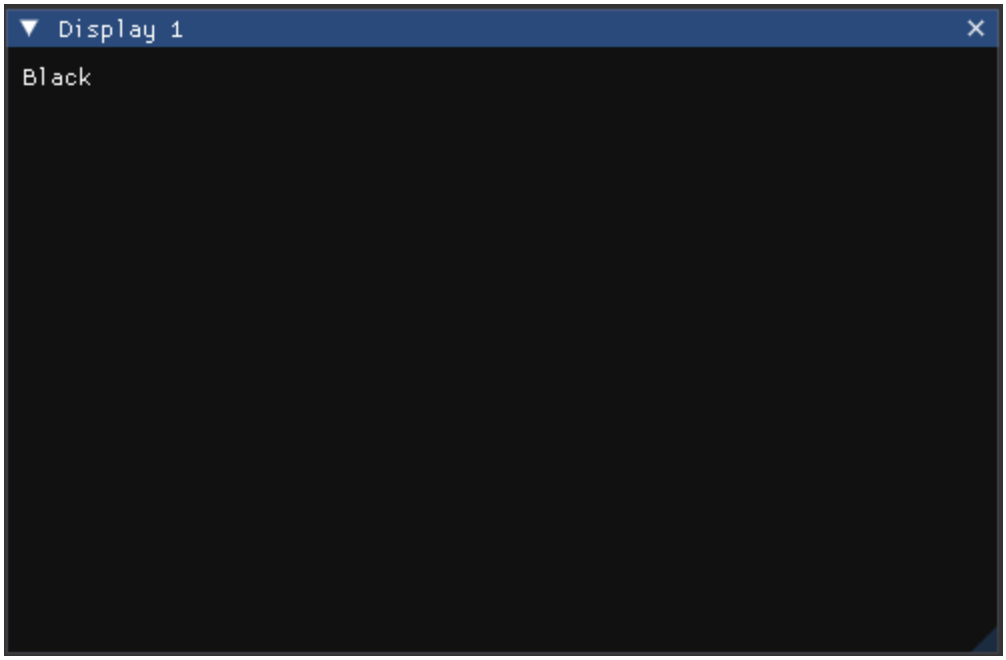
Save As – save the current configuration file for future use. This option opens a dialog so you can provide a name for the configuration file.



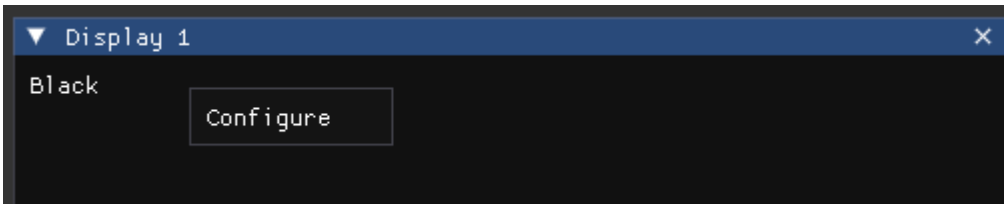
View – Add Test Pattern Output



Clicking the **View** menu provides an option to add a test pattern output. Clicking the **Add Test Pattern Output** menu item opens a Display for the output.



By default it is set to output **Black**. Right clicking on the **Display** provides a **Configure** option. This is where the user can set up test patterns and associated tones, closed captions etc.

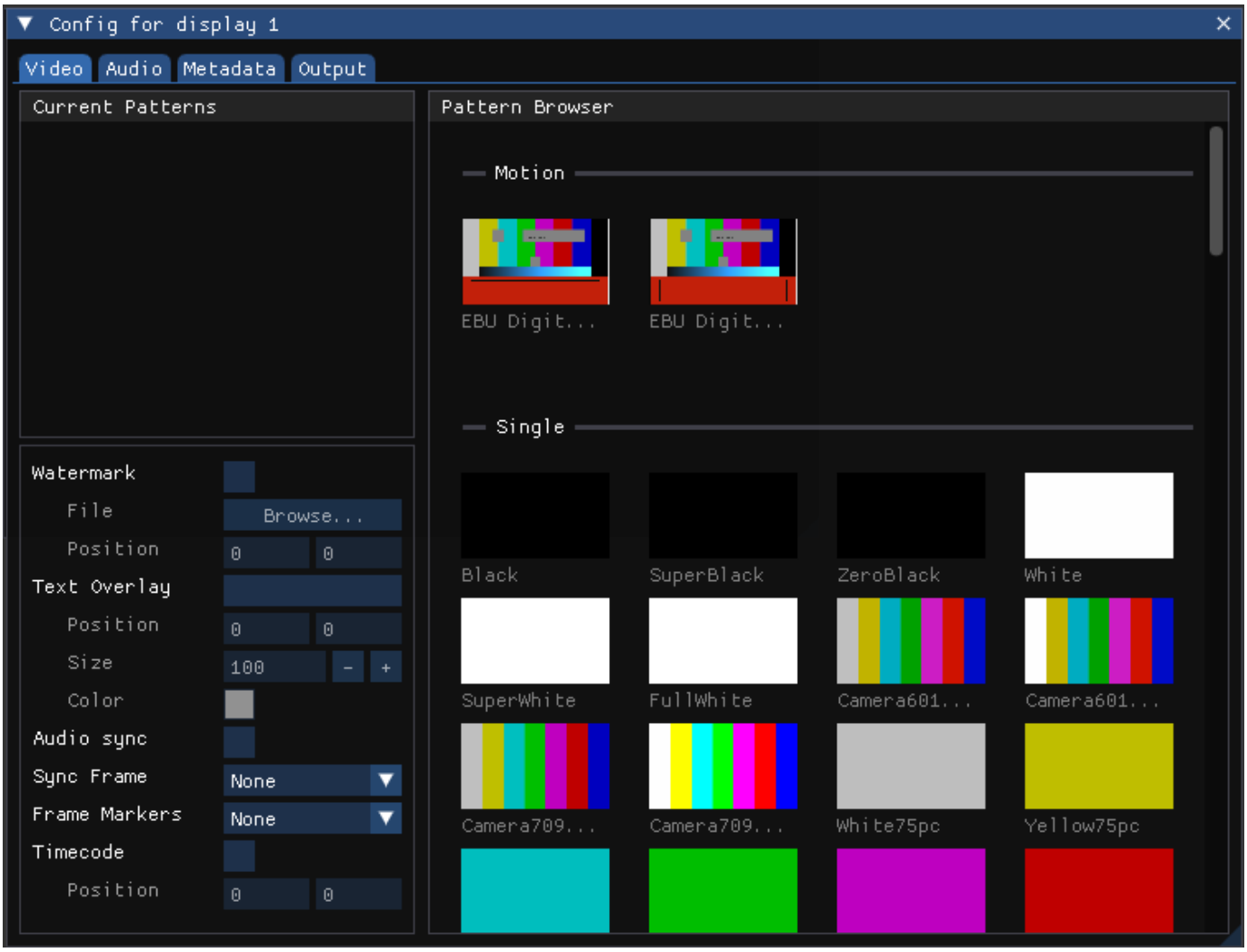


Configure

The Configuration is specific to each test pattern display, since **Test Pattern Generator** supports outputting different video standards and frame rates at the same time. The configure menu has four tabs

Video

Provides options for setting up the test pattern output, including various overlays.

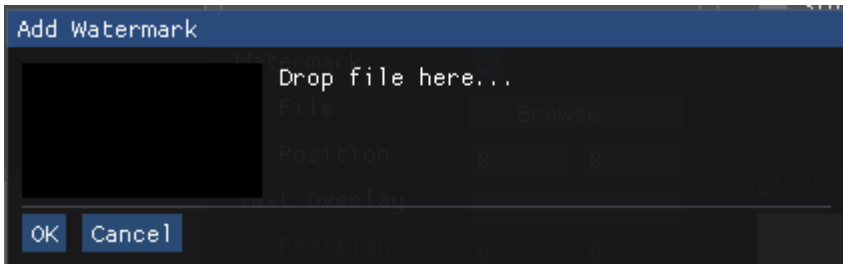


Current Patterns section - this section shows any test patterns that have been loaded into the Display.

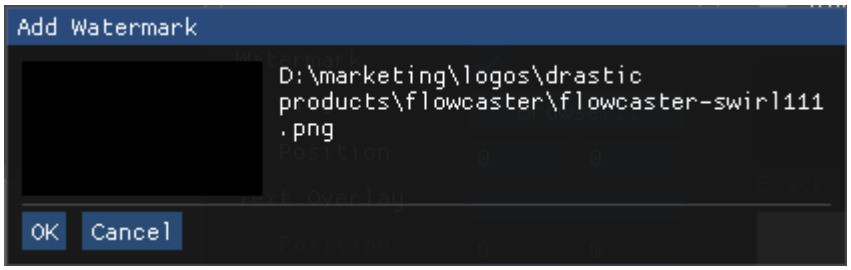
Overlay Options section - this section provides options to overlay watermarks, text overlays, audio sync tones, sync frames, and time code. The available options are:

- **Watermark** – click the checkbox to enable a watermark overlay on output.

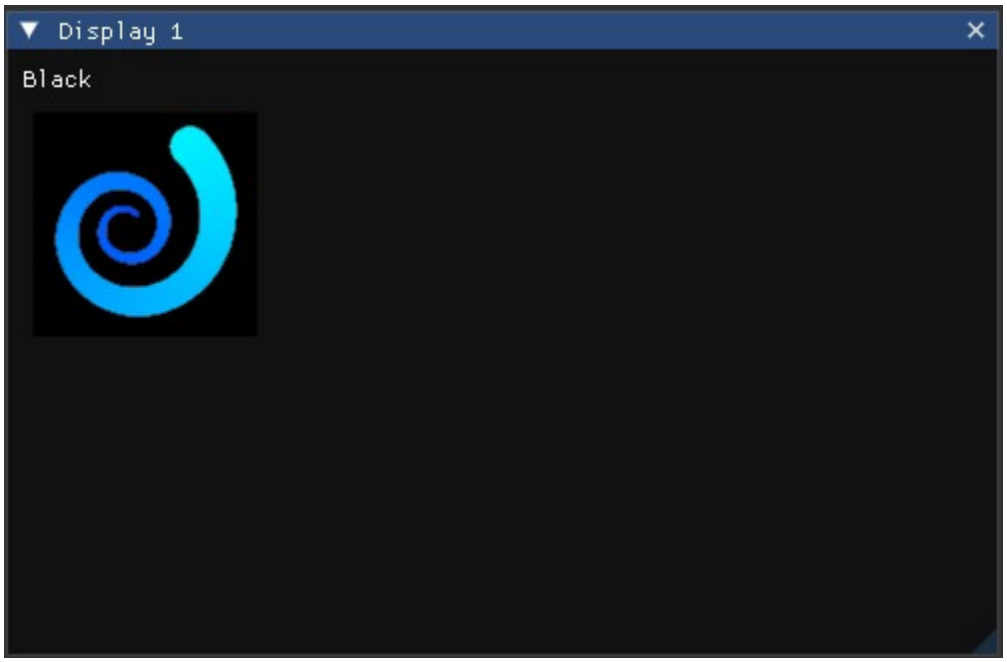
- **File Browse** – click the **Browse** button to navigate to a 32 bit png to use for a watermark on output. Clicking this control opens a drag and drop option to add a watermark file.



Dropping a watermark file loads it onto the dialog.



Clicking the OK button adds it to the output.

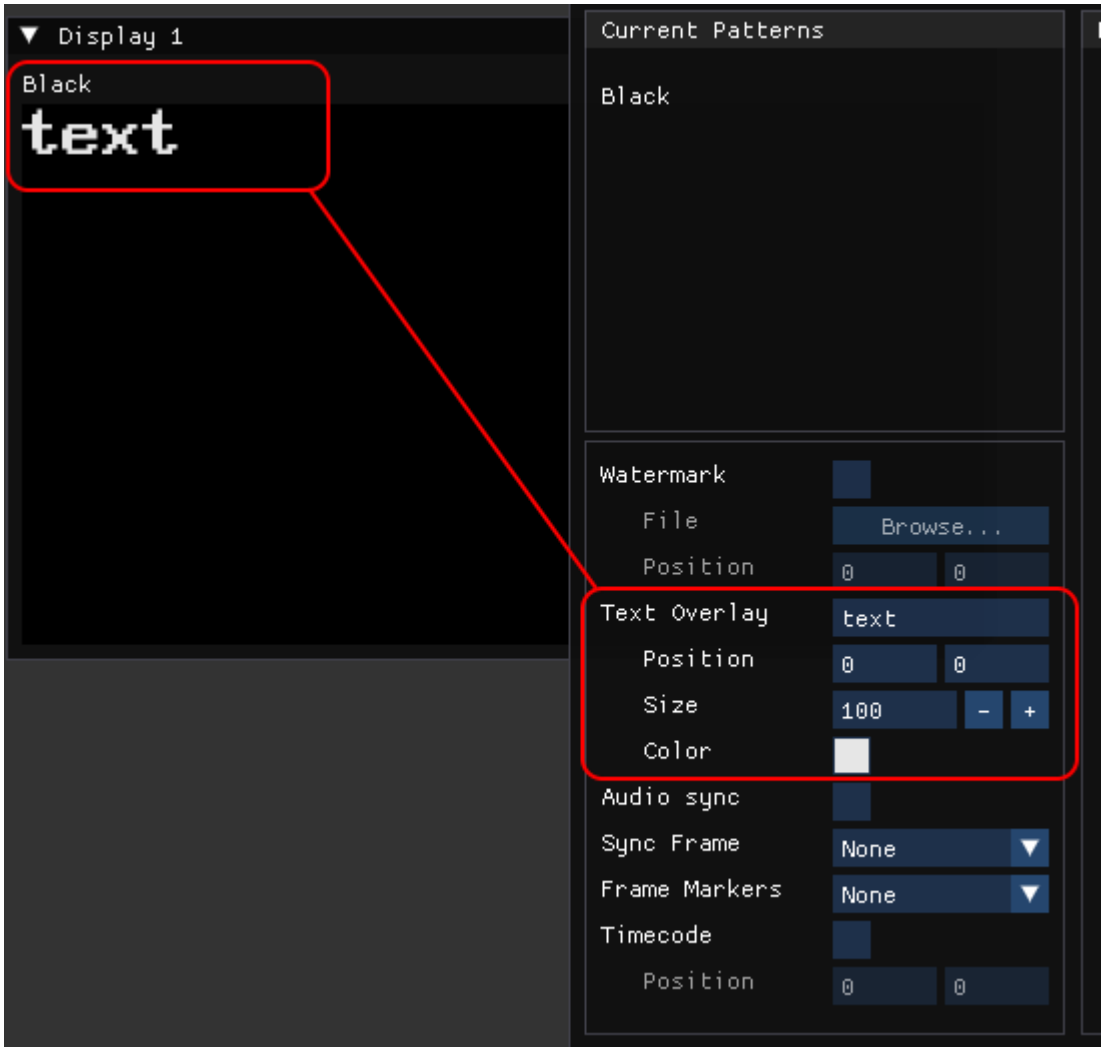


- **Position** – use the x and y fields to specify a location for the watermark. The default location (0, 0) will place the watermark in the upper left corner for example. Note that the watermark and any text that has been added may come into conflict unless their positions have been set carefully.

- **Text Overlay** – the first field is where you can type in some text to be overlaid.

    - **Position** – use the x and y fields to specify a starting point for left-to-right text.
    - **Size** – the text can be enlarged or reduced in size. The default is 100%. There are plus (+) and minus (-) arrows to reduce or enlarge the size of the text.
    - **Color** – typically a default color that is contrasting will be provided, but the user can click the color chip to open a color picker.

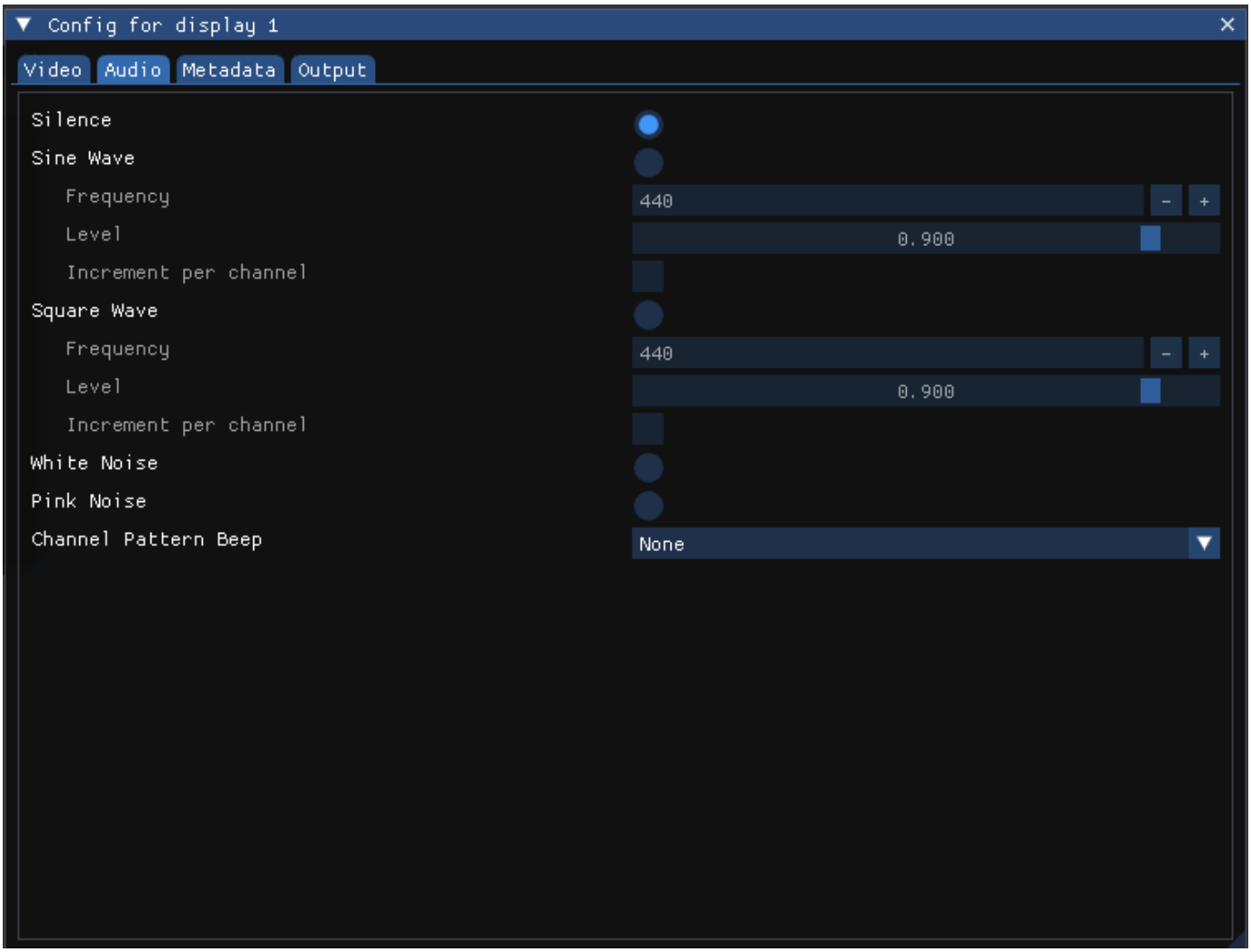
Here is some text that has been overlaid at 100% size, so you can decide whether you need to to increase or decrease it.



- **Audio Sync** – specify an audio beep to be sent regularly, for AV Sync testing.
- **Sync Frame** – specify a condition for a Sync Frame to be sent to match the audio tone. The options include:
  - **None** – do not interpose a frame of black or white (turn Sync Frame off).
  - **Black Frame** – show a black frame every second
  - **White Frame** – show a white frame every second.
- **Frame Markers** – specify a condition for frame markers to be overlaid on output. The options include:
  - **None –** do not show frame markers on the output.
  - **Top Left** – show frame markers along the top left
  - **Bottom Left** – show frame markers along the bottom left
- **Pattern Browser – Motion** – provides motion test patterns for AV Sync testing.
- **Pattern Browser – Single** – lets the user select between the available single frame video test patterns.

Audio

Provides options for setting up the audio output.



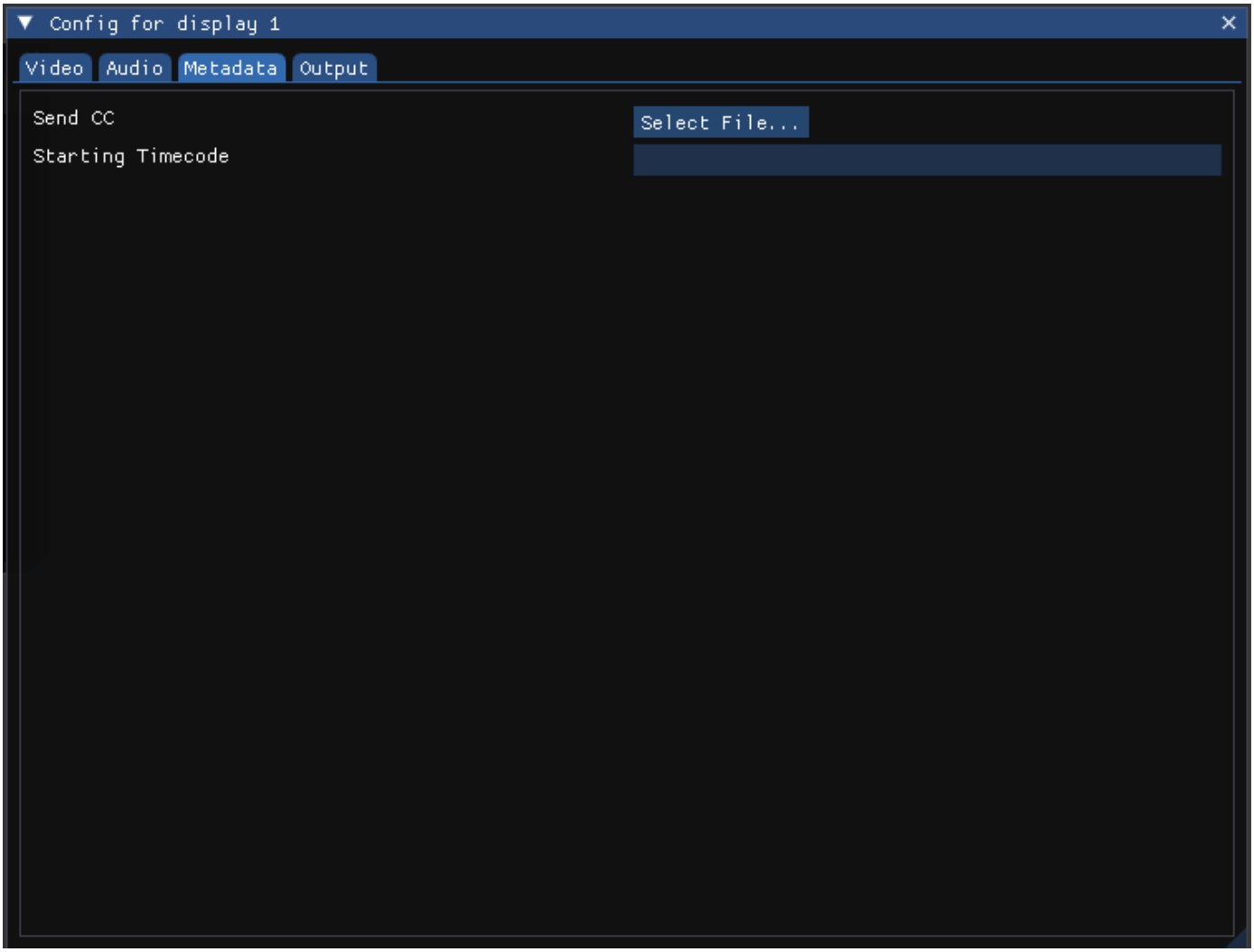
The Audio tab provides options for adding audio to the output.

- **Silence** – the default setting is no audio output. Clicking this checkbox will turn the other audio output settings off.
- **Sine Wave** – add a sine wave tone on output. A sine wave provides a single frequency output.
  - **Frequency** – opens set to 440 Hz. Provides plus (+) and minus (-) buttons to adjust the frequency.
  - **Level** – output level, opens set to 0.900. Provides plus (+) and minus (-) buttons to adjust the output level.
  - **Increment per channel** – increments the frequency of the sine wave per audio channel, to help diagnose any per channel issues.
- **Square Wave** – add a square wave tone on output. A square wave provides multiple frequencies, or harmonics, in addition to its fundamental frequency.
  - **Frequency** – opens set to 440 Hz. Provides plus (+) and minus (-)

buttons to adjust the frequency.
    - **Level** – output level, opens set to 0.900. Provides plus (+) and minus (-) buttons to adjust the output level.
    - **Increment per channel** – increments the frequency of the square wave per audio channel, to help diagnose any per channel issues.
- **White Noise** – add white noise on output. White noise has a flat frequency spectrum when plotted as a linear function of frequency (e.g., in Hz). In other words, the signal has equal power in any band of a given bandwidth (power spectral density) when the bandwidth is measured in Hz.
- **Pink Noise** – add pink noise on output. Pink noise has equal power per octave. The spectral power density, compared with white noise, decreases by 3.01 dB per octave (10 dB per decade); density proportional to 1/f. For this reason, pink noise is often called "1/f noise" Pink noise offers more of the lower frequencies, generally considered more soothing than White Noise.
- **Current Pattern Beep** – add beeps on output per channel. Options include:
    - **None** – do not specify a beep pattern per channel.
    - **1/2 sec on, 1/2 sec off** – output a beep for ½ a second, and silence for ½ a second, then do the same for the next channel.
    - **Start C** – add a beep per channel using the note of C. (middle C, or C4).
    - **One scale note up per channel** – provides an incremented series of notes in the scale of C major, so the first channel would output C (middle C, or C4), and second channel would output a D (the next note in the scale) and so on.
    - **Pause at end for 1 sec** – when cycling through channels, add a 1 second pause at the last channel.

Metadata

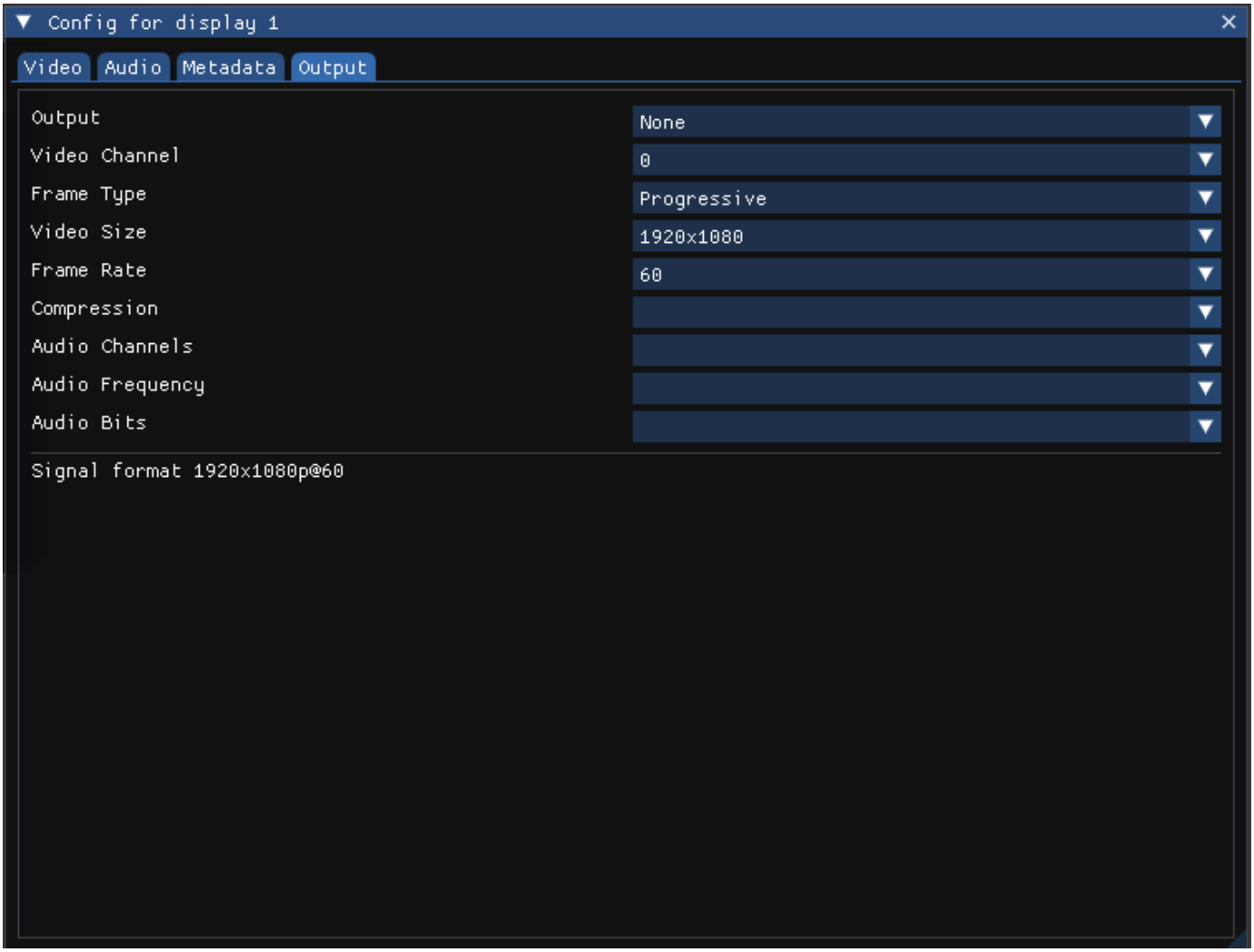
Provides options for adding metadata to the output, including adding closed captions, and a starting timecode.



- **Send CC** – send closed captions as an overlay on the test pattern. Pressing the Select File button opens a browser, so you can navigate to a closed caption file and add it to the output.
- **Starting Timecode** – specify a starting time code location, so when you overlay time code, it will use this as the first frame of time code.

Output

Provides configuration for the output.

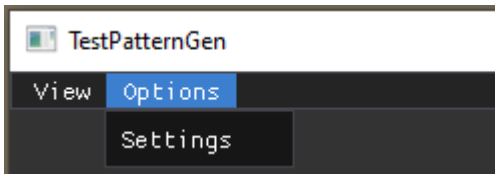


- **Output** – set the output type. Options include:
  - **None** – the default setting. This setting turns the output off.
  - **ScopeDirect (AvVr3D)** – use the ScopeDirect plugin for UnReal Engine as the output channel, so you can view test patterns in UnReal Engine.
  - **Aja** – use an AJA board installed in the system as the output.
  - **BlueFish** – use a Bluefish444 board installed in the system as the output.
  - **BlackMagic** – use a Blackmagic board installed in the system as the output.
  - **Matrox** – use a Matrox board installed in the system as the output.
  - **NDI** – send out the test patterns via NDI for local network use.
  - **SMPTE2110** – send out the test patterns as an ST-2110 stream or streams, for remote workflows. May require third party hardware and a separate third party software license.
- **Video Channel** – on a system where a supported video board (list above)

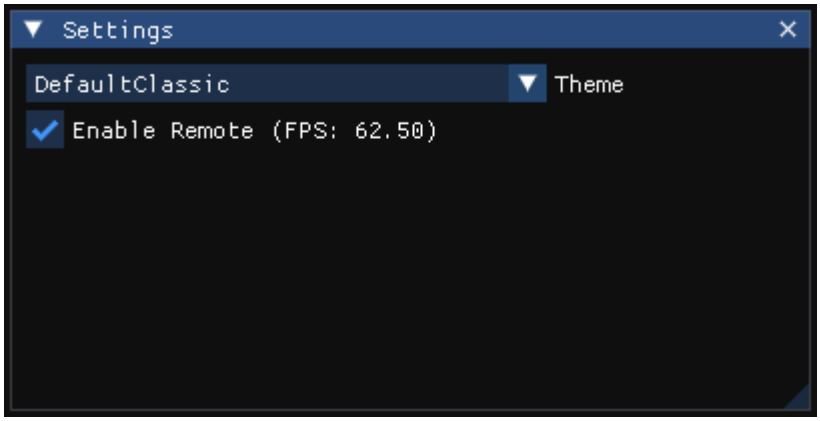
has multiple channels, use this pulldown menu to set which channel the Display outputs video on.

- **Frame Type** – sets the frame type. Options include:
  - **Unknown** – don’t know what to set? Use this.
  - **Interlaced** – send the even, then the odd numbered lines of a frame as fields.
  - **Progressive** – send whole frames at once.
  - **Segmented Frame** – send PsF frames as output.
- **Video Size** – the size of the video frame in pixels, width by height. Test Pattern Generator uses standard size frames. Options include:
  - 720x480 (NTSC)
  - 720x576 (PAL)
  - 1280x720 (HD)
  - 1920x1080 (HD)
  - 2048x1080 (2K)
  - 3840x2160 (4K)
  - 4096x2160 (4K Cinema)
  - 7680x4320 (8K)
- **Frame Rate** – the frame rate, in frames per second. Test Pattern Generator uses standard frame rates. Options include:
  - 23.98
  - 25
  - 29.97
  - 30
  - 50
  - 59.94
  - 60
- **Compression** – compression options.
- **Audio Channels** – number of audio channels options.
- **Audio Frequency** – audio frequency settings.
- **Audio Bits** – audio bit depth setting
- **Signal format display** – shows the current system setup.

Options – Settings

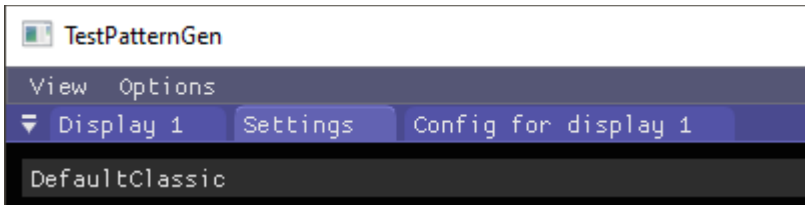


The options menu lets you open the settings for Test Pattern Generator. The settings window looks like this:

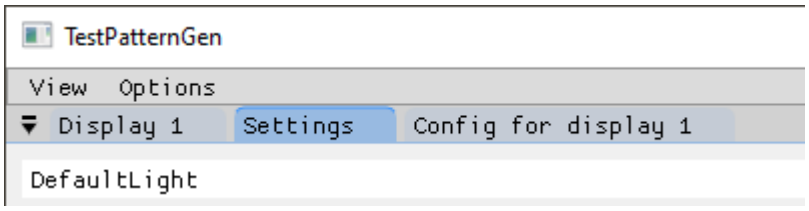


The pulldown menu provides a number of “Themes” the user can apply to change how the GUI is displayed. Here are the themes:

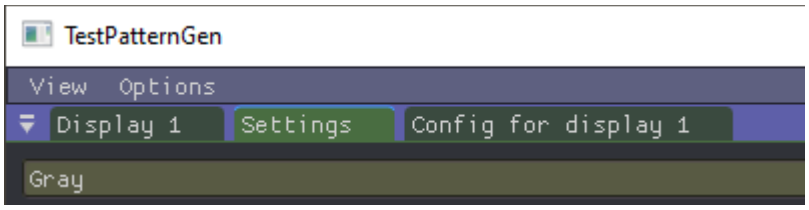
DefaultClassic



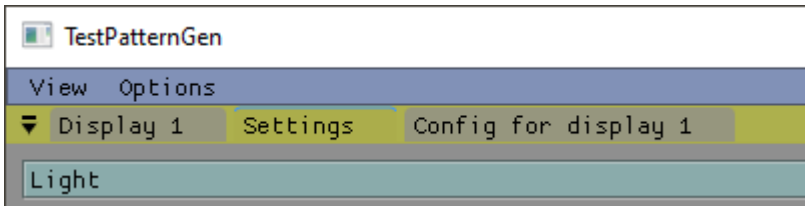
DefaultLight



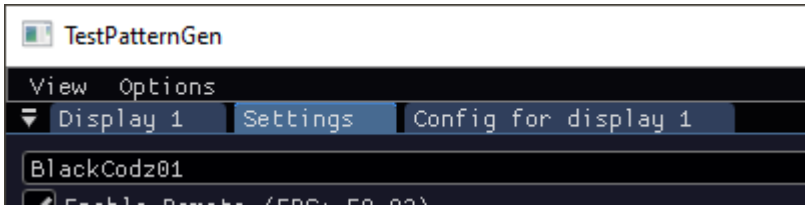
Gray



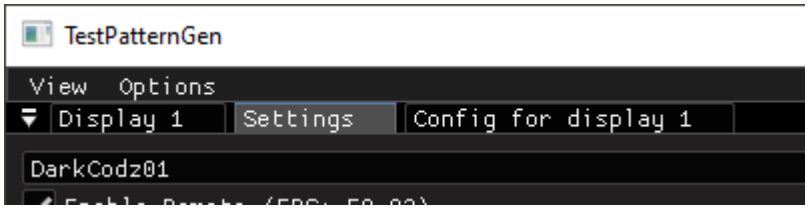
Light



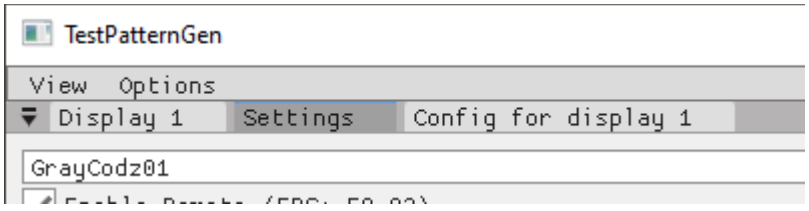
BlackCodz01



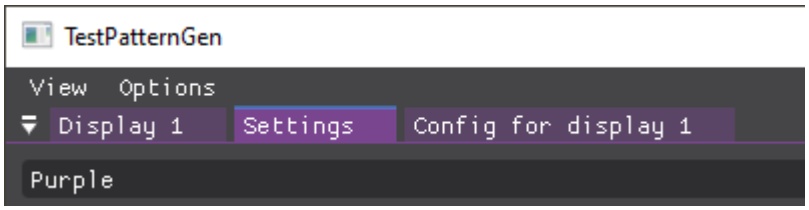
DarkCodz01



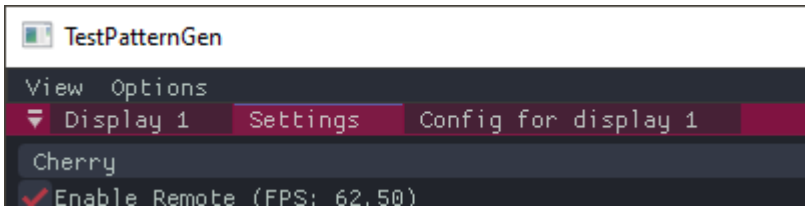
GrayCodz01



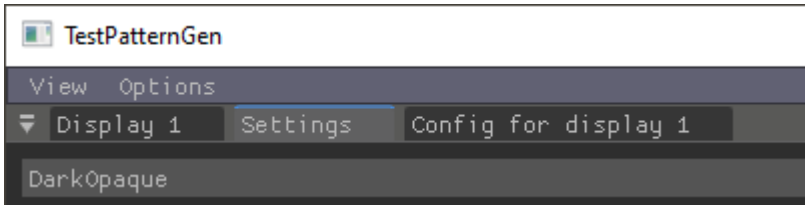
Purple



Cherry

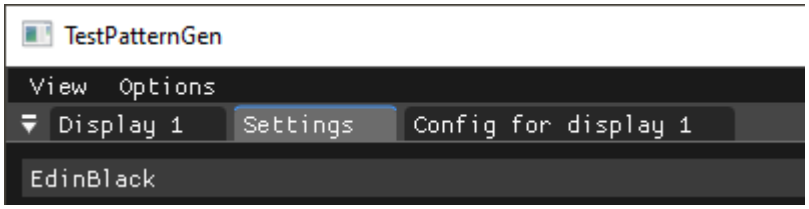


DarkOpaque

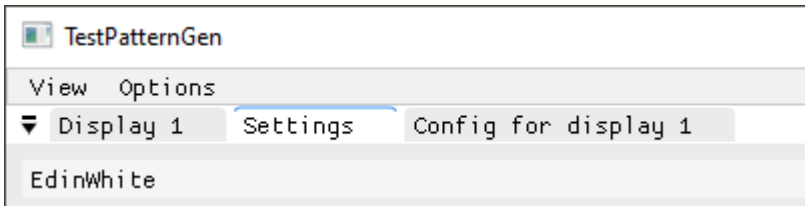


Soft

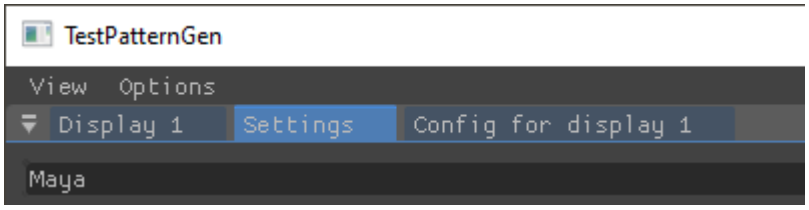
EdinBlack



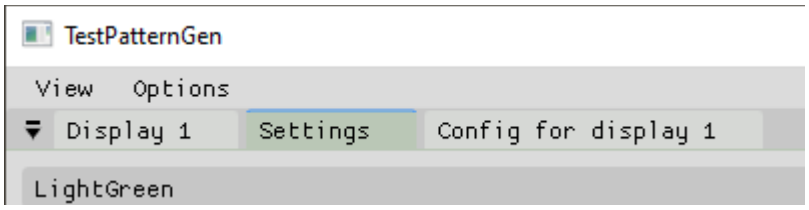
EdinWhite



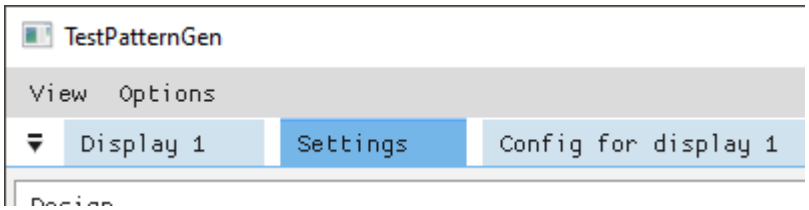
Maya



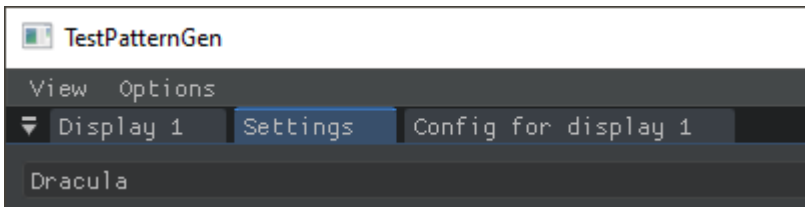
LightGreen



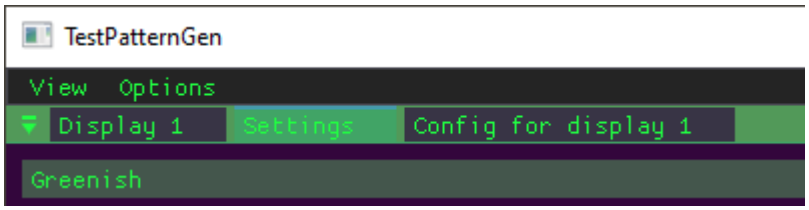
Design



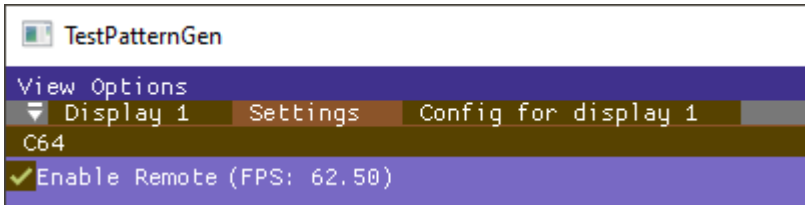
Dracula



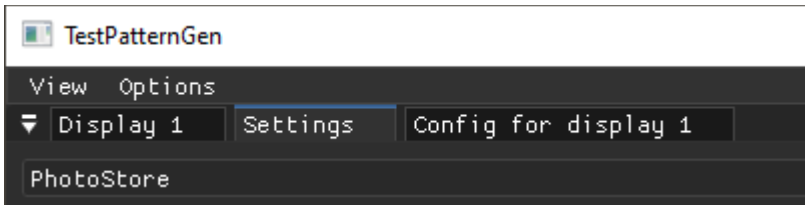
Greenish



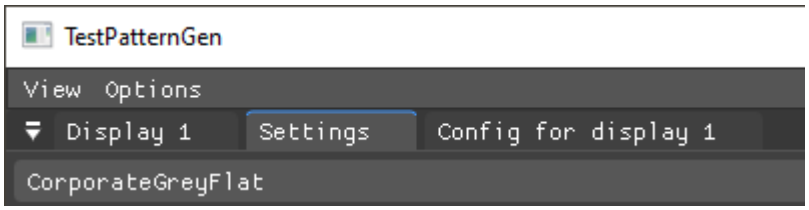
C64



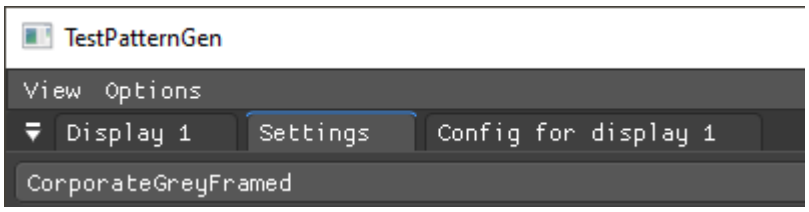
PhotoStore



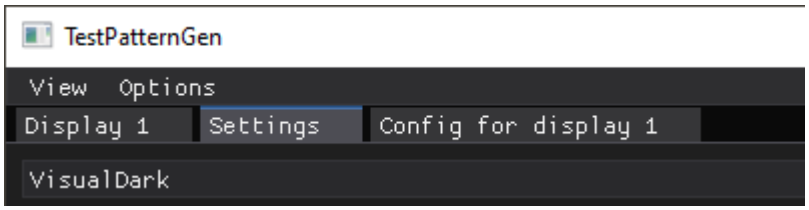
CorporateGreyFlat



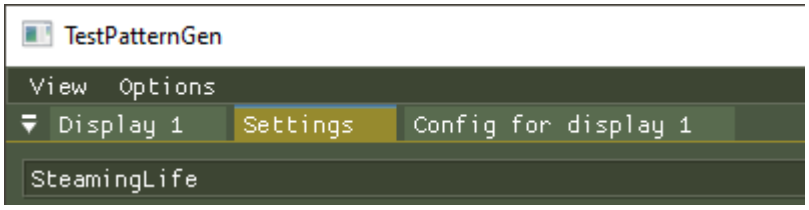
CorporateGreyFramed



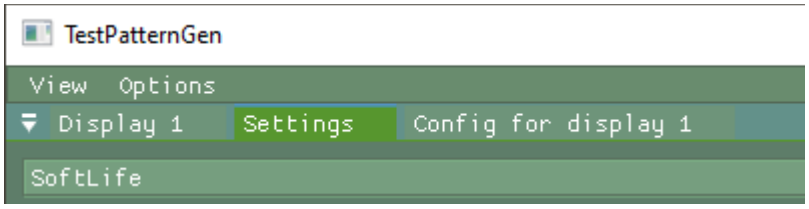
VisualDark



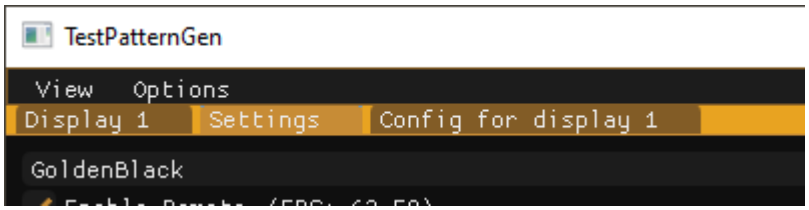
SteamingLife



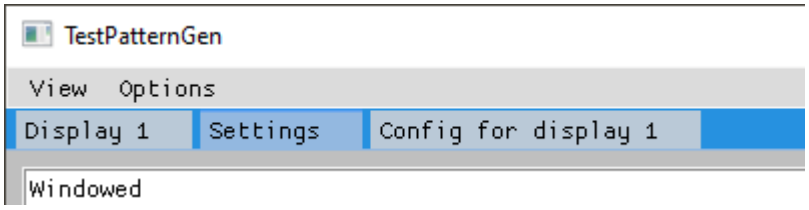
SoftLife



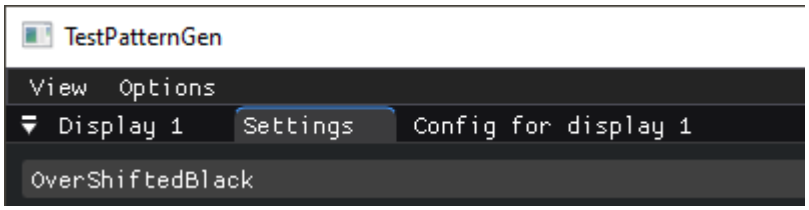
GoldenBlack



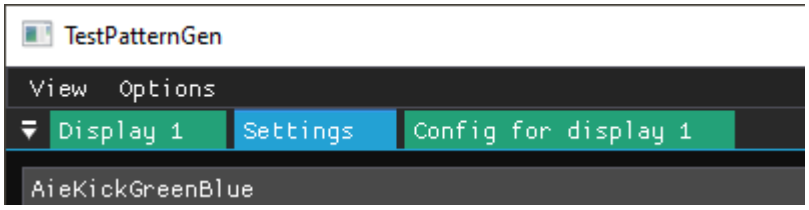
Windowed



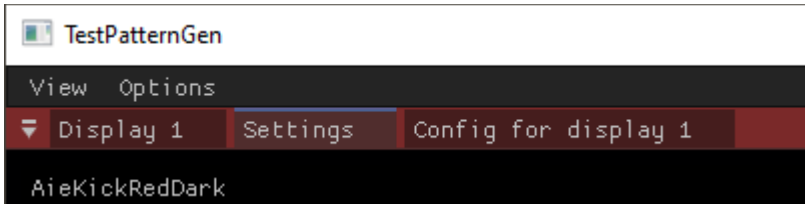
OverShiftedBlack



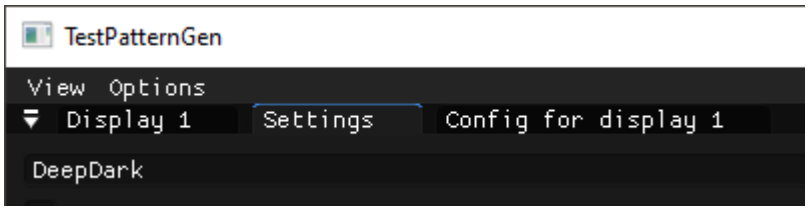
AieKickGreenBlue



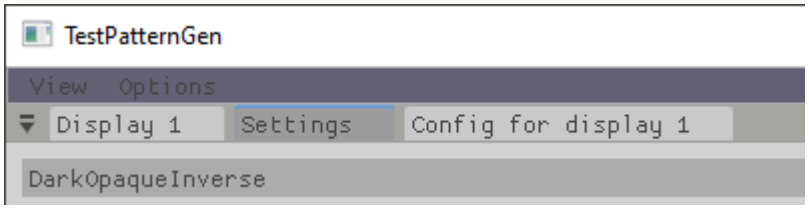
AieKickRedDark



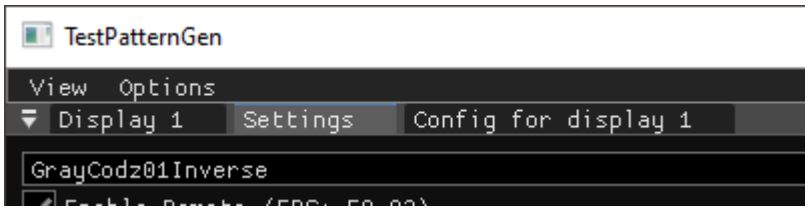
DeepDark



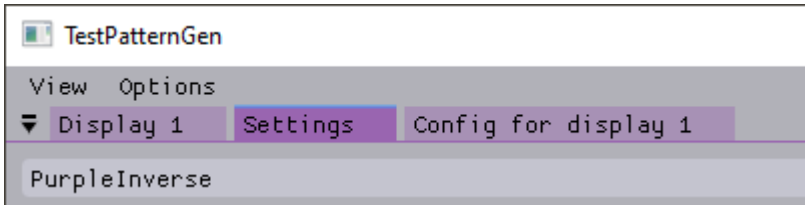
DarkOpaqueInverse



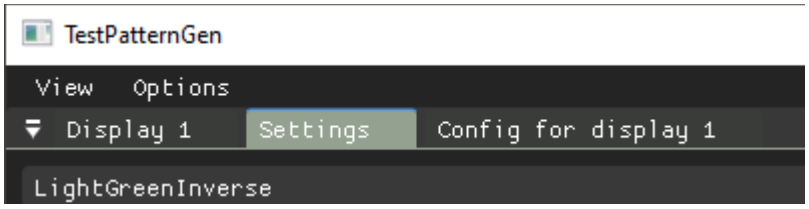
GrayCodz01Inverse



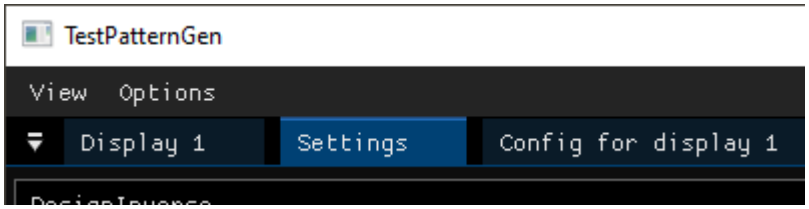
PurpleInverse



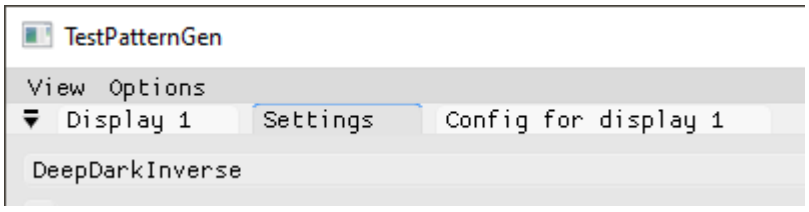
LightGreenInverse



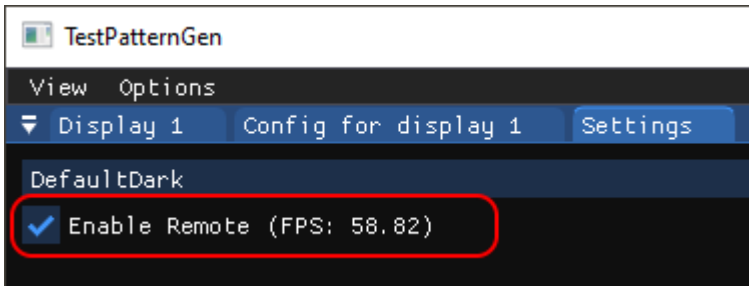
DesignInverse



DeepDarkInverse



Settings – Enable Remote (FPS)



Checking the **Enable Remote** checkbox enables use of the web GUI to control Test Pattern Generator. By default this box is checked, but it can be unchecked, where the user wants to disable its use for security purposes.

Workflows

Set up test patterns in UnReal Engine

Use an AJA Board to send test patterns

Use a Bluefish444 Board to send test patterns

Use a Blackmagic Design Board to send test patterns

Use a Matrox Board to send test patterns

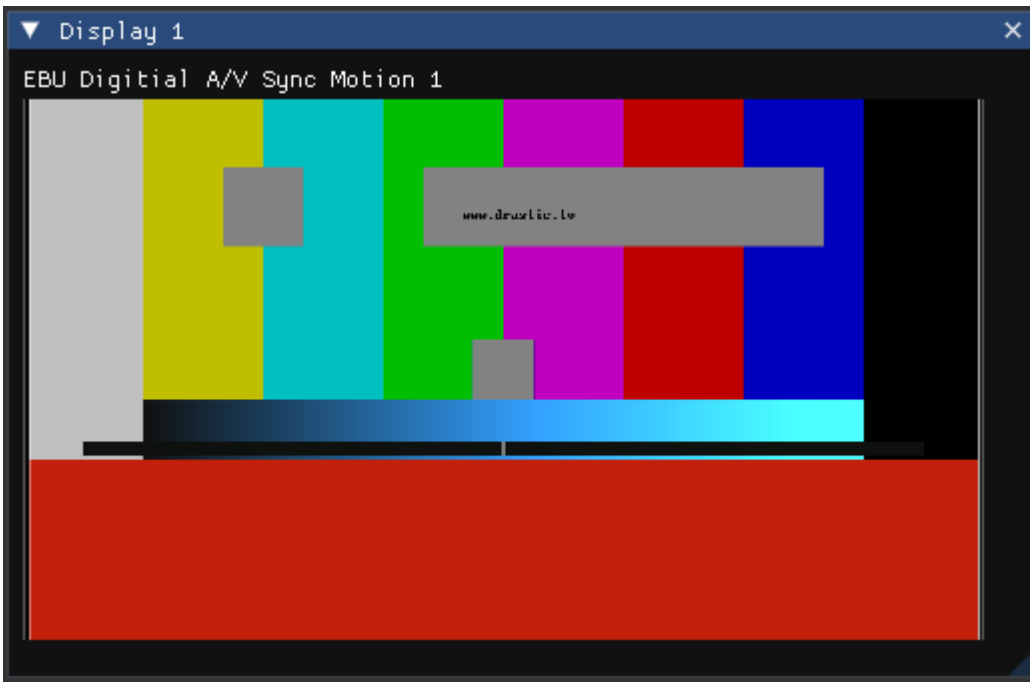
Use NDI to send test patterns

Use SMPTE2110 to send test patterns

The Patterns

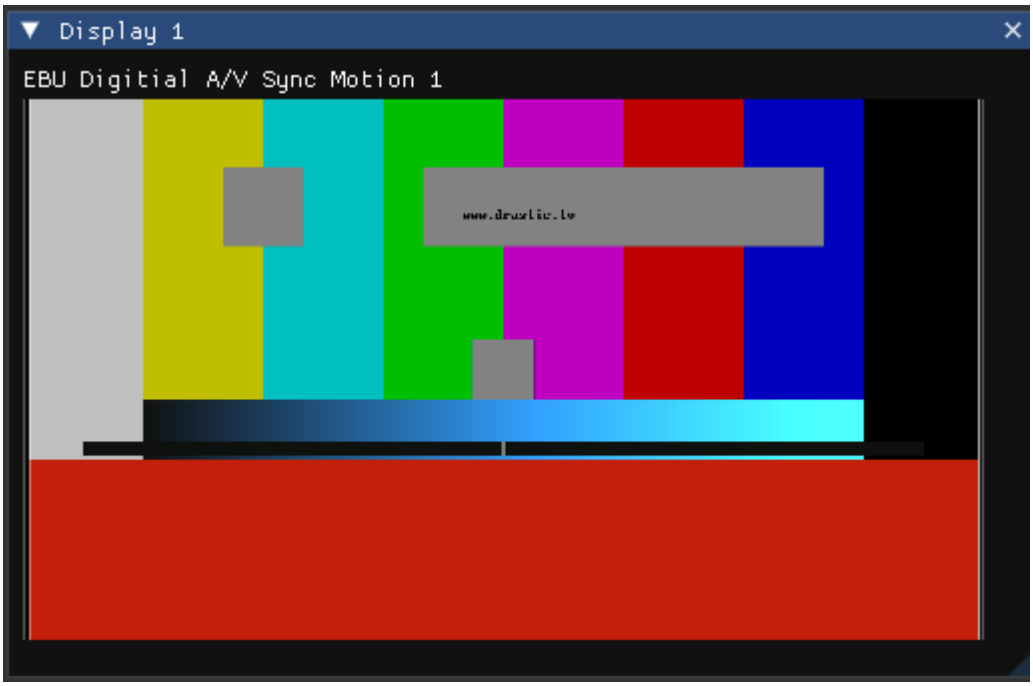
Motion Patterns

EBU Digital A/V Sync Motion 1



EBU Digital A/V Sync Motion 1 – Features bars and a moving black bar synchronized to an audio pulse.

EBU Digital A/V Sync Motion 2



EBU Digital A/V Sync Motion 2 – Features bars and a flashing white line synchronized to an audio pulse.

Static Patterns

Black

Black – SMPTE black, or 64 luma in 10 bit.

SuperBlack

Super Black - Super Black, or 3 luma in 10 bit (the lowest legal value).

ZeroBlack

Zero black – having zero luminance. This is 0 luma, which is an illegal value.

White

White – White, or 940 luma.

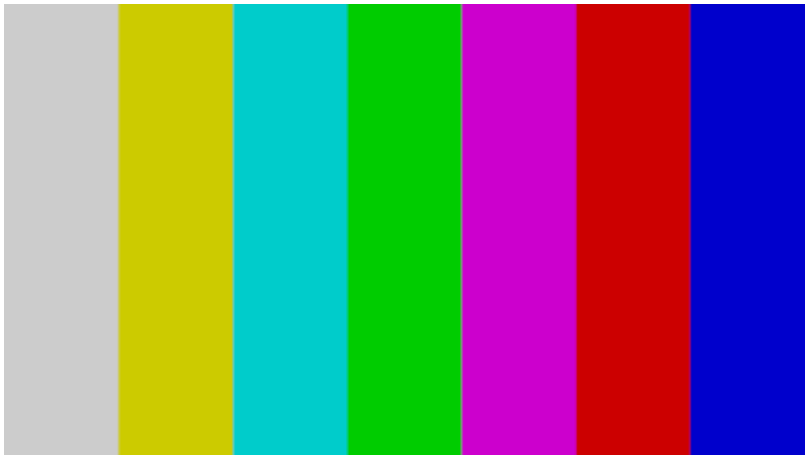
SuperWhite

Super White – Super white, at 1020 luma (the highest legal value).

FullWhite

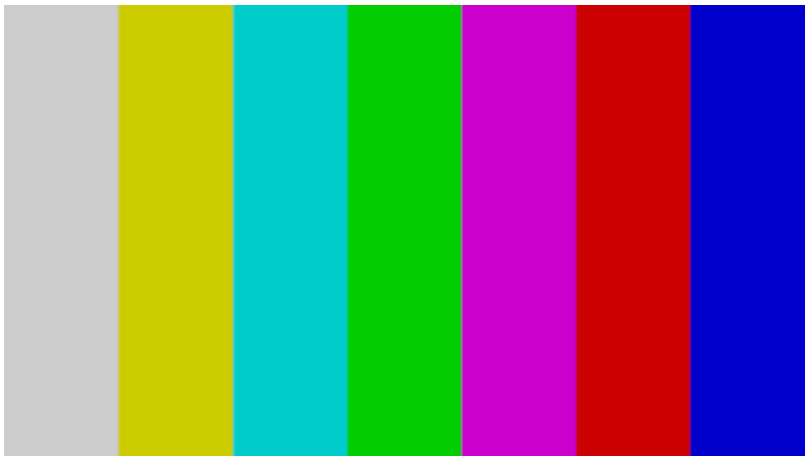
Full White – full white, at 1023 luma (an illegal value).

Camera601Bars75pc



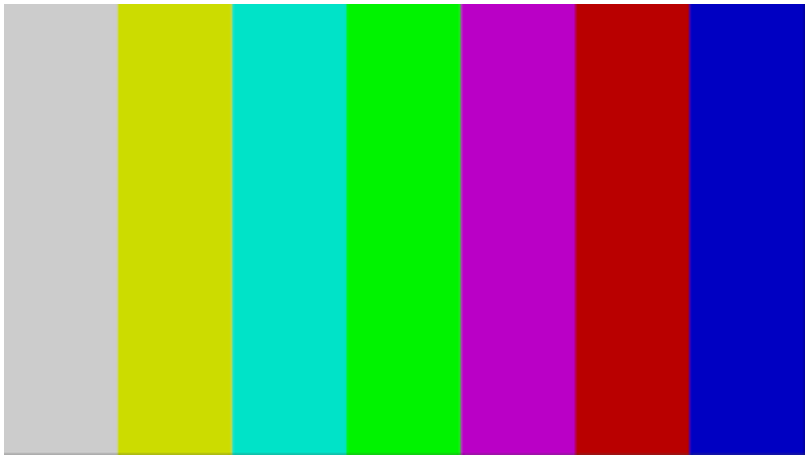
Camera 601 Bars 75% - Camera 601 (SD) bars at 75%.

Camera601Bars100pc



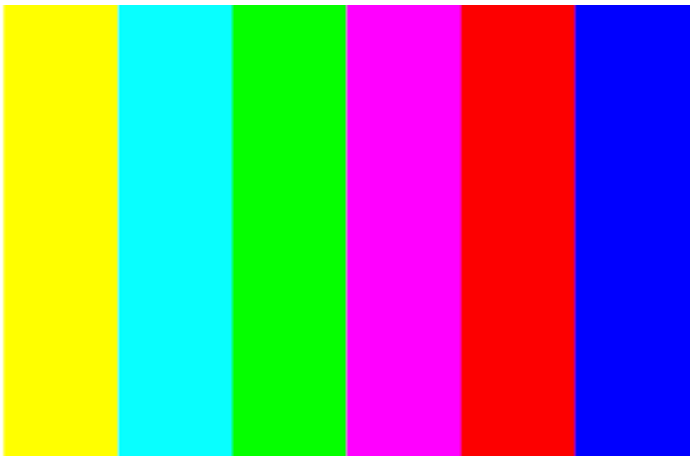
Camera 601 bars at 100% - camera 601 (SD) bars at 100%

Camera709Bars75pc



Camera 709 bars at 75% - camera 709 (HD) bars at 75%

Camera709Bars100pc



Camera 709 bars at 100% - Camera 709 (HD) bars at 100%

White75pc

White 75% - a full frame of white at 75% saturation. Same as “Gray75pc”.

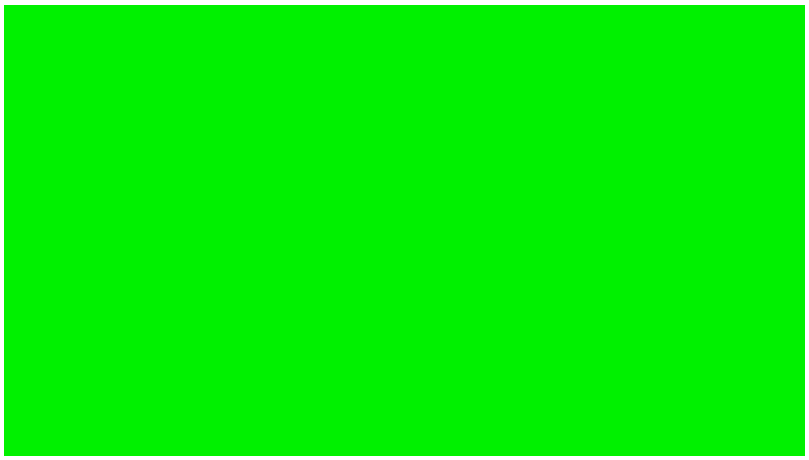
Yellow75pc

Yellow 75% - a full frame of Yellow at 75%

Cyan75pc

Cyan 75% - a full frame of Cyan at 75%

Green75pc



Green 75% - a full frame of Green at 75%

Magenta75pc

Magenta 75% - a full frame of Magenta at 75%

Red75pc

Red 75% - a full frame of Red at 75%

Blue75pc

Blue 75% - a full frame of Blue at 75%

Gray75pc

Gray 75% - a full frame of white at 75% saturation. Same as “White75pc”.

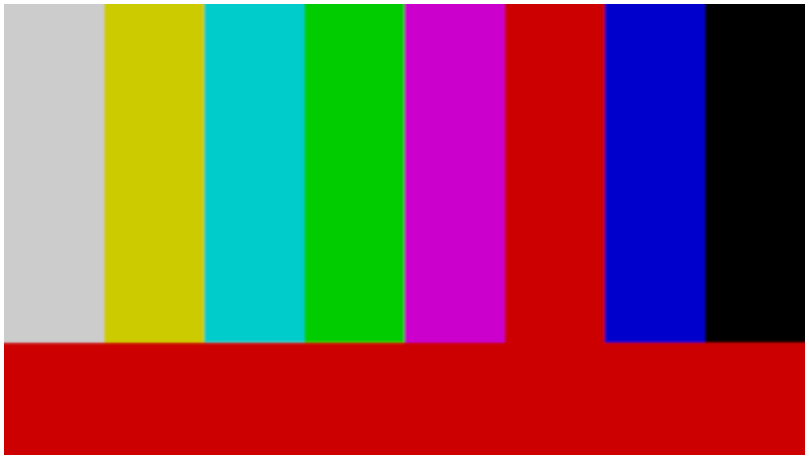
Grey25pc

Grey 25% - a full frame of Grey (25%).

Grey50pc

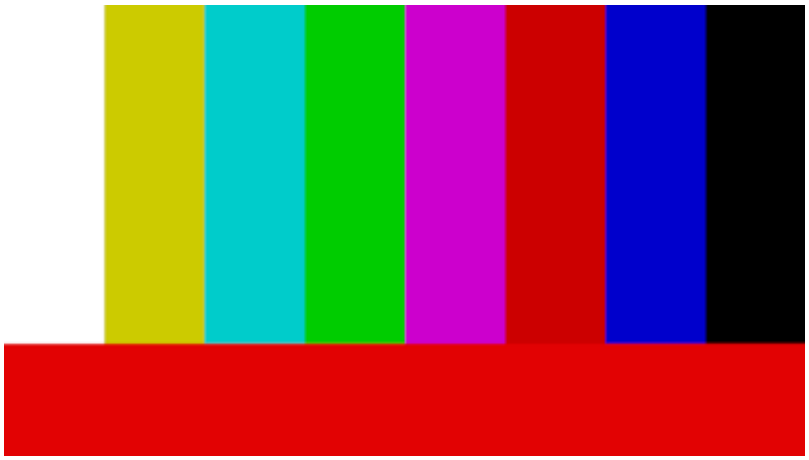
Grey 50% - a full frame of Grey (50%). (same as Flat Field)

BarsRed75pc



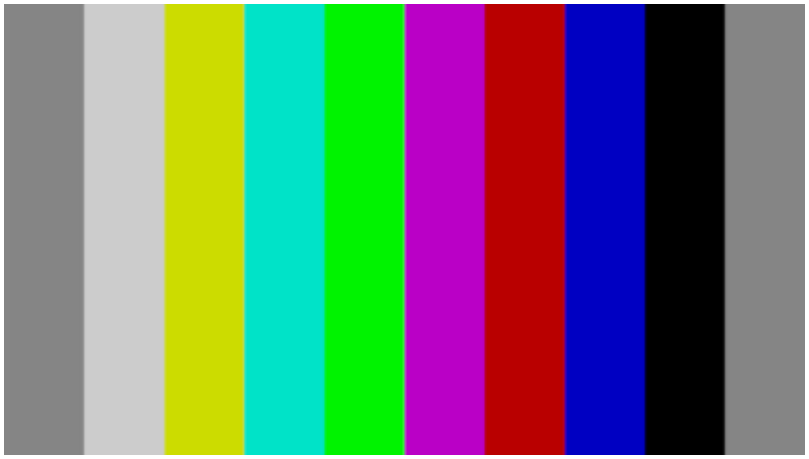
Bars Red 75% - Bars at 75%, with a field of red in the lower quarter.

BarsRed100pc



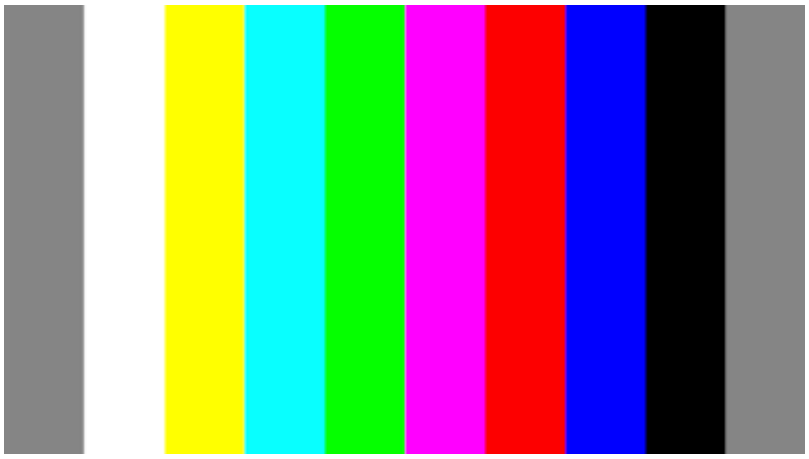
Bars Red 100% - Bars at 100% saturation, with a field of red in the lower quarter.

BarsBasicHD75pc



Bars Basic HD 75% - Basic HD bars at 75% saturation

BarsBasicHD100pc



Bars Basic HD 100% - Basic HD bars at 100% saturation.

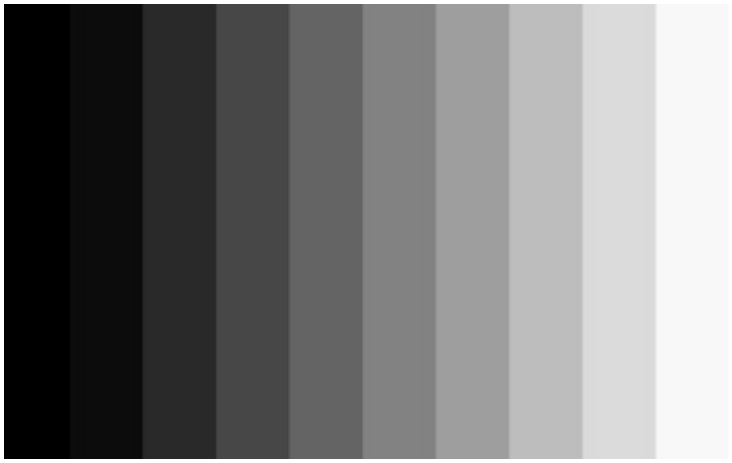
Luma5Step

Luma 5 step – from black to white in 5 even steps, left to right.

Luma7Step

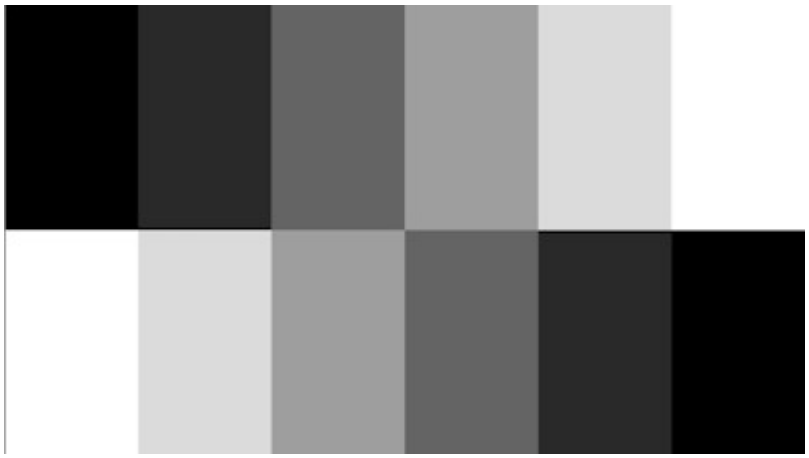
Luma 7 Step – a panel of black on the left followed by 6 increasingly lighter bars of gray, left to right.

Luma10Step



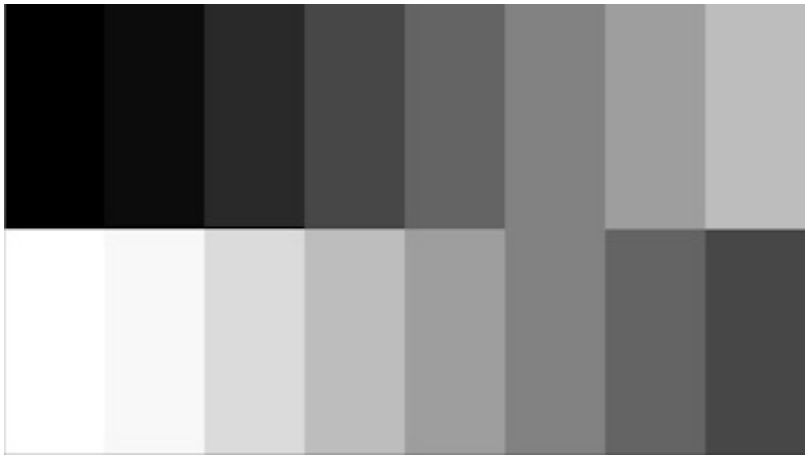
Luma 10 Step – from black to white in 10 even steps, left to right.

Luma5StepInvert



Luma 5 step Invert – from black to white in 5 even steps, left to right on the top, and right to left along the bottom.

Luma7StepInvert



Luma 7 Step Invert – a panel of black followed by 6 increasingly lighter bars of gray, left to right along the top, and 7 bars from white to dark gray along the bottom.

Luma10StepInvert

Luma 10 Step Invert – from black to white in 10 even steps, left to right on the top, and right to left along the bottom.

SMPTEBars601_75pc

SMPTE Bars 601 75% – standard 601 (SD) SMPTE color bars at 75% saturation.

SMPTEBars709_75pc

SMPTE Bars 709 75% – standard 709 (HD) SMPTE color bars at 75%.

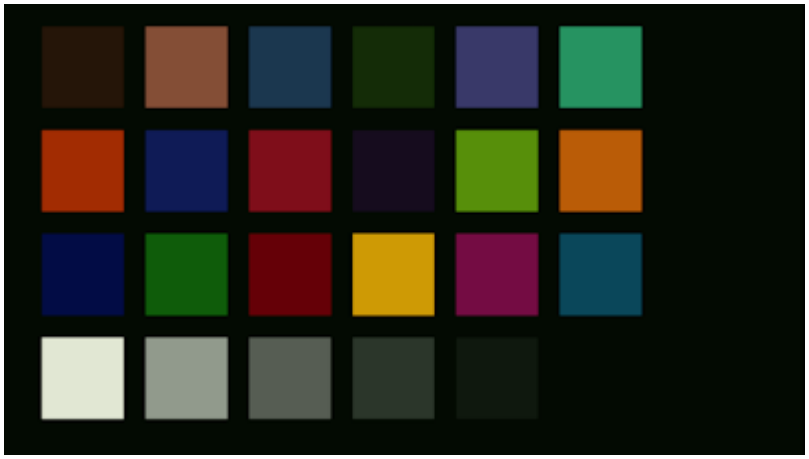
SMPTEBars601_100pc

SMPTE Bars 601 100% – standard SD SMPTE color bars at 100% saturation.

SMPTEBars709_100pc

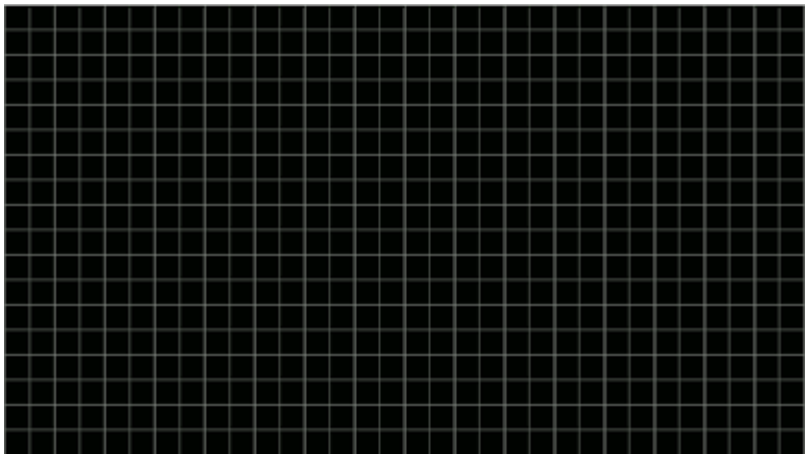
SMPTE Bars 709 100% – standard HD SMPTE color bars at 100% saturation.

SMPTE303M



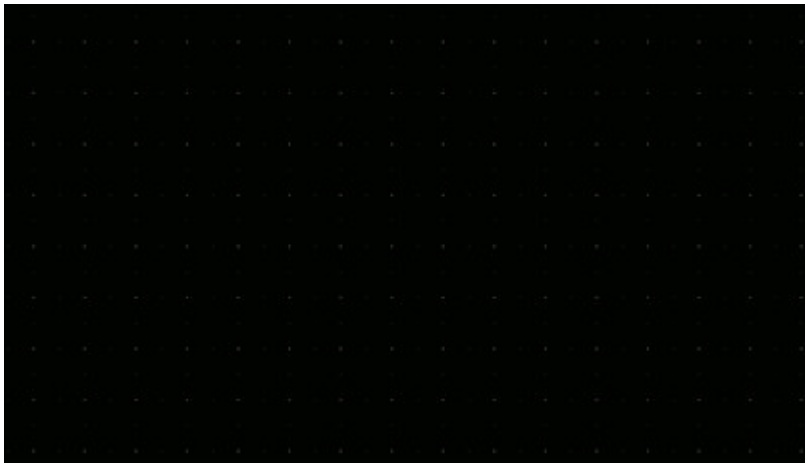
SMPTE 303M – 24 sample colors whose colorimetric designations are distributed throughout the color television gamut.

Grid



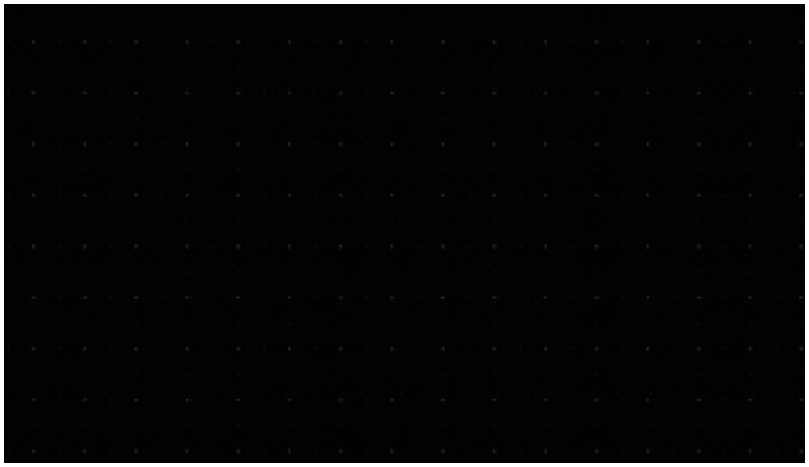
Grid – a grid used to calibrate RGB channels

Dots



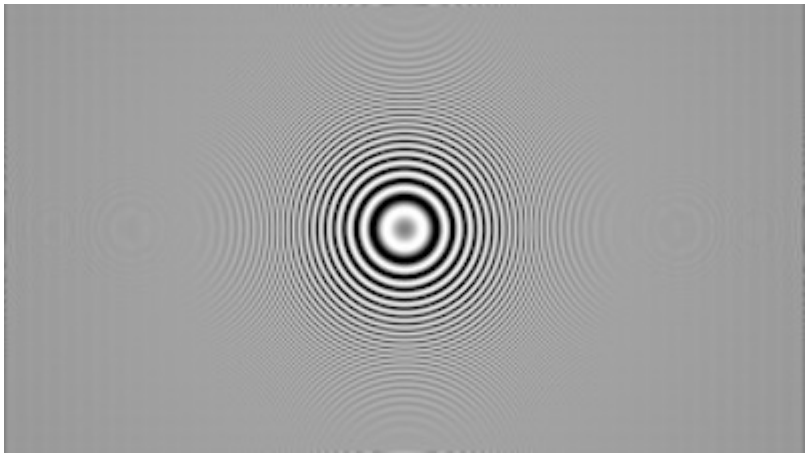
Dots – dots used to calibrate RGB channels

GridAndDots



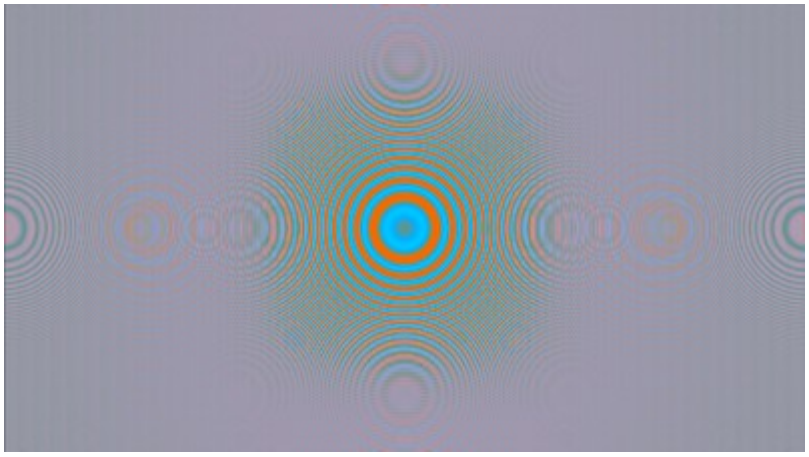
Grid and Dots – a grid and dots pattern used to calibrate RGB channels

ZonePlateY



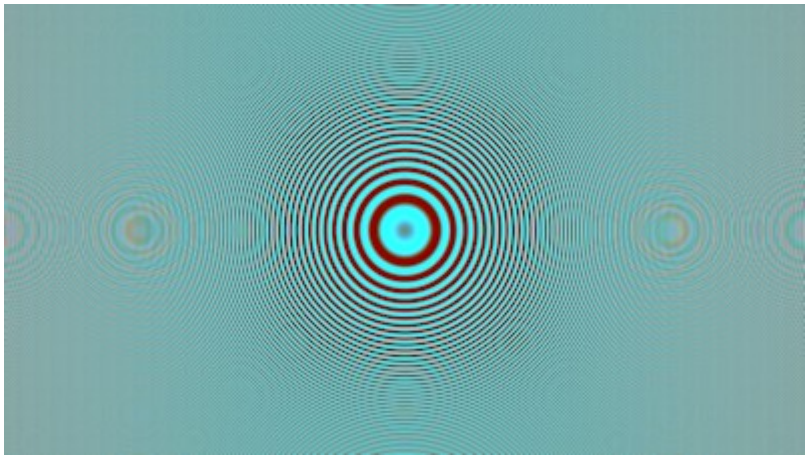
Zone Plate Y – patterns of concentric circles in black and white used for visual inspection of artefacts

ZonePlateC



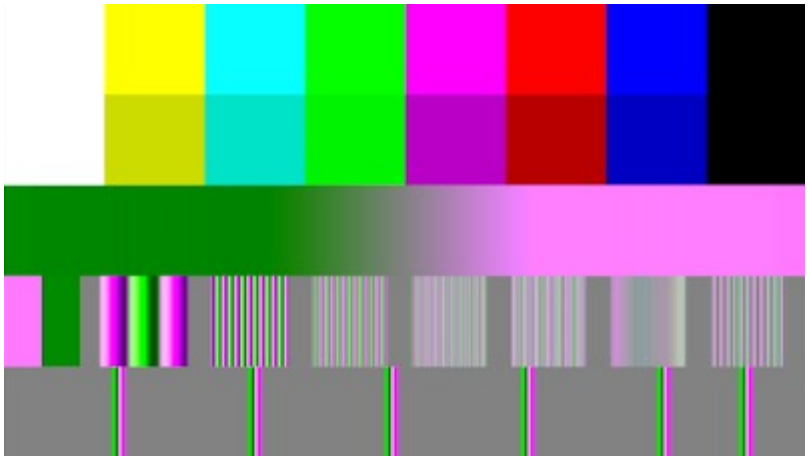
Zone Plate C – patterns of concentric circles in color (orange-blue) used for visual inspection of artefacts

ZonePlate



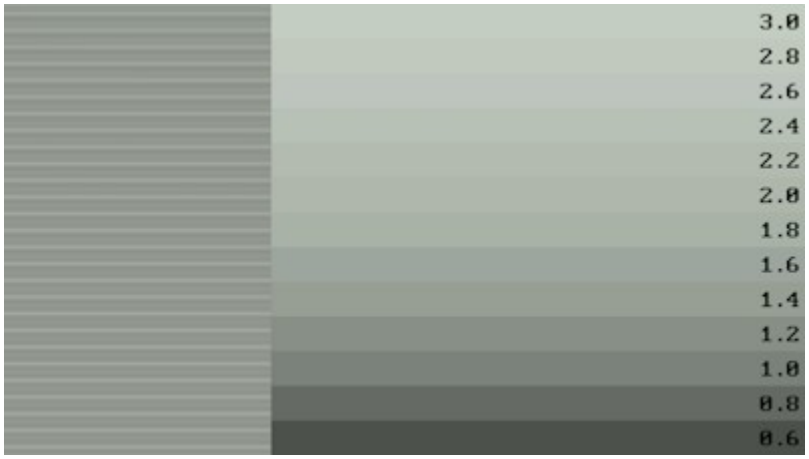
Zone Plate – patterns of concentric circles in color (cyan-red) used for visual inspection of artefacts

MultiPattern



Multi Pattern – across the top, 100% color bars. Second row, 75% color bars. Third row, chroma ramp from green to magenta. Fourth row, multiburst, and bottom row, multiburst with gray panels.

Gamma Strip



Gamma Strip – a panel of gray on the left, with a panel of evenly spaced grays and their corresponding luminance values on the right.

Pluge

Pluge – Picture Lineup Generation Equipment uses pluge to set up black levels.

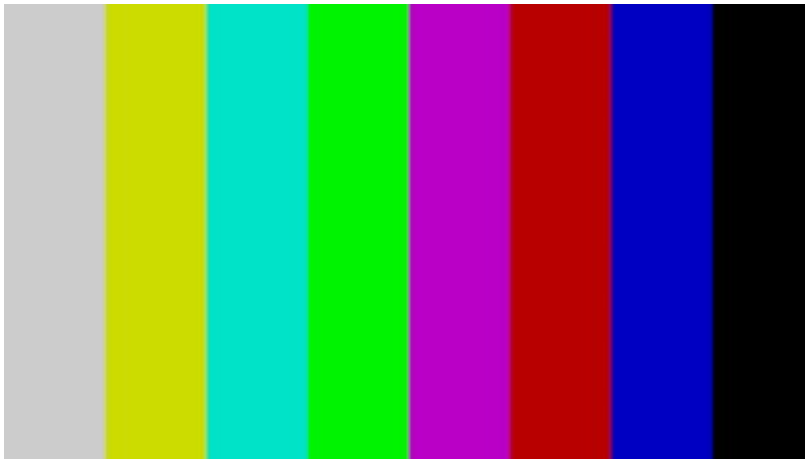
Border

Border – provides a screen of black with a border around it.

BorderColorQuadrant

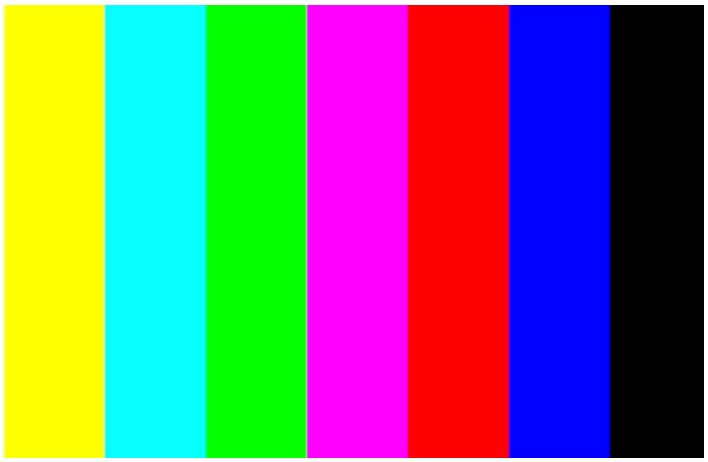
Border Color Quadrant – provides a screen of black with a border and quadrant markers.

CameraBars_75pc



Camera Bars 75% - camera bars at 75% saturation.

CameraBars_100pc

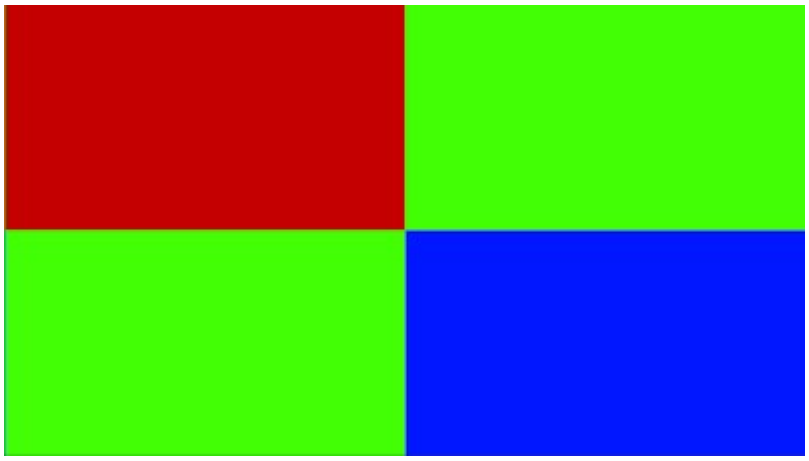


Camera Bars 100% - camera bars at 100% saturation.

CheckField

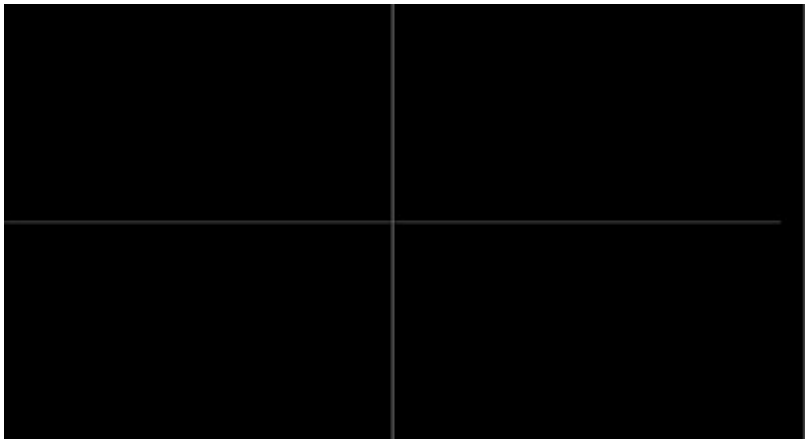
Check Field – provides a panel of magenta on top and a panel of gray on the bottom.

ColorQuadrant



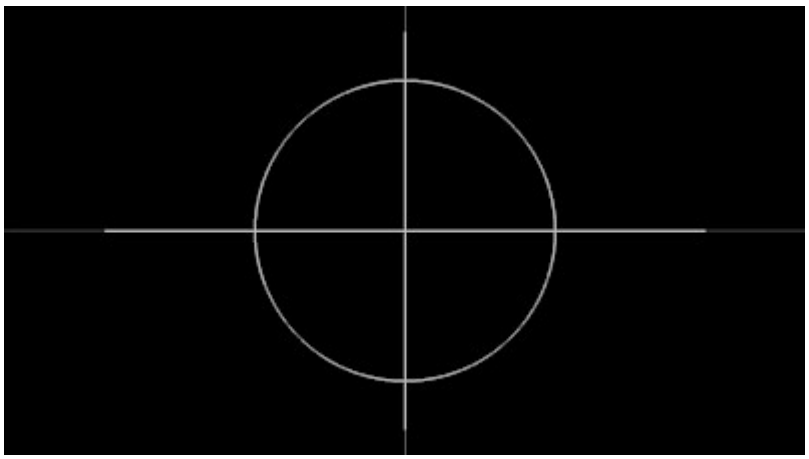
Color Quadrant – divides the screen into 4 quadrants, with red top left, green top right and lower left, and blue on the lower right.

Cross



Cross – provides a screen of black with a white cross drawn in the center.

CrossCircle

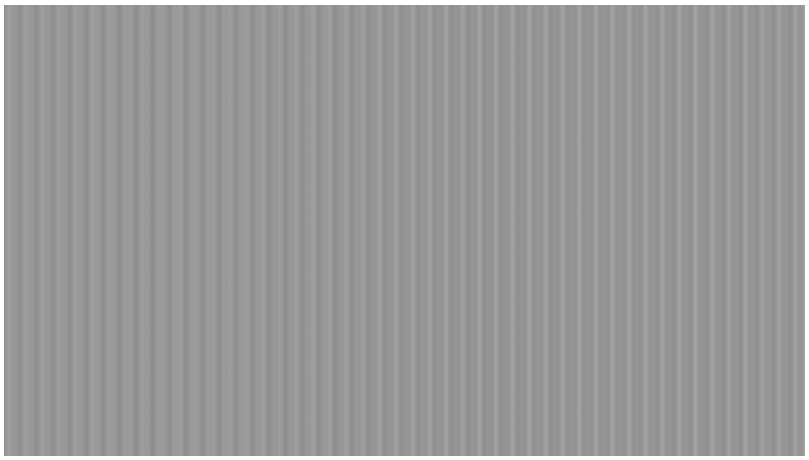


Cross Circle – provides a screen with a white cross in the middle, and a circle centered on it.

FlatField

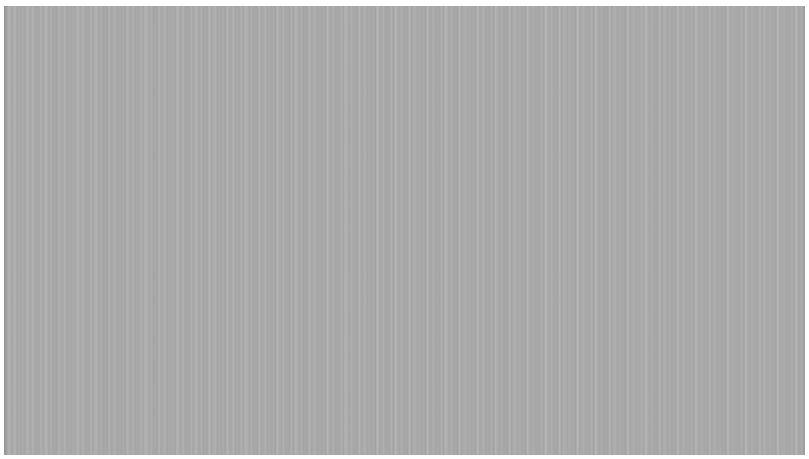
Flat Field – even gray screen (same as 50% gray).

HorizPixOne



Horizontal Pixel One – provides a test of horizontal resolution with single pixel vertical lines across the screen.

HorizPixTwo



Horizontal Pixel Two – provides a test of horizontal resolution with two pixel vertical lines across the screen.

HorizRes

Horizontal Resolution – provides a test of horizontal resolution with a series of lines across the screen.

IRELow

IRE Low – shows IRE level vertical setup bars from (L-R) black to dark gray. These are very dark.

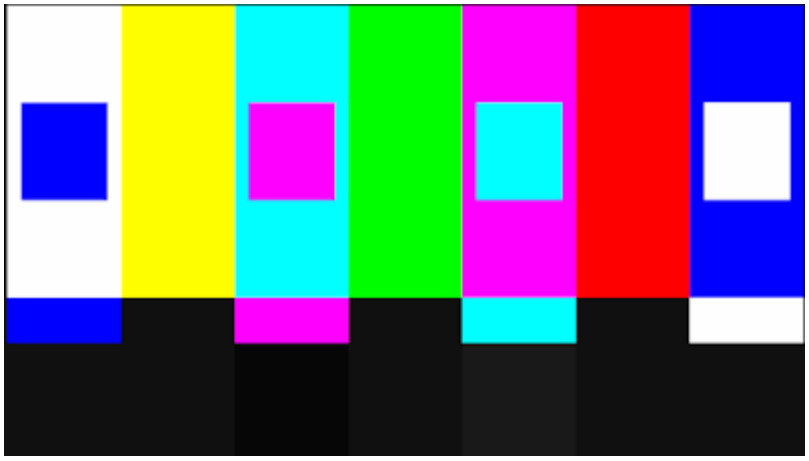
IRELowTwo

IRE Low Two – shows IRE level horizontal setup bars from black at the bottom to dark gray at the top. These are rather dark.

IRESplitBars

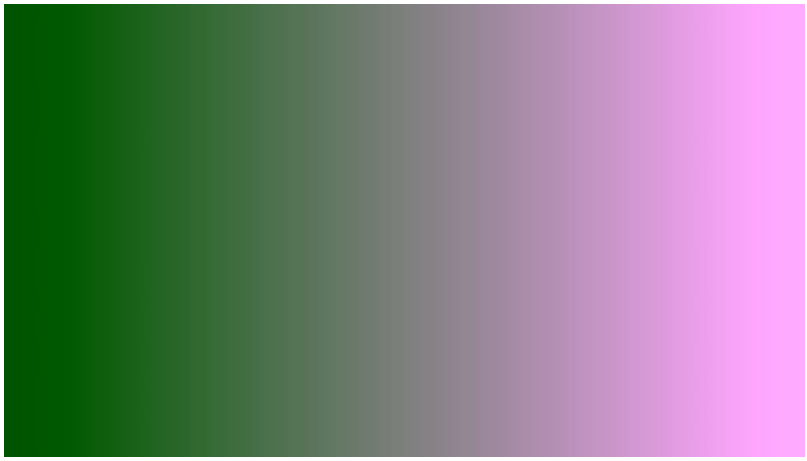
IRE Split Bars – shows black to white, and white to black bars across the top, and bottom, for luminance distribution analysis.

Bars709Inverts_75pc



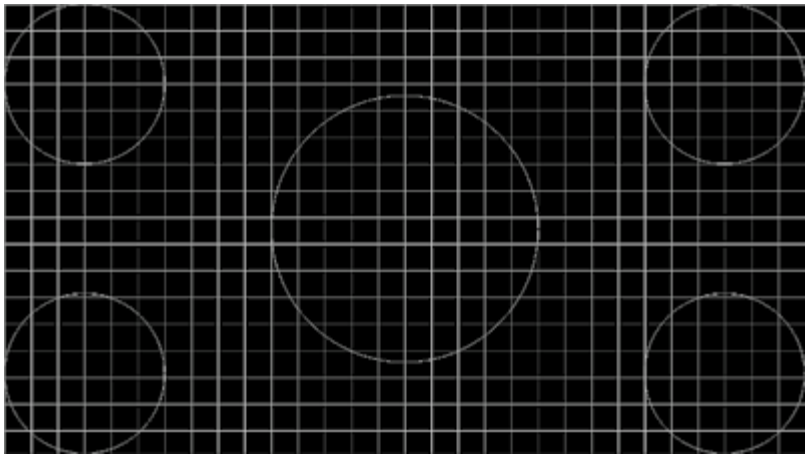
Bars 709 Inverts 75% – shows color bars with inverted white/blue, and inverted cyan/magenta panels, and features a bar of black on the lower quarter.

ChromaRamp



Chroma Ramp – shows a green to magenta chroma ramp, to confirm the chrominance is evenly gradated.

Circle



Circle – shows a frame of black with 5 circles on a grid for image alignment.

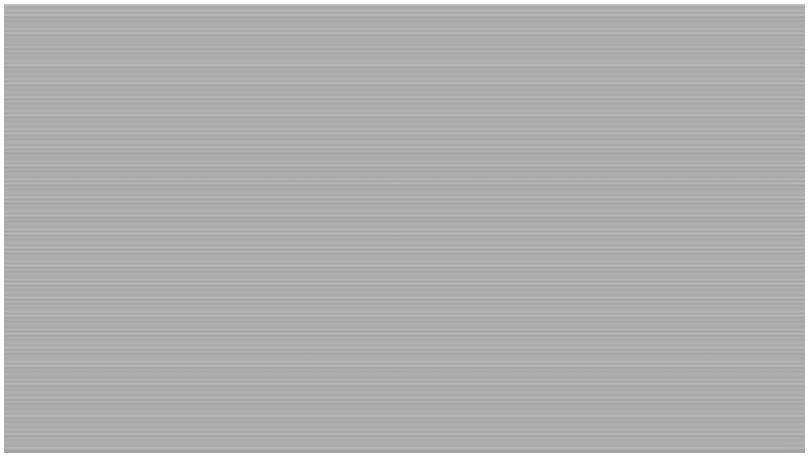
ColorScales

Color Scales – shows a scale for red, orange, yellow, green, cyan, light blue, blue, magenta, and red magenta, from nearly black to full saturation with no black.

VertPixOne

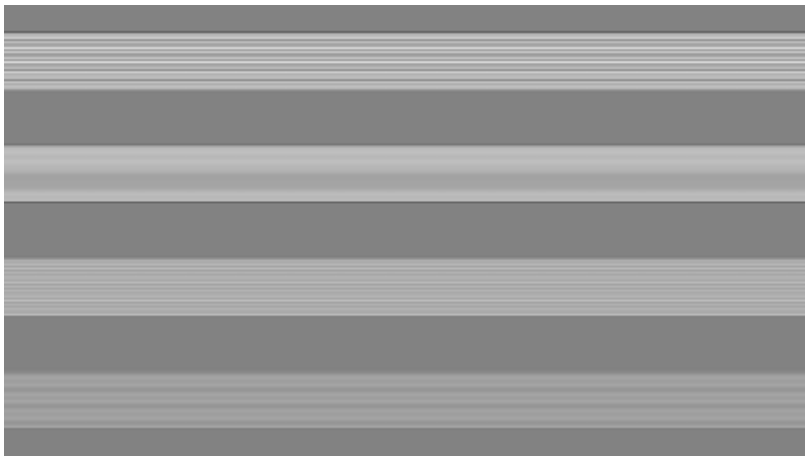
Vertical Pixels One – a series of horizontal one pixel lines for checking vertical resolution

VertPixTwo



Vertical Pixels Two – a series of horizontal two pixel lines for checking vertical resolution

VertRes



Vertical Resolution – a series of horizontal lines with gray spaces for checking vertical resolution

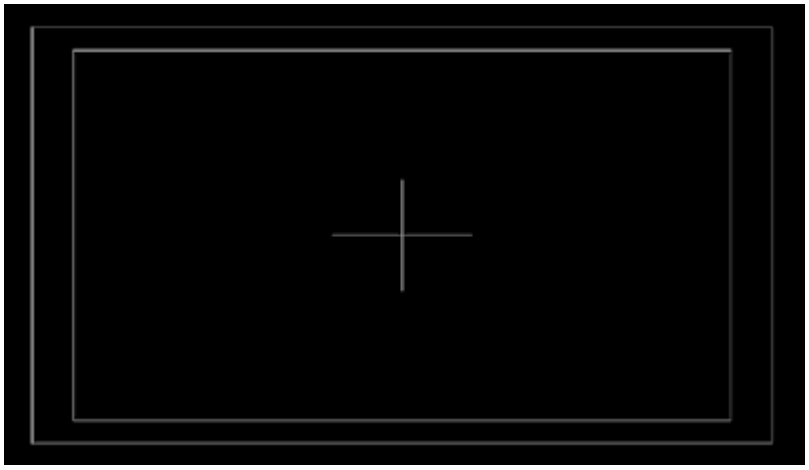
LumaRamp

Luma Ramp – a luminance ramp that goes from black on the left to white on the right.

White100pc

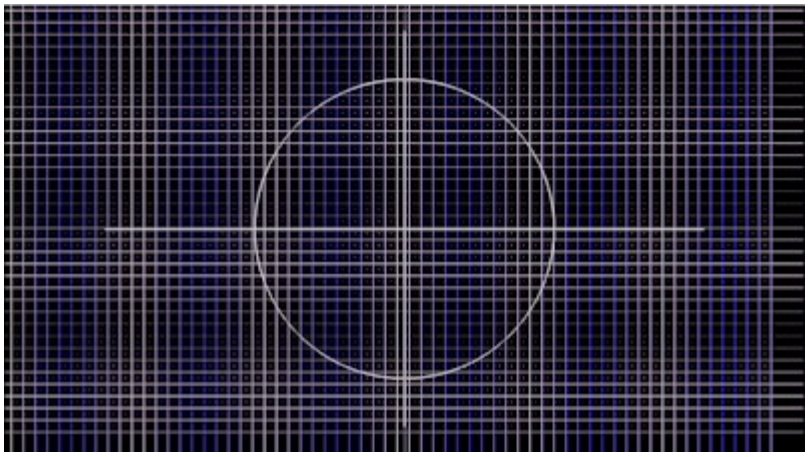
White 100% – a screen of white at 100% saturation.

TitleActionSafe



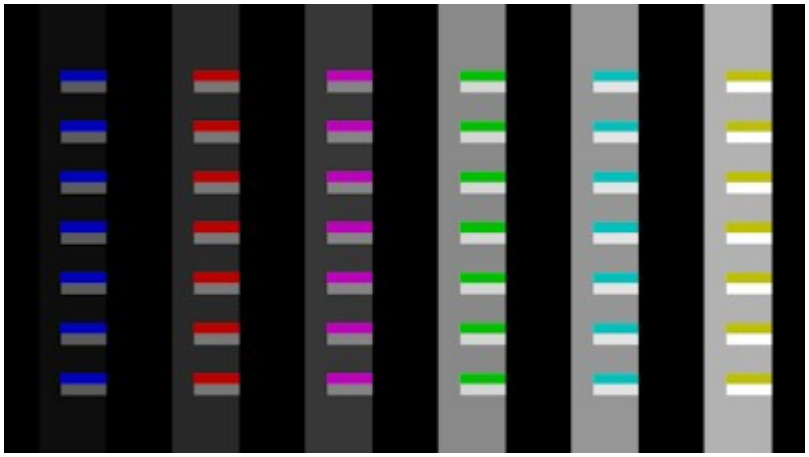
Title Action Safe – a black screen with title safe and action safe graticules with a cross in the center.

ConvergenceCircle



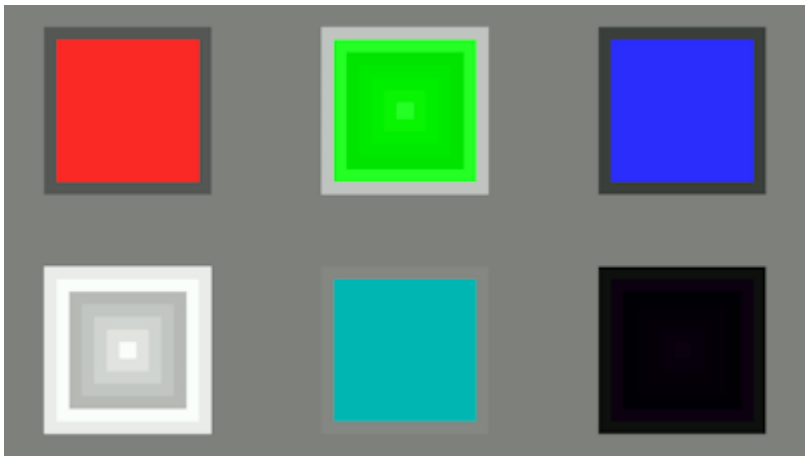
Convergence Circle – a black screen overlaid with a white and blue grid, featuring a circle and a cross in the center.

ycHD



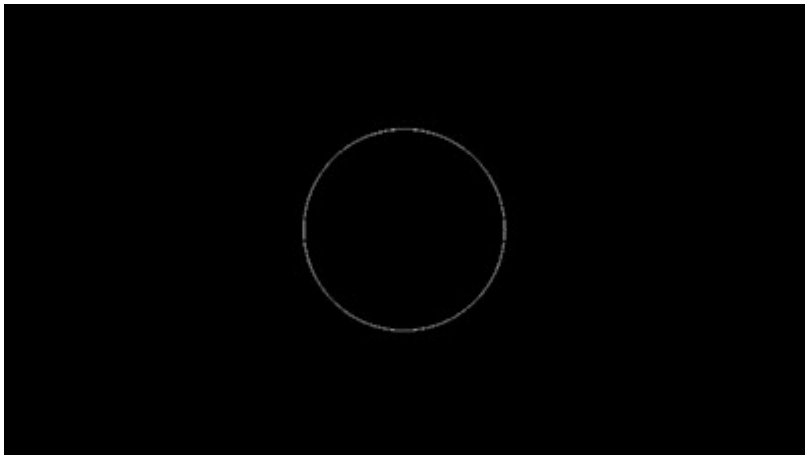
YC HD – a black screen with gray bars containing colored and gray to white rectangles.

Clipping



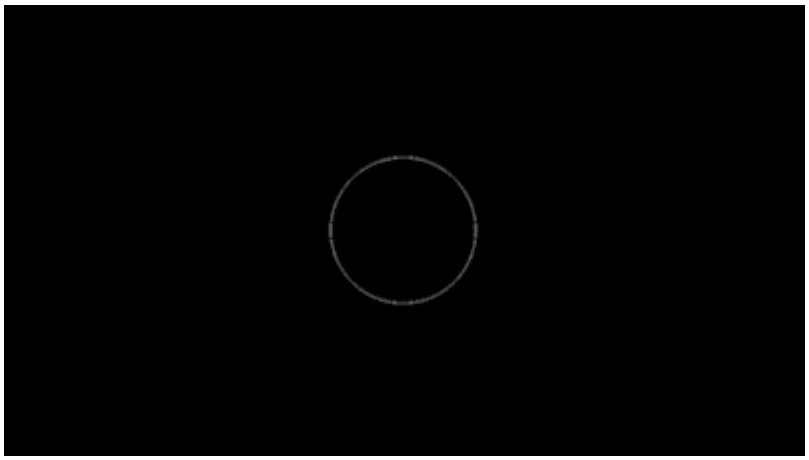
Clipping – a gray screen with 6 rectangles, each designed to test whether the signal is clipping.

FillCircle



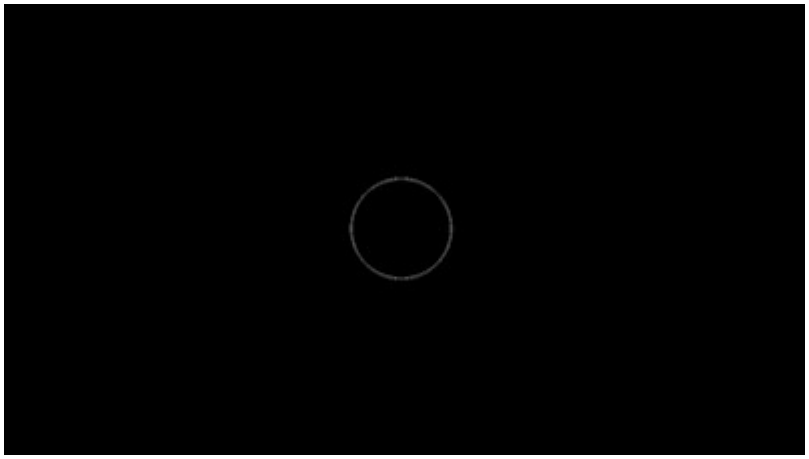
Fill Circle – a black screen with a white circle in the middle, filled with black.

FillCircle2



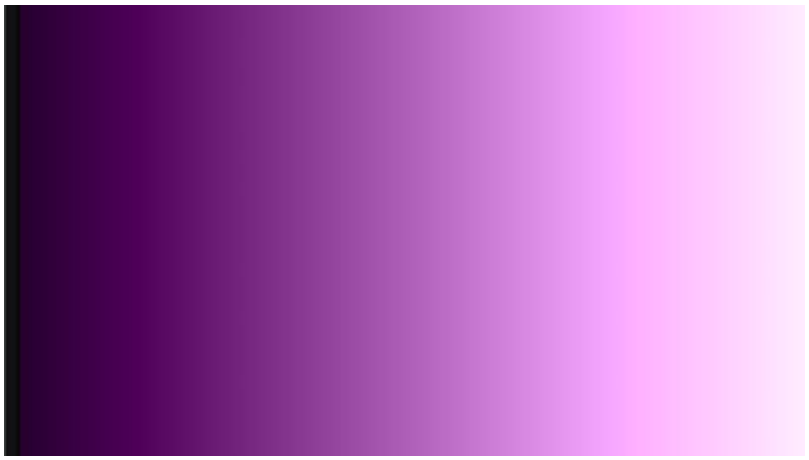
Fill Circle 2 – a black screen with a smaller white circle in the middle, filled with black.

FillCircle3



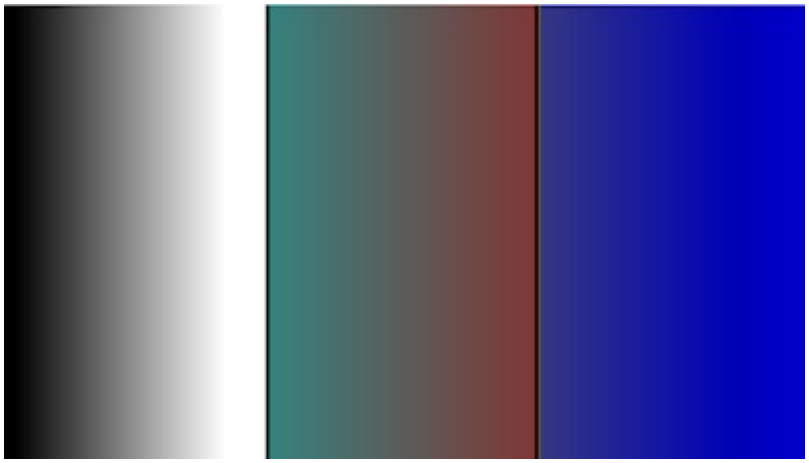
Fill Circle 3 – a black screen with an even smaller white circle in the middle, filled with black.

ModRamp



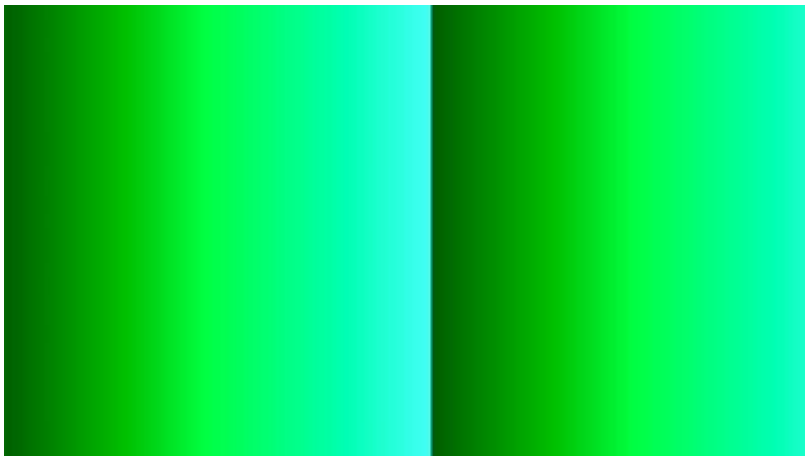
Mod Ramp – a screen of magenta whose luminance goes from black on the left to white on the right.

ValidRamp



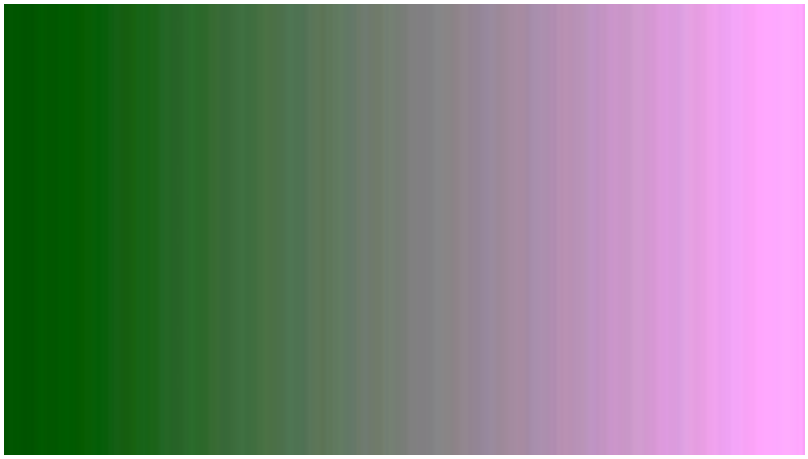
Valid Ramp – features a black to white ramp, a teal to red ramp, and a blue panel.

DigitalRamp



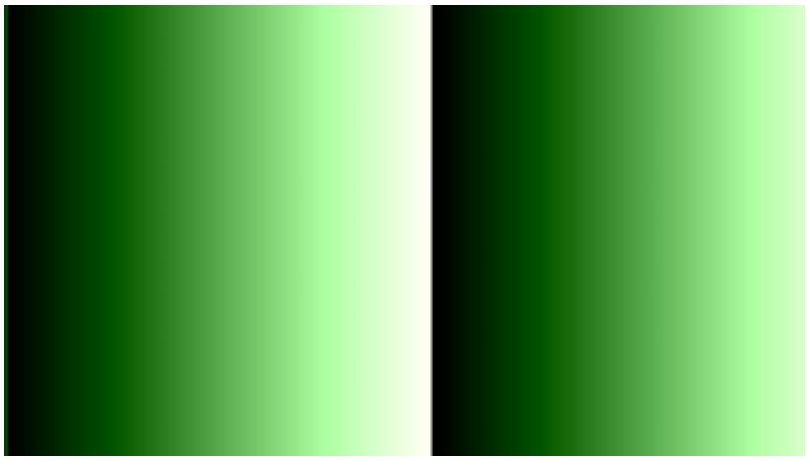
Digital Ramp – features two ramps of dark green to cyan.

ShallowRamp



Shallow Ramp – features a green to magenta ramp.

ShallowRamps



Shallow Ramps – features two green ramps, from zero saturation (black) to full saturation (white).

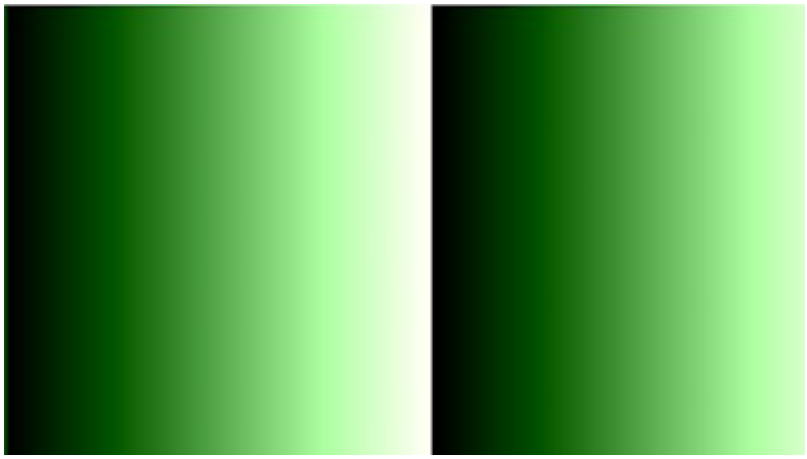
100iRamp

100i Ramp – features a white top half and a black bottom half, with left and right safe area markers.

120iRamp

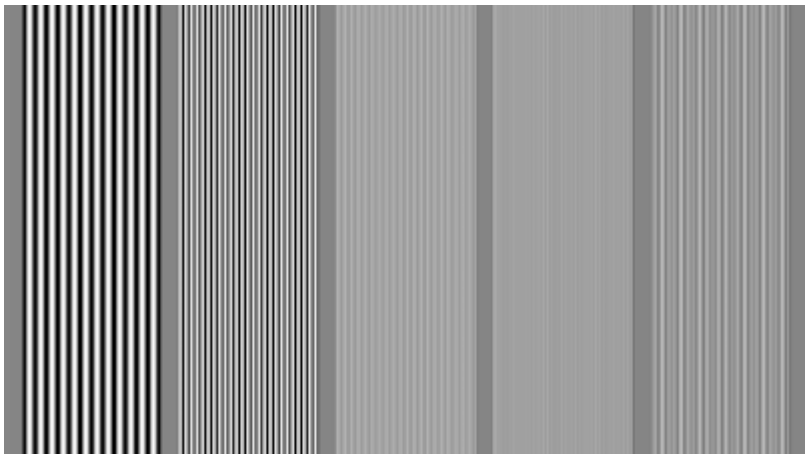
120i Ramp – features a green to magenta ramp, with left and right safe area markers.

UBMRamp



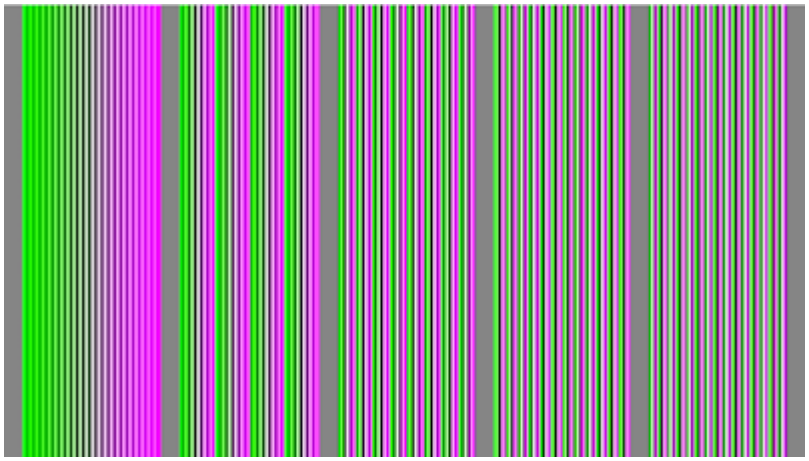
UBM Ramp – features two green ramps from no saturation (black) to white.

MultiBurst



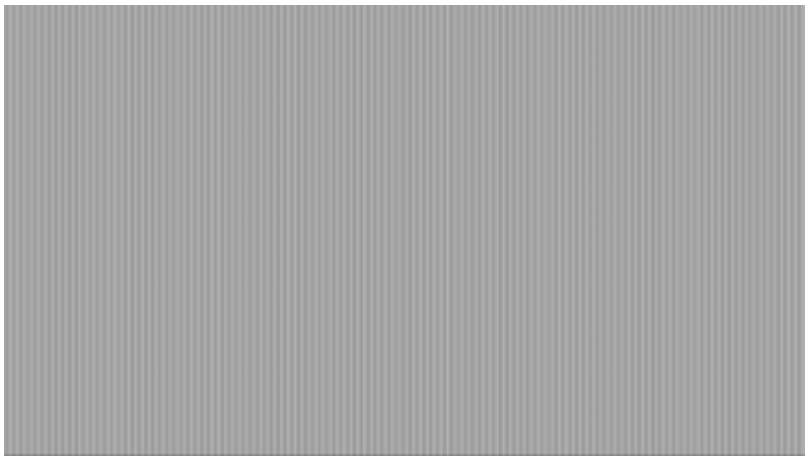
Multiburst – shows a series of vertical lines of varying thickness in shades of gray.

MultiBurst_5_0Mhz



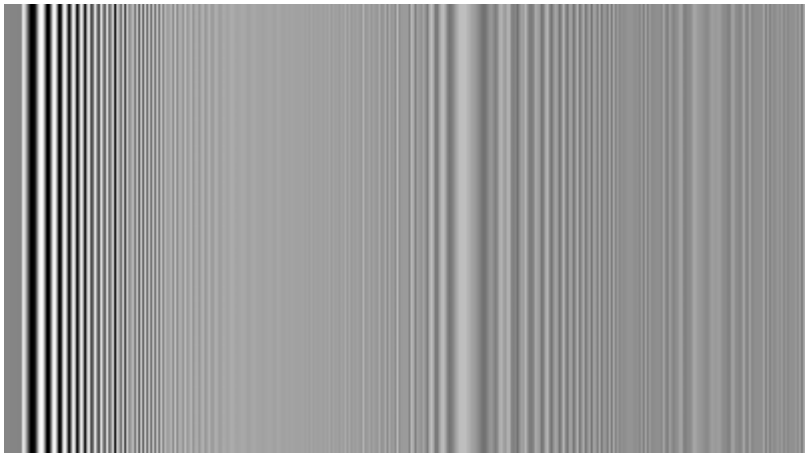
Multiburst 5.0 Mhz – a series of green, gray, and magenta vertical lines of varying thickness.

SingleBurst



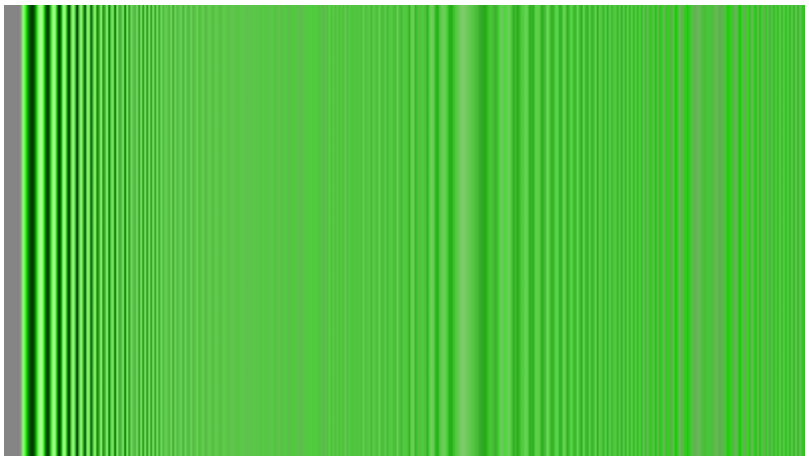
Single Burst – a series of white and black vertical lines of varying thickness.

LumaSweep



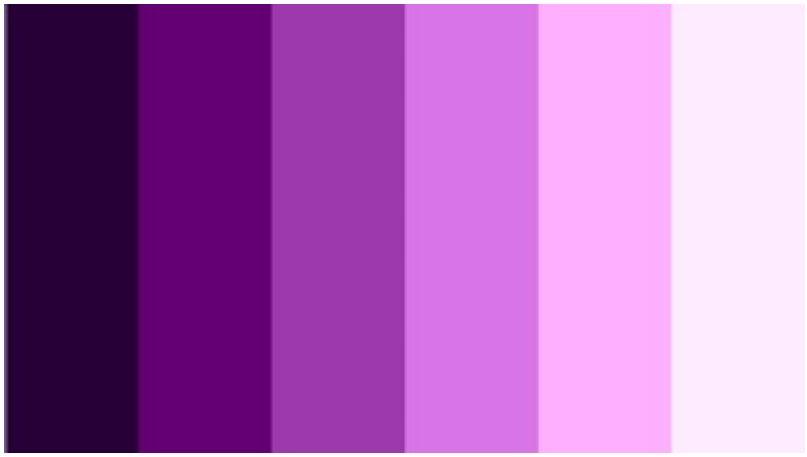
Luma Sweep – a series of white, gray, and black vertical lines of varying thickness.

ChromaSweep



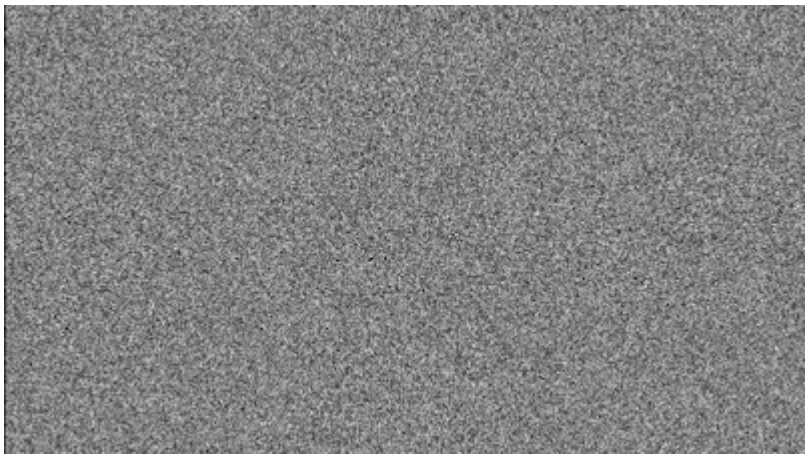
Chroma Sweep – a series of green and gray vertical lines of varying thickness.

Chroma5Step



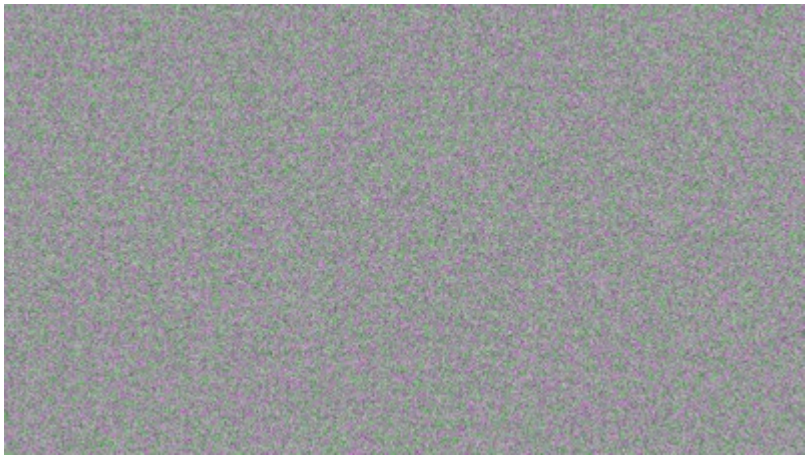
Chroma 5 Step – five vertical bars of magenta, from very dark to very light.

RandomLuma



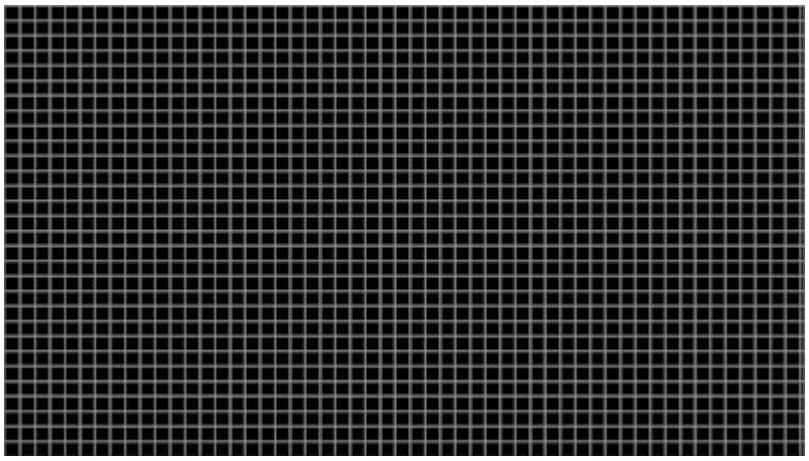
Random Luma – a screen filled with random black, white, and gray pixels

RandomChroma



Random Luma – a screen filled with random colored pixels

CrossHatch

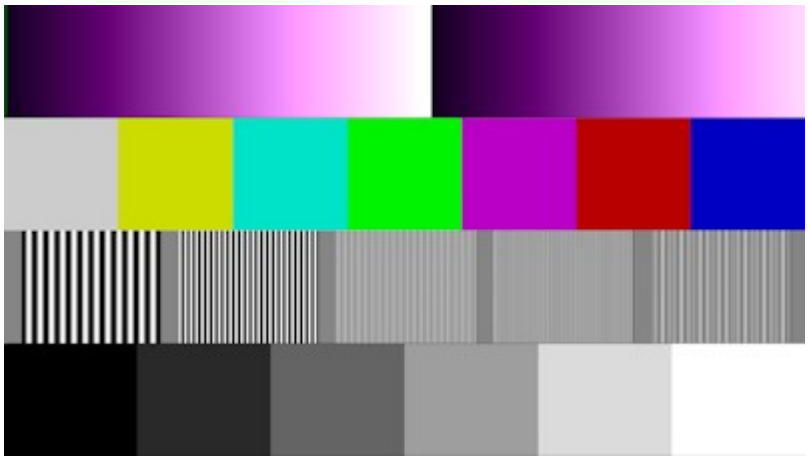


Cross Hatch – a white grid on a black background.

EdgeMarkers

Edge Markers – a black screen with edge markers.

Combo709

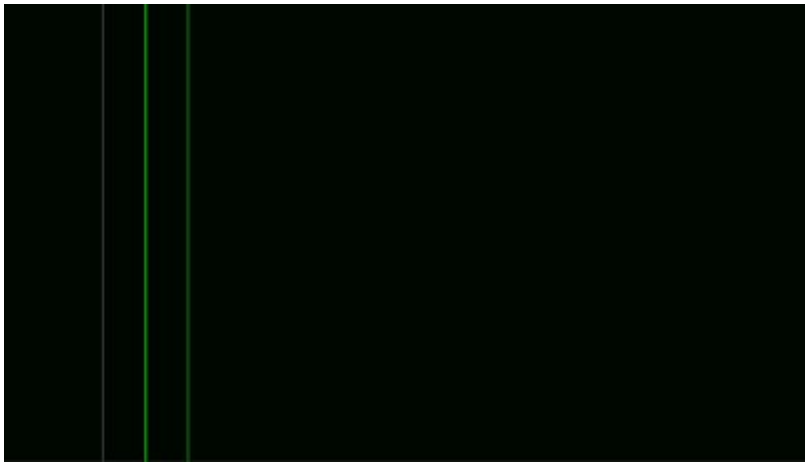


Combo 709 – a multi pattern with two magenta black-to-white ramps across the top, standard color bars, multiburst, and a luma scale.

HDBars

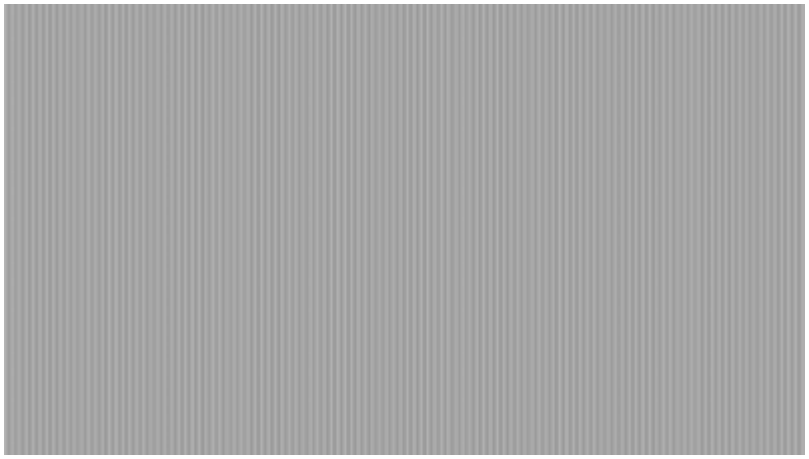
HD Bars – features standard HD color bars at 75%, flanked by two gray bars on top, and a panel of black along the bottom.

2TPulseBar



2T Pulse Bar – a mostly black screen with 3 narrow green vertical stripes on the left side.

SinFreq



Sin Freq – a screen of black and white vertical lines.

SMPTE-ARIB-HDBars75pc

SMPTE ARIB HD Bars 75% – SMPTE ARIB HD color bars at 75% saturation.

SMPTE-ARIB-HDBars100pc

SMPTE ARIB HD Bars 100% – SMPTE ARIB HD color bars at 100% saturation.

SMPTE-ARIB-HDBarsPIpc

SMPTE ARIB HD Bars PI % – SMPTE ARIB HD color bars at pi saturation.

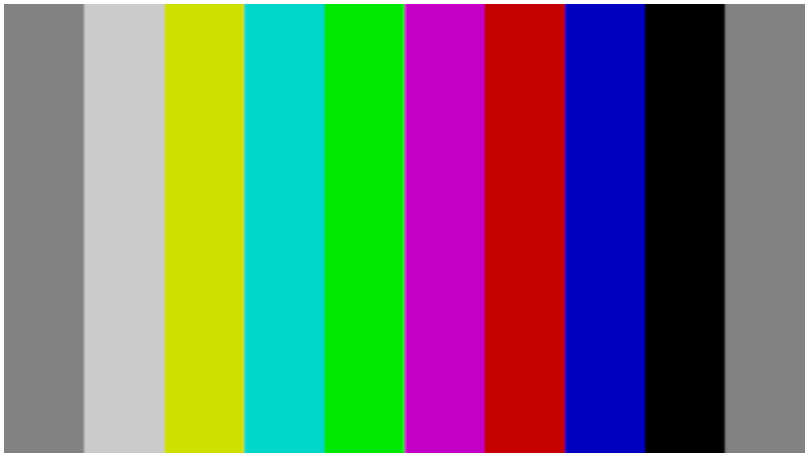
Camera2020Bars75pc

Camera 2020 Bars 75% – BT-2020 color bars at 75% saturation.

Camera2020Bars100pc

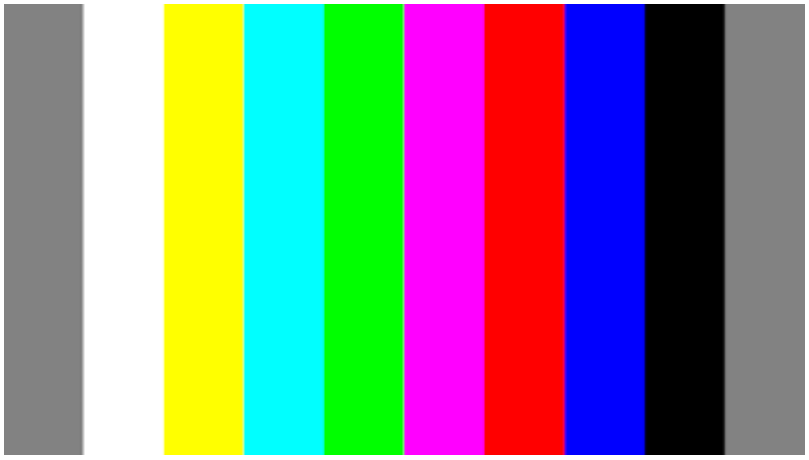
Camera 2020 Bars 100% – BT-2020 color bars at 100% saturation.

BarsHD2020_75pc



Bars HD 2020 75% – BT-2020 HD color bars at 75% saturation.

BarsHD2020_100pc

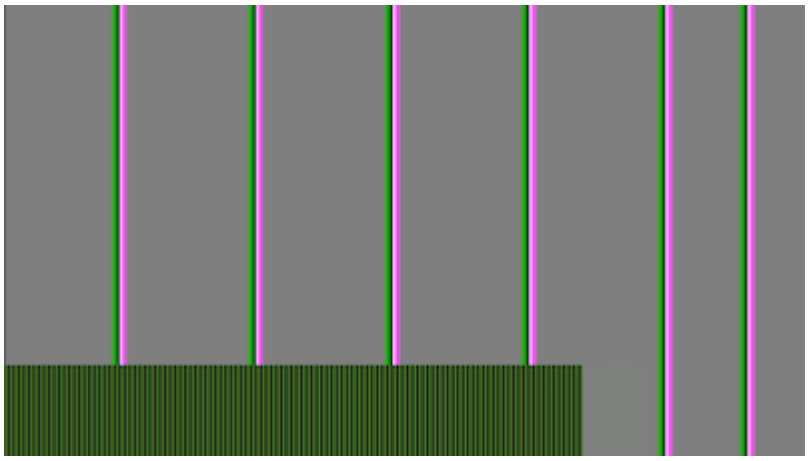


Bars HD 2020 100% – BT-2020 HD color bars at 100% saturation.

BTBars

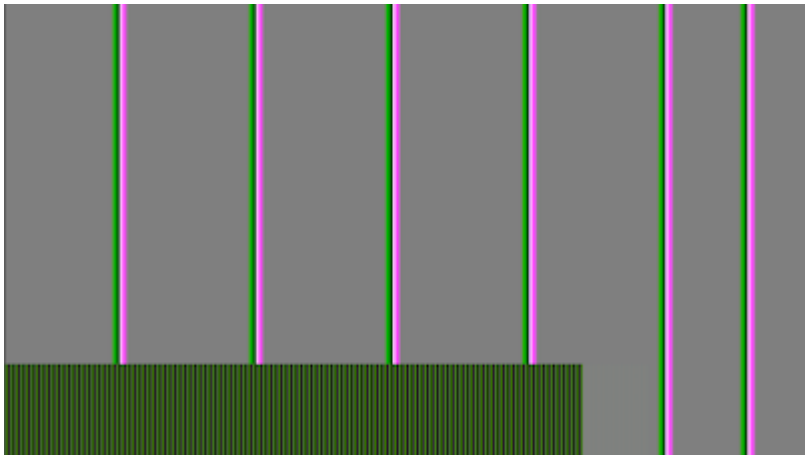
BT Bars – color bars at 75% saturation with a panel of black on the lower third

BarsMultiburst_75pc



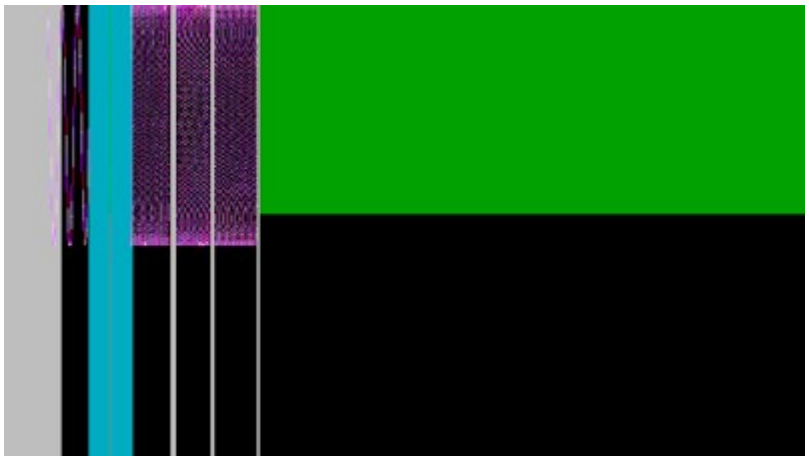
Bars Multiburst 75% – multiburst with color bars at 75% saturation

BarsMultiburst_100pc



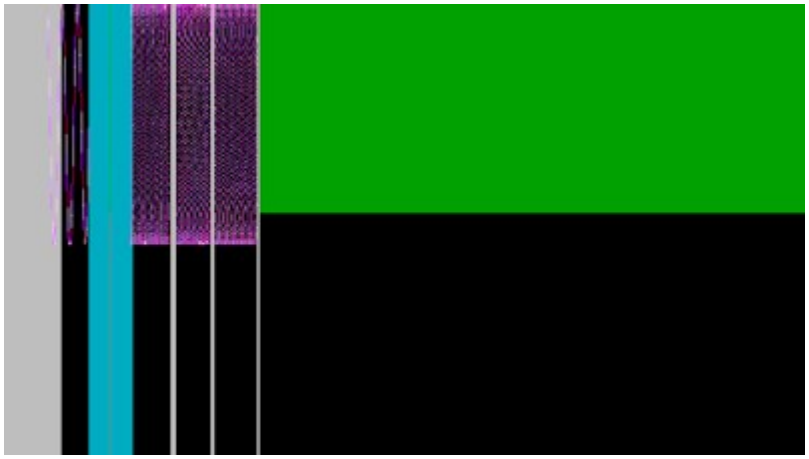
Bars Multiburst 100% – multiburst with color bars at 100% saturation

BarsMultiburst1_75pc



Bars Multiburst 1 75% – multiburst with color bars at 75% saturation

BarsMultiburst1_100pc



Bars Multiburst 1 100% – multiburst with color bars at 100% saturation

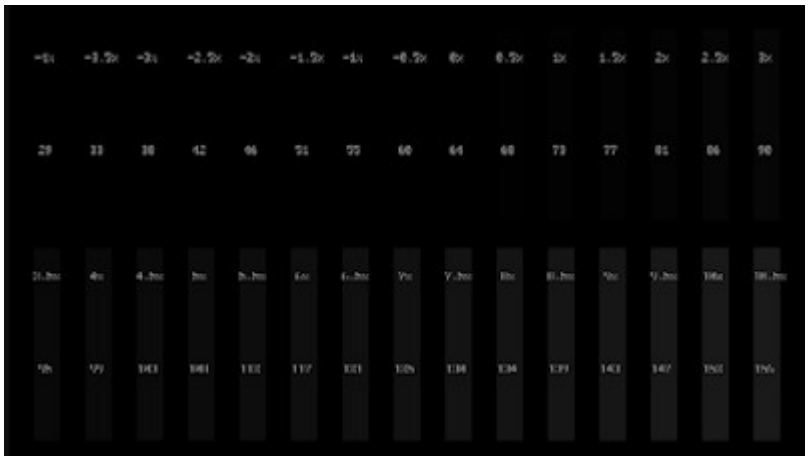
BarsMultiburst2_75pc

Bars Multiburst 2 75% – multiburst with color bars at 75% saturation

BarsMultiburst2_100pc

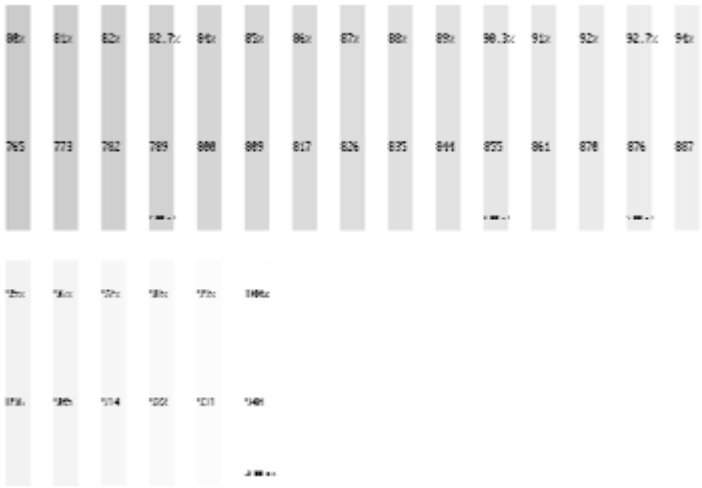
Bars Multiburst 2 100% – multiburst with color bars at 100% saturation

HDR_BlackClipping



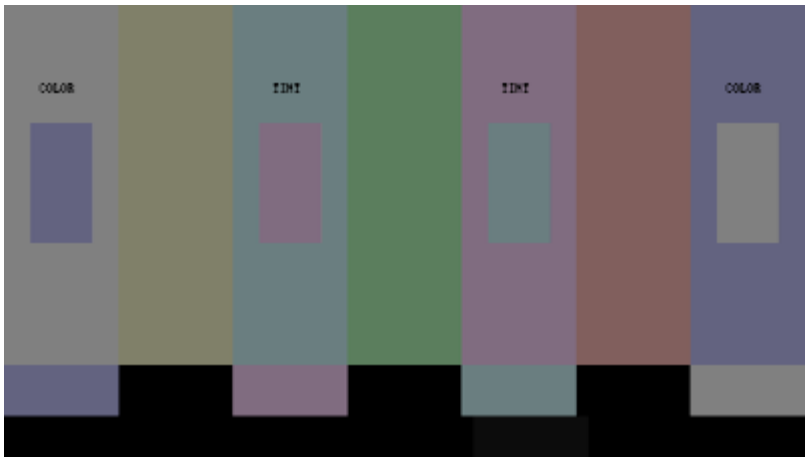
HDR Black Clipping – a series of very dark black panels with their values displayed on them, used to check legal gamut in HDR signals.

HDR_WhiteClipping_1



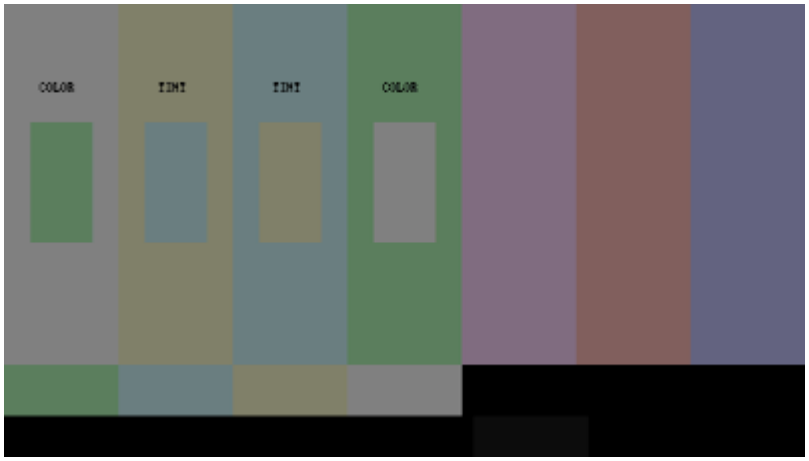
HDR White Clipping 1 – a series of very dark light panels with their values displayed on them, used to check legal gamut in HDR signals.

HDR_BlueFilter_1



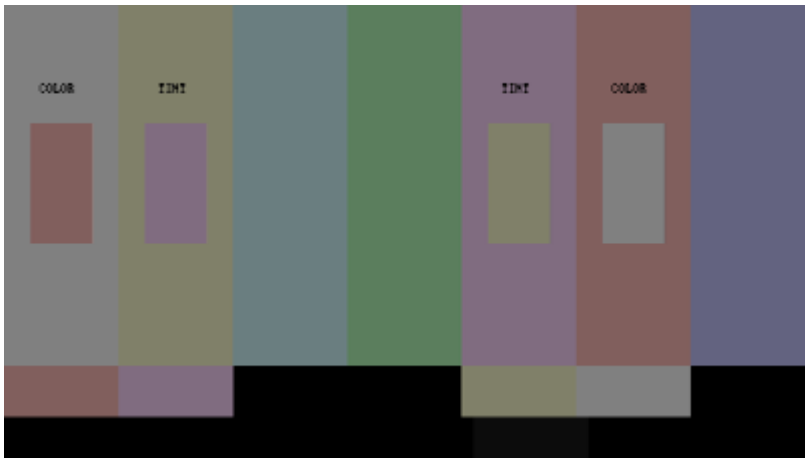
HDR Blue Filter 1 – color bars with inverts, overlaid with a blue filter.

HDR_GreenFilter_1



HDR Green Filter 1 – color bars with inverts, overlaid with a green filter.

HDR_RedFilter_1



HDR Red Filter 1 – color bars with inverts, overlaid with a red filter.

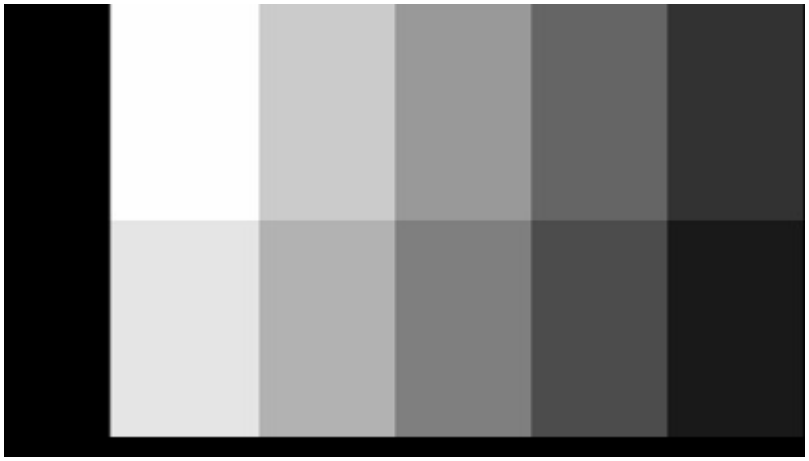
HDR_GridPattern_1

HDR Grid Pattern 1 – a black screen with a grid overlaid.

HDR_StepGrayscale_1

HDR Step Grayscale 1 – a gray scale for HDR.

HDR_GammaStep_1

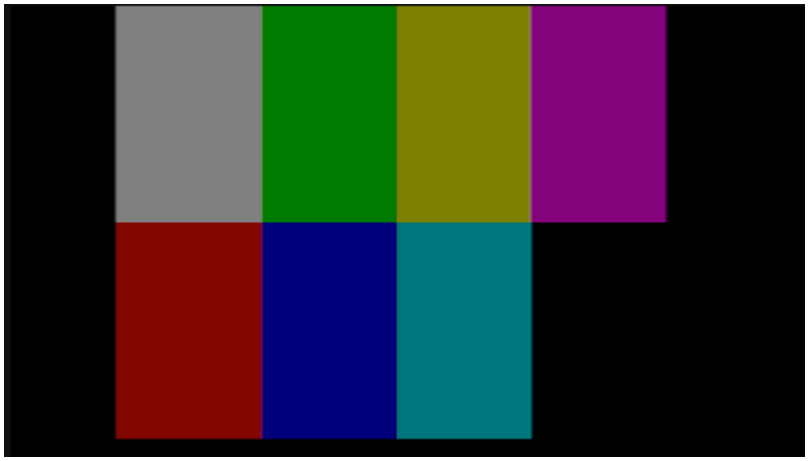


HDR Gamma Step 1 – a gray scale for HDR gamma analysis.

HDR_Contrast_1

HDR Contrast 1 – black screen with a white panel, to show contrast in HDR workflows.

HDR_50Amp_100Sat_1

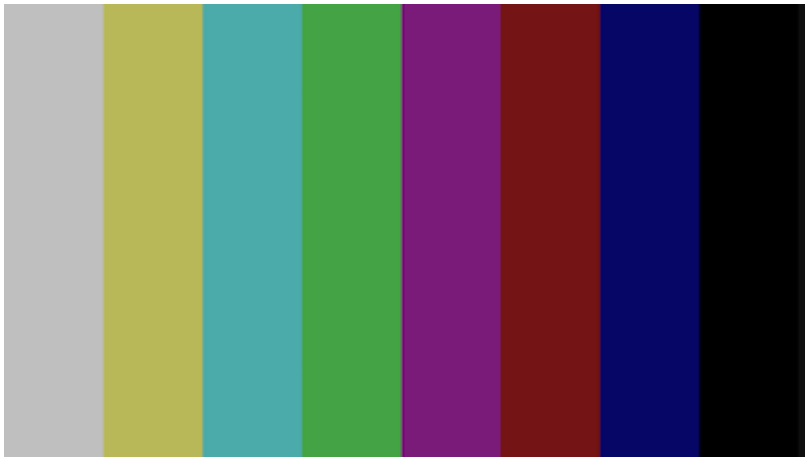


HDR 50 Amp 100 Saturation 1 – HDR color bars with black.

HDR_Point_Pantone_SkinTones_Color

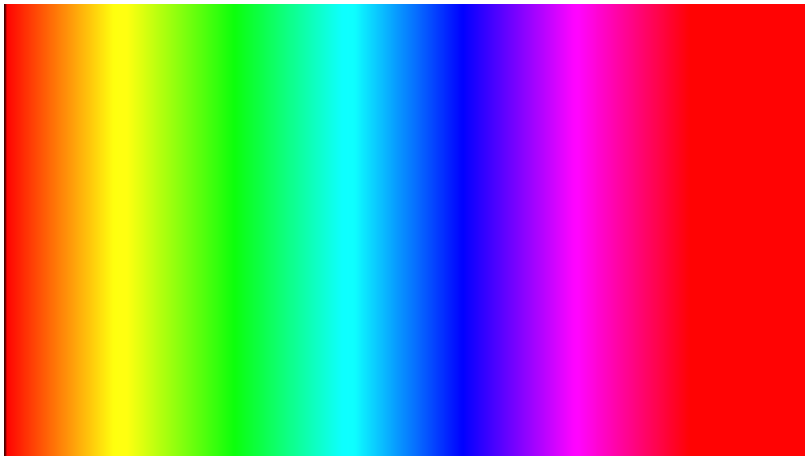
HDR Point Pantone SkinTones Color – various skin tones from the Pantone collection, for HDR workflows.

DSC_Camera_Bars_37pc



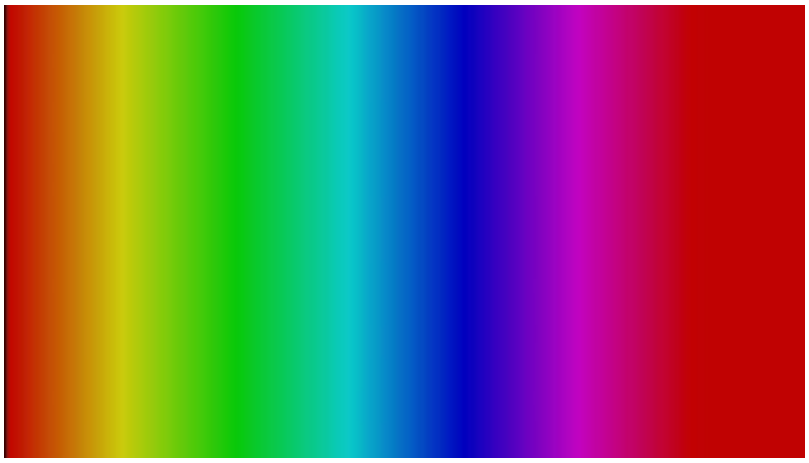
DSC Camera Bars 37% – color bars at 37% of saturation, for camera setup and lighting calibration.

All_Hue_709_100pc



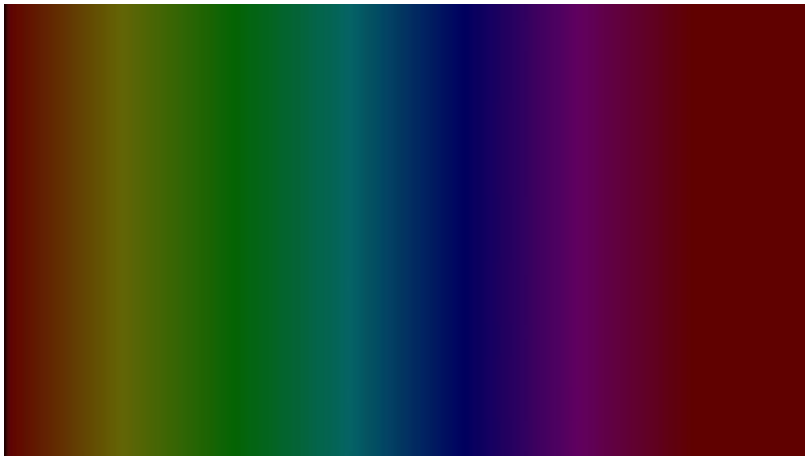
All Hue 709 100% – all the colors at full (100%) saturation arranged in a spectrum.

All_Hue_709_75pc



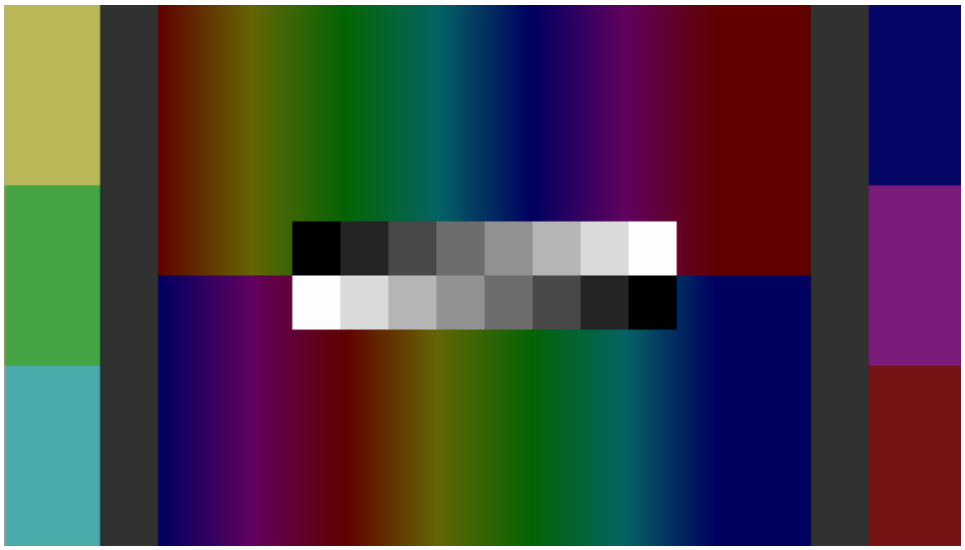
All Hue 709 75% – all the colors at three quarters (75%) saturation arranged in a spectrum.

All_Hue_709_37pc



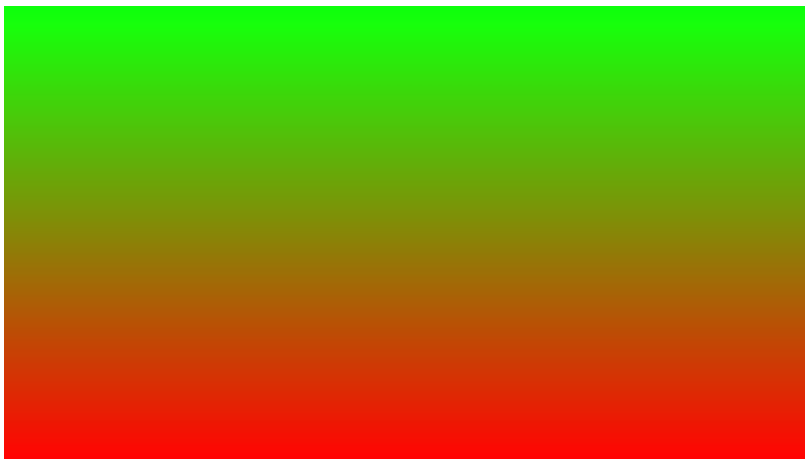
All Hue 709 37% – all the colors at 37% saturation arranged in a spectrum.

AllHue37_Markers



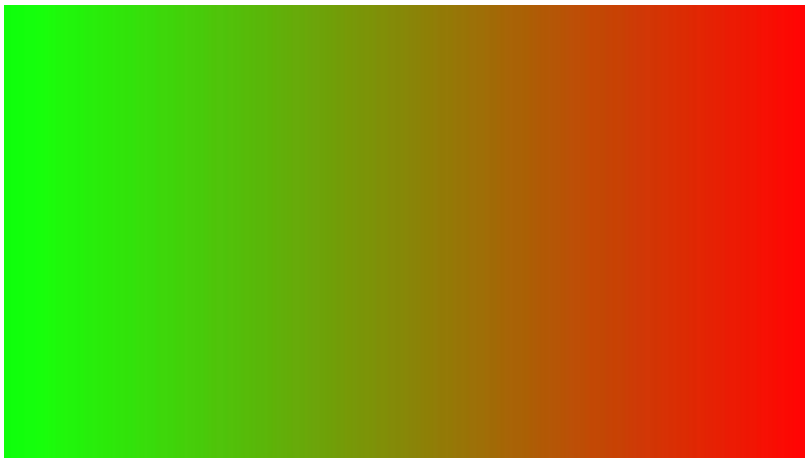
All Hue 37% Markers – features a panel with all the colors at 37% saturation arranged in a spectrum plus inverse, and adds a black and white gradation step with inverse, as well as two panels of gray, and the gamut primaries at 37% saturation.

R-G_Vert



R to G Vertical – a smooth vertical gradation from red on the bottom to green on top, at full saturation.

R-G_Horiz

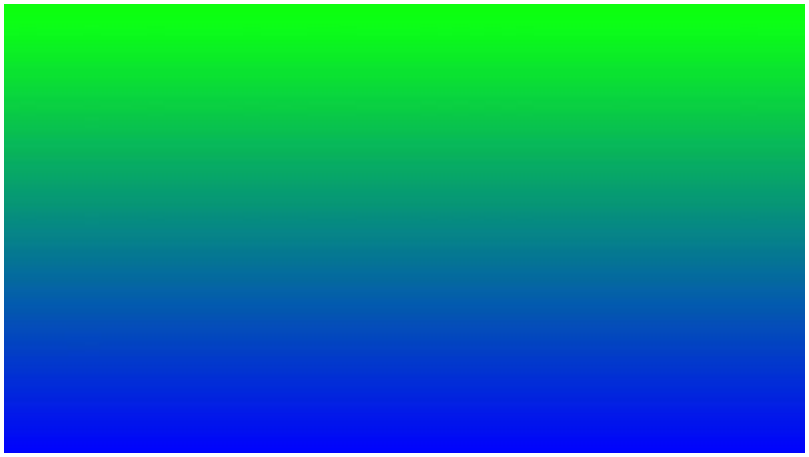


R to G Horizontal – a smooth horizontal gradation from red on the right to green on the left, at full saturation.

R-G_Both

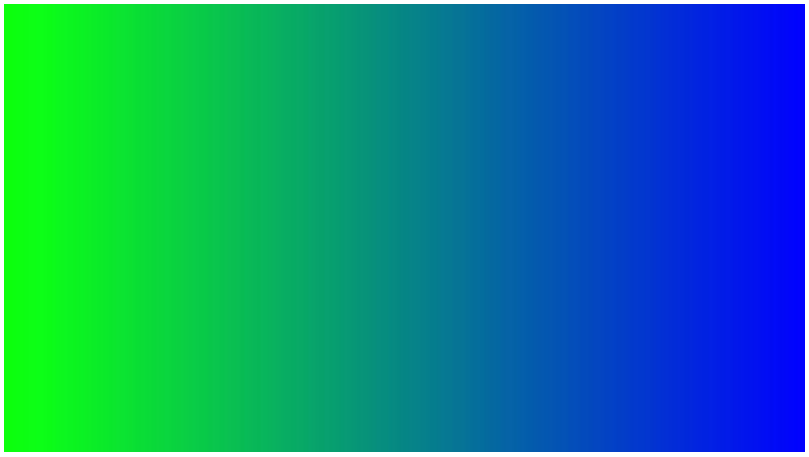
R to G Both – a smooth vertical gradation of red and green combined, with zero saturation (black) at the top and full saturation (yellow) at the bottom.

B-G_Vert



B to G Vertical – a smooth vertical gradation from blue on the bottom to green on top, at full saturation.

B-G_Horiz

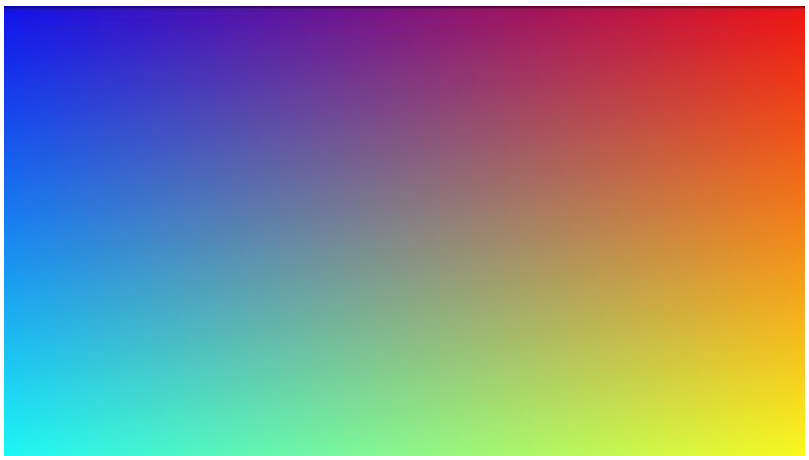


B to G Horizontal – a smooth horizontal gradation from blue on the right to green on the left, at full saturation.

B-G_Both

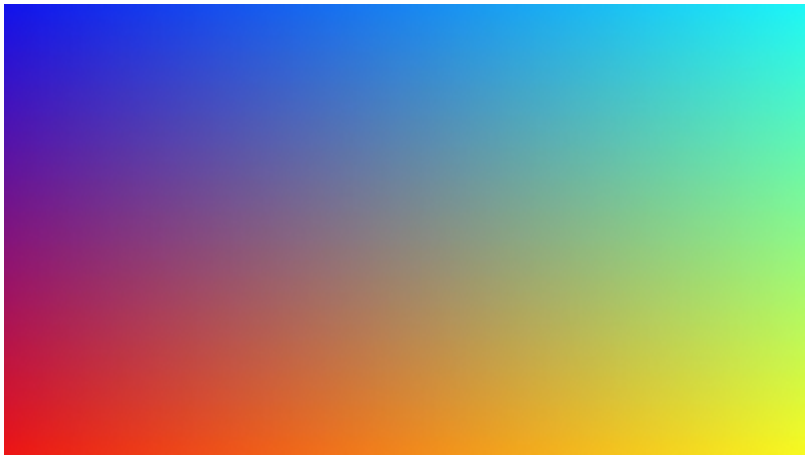
B to G Both – a smooth vertical gradation of blue and green combined, with zero saturation (black) at the top and full saturation (yellow) at the bottom.

G_Vert_R-G_Horiz



G Vertical R to G Horizontal – a smooth vertical gradation of green, combined with a red to green gradation from right to left.

R-B_Vert_G_Horiz



R to G Vertical B to G Horizontal – a smooth horizontal gradation of red (top) to blue (bottom), with a vertical gradation of green from 0 to 100%

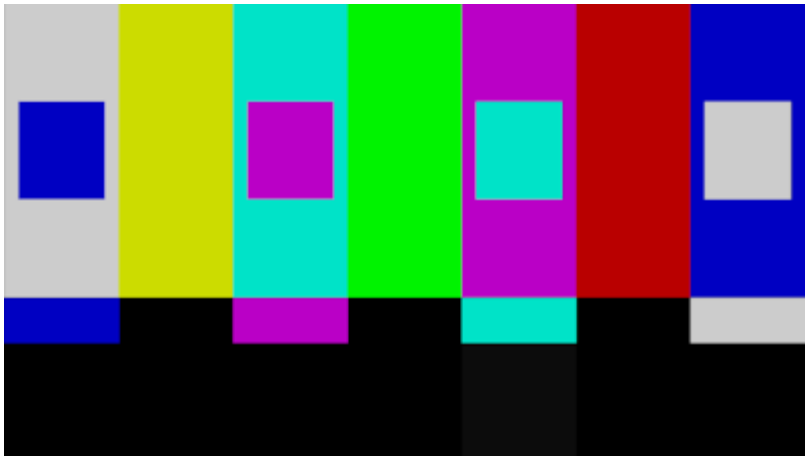
R-G-B_Horiz

R-G-B Horizontal – all three channels (R, G, and B) in a smooth gradation from 100% at the left to 0% at the right.

R-G-B_Vert

R-G-B Vertical – all three channels (R, G, and B) in a smooth gradation from 100% at the top to 0% at the bottom.

Bars709InvertsFull

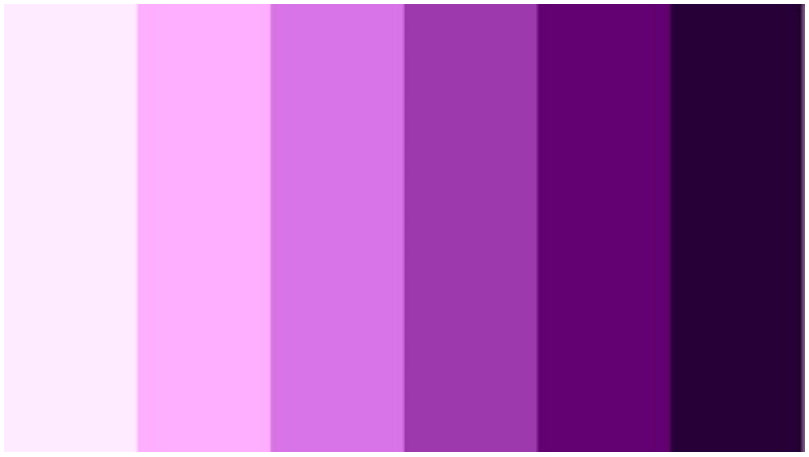


Bars 709 Inverts Full – 709 (HD) color bars with magenta/teal inversion, plus a panel of black along the bottom.

LumaRampVert

Luma Ramp Vertical – a smooth luminance gradation, from full saturation (white) at the bottom, to zero saturation (black) at the top.

Chroma5StepInvert



Chroma 5 Step Invert – five vertical bars of magenta, from very light to very dark.

White100pc

White 100% – a full screen of white at full saturation.

Yellow100pc

Yellow 100% – a full screen of yellow at full saturation.

Cyan100pc

Cyan 100% – a full screen of cyan at full saturation.

Green100pc

Green 100% – a full screen of green at full saturation.

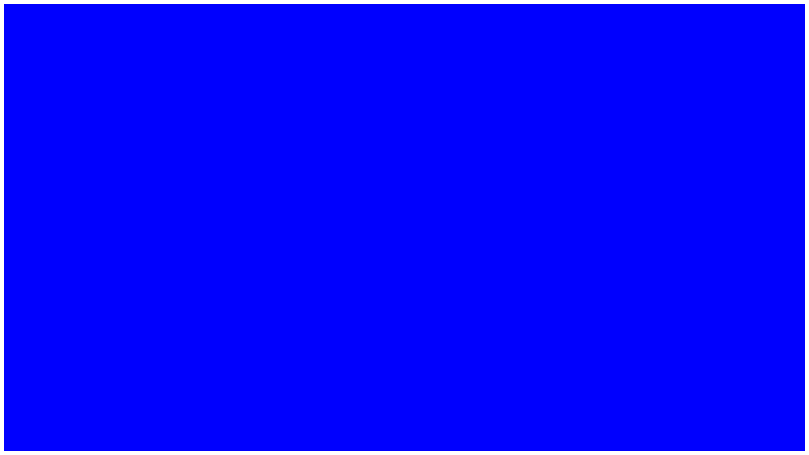
Magenta100pc

Magenta 100% – a full screen of magenta at full saturation.

Red100pc

Red 100% – a full screen of red at full saturation.

Blue100pc



Blue 100% – a full screen of blue at full saturation.

SMPTE-ARIB-B72_HDRBars

SMPTE ARIB B72 HDR Bars – color bars to support the SMPTE ARIB B72 HDR specification.

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This manual has been compiled to assist the user in their experience using **DrasticScope** software. It is believed to be correct at the time of writing, and every effort has been made to provide accurate and useful information. Any errors that may have crept in are unintentional and will hopefully be purged in a future revision of this document. We welcome your feedback.

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