## Applications Note

SYS-LINK explained

SYS-LINK (system link) is the Allen & Heath connection standard for linking two consoles together to expand the number of input channels feeding the mixes. One becomes the 'slave' to the other 'master' console. All the slave console mix busses including main LR, groups and auxes connect directly to the master console mix busses without using up valuable input channels. The PFL/AFL system is also linked so that all channels can be monitored using the master console headphones and meters. The slave console master section is not used as its signals are taken before the mix inserts and output faders. Both consoles must have the SYS-LINK option fitted. A pair of multiway cables is all that is required to link the GL2800/ GL3800 to another 8 bus Allen & Heath console fitted with SYS-LINK. (A single cable may be used to connect to a 4 bus console such as a MixWizard[3] or GL2400.)
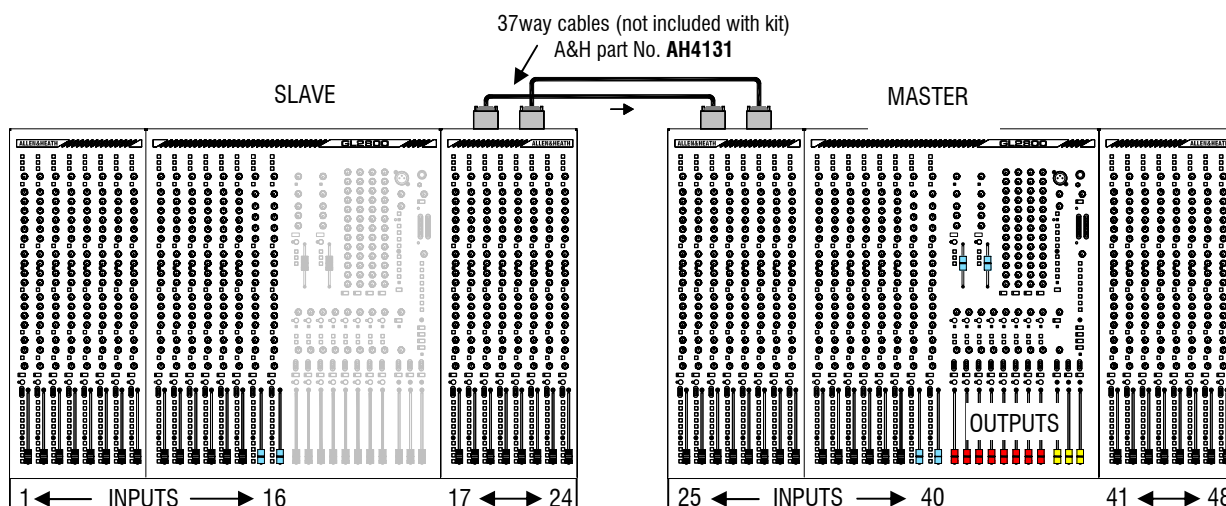

SYS-LINK versions 1 and 2

The GL2800 and GL3800 use the more recent SYS-LINK Version 2 standard. This benefits from balanced interconnections which allow longer cable length with less chance of noise and interference pickup than the earlier, unbalanced SYS-LINK Version 1. Both versions operate at -2dBu line level. V1 uses the 25way D-type connector. V2 uses the 37way D-type connector. Two consoles fitted with SYS-LINK V2 can be linked using two 36-core shielded cables wired one to one to two 37way male D-type connectors. It is also possible to connect between SYS-LINK V2 and V1. This requires 37way to 25way adapter cables wired to unbalance the connections. Wiring details are provided later in this document. The interconnecting cable is not included in the kit and should be sourced elsewhere or ordered separately from Allen & Heath.

GL2800/GL3800 SYS-LINK V2 input and output option

Option kit GL28/38-SLV2 is available from Allen & Heath. This can be installed in the GL2800 or GL3800 console to provide both SYS-LINK V2 input and output. The console may be used as either a 'slave' or a 'master'. For information on fitting the option refer to document AP6159.
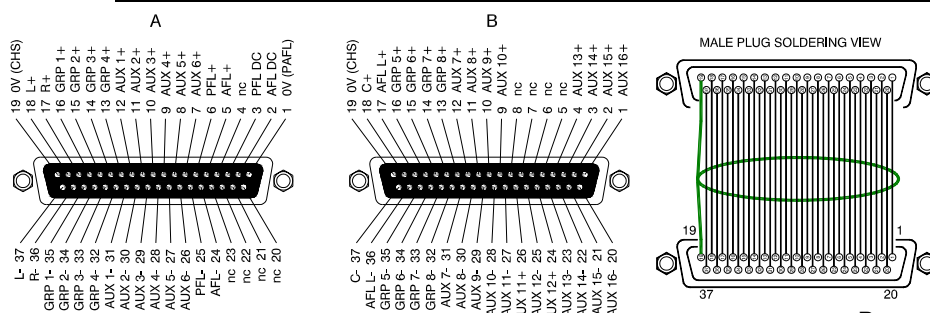
Linking consoles
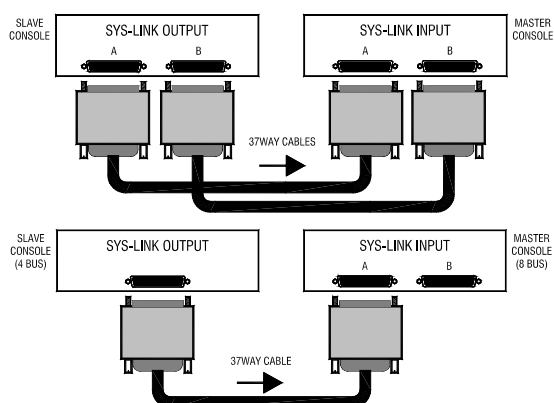
Plug the 'slave' console SYS-LINK V2 outputs into the 'master' console SYS-LINK V2 inputs. Make sure the connectors are fully plugged in and their securing screws tightened.

If linking to a 4 bus console such as a MixWizard or GL2400, use a single 37way cable and plug into the socket marked 'A'.

SYS-LINK V2 to V2 connection

A B

MALE PLUG SOLDERING VIEW

37way male to male D-type cable wired one to one. 36-core shielded cable with screen soldered to pin 19.

A suitable cable is available from Allen & Heath – part number **AH4131**

Note: Aux 11-16 connections are not used on the GL2800 and GL3800, these are used on larger consoles such as the ML Series.

Recommended cable length 2.9 metres, maximum length less than 5 metres.

SYS-LINK V2 to V1 connection

37way male to 25way male D-type cable wired as shown below. Minimum 18-core shielded cable with screen soldered to chassis at both ends. Maximum cable length 2.9 metres.

A suitable cable is available from Allen & Heath – part number **AH6552**

MALE PLUG SOLDERING VIEW
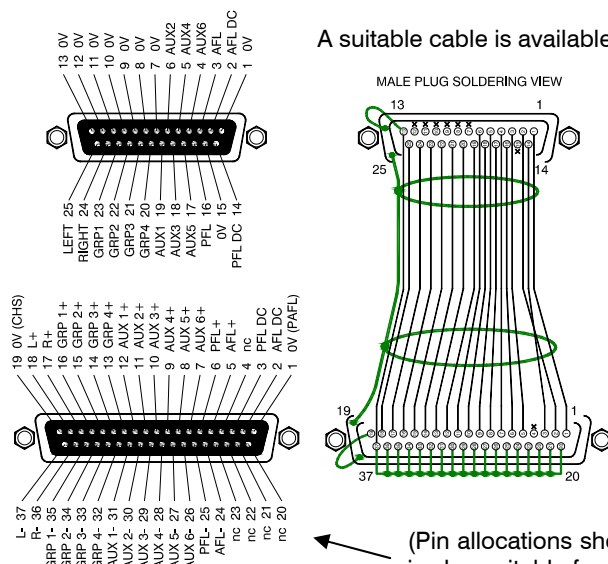
25way 37way	25way 37way
Pin 1 > 1	Pin 18 > 10
Pin 2 > 2	Pin 19 > 12
Pin 3 > 5	Pin 20 > 13
Pin 4 > 7	Pin 21 > 14
Pin 5 > 9	Pin 22 > 15
Pin 6 > 11	Pin 23 > 16
Pin 14 > 3	Pin 24 > 17
Pin 16 > 6	Pin 25 > 18
Pin 17 > 8	

Pin 13 > 20 to 37 (linked 0V) (pin 13 also connected to 25way chassis)
37way Pin 19 = chassis
25way Pins 7 to 12,15 not connected
37way Pin 4 not connected

(Pin allocations shown are for 'A' connectors – adapter cable is also suitable for 'B' connectors)

Custom applications

To connect other audio equipment using the SYS-LINK connectors always ensure unused audio inputs are linked to 0V ground at the input connector. This is to prevent interference pickup on unterminated high impedance inputs. Do not link unused outputs to ground. Connect line level signals of -2dBu. Use balanced connections where possible. For unbalanced signals link signal '-' to 0V. To activate PFL/AFL link PFL DC to 0V through a 15k ohm resistor (37 way Pins 3 to 1).

If you require further information or advice please contact Allen & Heath technical support.