RMA400
Quad Embedding Ethernet Controlled Microphone Amplifier.

by
CTP Systems

Product warranty

This unit is guaranteed for a period of one year from dispatch of the goods. This guarantee is a return to base warranty. In the unlikely event of a fault the goods should be returned to CTP Systems in the UK or your local dealer.

This equipment is CE marked and conforms to the following directives:

Emissions: EN55032: 2015
Immunity: EN55035: 2017

WEEE

CTP Systems are registered for Business to Business sales of WEEE in the UK. Our registration number is WEE/DF0509VR. This is why our product has a ridiculous picture of a dustbin on the back.

RoHS

The product conforms to the RoHS Directive 2002/95/EC for restriction of the use of hazardous substances in electrical and electronic equipment.

This unit was designed and manufactured in the UK by CTP Systems Limited, Unit 4, Clinton Business Centre, Lodge Road, Staplehurst, Kent TN12 0QF.
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Overview

The RMA400 contains four discreet microphone amplifiers with analogue, AES and HD-SDI embedded outputs. The unit may be controlled locally using the front panel controls and display or it may be controlled over ethernet.

Gain range of the microphone amplifiers is 0-66dB in 1dB steps. The unit has built in limiters, switchable 48 volt phantom power, 10dB pads and high pass filters.
All channels include their own metering and the microphone outputs may be monitored locally on headphones.

Power
The unit requires a 12 volt DC supply. Either connect the supplied adaptor to the power inlet or a 12 volt battery. Pin 1 is ground and pin 4 is +12V.
The display will show channel 1 settings and all gains, limit levels and button settings will have been memorised from power down.

Local controls
On power up the unit's controls will be 'locked'. In this situation the Mon/Select buttons will operate to display gain and limiter settings and to allow monitoring of the outputs on headphones. Pressing any other button will show 'Locked' on the display.
Press the two centre HPF buttons for approximately 3 seconds and the unit will display 'Unlocked'. Settings may now be changed as required.

A single press on the Mon/Sel button will display the gain and limiter settings for that channel. Press the button again and 'Micx' will be highlighted. Now press the + and – buttons to adjust gain as required. Gain range is 0dB to +66dB.

Press the Mon/Sel button again and 'Limx' will be highlighted. Adjust the setting as required using the +- buttons. Note that the limit level is in dBFS so the range is -18 to 0 dBFS. Press the Mon/Sel button again to return to normal.

All other buttons just toggle of and off when pressed. Phantom power is standard 48 volts, the 10dB pad helps prevent microphone overload in high SPL applications.
The High Pass Filter is 6dB down at 100Hz and is suitable for prevention of wind noise.

To lock the buttons again press the two 'unlock' buttons again. The display will show 'Locked' until the buttons are released.
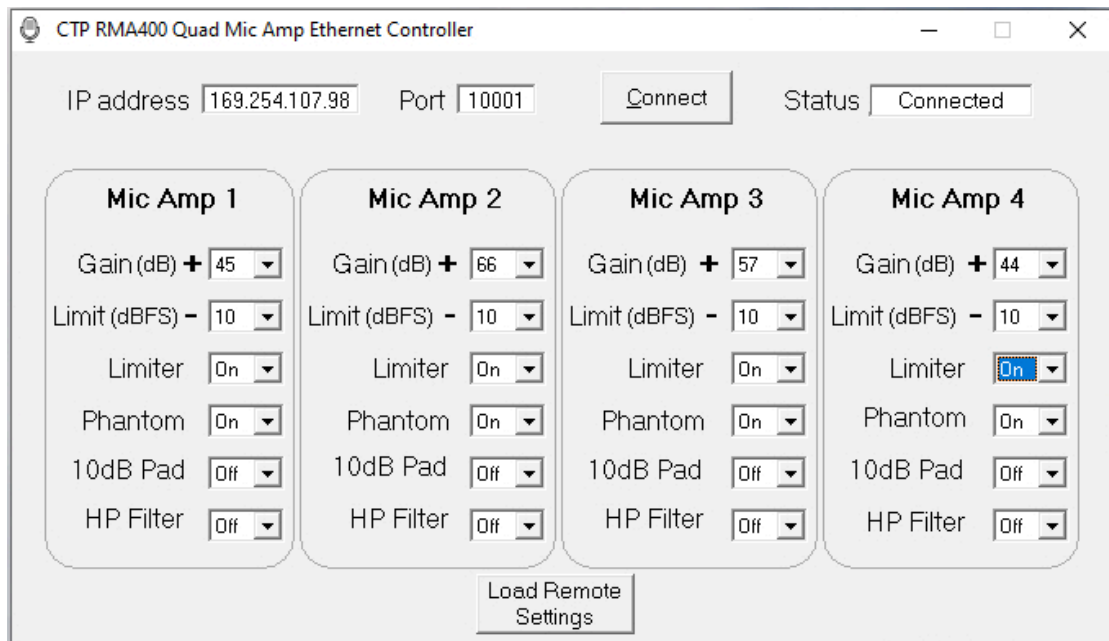
Headphone Monitoring
The headphone output will follow any input as selected by the Mon/Sel button. This facility is intended for confidence monitoring and has no volume control.

Ethernet Control

Ethernet control of the RMA400 is facilitated using the RMA400 application.

This app may be downloaded at:

https://www.ctpsystems.co.uk/support.html

This software will run on Microsoft Windows XP through to Windows 10.

Download the software, unzip it and run Setup.exe. The Software will then install on your PC.

The RMA400 is supplied running DHCP. The status box will currently show 'Not Connected'. Connect the unit to your network, insert the unit's IP address into the box, leave the port number as 10001 and press connect. The status display will change to 'Connected'. If it doesn't please check your IP address and connection.

On connection the software will automatically upload the RMA400s current status. The software is now 'live', any changes made will be automatically downloaded to the RMA400. The displays and settings on the remote unit will change to reflect any changes made. If changes are also being made at the remote end it is wise to hit the 'Load Remote Settings' button to display the units current settings before adjustment.

IP address

Normally the IP address will be found by interrogating the router. If this is not possible you can download this program which will tell you the IP address:

https://www.lantronix.com/products/deviceinstaller/

Install the program, run it and it will auto search. If not just press search.

If you want to fix the IP address double click on the name it found (XPort-NN)
Then select web configuration, then press the right green arrow.
When it asks user name and password just click ok.
Select network and you will see configuration settings. Select 'use the following IP configuration'.
Type in your required IP address and mask.
Select OK at the bottom of the page.
Select apply settings on the left. It will take a minute or so to save the settings and will tell you when it's done.
Power cycle the unit and it will use the IP address you typed in.

Be careful about some of the other settings you can access, there are many of them that can stop the unit operating correctly.

Updating

When firmware updates are available, they may be downloaded from:

https://www.ctpsystems.co.uk/support.html

and programmed using our firmware update manager available on the same page.
Full instructions will be supplied with the update.

Audio Outputs

Audio outputs are available as analogue, AES and embedded.

Connect a video SDI/HD-SDI source to SDI In. The unit will embed the four audio channels to channels 1-4 respectively of the SDI signal. Any other audio embedded channels will just pass through. Connect to SDI Out for your embedded signal.

The four analogue outputs are available on the D25 connector on the rear as are the AES audio signals. The AES sample rate is 48kHz.

Analogue and AES connections. D25 female fitted to unit.

Hot	Cold	Screen	Function
24	12	25	Analogue output 1
10	23	11	Analogue output 2
21	9	22	Analogue output 3
7	20	8	Analogue output 4
15	3	16	AES outputs 1+2
1	14	2	AES outputs 3+4

These connections closely resemble the Tascam standard.