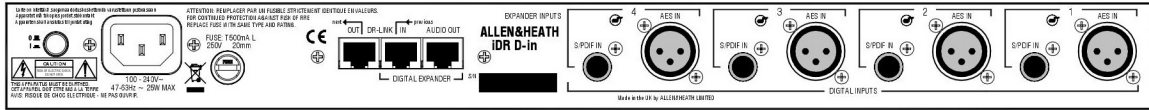


# iDR D-in/out DIGITAL EXPANDERS

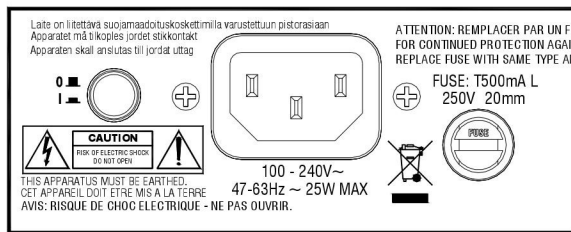
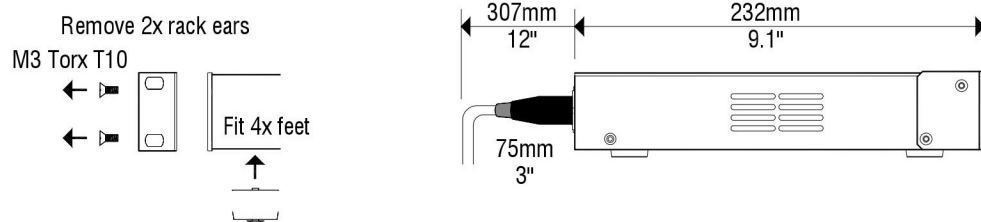
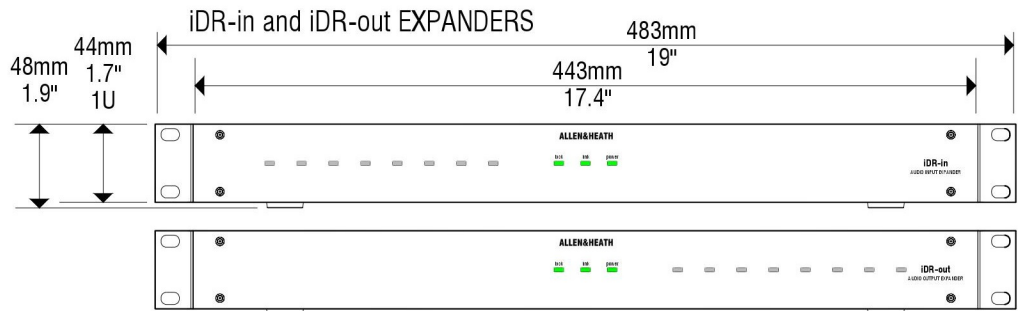
## User Guide



**iDR D-in** and **iDR D-out** are add-on digital audio expander units for the Allen & Heath **iDR-4** and **iDR-8** audio mix processors. They provide AES3 and SPDIF format digital audio inputs and outputs to add to the analogue audio connections on the main unit. The **iDR D-in** has 8 inputs arranged as 4 pairs. Either the AES3 (XLR) or the SPDIF (RCA phono) input may be selected for each pair. The **iDR D-out** has 8 outputs arranged as 4 pairs. These provide AES3 and SPDIF outputs simultaneously available. Only one input and one output expander may be added to the iDR system bringing it up to a maximum 16x16 audio matrix. This may be any combination of the analogue and digital expanders available for the iDR system. These units do not have any processing built in. They simply convert the AES3 and SPDIF formats to work with the 8 channel wide iDR digital bus which feeds the main unit via a CAT5 STP cable. The processing and mixing is handled by the main **iDR-4** or **iDR-8** unit which features the full 16x16 DSP matrix. The iDR System Manager software is used to select either the AES3 or the SPDIF connection for each expander input pair. Both expander units have 8 front panel LEDs in addition to the 3 status indicators. These are 3-colour soft LEDs which can be assigned as audio meters, mute indicators or patch related indicators. They are programmed in the usual way using the iDR System Manager software. Control of the expanders is via the DR-Link port using a CAT5 STP cable. This means that two CAT5 cables are required to interconnect an expander to the main unit. Maximum distance between the units is 250 metres. Local mains power is required.

The **iDR D-in** and **iDR D-out** expanders can be rack mounted or free standing. There are no user controls on the front panel, only the status and assignable LEDs. Allow a minimum of 75mm clearance behind the unit for the connectors and cables. Ensure adequate ventilation to the side of and behind the unit.

The units are shipped with their rack ears fitted and feet removed ready to be mounted in a standard 19" equipment rack. 1U rack space is required. For desk mount operation remove the two rack ears using a Torx (star head) T10 screwdriver. Fit the four plastic feet provided by pressing them into the underside.



**Make sure you have read the Important Safety Instructions provided. Also check that your local mains supply is compatible with that printed on the rear panel of the unit. Ensure that the correct mains lead with moulded plug and IEC connector has been supplied. For your own safety and optimum performance make sure the system is correctly grounded.**

**To avoid any unexpected audible clicks or thumps always turn connected power amplifiers down or off before switching the iDR or any other signal equipment on or off.**

**Turning the expander on or off** First make sure the unit is correctly plugged up and connected to the **iDR-4(8)**. This is described below. Turn the unit on by pressing the rear panel power ON/OFF switch. The power LED lights up. The link LED lights if the DR-Link connection is established with the **iDR-4(8)**. The lock LED lights once the link is established and audio is correctly communicated with the **iDR-4(8)**. The iDR System Manager detects the presence of the expander.

If one or more of the LEDs do not light then check that the cables are correctly fitted and the **iDR-4(8)** is functioning normally.

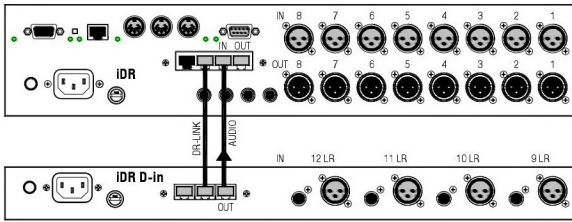
**Checking for expanders** You can use the front panel **iDR-4(8)** Setup menus to check if any expanders are connected and recognised. This is useful when the expanders are located far away from the main unit. With the face plate removed access menu \*8 Diagnostics and scroll to Audio Exp. Refer to the **iDR-4** user guide AP5230 or **iDR-8** user guide AP4530 for further details.

lock

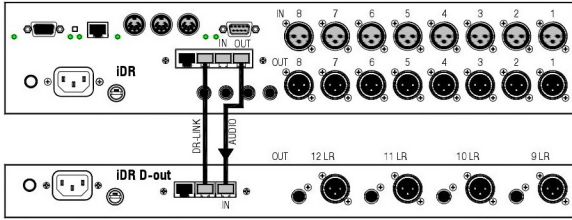
link

power

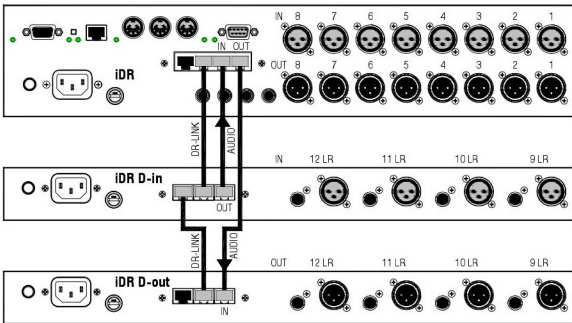
**CONNECTING THE INPUT EXPANDER**



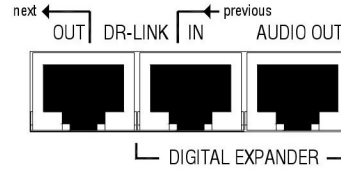
**CONNECTING THE OUTPUT EXPANDER**



**CONNECTING BOTH EXPANDERS**

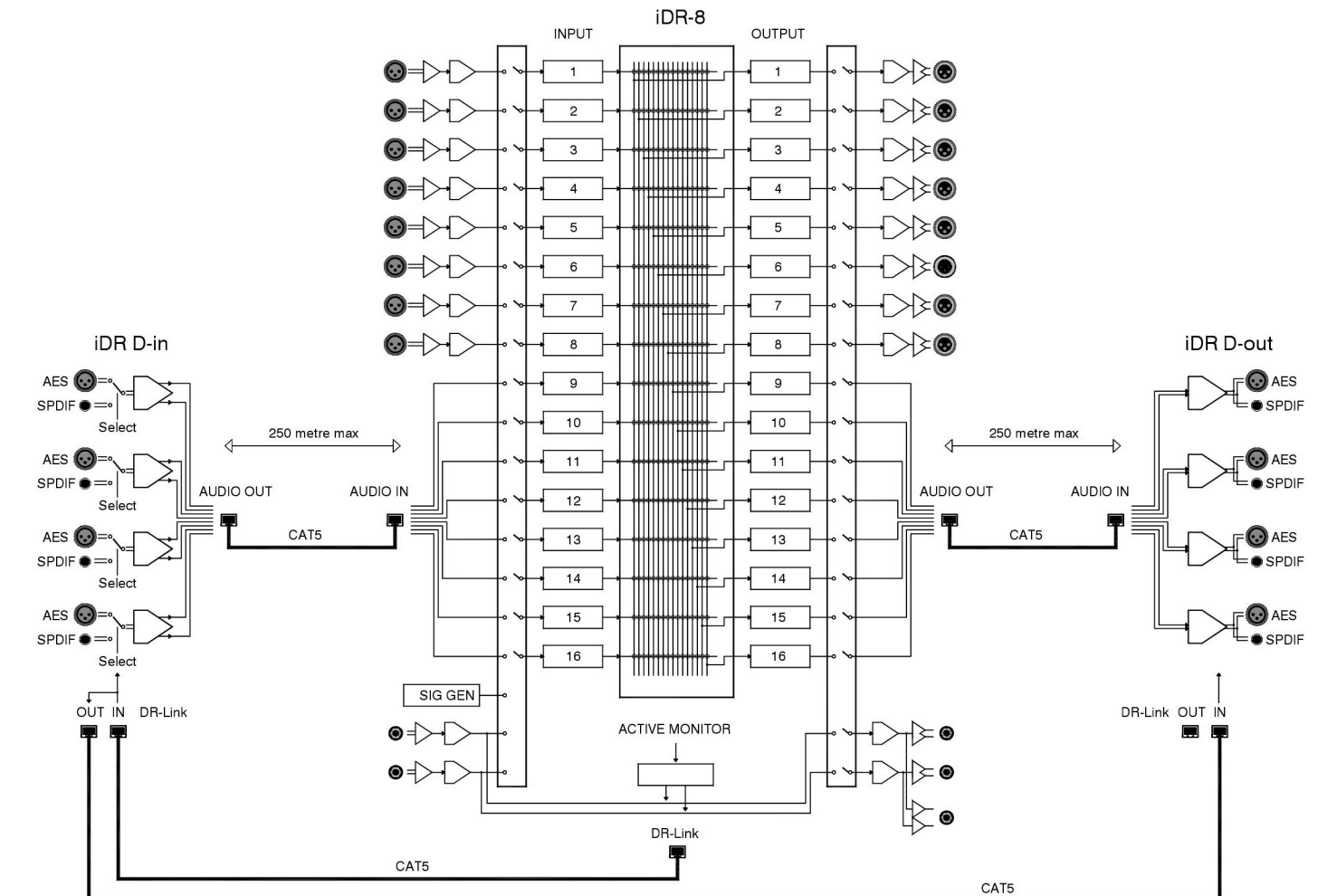


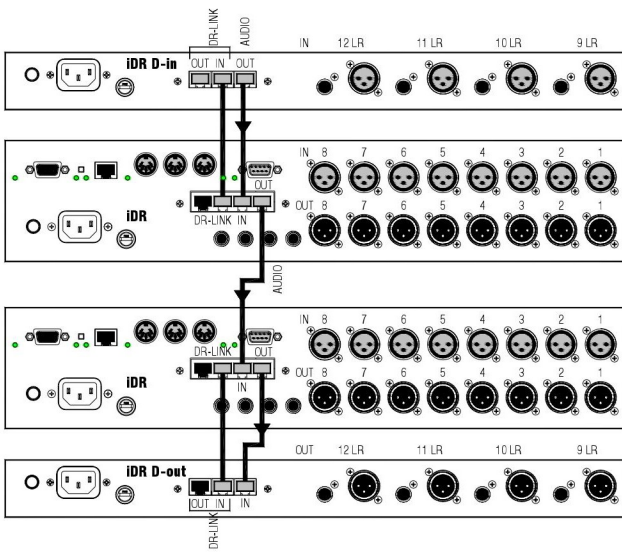
**Connecting to the iDR-4(8)** You can connect either or both expanders according to the requirements of your application. Note that the **iDR-in** and **iDR-out** analogue expanders are also available. The **iDR D-in** AUDIO OUT connects to the **iDR-4(8)** AUDIO IN. The **iDR D-out** AUDIO IN connects to the **iDR-4(8)** AUDIO OUT. Ensure that the expander DR-Link IN connects to DR-Link on the **iDR-4(8)** it is associated with. If both expanders are used with the same **iDR-4(8)** then daisy chain from DR-Link OUT of one to DR-Link IN on the other. DR-Link can also be daisy chained from or to **iDR-switch** units if you are using them as well.



**Fully expanded iDR-4(8)** The diagram below shows the **iDR-8** with both the input and output digital expanders fitted. Note the connection of DR-Link which is daisy chained from one unit to the next. If an **iDR-switch** unit is also fitted then daisy chain DR-Link from the last expander to the switch unit. Make sure you plug into the correct DR-Link socket.

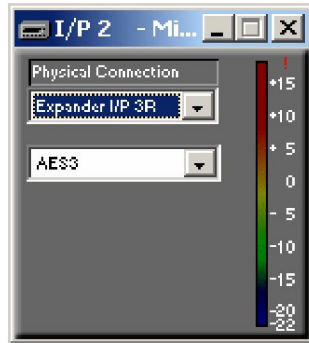
Use CAT5 STP cable. A pair of standard 2 metre cables is provided with each expander. Maximum cable length is 250 metres. This means that the expander units can be used for remote audio over CAT5 cable.





**Expanded multiple iDR system** This diagram shows an iDR system with two **iDR-8** units and both expanders fitted. A system could also be created with **iDR-4** units or a mix of **iDR-4** and **iDR-8** units. Note that the digital or analogue expanders may be used, but only one input and one output expander may be added per system. DR-Link is only required to connect to the expanders, not between the main units. Make sure you connect DR-Link to the **iDR** associated with each expander. Make sure you plug into the correct DR-Link socket. In this case do not daisy chain DR-Link from one expander to the other.

Use CAT5 STP cable. Maximum cable length is 250 metres. Maximum audio matrix is 16x16. The audio link cable carries 8 channels. This can provide a distributed system with 8 common channels and 8 local channels at each unit.



**Working with iDR System Manager** The online Editor recognises any expanders connected. If you are working **offline** then a simulation of the expanders is provided. This is the same for either the analogue or digital output expander. If you want to simulate a digital input expander then select this from the File / Preferences / Expander Options menu. When choosing a digital input as a channel **Source** you can select either the AES3 or the SPDIF connection. The digital input selection is also available as a parameter which can be stored and recalled in the **presets**.

For further information refer to the Allen & Heath web site or contact Technical Support in your area.

### Inputs x8

- 4x pairs AES3 and SPDIF
- Sample rate conversion
- Select using iDR System Manager

### Outputs x8

- 4 pairs AES3 and SPDIF
- Both formats available simultaneously

### Expander Input / Output Port

- Proprietary 8 channel digital audio
- Connects to **iDR-4** or **iDR-8** main unit
- CAT5 STP cable up to 250 metres (825 feet)

### DR-Link Port

- Serial control of iDR expander units
- Proprietary Allen & Heath control protocol
- IN and OUT ports provided to allow daisy chaining through multiple units
- CAT5 STP cable up to 250 metres (825 feet)

### Status LEDs

- Power –mains power on
- Link – DR-Link control communication
- Lock –audio communication

### Soft LEDs

- Assignable by the installer
- iDR D-in** 8x front panel indicators
- iDR D-out** 8x front panel indicators
- 3-colour – green, yellow, red, off
- Function 3-colour signal meters
- Mute on/off (red)
- Static patch related (one of 3 colours)

### Power Supply

- Universal mains input switched mode design
- IEC 3pin socket
- Country dependent mains lead supplied
- Rear panel power on/off switch
- AC mains input 100-240V AC 50/60Hz
- 25VA max
- Fuse T500mAL 20mm

### Mechanical

- 1U rack 483 x 232 x 44mm
- 19" x 9.1" x 1.7"
- Desk 443 x 232 x 48mm
- 17.4" x 9.1" 1.9"
- Weight 3.5kg, 7.7lbs