

# MA Lighting grandMA3 viz-key Connectivity Guide

*This document was written, and is maintained, in collaboration with MA Lighting Technology GmbH.*

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## Introduction

This guide provides instructions for how to connect to MA Lighting's grandMA3 viz-key from WYSIWYG R47 Update 1 (and later versions). It also includes tips for troubleshooting the connection, information pertaining to updating the viz-key connectivity software (the "Plugin") and instructions for the viz-key Windows USB driver installation.

## Key Points

Here are the most important points related to the connection to viz-key:

- 1. The viz-key device/unit MUST be connected to WYSIWYG workstation. DO NOT connect viz-key to a computer running grandMA3 onPC *except* if that computer is (also) the WYSIWYG workstation!**
- 2. When grandMA3 onPC is used on the same computer as WYSIWYG ("the WYSIWYG workstation") WYSIWYG must always be launched before grandMA3 onPC.**
- 3. Plugin version updates are REQUIRED in order to connect to a new major version of grandMA3 and recommended before connecting to a different version of grandMA3.**
- 4. The viz-key MUST re-authenticate at least every ten days by connecting to the internet; it will run for a maximum of ten days re-authenticating; after this period, the unit will down until an internet connection becomes available. Further information related to this requirement may be found in step **b** of the [Troubleshooting](#) section.**

Additional information about these points is found throughout this document. As always, the patch and the fixtures' modes (where applicable) must match between the WYSIWYG and grandMA3. (Tip: use .MVR files to easily exchange fixture information between the two.)

## Notes and Advice Regarding viz-key

grandMA3 viz-key enables non-granted Parameters to be output by the grandMA3 hardware and/or software that it is used together with viz-key. Put simply, when visualization of a grandMA3 .show file is required, regardless of whether a grandMA3 onPC or a physical grandMA3 console is used, connecting the viz-key to the WYSIWYG workstation will enable all parameters to be visualized; for this reason, DMX universes should always be bound to the grandMA3 viz-key device in the .wyg file that "corresponds to" the grandMA3 .show file. In more detail though...



When working only with grandMA3 onPC without a viz-key or other grandMA3 hardware attached, regardless of where onPC is running (i.e., on the WYSIWYG workstation or another computer) no Parameters are granted, and it is impossible to establish a connection to onPC from WYSIWYG. Connecting hardware such as programming wings to onPC grants a limited number Parameters. (These may be visualized without a viz-key connected, by setting grandMA3 onPC to output the Art-Net or sACN, binding DMX universes in the .wyg file to the chosen protocol, and connecting WYSIWYG to this protocol. For information on using Art-Net/sACN, please consult WYSIWYG Help, [here](#) and [here](#), respectively.) However, connecting the grandMA3 viz-key to the WYSIWYG workstation enables visualization of all Parameters. When this is done, DMX universes in the .wyg file should (must) be bound to viz-key; when this is done from the start, there will be no need to un-bind universes from Art-Net/sACN and bind them to viz-key. In addition, viz-key grants 512 DMX output Parameters; this makes no difference if other connected grandMA3 hardware grants more, but if no other hardware is available, 512 Parameters can indeed be useful (for testing fixtures, etc.).

When working with a physical grandMA3 console, the number of Parameters is limited by the console/hardware configuration. (If this limit is sufficient, a viz-key is (again) not required.) If the show requires more Parameters than are granted by the console/hardware, connecting a viz-key to the WYSIWYG workstation will enable all additional necessary Parameters to be visualized. Therefore, even when a console is available, using viz-key (from the start) can be advantageous. An added bonus to using a viz-key is that DMX universes in the .wyg file are bound to viz-key from the start, so if programming needs to switch between the physical console and onPC, no time is wasted on un-binding and re-binding universes.

## Connecting to viz-key

### A. Enabling viz-key Connectivity when WYSIWYG Starts

Before attempting to connect to viz-key from WYSIWYG's Device Manager, WYSIWYG must be set up to load the connectivity Plugin while it launches. **If grandMA3 onPC has ever been installed on the WYSIWYG workstation, the USB driver for viz-key must be installed, else Windows will be unable to correctly recognize the device. Instructions for how to install the driver are found in the [Installing the Windows USB driver for viz-key](#) section below; please perform this installation now, before enabling the viz-key connection from WYSIWYG.**

If grandMA3 onPC is (or was) installed on the WYSIWYG workstation, the USB driver for viz-key has already installed (by the grandMA3 onPC installer) and, therefore, installation should not be required. (However, (re)installing the driver as detailed [below](#), will do no harm.)

### To enable viz-key connectivity

1. Connect viz-key to the WYSIWYG workstation.
2. Launch WYSIWYG, click the *OPTIONS* menu and select *Application Options*.
3. Click the *Additional Interfaces* tab.
4. In the *grandMA3 viz-key* section, click to check the *Enable viz-key* checkbox.

5. Select the version to which you wish to connect by clicking the *Plugin Version* dropdown. **If the required version is not listed, or if no versions are listed, the Plugin must be updated (installed).** The Update procedure is described in the [Updating the viz-key Plugin Version](#) section below.
6. Click *OK* and exit WYSIWYG (as requested).

The connectivity software will load the next time WYSIWYG is launched. It will continue to do so until the checkbox from step 4 above is unchecked.




The connection may now be established from any .wyg file opened in this installation of WYSIWYG. If multiple versions of WYSIWYG are installed, this procedure must be performed in each version.


## B. Establishing the Connection

**Connecting to viz-key when grandMA3 onPC is run on the WYSIWYG workstation *REQUIRES WYSIWYG to be launched BEFORE grandMA3 onPC.*** Therefore, if WYSIWYG needs to be closed for whatever reason (or in the event that WYSIWYG crashes) grandMA3 onPC must also be closed – after which WYSIWYG must be started first, followed by grandMA3 onPC. (If grandMA3 onPC is launched first, it connects to viz-key immediately (by design) and places an exclusive lock on the device (also by design). When WYSIWYG is launched later, it cannot break this lock (by design as well) and therefore it cannot connect to the device.)

This is not a requirement when connecting to a console or to grandMA3 onPC running on a different computer. (It would be unreasonable to expect the console to be shut down, only for the WYSIWYG connection to be (re)established.)

### To connect

1. Connect viz-key to the WYSIWYG workstation.
2. Launch WYSIWYG.
3. [Optional] Click the *Options* menu, then click *Application Options* and switch to the *Additional Interfaces* tab in the window that appears, to select the *Plugin Version* that matches the version of the grandMA3 system software (or onPC) that you are connecting to. For more information about this option, please see [Connecting to a Different Version of grandMA3](#) below.
4. Open the .wyg file which you wish to visualize using grandMA3.
5. Start grandMA3. If using grandMA3 onPC on a computer other than the WYSIWYG workstation, or when using a physical console, ensure that the two are [in the same subnet](#).
6. Click the console's 'network' button , then click *MA-Net Interface*. If a network session has not been started (this is indicated by a red 'power' button, ) you must click the 'power' button to start it; once the network session is active this button turns green .
  - i. If grandMA3 onPC is running on the WYSIWYG workstation, select Loopback Pseudo-Interface.

- ii. If grandMA3 onPC is running on a separate computer, or if using a physical console, select the network interface via which the computer or console is linked to the WYSIWYG workstation.
7. In WYSIWYG, switch to LIVE mode.
8. Click the *MANAGERS* menu and select *Device Manager*.
9. In the window that appears, click *New*.
10. In the Library Browser that appears, search for *viz-key*.
11. Once found, click *grandMA3 viz-key*, then click *Insert*.
12. With the *grandMA3 viz-key* selected in the Device Manager window's list, click *Properties*.
13. In the window that appears, click the *Address* dropdown, and select the network interface via which WYSIWYG is to connect to grandMA3:
  - i. If connecting to grandMA3 onPC running on the WYSIWYG workstation, select Loopback Pseudo-Interface.
  - ii. If connecting to grandMA3 onPC running on a separate computer, or if connecting to a physical console, select the network interface via which the WYSIWYG workstation is linked to that computer or to the console.
14. If not done already, bind Ports to Universes as described in [WYSIWYG Help](#) (search your version of Help for *bind universe*).
15. Click *Close* when finished.
16. Within a few seconds, the WYSIWYG workstation will appear as a new *NetworkNode* in grandMA3's Network window. Click  to expand this Node. If the *Vis+Dongle* line that appears is not green, click this line and then click the *Invite Station* button; this line will turn green shortly. This line **must** be green in order for the connection to get established.
17. Back in WYSIWYG, ensure that the *grandMA3 viz-key* is selected in the Device Manager window and click *Connect*.



The connection is established, and changes made on the console are now visualized in WYSIWYG. (You may now close the Device Manager window.) Happy programming!

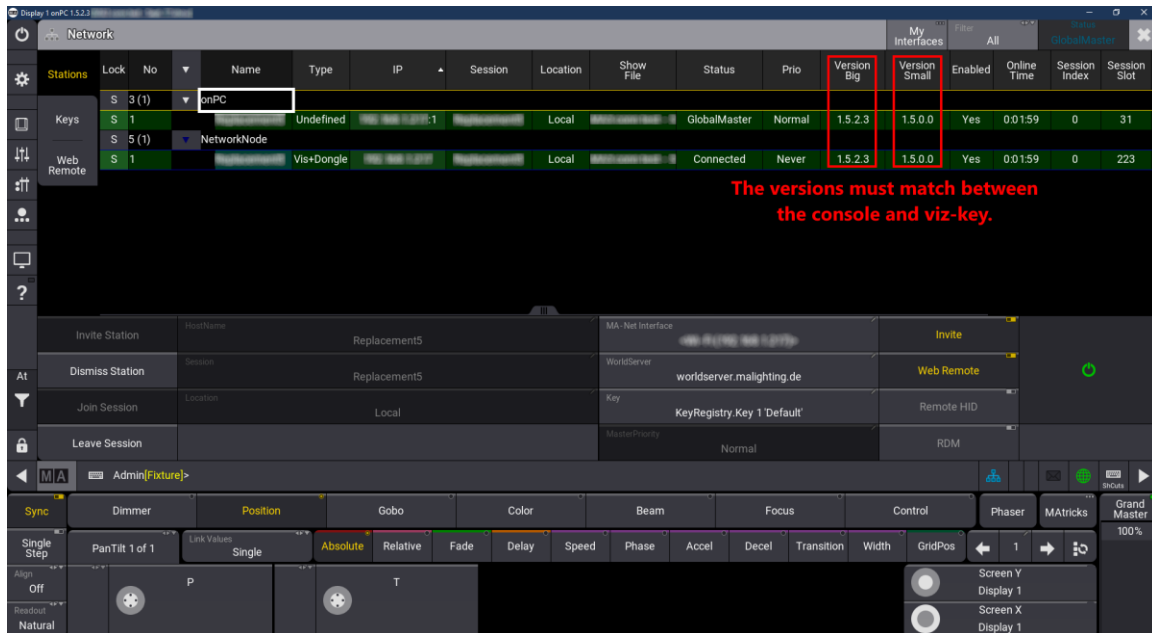
## C. Troubleshooting the Connection

If the connection is not established as described, one or more of the following tips will help resolve the issue. (These are not listed in any particular order.)

- a. Ensure that the Windows Firewall (and/or any other) is disabled, or that TCP and UDP firewall exceptions have been created for both WYSIWYG and grandMA3 onPC, for the network interface you are using.
- b. viz-key must connect to the internet for re-authentication at least once every ten days. If viz-key stops working or if unlimited parameters are no longer unlocked, **DO NOT connect it to the console**

or to the computer running grandMA3 onPC (unless this computer happens to be the WYSIWYG workstation). Leave viz-key connected to the WYSIWYG workstation and:

- i. Ensure that the console (or the computer where grandMA3 onPC is running) is connected to the internet and to MA's [Worldserver](#). Connection to the Worldserver this is indicated by a green 'globe' icon in the console/onPC interface: . Note that firewalls may block your connection to the Worldserver; this includes all firewalls – e.g., firewall software running locally, those built into your local router, or those protecting your company's internet connection; please [contact MA Lighting](#) for information about unblocking the necessary firewall ports for this connection.
  - ii. Launch WYSIWYG, open a .wyg file and connect to viz-key: in turn, viz-key will connect to the internet via the console or onPC and re-authenticate. **Important note: if a viz-key is shared between multiple computers, it must be re-authenticated on each.** (For more information regarding this requirement, please [contact MA Lighting](#).)
- c. Use the three status LEDs found next to the viz-key unit's USB-C port to determine its state while connected to the WYSIWYG workstation.
- i. The first LED being lit indicates that the unit is powered up.
  - ii. The second LED being lit indicates that Windows has correctly identified and can use the device. If this LED is not lit, [install the viz-key Windows USB driver](#).
  - iii. The third LED being lit indicates that grandMA3 onPC or WYSIWYG has connected to the device and placed an exclusive lock on it. If this LED is lit before launching WYSIWYG, the connection to the grandMA3 onPC will not succeed; check Windows Task Manager for any running grandMA3 onPC or WYSIWYG processes and select, then click *End Task* to close them if found; if the third LED continues to remain lit after this, reboot the WYSIWYG workstation and try again.
- d. When using grandMA3 onPC on the WYSIWYG workstation, if, once connected, the number of parameters (DMX channels) being visualized is above 0 but smaller than expected, WYSIWYG was started after grandMA3 onPC. Exit both, launch WYSIWYG and open the file, and then launch grandMA3 onPC; finally, switch back to WYSIWYG and connect.
- e. If grandMA3 onPC is being used on a separate computer, or if the physical grandMA3 console is used, ensure that the computer/console is in the same subnet (IP network) as the computer running WYSIWYG. (Information about setting up IP addresses and the subnet is found in Windows Help and in grandMA3 Help. Basic knowledge of [IP networks](#) is required in order to understand how to correctly set up the network; if needed, a Google search such as [this](#) should help with understanding subnets.)
- f. Check the console's Network window: the two green lines from the screenshot below must appear as such (both must be green, both must list an IP address, version numbers must match, the NetworkNode line's *Type* column must read *Vis+Dongle*), else the connection cannot be established. (To see the green lines, click the stations' 'expand' button .) If, after expanding the NetworkNode, the Vis+Dongle line is black (and an IP address doesn't appear) select this line and click Invite Station; the *Vis+Dongle* line will turn green within a few seconds.



- g. There should never be a need to click the *Dismiss Station* button; if this is done by mistake, select the first station in the list above (expand it, then click on the green line) and click *Invite Station*; repeat for the second station in the list.
- h. After installing a new version of grandMA3 or onPC, if a connection to another version is desired but cannot be established, perform a Plugin Version Update to the other version.

## Updating the viz-key Plugin Version

The grandMA3 viz-key Plugin must be updated every time a new major version of the grandMA3 system software or a new version of grandMA3 onPC is used. A connection cannot be established without such an update, due to the difference in versions. This Update is initiated from WYSIWYG and completed from the console or onPC.

Once the Plugin has been updated, WYSIWYG will be able to connect to onPC or to the physical console running that version. WYSIWYG can continue to connect to other versions, as detailed in the [Connecting to a Different Version of grandMA3](#) section.

### To Update the Plugin Version

1. Ensure that the viz-key is connected to the WYSIWYG workstation.
2. Launch WYSIWYG.
3. From WYSIWYG's Welcome Screen, click the *OPTIONS* menu, then click *Application Options*.
4. Click the *Additional Interfaces* tab.
5. In the *grandMA3 viz-key* section, click *Update*.

6. In the list that appears, select the network interface via which you wish to connect to the physical console or grandMA3 onPC; if grandMA3 onPC is running on the WYSIWYG workstation, select *Loopback Pseudo-Interface*.
  - ⇒ An ‘update status’ window appears. Shortly thereafter, focus will switch back to the WYSIWYG application window and a progress bar with instructions will be displayed.
7. Follow MA Lighting’s [instructions](#) to complete the update. (Note: For the most up-to-date information or further questions/clarifications, please [contact MA Lighting Support](#).)
  - ⇒ Once the update completes, the progress bar dialog closes automatically.
8. Click *OK* to close the *Application Options* window, then exit WYSIWYG.

## Connecting to a Different Version of grandMA3

Even after updating the Plugin to the latest version, it will still be possible to connect to a different (earlier or later, perhaps Beta) version of grandMA3. To do this, you must specify (in WYSIWYG) which version to connect to.

### To connect to a different version of grandMA3

1. Ensure that the viz-key is connected to the WYSIWYG workstation.
2. Launch WYSIWYG.
3. From WYSIWYG’s Welcome Screen, click the *OPTIONS* menu, then click *Application Options*.
4. Click the *Additional Interfaces* tab.
5. From the *Plugin Version*: dropdown, select the version you wish to connect to. This list should contain all the different Plugin versions that were ever installed/used on this machine; if the version you need to connect to is not listed, install it by following the procedure to [Update the Plugin](#). (In this case, “update” means “install”.)
6. Click *OK* to close the *Application Options* window, then exit WYSIWYG (as requested).

## Installing the Windows USB driver for viz-key

This driver is required if Windows fails to recognize and correctly-use the device, which is indicated by the LED “2” (found next to the viz-key unit’s USB-C port) turning on when viz-key is connected to the computer, but turning off shortly thereafter, or this LED not turning on at all. In such cases, the driver must be installed. The driver must also be installed if a version of grandMA3 onPC which predates viz-key is currently installed (though in this case, it will be impossible to establish a connection to that version of granMA3 onPC). If unsure, install the driver regardless: there are no disadvantages to doing so.

### To install the USB driver:



1. Disconnect/unplug viz-key unit from the WYSIWYG workstation. (WYSIWYG or other apps should not be running at this time.)
2. Download the *grandMA3 Software #.#.#.# for grandMA3 viz-key* package (.ZIP file) from MA Lighting's grandMA3 download page. (The #s represent the current version available for download.) At the time of this writing, the URL for this page is:  
<https://www.malighting.com/downloads/products/grandma3/>.
1. Extract the driver installer from the downloaded .ZIP file. At the time of this writing, this file's name is *grandMA3\_USBDriver\_win\_#.#.#.#.exe*, where the #s represent the version number.
2. Double-click on the extracted file to launch the USB driver installer.
3. Follow the installer's prompts and wait for the installation to complete.
4. Connect the viz-key.  
⇒ *Now LED "2" should remain lit after the unit is connected (along with LED "1").*

Should you require further assistance with this driver installation, please contact [MA Lighting Support](#).