Waves SoundGrid V9.80 for DiGiCo

Upgrade & Setup Guide

WAVES

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1. **What Do I Need?**

- **Waves I/O card:** Pre-installed in the console
- **Waves-qualified SoundGrid DSP Server:** A multi-core PC used for real-time audio processing. See a list of Waves-qualified servers at: http://www.waves.com/live-sound/soundgrid-servers A second server may be added to your system for Redundancy.
- **Network switch:** See a list of Waves-certified switches at http://www.waves.com/live-sound/soundgrid-switches
- **Ethernet Cables:** Standard CAT5e or CAT6 Ethernet cables. See a list of supported length per cable type and application http://www.waves.com/1lib/pdf/live/soundgrid-cables.pdf
- **USB flash drive with activated SoundGrid-compatible V9 licenses:** The USB flash drive holds the licenses for the Waves plug-ins. To verify USB flash drive compatibility: http://www.waves.com/support/usb-flash-drive-formats
- To learn more about Waves License Center: http://www.waves.com/support/waves-license-center
- For activation instructions: http://www.waves.com/support/activate - Choose the "My audio computer is NOT online" tab.
- **MultiRack SoundGrid V9 for DiGiCo**: No license is required.

See a list of **SoundGrid-compatible plug-ins** at http://www.waves.com/live-sound/soundgrid-plug-ins

Please note:
- Only SD consoles running V443 or higher are able to run Waves V9.
- Only SD consoles running Core 2 V821 or higher are able to run Waves V9.80.
- For instructions on how to upgrade your SD Series console to V442+, please refer to the relevant DiGiCo Tech Note for your console.

2. **Connecting Your Console to the SoundGrid Network**

First, shut down your console.

- If you are in the SD application, **Quit to Windows**.
- On **SD7**, use the **System>Quit** to Windows button.
- On all **other SD Consoles**, press **Alt-F4** in the mixer program

Connect the Waves SoundGrid card Ethernet port to a network switch.

SD7: *Connect <u>both</u> Waves SoundGrid card Ethernet ports (both engines) to a network switch.*
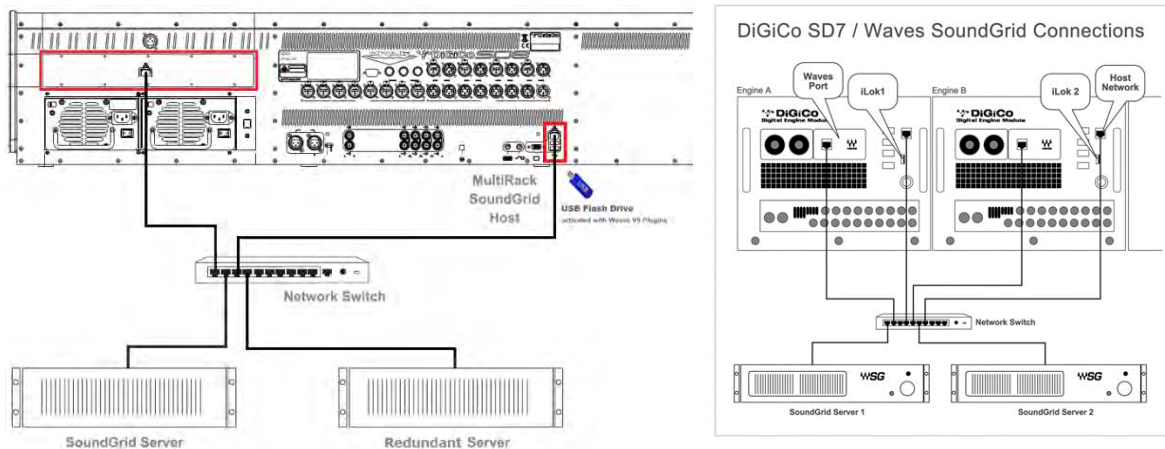
- Connect the console's Ethernet port to the network switch with another network cable
  SD7: *connect <u>both</u> console Ethernet ports (both engines) to a network switch.*
- Connect the SoundGrid DSP Server Ethernet port to the network switch using an Ethernet network cable. *For server redundancy, or to comply with the **SD7** redundancy scheme, connect the second SoundGrid server's Ethernet port to the network switch.*
- Connect a USB flash drive with activated V9 plug-in licenses to the console's USB port.
  SD7: *On B engine, connect another USB flash drive with an identical set of activated V9 plug-in licenses.*
- Disconnect All Optocore, MADI, Local I/O Audio, CAT5, iLok and headphone connections before proceeding with this upgrade.
- Reboot the DSP Server, network switch and the console.

3. **Disabling ReadyOn**

Your SD Console OS is protected by **ReadyOn**. Unless **ReadyOn** is disabled, any changes made to the OS, including network and display settings, will be lost when the SD console is switched off.

*Important: Connect a secondary screen to the console during this procedure, or it may become disabled after **ReadyOn** is re-enabled. (Does not apply to SD7.)*

- **Right-Click on the Start Menu**, and choose "**Explore**".
- Navigate to **C:\Program Files\Ardence\ReadyOn**, and then run **ReadyOn.exe**
- The following window will open:
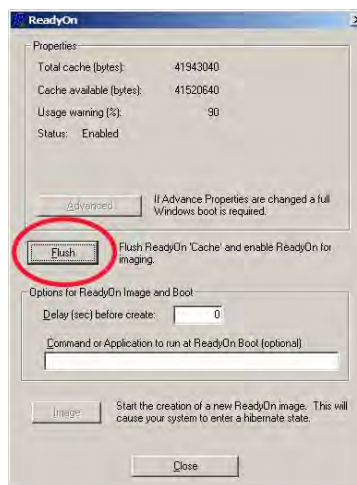
- Click **Flush**, as indicated above. The following progress bar will appear:

- **Ready ON** is now disabled.

4. **Installing the Software from a USB Flash Drive**

1. Navigate to your USB flash drive and run the **Waves_for_DiGiCo.exe** installer from your USB flash drive. It will install the following items:
   - o MultiRack SoundGrid V9.80 for DiGiCo
   - o All MultiRack SoundGrid-compatible plug-ins
2. Once installation complete, you will be prompted to restart your computer.
3. Once restarted, the console will boot to Windows, without loading the SD software. When installing on a clean system follow the steps 4-9, otherwise continue to chapter 5.
4. Insert your USB flash drive into the USB ports on the control surface.
5. Windows **New Hardware Wizard** will appear on Screen.
6. Select **Install Software Automatically** and click **Next**
7. Once this process is complete, click **Finish**
8. **Repeat Step 4 – 7 for each of the USB ports on your console**. *(SD7 has a single USB connection only.)*
9. Remove all USB flash drives from the console.

5. Re-enabling ReadyOn

SD7 users: Before enabling ReadyOn on your first engine, ensure that both engines are connected via Ethernet and that the second engine is active and running the Windows desktop.

1. Remove all USB flash drives from the console.
2. Right-click on the **Start Menu,** and choose **Explore**.
3. Navigate to **C:\Program Files\Ardence\ReadyOn**, and run **ReadyOn.exe**
4. Close all open windows **except** the ReadyOn window.
5. Press **Flush**.
6. In the **Command or Application to run at ReadyOn Boot** box, type the following path: ***D:\SDxx\SDxx.exe (xx is the number of the SD console you are using (e.g., D:\SD7\SD7.exe)***
7. Press **Image**; the **System Hibernating** message should appear.
   - *Please note: If you receive an error message after pressing **Image**, OK the error, close the **ReadyOn** program and restart the console using the **Windows Start Menu**. The console will restart and boot to Windows. Then repeat the process as described above.*
   - *SD7 users: Once the first engine has Hibernated, turn off the console using the **Main Power Switch**. Reboot the engine and wait for it to load the SD application again before enabling **ReadyOn** on the second engine.*
8. Turn off the console using the **Main Power Switch**, then turn it on again.
9. Connect your **USB flash drive** containing your Waves licenses.
10. The software upgrade process is now complete.
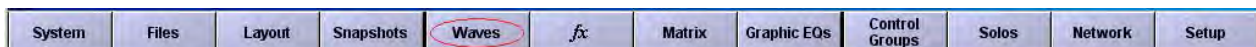   - *If you are upgrading an **SD7**, please repeat this process for your second engine.*

6. **Enabling the Waves MultiRack Tab**

System	Files	Layout	Snapshots	Options	fx	Matrix	Graphic EQs	Control Groups	Solos	Network	Setup

If no **Waves** button appears on the Master Screen, then Waves has not yet been enabled.

Click **Options > Console** as indicated below, and set **Enable Waves MultiRack** to **Yes**.
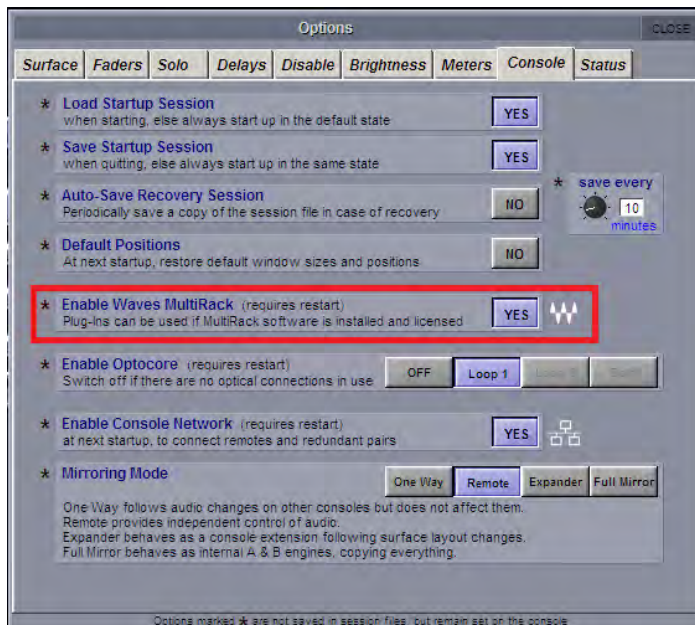
Now, restart the console. The **Waves** button will now appear on the Menu bar; the **Options** button will now appear under **Setup**.

| System	Files	Layout	Snapshots	Waves	fx	Matrix	Graphic EQs	Control Groups	Solos	Network	Setup

WAVES

7. **Connecting the Waves Port I/O**

- On the **Menu** bar, touch **Setup > Audio I/O**.
- Check the **Ports** column on the left; if you don't see **Waves**, touch **Add Port** and add **Waves**.
- Touch the **Waves Port**; you will see two added columns of 64 inputs and outputs.
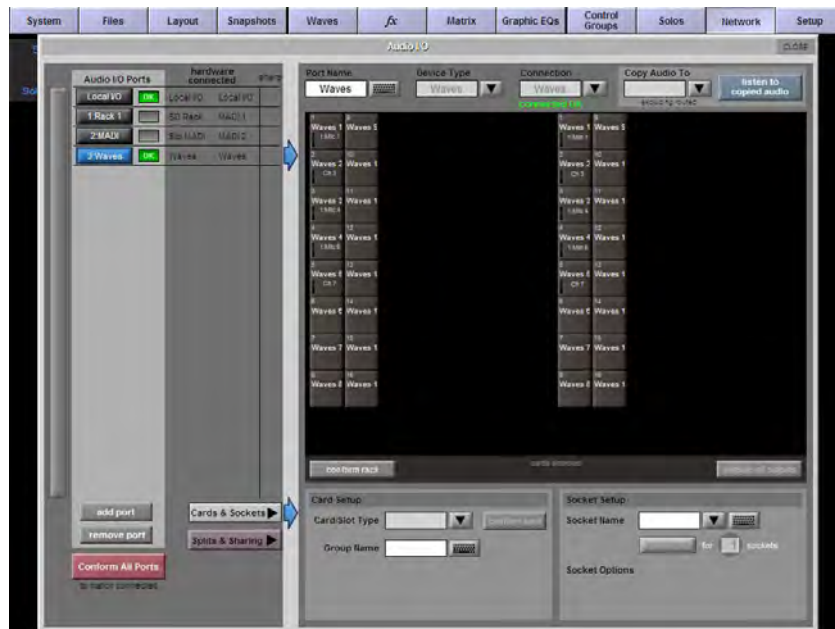
8. **Selecting a Host Network Interface**

On the **Menu** bar, touch **Waves** to open the **MultiRack SoundGrid** interface and select **Preferences** from the **Window** menu. Set your system by selecting the Host Network Interface on your host computer.
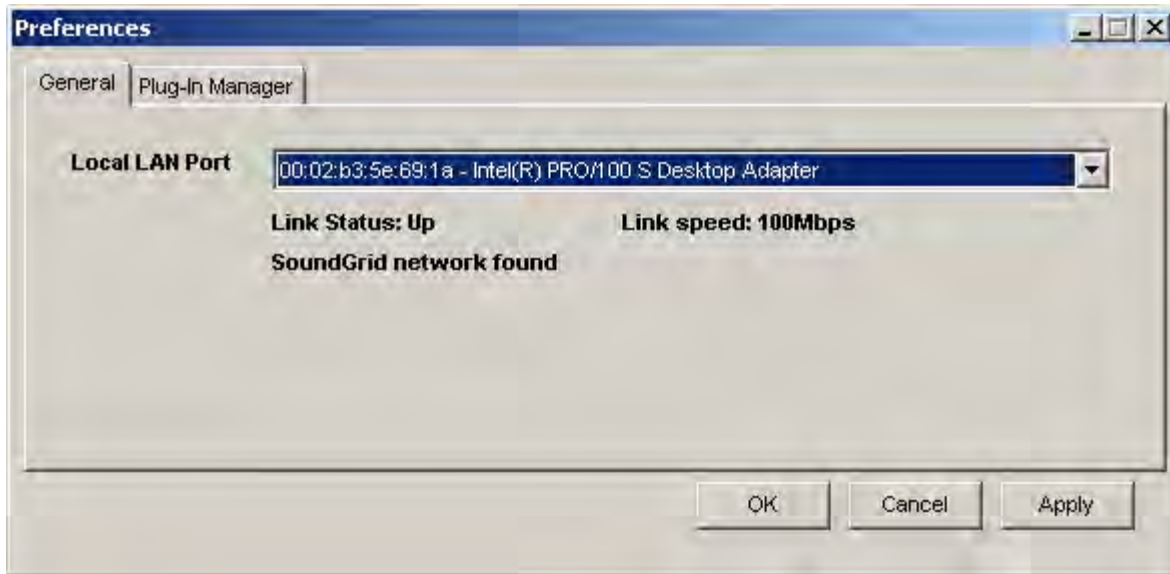
Local LAN Port lists the available network adapters on the host machine. Choose the network adapter that is connected to the SoundGrid network. Network adapters are displayed by MAC addresses and port name. When you select the proper port, **SoundGrid Network Found** will appear.

9.   **Setting SoundGrid Inventory**

The following window is accessed by selecting the **SoundGrid Inventory** from the **Window** menu.
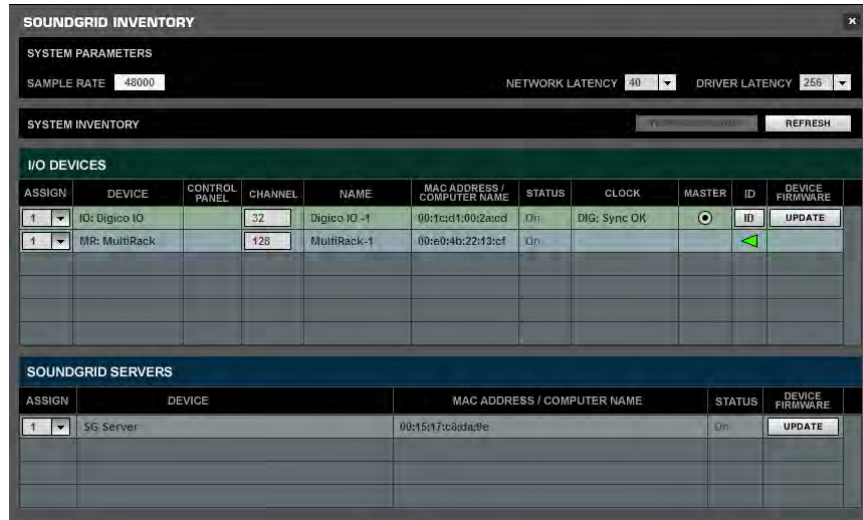
Changes in the Inventory window are allowed only in **Setup** mode. In **Show** mode, the window opens as display-only and no changes are allowed. Changes made in the Inventory window are applied immediately.

System Parameters

Sample Rate displays sample rate. MultiRack SoundGrid is slaved to the console's sample rate; this field cannot be edited.

Network Latency sets the network latency value. This field allows you to change SoundGrid network throughput latency. This value sets the buffering delay used by the processing engine(s) and affects SoundGrid's end-to-end latency. Plug-ins that add latency will add to the overall latency (system latency + plug-in latency) of the specific Rack into which these plug-ins are inserted. See http://www.waves.com/live-sound/soundgrid-servers for correct settings

Test Redundancy. A setup is redundant once you have designated a second Server as a Test Redundancy: In a setup using a Redundant Server, a second server is connected to the main audio processing DSP server. If the main server fails, then the secondary backup server automatically takes over and begins processing. Click the Test Redundancy button to make sure the Redundant Server is capable of holding the session being handled by the main server. This is important when the two servers are not identical.

Refresh is used to refresh the inventory list after you have changed devices or settings. The Inventory table displays all SoundGrid devices available on the network, allowing you to select/assign the devices you are using.

10. **The Inventory and SoundGrid Servers Table**

The Inventory table displays all SoundGrid devices available on the network, allowing you to select and assign the devices you are using.

Inventory Fields

Assign selects devices for usage in your setup. The number you assign the device is its index number in the Inventory list. For an I/O device, setting 1 means this is the first I/O device, and its channels will be the first listed in the routing menus.

I/O: An I/O device that streams audio to and from the SoundGrid network. On your console the DiGiCo I/O should be selected and used.

MR: MultiRack, SoundGrid's audio processing device. MultiRack is the device which receives audio for processing**.** MultiRack utilizes SoundGrid DSP Servers as its processing engines.

Device displays the type and description of the device. When hovering with a mouse over a device row, the device's software/firmware version is displayed as a tool-tip.

Chn displays the number of channels available on the device. I/O and MultiRack channels cannot be set and are display-only.

Name: Double-click in this field to rename the device. *We recommend leaving this field at its default value.*

MAC Address / Computer Name displays the device's MAC address or computer name.

Status displays the device's status in real-time.

Device Firmware supports an **Update** button for each I/O or server device. Click the button to update the device's firmware if incompatible with the MultiRack version you are using. The Update process will display a progress bar and status messages. Follow the status messages and instructions carefully. At the end of the process (in some cases requiring you to reboot the device), click the window's **Refresh** button.

ID: Applicable for I/O-type devices only. Clicking this button will temporarily turn on the selected I/O's link and activity LEDs, while turning the LEDs of all other I/O devices off, to allow identification of the device in the network.

The **Servers** table is very similar to the **Inventory** table and is used in the same way. This table is separate from the I/O Device table, since servers don't have channels and do not receive audio connections. Set "1" for the server you intend to use as your main processing engine; set "2" for the server you intend to use as a redundant server.

Please note: On the SD7 console, inventory settings and connections should be the same for both engines, and should set up separately.

11. **Setting SoundGrid Connections**

The **SoundGrid Connections** window allows you to create audio connections (routes) between Source and Destination devices.
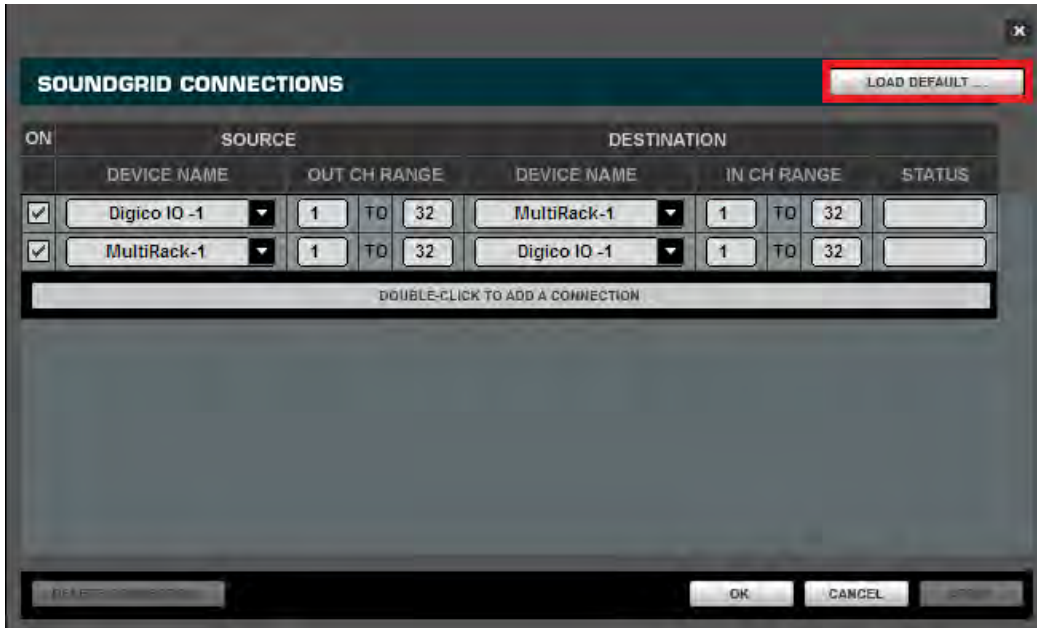
Open the **SoundGrid Connections** window by selecting **SoundGrid Connections** from the **Window** menu.

Changes in the **SoundGrid Connections** window are allowed only in **Setup** mode. In **Show** mode, the window opens as display-only and no changes are allowed.

On your console, **SoundGrid Connections** are hard-set by default to be recalled correctly from the channels.

If your connections have been changed, you can easily correct this by tapping the **Load Default,** in the dialog prompting for Load Default Connections. Navigate to **D:\Waves \Factory Presets\Connections** folder and choose the Connections file.

Please note: On the SD7 console, inventory settings and connections should be the same for both engines, and should set up separately.

12. **Updating the Firmware of the Waves I/O**

Please note: If updating from SoundGrid V1, please refer to the last chapter.

- On the DiGiCo Master Screen, click or touch Waves tab to open MultiRack SoundGrid.
- Click or touch Window button and choose SoundGrid Inventory.
- In the Inventory window, hover the mouse above the I/O device. A pop-up message should indicate FW Version.
- In the Inventory window, click Update next to the devices requiring an update and follow prompts to complete update. Reboot updated devices.
- If upgrading an SD7, repeat the steps above on the second engine to upgrade second I/O.

Now you are ready to update your Waves SoundGrid Server/s.

13. **Updating the Firmware of Waves SoundGrid DSP Servers**

On the main MultiRack menu, click or touch the **Window** button and choose **Inventory**.

In the **Inventory Window**, click the **Update** button next to **SoundGrid Server/s**, and follow prompts to complete update. Reboot updated devices.

If there is more than one SoundGrid connected to the switch, either as redundant servers or as part an **SD7** system, they will all be detected and can all be upgraded from the same **Inventory Window**.

The Upgrade procedure is now complete.

14. **Updating the Firmware of the Waves I/O Card from SoundGrid V1–2.5 to V9**

Using a computer with an internet connection, download **v1-to-v9-io-updater.zip** from http://www.waves.com/downloads/digico#v8

The **digico-firmware-updater_for_sdx-type** contains two executable files, listed below. One is for **SD7** only; another is for all other **SD** consoles.

SD7: www.waves.com/1lib/downloads/v8/digico/digico-firmware-updater-for-sd7-only.zip

Other SD Consoles: www.waves.com/1lib/downloads/v8/digico/digico-firmware-updater-for-sd8-type.zip

1. Run **v1-to-v9-io-updater.zip.** Choose your **USB flash drive** root folder as your destination and **Extract**.

2. Plug the **USB flash drive** into a **USB port** on your console.

3. Right-click on the **Start Menu** button in the windows tool-bar, and choose **Explore**.

4. Navigate to your USB flash drive and run the appropriate updater from your USB flash drive.

5. The updater will scan the network and will find the I/O device/s. From the drop-down menu, choose the I/O you would like to update.

6. Follow the status messages and instructions carefully to complete the update. At the end of the process, reboot the console.

7. After reboot, touch the **Waves** tab to open MultiRack SoundGrid.

8. On the main **MultiRack** menu click or touch **Window** button and choose **SoundGrid Inventory**.

9. In the **SoundGrid Inventory** window, hover above the I/O device; a pop up message will indicate the firmware version. Click **Update** next to relevant devices and follow the instructions.

10. If upgrading an **SD7**, repeat steps 4 – 9 above for the second engine.

The Upgrade procedure is now complete.

15. Updating DiGiCo Console Software or Offline Editor after Installing Waves V9

When updating the DiGiCo console software or offline editor after installing Waves V9, the update might erase necessary Waves files. These files can be retrieved from the following locations:

- On DiGiCo Console
  Go to **D:\Waves\SoundGrid\SG_Digico apps** folder,
  Copy the content and paste/overwrite to: **D:\SDx** folder.
- DiGiCo Offline Editor
  Go to **C:\Program Files(x86)\Waves\SoundGrid\SG_Digico apps backup** folder,
  Copy the content and paste/overwrite to: **C:\SDx** folder.