## Introduction

The MX36 is capable of operating with up to 3 levels of redundancy on any of the three main quad channel input sets. There are therefore 36 channels available (3 x source type x 4 channels x 3 sets = 36).

Working with Failover and Redundancy

The priority of the input sources is chosen for each set using the Input Source / Backup keys for each of banks A, B & C. Analogue is always the lowest priority - your "if all else fails" option. If a Dante subscription is removed or the network is lost, the MX36 will switch to the backup (normally AES). If AES is lost then the MX36 will switch to the Analogue (on a 4 channel basis to maintain latency timings).

Working in this full redundancy/failover mode, the MX36 will handle three x four channels (typically Left, Right, Front Fill, Sub).
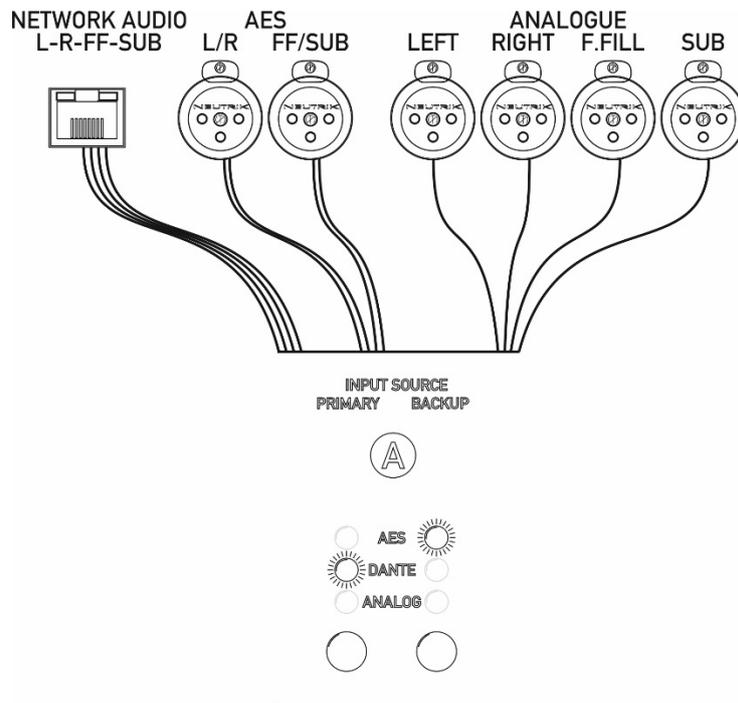
Not all consoles will provide all three source types, so the Input Source Priority should be set accordingly – if only Analogue and AES is available then the typical setting would be Primary = AES and Backup = Analogue.

If only a single source type is available then redundancy can simply be switched off – for example, if only AES is available then Primary = AES and Backup = OFF.

Increasing Console Capacity Using Cascaded Connections

If it is necessary to manage more than three consoles that require redundant failover support, units can be connected in cascade. This requires an audio network connection and a control network connection from both units (even if Dante is not being used as a source type by any of the consoles).

The Dante (audio network) connection is required, as the Dante outputs from one unit must be connected to the "Aux" Dante inputs of the other unit so that it can provide a single set of four outputs across all 6 possible console quad mixes.

The control network connection is required to send switching information (locking, solo etc.) between both units.
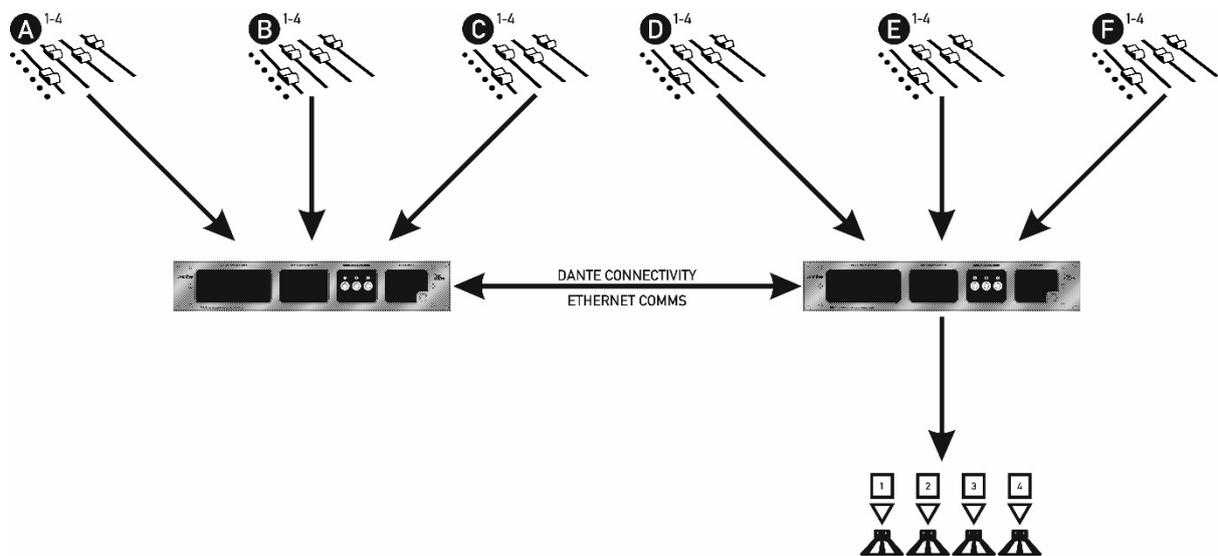

The Console Select switches and failover source selection remain independent across the units but the use of the Dante "Aux" bus means that all consoles' audio is output from the unit designated as the master. The set-up of the "Aux" bus to provide this routing is simply achieved through Dante Controller.

As the stereo line input and mic channels are only over routed direct to the main outputs, these will also cascade across both units.

Increasing Channel Capacity Using Parallel Connections

If it is necessary to manage more than four outputs per console and also maintain redundant failover support, units can be connected in parallel. This requires an audio network connection and a control network connection from both units (even if Dante is not being used as a source type by any of the consoles).

The Dante (audio network) connection is required to provide a bus for the stereo line feed and mono mic channels across all outputs. The control network connection is required to send switching information (locking, solo etc.) between both units, as well as Console Select, which is automatically synchronised.
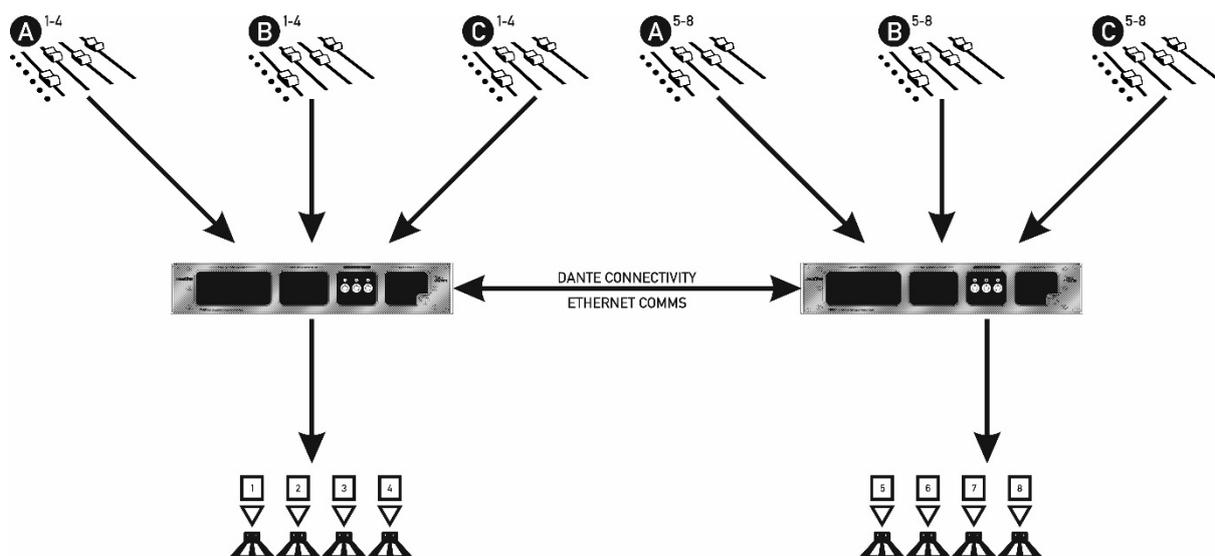

Any redundancy and failover set up on the system will be synchronised across all outputs.

Increasing Console Switching Capability Using a Single MX36

Each of the three main sets of inputs on an MX36 are capable of accepting Dante, AES and Analogue audio simultaneously on A, B and C. It's likely that full three level redundancy may not be required on all three sets (or may not be possible due to the source not providing all three signal types).

If failover is not required, the MX36 is capable of switching between 9 consoles, with the proviso that three will be Dante, three will provide AES and three will be Analogue only.

Backup sources are disabled (via the front panel – Backup = Off) and the Primary source switching is used to cycle between the three signal types to select one of three consoles.
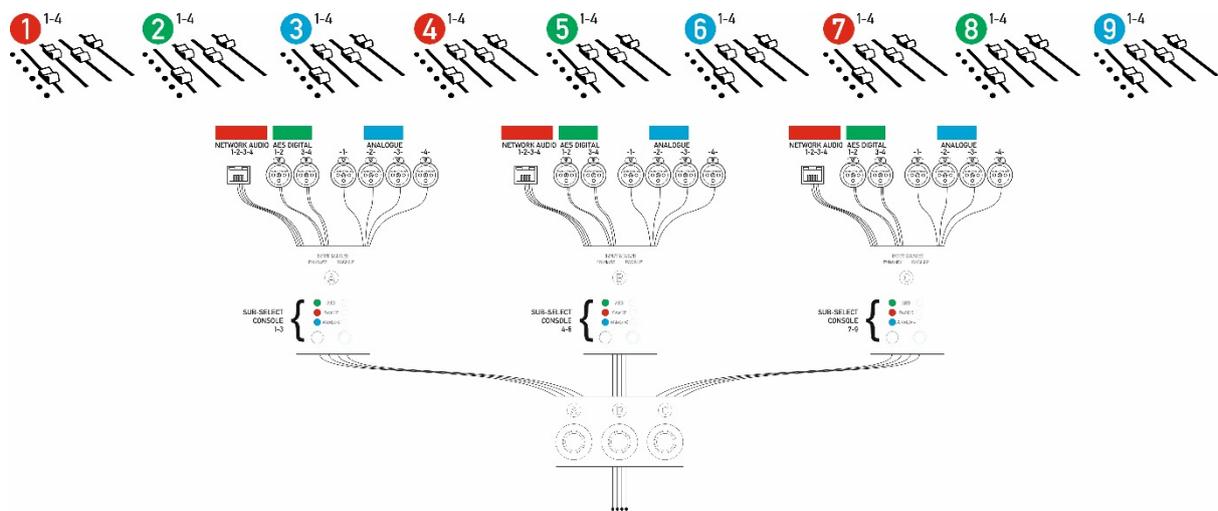
Three of the nine can be mixed using the A-B-C console select switches, one from each sub-set as chosen using the Primary source selection.

All consoles outputs can still be monitored using the Line Monitor and the stereo line input can even be used for an emergency 10th console!

Increasing Console Switching Capacity and Using Redundancy

It is entirely possible to use a combination of redundancy on some channels and not others and so mix the capabilities of the MX36 to best suit your requirements.

For example, the "headline act" may have a cutting edge digital console, capable of outputting analogue, multiple AES streams, and have a Dante card so can be set up with full "belt and braces" for three level redundancy. Consider this on Set "A".

The next level down might just have a console with AES and analogue only. If the AES is only available for the main outputs, then the analogue must be considered as the "Primary" source, and the AES backup would be manually switched in (as analogue sources cannot be monitored for failure modes unless HF pilot tones are used).

Finally, analogue/AES/Dante sources can be used in isolation with no failover in place, and selected as the required Primary source with failover disabled.