

USER MANUAL

MODEL:

KN-DSP100

Kramer Network Powered Server with DSP



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Introduction

Welcome to Kramer Electronics! Since 1981, Kramer Electronics has been providing a world of unique, creative, and affordable solutions to the vast range of problems that confront the video, audio, presentation, and broadcasting professional on a daily basis. In recent years, we have redesigned and upgraded most of our line, making the best even better!

Getting Started

We recommend that you:

- Unpack the equipment carefully and save the original box and packaging materials for possible future shipment.
- Review the contents of this user manual.



Go to www.kramerav.com/downloads/KN-DSP100 to check for up-to-date user manuals, application programs, and to check if firmware upgrades are available (where appropriate).

Achieving the Best Performance

- Use only good quality connection cables (we recommend Kramer high-performance, high-resolution cables) to avoid interference, deterioration in signal quality due to poor matching, and elevated noise levels (often associated with low quality cables).
- Do not secure the cables in tight bundles or roll the slack into tight coils.
- Avoid interference from neighboring electrical appliances that may adversely influence signal quality.
- Position your Kramer **KN-DSP100** away from moisture, excessive sunlight and dust.

Safety Instructions



Caution:

- This equipment is to be used only inside a building. It may only be connected to other equipment that is installed inside a building.
- There are no operator serviceable parts inside the unit.



Warning:

- Use only the power cord that is supplied with the unit.
- Disconnect the power and unplug the unit from the wall before installing.
- Do not open the unit. High voltages can cause electrical shock! Servicing by qualified personnel only.
- To ensure continuous risk protection, replace fuses only according to the rating specified on the product label which located on the bottom of the unit.

Recycling Kramer Products

The Waste Electrical and Electronic Equipment (WEEE) Directive 2002/96/EC aims to reduce the amount of WEEE sent for disposal to landfill or incineration by requiring it to be collected and recycled. To comply with the WEEE Directive, Kramer Electronics has made arrangements with the European Advanced Recycling Network (EARN) and will cover any costs of treatment, recycling and recovery of waste Kramer Electronics branded equipment on arrival at the EARN facility. For details of Kramer's recycling arrangements in your particular country go to our recycling pages at www.kramerav.com/support/recycling.

Overview

Congratulations on purchasing your Kramer **KN-DSP100 Kramer Network Powered Server with DSP**.

KN-DSP100 is a 19" 1U server with pre-installed Kramer Network Enterprise Management Platform and added DSP functionality. In addition to the full functionality of Kramer Network, **KN-DSP100** provides DSP over IP and enables simultaneous processing of 64 input channels and distribution to over 1000 outputs. The unit is fully compatible with any Dante™ audio signal and provides auto-detection of all Kramer devices and their functionality. **KN-DSP100** seamlessly integrates with standard IT infrastructures and simplifies the user experience with a single point of contact for both management and support of all audio devices. The device's processing capability is powered by Waves Audio™, the world-leading developers of audio DSP technologies.

KN-DSP100 provides exceptional quality and advanced and user-friendly operation and control.

All product names and trademarks are the property of their respective owners.

Exceptional Quality

- Processes by Waves Audio™, including: Q10 Paragraphic EQ, GEQ 30-band Graphic EQ, X-FDBK Automatic Feedback Eliminator, WNS Automatic Noise Suppressor, MaxxVolume Dual Compressor for High & Low Levels, L1 Peak Limiter / Level Maximizer, C1 Compressor.

Advanced and User-friendly Operation

- Powered by Kramer Network.
- Over 1000 inputs and outputs using Dante™.
- 64 processed inputs.
- Easy control via the Kramer Network virtual matrix: click and connect any source to any destination and create predefined scenarios for video and Dante™ streams.
- User-friendly Web-based GUI – Easily access and use from anywhere, anytime.
- Automated device detection – The platform instantly and automatically identifies devices in the network, reducing configuration time.

- Visual & topology AV system mapping – Easily drill down to a specific network, site, building or room to start managing AV devices.
- System & connection status at a glance – Quickly identify critical issues in the network and see logical-video-link status at a glance.

Typical Applications

KN-DSP100 is ideal for the following typical applications:

- Airports
- Hotels
- Court rooms
- Hospitals

Defining KN-DSP100 Kramer Network Powered Server with DSP

This section defines KN-DSP100.

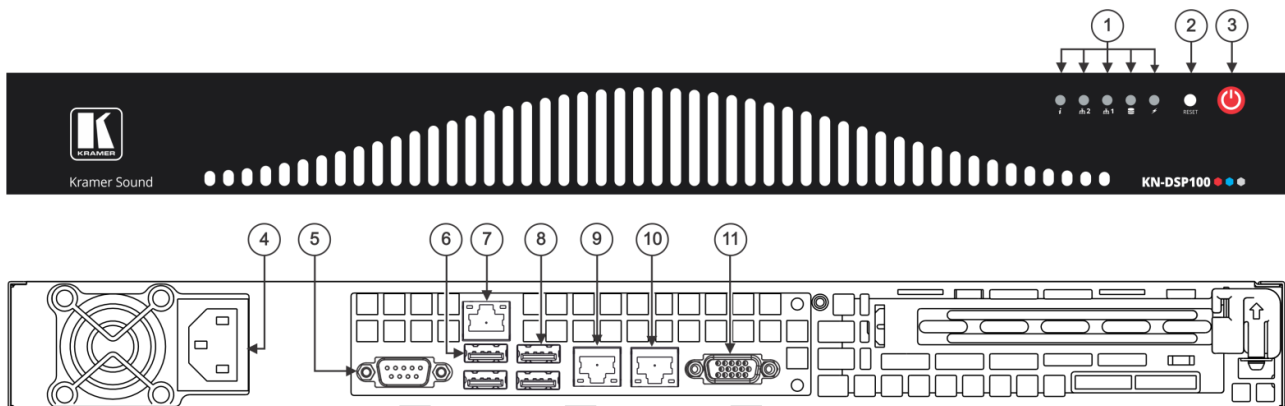







Figure 1: KN-DSP100 Kramer Network Powered Server with DSP

#	Feature	Function
①	Indicator LEDs	 Flashes to indicate fan failure. Lights continuously to indicate system overheat.
		 Flashes when there is network activity on LAN port 2.
		 Flashes when there is network activity on LAN port 1.
		 Flashes to indicate hard drive activity.
		 Lights when the device is powered.
②	Reset Button	Use to reboot the system.
③	Power Button	Use to toggle setting the device to standby mode / turning the device on. To turn the power off, disconnect the power connector from the mains.
④	Power Socket	Connect to the power cord and to the mains electricity.
⑤	RS-232 9-pin D-sub Connector	Connect to a system controller.
⑥	USB 2.0 Ports (2)	Connect to a keyboard and mouse (if required).
⑦	IPMI (Intelligent Platform Management Interface) LAN RJ-45 Connector	Use for remote access.
⑧	USB 3.0 Ports (2)	Connect to USB devices.
⑨	LAN 1 ETHERNET RJ-45 Connector	Connect to a switcher/router for audio streaming (Dante™).
⑩	LAN 2 ETHERNET RJ-45 Connector	Connect to the Ethernet.
⑪	VGA 15-pin HD Connector	Connect to a display.

Installing KN-DSP100 in a Rack

This section provides instructions for rack mounting the **KN-DSP100**. Before installing in a rack, verify that the environment is within the recommended range:

- Operation temperature – 0° to 40°C (32 to 104°F).
- Storage temperature – -40° to +70°C (-40 to +158°F).
- Humidity – 10% to 90%, RHL non-condensing.

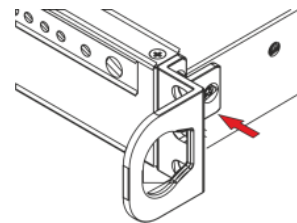


When installing on a 19" rack, avoid hazards by taking care that:

- It is located within recommended environmental conditions. Operating ambient temperature of a closed or multi-unit rack assembly may exceed ambient room temperature.
- Once rack mounted, there is enough air flow around **KN-DSP100**.
- The **KN-DSP100** is placed upright in the correct horizontal position.
- You do not overload the circuit(s). When connecting the **KN-DSP100** to the supply circuit, overloading the circuits may have a detrimental effect on overcurrent protection and supply wiring. Refer to the appropriate nameplate ratings for information. For example, for fuse replacement, see the value printed on the product label.
- The **KN-DSP100** is earthed (grounded) and connected only to an electricity socket with grounding. Pay particular attention when electricity is supplied indirectly (for example, when the power cord is not plugged directly into the wall socket but to an extension cable or power strip). Use only the supplied power cord.

To rack-mount the KN-DSP100:

1. Attach both ear brackets to the **KN-DSP100**:
Remove the screws from each side of the **KN-DSP100**, and replace them through the ear brackets.
2. Place the ears of the **KN-DSP100** against the rack rails and insert the appropriate screws (not provided) through each of the holes in the rack ears.



- Detachable rack ears can be removed for desktop use.
- Always mount the **KN-DSP100** in the rack before connecting any cables or power.

Connecting KN-DSP100



Always switch off the power to each device before connecting it to your **KN-DSP100**. After connecting your **KN-DSP100**, connect its power and then switch on the power to each device.

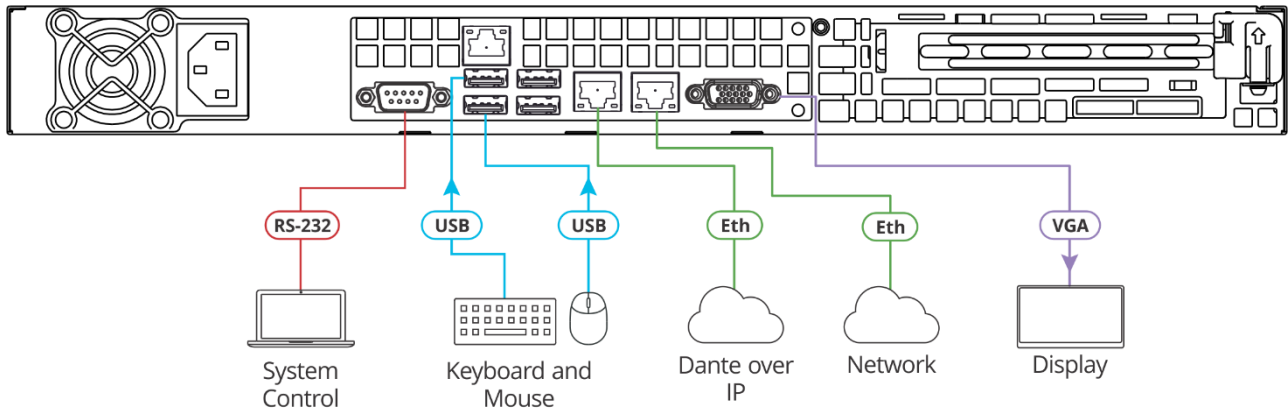


Figure 2: Connecting to the KN-DSP100 Rear Panel

To connect KN-DSP100 (as illustrated in Figure 2):

1. Connect a laptop (for system control) to the RS-232 9-pin D-sub connector (5).
2. Connect a keyboard and mouse to the USB ports (6).
3. Connect the following ports to the Ethernet:
 - LAN 1 RJ-45 port (9) to audio streaming via the Ethernet.
 - LAN 2 RJ-45 port (10) to a network.



To operate **KN-DSP100** you need at least 1 Dante device connected to the system.

4. Connect the VGA 15-pin HD connector (11) to a display.
5. Connect the power cord to the power socket (4) and to the mains electricity.
We recommend that you use only the power cord that is supplied with this machine.

Connecting KN-DSP100 via the Ethernet Port

You can connect to the **KN-DSP100** via Ethernet using either of the following methods:

- [Connecting the Ethernet Port Directly to a PC](#) on page [7](#).
- [Connecting the Ethernet Port via a Network Hub or Switch](#) on page [9](#).



If you want to connect via a router and your IT system is based on IPv6, speak to your IT department for specific installation instructions.

Connecting the Ethernet Port Directly to a PC

You can connect the Ethernet port of the **KN-DSP100** directly to the Ethernet port on your PC using a crossover cable with RJ-45 connectors.



This type of connection is recommended for identifying the **KN-DSP100** with the factory configured default IP address.

After connecting the **KN-DSP100** to the Ethernet port, configure your PC as follows:

1. Click **Start > Control Panel > Network and Sharing Center**.
2. Click **Change Adapter Settings**.
3. Highlight the network adapter you want to use to connect to the device and click **Change settings of this connection**.

The Local Area Connection Properties window for the selected network adapter appears as shown in [Figure 3](#).

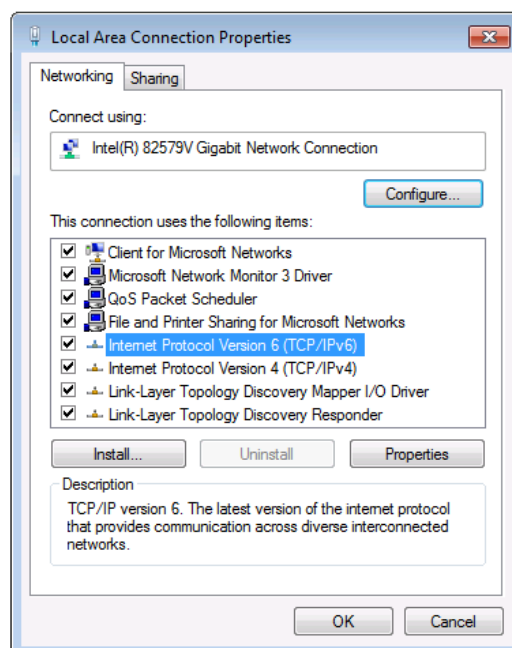


Figure 3: Local Area Connection Properties Window

4. Highlight either **Internet Protocol Version 6 (TCP/IPv6)** or **Internet Protocol Version 4 (TCP/IPv4)** depending on the requirements of your IT system.
5. Click **Properties**.
The Internet Protocol Properties window relevant to your IT system appears as shown in [Figure 4](#) or [Figure 5](#).

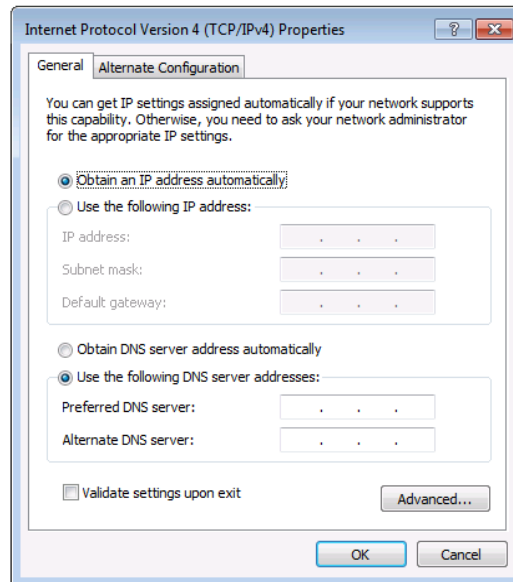


Figure 4: Internet Protocol Version 4 Properties Window

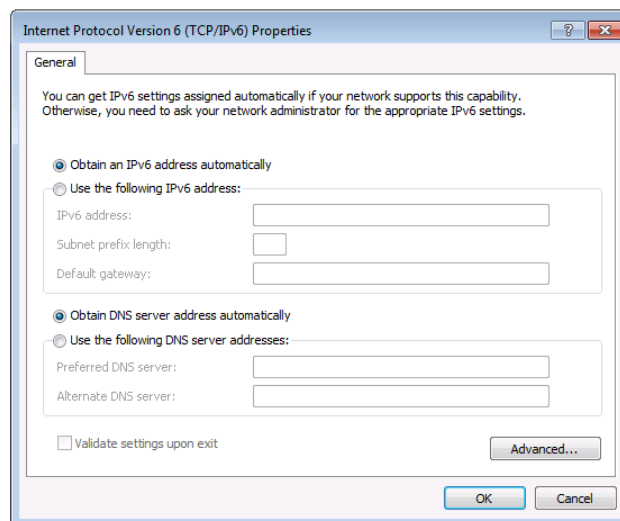


Figure 5: Internet Protocol Version 6 Properties Window

6. Select **Use the following IP Address** for static IP addressing and fill in the details as shown in [Figure 6](#).
For TCP/IPv4 you can use any IP address in the range 192.168.1.1 to 192.168.1.255 (excluding 192.168.1.39) that is provided by your IT department.

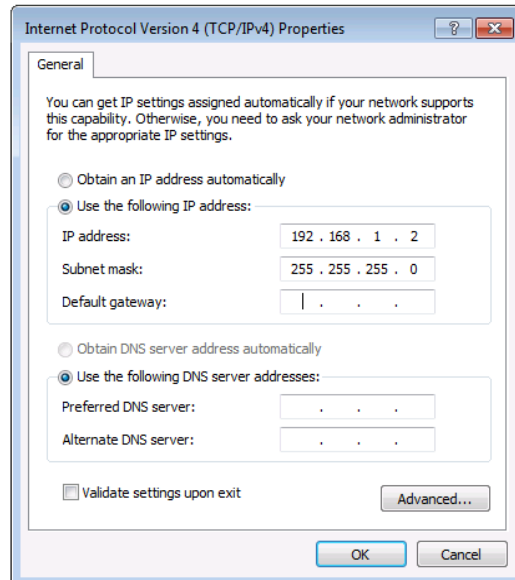


Figure 6: Internet Protocol Properties Window

7. Click **OK**.
8. Click **Close**.

Connecting the Ethernet Port via a Network Hub or Switch

You can connect the Ethernet port of the **KN-DSP100** to the Ethernet port on a network hub or using a straight-through cable with RJ-45 connectors.



Since **KN-DSP100** incorporates an embedded Layer 2 Ethernet switch, we recommend that this port only is connected to the network.

Peripheral devices that are connected to **KN-DSP100** via HDBT ports and have Ethernet ports as well, should not be connected to the network and can be used for Ethernet IP clients.

Connecting the Ethernet port of the HDBT transmitters/receivers to the network switch port in conjunction with Ethernet port network connection on the **KN-DSP100**, will cause network loops that may cause Ethernet switch network breakdown.

Control Configuration via the Ethernet Port

To control several units via Ethernet, connect the Master unit (Device 1) via the Ethernet port to the Ethernet port of your PC. Use your PC provide initial configuration of the settings (see [Connecting KN-DSP100 via the Ethernet Port](#) on page 7).

Preparing KN-DSP100 for Operation

This section describes how to verify that **KN-DSP100** is ready for operation.

To prepare KN-DSP100:

1. Connect power to the device and press the power button (3).
The following window appears:

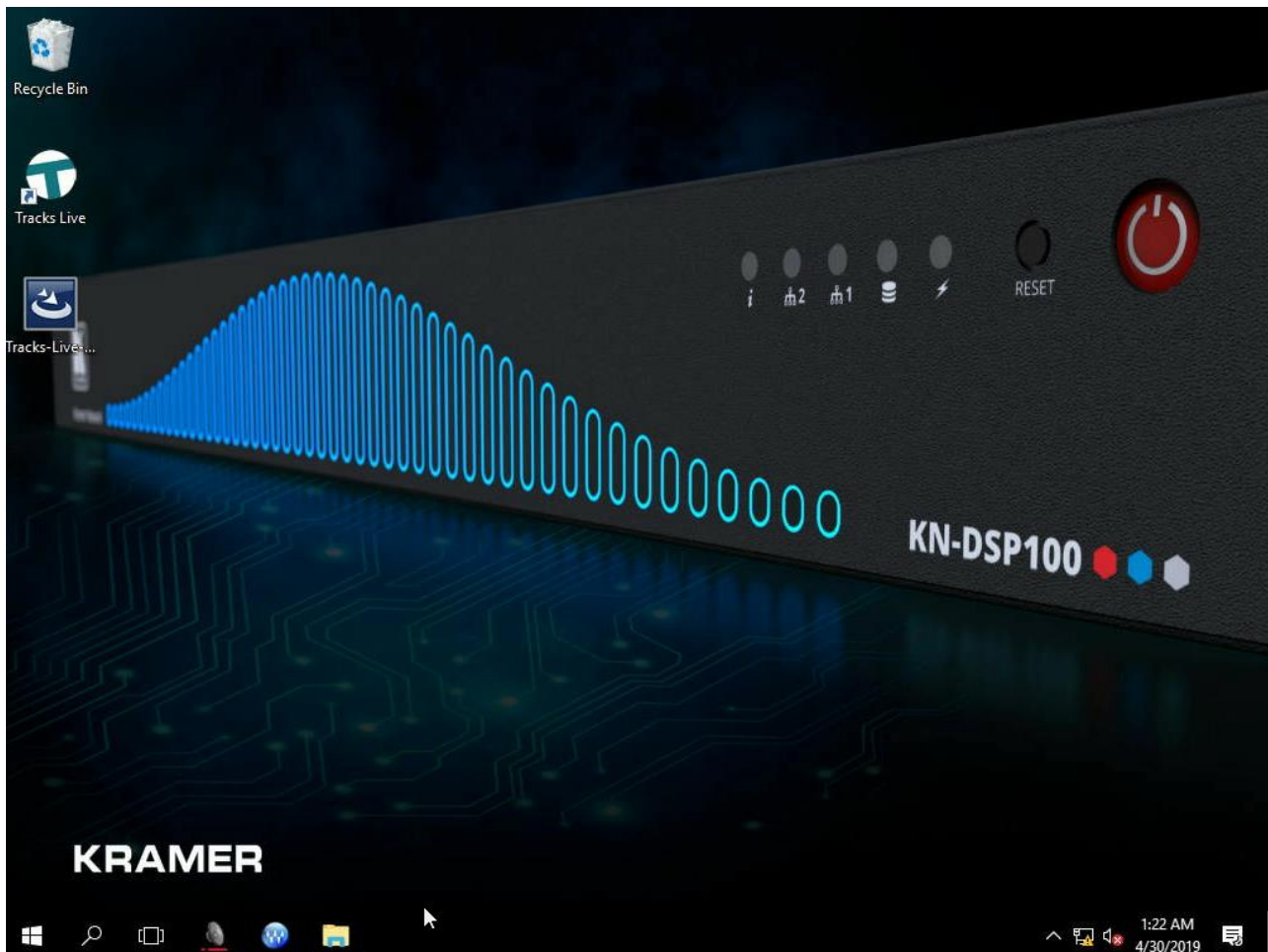


Figure 7: Desktop View

2. Wait for the system to initialize.



You must wait 5 minutes for the system to initialize.

3. Check that the Dante virtual Soundcard (DVS) card is defined as follows:

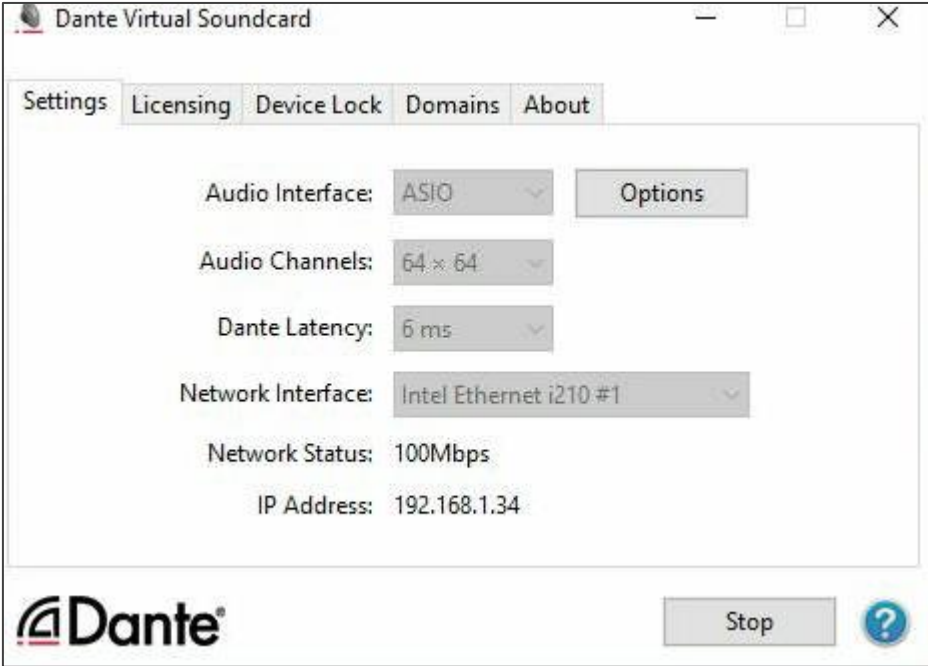


Figure 8: Dante Virtual Soundcard Window

4. Click **Options** and verify that the settings are as follows:

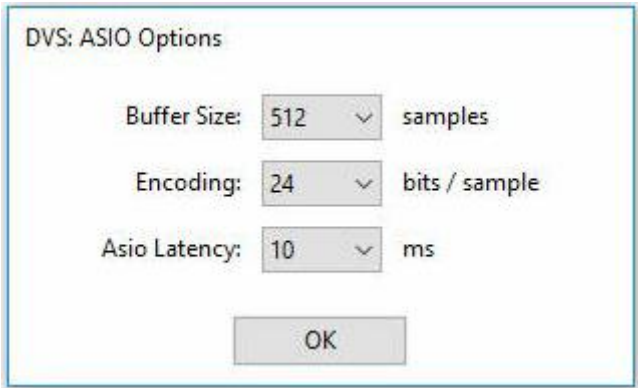


Figure 9: ASIO Options Window

- 5. Click **OK**.
- 6. Minimize the Dante Virtual Soundcard window.

7. Verify that the Waves MultiRack window appears.

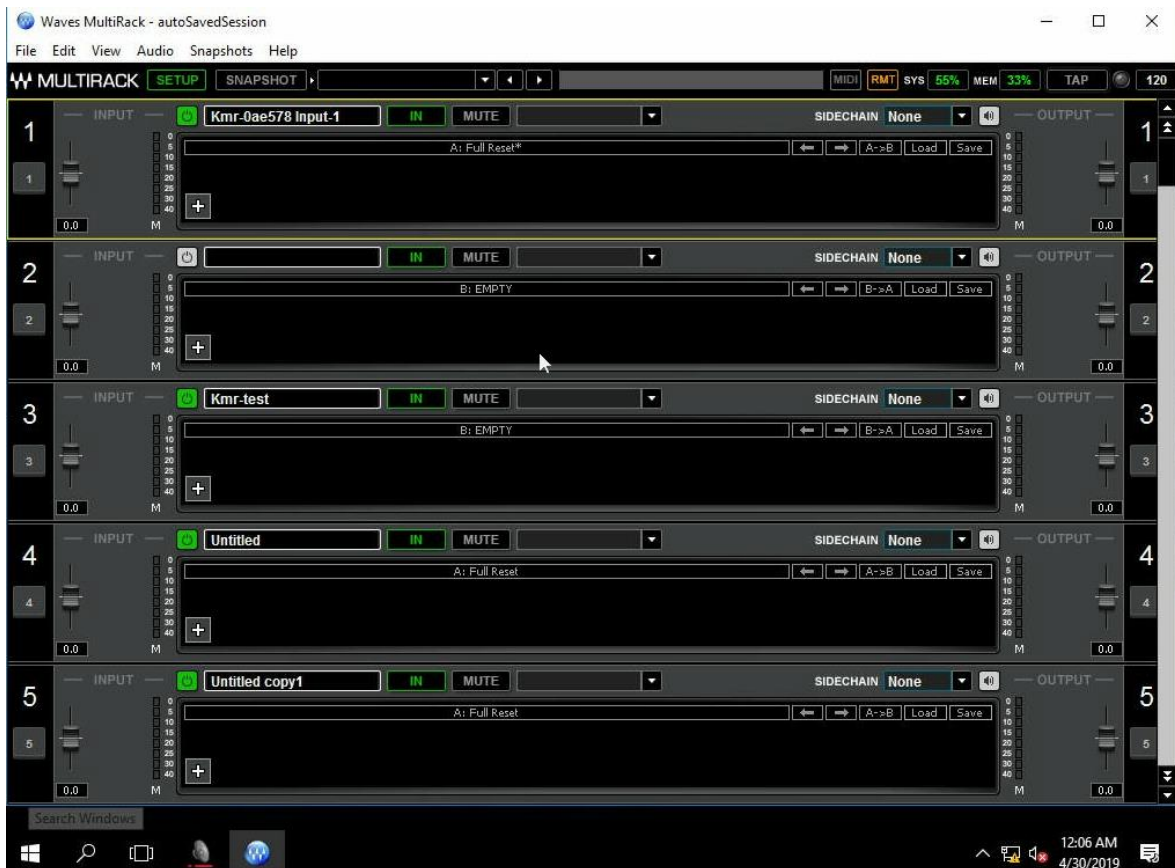


Figure 10: Waves MultiRack Main Window

8. Verify that all the channels appear empty.

9. Minimize the MultiRack Window.

10. Open Internet Explorer. Kramer Network access window opens.

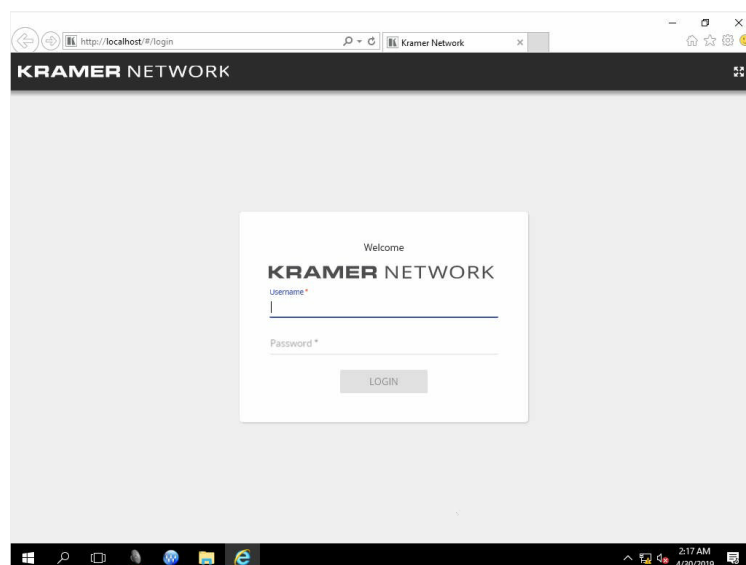


Figure 11: Kramer Network Welcome Page


11. Enter Username and Password (Super and 12345, by default).

12. Click **LOGIN**.

Kramer Network is ready to use.

Using Kramer Network

This section briefly describes the basic steps for using **Kramer Network**.

Go to [www.kramerav.com/manual/Kramer Network](http://www.kramerav.com/manual/Kramer%20Network) for detailed instructions or click  after **Kramer Network** uploads to access the tutorial documents.

Once **Kramer Network** uploads, it automatically scans for devices on the web. In the following example, an **FC-404NET** device is connected to **KN-DSP100** via a router.

To configure Kramer Network and the streaming devices:

1. Enter **Kramer Network** Username and Password (Super and 12345, by default). The system automatically discovers the **FC-404NET** inputs and outputs.
2. Set the system parameters.
3. Create a streaming group and add the inputs (transmitters) to that streaming group (my streaming group).
4. Create a location (Sound Room) and associate the outputs (receivers) to that room.

To manage audio streaming:

1. In the navigation pane click **Manage > MATRIX VIEW**.
2. Click + to open the Pro AV device list.
3. Select **Audio over IP**.

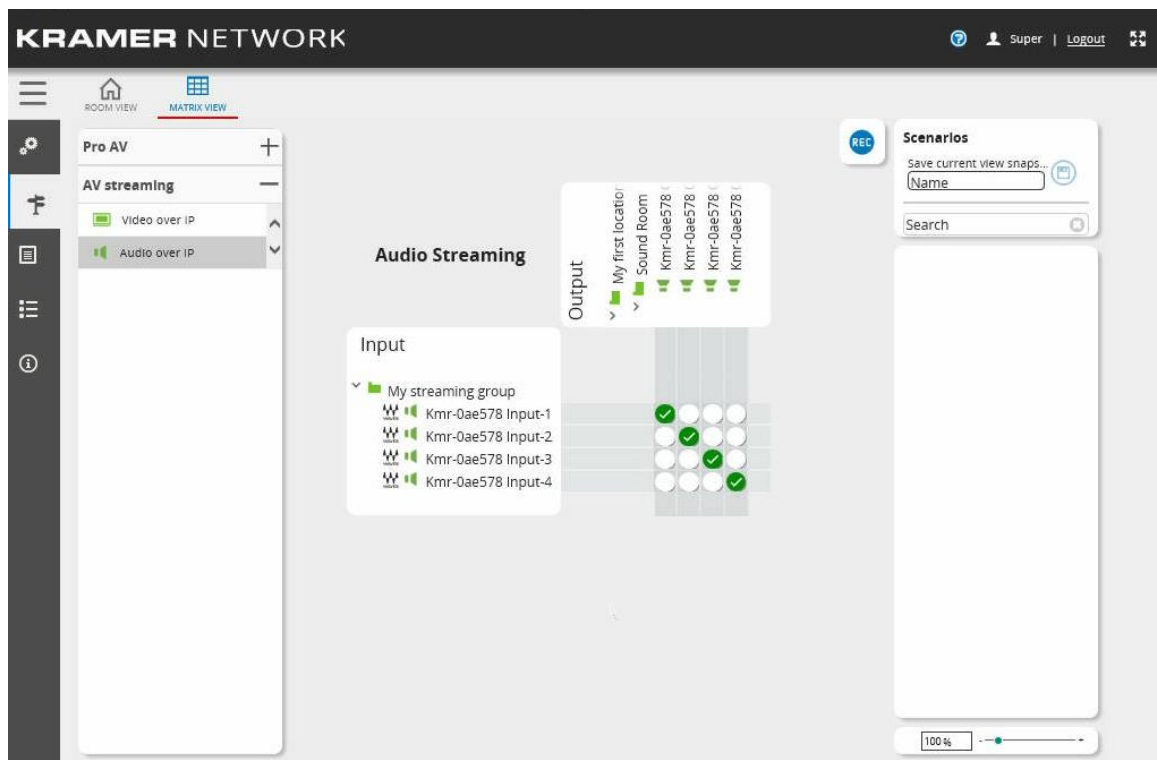



Figure 12: Kramer Network – Audio over IP Streaming

4. Click a white cross-point button to connect an input to an output. For example, in [Figure 12](#), Input 1 (in My Streaming Group) is routed to Output 1 (in the Sound Room).

Processing Audio Streaming Signals

You can process the streaming devices directly via Kramer Network audio built-in plug-in presets.

To configure the audio features:

1. Select Manage>MATRIX VIEW>AV streaming>Audio over IP.
2. Click the Wave icon next to the input:  Kmr-0ae578 Input-1 .
Currently, the signal is routed unprocessed. The following window appears:

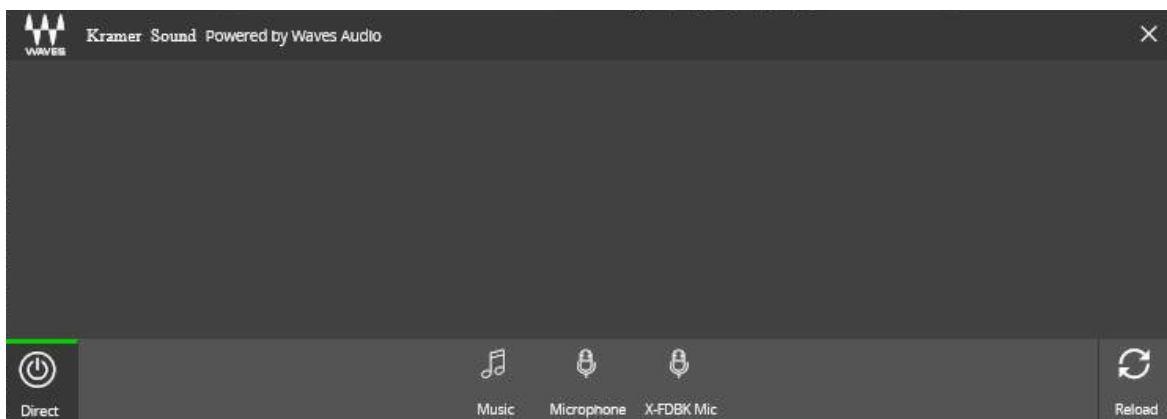






Figure 13: Kramer Sound – Presets Window

3. On the lower left side, the green **Direct** button () indicates that currently the signal is not processed.
4. For each input, choose one of the following:
 - Route it directly (with no processing).
 - Process and define the signal as music (see [Processing Music](#) on page 15), microphone (see [Processing Speech](#) on page 17), or X-FDBK Mic (see [Processing Microphone Feedback](#) on page 18).
5. For each plug-in preset you can perform the following:
 - Click **IN** to enable or disable plugins. When enabled, all the individually enabled plugins are active. When disabled, the signal passes directly from the input to the output without plug-ins.
This can be used to test the signal with/without plug-ins.
 - Click **MUTE** to silence the plugins but not remove them from CPU processing. Muting is performed on the Rack's input to allow reverb tails and delay taps to fade gracefully.
 - Click **ACTIVE** to disable/enable a rack, mute all signals routed to the rack and remove it from CPU processing.
Turning off an unnecessary rack results in better CPU handling.

- Change the rack name by typing a new name in the text box and clicking . The new name appears in the Kramer Network Matrix view as well as in Waves MultiRack.
- Click  to route inputs to outputs directly, by-passing Wave MultiRack.
- Click  to reload the plug-ins.

Processing Music



Select Music signal processing when the speakers are used to output music. The Kramer Sound window for music includes several built-in plug-ins for processing the audio signals. You can adjust the data (where available), mute, or activate plug-ins.



Note that if you change any plug-in parameter via Waves MultiRack, the Music preset changes and the following message appears:

The preconfigured preset has been changed. Save these changes as a new preset in MultiRack or choose another preset to ignore these changes. To save a new preset, see [Creating Custom Presets](#) on page [20](#).

To process the Music signal:

1. Click . The Kramer Sound window appears (see [Figure 13](#)).
2. Click . The Music processing window appears:

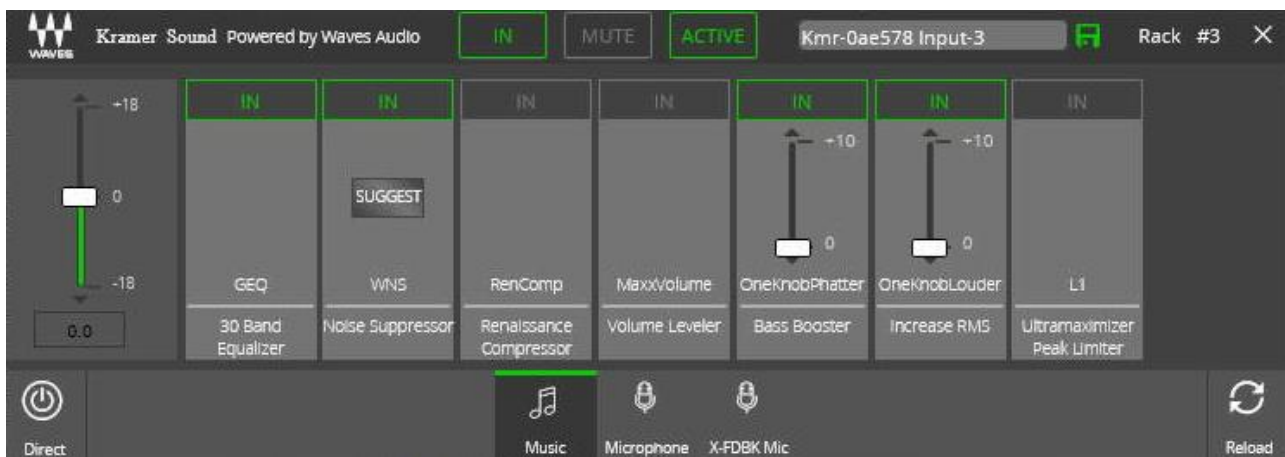


Figure 14: Kramer Sound – Music Preset

3. Adjust the plug-ins defined in the following table:



Plug-in	Function	Description
GEQ	30 Band Equalizer	30-band graphic equalizer plugin with classic Mono and stereo components. For further details, see www.waves.com/1lib/pdf/plugins/geq-graphic-equalizer.pdf
WNS	Noise Suppressor	A real-time noise reduction plugin for cleaning dialog tracks (indoor and on-location recordings with constant or modulating environment noise). WNS reduces noise from dialog, narration, voiceovers and broadcast, with minimal artifacts. Click SUGGEST to automatically adjust the plugin parameters to provide an optimized setup. For further details, see www.waves.com/1lib/pdf/plugins/wns-noise-suppressor.pdf
RenComp	Renaissance Compressor	A multi-purpose compressor that delivers musical results on any vocal or instrument, including drums, bass and guitar. Warm and present, yet as transparent as you want it to be. Easy to use and light on CPU, this classic plugin is the go-to compressor for thousands of mixing engineers and musicians. For further details, see www.waves.com/1lib/pdf/plugins/renaissance-compressor.pdf
MaxxVolume	Volume Leveler	Performs four different dynamics processing functions: gating, low level compression, leveling, and compression. For further details, see www.waves.com/1lib/pdf/plugins/maxxvolume.pdf
OneKnobPhatter	Bass Booster	Provides a generous analog-style low shelf filter to fatten up any source. For tracks that seem too thin, Phatter is a quick way to add bottom, weight, and body to instruments, drums, and vocals alike, to bring them just a bit closer in the mix. For further details, see www.waves.com/1lib/pdf/plugins/oneknob-series.pdf
OneKnobLouder	Increase RMS	A dynamics processor that makes your tracks louder. If you have a track with weak levels, rather than just boost the peaks, Louder increases its RMS by up to 24dB. And if your source level is already loud, it delivers a moderate loudness boost. For further details, see www.waves.com/1lib/pdf/plugins/oneknob-series.pdf
L1	Ultramaximizer Peak Limiter	Advanced level maximizer, look-ahead peak limiter and high-resolution re-quantizer. For further details, see www.waves.com/1lib/pdf/plugins/l1-ultramaximizer.pdf

4. Use the slide to set the volume or type the audio level below the slide.

Processing Speech

Select Microphone signal processing when the speakers are used to output speech. The Kramer Sound window for speech includes several built-in plugins for processing the audio signals. You can adjust the data (where available), mute, or activate plug-ins.

To process the Microphone signal:

1. Click . The Kramer Sound window appears (see [Figure 13](#)).
2. Click . The Microphone processing window appears:

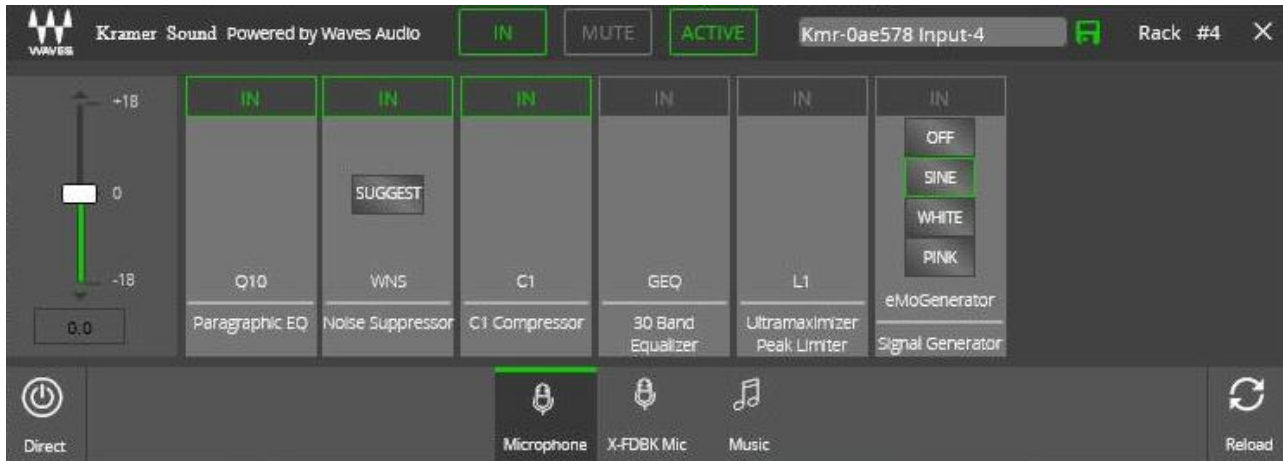


Figure 15: Kramer Sound – Microphone Preset

3. Adjust the plug-ins defined in the following table:

Plug-in	Function	Description
Q10	Paragraphic Equalizer	10 bands of precision equalization for mixing and mastering – a go-to tool for both surgical repair and gentle coloring. For further details, see www.waves.com/1lib/pdf/plugins/q10-equalizer.pdf
WNS	Noise Suppressor	Real-time noise reduction plugin for cleaning dialog tracks (indoor and on-location recordings with constant or modulating environment noise). WNS reduces noise from dialog, narration, voiceovers and broadcast, with minimal artifacts. Click SUGGEST to automatically adjust the plugin parameters to provide an optimized setup. For further details, see www.waves.com/1lib/pdf/plugins/wns-noise-suppressor.pdf
C1	C1 Compressor	Compressor plugin with sidechain, compression, expansion, gating, and equalization. C1 is a true production workhorse, featuring three independent modules which can be used separately or combined for maximum flexibility. For further details, see www.waves.com/plugins/c1-compressor
GEQ	30 Band Equalizer	30-band graphic equalizer plugin with classic Mono and stereo components. For further details, see www.waves.com/1lib/pdf/plugins/geq-graphic-equalizer.pdf
L1	Ultramaximizer Peak Limiter	Advanced level maximizer, look-ahead peak limiter and high-resolution re-quantizer. For further details, see www.waves.com/1lib/pdf/plugins/l1-ultramaximizer.pdf



Plug-in	Function	Description
eMoGenerator	Signal Generator	Generates one of three selectable signal types when ON : <ul style="list-style-type: none"> • SINE Wave: for sweeping through entire frequency ranges or even for tuning instruments to middle A. • WHITE Noise: for SPL measurements. • PINK Noise: for testing and tuning the live sound-system. For further details, see www.waves.com/1lib/pdf/plugins/emo-generator.pdf

4. Use the slide to set the volume or type the audio level below the slide.

Processing Microphone Feedback

Select X-FDBK Mic to test the feedback on in microphone signal processing when the speakers are used to output speech. The Kramer Sound window for microphone feedback includes several built-in plugins for testing signals. You can adjust the data, mute, or add plugins.

To test the microphone feedback:

1. Click . The Kramer Sound window appears (see [Figure 13](#)).
2. Click . The Microphone Feedback processing window appears:

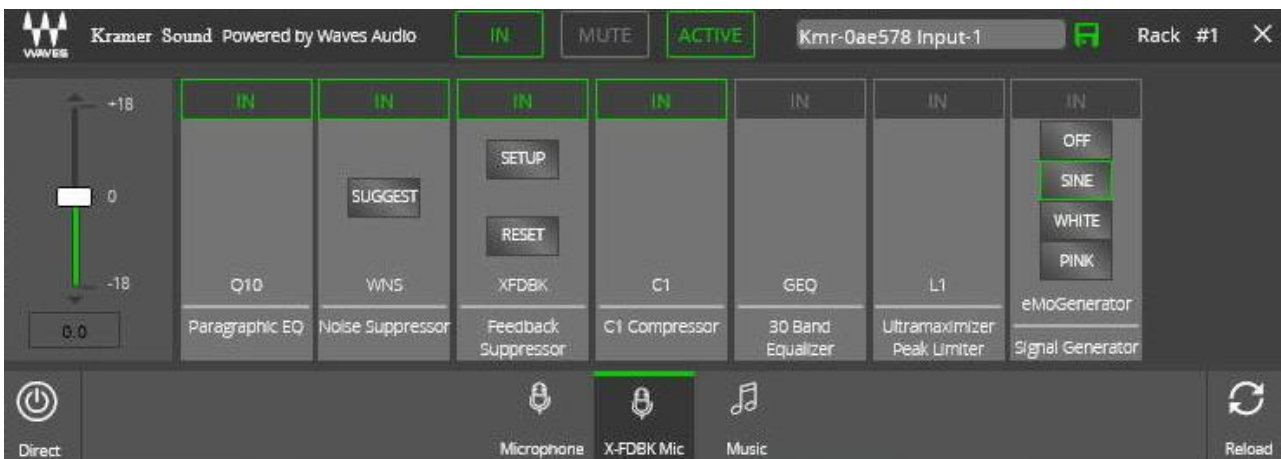


Figure 16: Kramer Sound – Microphone Feedback Preset

3. Adjust the plug-ins defined in the following table:

Plug-in	Function	Description
Q10	Paragrophic Equalizer	10 bands of precision equalization for mixing and mastering – a go-to tool for both surgical repair and gentle coloring. For further details, see www.waves.com/1lib/pdf/plugins/q10-equalizer.pdf
WNS	Noise Suppressor	Real-time noise reduction plugin for cleaning dialog tracks (indoor and on-location recordings with constant or modulating environment noise). WNS reduces noise from dialog, narration, voiceovers and broadcast, with minimal artifacts. Click SUGGEST to automatically adjust the plugin parameters to provide an optimized setup. For further details, see www.waves.com/1lib/pdf/plugins/wns-noise-suppressor.pdf

Plug-in	Function	Description
X-FDBK	Feedback Suppressor	<p>A feedback elimination plugin that identifies the precise frequencies that cause feedback and cuts them, dramatically shortening the setup time of monitors and PA speakers. To cut out the microphone feedback before it is live:</p> <ol style="list-style-type: none"> Set the microphone as loud as possible before the system begins to feedback. Walk around the area where the speaker will be talking. Click SETUP in the different areas to activate the X-feedback detection engine. The button turns red. The plug-in turns off automatically after 1 minute and if microphone feedback is detected, the filter is added with appropriate Q and amplitude to stop the feedback. Click SETUP as many times as needed to suppress feedback. <p>Click RESET to clear all the filters. For further details, see www.waves.com/1lib/pdf/plugins/x-fdbk.pdf</p>
C1	C1 Compressor	<p>Compressor plugin with sidechain, compression, expansion, gating, and equalization. C1 is a true production workhorse, featuring three independent modules which can be used separately or combined for maximum flexibility. For further details, see www.waves.com/plugins/c1-compressor</p>
GEQ	30 Band Equalizer	<p>30-band graphic equalizer plugin with classic Mono and stereo components. For further details, see www.waves.com/1lib/pdf/plugins/geq-graphic-equalizer.pdf</p>
L1	Ultramaximizer Peak Limiter	<p>Advanced level maximizer, look-ahead peak limiter, and high-resolution re-quantizer. For further details, see www.waves.com/1lib/pdf/plugins/l1-ultramaximizer.pdf</p>
eMoGenerator	Signal Generator	<p>Generates one of three selectable signal types when ON:</p> <ul style="list-style-type: none"> SINE Wave: for sweeping through entire frequency ranges or even for tuning instruments to middle A. WHITE Noise: for SPL measurements. PINK Noise: for testing and tuning the live sound-system. <p>For further details, see www.waves.com/1lib/pdf/plugins/emo-generator.pdf</p>

- Use the slide to set the volume or type the audio level below the slide.

Creating Custom Presets

You can use Waves MultiRack to create new presets that can be used to process audio signals via **Kramer Network**.



For further information regarding MultiRack operation, see:

www.waves.com/1lib/pdf/live/multirack-manual.pdf

For details regarding Waves MultiRack toolbar see:

www.waves.com/1lib/pdf/plugins/waves-system-guide.pdf

To create a new custom preset:

1. Select **Waves MultiRack** from the Task Bar.



Figure 17: Selecting Waves

2. Select a rack.



You can select a rack that is not assigned to a streaming input and is empty.



Figure 18: Waves Rack

- Click **+** and select a plug-in from the drop-down list.

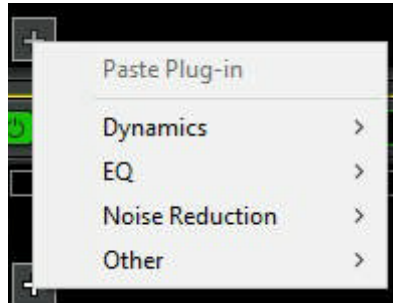


Figure 19: Selecting a Plug-In



You can click **Load** and select an existing preset if you want to base your new preset on an existing one.



Figure 20: Adding Plug-Ins to the Rack

- Repeat step 3 as required.



Figure 21: Plug-Ins in the Rack

- Within the rack click **Save**. The following window appears:



Figure 22: Saving the Preset

- Select **Put into Preset Menu As...** to have the preset appear in the presets lists when loading a preset.



For other saving options go to www.waves.com/1lib/pdf/plugins/waves-system-guide.pdf

7. Type the Preset name.

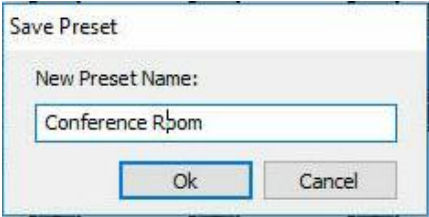


Figure 23: Preset Name

8. Click **Ok**. The preset appears in the preset list when loading a preset.

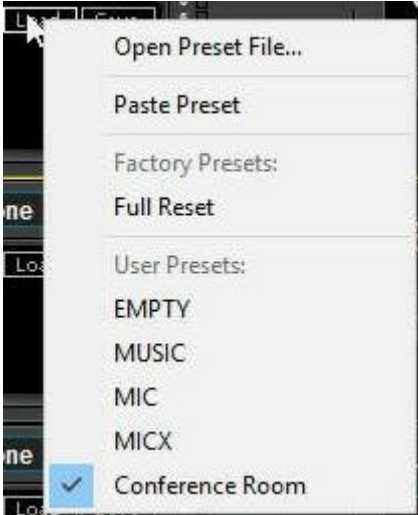


Figure 24: Loading User Presets List

9. The custom preset appears in Kramer Sound window within Kramer Network.

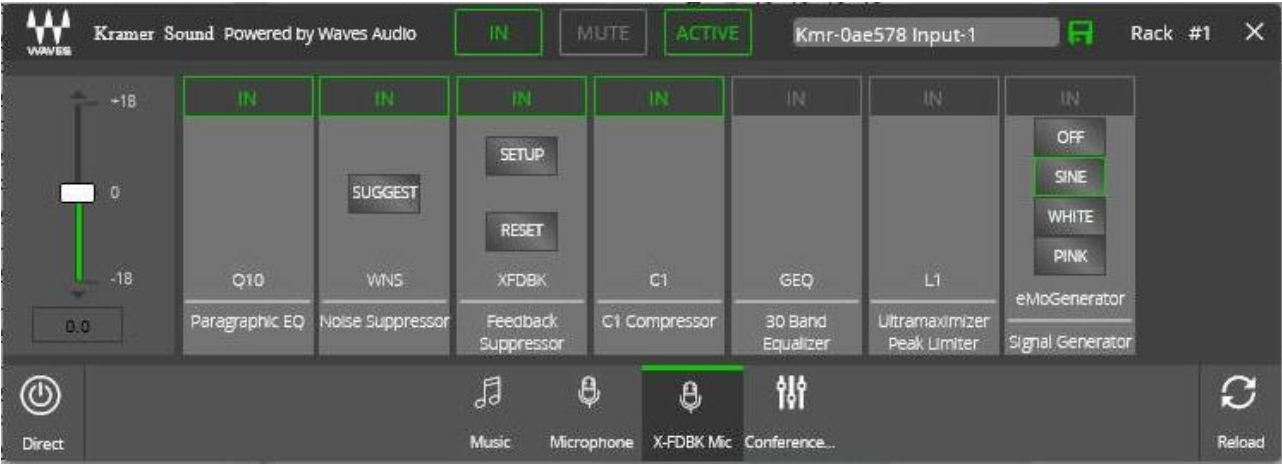



Figure 25: Custom Preset Added

10. Click **Conference** (for example) to select a custom preset for an input.



Figure 26: Selecting a Custom Preset

 When using a custom preset, you can adjust the plug-in parameters only via Waves.

To delete a preset:

1. press **Ctrl** on your keyboard while clicking **Load**. The list of presets appears:

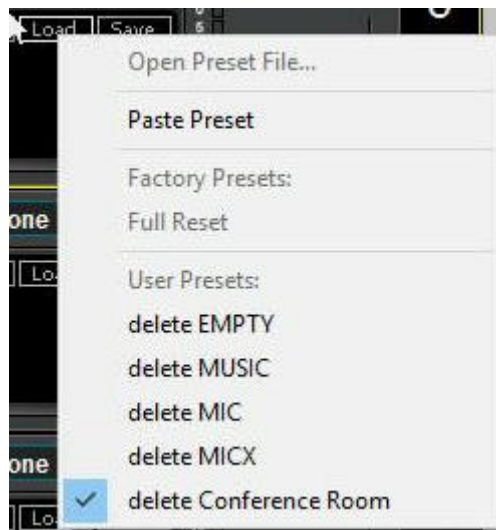


Figure 27: Deleting a Preset

2. Select a preset to delete and in the confirmation window, click **OK**. The preset is removed from the reset list.



Be careful not to delete any of the **Kramer Network** presets.

Technical Specifications

Output	VGA	On a 15-pin HD connector
Ports	RS-232	On a 9-pin D-sub connector
	2 USB 2.0	On USB type-A ports
	2 USB 3.0	On USB type-A ports
	3 Ethernet	On RJ-45 connectors
Controls	Indication LEDs	Fan failure, network activity (LAN 1 and LAN 2), hard-drive activity, power
	Buttons	Reboot the system, power
Server	Processor	3.5GHz quad core
	Main Memory	8GB, high speed
	Storage	60GB, solid-state drive
Power	Consumption	100-240V AC, 600VA max.
	Source	100-240V AC, 5A
Environmental Conditions	Operating Temperature	0° to +40°C (32° to 104°F)
	Storage Temperature	-40° to +70°C (-40° to 158°F)
	Humidity	10% to 90%, RHL non-condensing
Regulatory Compliance	Safety	CE
	Environmental	RoHs, WEEE
Enclosure	Size	1U
	Type	Aluminum
	Cooling	Fans
General	Net Dimensions (W, D, H)	44cm x 37.2cm x 4.5cm (17.3" x 14.6" x 1.8")
	Shipping Dimensions (W, D, H)	52.6cm x 47.5cm x 18.4cm (20.7" x 18.7" x 7.2")
	Net Weight	5.7kg (12.6lbs)
	Shipping Weight	7.7kg (17lbs) approx.
	Kramer Network	Default user: Super Default password: 12345
Accessories	Included	2 Power cord types (US + European), VGA to HDMI™ cable adapter, rack ears
Specifications are subject to change without notice at www.kramerav.com		

The terms HDMI, HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.

The warranty obligations of Kramer Electronics Inc. ("Kramer Electronics") for this product are limited to the terms set forth below:

What is Covered

This limited warranty covers defects in materials and workmanship in this product.

What is Not Covered

This limited warranty does not cover any damage, deterioration or malfunction resulting from any alteration, modification, improper or unreasonable use or maintenance, misuse, abuse, accident, neglect, exposure to excess moisture, fire, improper packing and shipping (such claims must be presented to the carrier), lightning, power surges, or other acts of nature. This limited warranty does not cover any damage, deterioration or malfunction resulting from the installation or removal of this product from any installation, any unauthorized tampering with this product, any repairs attempted by anyone unauthorized by Kramer Electronics to make such repairs, or any other cause which does not relate directly to a defect in materials and/or workmanship of this product. This limited warranty does not cover cartons, equipment enclosures, cables or accessories used in conjunction with this product.

Without limiting any other exclusion herein, Kramer Electronics does not warrant that the product covered hereby, including, without limitation, the technology and/or integrated circuit(s) included in the product, will not become obsolete or that such items are or will remain compatible with any other product or technology with which the product may be used.

How Long this Coverage Lasts

The standard limited warranty for Kramer products is seven (7) years from the date of original purchase, with the following exceptions:

1. All Kramer VIA hardware products are covered by a standard three (3) year warranty for the VIA hardware and a standard three (3) year warranty for firmware and software updates; all Kramer VIA accessories, adapters, tags, and dongles are covered by a standard one (1) year warranty.
2. All Kramer fiber optic cables, adapter-size fiber optic extenders, pluggable optical modules, active cables, cable retractors, all ring mounted adapters, all Kramer speakers and Kramer touch panels are covered by a standard one (1) year warranty.
3. All Kramer Cobra products, all Kramer Calibre products, all Kramer Minicom digital signage products, all HighSecLabs products, all streaming, and all wireless products are covered by a standard three (3) year warranty.
4. All Sierra Video MultiViewers are covered by a standard five (5) year warranty.
5. Sierra switchers & control panels are covered by a standard seven (7) year warranty (excluding power supplies and fans that are covered for three (3) years).
6. K-Touch software is covered by a standard one (1) year warranty for software updates.
7. All Kramer passive cables are covered by a ten (10) year warranty.

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Only the original purchaser of this product is covered under this limited warranty. This limited warranty is not transferable to subsequent purchasers or owners of this product.

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Kramer Electronics will, at its sole option, provide one of the following three remedies to whatever extent it shall deem necessary to satisfy a proper claim under this limited warranty:

1. Elect to repair or facilitate the repair of any defective parts within a reasonable period of time, free of any charge for the necessary parts and labor to complete the repair and restore this product to its proper operating condition. Kramer Electronics will also pay the shipping costs necessary to return this product once the repair is complete.
2. Replace this product with a direct replacement or with a similar product deemed by Kramer Electronics to perform substantially the same function as the original product.
3. Issue a refund of the original purchase price less depreciation to be determined based on the age of the product at the time remedy is sought under this limited warranty.

What Kramer Electronics Will Not Do Under This Limited Warranty

If this product is returned to Kramer Electronics or the authorized dealer from which it was purchased or any other party authorized to repair Kramer Electronics products, this product must be insured during shipment, with the insurance and shipping charges prepaid by you. If this product is returned uninsured, you assume all risks of loss or damage during shipment. Kramer Electronics will not be responsible for any costs related to the removal or re-installation of this product from or into any installation. Kramer Electronics will not be responsible for any costs related to any setting up this product, any adjustment of user controls or any programming required for a specific installation of this product.

How to Obtain a Remedy Under This Limited Warranty

To obtain a remedy under this limited warranty, you must contact either the authorized Kramer Electronics reseller from whom you purchased this product or the Kramer Electronics office nearest you. For a list of authorized Kramer Electronics resellers and/or Kramer Electronics authorized service providers, visit our web site at www.kramerav.com or contact the Kramer Electronics office nearest you.

In order to pursue any remedy under this limited warranty, you must possess an original, dated receipt as proof of purchase from an authorized Kramer Electronics reseller. If this product is returned under this limited warranty, a return authorization number, obtained from Kramer Electronics, will be required (RMA number). You may also be directed to an authorized reseller or a person authorized by Kramer Electronics to repair the product.

If it is decided that this product should be returned directly to Kramer Electronics, this product should be properly packed, preferably in the original carton, for shipping. Cartons not bearing a return authorization number will be refused.

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Other Conditions

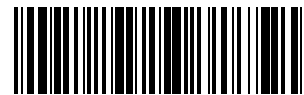
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This limited warranty is void if (i) the label bearing the serial number of this product has been removed or defaced, (ii) the product is not distributed by Kramer Electronics or (iii) this product is not purchased from an authorized Kramer Electronics reseller. If you are unsure whether a reseller is an authorized Kramer Electronics reseller, visit our web site at www.kramerav.com or contact a Kramer Electronics office from the list at the end of this document.

Your rights under this limited warranty are not diminished if you do not complete and return the product registration form or complete and submit the online product registration form. Kramer Electronics thanks you for purchasing a Kramer Electronics product. We hope it will give you years of satisfaction.



P/N:



2900-301236

Rev:



1



SAFETY WARNING

Disconnect the unit from the power supply before opening and servicing

For the latest information on our products and a list of Kramer distributors, visit our Web site where updates to this user manual may be found.

We welcome your questions, comments, and feedback.