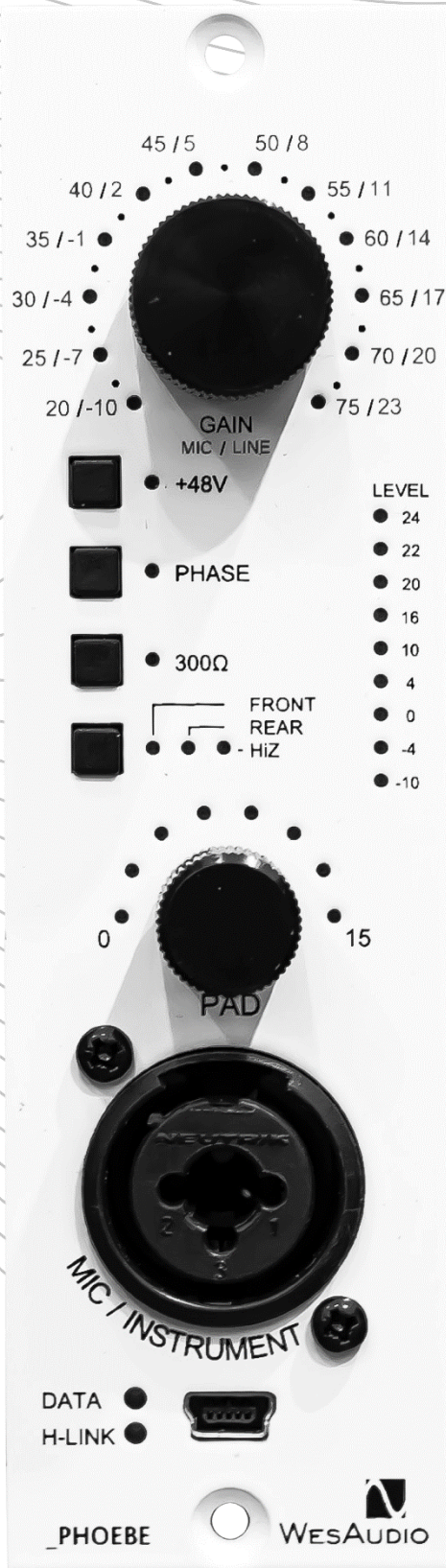


Analog Sound Digital Recall



Thank You for the purchase of _PHOEBE

_PHOEBE

Class A analog microphone preamplifier with digital control over
VST2/VST3/AAX/AU plugins.

With kind regards

Radoslaw Wesolowski and Michal Weglicki

_PHOEBE is next product in new generation 500 series line created by WesAudio.

The most noble character of microphone preamplifiers now fully integrated with digital workflow. Dual amp vintage design with most demanded modern features! We are proud to present _PHOEBE – NG500 fully analog, Class A microphone/line/instrument preamplifier with digital recall.

_PHOEBE - fully analog, class A microphone/line/instrument preamplifier with digital recall.



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1. Introduction

_PHOEBE is fully analog unit with digital control - whole audio processing is done ONLY through analog components. Digital side is responsible to configure device accordingly, which allows to implement digital recall and remote control of the unit.

2. Main Features

100% analog microphone/line preamp with +28dBu of headroom.

Class A fully analog - inspired by famous 1073 design based on dual amp topology.

Microphone gain up to 75dB.

Carnhill Transformers (input and output).

Output signal metering on the front panel with clip detection.

Phantom power and phase invert control.

Switchable input impedance (1200/300Ohm).

**All controls/analog settings are fully manageable via the WesAudio GCon DAW
plug-in.**

**IRON PAD - passive output attenuation circuit with 1 dB step
(after the output transformer).**

**Front panel XLR/TRS socket which supports - HiZ instrument input (TS), line input
(XLR), microphone input (XLR).**

**Recallable signal source to be either back XLR Socket, or front panel
XLR/TRS socket.**

500 series and ng500 (e.g. _TITAN) series compatible.

Total Recall and plugin control compatible with most DAWs.

Analog automation in DAW.

Fully digitally controlled and isolated analog circuit,

**Digital recall can be achieved by connecting unit directly through front
panel mini-USB socket, or using it inside _TITAN chassis,**

**Accurate analogue Output signal metering and its precise simulation implemented in the plug-in itself,
Free software and firmware upgrades.**

3. Specification

Frequency response	+/- 0.5dB 20Hz-20kHz; -3dB at 50kHz
Distortion	0.005% at 1kHz at +20dBu output
Line input impedance	5.5k ohm bridging
Microphone input impedance	300/1200 ohm
Noise	unity gain (better than -100dBu) Max gain +75dB (better than -70dBu)
EIN	better than -120dB
Max power consumption	170mA(+16V); 100mA(-16V)
Dimensions	38x133x145mm

4. Module installation and compatibility.

WesAudio _PHOEBE compressor module is designed to be installed into an API™ 500 Series compatible rack or in ng500 rack (e.g., _TITAN) and cannot function stand alone, requiring the power source supplied by the rack system.

Important NOTE:

Unit produces fair amount of heat because of its power consumption, it is highly recommended to leave empty space above and below chassis to allow proper air circulation. Ideally 1U space above, and 1U space below.

After unpacking your _PHOEBE module, please check for any visible damage that may have occurred during transit. If there is any problem, please contact your dealer immediately for an advice on how to proceed.

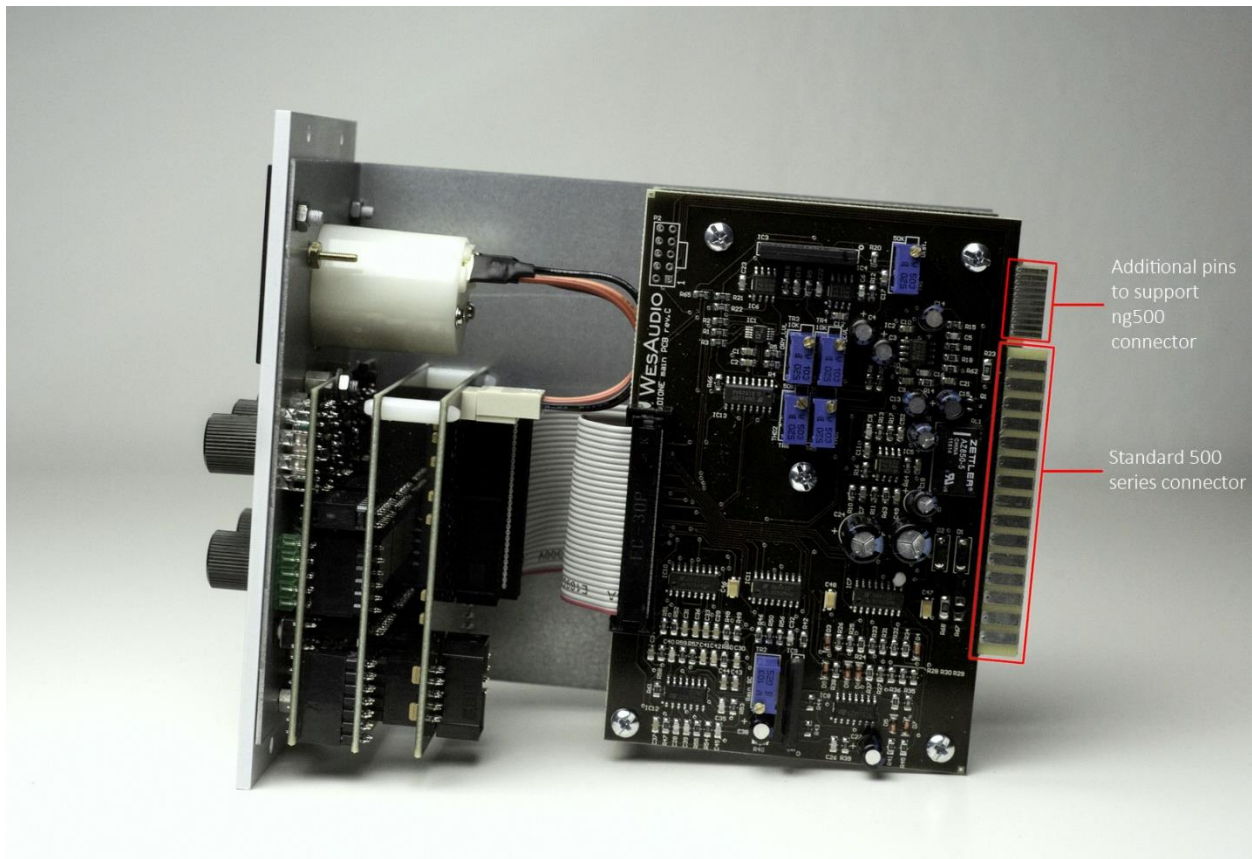
!!!Ensure the rack is completely powered down before attempting installation to prevent damage to the module and yourself!!!

Module installation walkthrough:

Choose the position in the rack to which you will install the module and slide it in so that the edge connector of the module aligns with the matching connector in the rack. A gentle push and the module should slide home into the rack connector. Attach the front panel to the front of the rack with screws supplied by your rack manufacturer. This is important for mechanical rigidity. Do not over tighten these screws to avoid stripping out the threads. Apply power, test that everything is working OK, and most importantly, enjoy!

500 series compatibility note:

Each WesAudio device in ng500 (Next Generation 500 series) product line is equipped with special connector. This connector is an extension to 500 series and allows your device to be managed/recalled through specialized GCon protocol (e.g., _Titan 500 series 10 slots frame).



This extension is compatible with 500 series standardized plug type. However, some manufacturers apply enormous screws to the plug itself, which prevent the device to fit in. Based on official research more than 90% of available 500 series racks will fit just fine. **Currently known exceptions:**

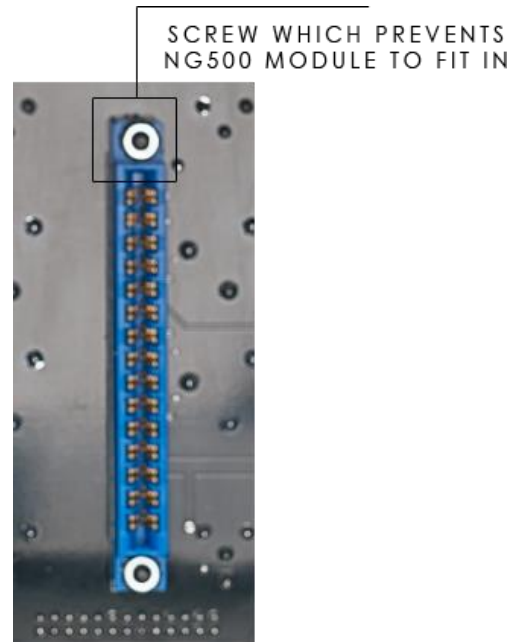
- 1) Rupert Neve Designs 500 series Racks (R6 & R10),
- 2) Aphex 500 series rack,
- 3) Some older BAE racks (not produced anymore).
- 4) Midas L6 – Module won't be able to fit till the very end on slot 3 & 6 – it should work just fine though.
- 5) Midas L10 – Module won't be able to fit till the very end on slot 4 & 8 – it should work just fine though. If you are in possession of any of those 500 series racks, there are two options:

NG500 module won't fit into these racks because of upper screw attached to 500 series connectors. This screw can be removed without any side effects in most of listed racks. With such simple modification your rack is ready to host any NG500 module on this slot.

If you are in possession of any of those 500 series racks, there are following options:

1) **If You are in possession of WesAudio module WITH ng500 connector (regular version):**

- a. RND R6 & R10 – it is quite simple modification to remove those screws, and there is no impact on the chassis – We have created very simple tutorial:
http://wesaudio.com/r6_mod/
- b. For Midas L6 & L10 – WesAudio modules can be placed on slots without the upper screw on the connector.
- c. For BAE & Aphex racks – it was not analyzed how complicated removal of those screws can be, so we would advise to select different chassis, or acquire WesAudio module without ng500 connector (please check below).



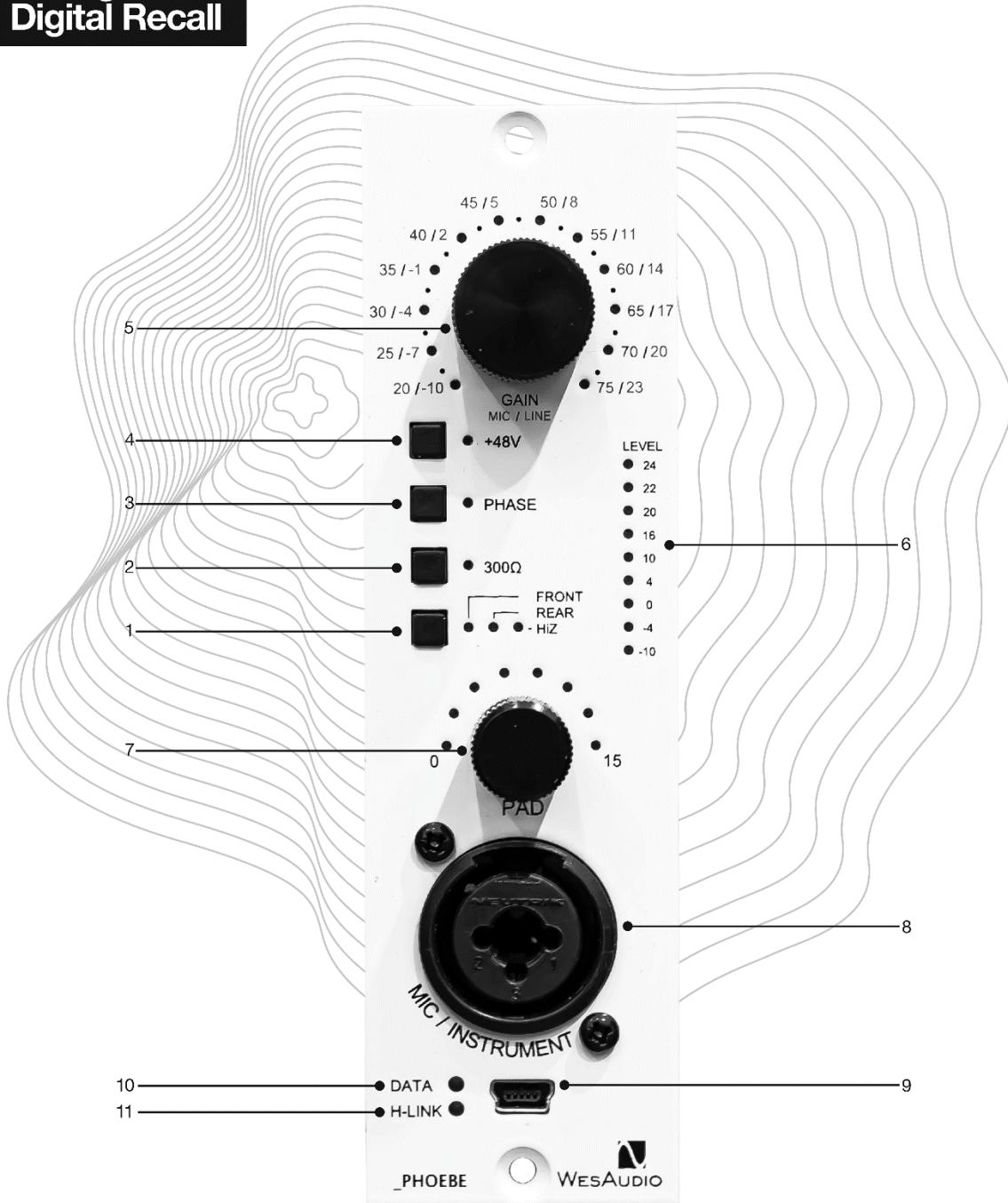
2) **You can order WesAudio module WITHOUT ng500 connector (special order):**

Each device can be ordered without special ng500 series connector which makes it fully 500 series compatible, however:

- a) The device compatibility with _TITAN chassis is broken and can't be undone.
- b) The device can be managed/recalled via direct USB connection without any problems – however please note that each module to be connected separately via USB cable.

5. Front Panel

Analog Sound
Digital Recall



1. **FRONT/REAR SWITCH** – Switch which changes input source between back XLR socket (LINE/MICROPHONE) and front panel XLR/TS socket (LINE/MICROPHONE/INSTRUMENT). HiZ LED is engaged when TRS cable is detected in the socket and FRONT mode is engaged.
2. **300 OHM IMPEDANCE** – this button engages 300-ohm impedance (instead of 1200-ohm default impedance).
3. **PHASE** – this button inverts the phase.
4. **PHANTOM POWER** – engages +48V phantom power. Please note that if LINE mode or HiZ mode is active, this option will be automatically disabled.
5. **GAIN knob** – Sets the gain of the preamplifier / Push the encoder to toggle between LINE and MICROPHONE mode.
6. **VU METER** – VU meter shows output level up to +24dBu, all LEDs turns RED when internal CLIP is detected.
7. **PAD** – passive attenuator up to 15dB in 1dB step.
8. **FRONT PANEL XLR/TRS** – socket is activated when FRONT mode is active, it supports LINE, INSTRUMENT or MICROPHONE signals.
9. **USB** – module control USB port,
10. **DATA LED** – indicates that data is being sent from DAW to device,
11. **H-LINK LED** – indicates state of host-module connection,

6. Gain

Unit operates in different gain ranges for microphone, line, and instrument modes:

- Microphone GAIN: 20dB – 75dB
- LINE GAIN: -10dB – 20dB
- Instrument GAIN: -30dB – +25dB

If 75dB of GAIN isn't enough, by engaging low input impedance mode (300 OHM) signal will also be raised few more dB.

7. VU Metering

Front panel and Plug-in meter shows output value after the PAD. However, CLIP detection alert about internal preamp distortion – that means if the PAD is engaged CLIP can be detected even on lower output values. For example, if INPUT signal is 0dBu, GAIN will be set to 30dB (Microphone mode) and PAD will be set to 15 – that would mean that Preamp will clip starting from +28dBu, clip will be detected, but signal will be lowered by 15 dB, which would show output signal around +13dBu. Such approach gives us most useful information – OUTPUT signal level which will hit next stage (e.g., Audio Interface) and information about internal distortion.

Front LEDs will all become RED when CLIP is detected.

8. Stereo vs Mono

_PHOEBE is single slot mono preamplifier. However due to its digital control it is possible to link to modules into stereo operation – just open Stereo plug-in and connect 2 devices! From now on all controls maybe link in a relative way, so just turn one knob, and second channel will follow!

9. Front vs Rear

_PHOEBE takes advantage over digital control and provides two memory banks:

- FRONT bank A.
- REAR bank B.

That means that activating Rear or Front, different values of parameters will be engaged on the analog circuit – it works in very similar ways like on plug-ins or our other units, with a difference that activating A (Front) will always enable front panel XLR/TRS socket, and B (REAR) will activate rear XLR on the chassis. That makes it possible to permanently connect two different sources, e.g., Microphone to rear panel of the chassis, and DI or Line level to front panel XLR/TRS socket – now by engaging Rear or Front, different sets of parameters will be used for each of those modes, so even without a plug-in we can easily switch between those two sources and settings using one magic button!

Front panel socket supports following signals:

- Microphone (XLR)
- Line (XLR)
- Instrument (TS)

Rear socket supports following signals:

- Microphone (XLR)
- Line (XLR)

10. HiZ – instrument mode

Instrument mode – HiZ – is automatically engaged when two conditions are met:

- Front panel mode is active.
- TS Jack cable is inserted in the front panel TS socket.

11. +48V Phantom power!

+48 Phantom power is well known as convenient power source for condenser microphones. It is part of most of available preamplifiers and _PHOEBE is no different. However due to different settings in internal circuit, there are some rules on how the Phantom power is engaged/disengaged:

- LINE gain mode will always disable Phantom power and turn it unresponsive on both front panel and the plug-in.
- HiZ mode will always disable Phantom power and turn it unresponsive on both front panel and the plug-in.
- Any change between FRONT and REAR settings will respect both above settings. That means if REAR is set to LINE and FRONT to MICROPHONE gain level, changing FRONT to REAR will disable Phantom power automatically.

12. Software

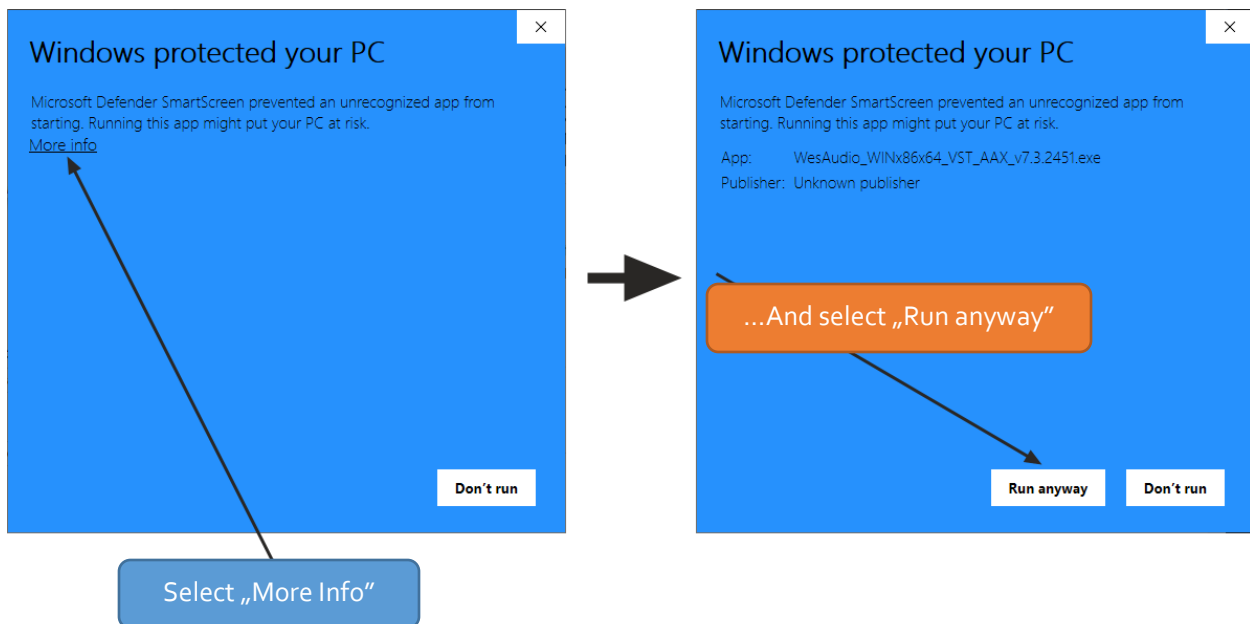
Software package can be downloaded from <http://www.wesaudio.com/download> by anyone who purchased related HW unit. To check currently supported plugin types and platforms, please follow above link.

5.1. Installation

To install Plugin Bundle package, please visit <http://www.wesaudio.com/download> and download recent version of software.

5.1.1. Windows

Start the installer application, if you will encounter any system warnings about this installer, please ignore them (*):



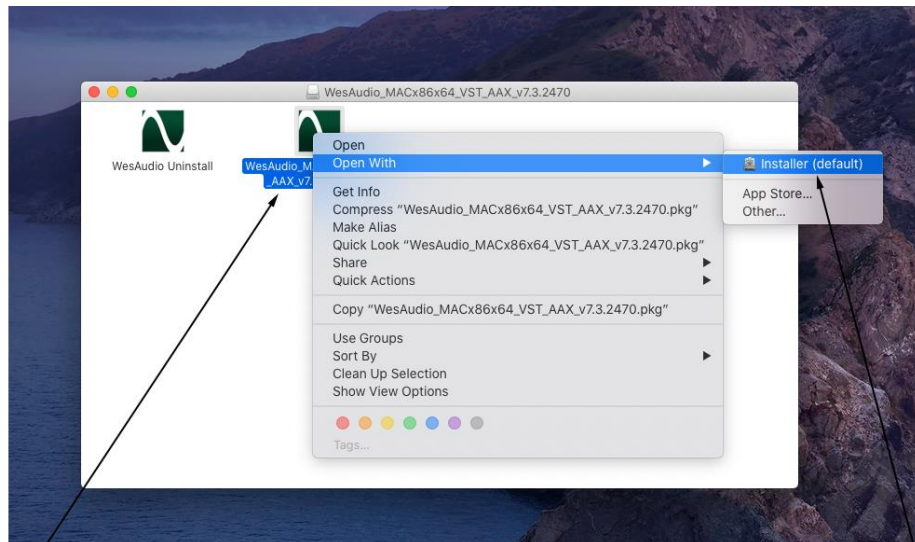
Select any components which you would like to install (**).

- If this is **FIRST** installation, please unplug all WesAudio devices from your workstation.
- When USB driver will be installed, application will inform that all devices should be connected – **please do so.**
- If USB driver installation is triggered, user will be asked to restart computer. We know that this is unwanted activity, but it is necessary step for USB driver to install with success.
- If computer restart is triggered, this Installer will start again during start up. **If for some reason installer won't be started after the restart, please start same installer manually again.**

5.1.2.OSX

Because OSX architecture and USB devices handling is much simpler in concept, the only thing to note is to have all devices **connected** during install procedure.

Start the installer application, if you will encounter any system warnings about this installer, please ignore them * (sometimes it is necessary to open context menu with right mouse button and trigger installation once again):



RIGHT CLICK or CONTROL+ left click

And select Installer(default)

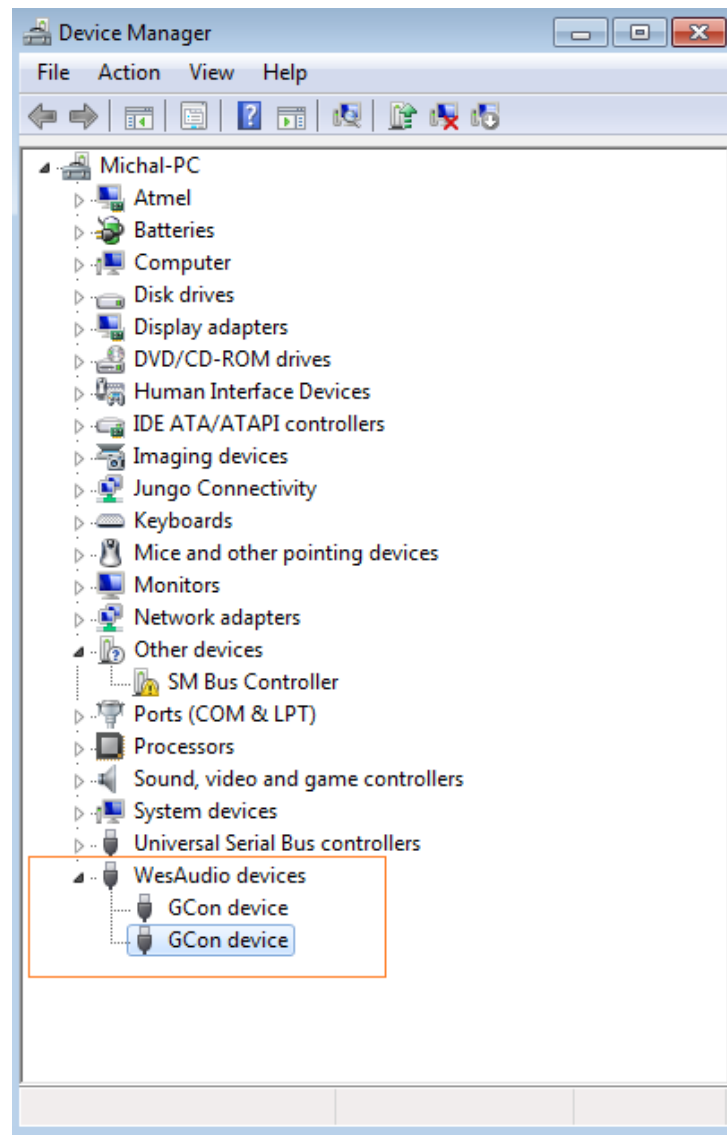
5.1.3. Troubleshooting

If anything would fail during installation procedure, please contact our support at support@wesaudio.com. We will get back to you ASAP.

Below you can find some symptoms and description which will help to investigate the issue:

“Can’t find my device on plugin drop down menu”

Unfortunately, there could be dozens of root causes. On Windows machine it is very important to check if USB device is successfully connected on system level. That can be checked in “Control Panel->System->Device Manager”:



The amount of GCon devices on the list should be equal amount of connected WesAudio units.

If you can't find WesAudio device in the list, or number of devices doesn't match, it is very valuable information and totally changes troubleshooting steps.

In any other cases, it is necessary to contact our support via support@wesaudio.com

** Operating system as windows or OSX are very restrictive about software signing, which doesn't really match with software distributed on small scale. Please ignore any warnings, we guarantee that software is checked and doesn't contain any viruses or unwanted malware objects.*

*** Please note that for **WINDOWS** it is necessary to install USB driver which is critical to communicate with HW units. It is required step only during first installation, and this option will be automatically disabled during any software upgrades.*

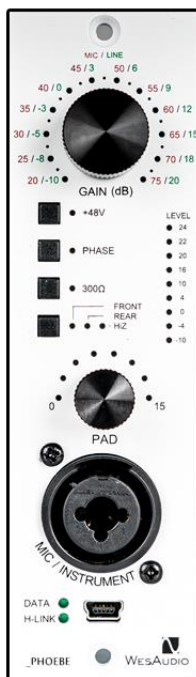
5.2. Plugin

_PHOEBE is a fully analog device, which was designed to integrate with its digital counterpart – a software plug-in available in following formats: VST2/VST3/AU/AAX or standalone application.

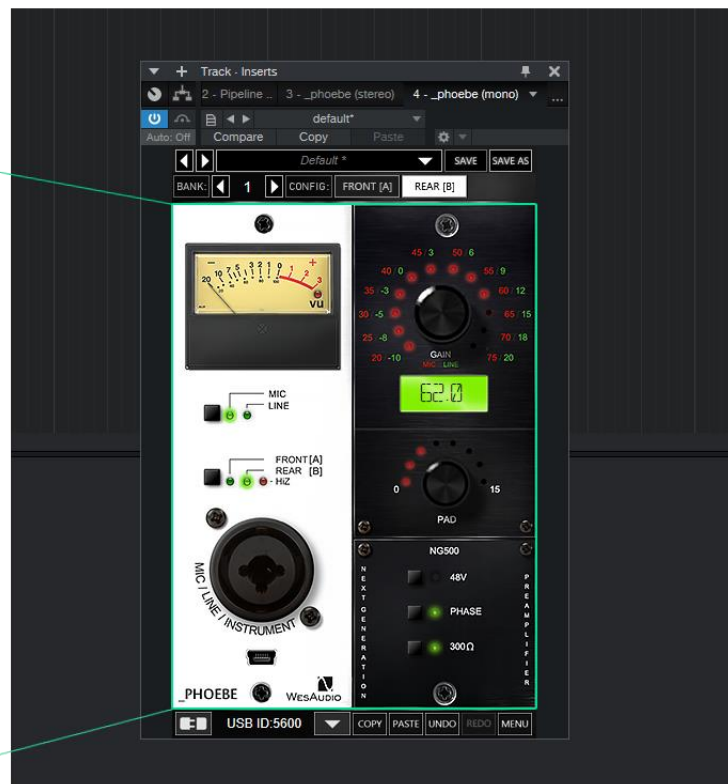
5.2.1. How does it work?

When connection of the DAW plug-in and the Hardware unit is established, both units should present the same state of parameters. That means that any change on the hardware unit's front panel, will be presented on the plug-in, and any change on the DAW plug-in will be presented on the hardware unit. Each change of the parameters will also apply changes to unit's analog circuit, so you can have the best of both worlds!

HARDWARE



DAW PLUG-IN



5.3. How to connect a unit to a Plugin-in?

In practice there could be plenty of GCon devices connected to Your PC/MAC, that is why it is mandatory to select proper ID from the drop-down list to initiate connection of the plug-in with the hardware unit. To do so, please hit small Triangle BUTTON on the left bottom section of the plug-in:



5.4. DAW Plug-ins

Below chapters will go through specific plug-in controls. The only difference worth highlighting is the plug-in meter, which has different scale and look compared to the front panel meter. However, as for the analog LED meter, maximum point of the plug-in meter marked as “3” will correspond to +24dBu of output level and small red LED on that meter will illustrate a CLIP detection.

As most of the controls are mirror image of the hardware unit, this chapter will describe only specific plug-in controls, for a reference.

Please note that stereo plug-in connects to two hardware devices, thus all the connection related controls (toggle, selection etc.) are available for each channel separately.





- 1) **Config bank:** Config bank feature – It allows to recall sets of independent configs (FRONT[A]/REAR[B]) for easy comparison across few settings. This parameter can be automated, which allows to recall different snapshots of parameters across different songs, or different sections of one song.
- 2) **Preset menu:** Preset menu control – in this menu presets can be recalled or saved.
- 3) **Config (Front[A]/Rear[B]):** This control changes:
 - a. **Source of the signal** – to be either front panel XLR/TRS socket or rear XLR socket.
 - b. **Config: sets of parameters** – each config (Rear and Front) works on two independent memory settings (similar to plug-in A/B) so it is possible to keep separate settings for each config independently.
- 4) **Toggle connection button:** Button toggles connection status ON/OFF. Please note that button works only if ID has been previously selected using “Select connection button”.
- 5) **Connection details:** Additional connection information:
 - a. **USB** – module has been connected through direct USB connection in front panel.
 - b. **S#X** – Slot number which is functionality available in _Titan frame and means that internal connection protocol between module and Frame is engaged.
 - c. **Connection ID:** Unique Connection ID of connected HW unit.

- 6) **Select connection button:** This button shows all connected devices, if “drop-down” list with element IDs is not visible, that means that no devices has been detected which support GCon protocol.

NOTE: This fields also shows connection status:

- a. **ON – Font WHITE/Style: NORMAL:** Connection is established.
 - b. **OFF – FONT GRAY/Style: NORMAL:** Connection is NOT established.
 - c. **Connecting FONT GRAY/Style: ITALIC –** Connection process is ongoing. If “Connecting” state is visible for longer period (more than 5 seconds), and plugin has no control over the unit, that would mean:
 - i. HW unit is no longer connected to your Workstation.
 - ii. HW unit was disconnected or detached by operating system for some reason.
 - iii. Any other reason which should be consulted with support@wesaudio.com.
 - d.
- 7) **Copy/Paste config (Front[A]/Rear[B]):** Button copies currently active config (fast preset) and store it to internal plug-in memory, this preset can be stored, by selecting another fast preset and hit “Paste”.
- 8) **UNDO/REDO:**
- a. **Undo:** Undo last parameter change (up to 40).
 - b. **Redo:** Redo last parameter change (up to 40).
- 9) **Menu:** Additional options available like “Reset parameters to default”.

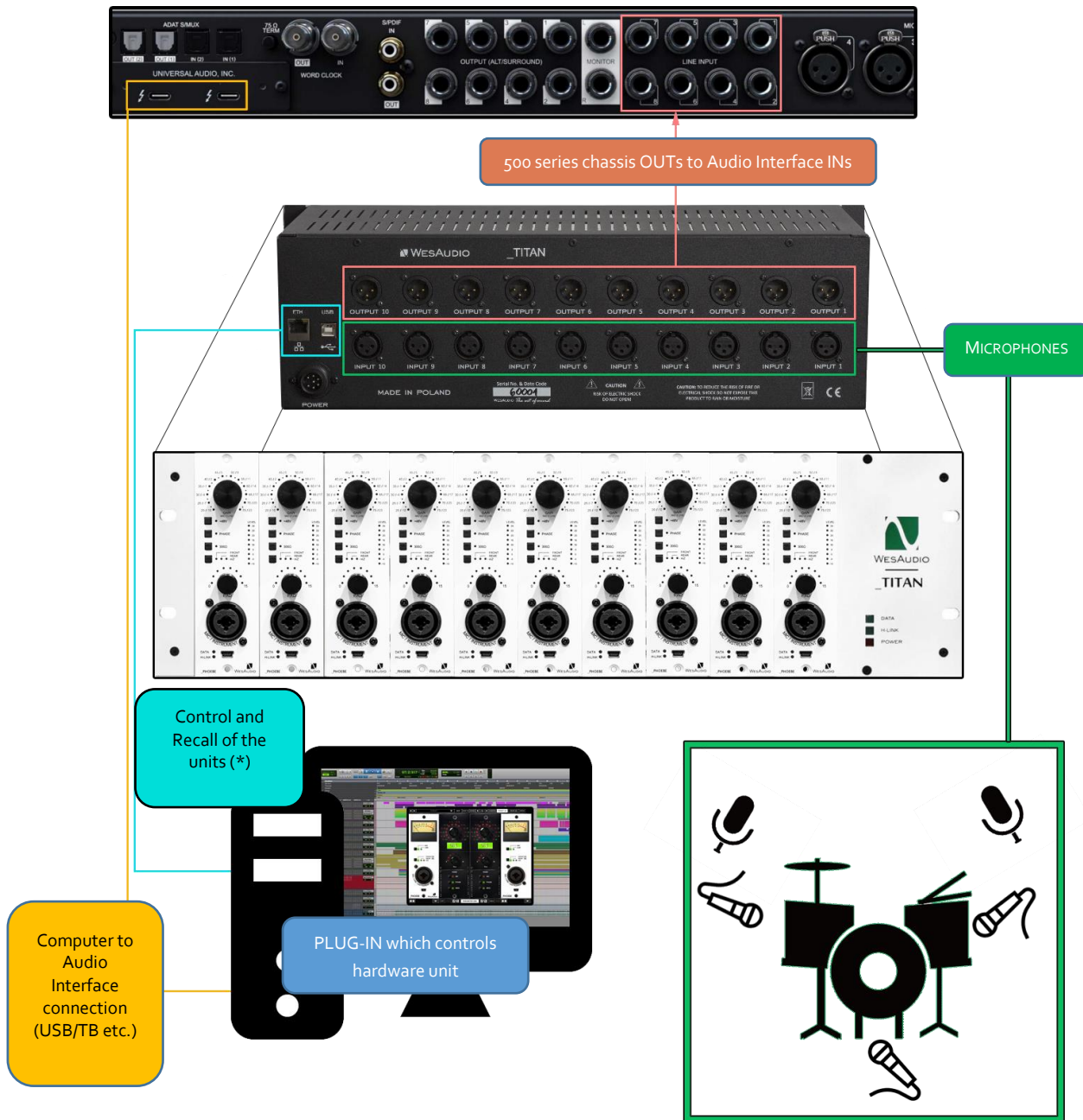
6. Hookup diagrams

Below chapter shows possible hookup of the WesAudio devices with other units. Please note that a lot of those scenarios show two sources connected to _PHOEBE at the same time. This is because this source of signal is fully recallable, so we can keep those sources connected all the time, and just recall settings by loading different DAW sessions. As You can see below, there are a lot of examples where:

- 1) REAR [B] configuration is setup to easily integrate DAW HW insert with LINE mode of each _PHOEBE.
- 2) FRONT [A] configuration processes microphone signals to be easily recorded in DAW.

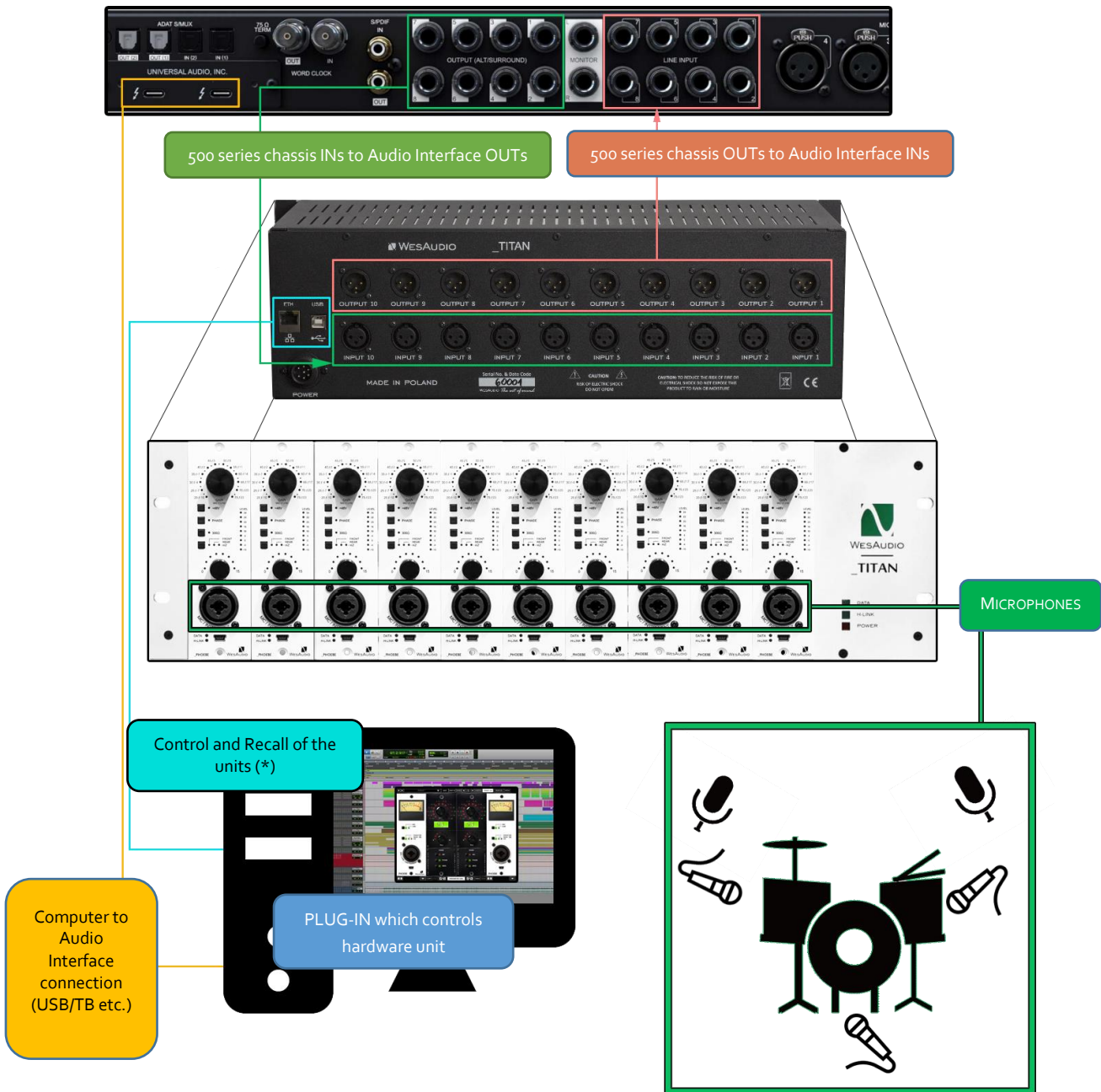
In this scenario plug-in will “remember” which of those settings were used in the DAW session. Even if plug-in won't be used, please remember that REAR and FRONT settings correspond to two different and independent memory snapshots, which makes super easy to switch the scenario with a magic of a simple button!

6.1. Hookup diagram – _PHOEBE in _TITAN: Recording



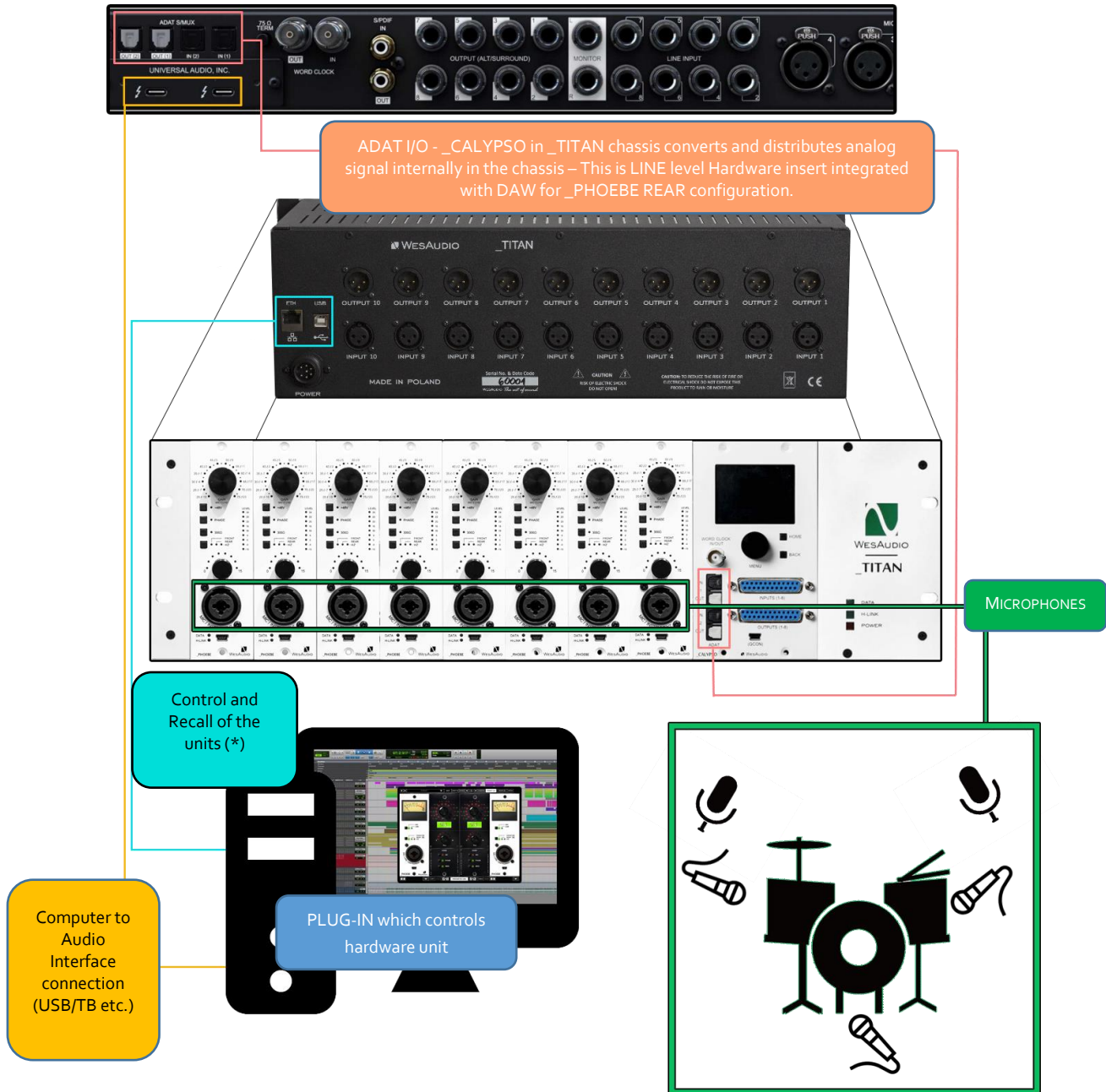
(*) Please note that _TITAN Ethernet connection doesn't require direct connection with the PC/MAC – You can also plug in the _TITAN directly to the router and use your local network to access and control all units inside _TITAN.

6.2. Hookup diagram – _PHOEBE in _TITAN: Recording & Mixing



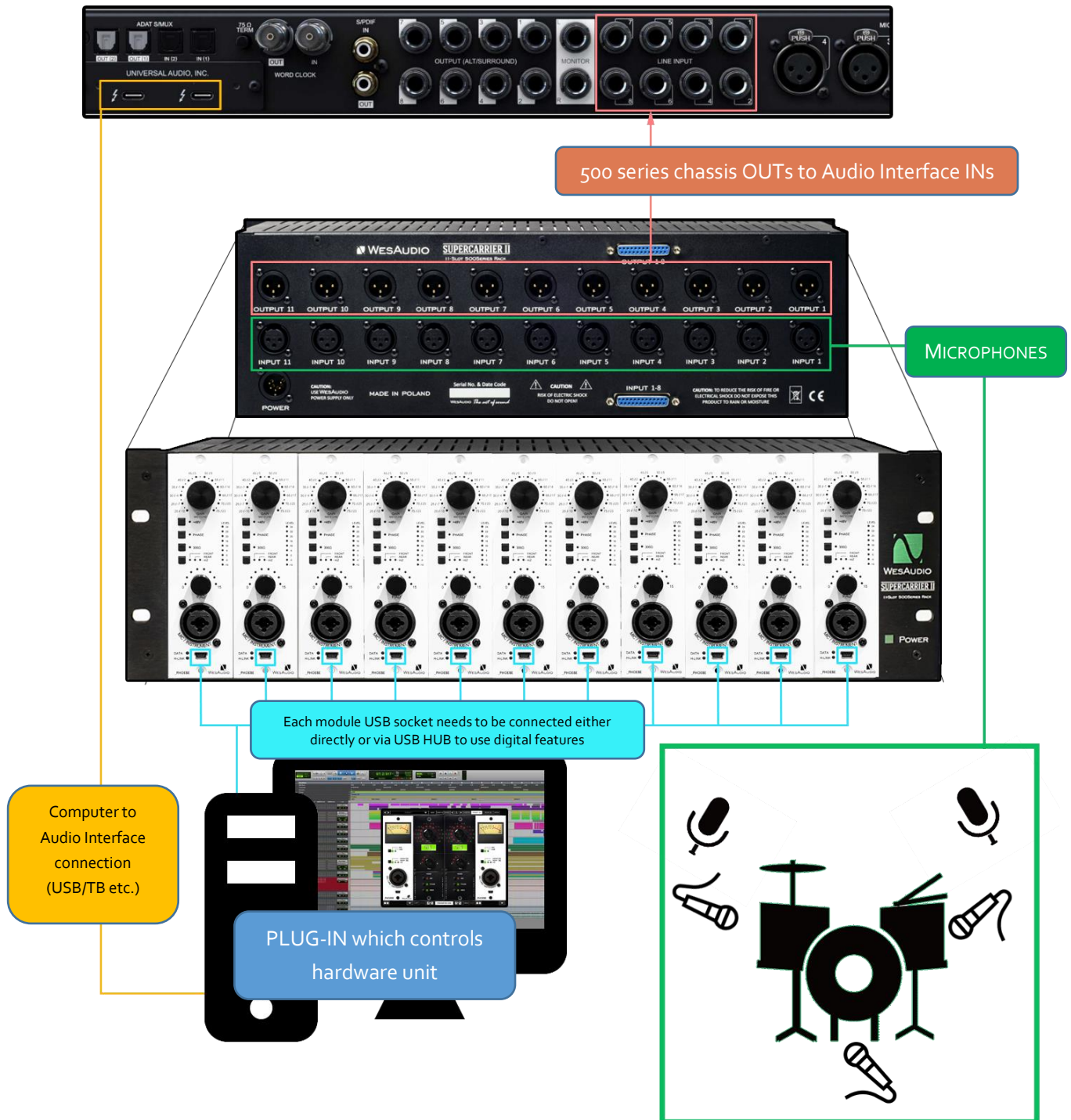
(*) Please note that _TITAN Ethernet connection doesn't require direct connection with the PC/MAC – You can also plug in the _TITAN directly to the router and use your local network to access and control all units inside _TITAN.

6.3. Hookup diagram – _PHOEBE and _CALYPSO in _TITAN: Mixing and Recording

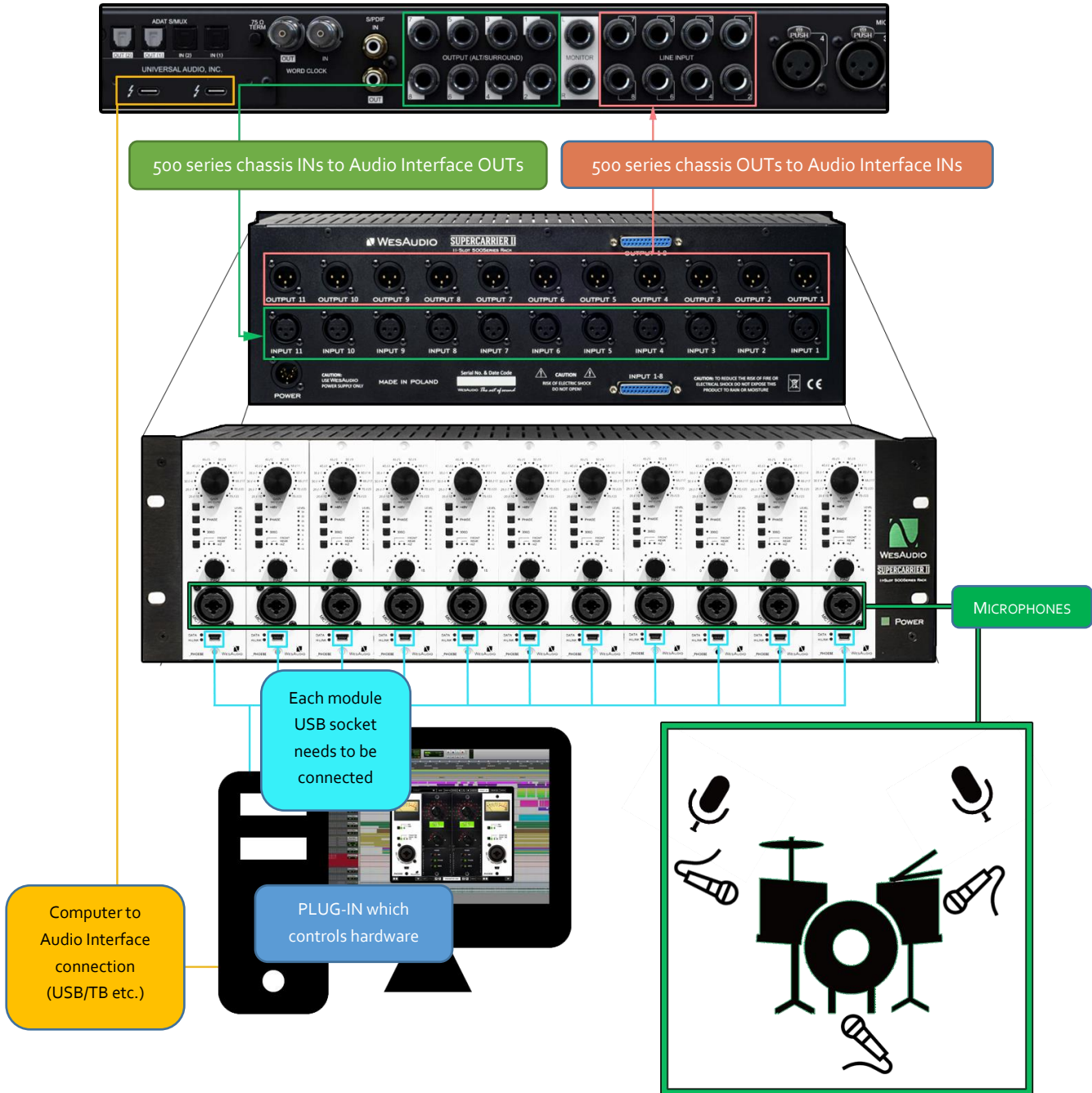


(*) Please note that _TITAN Ethernet connection doesn't require direct connection with the PC/MAC – You can also plug in the _TITAN directly to the router and use your local network to access and control all units inside _TITAN.

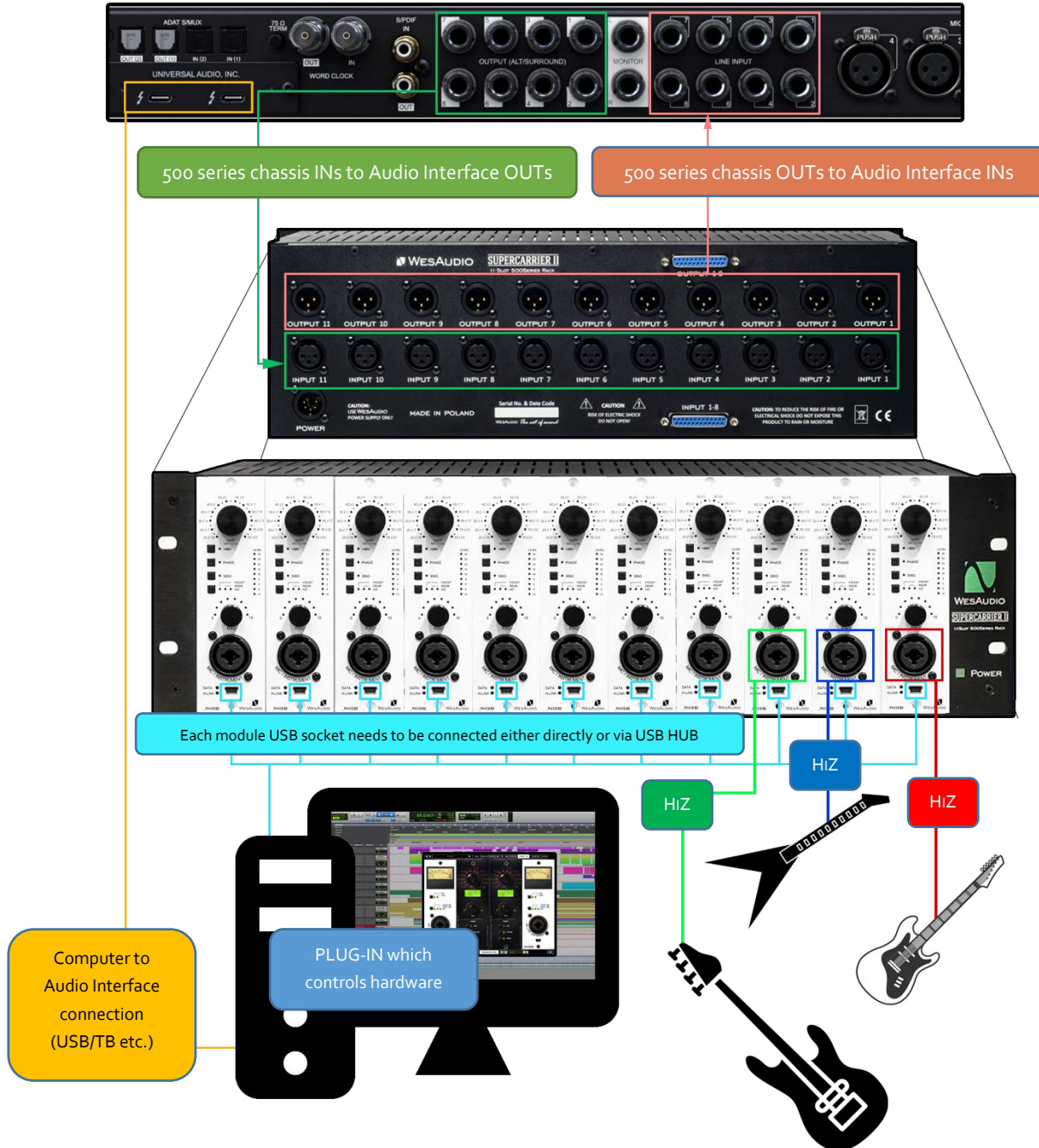
6.4. Hookup diagram – _PHOEBE in 500 Series chassis: Recording



6.5. Hookup diagram – _PHOEBE in 500 Series chassis: Recording & Mixing



6.6. Hookup diagram – _PHOEBE in 500 Series chassis: Recording (HiZ) & Mixing



6.7. Other examples

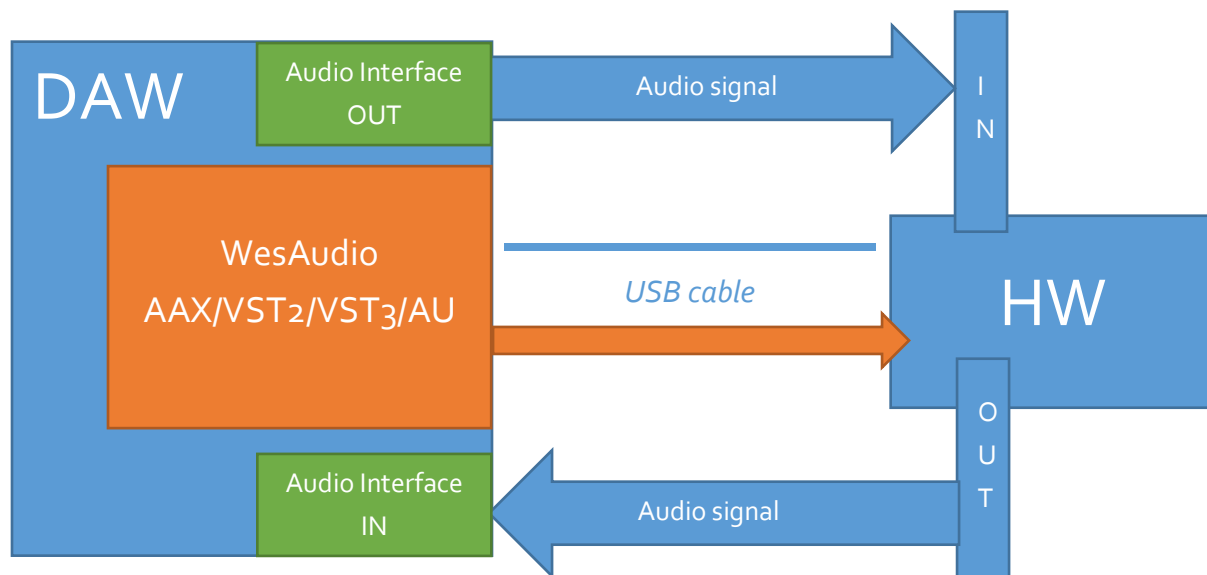
Please note that all WesAudio units regardless digital recall and control are still fully analog units and can be used in any recording or post processing stage of the production!

6.8. Setup for mixing

The configuration of devices is plain & simple, and its management side follows Plug&Play principles, so besides physical connection to your machine there are no other steps required.

6.8.1. HW insert/External effect in DAW

If you would like to work with WesAudio devices inside your DAW, audio signal must be sent to & received from the HW unit. Below you can find steps which describe that process in detail.



To set up your environment two steps are necessary:

- Device Control Setup:
 - Connect your workstation through USB cable and USB 2.0+ port (**) with your hardware unit or _Titan rack frame.
 - Insert on your track WesAudio plugin which matches with your HW and select your device from drop down list.
 - After connection state "ON" is light up, your device is ready to use, and saving your session activity will store all the settings as they are.
- Device Audio Setup:
 - Create any type of external effect which is supported in your DAW (e.g., "External effect" in Cubase/Nuendo, "Hardware Insert" in Pro Tools).
 - Configure "Send" to WesAudio HW unit IN.
 - Configure "Return" to WesAudio HW unit OUT.
 - Connect all the wires from your audio interface to the unit IN/OUT.
 - Insert this effect **after*** WesAudio plugin in insert chain.

Now you are ready to work in the Box with external audio units with all digital usability features provided by your DAW.

6.8.2. Direct output in DAW

WesAudio devices and its plugin management functionalities are perfect solution to hybrid mixing when on some stage signal is sent to analog world and summed outside DAW. In that approach:

- Connect your HW with your machine using **USB cable and USB 2.0+ port in your workstation (**)** or _Titan rack frame.
- Insert on your track WesAudio plugin which matches with your HW and select your device from drop down list.
- set up track/aux output to audio interface output which routes signal to the WesAudio device.

From now on you can use automation and recall features in analog domain!

** **THIS IS IMPORANT ONLY FOR AUTOMATION:** In practice audio signal and plugin parameters are mediated through whole insert chain in order, so by keeping Plugin after external effect could cause small latency (equal audio interface latency) which is causes by ASIO buffer setting (it is most pessimistic case and most probably it would be anyway smaller, but it depends on HOST(DAW) implementation). In simpler worlds such latency would be the same, as time which is needed to get audio to your audio interface and back. Keeping your plugin before external effect, would "compensate" this unwanted effect, and your device will apply parameters before audio signal gets through it.*

*** **PLEASE NOTE:** Officially supported interface is USB 2.0 – please check your USB HUB to be compatible with this USB revision.*

6.10. Memories

Parameter storage could be summarized like this:

- _PHOEBE unit has **TWO** separate fast presets which can be triggered via Front/Rear button.
- _PHOEBE plugin can store **up to 40** number of configurations via Config Banks available from the plug-in.

6.10.1. Synchronization upon connection

When new plugin instance is loaded into DAW, its state is unmodified, that means that no parameters are yet modified. When user will initiate connection to hardware unit by setting Connection ID, Plugin will download current state of parameters from the unit including any available fast configuration presets (e.g., A/B). For instance, if connection between _PHOEBE plugin and _PHOEBE hardware will be triggered, and plugin will be in unmodified state, all parameter states will be downloaded to the plugin, including A and B presets states.

6.11. Automation

WesAudio devices are capable to follow any automation triggered from your DAW. Our devices were tested against high performance peaks.

NOTE: *Please note that most of the settings which are adjustable on this preamplifier will cause artifacts in the source signal – this will happen as most of the settings are managed via internal switching or relays, which always cause glitches upon change. Also, preamplifier is very sensitive to any noises, and due to its amplification nature, it will exaggerate any form of artifact which goes through the circuit. However, automation can be used between songs, or song sections, or simply very small changes to gain will still work perfectly fine!*

6.11.1. Automation record

Besides normal automation features all knobs are touch sensitive, and this brings possibility to record automation using Hardware unit itself. Just enable automation record in your DAW and start moving HW knobs!

6.12. Pro Tools Integration

Starting from software release 2.1 WesAudio plugins integrates with Pro Tools using all powerful features:

- Making plugin instance “inactive” will force the plugin to unload, and because of that it will also disconnect from the hardware. It means that new plugin instance can be used to connect to the same hardware unit where all previous settings are stored through inactivated plugin – very useful to work with one unit on multiple sources keeping all the settings recallable with one mouse click,

- PT12+ - Commit Functionality – Pro Tools commit functionality can be used also to print hardware inserts and it is 100% compatible with WesAudio plugins. When commit is triggered for HW Insert and WesAudio plugin, plugin will disconnect from its source and save all the settings. As a result, you will get:
 - printed track through analogue processor,
 - hardware settings stored on inactivated track through plugin instance,
 - new plugin instance can be used to connect to the same hardware on different tracks,
 - inactive track can be re-enabled any time, and WesAudio plugin will reconnect to hardware automatically restoring all the settings (please remember that one instance of the plugin can be connected to the hardware at the same time).

6.13. GCon Manager

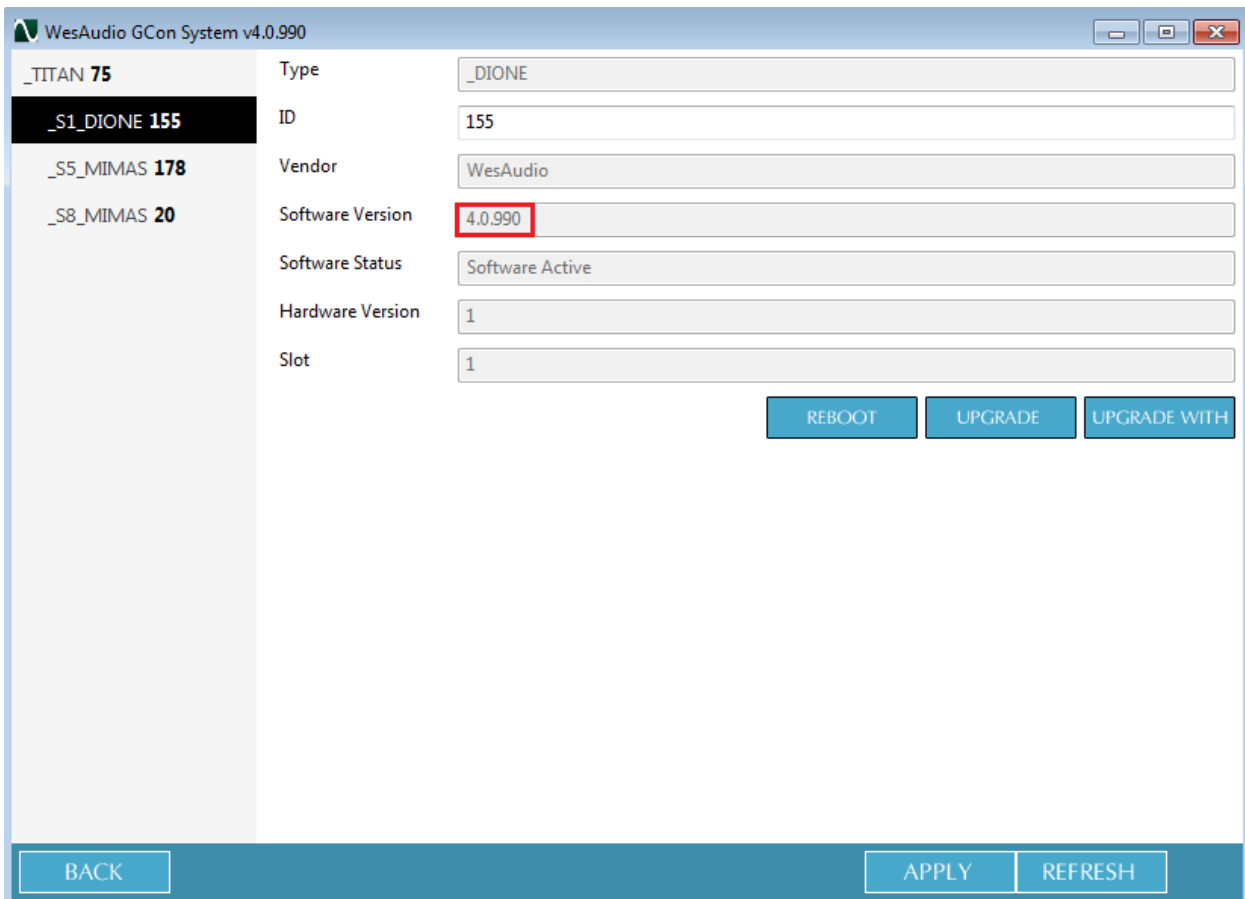
GCon Manager is generic application which implements configuration management over compatible units. It can be found in Application folder data:

- For OSX: “/Applications/WesAudio/GConManager”
- For WINDOWS: folder specified during installation phase, by default in: “c:/Program Files x86/WesAudio/GConManager.exe”.

GConManager can be also starting via clicking on WesAudio “Tray” Icon and selecting “Open GConManager”.

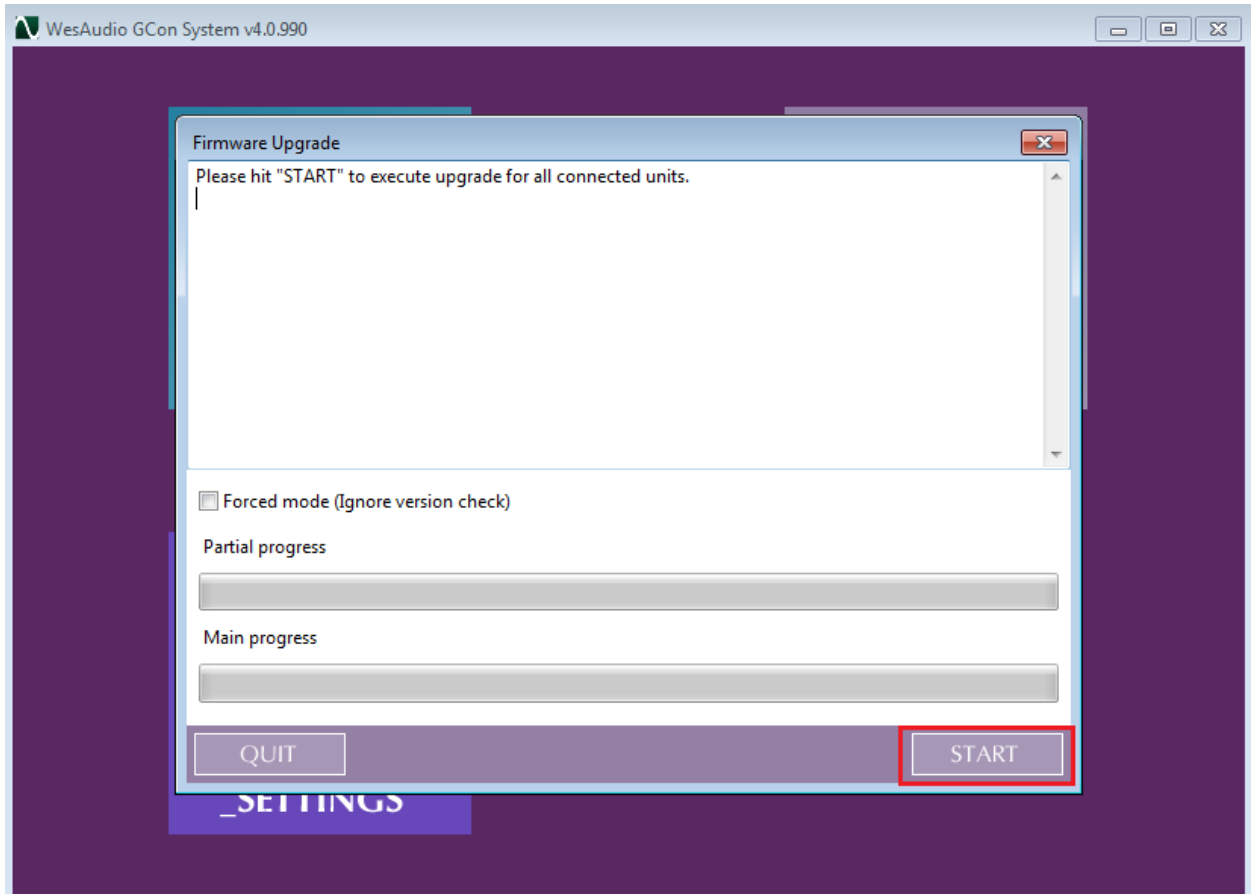
6.19.1. How to check firmware version

Each device reports to your workstation with version, which indicates compatibility between your host application and remote module. To check firmware upgrade please to GCon Manager CONFIG application:



6.19.2. How to perform firmware upgrade

To perform firmware upgrade, go to GConManager upgrade application and hit "Start" button. This will trigger upgrade operation for all modules which are not up to date with your host software.



More information can be found in this movie:

<https://www.youtube.com/watch?v=RG1t176BfKE>

7. Factory reset

Factory reset procedure re-writes firmware into internal flash memory – it doesn't affect anyhow unit configuration. To proceed with factory reset, please follow below steps:

- 1) Connect unit either:
 - a. Through front panel **USB** socket
 - b. Or keep the unit in **ng500** chassis - **_TITAN**, but please note that chassis must be connected to the PC/MAC either via USB or Ethernet cable.
- 2) POWER OFF your 500 series chassis.
- 3) PRESS Phase Button
- 4) While keeping THD button pressed, POWER ON your 500 series chassis.
- 5) LEDs should present a strange pattern.
- 6) Now open GConManager:
 - a. WIN: C:/Program Files (x86)/WesAudio/GConManager.exe
 - b. MAC: /Applications/WesAudio/GConManager.app
 - c. Or click on the WesAudio "Tray" icon, and select "Open GConManager"
- 7) Go to **_UPGRADE** application.
- 8) Hit start!

8. Troubleshooting

8.1. Module is frozen and doesn't react to encoder moves

If module doesn't react to any changes to the knobs on the front panel, first necessary step is to re-write firmware into the flash memory. To do so, please go to [Factory reset](#) chapter for further details. If it doesn't help, please contact our support team at: support@wesaudio.com.

8.2. Module can't connect to a plug-in

This is a wide topic, and there may be at least several root causes, but there are few things that should be checked. However, first and most important thing is to double check that GConManager doesn't list this device in the **_CONFIG** app. If this is the case, it means that WesAudio unit can't connect on the OS level, and some of the below steps may help:

- First, double check if module connection is properly executed, this procedure is described [here](#).
- USB specification indicates that USB 2.0 works up to 5 meters. This is however not entirely true, as it strongly depends on the peripherals that unit is connected to. Even if our modules are USB 2.0 compatible, your USB port could support USB 3.0 – USB is backward compatible protocol, so it maybe that USB 3.0 cable length limit should be considered which is 2 meters. We would recommend having USB cable up to 2 meters to remove those limitations from the equation.

- USB HUB is very common root cause to those problems, if module can't connect via HUB – just for the sake of the test, it is mandatory to connect unit directly to PC/MAC to verify if the problem isn't caused by it.
- Please note for any system warnings attached to “WesAudio Tray Icon”.

8.3. Module disconnects by itself

As USB controllers have limited capacity it could be a reason of random unit disconnection. Usually, it happens when a lot of USB devices are plugged in to the PC/MAC. The usual behavior would be that unit works normally, and after rebooting it doesn't, but it strongly depends on the OS implementation so exact reaction could be little bit different. If this is suspected, just for the test, it would be good to disconnect most of the devices from the USB ports, reboot PC/MAC and double check the connectivity from stability point of view. If it will lead to the conclusion that this is the root cause of the problem, we recommend to use decent USB hub, and ideally TB/USB dock station which tends to offload a lot of responsibilities from our PC/MAC.

8.4. Module can't connect anymore

If unit was working fine, and suddenly it can't connect (it is not visible in GConManager _CONFIG app) that could lead to the conclusion that some devices were added to our USB line, and we could have problems with USB controller inside PC/MAC. In that case, please check description in above chapter “Module disconnects by itself”.

8.5. (WINDOWS) Unit can't connect to a plug-in.

It is possible that we have some problems on installation level, to verify that, please check [this chapter](#).

For more information visit our FAQ: <https://wesaudio.com/faq/>

9. Abbreviations and terms

GCon – high speed communication protocol which allows full management and recall of analog devices. Please note that this is just management protocol, audio signal transfer is not in scope of its capabilities.

NG500 – Next generation 500 series.

NG500 connector – special connector which extends standardized 500 series connector with additional pins.

10. Warranty

All WesAudio products are built to the highest standards and should provide reliable performance for many years, subject to reasonable care, use, transportation, and storage.

WesAudio warrants all our products to be free of defective parts and workmanship for a period of two years.

This warranty period begins at the original date of purchase and is transferable to any person who may subsequently purchase the product during this time. This warranty excludes the following conditions: normal wear and tear, misuse, customer negligence, accidental damage, unauthorized repair or modification, cosmetic damage and damage incurred during shipment. During the time of this warranty, WesAudio will repair or replace, at its option, any defective parts or repair defective workmanship without charge, provided the customer has appropriate proof of purchase and that the product has its original factory serial number. In all warranty claims the customer is responsible for shipping costs to the WesAudio facility, and WesAudio pays for return ground shipping.

11. History

Editor	Version	Date	Description
Michal Weglicki	Draft	05.09.2022	Draft document created.
Michal Weglicki	V1	13.09.2022	Version 1

