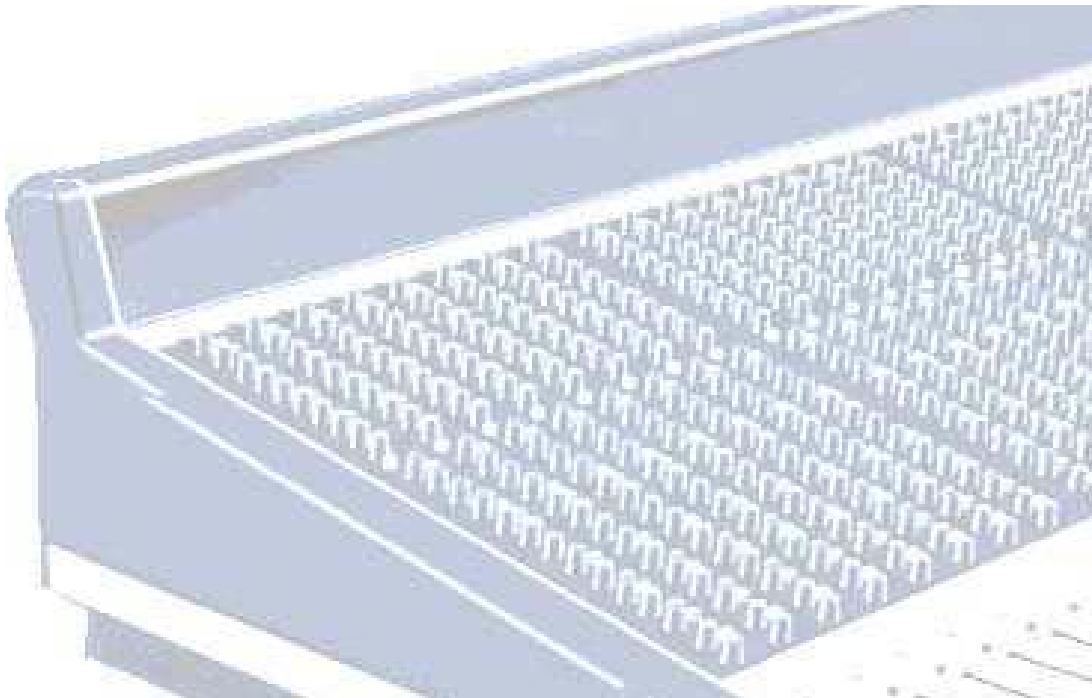# ML
4000

ALLEN&HEATH

Expander Sidecar

USER GUIDE

Introduction

The Allen & Heath **ML4000-24SC Sidecar** is the 24 mono input channel expander for the **ML4000** console. It is free standing and does not need to be mechanically fixed to the main console. Interconnection is by means of multiway cables to link the audio signals and control logic. It is supplied with its own power supply unit independent of the console. The input channel strip is identical to the main console with all functions available. The groups and snapshots are controlled from the main console. Up to two gooseneck lamps (part AL4061) may be plugged into the rear of the meterbridge.

Note: This sidecar may be used with the **ML4000** only. It is not suitable for use with other consoles or as a stand alone console. One or two sidecars may be connected allowing a maximum 96 input channels. Do not connect more than two sidecars.

Before Starting

Check that the following items have been supplied with each sidecar:

1x	**MPS14** Power Supply Unit with User Guide	MPS14/n
1x	Mains cord with moulded plug suitable for your local supply	n = volts
1x	DC power cable 2.8 metres long	002-583
2x	37way Audio Cables 2.8 metres long	002-617
1x	9way Logic Cable 2.8 metres long	AL4155

Read and heed the **Important Safety Instructions** printed at the start of the **ML4000** console user guide (AP4314) and **MPS14** power supply user guide (AP3898).
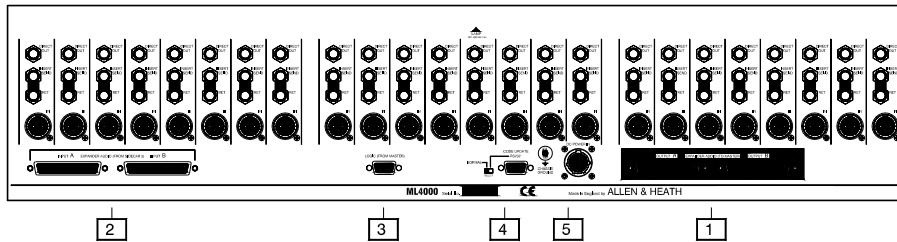
Connecting the Sidecar to the Console

Diagram 1 shows the cable routing for connecting the sidecars to the **ML4000**. Refer to **Diagram 2** for connecting one sidecar. Refer to **Diagram 3** for connecting two sidecars.

Connect the two audio OUTPUT connectors [1] to the main console EXPANDER INPUT using the two 37way 1 to 1 shielded cables provided. We recommend that you label the cables A and B to avoid them being swapped if replugged. If you are connecting a second sidecar plug its OUTPUT into the first sidecar INPUT connectors [2]. Plug the LOGIC connector [3] into the main console LOGIC connector 1 for one sidecar, or 1 and 2 for two sidecars. Plug the power supply DC cable into connector [5].

Note: To maintain correct channel assignment do not reverse the interconnecting cables. Make sure the cable plug locking screws are correctly tightened.

Turning the Console On and Off

Make sure the DC power cables and audio and logic interconnecting cables are correctly plugged in and locked. Turn all power supplies on or off together. Alternatively, turn the sidecar supplies on first followed by the main console, and turn the console off first followed by the sidecars. Do not turn off any supply during normal console operation.

Note: For normal console operation make sure the rear panel RS232 switch [4] is set to its NORMAL position. It will not function correctly if left in its RS232 position.

Diagram 1

SIDECAR 2   MAIN CONSOLE   SIDECAR 1

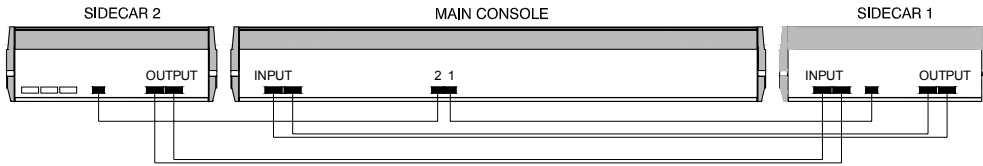OUTPUT   INPUT   2 1   INPUT   OUTPUT

Diagram 2   CONNECTING ONE SIDECAR

MAIN CONSOLE

INPUT   LOGIC   POWER

A   B   1

MAIN PSU

SIDECAR
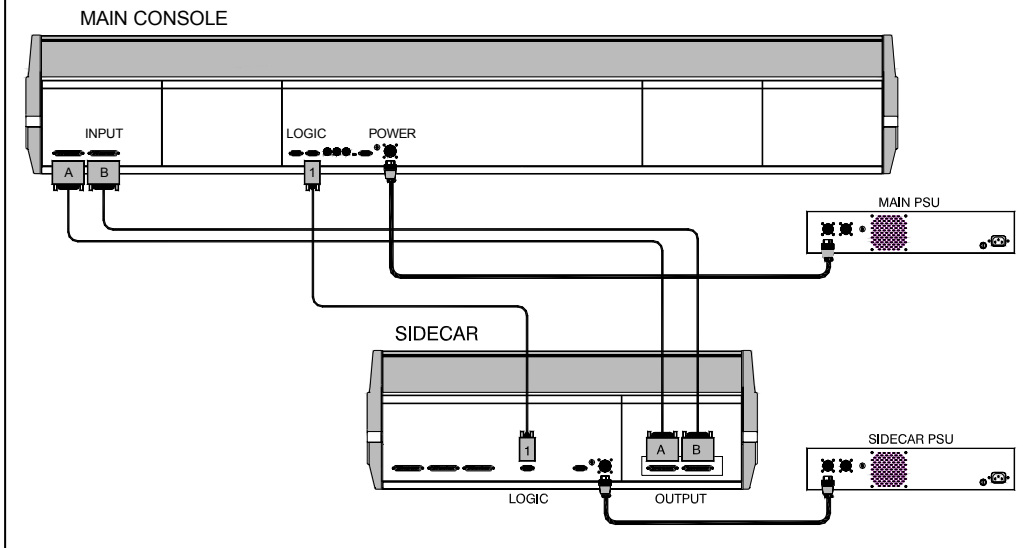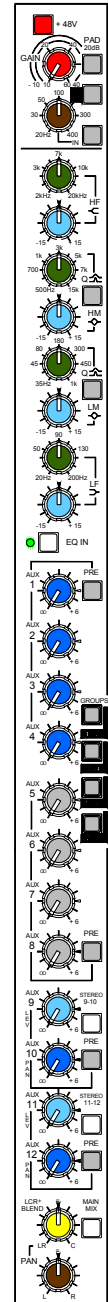
1   A   B

SIDECAR PSU

LOGIC   OUTPUT

Diagram 3   CONNECTING TWO SIDECARS

MAIN CONSOLE

INPUT   LOGIC   POWER

A   B   2 1

MAIN PSU

SIDECAR 1

LOGIC   OUTPUT

INPUT   A   B

SIDECAR 1 PSU

A   B

SIDECAR 2

SIDECAR 2 PSU

LOGIC   OUTPUT

2   A   B

+ 48V

PAD
20dB

GAIN

3k   10k
2kHz   20kHz
HF

1k   5k
700   7k
500Hz   15k
HM

80   180
45   450
35Hz   1k
LM

50   130
20Hz   200Hz
LF

EQ IN

AUX
1   PRE

AUX
2

AUX
3   GROUPS

AUX
4

AUX
5

AUX
6

AUX
7   PRE

AUX
8

AUX
9   STEREO
9-10

AUX
10   PRE

AUX
11   STEREO
11-12

AUX
12   PRE

LCR+
BLEND   MAIN
MIX

PAN

L   R

24

MUTE

SAFE/EDIT

PAFL

PK
+4
0
-6
SIG

1
2
3
4
5
6
7
8
VCA
GROUP

10

5

0

5

10

20
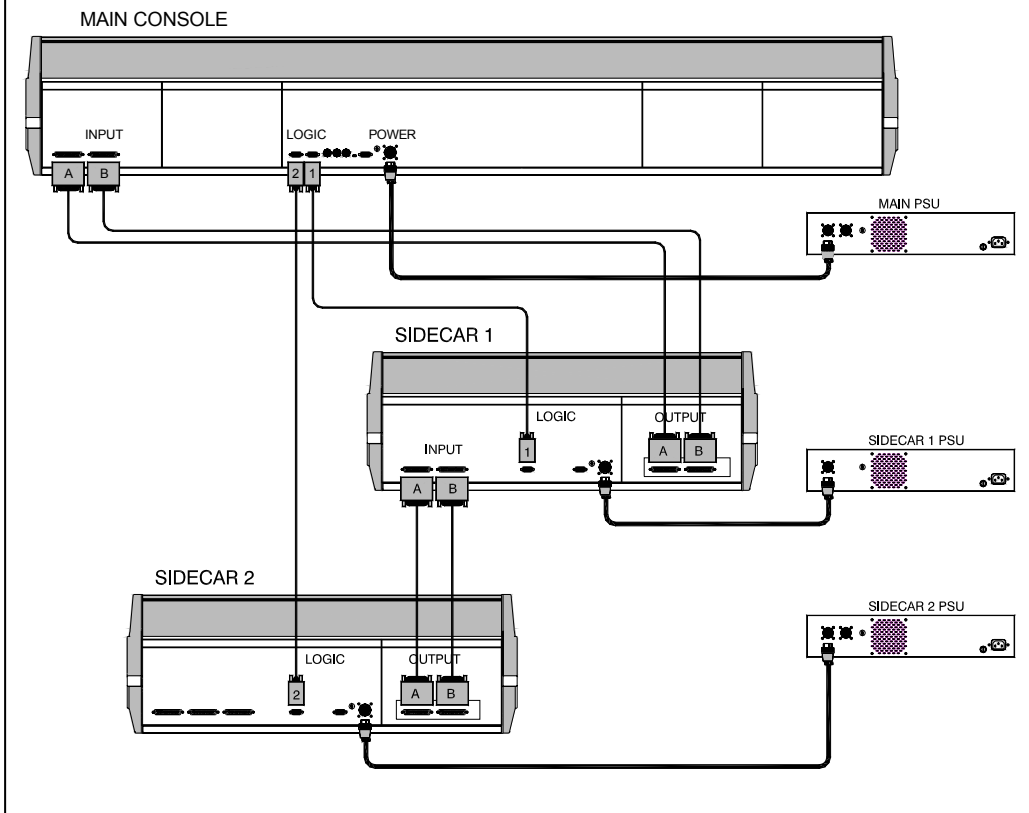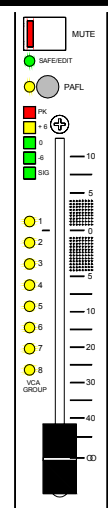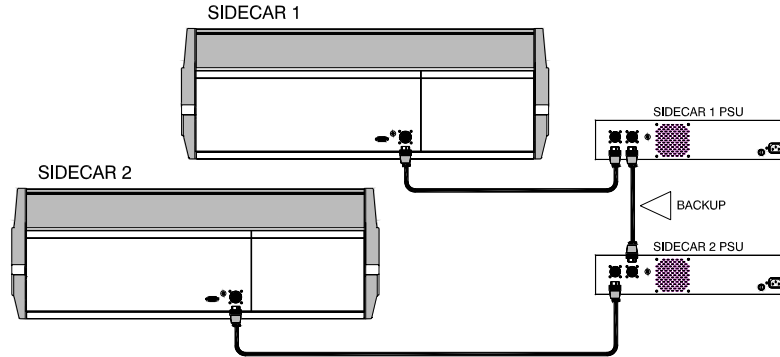
30

40

∞

Combining Power Supplies for Backup

If you are connecting two sidecars then you can link the power supplies together for redundant supply backup. One **MPS14** supply is capable of running both sidecars together should the other fail. You need to order the short 0.7 meter DC power cable (part 002-584) for linking.

Note: Do not link the main console power supply to the sidecar supply in this way. One supply is not capable of running both the main console and its sidecar should the other fail. You should order a spare power supply with your console in this case. Make sure the power supplies are positioned next to each other and use the same mains feed.
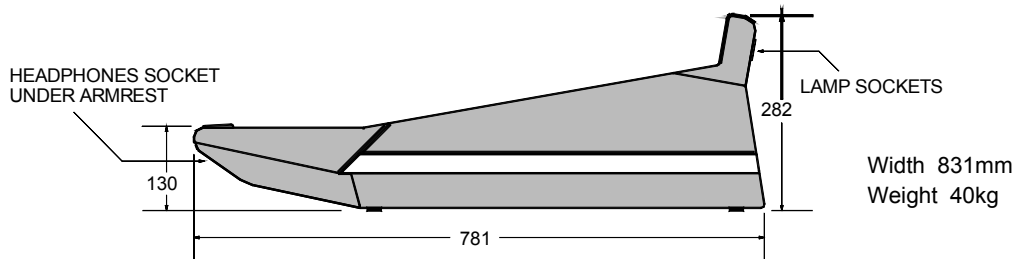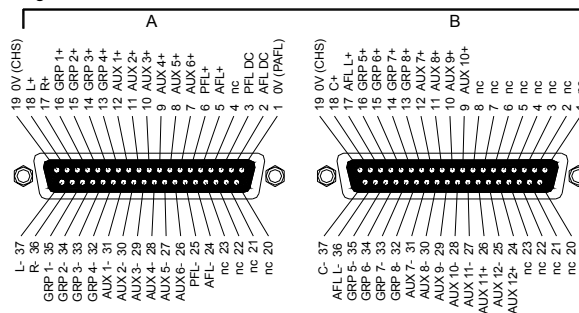
RS232 Code Update

A rear panel RS232 port is provided. This is used for loading new operating software into the sidecar from a PC. It is not used for any other function. Check our Web site www.allen-heath.com for details on the latest version of **ML4000** operating software and instructions on loading it into the console.

Note: The sidecar settings are archived using a MIDI or RS232 dump from the main console. There is no need to archive the sidecar settings separately.

Important ! The sidecars and console must run the same version of operating software. Check the web site for the latest version.

Audio Connections

The following information is provided for reference only. It is not necessary to wire special cables to connect the sidecar to the console. Standard 1 to 1 wired 37way cables are provided. The audio signals are balanced and operate at a nominal –2dBu line level.

HEADPHONES SOCKET
UNDER ARMREST

LAMP SOCKETS

282

130

781

Width 831mm
Weight 40kg