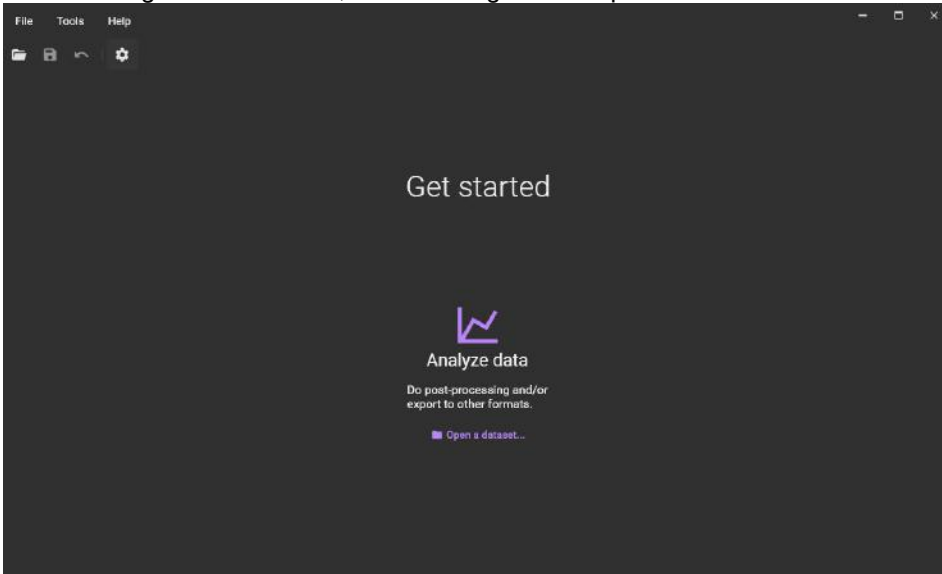


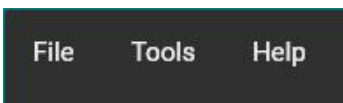
## 7. Screen Layout

### 7-1. Overall image

After starting BV Workbench, the following screen opens.



### 7-2. Top menu



#### [File]-[Open dataset...]

The [Open dataset] screen opens, and you can open the data in “gsd”, “bvx”, “raw”, and “tif” format.

Select file extension gsd/bvx/raw/tif

Check this when reading data with a file size larger than available memory of a PC. Directly access and display files on disk without copying data to memory.

Select drive name

Show file path

Move up one level

Reload file list in the folder

List of files in the folder displayed in "Path"

Select with a single click

Double click to load data

Display acquisition conditions saved in data file

Show comments stored in data file

View filter history stored in data file

Load selected data

Cancel

**[File]-[Save dataset...]**

You can save data by specifying data name, folder and data format (RAW/TIFF/GSD).



**[File]-[Save dataset as...]**

Data set (bvx) can be saved from the Windows "Save As" screen.

**[File]-[Import external data to current...]**

Import raw/tiff/gsd data and append to the currently open data. The imported data will be displayed to the right of the currently open data.

**[File]-[Close]**

Close selected data.

**[File]-[Close All]**

Close all open data.

**[File]-[Settings]**

App settings will open. On/Off of GPU use, color map setting, license setting, etc. See page 39 for details.

**[File]-[Exit]**

Close this software.

**[Tools]-[Script engine]**

Write and run scripts to automate some tasks.

**[Help]-[About]**

Displays the version information of BV Workbench.

### 7-3. Tool bar



#### [Open dataset...]

The [Open dataset] screen opens, and you can open the data in “gsd”, “bvx”, “raw”, and “tif” format.

**Select file extension**  
gsd/bvx/raw/tif

**Check this when reading data with a file size larger than available memory of a PC. Directly access and display files on disk without copying data to memory.**

**Select drive name**

**Show file path**

**Move up one level**

**Reload file list in the folder**

**List of files in the folder displayed in "Path"**

**Select with a single click**

**Double click to load data**

**Do not copy image sequences to memory**

**Display acquisition conditions saved in data file**

**Show comments stored in data file**

**View filter history stored in data file**

**OPEN** **CANCEL**

**Load selected data** **Cancel**

#### [Save dataset...]

You can save data by specifying data name, folder and data format (RAW/TIFF/GSD).

**Enter file name**

**Specify file path/folder. Click to display [Browse for Folder] screen**

**Select file extension RAW/TIFF/GSD**

**Check to make data read-only**

**Show tags (keywords) stored in data file**

**Enter comment**

**SAVE** **CANCEL**

**Save data** **Cancel**

**[Undo]**

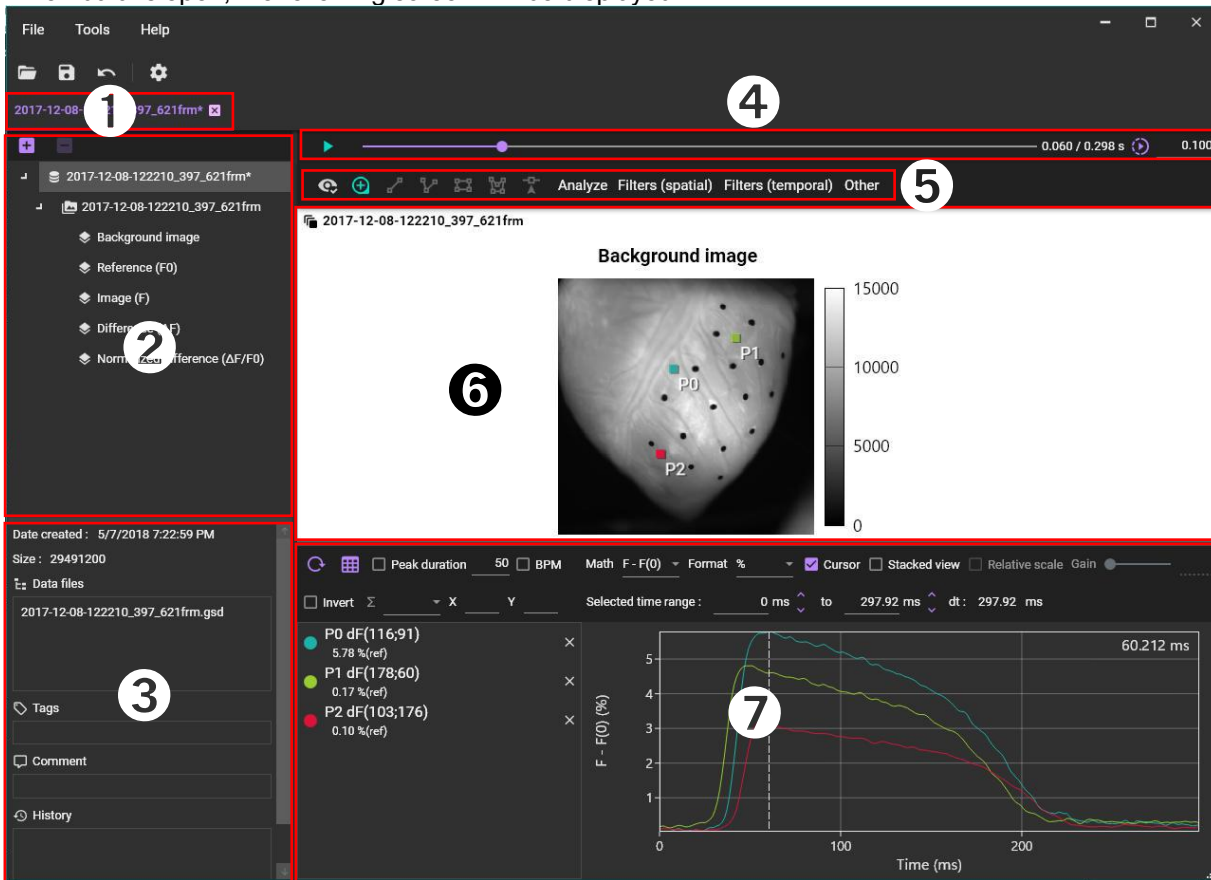
Undo the last filtering done and undo. You can set how many times you can revert to the previous setting in [Undo levels] of [App settings].

**[Settings]**

App settings will open. On/Off of GPU use, color map setting, license setting, etc. See page 39 for details.

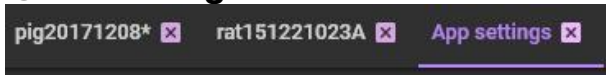
### 7-4. Data analysis screen

When data is open, the following screen will be displayed.



①	Switching tabs
②	View and select dataset, data, and layers
③	Data information display/Layer setting
④	Movie playback
⑤	Specify Point, Line, ROI / Data Analysis / Filtering
⑥	Image display
⑦	Wave display

## 1 Switching tabs



Acquired data and setting screen (App settings) are displayed in tabs. Click tab name to open that screen. You can change display order by dragging the name left or right.

To close tab, click the x icon or select [File]-[Close]. To close all tabs at once, select [File]-[Close all].

## 2 View and select dataset, data, and layers

Add data (\*.raw, \*.tif, \*.gsd)

Data deletion or layer deletion (only analysis result layers can be deleted)

Dataset name  
Click to display dataset information in ③.

Data name  
Click to display data information in ③.

Layer  
Click to display setting screen for each layer in ③.  
Right-click and select [Export data...] to output image data to a CSV file.  
In addition to layers displayed in the left image, layers for displaying various data analysis results are added.

Layer name	Description
Background image	When difference value display (Difference ( $\Delta F$ ) layer) or normalized difference value display (Normalized difference ( $\Delta F/F_0$ ) layer) is selected, set layer used as background image.
Reference (F0)	Set layer used as reference value when calculating difference value.
Image (F)	Set layer that displays real image represented by real brightness value F.
Difference ( $\Delta F$ )	Set layer that displays difference value image from F0.
Normalized difference ( $\Delta F/F_0$ )	Set layer to display image with difference value divided by F0.

### ③ Data information display/Layer setting

Select a **dataset name** in ②.

Annotations for the dataset information panel:

- ← Data save date and time (points to "Date created : 4/30/2020 4:33:49 PM")
- ← Data size (points to "Size : 640548864")
- ← Data file list included in dataset (points to the list of .raw files)
- ← Tags (keywords) (points to the Tags section)
- ← Comment (points to the Comment section)
- ← Data processing history (points to the History section)

Select a **data name** in ②.

Annotations for the data information panel:

- ← Frame number designation and frame advance/reverse in frame unit (points to "Frame 0" with navigation arrows)
- ← Destination for data file save (points to "File path C:\brainvision\data\心臓サンプル\UAB da")
- ← Data name (points to "Name 2017-12-08-122210 (bdm more light no noise s mode)\_N256 (IF1-CAM1)")
- ← Camera model (e.g. N256) (points to "Camera model")
- ← Bit depth (points to "Bit depth 14")
- ← Horizontal pixels (points to "Image width 256")
- ← Vertical pixels (points to "Image height 256")
- ← Exposure time (points to "Exposure time 0.00133000004291534 s")
- ← Frame count (points to "Frame count 3069")
- ← Frame rate (frame per second) (points to "Frame rate 751.88 fps")
- ← Trigger mode (points to "Trigger mode")
- ← Averaging times (points to "Times averaged 1")
- ← Comment (points to the Comment section)
- ← Data processing history (points to the History section)

**Background image**

Select **Background image layer**.

Set layer used as a background image, when difference value display (Difference ( $\Delta F$ ) layer) is selected.

The screenshot shows the 'Background image' settings panel. At the top is a slider for 'Layer opacity' ranging from 0 to 1.0. Below it is a 'Mask' dropdown menu set to 'All pixels'. The 'Min' value is 0 and the 'Max' value is 16383, both with up/down arrows. The 'Step' value is 2048, also with up/down arrows. A 'Levels adjustment' section contains a histogram and two triangular sliders for 'Minimum brightness value to display (14 bits)' and 'Maximum brightness value to display (14 bits)'. At the bottom are four buttons: 'Auto', 'Reset', 'Edit colors', and 'Save...'. Red arrows point from text labels to these various elements.

- Layer opacity (left: transparent↔right: opaque)
- Area to enable layer (e.g.: all pixels, ROI, line...)
- Minimum brightness value to display (14 bits)
- Maximum brightness value to display (14 bits)
- Spacing between color bar separator
- Minimum brightness value to display (14 bits): Specify with mouse drag
- Maximum brightness value to display (14 bits): Specify with mouse drag
- Automatic setting of optimum brightness value
- Reset settings
- Change pseudo color settings
- Save image (16bit grayscale TIFF, PNG, BMP, JPEG)



**Reference (F0)**

Select **Reference (F0) layer**.

Set layer used as reference value when calculating difference value.

The screenshot shows the 'Reference (F0)' settings panel. At the top is a slider for 'Layer opacity' set to 1.0. Below it is a 'Mask' dropdown menu set to 'All pixels'. The 'Min' value is 0 and the 'Max' value is 16383. The 'Step' is 2048. A 'Levels adjustment' histogram is shown with two white triangles for adjusting the minimum and maximum brightness values. Below the histogram are four buttons: 'Auto', 'Reset', 'Edit colors', and 'Save...'. Red arrows point from text labels to these various elements.

- Layer opacity (left: transparent↔right: opaque)
- Area to enable layer (e.g.: all pixels, ROI, line...)
- Minimum brightness value to display (14 bits)
- Maximum brightness value to display (14 bits)
- Spacing between color bar separator
- Minimum brightness value to display (14 bits): Specify with mouse drag
- Maximum brightness value to display (14 bits): Specify with mouse drag
- Automatic setting of optimum brightness value
- Reset settings
- Change pseudo color settings
- Save image (16bit grayscale TIFF, PNG, BMP, JPEG)

**Image (F)**

Select **Image (F) layer**.

Set layer to display real image.

The screenshot shows the 'Image (F)' settings panel with the following elements and annotations:

- Layer opacity:** A slider at the top right, set to 1.0. Annotation: "Layer opacity (left: transparent↔right: opaque)".
- Mask:** A dropdown menu currently set to "All pixels". Annotation: "Area to enable layer (e.g.: all pixels, ROI, line...)".
- Min:** A numeric input field set to 0. Annotation: "Minimum brightness value to display (14 bits)".
- Max:** A numeric input field set to 16000. Annotation: "Maximum brightness value to display (14 bits)".
- Step:** A numeric input field set to 12000. Annotation: "Spacing between color bar separator".
- Levels adjustment:** A histogram showing the distribution of pixel brightness values. Annotations:
  - Left triangle: "Minimum brightness value to display (14 bits): Specify with mouse drag".
  - Right triangle: "Maximum brightness value to display (14 bits): Specify with mouse drag".
  - Center triangle: "Automatic setting of optimum brightness value".
- Buttons:**
  - Auto:** A button with a gear icon. Annotation: "Reset settings".
  - Reset:** A button with a circular arrow icon.
  - Edit colors:** A button with a color palette icon. Annotation: "Change pseudo color settings".
  - Save...:** A button with a floppy disk icon. Annotation: "Save image (16bit grayscale TIFF, PNG, BMP, JPEG)".

**Difference ( $\Delta F$ )**

Select **Difference ( $\Delta F$ ) layer.**

Set layer to display difference value image.

Layer opacity (left: transparent↔right: opaque)  
 Area to enable layer (e.g.: all pixels, ROI, line...)  
 Specify range of values to be displayed in color. Specified value becomes the maximum/minimum value  
 Specify threshold of value to be displayed in color. Only the pixels having a value greater than or equal to the threshold are displayed in color  
 Spacing between color bar separator  
 Reset settings  
 Automatic setting of optimum brightness value  
 Change pseudo color settings  
 Save image (16bit grayscale TIFF, PNG, BMP, JPEG)

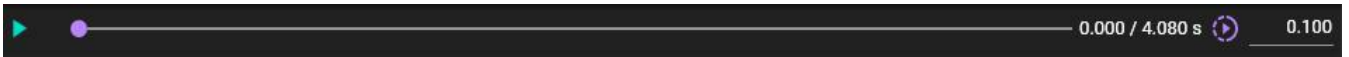
**Normalized difference ( $\Delta F/F_0$ )**

Select **Normalized difference ( $\Delta F/F_0$ ) layer.**

Set layer that displays difference value image (Difference) normalized by reference value image (Reference).

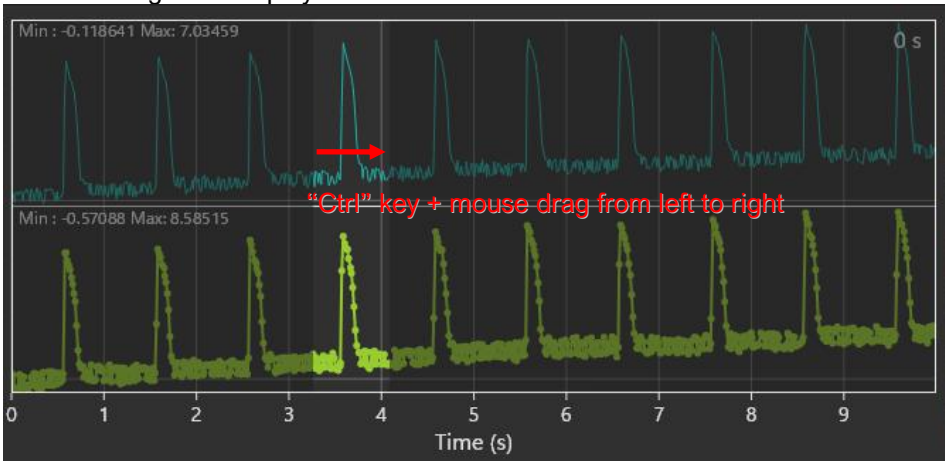
Layer opacity (left: transparent↔right: opaque)  
 Area to enable layer (e.g.: all pixels, ROI, line...)  
 Specify range of values to be displayed in color. Specified value becomes the maximum/minimum value.  
 Specify threshold of value to be displayed in color. Only the pixels having a value greater than or equal to the threshold are displayed in color.  
 Spacing between color bar separator  
 Reset settings  
 Automatic setting of optimum brightness value  
 Change pseudo color settings  
 Save image (16bit grayscale TIFF, PNG, BMP, JPEG)

## ④ Movie playback

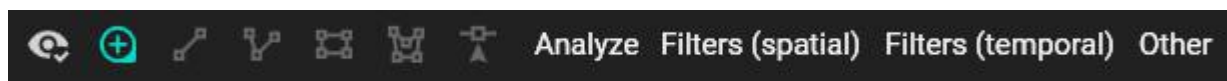




	Click to start playing movie.
	Click to stop playing movie.
	Display frame position. Also, you can move frame position by dragging ● with mouse or clicking bar.
<b>0.303 / 4.080 s</b>	Display time of displayed frame and total time.
	Click  to display. Drag ● with mouse to specify movie playback speed.
<b>1.000</b>	Movie playback speed is displayed. You can also the video playback speed by inputting.

If you hold down “Ctrl” key and drag mouse from left to right on waveform to select waveform range, only the selected range will be played back.



## 5 Specify Point, Line, ROI / Data Analysis / Filtering



	<div style="background-color: #333; color: white; padding: 5px; display: inline-block;"> <input checked="" type="checkbox"/> Wave chart  <input checked="" type="checkbox"/> ROI  <input checked="" type="checkbox"/> data         </div> <p>Turn on/off checkbox to set display/non-display of waveform, ROI, image, etc.</p>
 Point	<p>Click on image to add points. Multiple points can be specified. Right-click on a point to display a menu where you can select data analysis, copy point position, rename, and delete point. Details are given on page 46.</p>
 Line	<p>Click two points on image to specify a straight line. You can specify multiple straight lines. Right-click on line to display a menu where you can select calculation of conduction velocity, data analysis, copy line position, rename, and delete line. Details are given on page 53.</p>
 Polyline	<p>Specify polyline by clicking multiple points on image. Right-click in the middle of making polyline to display "End shape" and "Abort". Select "End shape" to complete polyline specification, and select "Abort" to delete the polyline. You can specify multiple polygonal lines.</p> <p>Right-click on polyline to display a menu where you can select data analysis, copy polyline position, rename it, or delete polyline. Details are given on page 58.</p>
 Rectangle (ROI)	<p>Click two points on image to specify rectangle. Right-click in the middle of making rectangle to display "End shape" and "Abort". Select "End shape" to complete rectangle specification. Select "Abort" to delete the rectangle. Multiple rectangles can be specified.</p> <p>Right-click on rectangle to display a menu where you can select data analysis, copy rectangle position, rename, and delete rectangle. Details are given on page 61.</p>
 Polygon (ROI)	<p>Click multiple points on image to specify a polygon. If you right click in the middle of specifying, "End shape" and "Abort" will be displayed. Select "End shape" to complete polygon specification. Select "Abort" to delete the polygon. You can specify multiple polygons.</p> <p>Right-click on polygon to display a menu where you can select data analysis, copy polygon position, rename, and delete polygon. Details are given on page 63.</p>
 Selection tool	<p>You can select a specified point, straight line, polyline, rectangle, or polygon.</p>

<b>Analyze</b>	Add mask...	Add a mask layer that can specify data display area.
	Add frequency analysis layer	Create a map showing maximum frequencies.
	Add peak analysis layer	Calculate the following values from a single peak (action potential) and create a map for each. <ul style="list-style-type: none"> <li>• Activation time</li> <li>• Repolarization time</li> <li>• Duration (APD)</li> <li>• Activation to Peak time</li> <li>• Peak to Repolarization time</li> <li>• Peak time</li> <li>• Peak amplitude</li> <li>• Decay tau</li> </ul>
	Add peak analysis layers	Calculate the following values from multiple peaks (action potentials) and create multiple maps at once. <ul style="list-style-type: none"> <li>• Activation time</li> <li>• Repolarization time</li> <li>• Duration (APD)</li> <li>• Activation to Peak time</li> <li>• Peak to Repolarization time</li> <li>• Peak time</li> <li>• Peak amplitude</li> <li>• Decay tau</li> </ul>
	Add phase analysis layer	Create a phase map
	Add velocity analysis layer	Create a conduction velocity map
	Average peaks	Average multiple peaks
	Average peaks and align start	Average multiple peaks and align start so that rising edge of peak is at the beginning of data
	Image SNR	Calculate S/N ratio of displayed image.
	Demodulate E-Field	Demodulates data captured by the electric field camera system
	Leading region map	Create a map that represents origin of action potential

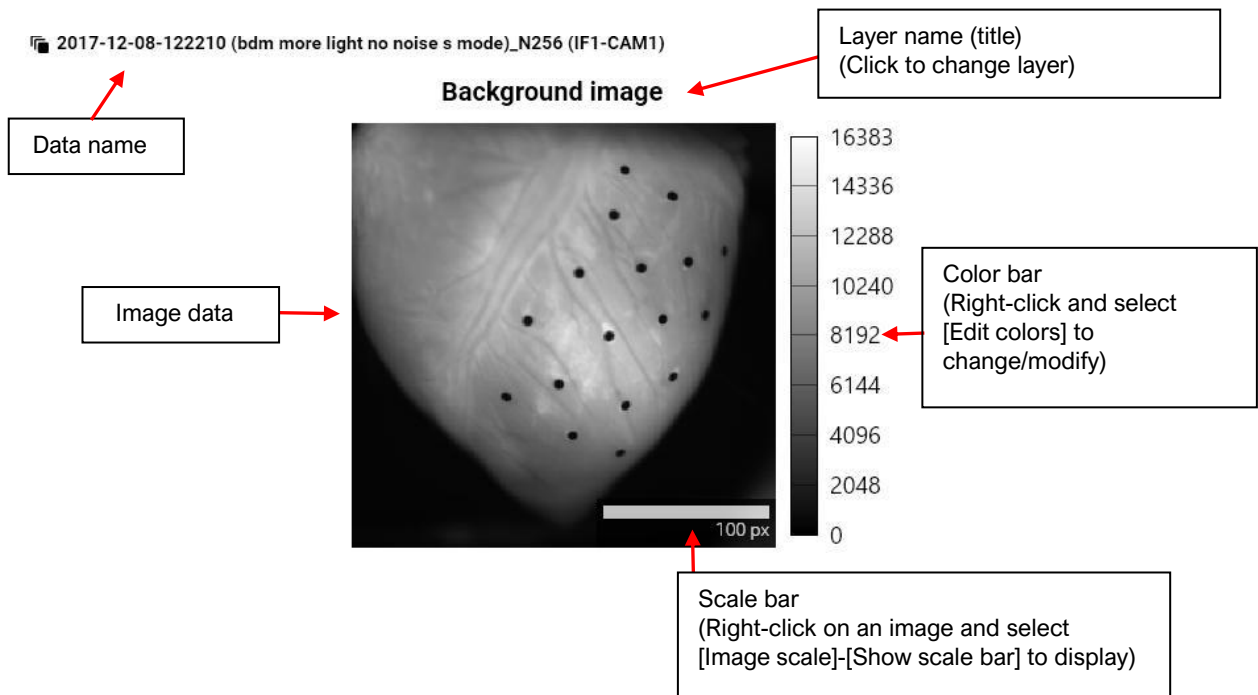
<b>Filters (spatial)</b>	Filter batch	Select multiple filters and process them all at once
	Invert polarity	Invert polarities of image and waveform
	Binning	Combine multiple pixels into one pixel (add or average)
	Brightness/Illumination correction	Brightness correction/illumination unevenness correction
	Gaussian filter	Gaussian filter (noise removal)
	Mean filter	Mean filter (noise removal)
	Median filter	Median filter (noise removal)

<b>Filters (temporal)</b>	Filter batch	Select multiple filters and process them all at once
	Deinterleave frames	Frames of data acquired by multiwavelength excitation imaging such as Fura-2 is extracted and split into multiple data.

	Drift removal	Drift curve correction
	Finite impulse response (FIR) filter	Finite impulse response (FIR) filter (noise removal)
	Dynamic range optimization (DRO)	Brightness value of each pixel is optimized to use entire 16-bit gradation, and dark image is corrected to be bright
	Normalize	Correct difference in amplitude of brightness value between each pixel and calculate so that brightness values of all pixels have same amplitude (0 to 65,535)




<b>Other</b>	Align	Enlarge/reduce, rotate, move, and overlay two images
	Crop	Crop image by specifying area with mouse.
	Arithmetic operation (all frames)	Calculate using all frames of two data. (Addition, subtraction, multiplication, division, average)
	Arithmetic operation (single frame)	Calculate using one frame of two data. (Addition, subtraction, multiplication, division, average)
	Batch average	Offline averaging with multiple data

## ⑥ Image display



### Ⓞ Image data

Display image and analysis result of each layer. The following mouse operations are possible.

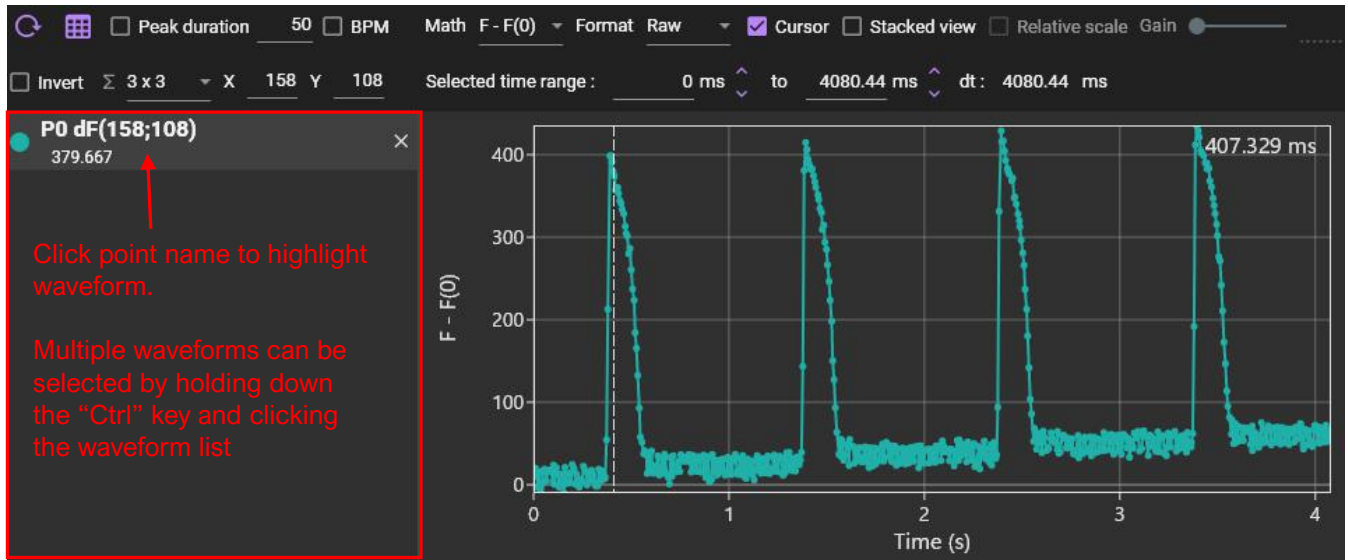
Operation	Description
Left click	When the point tool  is selected, a waveform showing brightness change of clicked point is displayed in  . When line/polyline/rectangle/polygon tool is selected, you can draw a line/polyline/rectangle/polygon on image and perform various data analysis.
Mouse drag point	Move position of point. Waveform display of  also changes accordingly.
Scroll mouse wheel	Enlarge or reduce image.



Right click (Pop-up Menu display)	Image scale - Show scale bar	A scale bar is displayed at bottom right of image
	Image scale - Set scale	Enter width of image in mm. Length of scale bar is set based on it
	Current intensity - Set as background image	Use image of displayed frame as Background image
	Current intensity - Set as reference (F0)	Image of displayed frame is used as reference image (Reference) when calculating difference image (Difference).
	Create dark reference (F0)	
	Reset zoom	Reset size of enlarged image
	Show title	Set display/non-display of layer name (title) displayed at top of image
	Show color bar	Show or hide color bar displayed on right side of image
	Show time stamp	Set display/non-display of time stamp displayed at lower left of image
	ROI - Show points	Set display/non-display of points on image
	ROI - Show lines	Set display/non-display of line and polyline on image
	ROI - Show polygons	Set display/non-display of rectangle and polygon on image
	ROI - Show masks	Set display/non-display of mask layer on image
	Non-square pixels (MiCAM-HR)	One pixel of image taken by HR camera for MiCAM is horizontally long. Set aspect ratio to 1:1 to make square pixels.
	Export data	Output displayed image data in CSV format.
	Export figure	Output displayed image data as a still image (png, bmp, jpg format).
Export video	Output displayed image data as a movie (avi format).	

## 7 Wave display

Click on image in 6 to display the following waveform. Light intensity change at clicked point is shown. Horizontal axis shows time (seconds) and vertical axis shows light intensity change.



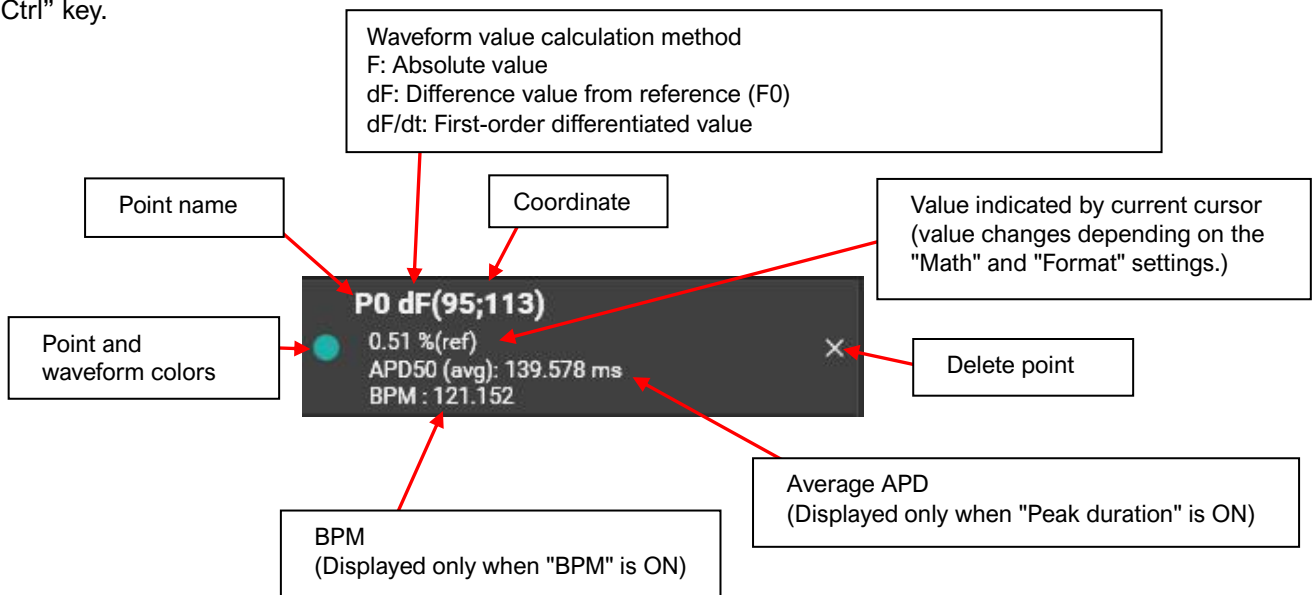
	Reload analog waveform and delete all other waveforms.
	Displayed waveform data is output in CSV format.
<input checked="" type="checkbox"/> Peak duration <input type="text" value="50"/>	Display average value of APD (action potential duration) calculated from waveform of selected point. If you want APD50, enter "50" in the text box.
<input checked="" type="checkbox"/> BPM	Display number of beats per minute (BPM) calculated from waveform of selected point
Math <input type="text" value="F - F(0)"/>	Specify how to calculate waveform value F: Absolute value F-F(0): Difference value from reference (F0) dF/dt: First-order differentiated value
Format <input type="text" value="Raw"/>	Specify unit for vertical axis of waveform Raw: Real data %: Ratio to reference
<input checked="" type="checkbox"/> Cursor	Show or hide vertical dotted line showing current frame displayed on waveform
<input checked="" type="checkbox"/> Stacked view	When set to ON, multiple waveforms are displayed vertically side by side. When turned OFF, multiple waveforms are displayed in a layered manner.
<input checked="" type="checkbox"/> Relative scale	When turned on, height of waveform is displayed on a relative scale. The tallest waveform is adjusted to take the maximum value in the waveform display frame, and the heights of other waveforms are set to take relative values to the largest waveform.  When turned OFF, the maximum value in each waveform is adjusted to take the maximum value in the waveform display frame.
Gain <input type="text" value="1"/>	Effective only when [Relative scale]=ON. Adjust gain of waveform by dragging ● or entering a number.

	Inverts polarity of waveform at selected point.
	Resizes selected points. If 3x3 is selected, 9 pixels will be observation points and average waveform of 9 pixels will be displayed.
	Coordinates of selected point are displayed. You can also specify arbitrary coordinates by entering numerical values.
	Select time range of waveform. It is possible to create various maps and analyze various data based on range selected here. Specify start time in the left box and the end time in the right box.  You can also select time range by holding down "Ctrl" key and dragging mouse pointer to the right on waveform.
	Displays time of range selected on waveform.
	Horizontally scroll waveform.

**Point information display**

When you click on image, information of the point is displayed as below.

Waveform can be selected by clicking on the following point information, and ON/OFF setting of "Peak duration" and "BPM" becomes possible. You can select multiple waveforms by clicking point information while pressing "Ctrl" key.

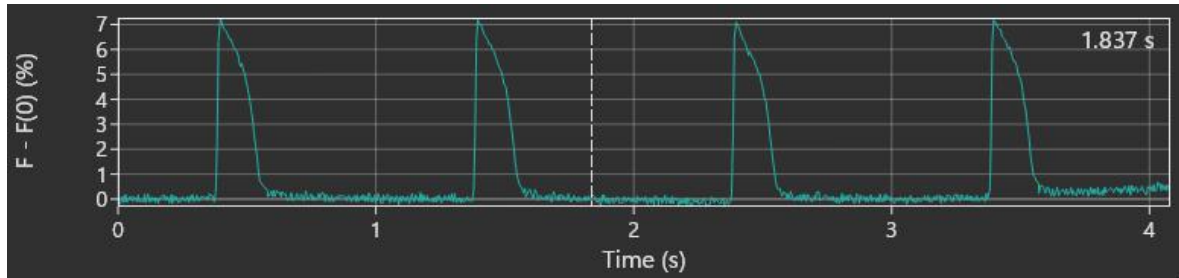


Select point information and right-click to display the following menu.


Operation	Description	Reference page
Frequency analysis	Frequency analysis	Page 66
Phase analysis	Phase analysis	Page 67
Time-frequency analysis	Time-frequency analysis	Page 68
Properties	Sampling time, number of points, minimum value, maximum value, average value, and standard deviation are displayed.	Page 71

**Waveform display**


Waveform of selected point on an image is displayed as shown below. The horizontal axis represents time and the vertical axis represents brightness. Select “Math” as numerical calculation method and “Format” the unit.

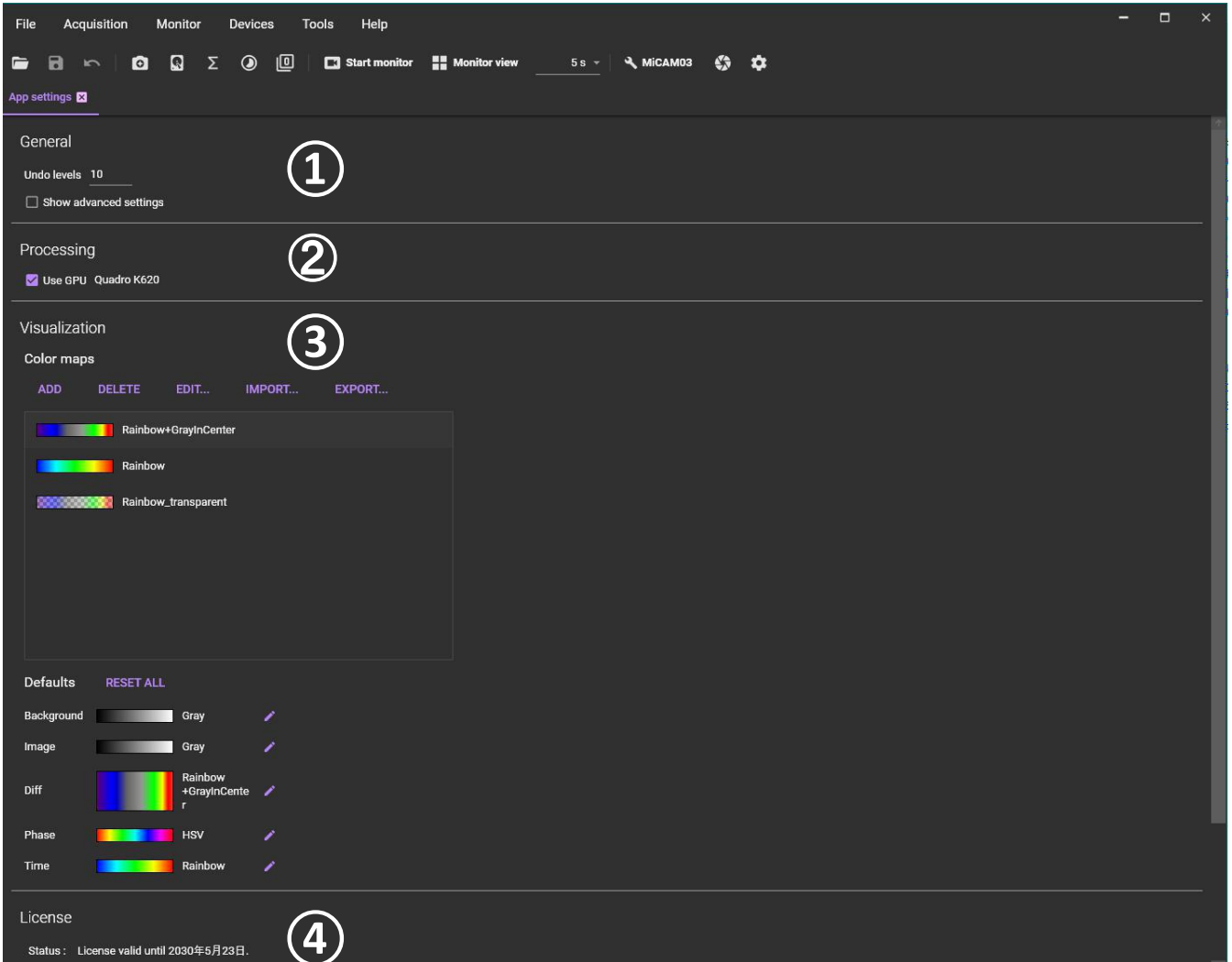


The following mouse operations are possible.

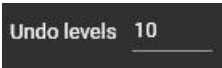

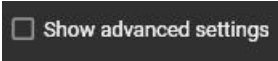

Operation	Description
Click on waveform	Move frame position
Drag mouse pointer left or right on waveform	Move frame position
Hold “Ctrl” key and drag mouse pointer to right	Select time range of waveform. It is possible to create various maps and analyze various data based on the range selected here.  You can select time range with “Selected time range” at top of waveform.
Hold “Ctrl” key and drag mouse pointer to left	Deselect time range selection for waveform and select all ranges.
Scroll mouse wheel	Enlarge/reduce waveform size
Right click	A popup menu is displayed.  Show extents: Change scale so that entire waveform can be displayed.  Show cursor: Display a vertical line cursor that indicates current frame on waveform. When you click mouse on waveform, the cursor also moves and the image display changes.  Stacked view: When set to ON, multiple waveforms are displayed vertically.  When turned OFF, multiple waveforms are displayed in a layered manner.  Export CSV: Saves displayed waveform in CSV format. It is the same operation as the  icon.

## 7-5. Setting screen


Click  or select [settings] from the [File] menu to open the [App setting screen as shown below. On this screen, you can turn on/off the use of GPU, set the color map, set the license, etc.



### ①[General]

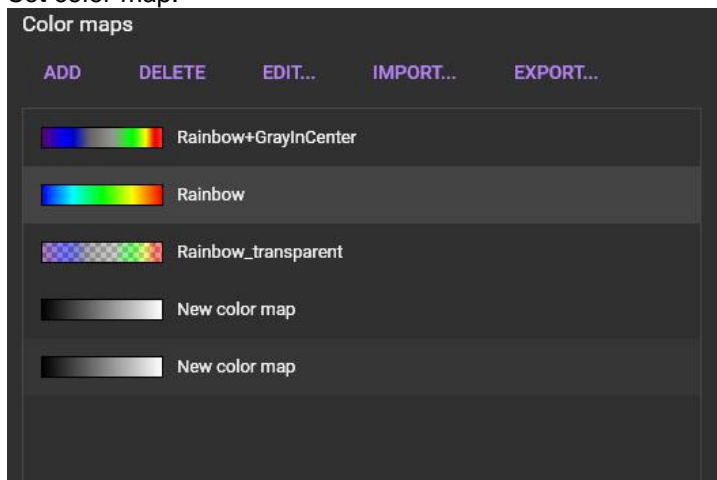
	<p>Click the Undo button  to cancel filtering process applied immediately before. Specify how many times you can cancel.</p> <p>If you apply filter once, the data before filter needs to be retained, so the memory capacity is about twice the data capacity. Setting a large value for Undo levels uses more memory, and may cause your PC to run out of memory.</p>
	<p>The following settings are displayed on the acquisition setting screen of MiCAM03. For details, refer to the acquisition manual.</p> 

②[Processing]

	<p>Model name of GPU installed in computer is displayed. GPU can be used for some filter processing (Finite impulse response (FIR) filter) and data analysis (Frequency analysis, Phase analysis, E-Field demodulation) to increase the speed. If you use GPU, please check the checkbox.</p> <p>If this software does not support GPU installed in PC or if memory capacity of GPU is insufficient, a message (“Not enough memory to complete this task. Try switching CPU (slower but more memory available) if using GPU”) is displayed. Turn off the check box. CPU is used.</p>
---	--

### ③[Visualization] - [Color maps]

Set color map.



#### [ADD]

Click to display the screen below and create a new color map. Click the [Save] button to add it to the color map list. Up to 256 points can be specified for gradation.

Enter color map name

Invert color map gradient

Click the bar to add ▲, and you can specify the color of that point

Click ▲ to select that point

Display the selected point number

Or you can enter the point number (0 to 255) and select that point.

Delete the point displayed in "Value"

Value: 130

Remove

Specify color in RGB

Specify transparency from 0 to 255

Specify color in hexadecimal

Preview the specified color

List registered color maps

Save the specified color

Cancel

Name: New color map

R 117

G 117

B 117

A 255

# FF757575

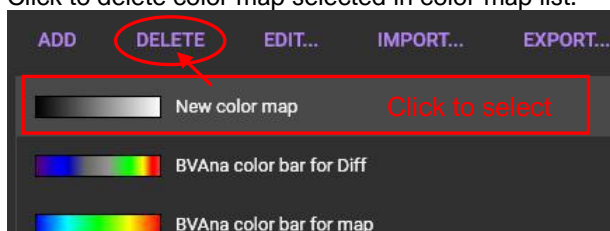
Presets: New color map

SAVE

CANCEL

#### [DELETE]

Click to delete color map selected in color map list.



**[EDIT]**

Click to display the following screen and edit the color map selected in the color map list.

The screenshot shows the 'Edit' window for a color map named 'Fire'. It includes a gradient bar at the top, a 'Value' field set to 0, a 'Remove' button, and a 'Preset' dropdown menu. On the right, there are input fields for RGB values (R: 40, G: 0, B: 0), transparency (A: 255), and a hexadecimal color code (# FF280000). A color preview window shows the selected color. At the bottom, there are 'SAVE' and 'CANCEL' buttons.

Callouts and instructions:

- Display color map name:** Points to the 'Name: Fire' field.
- Invert color map gradient:** Points to the invert icon on the gradient bar.
- Click the bar to add ▲, and you can specify the color of that point:** Points to the gradient bar.
- Click ▲ to select that point:** Points to a triangle marker on the gradient bar.
- Display the selected point number:** Points to the 'Value: 0' field.
- Or you can enter the point number (0 to 255) and select that point.** Points to the 'Value' field.
- Delete the point displayed in "Value":** Points to the 'Remove' button.
- Select preset color map:** Points to the 'Preset: Fire' dropdown.
- Specify color in RGB:** Points to the R, G, and B input fields.
- Specify transparency from 0 to 255:** Points to the A input field.
- Specify color in hexadecimal:** Points to the # FF280000 input field.
- Preview the specified color:** Points to the color preview window.
- Save the specified color:** Points to the 'SAVE' button.
- Cancel:** Points to the 'CANCEL' button.

**[IMPORT]**

You can import the saved color map file (extension: cmx). Click to display the file selection screen. Specify "cmx" file and click the [Open] button. Imported color map is added to the list

The screenshot shows a list of color maps: 'New color map', 'BVAna color bar for Diff', and 'BVAna color bar for map'. The 'IMPORT...' button at the top is circled in red, with an arrow pointing to it.

**[EXPORT]**

Color map selected in the color map list can be saved as a file (extension: cmx).

The screenshot shows the same list of color maps as above. The 'EXPORT...' button at the top is circled in red, with an arrow pointing to it. A red box highlights the 'New color map' entry with the text 'Click to select'.

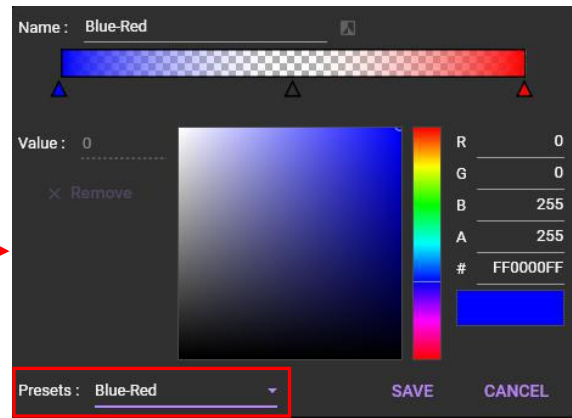
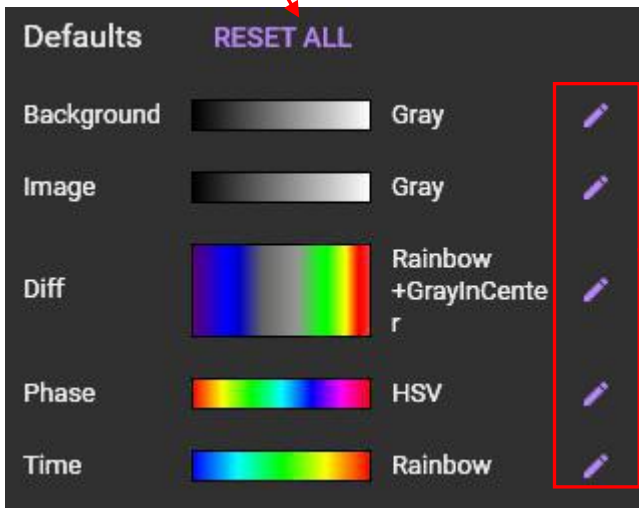


**[Defaults]**

Specify the default color map.

*Default color map set here is reflected when data is loaded.  
It will not be reflected in the already opened data, so set it before data analysis.*

Reset all color map specifications and return to the initial state

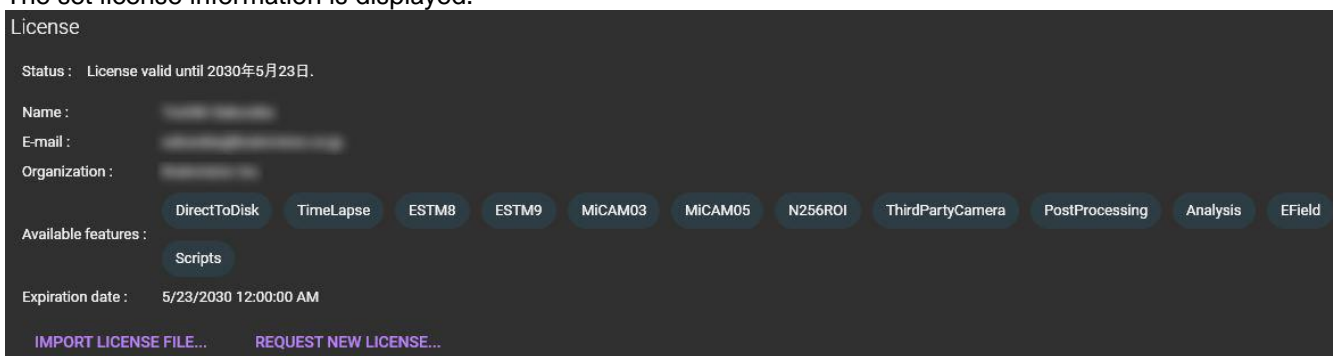


Select color map to use as default from "Presets" and click [SAVE] button

Background	Specifies color map for background image.
Image	Specifies color map for real image.
Diff	Specifies color map for difference value image.
Phase	Specify color map for phase map.
Time	Specify color map for maps such as activation time map, repolarization time map etc.

④[License]

The set license information is displayed.



[IMPORT LICENSE FILE...]

A screen for specifying a license file (extension: lic) is displayed.

[REQUEST NEW LICENSE...]

Click to display the [License request] screen below. Enter/select the required information and click the [SEND] button to start the default email software of your PC. The information you entered/selected is included in the email. Please send an email to support@brainvision.co.jp. We'll get back to you and email you the license file.

