KRAMER

USER MANUAL

MODEL:

FC-404NET

4X4 Dante Interface

P/N: 2900-300477 Rev 2

FC-404NET Quick Start Guide

This guide helps you install and use your **FC-404NET** for the first time. For more detailed information, go to **http://www.kramerav.com/manual/FC-404NET** to download the latest manual or scan the QR code on the left.

Step 1: Check what's in the box

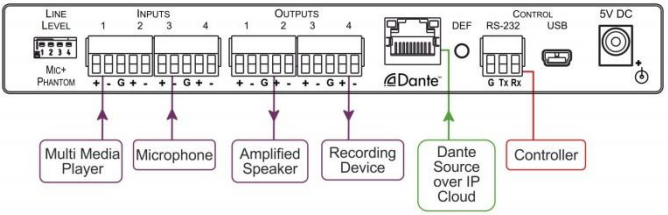
- ☑ **FC-404NET** 4x4 Dante Interface
- ☑ 1 Quick Start Guide
- ☑ 1 Power supply
- ☑ 4 Rubber feet

Step 2: Install the FC-404NET

To mount the **FC-404NET** in a rack, use an **RK-T2B** rack adapter. Alternatively, attach the rubber feet to the bottom of the machine and place it on a table.

Step 3: Connect the inputs and outputs

Always switch OFF the power on each device before connecting it to your **FC-404NET**.
For best results, always use Kramer high-performance cables to connect your AV equipment to the **FC-404NET**.



Step 4: Connect the power

Connect the 5V DC power adapter to the **FC-404NET** and plug the adapter into the mains electricity.

Step 5: Operate the FC-404NET

Operate the **FC-404NET** using the Web-based controller or Kramer Protocol 3000 via an RS-232 connection.

Download the Dante Web-based controller from:
https://www.audinate.com/products/software/dante-controller

Download the Dante Web-based controller user guide from:
http://dev.audinate.com/GA/dante-controller/userguide/pdf/latest/AUD-MAN-DanteController-3.6.x-v1.1.pdf

Pinouts

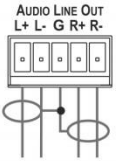
RJ-45 Pinout

For the Ethernet and HDBaseT connectors, see the proper wiring diagram below

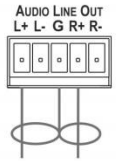
EIA / TIA 568B	
PIN	Wire Color
1	Orange / White
2	Orange
3	Green / White
4	Blue
5	Blue / White
6	Green
7	Brown / White
8	Orange

For optimum range and performance use Kramer's **BC-HDKat6a** cable. This specially built cable significantly outperform regular CAT 5/CAT 6 cables.

Line Input/Output Pinout



Balanced stereo audio output

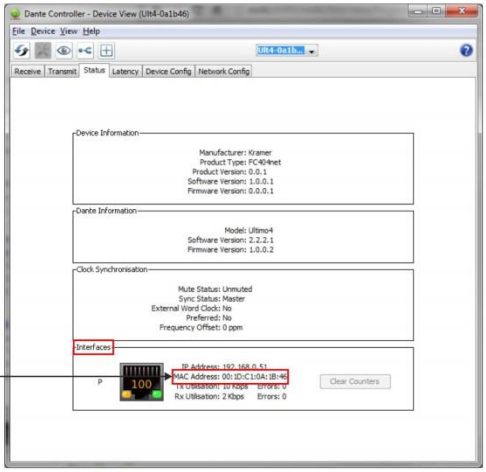


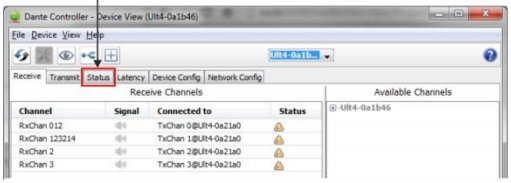
Balanced stereo audio output to unbalanced acceptor

Discover the Unit MAC Address

Using the Dante controller (see link on first page):

1. Double-click the unit name (ex. Ult4-0a1b46).
2. Select the status tab.
3. In Interfaces, view the MAC address.





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1 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 video, audio, presentation, and broadcasting professionals on a daily basis. In recent years, we have redesigned and upgraded most of our line, making the best even better!

Our 1,000-plus different models now appear in 14 groups that are clearly defined by function: GROUP 1: Distribution Amplifiers; GROUP 2: Switchers and Routers; GROUP 3: Control Systems; GROUP 4: Format/Standards Converters; GROUP 5: Range Extenders and Repeaters; GROUP 6: Specialty AV Products; GROUP 7: Scan Converters and Scalers; GROUP 8: Cables and Connectors; GROUP 9: Room Connectivity; GROUP 10: Accessories and Rack Adapters; GROUP 11: Sierra Video Products; GROUP 12: Digital Signage; GROUP 13: Audio; and GROUP 14: Collaboration.

Congratulations on purchasing your Kramer **FC-404NET** *4X4 Dante Interface*, which is ideal for the following typical applications:

- Boardrooms
- Education
- Hospitality
- Airline and rail transportation
- Retail
- Entertainment
- Houses of worship

2 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/FC-404NET to check for up-to-date user manuals, application programs, and to check if firmware upgrades are available (where appropriate).

2.1 Achieving the Best Performance

To achieve 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 neighbouring electrical appliances that may adversely influence signal quality
- Position your **FC-404NET** away from moisture, excessive sunlight and dust

This equipment is to be used only inside a building. It may only be connected to other equipment that is installed inside a building.

2.2 Safety Instructions

Caution: There are no operator serviceable parts inside the unit

Warning: Use only the Kramer Electronics power supply that is provided with the unit

Warning: Disconnect the power and unplug the unit from the wall before installing

2.3 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 *http://www.kramerelectronics.com/support/recycling/*.

3 Overview

The Kramer **FC-404NET** is a four−input/four−output Dante™ interface with line or microphone level inputs and line level outputs. It connects analog inputs to a digital Dante network or outputs four channels from a Dante network.

The **FC-404NET** *4X4 Dante Interface* features:

- A Dante network interface
- Four balanced, line-level/mic inputs
- Four balanced, line-level outputs from the network
- Independent input gain/output volume settings per channel
- DIP-switch controlled input settings – line level (0db) or mic level (+20dB) with phantom +48 volts
- Control via the Dante IP control matrix or Kramer Protocol 3000 via RS-232 connection
- Compact MegaTOOLS® housing where 2 units can be rack mounted side-by-side in a 1U rack space with the optional RK-T2B rack adapter.

3.1 Defining the FC-404NET 4X4 Dante Interface

This section defines the **FC-404NET**.

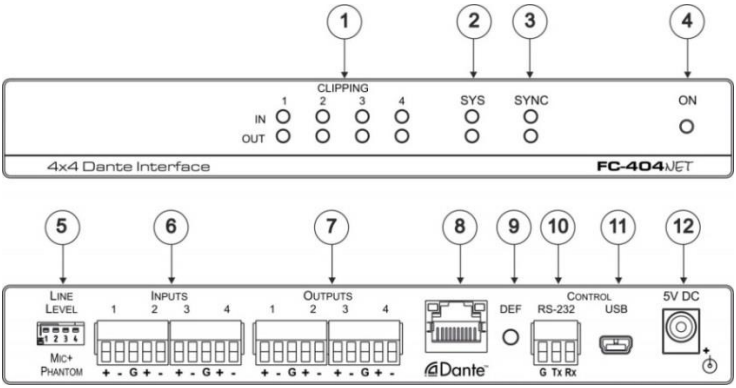


Figure 1: FC-404NET 4X4 Dante Interface

#	Feature	Function
1	*CLIPPING 1-4, IN-OUT* LEDs	Lights when in/out signal is clipped
2	*SYS* LEDs	Lights green when Dante network available or red if error
3	*SYNC* LEDs	Lights green for digital audio normal or red if error
4	*ON* LED	Lights green when the unit is powered on
5	*MIC PHANTOM/+48V ON 1-4* DIP-Switches	Set up (OFF) for line level input, set down (ON) for mic level input and +48v phantom supply to the microphones
6	*INPUTS* 5-pin Terminal Blocks (1-4)	Connect to balanced line-level audio sources 1-4, (+, –, G) (line or mic levels)
7	*OUTPUTS* 5-pin Terminal Blocks (1-4)	Connect to balanced line-level audio acceptors 1-4, (+, –, G)
8	*DANTE NET* RJ-45 Connector	Connects to the IP network
9	*DEF* Button	To reset/reboot the device, press and release the button To reset to factory settings, press and hold the button for 30 secs
10	*CONTROL RS-232* 3-pin Terminal Block	Connects to a control unit or PC running Protocol 3000
11	*CONTROL USB* Connector	N/A
12	5V DC Power Connector	Connects to the power supply

4 Connecting the FC-404NET

Always switch off the power to each device before connecting it to your **FC-404NET**. After connecting your **FC-404NET**, connect its power and then switch on the power to each device.

You do not have to connect all the inputs and outputs, connect only those that are required.

To connect the **FC-404NET**, as illustrated in the example in Figure 2, do the following:

1. Connect up to four balanced audio sources, (for example, multimedia player, microphone) to the 3-pin Input terminal blocks 1-4.
2. Set the MIC Phantom DIP-switches according to the input type: up (OFF) for line level inputs or down (ON) for microphone inputs.
3. Connect the Output 3-pin terminal block to up to four balanced audio acceptors, (for example, an amplifier with speaker, a recording device).
4. Connect the Dante RJ-45 connector to the any available IP network.
5. If needed, connect a PC or controller to the **FC-404NET** via the RS-232 connection (PC only).
6. Connect the power adapter to the **FC-404NET** and plug the power adapter into the mains power supply.

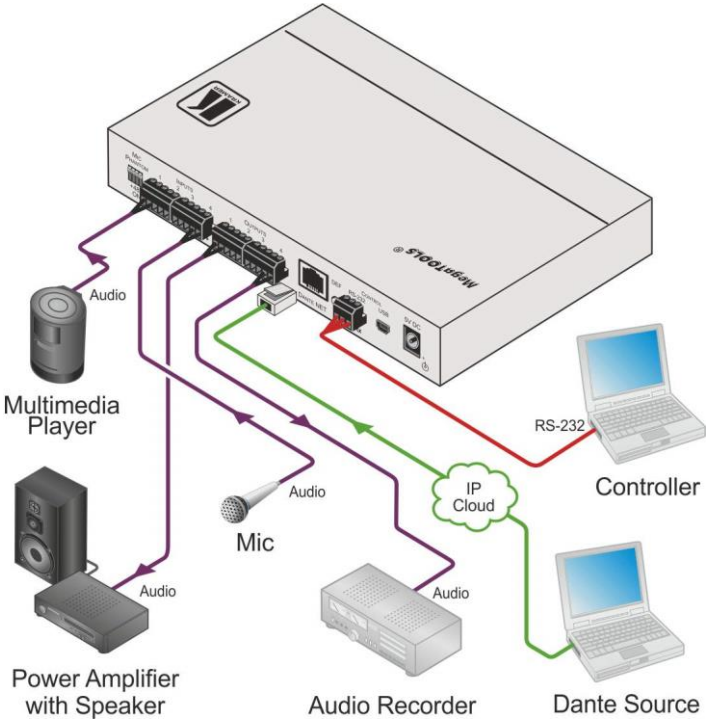


Figure 2: Connecting the FC-404NET 4X4 Dante Interface

4.1 Connecting the Inputs

Each input channel has a 3-pin terminal block connector that can accept either a balanced or an unbalanced connection; however, an unbalanced connection requires some modifications. The next two sections explain how to connect the **FC-404NET** to its input source.

4.1.1 Connecting Balanced Inputs

When using a balanced input source and connector, you must ensure that the hot, cold, and ground pins of the connector are matched up to the +, –, and ground pins of the **FC-404NET** terminal block connector respectively. The following diagrams illustrate how to connect standard XLR and 6.5mm phone jack.

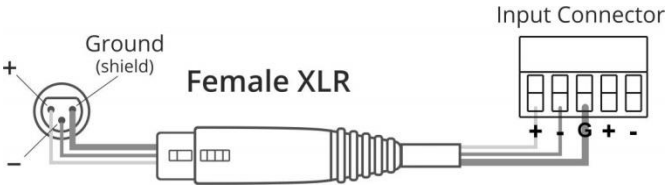


Figure 3: Connecting a Balanced XLR Input

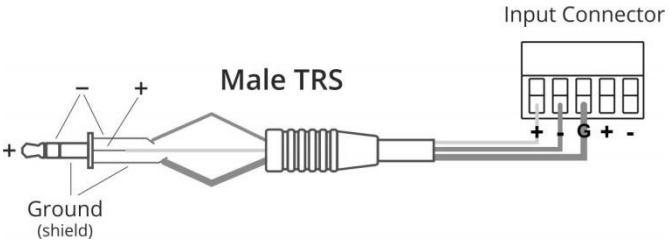


Figure 4: Connecting a Balanced 6.5mm Phone Jack

4.1.2 Connecting Unbalanced Inputs

When using an unbalanced input source, a jumper must be added between the negative (–) and ground terminals. The unbalanced source is connected to the positive (+) and ground terminals.

Note: A jumper is required for connecting an unbalanced input.

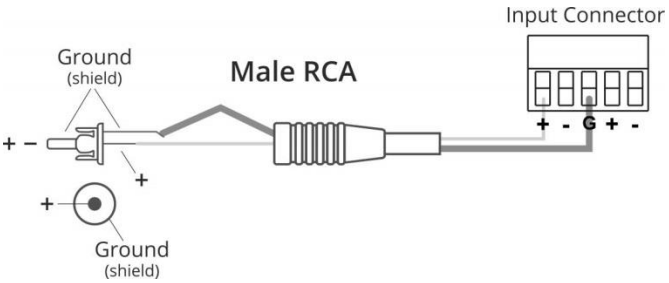


Figure 5: Connecting an Unbalanced RCA Input

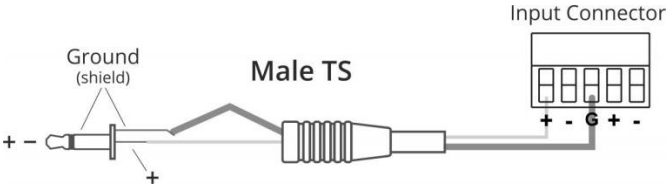


Figure 6: Connecting an Unbalanced 6.5mm Phone Jack

4.2 Connecting the Outputs

Your **FC-404NET** is provided with a 3-pin terminal block for each output channel. This connector offers a balanced output to interface with the input of another device.

Connection methods for balanced and unbalanced outputs are identical as the methods for inputs as referenced in Section 4.1.

For any microphone that needs +48 volts of power, set the DIP-switch for that channel ON (down).

5 Operating the FC-404NET

5.1 Setting the DIP-Switch

The 4-way DIP-switch on the rear panel sets the gain and enables/disables the phantom power to each channel according to the DIP-switch settings shown in the following table.

DIP-switch Number	Switch Setting	State
1	On	Mic level + Phantom
	Off	Line level
2	On	Mic level + Phantom
	Off	Line level
3	On	Mic level + Phantom
	Off	Line level
4	On	Mic level + Phantom
	Off	Line level

5.2 Using the Web-based Dante Controller

The **FC-404NET** is operated using Dante Controller, a Web-based software controller application from Audinate. Use the controller to route audio and configure devices on a Dante network. It features automatic device discovery, one-click signal routing and user-editable device and channel labels as well as providing essential device status information and powerful real-time network monitoring.

Download the Dante Web-based Controller from:
https://www.audinate.com/products/software/dante-controller

Download the Dante Web-based controller User Guide from:

http://dev.audinate.com/GA/dante-controller/userguide/pdf/latest/AUD-MAN-DanteController-3.6.x-v1.1.pdf

Initial or factory default input gain set according to position of DIP-switch/per channel: UP / OFF - 0 dB, DOWN / ON – +20dB.

Initial or factory default output volume always set to 0 dB

These values can be changed in any time through RS-232 interface by Kramer 3000 protocol commands. Input gain can be set in range -12 dB to +60 dB and output volume can be set in range +9 dB to -80 dB or Mute.

Recycling the power doesn't change the last current values of input gain and output volume.

To execute factory default setup press and hold pushbutton DEF for about 30 sec.

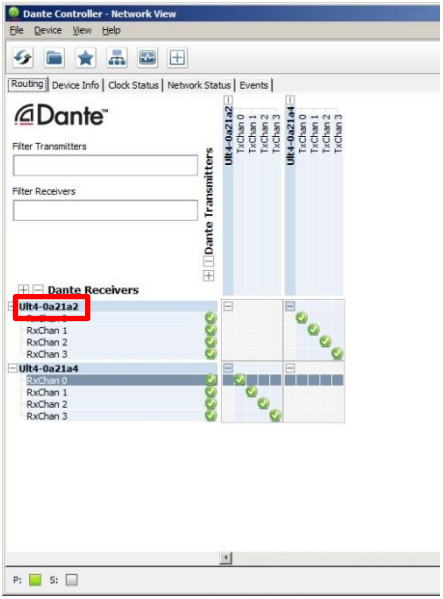
The working status of the LEDs are as follows:

- SYS: System ON – green, system OFF - red
- SYNC: unit is Master Green is flashing –, lights on – unit is Slave, Red lights OFF
- Clipping – all 8 LEDs must be light OFF

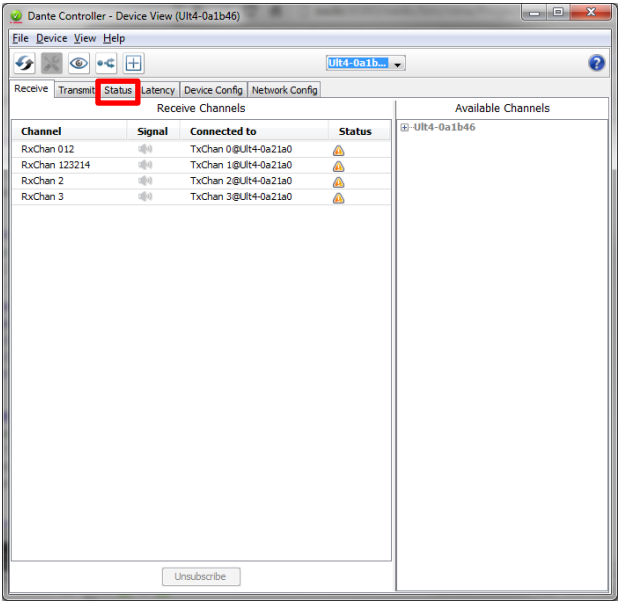
5.3 Viewing the Unit MAC Address

The MAC address of the unit is supplied by the Dante network. To view the MAC address, perform the following:

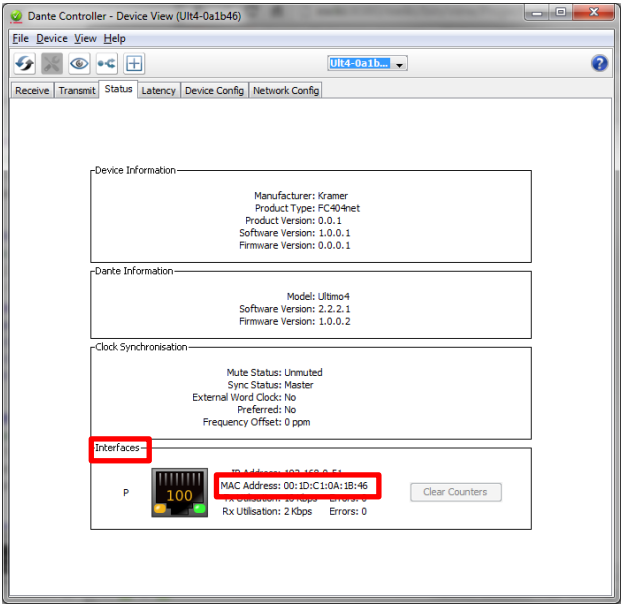
1. In the Dante controller, double-click the unit name (in this example, Ult4-0a1b46).



2. Select the Status tab.



3. In Interfaces, view the MAC address.



6 Technical Specifications

INPUTS:	4 balanced stereo audio on terminal blocks
OUTPUTS:	4 balanced stereo audio on terminal blocks
PORTS:	1 Dante Net on RJ-45 connector, 1 RS-232 on a three-pin terminal block, 1 USB mini connector (not used)
INDICATOR LEDS:	On, In/Out Clipping, Sys, Sync
CONTROLS:	Line/mic+phantom DIP-switches, factory reset button
BALANCED INPUT LEVEL MAX:	3.2Vpp @ 0dB in/out gain and 0dB output volume
FREQUENCY RESPONSE:	20Hz to 20kHz @1dB
THD+N:	<0.008% @1kHz at maximum level
S/N RATIO:	>85dB
CROSSTALK:	<80dB
INPUT GAIN ADJUSTMENT:	-12dB to +60dB
OUTPUT GAIN ADJUSTMENT:	+9 dB to -80dB
INPUT IMPEDANCE:	10kΩ balanced
OUTPUT IMPEDANCE:	50Ω balanced
MIC PHANTOM POWER:	+48V DC =/- 10%
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
POWER CONSUMPTION:	5V DC, 850mA max.
DIMENSIONS:	18.8cm x 12cm x 2.6cm (7.4” x 4.7” x 1.0”) W, D, H, ½ 19” 1U
WEIGHT:	0.41kg (0.9lbs) approx.
SHIPPING DIMENSIONS:	35.1cm x 21.2cm x 7.2cm (12.4” x 8.4” x 2.8”) W, D, H
SHIPPING WEIGHT:	0.95kg (2.1lbs) approx.
INCLUDED ACCESSORIES:	Power supply
OPTIONS:	RK-T2B 19” rack adapter

All Audio specification are from Analog In to Analog Out.

Specifications are subject to change without notice
For the most updated resolution list, go to our Web site at http://www.kramerelectronics.com

7 Protocol 3000 Syntax

With Kramer Protocol 3000 you can control a device from any standard terminal software (for example, the Windows® HyperTerminal Application) or from TCP/UDP clients connected to default TCP port 5000 or UDP port 50000 (port numbers can been changed by the user). RS-232/RS-485 communications protocol uses a data rate of 115200 bps, no parity, 8 data bits, and 1 stop bit.

7.1 Host Message Format

Start	Address (opt)	Body	Delimiter
#	Destination_id@	Message	CR

7.1.1 Simple Command

Command string with only one command without addressing:

Start	Body	Delimiter
#	Command SP Parameter_1,Parameter_2,…	CR

7.1.2 Command String

Formal syntax with commands concatenation and addressing:

Start	Address	Body	Delimiter
#	Destination_id@	Command_1 Parameter1_1,Parameter1_2,…| Command_2 Parameter2_1,Parameter2_2,…| Command_3 Parameter3_1,Parameter3_2,…|	CR

7.2 Device Message Format

Start	Address (opt)	Body	Delimiter
~	Sender_id@	Message	CR LF

7.2.1 Device Long Response

Echoing command:

Start	Address (opt)	Body	Delimiter
~	Sender_id@	Command SP [*Param1,Param2* …] result	CR LF

CR = Carriage return (ASCII 13 = 0x0D)

LF = Line feed (ASCII 10 = 0x0A)

SP = Space (ASCII 32 = 0x20)

7.3 Command Terms

Command

A sequence of ASCII letters ('A'-'Z', 'a'-'z' and '-').

Command and parameters must be separated by at least one space.

Parameters

A sequence of alphameric ASCII characters ('0'-'9','A'-'Z','a'-'z' and some special characters for specific commands). Parameters are separated by commas.

Message string

Every command entered as part of a message string begins with a **message starting character** and ends with a **message closing character**.

Note: A string can contain more than one command. Multiple commands are separated by a pipe ('|') character.

Message starting character

'#' - For host command/query

'~' - For machine response or machine command performed by keystroke operation on the front panel or IR remote controller.

Device address (Optional when directly connected to the device)

K-Net Device ID or MACHINE NUMBER followed by '@'

(ex. #02@CR LF)

Query sign

'?' follows some commands to define a query request.

All outputs sign

'*' defines all outputs.

Message closing character

CR - For host messages; carriage return (ASCII 13)

CR LF - For machine messages; carriage return (ASCII 13) + line-feed (ASCII 10)

Command chain separator character

When a message string contains more than one command, a pipe ('|') character separates each command.

Spaces between parameters or command terms are ignored.

7.4 Entering Commands

You can directly enter all commands using a terminal with ASCII communication software, such as HyperTerminal, Hercules, etc. Connect the terminal to the serial or Ethernet port on the Kramer device. To enter CR, press the Enter key. (LF is also sent but is ignored by the command parser).

For commands sent from some non-Kramer controllers such as Crestron, some characters require special coding (such as, /X##). Refer to the controller manual.

7.5 Bidirectional Definition

All commands are bidirectional. That is, if the device receives the code, it performs the instruction. If the instruction is performed (due to a keystroke operation on the front panel or IR controller) these codes are sent to the PC or other RS-232 / Ethernet controller.

7.6 Command Chaining

Multiple commands can be chained in the same string. Each command is delimited by a pipe character ('|'). When chaining commands, enter the **message starting character** and the **message closing character** once only, at the beginning of the string and at the end.
Commands in the string do not execute until the closing character is entered. A separate response is sent for every command in the chain.

7.7 Maximum String Length

64 characters (except for special commands that are defined in the command syntax description).

7.8 Practical Command Examples

Ask all level status

#AUD-LVL? 1,1

#AUD-LVL? 1,2

#AUD-LVL? 1,3

#AUD-LVL? 1,4

#AUD-LVL? 2,1

#AUD-LVL? 2,2

#AUD-LVL? 2,3

#AUD-LVL? 2,4

Set volume output to -70 dB (very low output)

#AUD-LVL? 2,2

#AUD-LVL 2,2,-70

#AUD-LVL 2,1,-70

#AUD-LVL 2,3,-70

#AUD-LVL 2,4,-70

Set volume output to -6 dB (normal output)

#AUD-LVL 2,1,-6

#AUD-LVL 2,2,-6

#AUD-LVL 2,3,-6

#AUD-LVL 2,4,-6

Set volume output to 0 dB (normal output)

#AUD-LVL 2,1,0

#AUD-LVL 2,2,0

#AUD-LVL 2,3,0

#AUD-LVL 2,4,0

Set gain input to -6 dB (normal input)

#AUD-LVL 1,1,-6

#AUD-LVL 1,2,-6

#AUD-LVL 1,3,-6

#AUD-LVL 1,4,-6

Reduce the gain input to -9 dB (lower input)

#AUD-LVL 1,1,-9

#AUD-LVL 1,2,-9

#AUD-LVL 1,3,-9

#AUD-LVL 1,4,-9

Increase the gain input to 0 dB (better level input)

#

#AUD-LVL 1,1,0

#AUD-LVL 1,2,0

#AUD-LVL 1,3,0

#AUD-LVL 1,4,0

Increase the gain input to max 59 dB (very high level input)

#AUD-LVL 1,1,59

#AUD-LVL 1,2,59

#AUD-LVL 1,3,59

#AUD-LVL 1,4,59

Ask Mute status on all channels

#MUTE? 1

#MUTE? 2

#MUTE? 3

#MUTE? 4

Set Mute On to all channels

#MUTE 1,1

#MUTE 2,1

#MUTE 3,1

#MUTE 4,1

Check Mute status on all channels

#MUTE? 1

#MUTE? 2

#MUTE? 3

#MUTE? 4

Set Mute Off to all channels

#MUTE 1,0

#MUTE 2,0

#MUTE 3,0

#MUTE 4,0

Check Mute status on all channels

#MUTE? 1

#MUTE? 2

#MUTE? 3

#MUTE? 4

```
#MUTE? 1
#MUTE? 2
#MUTE? 3
#MUTE? 4
```

8 Protocol 3000 Commands

8.1 System Commands - Mandatory

All devices running Protocol 3000 use these commands.

Command	Description	Type	Permission
#	Protocol handshaking	System-mandatory	End User
BUILD-DATE?	Get device build date	System-mandatory	End User
FACTORY	Reset to factory default configuration	System-mandatory	End User
MODEL?	Get device model	System-mandatory	End User
PROT-VER?	Get device protocol version	System-mandatory	End User
RESET	Reset device	System-mandatory	Administrator
SN?	Get device serial number	System-mandatory	End User
VERSION?	Get device firmware version	System-mandatory	End User

Command - #		Command Type - System-mandatory	
Command Name		**Permission**	**Transparency**
Set:	#	End User	Public
Get:	-	-	-
Description		**Syntax**	
Set:	Protocol handshaking	#CR	
Get:	-	-	
Response			
~nn@SPOKCR LF			
Parameters			
Response Triggers			
Notes			
Validates the Protocol 3000 connection and gets the machine number Step-in master products use this command to identify the availability of a device			

Command - **BUILD-DATE**		Command Type - System-mandatory	
Command Name		**Permission**	**Transparency**
Set:	**-**	-	-
Get:	**BUILD-DATE?**	End User	Public
Description		**Syntax**	
Set:	Get device build date	#**BUILD-DATE**[CR]	
Get:	-	-	
Response			
~[nn]@**BUILD-DATE**[SP]*date*[SP]*time*[CR LF]			
Parameters			
date - Format: YYYY/MM/DD where YYYY = Year, MM = Month, DD = Day *time* - Format: hh:mm:ss where hh = hours, mm = minutes, ss = seconds			
Response Triggers			
Notes			

Command - **FACTORY**		Command Type - System-mandatory	
Command Name		**Permission**	**Transparency**
Set:	**FACTORY**	End User	Public
Get:	**-**	-	-
Description		**Syntax**	
Set:	Reset device to factory default configuration	#**FACTORY**[CR]	
Get:	-	-	
Response			
~[nn]@**FACTORY**[SP]**OK**[CR LF]			
Parameters			
Response Triggers			
Notes			
This command deletes all user data from the device. The deletion can take some time. Your device may require powering off and powering on for the changes to take effect.			

Command - **MODEL?**		Command Type - System-mandatory	
Command Name		**Permission**	**Transparency**
Set:	**-**	-	-
Get:	**MODEL?**	End User	Public
Description		**Syntax**	
Set:	-	-	
Get:	Get device model	#**MODEL?**CR	
Response			
~nn@**MODEL**SP*model_name*CR LF			
Parameters			
model_name - String of up to 19 printable ASCII chars			
Response Triggers			
Notes			
This command identifies equipment connected to Step-in master products and notifies of identity changes to the connected equipment. The Matrix saves this data in memory to answer REMOTE-INFO requests			

Command - **PROT-VER?**		Command Type - System-mandatory	
Command Name		**Permission**	**Transparency**
Set:	**-**	-	-
Get:	**PROT-VER?**	End User	Public
Description		**Syntax**	
Set:	-	-	
Get:	Get device protocol version	#**PROT-VER?**CR	
Response			
~nn@**PROT-VER**SP3000:*version*CR LF			
Parameters			
Version - XX.XX where X is a decimal digit			
Response Triggers			
Notes			

Command - **RESET**		Command Type - System-mandatory	
Command Name		**Permission**	**Transparency**
Set:	**RESET**	Administrator	Public
Get:	**-**	-	-
Description		**Syntax**	
Set:	Reset device	#**RESET**[CR]	
Get:	-	-	
Response			
~[nn]@**RESET**[SP]**OK**[CR LF]			
Parameters			
Response Triggers			
Notes			
To avoid locking the port due to a USB bug in Windows, disconnect USB connections immediately after running this command. If the port was locked, disconnect and reconnect the cable to reopen the port.			

Command - **SN?**		Command Type - System-mandatory	
Command Name		**Permission**	**Transparency**
Set:	**-**	-	-
Get:	**SN?**	End User	Public
Description		**Syntax**	
Set:	-	-	
Get:	Get device serial number	#**SN?**[CR]	
Response			
~[nn]@**SN**[SP]*serial_number*[CR LF]			
Parameters			
serial_number - 11 decimal digits, factory assigned			
Response Triggers			
Notes			
For new products with 14 digit serial numbers, use only the last 11 digits			

Command - **VERSION?**		Command Type - System-mandatory	
Command Name		**Permission**	**Transparency**
Set:	**-**	-	-
Get:	**VERSION?**	End User	Public
Description		**Syntax**	
Set:	-	-	
Get:	Get firmware version number	#**VERSION?**CR	
Response			
~nn@**VERSION**SP*firmware_version*CR LF			
Parameters			
firmware_version - XX.XX.XXXX where the digit groups are: major.minor.build version			
Response Triggers			
Notes			

8.2 System Commands

Command	Description	Type	Permission
NAME	Set/get machine (DNS) name	System	Administrator
NAME-RST	Reset machine name to factory default (DNS)	System	Administrator

Command - **NAME**		Command Type - System (Ethernet)	
Command Name		**Permission**	**Transparency**
Set:	**NAME**	Administrator	Public
Get:	**NAME?**	End User	Public
Description		**Syntax**	
Set:	Set machine (DNS) name	#**NAME**SP*machine_name*CR	
Get:	Get machine (DNS) name	#**NAME?**CR	
Response			
Set: ~nn@**NAME**SP*machine_name*CR LF Get: ~nn@**NAME?**SP*machine_name*CR LF			
Parameters			
machine_name - String of up to 14 alpha-numeric chars (can include hyphen, not at the beginning or end)			
Response Triggers			
Notes			
The machine name is not the same as the model name. The machine name is used to identify a specific machine or a network in use (with DNS feature on)			

Command - **NAME-RST**		Command Type - System (Ethernet)	
Command Name		**Permission**	**Transparency**
Set:	**NAME-RST**	Administrator	Public
Get:	**-**	-	-
Description		**Syntax**	
Set:	Reset machine (DNS) name to factory default	#**NAME-RST**CR	
Get:	-	-	
Response			
~nn@**NAME-RST**SP**OK**CR LF			
Parameters			
Response Triggers			
Notes			
Factory default of machine (DNS) name is “KRAMER_” + 4 last digits of device serial number			

8.3 Audio Commands

These commands are used by audio devices running Protocol 3000.

Command	Description	Type	Permission
AUD-LVL	Set/get audio level in specific amplifier stage	Audio	End User
MUTE	Set/get audio mute	Audio	End User

Command - **AUD-LVL**		Command Type - Audio	
Command Name		**Permission**	**Transparency**
Set:	**AUD-LVL**	End User	Public
Get:	**AUD-LVL?**	End User	Public
Description		**Syntax**	
Set:	Set audio level in specific amplifier stage	#**AUD-LVL**SP*stage, channel, volume*CR	
Get:	Get audio level in specific amplifier stage	#**AUD-LVL?**SP*stage, channel*CR	
Response			
~nn@**AUD-LVL**SP*stage, channel, volume*CR LF			
Parameters			
stage - 'IN, 'OUT' or numeric value of present audio processing stage For example: '1' for input level, '2' for output *channel* - input or output number *volume* - audio parameter in Kramer units, minus sign precedes negative values. ++ increase current value, -- decrease current value			
Response Triggers			
Notes			
Channel is an integer value as following (1-channel 1, 2- channel 2 … up to 4 channel max.) The output volume is an integer value expressed in dB from -78dB to +9dB The input gain is an integer value expressed in dB from -12dB to +60dB			

Command - **MUTE**		Command Type - Audio	
Command Name		**Permission**	**Transparency**
Set:	**MUTE**	End User	Public
Get:	**MUTE?**	End User	Public
Description		**Syntax**	
Set:	Set audio mute	#**MUTE**SP*channel,mute_mode*CR	
Get:	Get audio mute	#**MUTE?**SP*channel*CR	
Response			
~nn@**MUTE**SP*channel, mute_mode*CR LF			
Parameters			
channel - output number *mute_mode* - 0 or OFF / 1 or ON			
Response Triggers			
Notes			

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KRAMER

P/N: 2900-300477 Rev: 2

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 to find updates to this user manual.

We welcome your questions, comments, and feedback.

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