SM PRO AUDIO

**ADDA 192-S
OPERATING MANUAL**

SAFETY INSTRUCTIONS

CAUTION: To reduce the risk of electrical shock, do not remove the cover or rear panel of this unit. Do not expose this appliance to rain or moisture. No user serviceable parts inside. Please refer servicing to qualified personnel only.

Retain Instructions:
Please retain all safety and operating instructions for future reference.

Ventilation:
Do not impede the flow of air through the ventilation openings. Take care when selecting appropriate installation locations so obstacles do not obscure proper ventilation.

Heat:
This product should be situated away from other heat sources such as fire, high heat emitting devices, heaters, etc.

Power Source:
Make sure the product is set to the correct voltage for the location in which it is being used.

Grounding and Polarization:
Never defeat the products power grounding means.

Power-Cord Protection:
Power supply cords should be connected or placed in a fashion that could allow possible exposure to damage. Take care to avoid wear and tear, rubbing, squashing, etc.

Cleaning:
The product should be cleaned only with a soft cloth. Do not use any corrosive products on the unit.

Inactivity:
The power cord of the product should be unplugged from the outlet when left unused for a long period of time.

Service requirement:
Service by qualified service personnel when:
-   The power supply cable has been damaged in any way
-   Liquid has been spilled onto or into the product
-   The product has been exposed to elements such as rain
-   The product exhibits faults or obvious performance degradation
-   The product has been damaged in a way that exposes components

The user should not attempt to service this product beyond what is described in this operating manual.

FOREWORD

Dear Customer,

Firstly, we would like to thank you for purchasing our ADDA 192-S analog/digital audio interface. With much thought and effort, our engineers have developed a product we know you will be satisfied with.

As digital recordings are facilitated by the use of A/D (analog to digital) converters it's not surprising that the sonic quality of the recorded audio is directly related to the quality of the A/D converter used. Needless to say… you need a quality AD/DA unit to give your recording projects the justice they deserve.

Our hardware engineers have designed a truly spectacular stand-alone AD/DA unit that allows for pristine conversion of your audio data. Featuring both excellent sonic qualities coupled with a host of versatile operational features, the ADDA 192-S is an ultra-high quality AD/DA converter perfectly suited to a range of applications.

We are extremely proud to offer you our new ADDA 192-S audio interface solution. It's a great addition to the SM Pro Audio product line up and we know you will enjoy many years of trouble free operation.

Please read this manual thoroughly to best understand the safety and operational procedures of the ADDA 192-S.

Regards,

SM Pro Audio

ADDA 192-S Main Features
The ADDA 192-S is a professional analog/digital audio interface:

➢ Pristine 24 Bit AD/DA Conversion
➢ 44.1, 48, 96, 192 kHz Sampling-Rates
➢ 2 x channel Mic/Line pre-amp
➢ Switchable 48Volt phantom power per channel
➢ Switchable -20dB PAD per channel
➢ Internal & External S/PDIF Sync
➢ S/PDIF optical and coaxial I/O
➢ Balanced/unbalanced analog monitor outputs
➢ Analog input/Digital input monitoring mix balance feature
➢ Zero latency hardware monitoring
➢ Built in headphone amplifier

* Note: It should be pointed out, that extreme output volumes may damage your ears and/or your equipment. Turn down LEVEL controls before you switch on the unit.

INDEX

1. Introduction

In purchasing the new ADDA 192-S, you have acquired a AD/DA of high class that meets the demands of the home and professional studio. This sturdy desktop unit allows for 2 channels of audio to be accurately converted to and from the digital realm. Peak led indicators and switchable phantom power per channel, a Digital mix function, and a handy headphone monitoring amplifier are also included making the ADDA 192-S an indispensable tool for audio professionals.
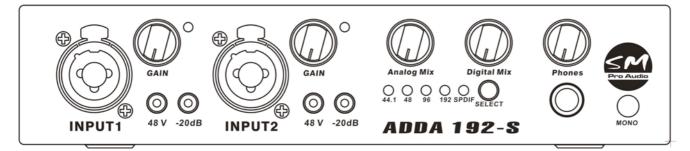
2. THE DESIGN

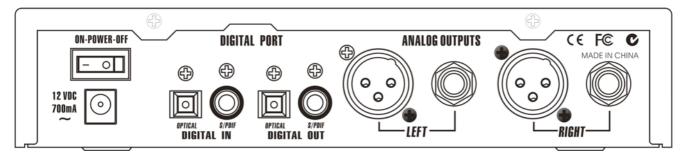## 2.1 High quality components and design
The philosophy behind SM Pro Audio products guarantees a no-compromise circuit design and fault-tolerant component selection. All SM Pro Audio products go through a rigorous planning and production procedure from start to finish.

2.2 Inputs and outputs
All inputs and outputs are secured firmly to the exterior chassis housing thus ensuring robust quality and confidence under all conditions.

ADDA 192-S front panel

ADDA 192-S rear panel

3. INSTALLATION
Your SM Pro Audio ADDA 192-S was carefully packed in the factory and the packaging was designed to protect the unit from rough handling. We do however still recommend that you carefully examine the packaging and its contents for any signs of damage that may have occurred in transit.

* Note: If you happen to receive a damaged unit, please notify your dealer and shipping company immediately.

3.1 What's included in the box
You should have the following included inside your shipping box:
-   1 x ADDA 192-S
-   1 x Power adaptor
-   1 x Operational user guide (the one you are reading!)

3.2 Installation

The SM Pro Audio ADDA 192-S can be used stand alone on your desktop or installed into "one" standard 19" compatible audio rack-mount unit space (rack ears sold separately).

Desktop installation - Simply find a suitable location to place the unit on your desktop. Keep in mind that you will need easy access to the front panel controls and adequate access to accommodate your cable connections.

Rack installation - Please remove all cables (including power) before installing the ADDA 192-S into your audio rack.
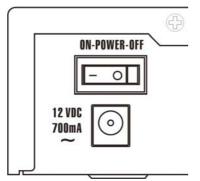
Sturdy rack mounting ears (optional accessory purchase) can be attached to each side of the ADDA 192-S to allow for easy rack installation. Mount the ADDA 192-S into an available rack-space position and secure with rack-mount bolts/screws.

* Note: Please take into consideration ventilation of your equipment. A well-ventilated equipment rack will ensure optimum operation and longevity of your equipment. It's often a good idea to leave 1 free rack-bay position between your equipment to allow adequate ventilation.

3.3 Mains Voltage & front panel power switch

Mains Voltage

Important Note: - Before you connect your ADDA 192-S to the mains power supply, please make sure that your local voltage matches the voltage required by the included power supply.

The ADDA 192-S has an external power supply. Each ADDA 192-S is shipped to the end user destination with the appropriate voltage of your mains power supply in mind.
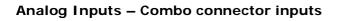
Power on/off switch

The ADDA 192-S's power switch can be found on the rear panel. To enable power to the ADDA 192-S or 'turn on', simply place the power on/off switch into the on position.
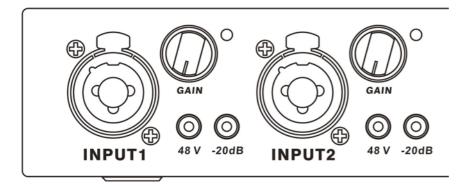
* Note: When the unit is powered on, one of the front panel sample rate mode LED's will illuminate to indicate the ADDA 192-S's operational state as 'on' (and of course the sample rate mode status) and ready for operation.

To power down or 'turn off' the ADDA 192-S, simply place the power on/off switch into the off position.

* Note: It's always good practice to protect your ears, and other audio equipment by taking appropriate care when powering up any audio equipment. Being aware of your gain structure, and performing a structured power up sequence with your equipment will help to avoid unexpected audio signals bursts. It's a good idea to power up devices in sequence from the start of the signal chain to the end of the signal chain.

3.4 Audio Connections

Analog Inputs – Combo connector inputs

2 x combo (XLR & TRS) connectors are provided as channel inputs. Connect the source audio material you would like to pre-amplify and/or convert to a digital stream to these connections.
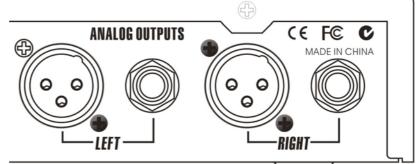
The XLR inputs are designed to accept microphone signals whilst the multi-purpose combo socket accepts 1/4″ jack inputs from line level devices such as synthesizers, mixer outputs, or other devices.

Analog outputs – XLR & TRS connector outputs

2 x XLR and 2 x TRS connectors are provided on the rear panel as a stereo channel output pair.
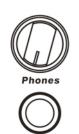

These two analog output pairs deliver the left and right channels of the signal that is inserted into either the digital or analog inputs of the ADDA 192-S.

Connect the outputs of the ADDA 192-S to your destination audio device.

Note: The analog output pair delivers a mixed signal of both the digital and analog input signals of the ADDA 192-S. You can adjust the balance of signals via the Analog and Digital Mix rotary knobs located on the front panel. This is perfect for attaining a mix balance of incoming signals.

Headphone output – ¼″ TRS stereo connector output

1 x Stereo TRS connector is provided as a headphone amplifier output monitor. Simply connect the ¼″ jack from your headphones and adjust the headphone gain control to your desired listening level.
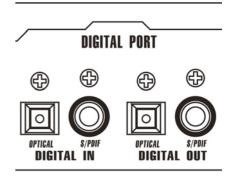
Note: The stereo headphone output delivers the same signal as the analog output pair. As such, keep in mind that the Analog and Digital Mix rotary knobs located on the front panel effect the balance of the monitored mix.

Digital input and output – optical & coaxial

The ADDA 192-S offers digital connectivity via the digital interface port provided on the rear panel. Connections for coaxial and optical S/PDIF formats are provided.

Digital Output
Converted analog input signals are converted to a digital (A/D) stream and routed to both the coaxial and optical S/PDIF output connectors. Connect either of these connectors to the digital input of your destination device (DAT, workstation, sound card, etc).
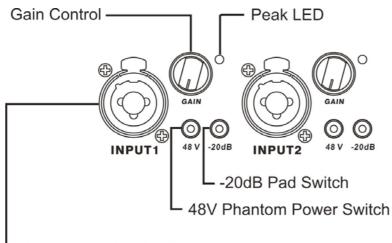
Digital Input
The coaxial or optical S/PDIF format digital input connectors are designed to accept a digital signal from your digital recorder, workstation, or other compatible digital device. The built in digital to analog (D/A) converter then routes the converted signal to the analog and headphone amplifier outputs.

* Note: This signal can be blended in with the analog input signal via the Digital and Analog rotary mix controls.

4. FRONT PANEL CONTROLS & INDICATORS

4.1 Independent (2x) rotary gain controls and peak LED indicators

Rotary gain controls
Each of the ADDA 192-S's input channels feature a rotary gain control for variable adjustment of the desired pre-amplifier level. Clockwise rotation increases the gain, whereas anti-clockwise rotation decreases the gain.

* Note: Always begin using the ADDA 192-S with all gain controls set to the minimum value. This way you can increase each channel gain gradually to the desired level without experiencing possible unwanted and unexpected loud signal surprises to both you and the rest of your audio equipment!

Peak LED indicators
A peak LED indicator is provided for each of the ADDA 192-s's input channels. The peak LED momentarily illuminates to indicate when incoming signal strength has reached an optimum input level.

* Note: A continuously illuminated peak LED indicates you have surpassed optimum input level and distortion of the respective channels audio signal will occur. It's time to adjust your gain structure to a more acceptable setting. To monitor your gain structure in finer detail, take note of the incoming level meters on the destination device that follows next in your signal chain!

4.3 Independent (2x) channel 48V phantom power and -20dB PAD selector switches

48V Phantom power switch
Each of the ADDA 192-S's input channels feature a phantom power switch to facilitate enabling or disabling of 48v of continuous power supply to the channel. When enabled the corresponding phantom power LED will illuminate.

* Note: Phantom power is a voltage distribution system utilizing standard microphone cable. It is useful (and often required) for powering condenser microphones connected to your audio system. If any of your microphones require phantom power, simply enable the corresponding channels phantom power switch to activate a constant 48v power supply.

-20 dB PAD switch
A -20dB PAD switch is provided for each channel to allow a twenty (20) decibel gain reduction of the incoming signal if desired/required. When enabled the corresponding -20dB PAD LED will illuminate.

* Note: This function is useful when connecting extremely "hot" signals. Excessive signal input levels can overdrive the ADDA 192-S's pre-amplifier input stage resulting in unwanted signal distortion. The PAD switch allows -20dB of gain attenuation/reduction to compensate for this situation prior to finer pre-amplifier gain adjustment. To monitor your gain structure in finer detail, take note of the incoming level meters on the destination device that follows next in your signal chain!

4.5 Analog & Digital Mix controls

Analog Mix   Digital Mix

The ADDA 192-S's Mix controls allow you to mix together the incoming analog signal/s with the output of the internal D/A converter (any incoming digital signals connected to the rear panel) for monitoring purposes through the analog outputs (and headphone output).

* Note: This is a great feature when using the ADDA 192-S in a recording environment. As all computer workstation based digital recording systems have a small amount of inherent latency, it is important to offer functional solutions to avoid possible issues during the recording process.

Latency manifests itself as a delay between recording a signal and monitoring/hearing it. It takes time for data to travel to and from your computer through hardware (audio card/interface) and multiple software layers to be recorded and played back. Although developers are optimizing their hardware and software drivers to deliver better performance in regard to reducing latency, it still remains a problem. In many systems where latency delay is unacceptably long it becomes almost impossible to record anything in time. What you hear is always a little bit behind what you're playing!

Example – Imagine trying to record your vocal while listening to your backing tracks with a noticeable delay between when you actually sing and what you are hearing back in your headphones! Obviously this will cause you never ending problems of timing, phrasing, etc.

The ADDA 192-S allows for zero latency hardware input monitoring thus eliminating the problems found in many systems. It allows you to simultaneously monitor your playback tracks from your recorder/computer workstation (when connected to the digital input) whilst continuing to monitor your live inputs (from microphone, guitar, synthesizer, etc). As the analog input

signal is patched and mixed directly to the analog and headphone outputs without having to go via your computer, there is no latency delay whatsoever. You can achieve your preferred monitoring balance between playback tracks and live inputs simply by adjusting the Analog and Digital Mix rotary controls to your desired levels!

4.6 Sample rate mode selector switch and LED indicators

The ADDA 192-S can operate at 44.1, 48, 96, or 192 kHz sample rates. It also allows for both internal and external clock sync. The SELECT button performs all operational mode selection as described below.

Internal sync & sample rate selection
If you would like the ADDA 192-S to operate independently as a stand-alone A/D using it's own internal sync, simply press the SELECT button to toggle sample rate selection through to the desired sample rate. Each corresponding LED will illuminate to indicate the current selection status.

External Sync
If you would like to lock the ADDA 192-S to an external digital device, simply connect a digital S/PDIF signal to the either the optical or coaxial input on the rear panel and toggle the SELECT switch to the S/PDIF mode (until the S/PDIF LED is illuminated). The ADDA 192-S will lock to external sync and the sample rate will be set automatically.
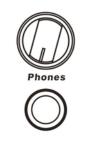
* Note: When utilizing external sync mode, the S/PDIF LED will remain constantly illuminated to indicating a successful sync lock connection. An unsuccessful (or searching for) sync lock is indicated by a flashing/blinking S/PDIF LED.

4.7 Headphone rotary gain control

A headphone amplifier is provided for monitoring the mix balance audio signal appearing at the amnalog ouputs.

Simply connect a pair of headphones to the ¼″ TRS headphone connector socket and use the rotary headphone volume control knob to adjust the volume level to your desired setting.

*Note: The ADDA 192-S's Mix controls allow you to mix together the incoming analog signal/s with the output of the internal D/A converter (any incoming digital signals connected to the rear panel) for monitoring purposes through the analog outputs (and headphone output). Refer to the Analog and Digital Mix controls for more information.

4.8 Mono input monitor selector switch

The MONO input monitor selector switch allows you to monitor channel 1 & 2 in mono. This is often desired when monitoring your live input during the recording process.

For example - By enabling the MONO switch during a vocal session, you can listen to your vocal in the centre of the Left and Right channels in your headphones whilst still recording the channel to its own track as per normal.

*Note: The MONO function does not affect the A/D converted output signal in any way. It only affects the monitoered signal! Each input channel signal continues to be converted correctly to each of the L & R channels.
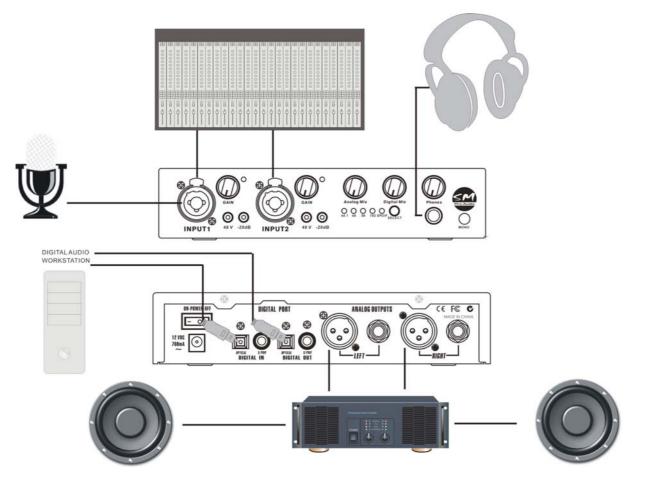
5. APPLICATION GUIDE

Digital equipment is only as good as the converters they employ! I'm sure you have heard that before, but never a truer word has been spoken. Poor quality converters can be found in many digital devices even today and simply will not do justice to your recordings. Poor imaging, excessive distortion, and low fidelity are just some of the outcomes you can expect when using sub-standard converters.

One main area of concern where poor quality converters are often found is that of computer sound cards and audio interfaces. Poor sonic quality is not uncommon, especially in many of the mass-produced computer sound cards. It's comes as no surprise that more and more recording professionals and hobbyists alike prefer to use high-quality external converters to their AD/DA concerns.

The exceptional A/D and D/A converters built into the ADDA 192-S are ideal for use in a computer based recording situation. In combination with your computer or audio interfaces digital I/O connectors the ADDA 192-S provides outstanding audio conversion to and from the digital realm. All housed in a sturdy external chassis, the ADDA 192-S is also removed from any computer based frequency interference that can often cause havoc with your audio integrity. With its two onboard high-quality microphone preamplifiers, independent phantom power and -20dB PAD switches, and a handy headphone amplifier, the ADDA 192-S is perfectly matched to form part of any powerful computer based recording solution.

5.1 ADDA 192-S as a ultra high-end sound card/audio interface

The ADDA 192-S's replaces sub-standard converters and allows your all-important analog connections and conversion to operate away from any possible electrical interference that can be inherent in your computer chassis.
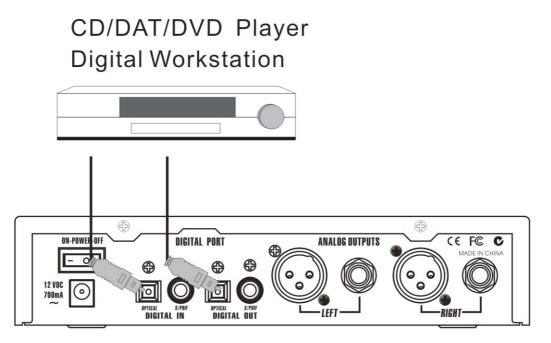
Simply connect the digital connections of the ADDA 192-S to the digital connections of your computer (computer digital out → ADDA 192-S digital in, ADDA 192-S digital out → computer

digital in). This effectively replaces your audio interface or sound card with ultra high quality 24-bit converters.

You system is now ready to accept analog connections from the front panel of the ADDA 192-S. Perfect for recording both line level analog devices and microphones with the built in studio grade pre-amplifiers.

Monitoring is simple through either the built in headphone amplifier or analog outputs. Typically you would connect the main analog output pair to your amplifier and monitor speakers.
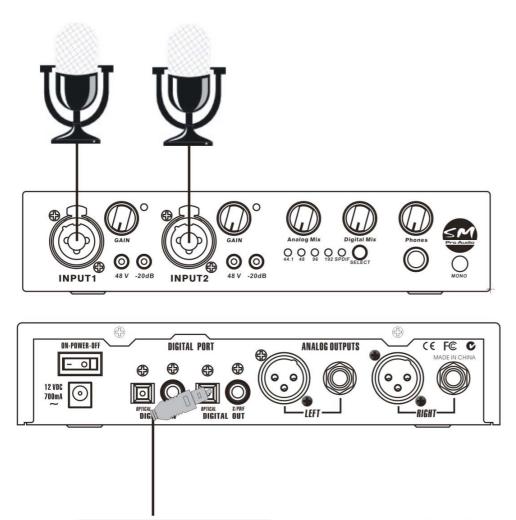
5.2 ADDA 192-S as a stand-alone converter for digital recorders

Many budget quality (and older model) digital devices have outdated or sub-standard quality converters. The ADDA 192-S is the perfect product to help give your audio equipment a much-needed sonic enhancement. Simply put, the ADDA 192-S can replace another devices converter circuitry with ease.

Simply connect the ADDA 192-S to your DAT, audio interface, MD unit, or other digital device in both directions via the coaxial or optical S/PDIF digital interfaces. The analog inputs and outputs of the ADDA 192-S effectively become the analog circuitry of your old device!

5.3 ADDA 192-S as the front end to your live recording rig

CD/DAT/DVD Player
Digital Workstation

Mobile portable DAT machines, stand-alone CD/DVD recorders, etc, are often the perfect recording medium when out on the road or in the field. The only problem is that they don't feature any built in microphone pre-amplifiers!

With the addition of an ADDA 192-S to the rig, two microphones can be patched into the system with ease. The ADDA 192-S's two superb microphone preamplifiers coupled with its pristine 24-bit internal converters, provide an outstanding front end to your high performance stereo recording rig.

6. SPECIFICATIONS

* Note: At time of printing full specifications of the ADDA 192-S had not been finalized. Please visit our website (www.smproaudio.com) for updated information as it becomes available. A full and comprehensive specification table will be provided in due course along with a revised manual for download. We appreciate your understanding.

POWER

Type: External

* The ADDA 192-S's external power supply is configured prior to shipping from the factory to match the destination receiving countries local mains power system. If you are in doubt as to the correct voltage of your unit please check with your dealer.

SM Pro Audio is constantly striving to maintain the highest professional standards. Modifications may be made over time to improve the performance and operation of this unit. As such, specifications and appearance may differ from those listed or shown.

7. WARRANTY

WARRANTY CARD &/OR WEBSITE REGISTRATION

To be protected by this warranty the purchaser of the product must complete an SM Pro Audio product registration procedure.

Product registration is available via two methods:
- Complete and return the enclosed warranty card within 14 days of the date of purchase to SM Pro Audio (see address below).
- Complete an online product registration form at the SM Pro Audio website. www.smproaudio.com

WARRANTY

- SM Pro Audio warrants the mechanical and electronic components of this product to be free of defects in material and workmanship for a period of one (1) year from the original date of purchase.
- SM Pro Audio will at its sole discretion either repair or replace the product if any defects occur that are not caused by normal wear or inappropriate use within the warranty period.
- This warranty does not apply if the product has been damaged by negligence, non-authorized modifications, accident, abuse, misuse, misapplication, or as a result of unauthorized service other than performed by that of SM Pro Audio's service department.
- All freight charges incurred for transport of justified warranty claims are at the buyer's expense.
- All other warranty claims other than those indicated above are excluded.

HOW TO REQUEST A RETURN AUTHORIZATION NUMBER

To obtain warranty service, the purchaser must call SM Pro Audio during normal business hours before returning the product (Tel.: +61 3 9555 8081). An SM Pro Audio representative will discuss any issues with you over the telephone and then issue a return authorization number if deemed appropriate.

Please ship original shipping cartons along with your return authorization number to the following address:

SM Pro Audio
Service Department
Warehouse 25
Roberna Business Park
26-28 Roberna St

Moorabbin 3189
Melbourne, Victoria
Australia

WARRANTY REGULATIONS

- Warranty can only be serviced when accompanying proof of purchase is provided. Dealers invoice noting date of purchase required.
- SM Pro Audio will endeavor to repair or replace any product under the terms of this warranty within 30 days of receipt of the product at SM Pro Audio.
- Modifications performed in order to comply with any applicable technical or safety standards in any country which is not the country for which the product was originally developed and manufactured shall not be considered a defect in materials or workmanship. SM Pro Audio shall not be held responsible for any costs incurred or resulting from any such modification whether performed correctly or not.
- This warranty does not cover defects of parts caused by normal operational wear. These parts are typically switches, knobs, and other similar components.

Product damage caused by the following conditions are not covered by this warranty:
- Operation of the unit in a way that does not comply with the safety regulations applicable in the country where the product is used.
- Damages or defects caused by conditions beyond the control of SM Pro Audio.

TRANSFERABILITY

This warranty is non transferable and available exclusively to the original purchaser.

DAMAGE CLAIMS

Failure of SM Pro Audio to provide proper warranty service does not entitle the purchaser to claim further damages. SM Pro Audio's liability shall in no way exceed the invoiced value of the product.

OTHER WARRANTY RIGHTS

This warranty does not exclude or limit any statutory rights provided by national law.

The information contained in this manual is subject to change without notice.

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Moorabbin 3189
Melbourne, Victoria
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FAX- +61 3 9555 8083