USER'S MANUAL

www.aps-company.com

coax

ACTIVE STUDCOAX MONITOR

CONTENTS

page

INTRODUCTION
GENERAL INFORMATION 3
BREAK-IN TIME 3

SAFETY INSTRUCTIONS
SAFETY INSTRUCTIONS 4

MISCELLANEOUS
CARE 4

REAR PANEL
REAR PANEL 5
SWITCHES 5

INDICATORS & PROTECTION
INDICATORS 6
PROTECTCOAXN 6

SETTING UP & POSITIONING
UNPACKING 7
POSITIONING 7
CONNECTING & STARTING 9

TECHNICAL SPECIFICATIONS
TECHNICAL SPECIFICATIONS 10

INTRODUCTION

Congratulations on your purchase of the APS **coax** active monitor. **coax** is designed to provide many years of excellent and trouble free audio reproduction. It is most important, however, that you take a few minutes to read this manual. It contains essential information to make you get the best from your new monitors.

General Information

coax is a professional studio monitor for near field, designed for accurate sound realization.
This loudspeaker is suitable for:

- small size recording studios,
- broadcasting studios,
- TV studios,
- multimedia studios,
- post production facilities,
- mastering,
- digital workstations,
- small size home recording studios,

coax monitor is a two-way active system. It has two independent power amplifiers, mounted on the rear panel, for each: tweeter and bass/mid-range loudspeaker. There are also calibrated controls, protections, indicators, and the input terminals.

coax is designed for operation in stereophonic or multi-channel systems (5+1 or 7+1 and larger) such as DOLBY, DTS, THX, etc.

Break-In time

The coaxial transducer of your APS **coax** monitor will achieve better sound quality after breaking in. Especially after the first hours of use, you may notice a significant advance in sound quality.

APS Sp. z o.o.
Oblaczkowo 16
62-300 Wrzesnia
POLAND

www.aps-company.com
e-mail: info@aps-company.com

SAFETY INSTRUCTIONS

The lightning flash with an arrowhead symbol within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Install in accordance with the manufacturer’s instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Warinng!

- ⇒ To reduce the risk of fire or electrical shock, do not expose this equipment to dripping or splashing and ensure that no objects filled with liquids, such as vases, are placed on the equipment.
- ⇒ This apparatus must be earthed.
- ⇒ Use a three wire grounding type line cord like the one supplied with the product.
- ⇒ Be advised that different operating voltages require the use of different types of line cord and attachment plugs.
- ⇒ Always observe the local safety regulations. Ensure that the factory-set power requirements for the device (refer to the label on the back of the monitor) corresponds to the mains supply in your region.
- ⇒ This equipment should be installed near the socket outlet and disconnection of the device should be easily accessible.
- ⇒ To completely disconnect from AC mains, disconnect the power supply cord from the AC receptacle.
- ⇒ The mains plug of the power supply shall remain readily operable.
- ⇒ Do not install in a confined space.
- ⇒ Do not open the unit-risk of electric shock inside.

MISCELLANEOUS

Care

Components of the highest quality are used in your **COAX** monitor. This assures years of trouble free operation. Following precautions should still be made though. Avoid running the system into severe clipping. Even there is an

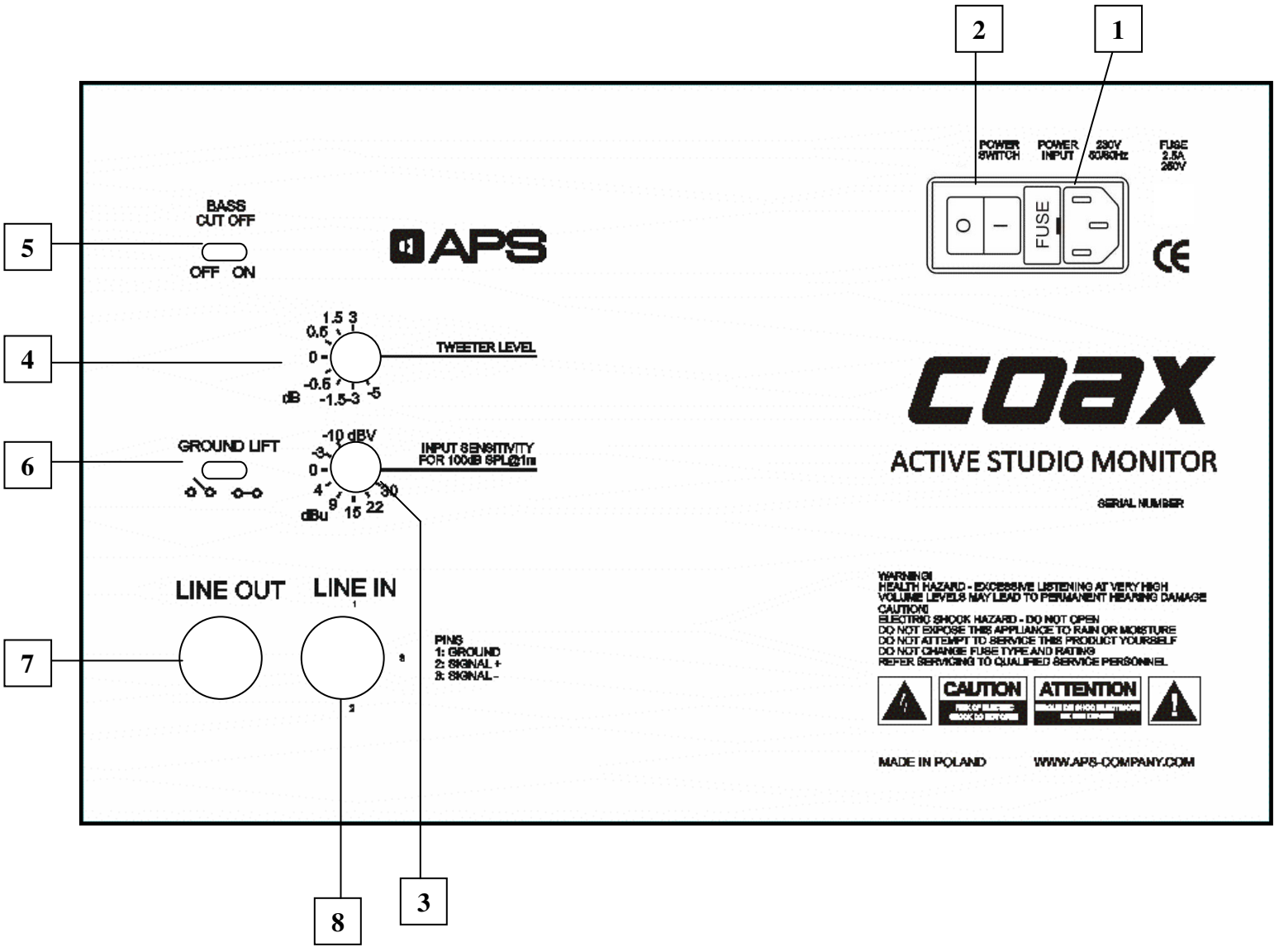
advanced protection system, you may be able to destroy your speakers by severe overpowering. The limiter works over a certain range, but exceeding this level may send a severely clipped signal to your drivers.

When a noticeable distortion occurs, please turn down the level to your speakers. Avoid hot plugging the equipment connected to the monitors. Always turn off the speaker and other equipment when plugging or unplugging signals, or switching equipment on or off.

Do not touch the drive units by hand.

REAR PANEL

Correct setup is essential to achieve optimal performance from your monitors. Please follow the instructions on the following pages.



1. AC input and fuse
2. Power on/off switch
3. Input Sensitivity Switch
4. Tweeter Loudspeaker Level Switch
5. Bass Cut Off
6. Ground Lift Switch
7. XLR symmetrical (balanced) output
8. XLR symmetrical (balanced) input

Switches
On the rear of the monitor you will find switches for setting up the monitor for optimum performance in different acoustic and electric environments. Each switch is explained in the following.

3. Input Sensitivity Switch
Use this switch to match the sensitivity of **COAX** monitor to your source.
COAX functions together with the most common signal sources. The step switches allow you to adjust exactly the same levels in each monitor in stereophonic or multi-channel systems.

4. Tweeter Loudspeaker Level Switch
This switch controls the higher tones. You can use it to match **COAX** sound with room conditions, audio monitoring conditions or sound material.
If the surfaces of walls in the room are made of hard and smooth materials, the sound - especially the high frequencies - can be strongly reflected and it will be too bright. In such situation it is recommended to decrease the treble level.
You can also raise the treble if the sound is too dull.

5. Bass Cut Off Switch
.
If the room is too small or in the case of the monitors arrangement in front of a wall or if the monitor is suited in a corner of the room we recommend to decrease the level of bass by using CUT OFF switch. In the ON position of CUT OFF Switch you get bass level decreased by 6 dB at 50 Hz (– 3dB at 90 Hz)

6. Ground Lift Switch
It allows disconnection of the ground to the common (common of your studio equipment) if ground loops occur.
In case of a poorly earthed, and/or a great number of devices, say in a sound monitoring room, hums, interferences and other disturbances can appear. The switch should then be adjusted in such position in which interferences do not appear, or are the lowest.

INDICATORS & PROTECTION

Indicators
On the front you will find Three-Color LED Indicator positioned just underneath the APS logo. The blue (white for special finish options) power LED indicates speaker on/off status.

The LED indicator flashes green when the input signal reaches a level where the limiter is activated to prevent the internal high frequency amplifier from clipping and the tweeter from damage as well.

The LED indicator flashes red when the input signal reaches a level where the limiter is activated to prevent the internal bass amplifier from clipping and the woofer from damage as well.

Protection
COAX monitor has several built in protection systems to reduce the risk of hazard or damage due to overloading as well as prevent against interferences.
The tweeter is protected by an electronic Tweeter Protection System limiting overdrive of its dedicated Power Amplifier. The Tweeter Power Amplifier is equipped with thermal, short circuit and over-current protections. There are also interference eliminators operating during switch-on and switch-off.

The woofer is similarly protected by its own Woofer Protection System. The woofer section is also equipped with its own thermal sensor and is protected by a specially designed Power Amplifier Controller.

The **coax** loudspeakers are magnetically shielded, preventing interferences with TV screen, computer monitor screen (e.g. disturbance of colors) or other equipment standing nearby.

There is also the Ground Lift Switch preventing against ground loops.

SETTING UP & POSITIONING

Unpacking

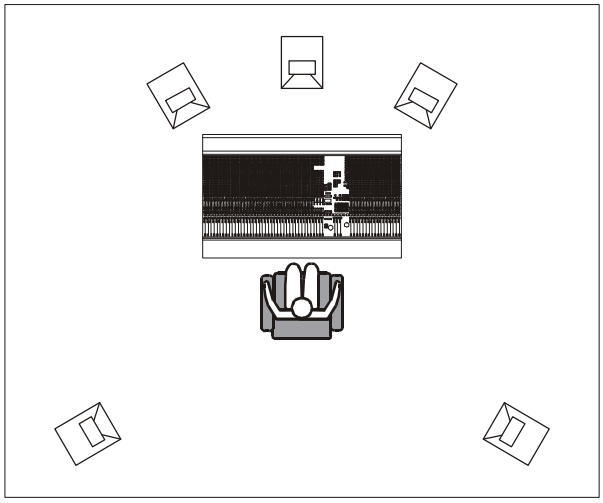
OK, first things first:

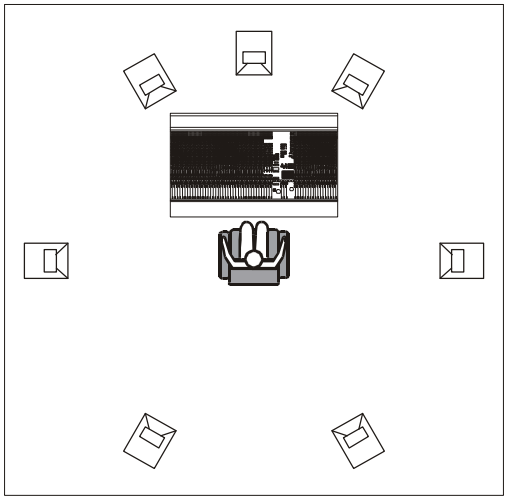
It is necessary to exercise caution while unpacking the device in order to avoid damage to the Bass/Mid-Range and Tweeter Loudspeaker diaphragms as well as the switches mounted on the rear panel of the monitor.

Positioning

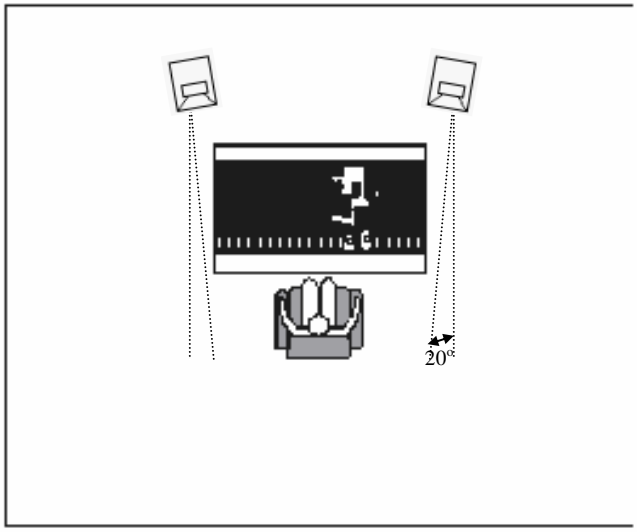
Step 1
Prepare a suitable place for each **coax** monitor. They can be special supports or fastenings or also other stable stands, pedestals, shelves or areas located in audio monitoring places.

Remark 1
The location of your monitors depends on the system: stereophonic or multi-channel systems (5+1 or 7+1 and larger).

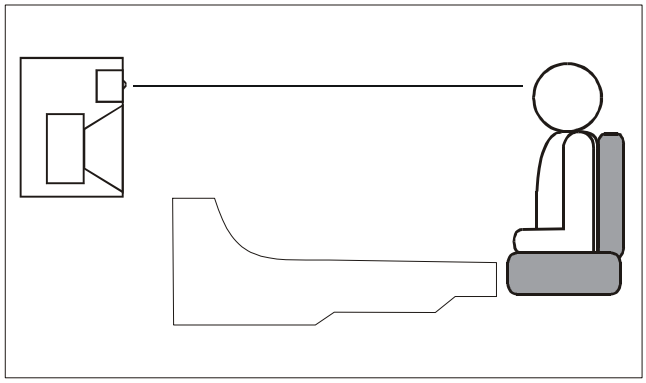




Remark 2
The distance from each monitor to listener's ears should be equal. We recommend to place monitors like shown on the picture on the next page.



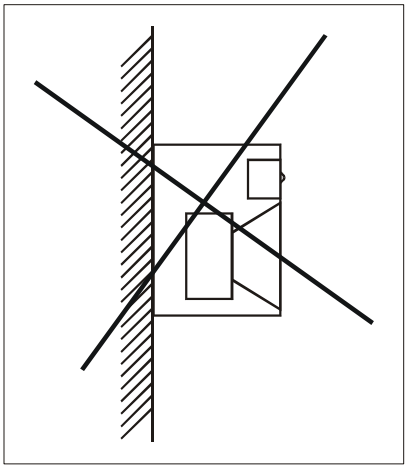
Step 2
Put monitors in a horizontal position (although vertical position is also permissible).



Remark 1
The most favorable is a configuration which allows similar acoustic conditions for each channel, e.g. the same distances of the left and right monitor from walls (from side, in the back of monitors), the same distances of the listeners ears from walls.

Remark 2
It is worth placing the **coax** away from walls, especially corners; even though the wide range of precise control settings allows the monitors to work in practically any position.

Remark 3
It is necessary to allow some air flow behind **coax**. In particular, do not put the monitor on a closed shelf or cover the rear panel of the monitor with materials blocking dispersion of heat, e.g. sound absorbing materials, curtains, etc.



Connecting and Starting

Step 1
Adjust regulators in 0 dBu and 0 dB positions before connecting.

Step 2
Adjust output level of signal source in the minimum position.

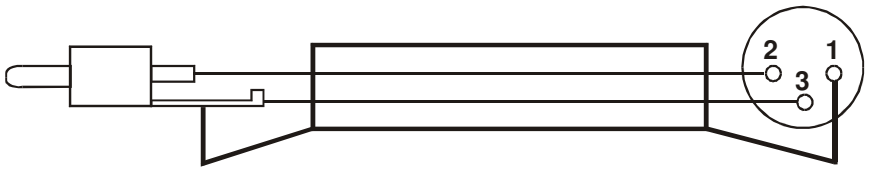
Remark 1
If a value of source output level is not known, then the safest method is to adjust the Input Sensitivity Switch in 30 dBu position.

Step 3
Adjust the Power Switch adjustment in the switch-off position.

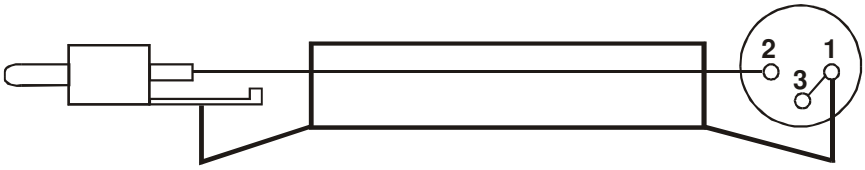
Step 4
Put XLR connector of the cable connected to symmetrical signal source (e.g. mixer console) into the XLR Symmetrical Input of **coax**.

Remark 1
It is possible to make use of the Big Jack Symmetrical Input using the big jack symmetrical connector or other applying a suitable inter-connector.

Remark 2
It is also possible to connect your **coax** monitor to an asymmetrical signal source. In this case one should use a suitable inter-connector, whose connection diagrams are shown below (RCA and XLR standards).



Connection in case of cable – two wires in screen



Connection in case of cable having one wire in screen

Remark 3
The use of high quality signal connectors and cables is recommended. Solid signal connectors are a must if you want to get the best sound performance.

Step 5
Connect the power cable to the Power Cable Socket and switch on power by means of **COAX** Power Switch.

Remark 1
Use of the power conditioners is not required.

Remark 2
Power cables of the monitor and a signal source connect best to the same power sockets unit.

Step 6
Adjust suitable source (e.g. mixer console) output level slowly.

Remark 1
Change the level by means of Input Sensitivity Switch especially if it was adjusted in 30 dBu position.

TECHNICAL SPECIFICATIONS

COAX Active Studio Monitor	
Field Monitor	Near
Type	Active – two power amplifiers: - Tweeter p.a.: monolithic integrated circuit TDA7294 - Woofer p.a. monolithic integrated circuit TDA7294
System	Two-way
Crossover Frequency	3.0 kHz (slope: 24 dB/octave.)
DimensCOAXns: Height × Width × Depth	21 cm × 33 cm × 26 cm/ 8.3'' x 13.0'' x 10.2''
Free Field Frequency Range	56 Hz ÷ 21 kHz (- 6dB)
SPL in Free Field @ 1m	RMS: 101 dB Peak: 109 dB
Weight	11 kg / 24.2 lbs.
Coaxial speaker	
Bass/Mid-Range Loudspeaker	ϕ 18 cm (7'') Diaphragm: diaphragm: polypropylene, surround: rubber Magnetically shielded
Tweeter Loudspeaker	ϕ 2.5 cm (1") in two versions: – Fabric dome Magnetically shielded

Amplifiers	
Bass/Mid-Range Power Amplifier	70 W RMS @ 8 Ω
Tweeter Power Amplifier	70 W RMS @ 6 Ω
THD Distortions	0.005 % – P_O = 5 W, f = 1 kHz 0.1 % max – P_O = 0.1 up to 50 W, f = 20 Hz up to 20 kHz
Signal to Noise Ratio	103.5 dB – weighted by A curve 101 dB – in band of 20 Hz up to 20 kHz
Input Voltage Level for 100 dB SPL In Free Field @ 1m	0 dBu (i.e. 0.775 V) – calibrated regulators in 0 dBu, 0 dB positions
Calibrated Controls	
Input Sensitivity Switch	30dBu, 22dBu, 15dBu, 9dBu, 4dBu, 0dBu, -3dBu, -10dBV
Bass Cut Off Switch	ON position: from - 6 dB at 50 Hz up to -3 dB at 90 Hz
Tweeter Loudspeaker Level Switch	-5dB, -3dB, -1.5dB, -0.5dB, 0dB, 0.5dB, 1.5dB, 3dB
Inputs, Outputs	
Input	Two types (common socket Combo): – XLR symmetrical (balanced) – TRS symmetrical (balanced) “6.3 mm” Input impedance 10 kΩ
„Loop Through” Output	XLR symmetrical Output impedance 100 Ω
Protections	
Tweeter Loudspeaker Protection	Limiter (optical)
Bass/Mid-Range Loudspeaker Protection	Limiter (optical)
Power Amplifiers Protections	Interference, thermal, short circuit and over-current limiters
Prevention from Interferences and Hums	GROUND LIFT switch
Signaling Devices	
Tweeter Loudspeaker Protection Switching On	Lit up logo – green LED
Bass/Mid-Range Loudspeaker Protection Switching On	Lit up logo – red LED
Power Switching On	Lit up logo – blue (white for special finishes) LED