



AVDT-BOB

User's manual



www.auvitran.com

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1. Legacy

1.1 LIMITATION OF LIABILITY

In no case and in no way, the provider of this software (AuviTran, the distributor or reseller, or any other party acting as provider) shall be liable and sued to court for damage, either direct or indirect, caused to the user of the software and which would result from an improper installation or misuse of the software. "Misuse" and "improper installation" mean installation and use not corresponding to the instructions of this manual.

AuviTran is constantly working on the improvement of the products. For that purpose, the products functionalities are bound to change and be upgraded without notice. Please read carefully the User's manual as the new functionalities will be described therein.

1.2 TRADEMARKS

All trademarks listed in this manual are the exclusive property of their respective owners. They are respected "as is" by AuviTran. Any use of these trademarks must receive prior approval of their respective owners. For any question, please contact the trademark's owner directly.

1.3 COPYRIGHT

The information in this manual is protected by copyright. Therefore, reproduction, distribution of whole or part of this manual is strictly forbidden without the prior written agreement of AuviTran.

1.4 MORE INFORMATION

Please visit our website for any question of further inquiry concerning our product range. Updates will also be posted when available.

<http://www.auvitran.com>

2 AVDT-BOB Quick Start

2.1 Power to Start-up

To start your AVDT-BOB, connect the Main port of your AVDT-BOB, to an active POE switch port using a CAT5E/6 cable (Gigabit connection) or alternatively connect an optional 12V DC power to the DC Power connector of your AVDT-BOB.



When powered, the Green Power led of the AVDT-BOB will be On.

Notice: You can use at the same time the POE and 12VDC and they will act as redundant power supplies.

2.2 Connect the AVDT-BOB to an IP/Dante network

The connection of your AVDT-BOB to the IP/Dante network can be done via Ethernet CAT5e/6/7 cables using the Main Gigabit port that is POE compatible or via the Aux Gigabit port(s)

When connected to another active/running Ethernet device (Switch, Mac, PC, IP router), the Link LED of the connected port will be On and the Act LED will start flashing.

AVDT-BOB can be daisy chained to other Dante device via the remaining port(s) thanks to an internal gigabit switch that connects:

- Physical Ethernet ports (Main, Aux)
- Dante component
- User Interface of ARM processor managing Web 2.0, DSP and Mic preamps

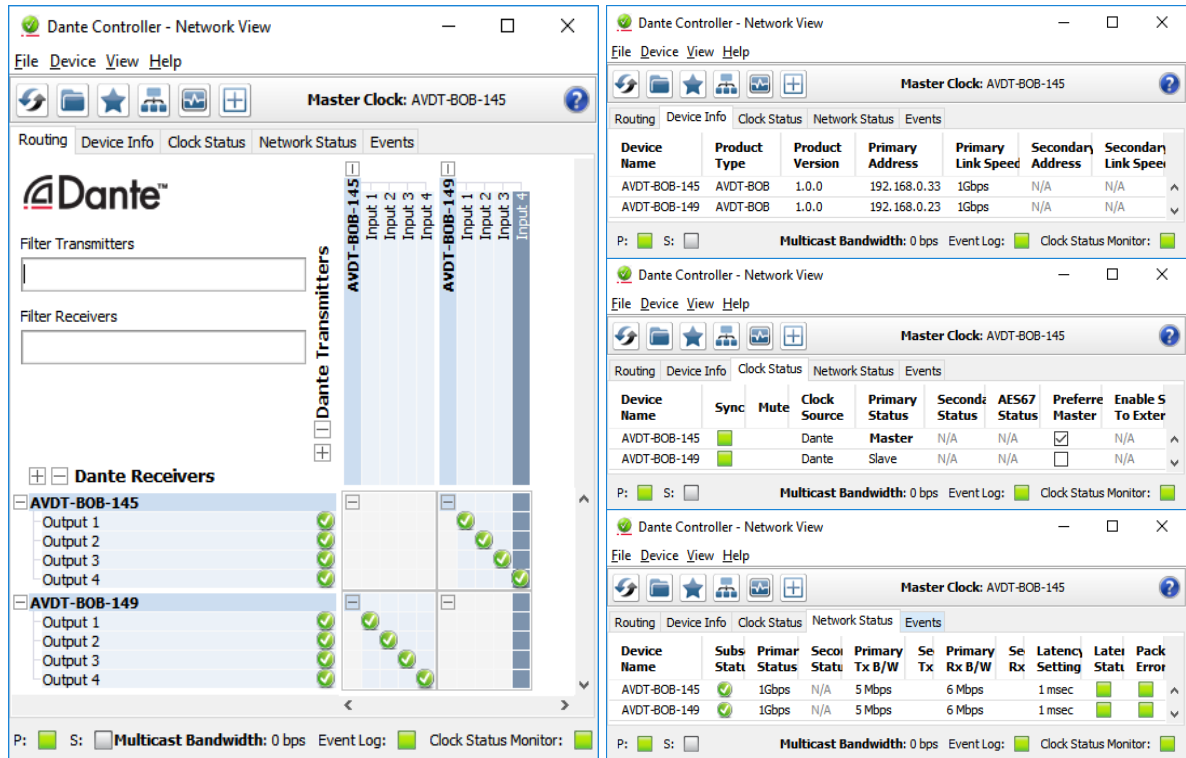
AVDT-BOB has 2x independent IP network addresses and 2 associated names to control “**Dante**” functions and “**User-Interface**”:

1. IP addresses are set automatically by default via a DHCP server or using APIPA addresses (169.254.xxx.xxx/16).
2. The Dante name of an AVDT-BOB may be changed by the Dante Controller. This name is preset at factory at “**AVDT-BOB-#**” where # is its serial number.
 - ⇒ AVDT-BOB serial number 145 has Dante name “**AVDT-BOB-145**” as factory preset.
3. The name of User Interface of an AVDT-BOB is its Dante name plus a fixed extension “-UI”. This name is preset at factory to “AVDT-BOB-#-UI” where # is its serial number.
 - ⇒ AVDT-BOB with serial number 145 has User Interface name “**AVDT-BOB-145-UI**” as factory preset.

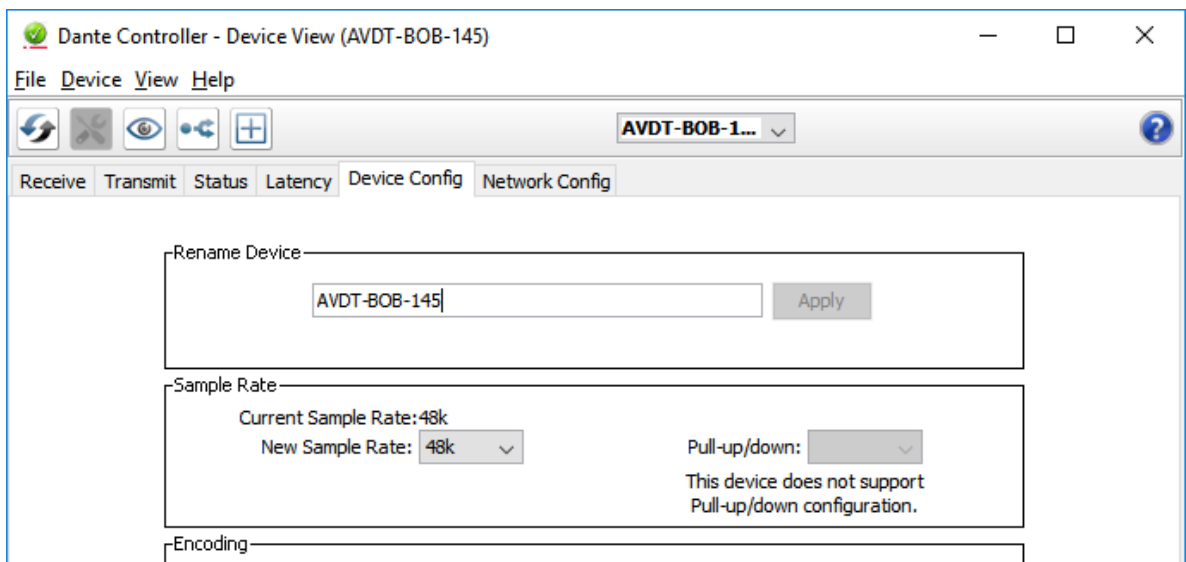
2.3 AVDT-BOB's Dante settings

The AVDT-BOB Dante settings are done via the standard Audinate Dante Controller.

1. Download Dante Controller on the Audinate web site at the following web address <https://www.audinate.com/products/software/dante-controller>
2. Install Dante Controller by double clicking on the download file.
3. Start Dante Controller to detect your AVDT-BOB Dante devices and control settings



4. To change AVDT-BOB name, Double click on the device label
5. Select "**Device Config**" tab in the new windows and modify the "**Rename Device**" field



6. Consult the Audinate Dante Controller User's manual for any other information

2.4 Access to AVDT-BOB's User Interface via AVSMonitor on Windows OS

The AVDT-BOB User Interface can be accessed using AVSMonitor on Windows OS:

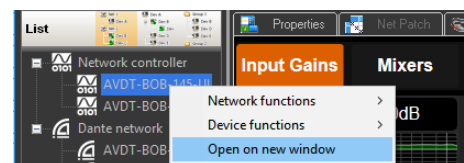
1. Download AuviTran AVS-Monitor free software for windows 7/8/10 available at the following web address http://www.auvitran.com/w4/?page_id=86
2. Install AVS-Monitor by double clicking on the download file.
3. Start AVS-Monitor.
4. The AVDT-BOB connected to the network will automatically appears in 2 lists on left:
 - “Network controller” provides access to the AVDT-BOB control
 - “Dante Network” give “Dante” information on the AVDT-BOB
5. Select the AVDT-BOB in the left list called “Network controller” and” “Control” Tab in the right windows as describe bellow.



6. See chapter 3 for interface description.

Notices:

- If your device doesn't appear, your network configuration is probably not good.
 - 1) Go to the AVS-Control-Panel using “Edit/Control panel” menu or press Ctrl+P
 - 2) Select a valid network adapter in the “Dante / AuviTran Adapter”
 - 3) Press the “Turn On” button if the service is off (red LED).
- The “**Properties Tab**” provides the IP address of the AVDT-BOB user's interface
- You can transfer the control of your device to your standard browser by a right click on AVDT-BOB name in the Network list and selected “**Open on new window**”
- For more information on AVSMonitor read its “User's manual”



2.5 Access to AVDT-BOB's User Interface via a Browser

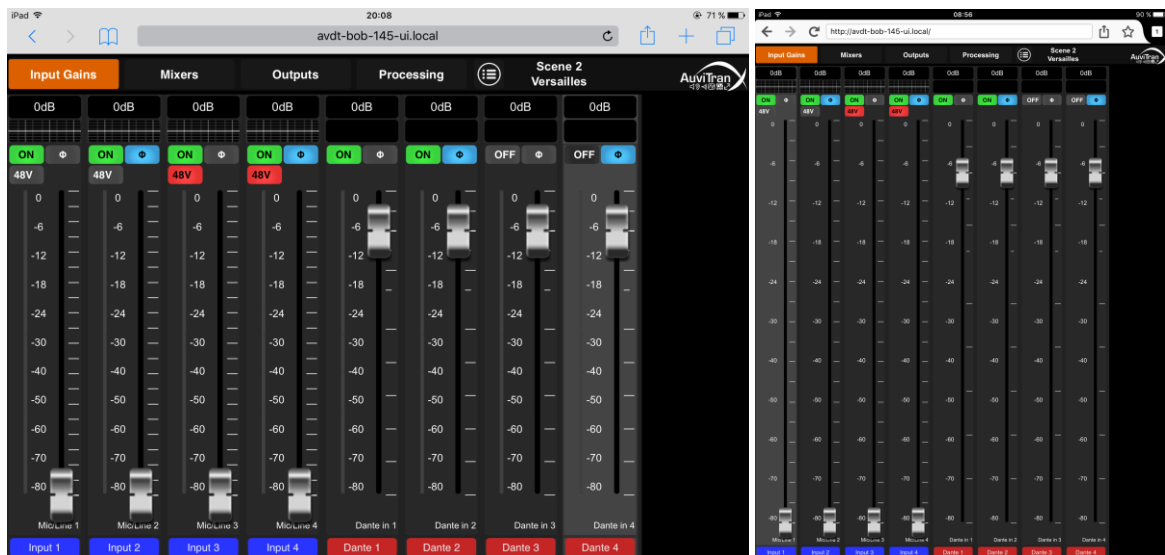
The user interface of an AVDT-BOB can be launched without installation by any standard Web browser compatible with HTML5 and JavaScript standards.

The device hosting the web browser must comply with the following:

- May be any platform PC, Laptop, Tablet, Smartphone working whatever OS (MacOS, iOS, Android, Win, Linux ...) with a minimum resolution of 640x480 or 480x640
- Must be connected to the same IP network than the AVDT-BOB to control it
- It can use WIFI or Ethernet link

To launch the user interface of an AVDT-BOB using a browser

1. Start a Web Browser (i.e. Safari, Firefox, Chrome, Opera...)
2. Write the **User Interface Name** (see §2.2) terminated by **“.local”** in Web Browser address field/bar to ask it accessing to the IP server with a local name in your local area network. The to resolve mDNS local name)
⇒ **“AVDT-BOB-145-UI.local”** for instance to connect to AVDT-BOB serial number 145 if the Dante name was not changed
3. The Browser will display AuviTran's Logo during the loading of the user's interface.
4. After loading you will see the interface of the AVDT-BOB User interface as Follows (iPad/Safari and iPad/Firefox).



5. See chapter 3 for a description of the AVDT-BOB User's interface.

Notices:

- IE and Edge on Windows OS does not manage the **“.local”** and mDNS name. Use the IP address of the User's Interface for this web Browser or follow instructions given in §2.4 notices to run web browser directly from AVSMonitor.
- If you have problem with the UI name, remember you can change it using Dante controller.

3 AVDT-BOB architecture and processing

3.1 AVDT-BOB inputs and outputs

The AVDT-BOB-AE8IO and AVDT-BOB-AS8IO have 4 analog balanced Mic/Line inputs and 4 balanced analog outputs or Euroblock/SUBD connectors. They can receive and send 4 digital signal from/to Dante from their Main or Aux gigabits Ethernet ports.

The AVDT-BOB-AE4IO has {2} analog balanced Mic/Line inputs and {2} balanced analog outputs on Euroblock connectors. It can receive and send 4 digital signal from/to Dante from its Main or Aux gigabits Ethernet ports.

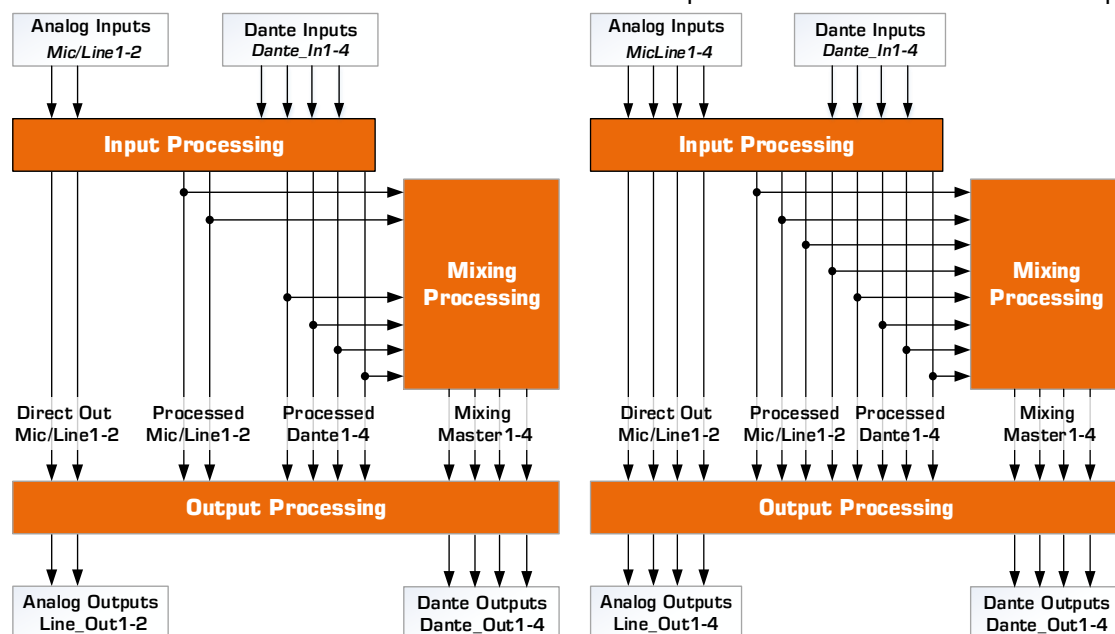
These input / output signals are named as follows in AVDT-BOB:

- Mic/Line1-4{2} for the signals coming from Mic/Line inputs
- Dante In1-4 for the signals coming from Dante network
- Line Out1-4{2} for the signals sending to Line outputs
- Dante Out1-4 for the signals sending to Dante network

3.2 AVDT-BOB architecture

The AVDT-BOB architecture is divided in 3 main interconnected blocks:

- The Input block manages Mic/Line1-4{2} preamps and Dante in1-4. It sends DirectOut MicLine1-4 to Output Processing Block. It computes processed Mic/Line1-4{2} and 4 processed Dante inputs for the Mixing and Output Processing Blocks.
- The Mixing block receives the processed Mic/Line1-4{2} and Dante1-4. It mixes them on 4 independent mixers to provide mixing Master1-4 to Output Processing Block.
- The Output block enables selecting the source Out1-4{2} and Dante Out1-4 from DirectOut Mic/Line1-4{2}, Processed Mic/line1-4{2}, Processed Dante1-4 and the Master1-4. Once the source selection done it processes Line and Dante outputs.



AVDT-BOB-AE4IO's schematic diagram AVDT-BOB-AE8IO/AS8IO's schematic diagram

3.3 Input processing block

The Input Processing controls the analog mic preamps, the +48V phantom power of Mic/Line inputs and the digital gains for Dante inputs, manages the digital signal processing (Phase inversion, Mute, Equalization, Limiter/Compressor/Gate) for the Mic/Line or Dante inputs.

There are 4 (EQ + Dyn) processing* blocks available for the Input Processing. Each one is individually connected to its respective Mic/Line or Dante input.

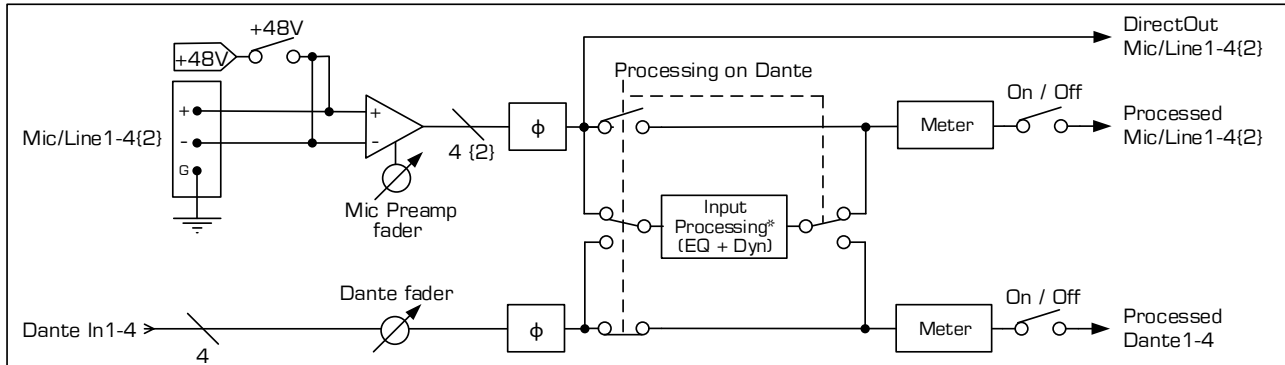


Diagram of the AVDT-BOB's Input Processing block

3.4 Mixing Processing block

The Mixing block has 4 independent mixers that mix the processed Mic/Line1-4{2} and the processed Dante1-4 inputs provided by the Input Processing Block. Each mix has Master Mixer faders to adjust final mix. The Mixing block provides Mixing Master1-4 to Output Processing Block.

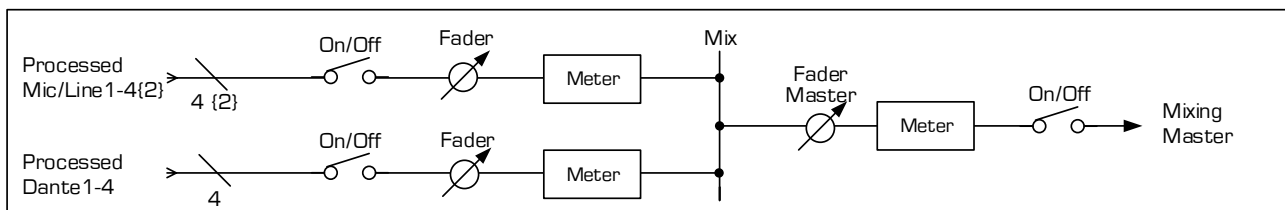


Diagram of an AVDT-BOB's Mixer

3.5 Output processing block

The Output block has 2 source selectors for the Line Output1-4 and Dante Out1-4 outputs.

There are 4 (EQ + DYN) processing* blocks attached to Line Output1-4.

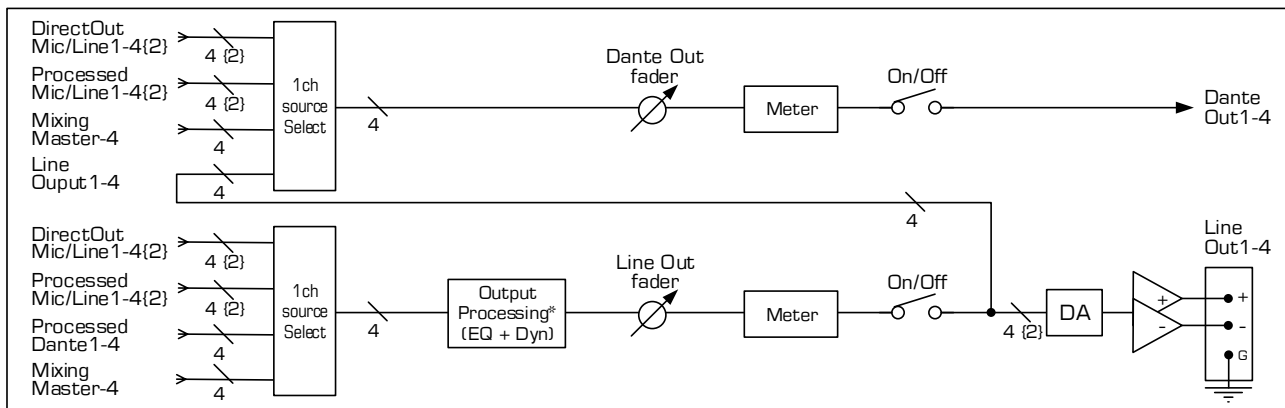


Diagram of the AVDT-BOB's Output Processing block

4 AVDT-BOB User's Interface

4.1 Bar menu for interface selection

The GUI of the AVDT-BOB is divided in 5 interfaces. A generic bar menu displayed on the top of screen enables the selection of one of these interfaces by clicking/pressing the interface name. The interface in used is colored in Orange on menu:



- **Input Gains** send to the Input Processing interface. It is the interface at startup.
- **Mixers** gives access to the Mixing Processing interface.
- **Outputs** gives access to the Output Processing interface.
- **Processing** gives access to EQ/DYN Processing interface for inputs and outputs.
- **Parameter icon** gives access to software settings, information and Load/Save sub menus.

4.2 Input Gains' interface

The Input Gains interface controls the Input Processing (see diagram in §3.3). It shows the following screen just below of the generic bar menu:

(1) Control Slices Mic/Line

(2) Control Slices for Dante in

(3) Value of Gains (preamp or digital)

(4) Miniatures + positions of EQ/DYN

(5) On/Off and Phase inversion buttons

(6) +48V Phantom power buttons (Mic)

Fadder at middle of slice with its scale to its right. A double click on a fadder reset the gain to 0db

Meter level at left of slice with its scale to its right

A long press or double click on the colored label button provides the ability to customize this button (i.e name, color gain) or to copy/paste the entire slice for/from another slice.

Mic/Line 1 (Input 1)

Rename

Color

Gain

Copy

Paste

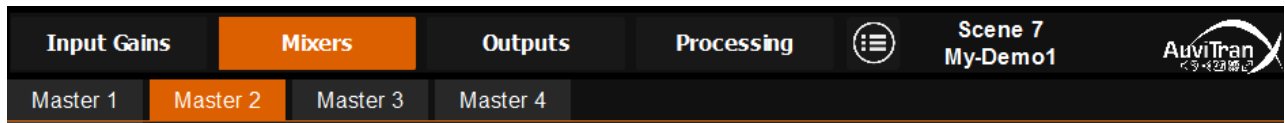
(7) Reminder of the input sources

(8) Names and colors of treated inputs

1. On left, 4{2} slices of faders and buttons control the Mic/Line preamps and processing
2. On right, 4 slices of faders and buttons manage the Dante processing
3. On the top of a slice, the value of the gain (preamp or digital) reflects the fader position
4. On 2nd line, miniatures of EQ or DYN indicates the processing position (Mic/Dante)
5. On 3rd line, On/Off + Phi buttons control the activation or phase inversion
6. On 4th line, 48V buttons control the phantom power of the input Mic/Line.
7. On bottom, a reminder of the source of each slice is displayed
8. On last line, colored label buttons enable the user to customized the input labels

4.2.1 Mixers' interface

The User interface of the Mixing Processing gives access to 4 sub tab called Master1-4, each one controls one of the 4 independent mixers (see diagram in §3.4). **Mixer** are individually selected by pressing/clicking on one of **Master1-4** button.



When selected, **Master1-4** mixer is displayed in orange just below generic bar menu:

(1) Mix fadder of processed Input1-4{1-2} and processed Dante1-4

(2) } (3) Selected mixer
 } (4) Mixing gain values on input sources
 } (5) On/Off buttons of input sources

Fadder with its scale on its right.
 A double click on a fadder reset the gain to 0db

Meter level at left of slice with its scale to its right

A long press or double click on the colored label button provides the ability to customize this button (i.e name, color gain) or to copy/paste the entire slice for/from

(6) Reminder of the source/destination

(7) Names and colors of input/output

1. On left, 8{6} individual slices of faders and buttons control of the processed inputs from the input processing
2. On right, the slice "Master mix" manages the output level and the on/off of the mix
3. On the top, the Master 1-4 tabs displays and allow selection of the Mixer under control
4. On 2nd line top of slice, the value of the gain reflects the mix fader position for the slice
5. On 3rd line, On/Off buttons control the activation of the slice
6. On bottom, a reminder of the source of each slice is displayed
7. On last line, colored label buttons enable the user to customized the input slice labels

Notices

- Faders control individually the input mixing gains
- Each input of a mixer can be enabled (On) or muted (Off)
- Each mixer has a Master fader controlling the Master mixer output level
- Each master mixer output can be enabled (On) or mute (Off)
- Digital fader manages gain in the range -Inf then -80dB to +12dB per step of 0.1dB
- A double click or a long press on a Gain in the top of the slice enables to set it directly using a keyboard

4.2.2 The Output interface

The Output interface controls the Output Processing block (see diagram in §3.5).



It shows the following screen just below of the generic bar menu:

(1) Control Slices for analogue out

(2) Control Slices for Dante out

(3) Selected input sources of the slices

(4) Values of digital gains / fader position

(5) Miniatures + positions of EQ or DYN

(6) On/Off (inverse mute) buttons

(7) Reminder of the output number/type

(8) User Names / colors of the outputs

A long press or double click on the 1st line colored label button provides the ability to select the source of the output.

Fadder at middle of slice with its scale to its right.

A double click on a fadder reset the gain to 0dB

Meter level at left of slice with its scale to its right

A long press or double click on the colored label button provides the ability to customize this button (i.e name, color gain) or to copy/paste the entire slice for/from another slice.

1. On left, 4{2} slices of faders and buttons control the analogue output processing
2. On right, 4 slices of faders and buttons manage the Dante output processing
3. The top of the slices shows the sources of the slices. The source can be modified individually by a right-click and choose on the menu. The sources for analogue and Dante outputs differ as described below:



- ✓ One of the 4{2} Mic/Line DirectOut
- ✓ One of the 4{2} processed Mic/line inputs
- ✓ One of the 4 processed Dante inputs
- ✓ One of the 4 Master mixers.

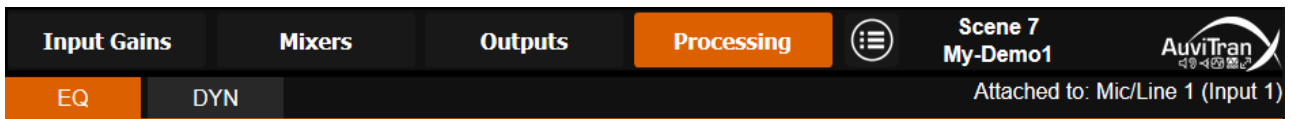


- ✓ One of the 4{2} Mic/Line DirectOut
- ✓ One of the 4{2} processed Mic/line inputs
- ✓ One of the 4 Master mixers
- ✓ One of the 4 processed analogue output

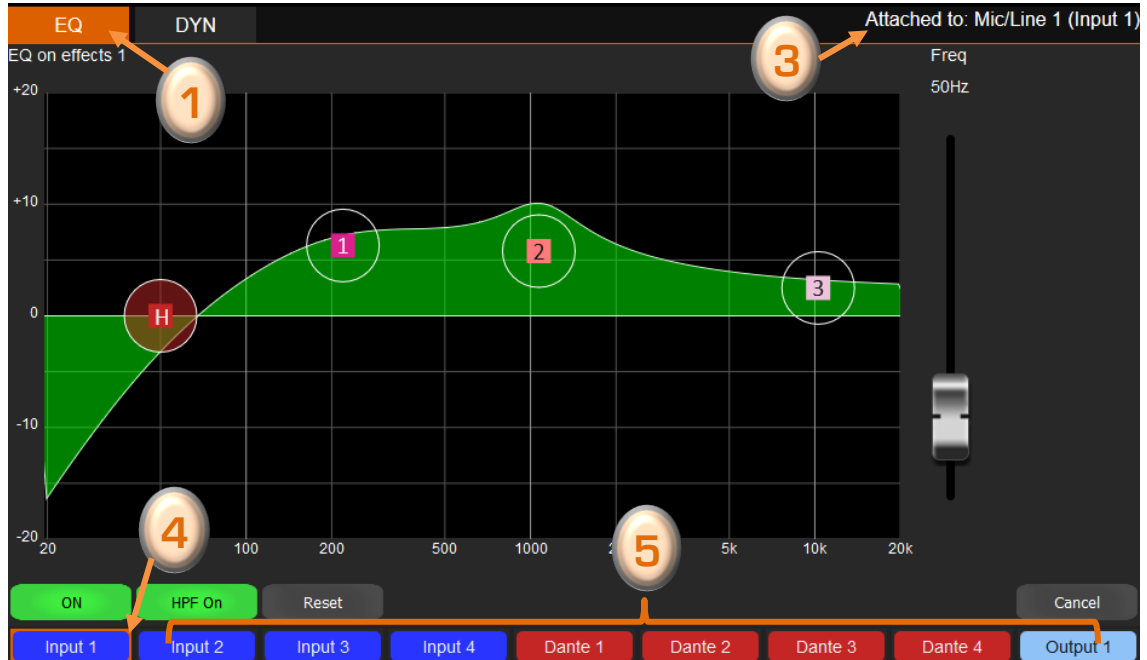
4. On 2nd line, the value of the digital gain reflects the fader position
5. On 3rd line, miniatures of EQ or DYN show the processing done on analogue outputs
6. On 4th line, On/Off buttons control the activation or the mute of the output slices
7. On bottom, a reminder of the physical types and names of each slice are displayed
8. On last line, colored label buttons display user's name/color of the slices. They can be individually customized by a long click or a double click on a button

4.2.3 Processing interface

The processing menu provides access and control via 2 tabs EQ/DYN to the equalization and dynamics assigned to input and output blocks.



1. EQ tab enables to select the equalization windows



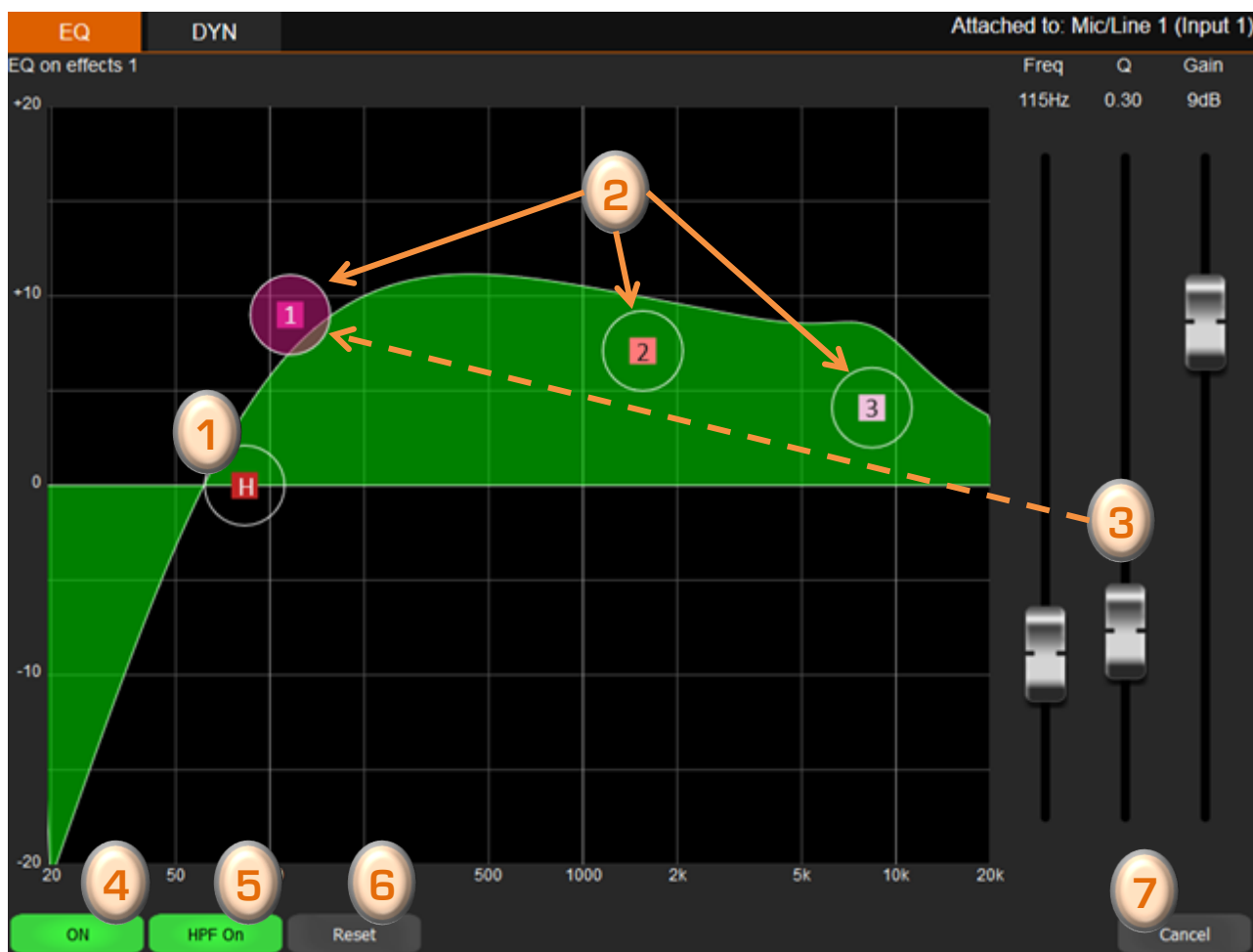
2. DYN tab enables to select the dynamic windows (limiter + compressor)



3. On the top left, below the Auvitrans logo, a reminder for the input EQ/DYN only indicates to which physical input/User's name the EQ/DYN processing is attached,
4. The slice on which the EQ/DYN processing will be done is displayed highlight in orange.
5. On the bottom, 12{10} colored user's names buttons enable to select the slice on which the EQ/DYN processing will be modified. This button line can be dragged left/right to access shadowed button left/right when the screen is not large enough.

4.2.3.1 EQ Processing view

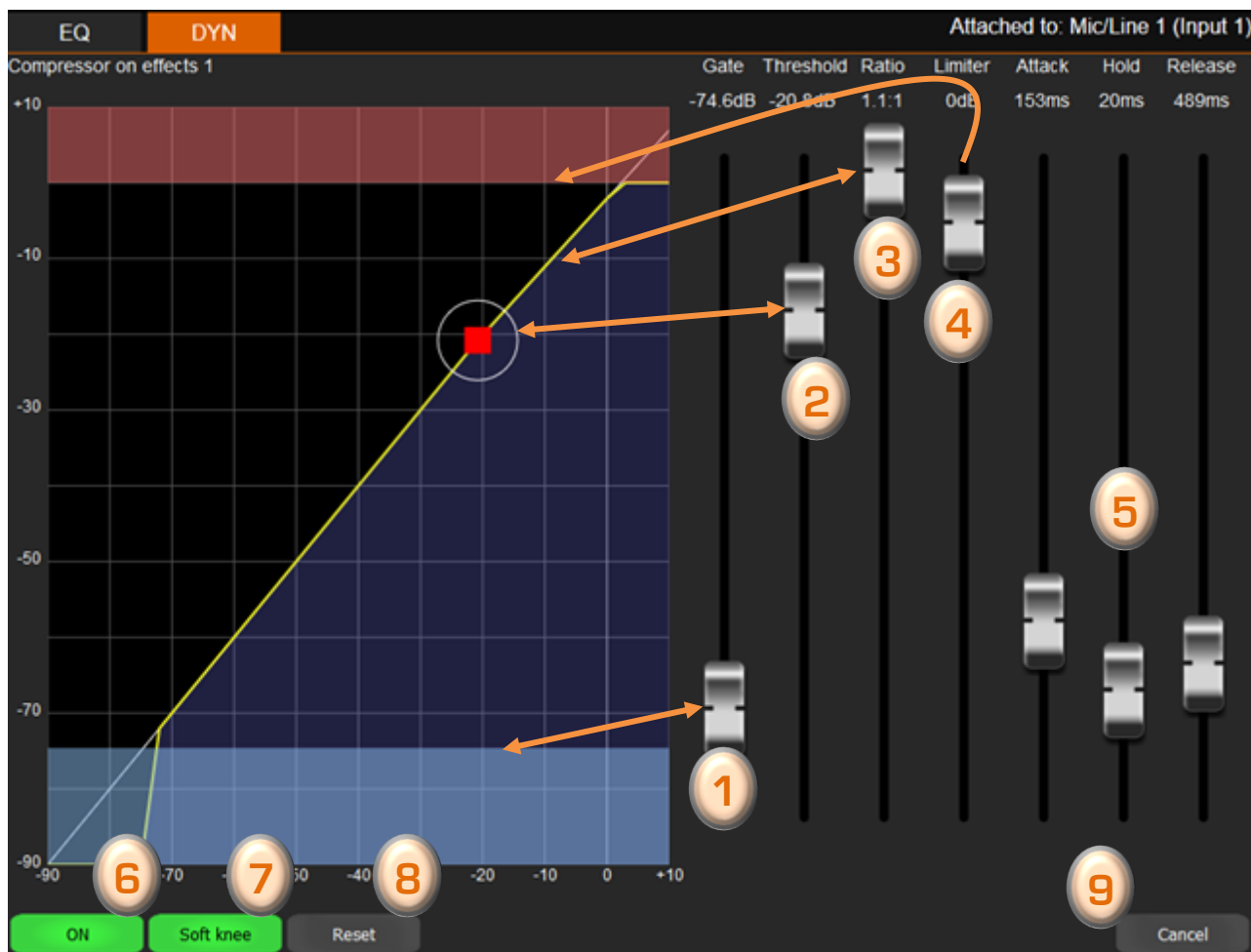
The EQ processing interface manages a high pass filter and 3 band Equalization



1. **(H)** button position manages the frequency parameter of the High pass filter
2. **(1)**, **(2)**, **(3)** button position control the associated EQ band frequency and gain parameters and pinch under them control/set their width Q parameter
3. Right faders enable to modify smoothly the parameters of highlight HPF/EQ button
4. **[On/Off]** button activates/bypass the EQ processing without modifying the parameters
5. **[HPF On/Off]** button activate/disable the high pass filter
6. **[Reset]** button reset all EQ processing parameters
7. **[Cancel]** button cancel all modifications and return to previous parameters

4.2.3.2 Limiter/Compressor view

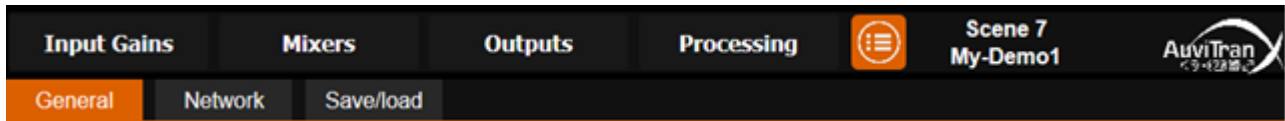
The processing/EQ interface manages the limiter compressor parameters



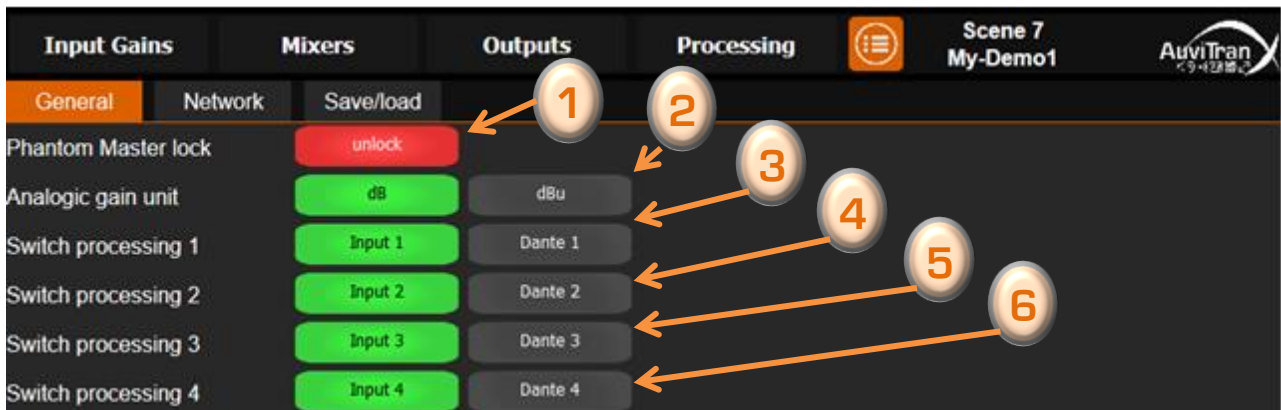
1. The first fader controls the Gate level of the processing (mutes the sound when the signal is too weak)
2. The 2nd fader or the [Red-Square] button position controls the compression threshold
3. The 3rd fader controls compression ratio
4. The 4th fader controls the Limiter level
5. The 3 right faders enable to set the Attack/Hold/Release parameters
 - ✓ Attack: attack time in ms
 - ✓ Hold: sets the time the gate will remain open after the signal has fallen below the threshold.
 - ✓ Release: return time in ms
6. [On/Off] button activates/bypass the Limiter/compressor processing without modifying the parameters
7. [Soft knee] button activates/disables the soft knee of the compression
8. [Reset] button reset all limiter/compressor processing parameters
9. [Cancel] button cancel all modifications and return to previous parameters

4.2.4 Parameter interface

The  parameter icon give access to software settings, information and Load/Save sub menus via 3 parameters tabs [General], [Network], [Save/Load]



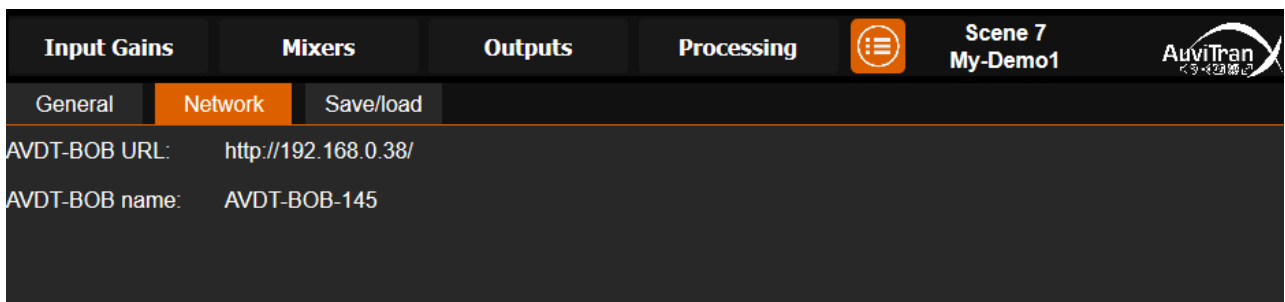
4.2.4.1 General software setting menu



1. Phantom Master Lock button locks/unlocks the +48V button of Mic/Line phantom power
2. Analogic gain unit defines the display unit of mic/Line preamp gains (dB or dBu).
3. Switch processing 1 defines the link of processing 1 to Mic/Line1 or to Dante in 1
4. Switch processing 2 defines the link of processing 2 to Mic/Line2 or to Dante in 2
5. Switch processing 3 defines the link of processing 3 to Mic/Line3 or to Dante in 3
6. Switch processing 4 defines the link of processing 4 to Mic/Line4 or to Dante in 4

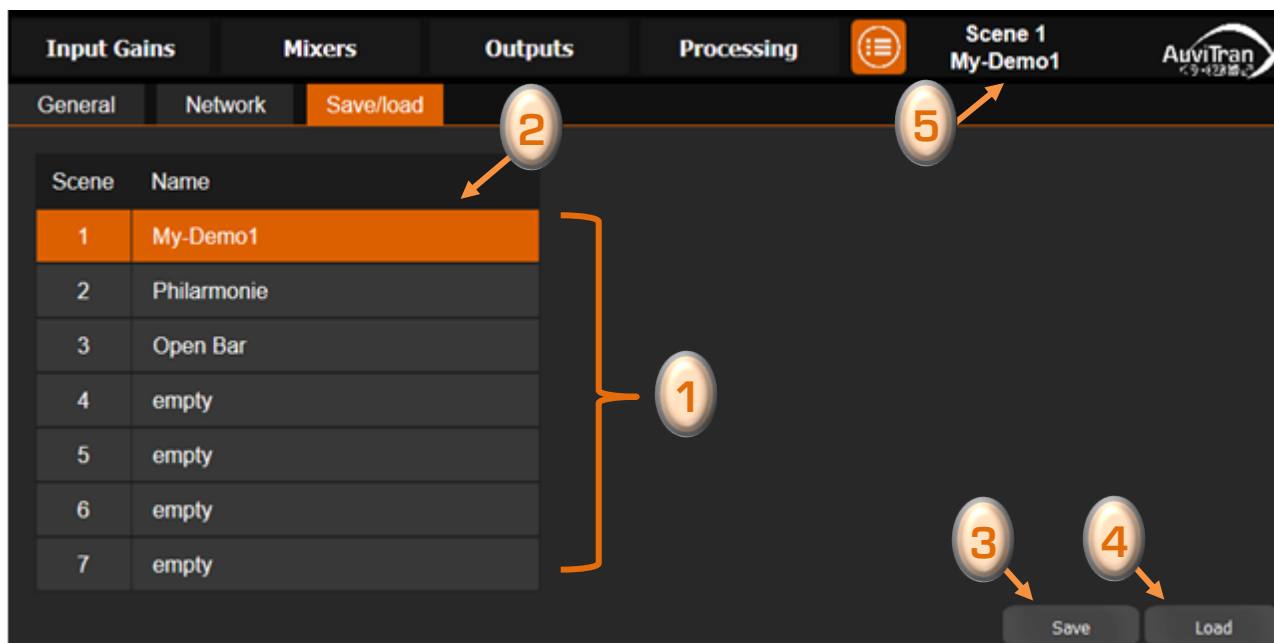
4.2.4.2 Network parameters menu

This tab displays information on your AVDT-BOB.



4.2.4.3 Save/Load parameter menu

The Save/Load interface allows you to save or to load recording scenes.



1. [**Scene slots**] are available to Save up to 7 scenes. A name associated to the scene will be displayed in the slot after saving. An empty slot is by default named "empty".
2. [**Scene slot**] selection is done just by clicking on it. The selected scene Slot is highlight in orange
3. The [**Save**] bottom enables to set a name and to save the current settings for the selected highlight [**Scene slot**]
4. The [**Load**] bottom enables to load in the AVDT-BOB the saved settings for the selected highlight [**Scene slot**]
5. On the top left just after the parameter icon, a reminder of the last saved/load scene is displayed