

The DXS2 Manual

Document part number: HB-DXS2-0001

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Caution: To reduce the risk of electric shock, do not remove any circuit board or power supply covers. There are no user serviceable parts inside; refer to qualified personnel.

Warning: To reduce the risk of fire or electric shock, do not expose this appliance to rain and moisture. The appliance should not be exposed to dripping or splashing and no objects filled with liquids should be placed on or near the appliance.

Detailed safety instructions

- 1 Read these instructions
- 2 Keep these instructions
- 3 Take notice of our warnings
- 4 Follow instructions
- 5 Clean only with a dry cloth
- 6 Keep the product away from liquids
- 7 Install in accordance with these instructions
- 8 Do not install near significant sources of heat e.g. radiators, stoves etc.
- 9 Ensure the product is properly grounded
- 10 Only use attachments / accessories specified or approved by **Amulet Hotkey**
- 11 Refer all servicing to qualified personnel

About this manual.

This manual is designed to give you both an overview of the DXS2 dual headed transmitter unit as well as a detailed explanation on how to install, configure and use it. However, there are bound to be questions we haven't answered so don't hesitate to contact technical support at Amulet Hotkey for expert assistance.

You can do this by phone or by email:

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Check out the Tech. Support page of our web site for additional contacts:

www.amulethotkey.com

Shipment.

1 Your DXS2 and cables were carefully packed prior to despatch to guarantee safe transit. However, we recommend that you thoroughly examine all packaging and contents for signs of physical damage before use.

2 If any damage has occurred, please notify the shipping company and your supplier immediately otherwise claims for damage or replacement may not be granted.

3 Retain the original packaging for use in the event that the equipment has to be stored, shipped or returned for service.

4 If you choose to dispose of the packaging please do so in an environmentally friendly fashion. *We like our planet and want it to last a long time.* 😊

Conventions in this manual.

Throughout this manual we use notes in the page border to highlight points made in the main body of the text. These notes are marked with one of the following graphics:

Warning: Anything preceded by this icon is an important warning. You must read these and please take note of our advice.

Hints and Tips: Following this icon you will find what we consider to be useful advice based on our extensive experience. Take it or leave it – it's up to you.

Info: This icon signals information related to the main text that we thought we'd share with you. Hopefully you will find it of interest.



Introduction

Thank you from everyone here at Amulet Hotkey for purchasing the DXS2 dual headed transmitter unit. A great deal of time and energy has gone into making this the best and most reliable KVM extenders available.

With over 16 years experience working around the world in a variety of installations we are confident that we have provided a 'state of the art' unit which will provide you with long and reliable service regardless of the application.

To get the best from this product please take time to study this manual carefully even if you are familiar with other Amulet Hotkey products.

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AHK3000-D Programming Application

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What's in the box...

Before installing your DXS2, refer to the following list to ensure that you have all the items that shipped with the product as well as other items necessary for proper installation.

Supplied with the DXS2 Transmitter Unit

1	CA-DXS2-0001	DXS2 Transmitter Unit - Complete Assembly
1	CA-XX01-0008	12V 3.33A 40W PSU with appropriate country IEC Lead
1	CL-XX01-4021	6-pin miniDIN Y-Splitter Cable
2	CL-XX01-0008	2m Male to Male HD15 Video Cable
1	CL-USB-0001	2m Standard USB A to B Cable
2	CL-XX02-0010	2m Stereo Audio Cable (3.5mm jack to jack)
1	CD-DXS2-0001	DXS2 Resource CD
1	HB-DXS2-0003	DXS2 Quick Start Guide

The following cable is required to extend RS232 Serial Devices:

1	CL-XX01-2014	2m Standard Direct Serial Cable Male to Female
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1

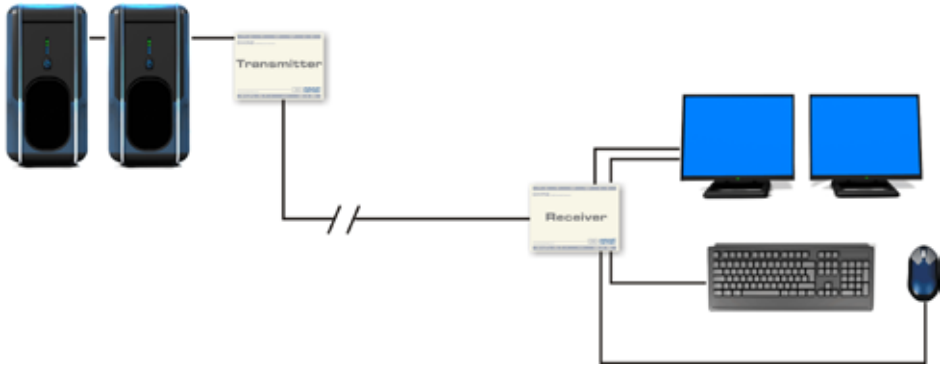
DXS2 Transmitter Unit

1.0 Overview

The DXS2 is a stand alone dual headed transmitter unit designed to be used with the Amulet Hotkey DX Series of analogue KVM extenders.

As part of a remote system it provides the interface between the 'back racked' computer system and the remotely located desktop, up to 200m away. The link between the DXS2 and the associated DXR2 receiver unit is made with category 5, 5e or 6 twisted pair cable.

A fully automatic compensation and de-skew built into the receiver optimises the video drive characteristics of the system to achieve the best performance possible over the length of cable in use.



Due to limitations in the USB protocol, DX Series products can only extend USB data up to a maximum of 200m. If you wish to use the DX system beyond this distance please set DIP switch 1 to the "ON" position disabling USB.



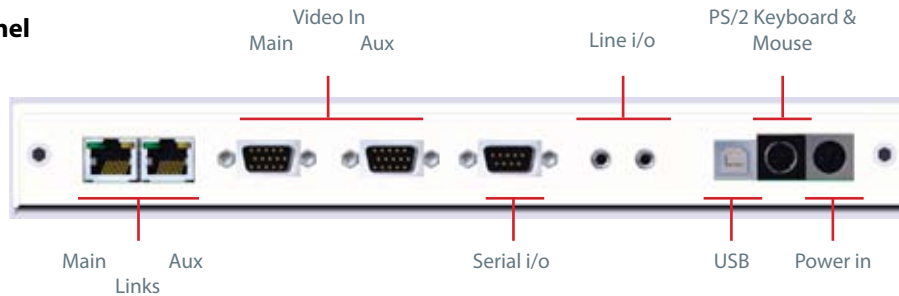
KVM extension allows you to place your monitor, keyboard and mouse many tens of metres from the computer base unit. This means that it can be kept in a secure, clean and if necessary air conditioned room away from the desktop.

1.1 DXS2 Connector Identification

Front Panel



Rear Panel



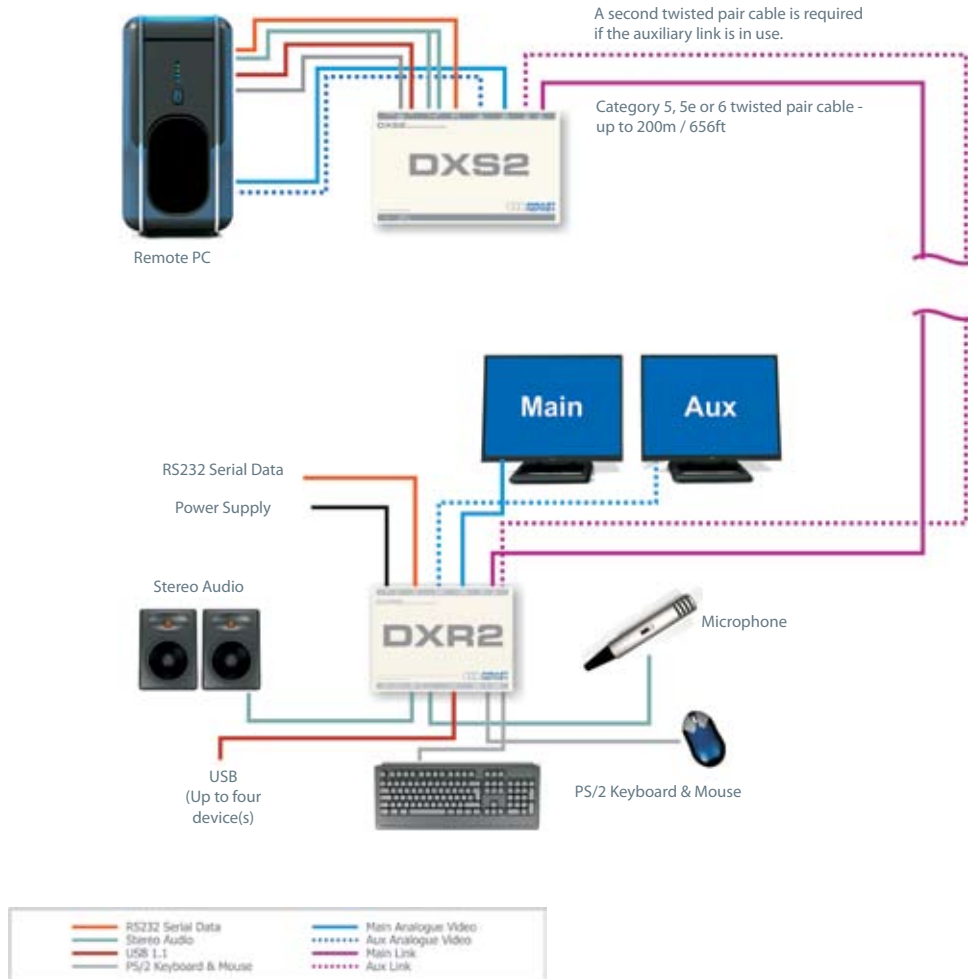
Front & Rear Panels

The images above show the front and rear panel connections as they appear on the DXS2 transmitter.

The front panel is fitted with LEDs to indicate power, link and video status. When illuminated green, the link LEDs indicate that a good connection exists between the DXR2 receiver and the DXS2 transmitter. The video LEDs also illuminate green when a video signal is present on each of the links.

To make installation easier these LEDs are duplicated on both the DXS2 and DXR2 rear panel RJ45 connectors, where the green represents the link and amber the video (refer to page 8).

1.2 DXS2 Connection



The link is a propriety protocol that cannot be used with any network switching or routing devices. It should NOT be mixed with other network signals.



Each additional patch degrades the signal quality, thus reducing the total overall possible distance. In order to achieve optimum performance, keep the number of patches to a minimum.

1.3 Connection Notes

Always ensure that the local workstation is powered down before connecting the DXS2 transmitter to a receiver unit.

At the computer

1. Ensure that the computer is powered down.
2. Connect the DXS2 transmitter to the remote computer using the illustration above as a guide.

At the local workstation

3. Connect the desktop peripherals (keyboard, mouse etc) to the DXR2 receiver using the illustration on page 7 as a guide.
4. Power up the DXR2.

Interconnecting cable

5. Connect the DXS2 and DXR2 together using the recommended twisted pair cabling keeping the number of patches to an absolute minimum. In order for the system to operate correctly the 'Main' link must always be connected. To support dual video heads connect up the 'Aux' link using a second twisted pair cable. If the cables are connected correctly the link status LEDs on both the DXS2 and the DXR2 will illuminate green.
6. Power up the back racked computer. The video LED(s) on both the DXS2 and the DXR2 should now illuminate. You should also see a picture on the monitor(s) attached to the DXR2 and be able to use your system, just as you would a conventional desktop computer.

1.4 Automatic Compensation & De-Skew

The DX series extenders work in the analogue domain transmitting suitably encoded signals across lengths of Cat 5, 5e or 6 twisted pair cable. Inevitably, the signal will be degraded when travelling over anything more than a few tens of meters of cable so DX series transmitters and receivers such as the DXS2 and DXR2 are equipped with circuitry designed to automatically compensate for this degradation. In addition, video colour signals driven over long lengths of twisted pair cable tend to become 'skewed' in relation to each other. So, for example, the red signal may arrive at the receiver much later than the green or blue leading to very poor quality video. The when paired with a DXR2, the DXS2 automatically compensates for this signal skew.



The system will not function unless the main link is in place and connected properly.



Do not cross connect the Main and Aux links.



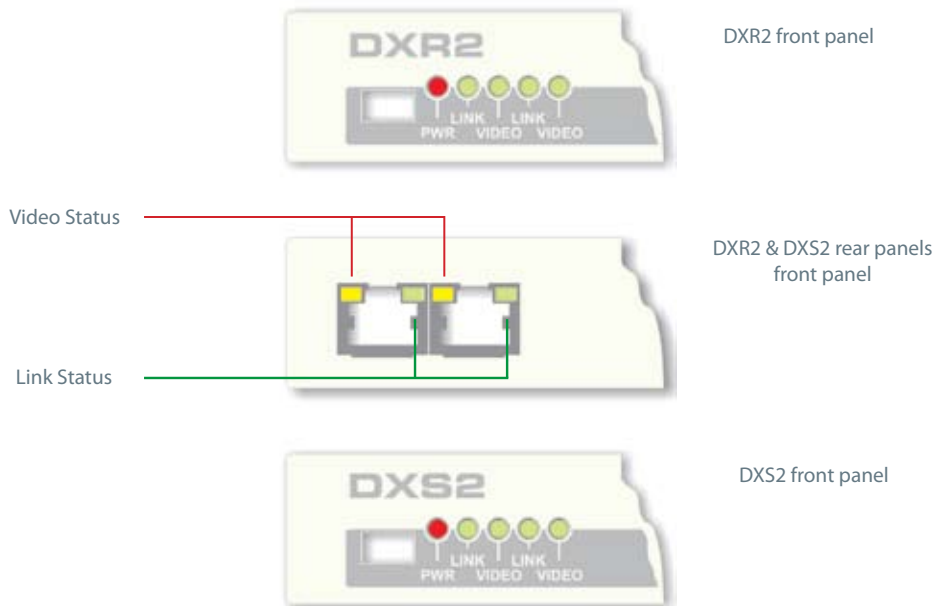
For a brief period, a flashing will appear on screen. This is part of the system set-up and occurs after power up.

1.5 Main & Auxiliary Definitions

It is important to understand that this transmitter is capable of supporting dual screen video systems.

The main link between the DXS2 and the DXR2 receiver carries keyboard, mouse, USB, RS232 serial data, audio and main video signals. It also carries link optimisation data between the transmitter and receiver. If you are using the DXS2 and DXR2 with a single monitor, this is the connection to use.

The auxiliary link can be used only to connect a second video head from the remote location to the receiver.





Trouble Shooting & Technical Support

2.0 Trouble Shooting

DXS2 power LED not lit -

Verify that the remote PC is plugged into an appropriate AC outlet. The host computer must at a minimum provide stand-by power.

DXS2 link LED not lit -

Check that the link cable is connected to the correct port on the desktop unit.
Make sure that the link cable is plugged into a desktop unit that is plugged into an appropriate AC outlet.

DXS2 video LED not lit -

Ensure that the attached PC is powered up.
Confirm that the video cable is patched correctly



The DXS2 does not supply power over the link cable to the DXR2. It must be connected to its own local power supply.



2.1 Technical Specifications

DXS2 Transmitter Unit

Power supply	12V 3.3A external power supply
Power consumption	Typically 7W
Dimensions	250 x 31 x 155mm (W x H x D)
Weight	1.6 kg
PS/2 keyboard & mouse input	1 x 6-pin Mini-DIN socket
USB	1 x USB type B socket
Video inputs	2 x HDD15 analogue video
RS232	1 x 9wayD type (supports dual serial channels with splitter cable)
Audio connections	3 x 3.5mm stereo jack socket
Flash program	1 x mini-USB socket
Conforms to relevant parts of	EN55022:1998 (emissions, IT equipment see note 1) FCC Part 15b (emissions, US) EN55024:1998 (immunity, IT equipment) EN61000-3-2:2000 (mains harmonics) EN61000-3-3:1995 (mains flicker)
Patents Pending	No. GB 06 07 232.6 No. GB 06 14 138.6

2.2 Technical Support

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Note 1: This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures. Note that the video and audio signals may be degraded when this equipment is used in environments where strong radio emissions are present.