Operating manual

(Rel. 1.1)

Oxygen 2

Portable Mixing Console

AXEL TECHNOLOGY

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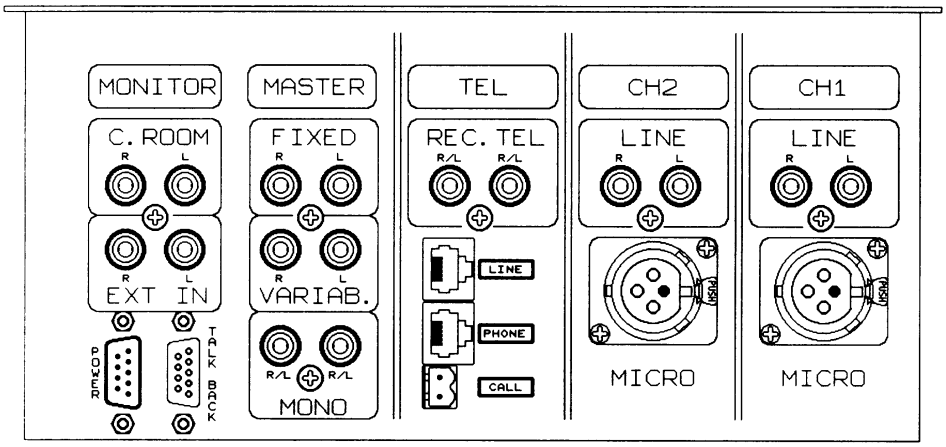
1 INTRODUCTION

Oxygen 2 has been especially conceived to realise professional external reportages.
It is particularly indicated for on air programs from stadium, sport houses, convetions, conferences, etc… as it is a complete remote working place.
The professional audio quality is assured by its high dynamic and its pass band from 0 to 20 KHz.
Thanks to its small dimentions and wheight you can carry *Oxygen 2* inside a business case.
Its batteries gives up to 14 hours autonomy.

2 INSTALLATION

Oxygen 2 has been conceived according to the present security legislation.
The installation must be realised by skilled technicians.
Before starting Yr *Oxygen 2* please check that any connection is correct and there are no wire problems.
We suggest to use high quality wires, well protected, and balanced connections.
Make sure that the telephone line is directly connected and does not pass in the switchboard: this could effect *Oxygen 2* performances.
Make sure that the ground system is working and that in the system the ground and the mass are separated.
This manual images could differ a bit from Yr *Oxygen 2* real design.
Please keep this instruction manual after reading it in detail.

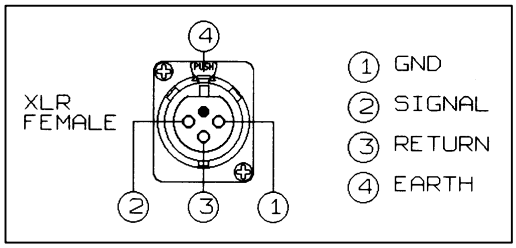
3 REAR PANEL CONNECTIONS



3.1 CH 1 ¸ 2

The first TWO channels feature two selectable inputs:

- INPUT A: input for MICROPHONE signal, electronically balanced on XLR female
- INPUT B (PIN RCA): LINE input.



3.2 TEL

Telephone hybrid for 2 wire connections.

- R/L (REC.TEL on PIN RCA): double mono output which allows recording of the telephone calls (either SEND or RECEIVE signals).
- LINE (standard telephone plug RJ 11): telephone network connection.
- PHONE (standard telephone plug RJ 11): for the connection to an external telephone set.
- CALL (terminal board connector): connector for light signalling system like MR.LIGHT by AXEL TECHNOLOGY (optocoupled output).

3.3 MASTER OUTPUTS

The Master output sums the signals of those channels on which you have selected the PGM key.

- FIXED (PIN RCA): unbalanced stereo output (only balance is adjustable)
- OUTPUT (2) (PIN RCA): unbalanced stereo output (balance and level are adjustable)
- MONO (PIN RCA): unbalanced (mono outputs not adjustable)

3.4 MONITOR OUT and EXT-IN input

The Monitor is the output module conceived for auxiliary (f.i. Control Room) listening.

- MONITOR OUT (PIN RCA): output for pre-listening of the Monitor selected sources (CUE or PGM or EXT).
- EXT IN (PIN RCA): input to connect external equipment, only for listening purposes (for example a tuner)
- POWER (SubD 9p male): connector for external AC adapter.
- TALK BACK (SubD 9p female): audio output (pin 3,4,5) providing the Master signal (or the EXT IN signal, depending on an internal jumper) until the T.B. key is pressed. After pressing this key, the Monitor output is temporally switched on the channel 1 (MicDJ - Line) signal. DJ OUTPUT is not regulated by any overall volume.

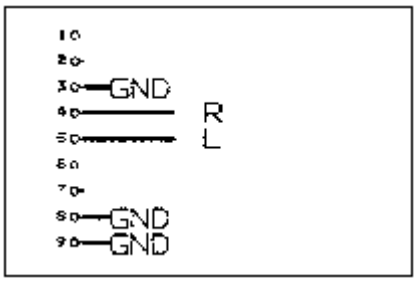
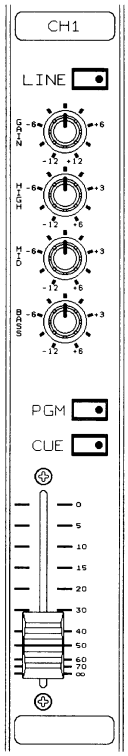


Fig: T.B. output layout

4 CHANNELS

4.1 CHANNELS 1 & 2



LINE: The pressed button selects the input LINE (led switched on) and the released button selects the input Micro (led switched off).

GAIN: It sets the gain on the selected input. We suggest to set the gain making sure that the output audio signal is not distorted when the slider is on its upper point; PFL (i.e. CUE) level should be 0 dB.

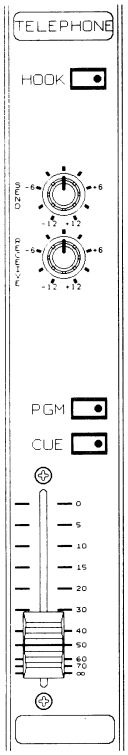
HIGH, MID, BASS: they adjust the level of the high, mid and bass frequencies.
You can get a flat frequency response when the potentiometers are in their median position.

PGM: it connects the module output to the Master output.
The led inside the button turns on according to the pressed buttons.

CUE: it enables the channel pre-fader output listening. The led shows that the function is on.

SLIDER: main fader. The **ALPS N** – 60 mm type is supplied in the current model.

4.2 TELEPHONE CHANNEL



HOOK: it hooks the line. The led under the button blinks when a call is coming and stays on when the line is hooked (if not, the phone line could be not present or could be defective)

SEND: it adjusts the level of the signal sent to the telephone line.

RECEIVE: it adjusts the level of the signal received from the telephone line.

PGM: it connects the telephone output to the Master output. The led inside the button turns on according to the pressed button.
Note: if the PGM button is pressed, the signal sent to the telephone line (adjustable through SEND control) will be the sum of the signals coming from the first two modules (if the PGM key is pressed).

CUE: it enables the channel pre-fader output listening. The led inside the button turns on according to the pressed button.

SLIDER: main fader. The **ALPS N** 60 mm type is supplied in the current model.

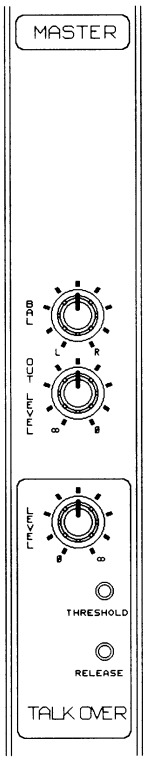
NOTE: *Oxygen 2* allows to have a 'private' (i.e. not broadcast), bidirectional communication with the phone user.

- You can listen to the phone user (without broadcasting the signal) as a normal PFL, available on the Monitor module outputs (see Monitor channel chapter).

- You can speak to the phone user through the microphone connected to the first channel (MicDJ-Line) (even if neither CUE or PGM keys are pressed). Please note that every time you hook the line, you allow the phone user to listen to the first channel output.

NOTE: if PGM key is selected on the TELEPHONE channel (no matter of the CUE keys), You are able to speak to the phone user only by selecting the PGM key on the MIC channels, too.

4.3 MASTER CHANNEL



OUTPUT 2: it controls the signal level on the VARIABLE output.

BALANCE: it controls the signal balance on the VARIABLE and FIXED outputs.

4.4 TALK OVER SECTION

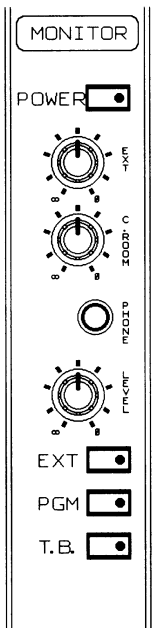
The TALK OVER section allows compression of all signals from CH 2 and from the TELEPHONE channel in favour of CH1 channel signal. It means that you can, f.i., automatically fade the level of music signals (from Stereo module) depending on the level of a microphone signal.

LEVEL: it controls the ratio of the compression: the lower is the value, the lower will be the compressed audio level. The TALK OVER function can be disabled by turning the LEVEL potentiometer in position 10.

THRESHOLD: the trimmer inside the hole adjusts the threshold intervention level of the compressor (use a small screw-driver in order not to damage the trimmer).

RELEASE: adjusts the release time of compressor: the higher is the value (turn it clockwise), the longer is the time needed to go back to the former audio level. (use a small screw-driver not to damage the trimmer).

4.5 MONITOR CHANNEL



POWER: it switches On / Off the mixing console. The led in the key shows its status.

EXT: it adjusts the EXT IN input signal level (for example the tuner signal)

MON: it controls the level of the signal related to the MONITOR OUT (CUE or EXT IN, or PGM).

PHONE LEVEL: it controls the headphones signal level. Phone signal is the same as Monitor output

EXT: by pressing this key you relate the input EXT IN signal to the Monitor output

PGM: by pressing this key you relate the Master signal to the Monitor output

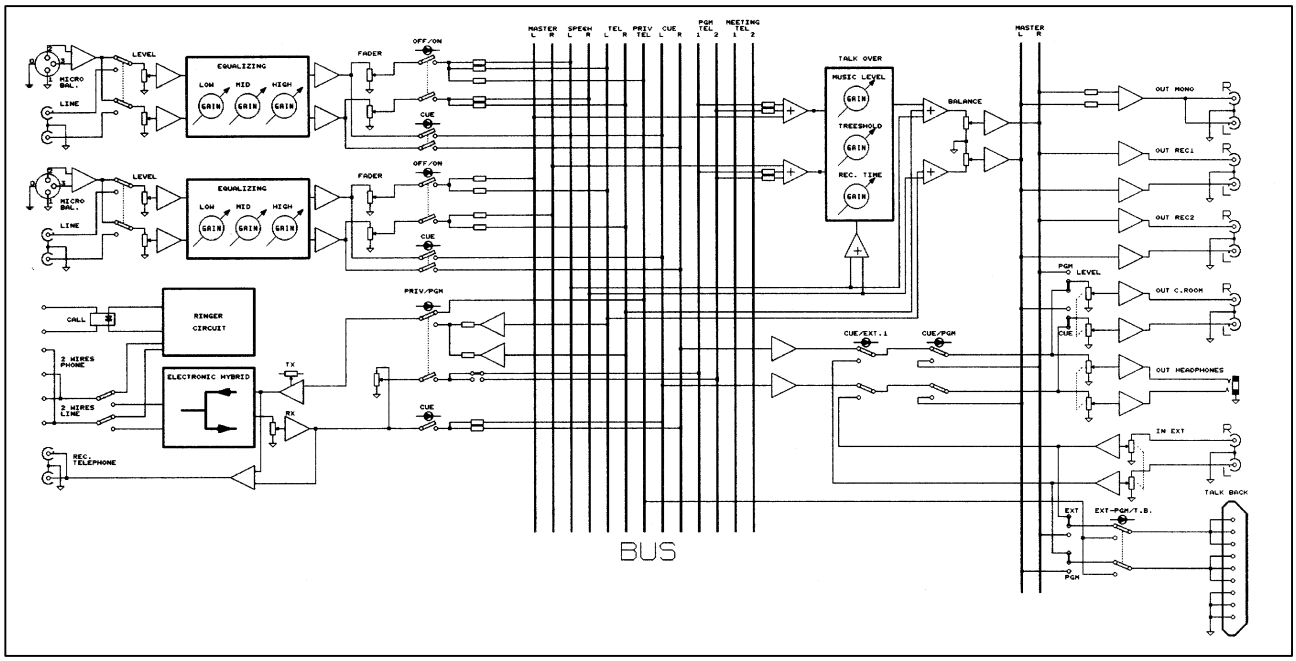
T.B.: by pressing this key you send the channel CH1 pre-fader signal to the TALK BACK output.

NOTE: with released PGM and EXT IN buttons, the Monitor output supplies the PFL (CUE) signal.

5 BATTERIES

The equipment features two internal Lead batteries (12 V – 1.2 A each one, whitout memory effect) which assure about 14 hours autonomy. Battery recharge is get through the external power supply without open the console or remove the batteries.
Complete charge need about 24 hours time (no matter of console powering state).

6 BLOCK DIAGRAM



7 TECHNICAL FEATURES

INPUTS

	TYPE	CONNECTORS	LEVEL	IMPEDANCE
LINE (CH 1/CH 2)	STEREO UNBAL.	PIN RCA	12 ÷ +12 dBm	47KΩ
MICRO	MONO BAL.	XLR FEMALE	-36 ÷ -60 dBm	12KΩ
EXT.IN	STEREO UNBAL.	PIN RCA	- ÷ +6 dBm	47KΩ
LINE (TEL.)	2 WIRES	Rj 11.	12 ÷ +12 dBm	

OUTPUTS

	TYPE	CONNECTORS	LEVEL	IMPEDANCE
FIXED	STEREO UNBAL	PIN RCA	0 dBm	100 Ω
VARIABLE	STEREO UNBAL	PIN RCA	- ÷ +6 dBm	100 Ω
MONO	MONO UNBAL	PIN RCA	0 dBm	100 Ω
MONITOR	STEREO UNBAL	PIN RCA	- ÷ +6 dBm	100 Ω
TALK BACK	STEREO UNBAL	DB 9	0 dBm	100 Ω
HEADPHONE	STEREO UNBAL	JACK STEREO	- ÷ +12 dBm	100 Ω
REC.TEL	STEREO UNBAL	PIN RCA	0 dBm	100 Ω

DYNAMIC: 100 dB

FREQ. BAND: 20 ÷ 20 KhZ

EXTERNAL SWITCHING POWER SUPPLY:

AC rate	90 / 260V (50 – 60 Hz)
Power consumption	20W

DIMENSIONS:

Height: 118 mm.
Width: 217 mm.
Depth: 270 mm.
Weight: 4.5 kg.

8 WARRANTY

The warranty covered by AXEL TECHNOLOGY S.R.L. has 1 year validity ex-work.
Do not open the equipment without being previously authorised by AXEL TECHNOLOGY, in case of seal breaking the warranty will expire.
AXEL TECHNOLOGY will not be responsible for any damage, of any origin, caused or related to an incorrect use of the product.