



# TURBO Series

COLOR YOUR STUDIO



## USER MANUAL

Digital active near field studio monitor /Subwoofer

[www.monkey-banana.de](http://www.monkey-banana.de)

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## Section 1: Important Safety Instruction

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. Do not block any ventilation openings.
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 plug. A polarized plug has two blades with one wider than the other. A grounding plug has two blades and a third grounding prong. The wide blade or the third prong is 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 the plugs, convenience receptacles, and at 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 or rack is used, use with caution when moving the cart/apparatus combination to avoid injury from tip-over.



13. Unplug the apparatus during lightning storms or when unused for long period of time.
14. Refer all servicing to qualified 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 have been exposed to rain or moisture, does not operate normally, or has been dropped.
15. Please keep the unit in a good ventilation environment.
16. **WARNING:** Do not install this equipment in a confined space such as a book case or similar unit. The ventilation should not be impeded by covering the ventilation openings with items such as newspaper, table-clothes, curtains etc
17. **WARNING :** To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture. The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall not be placed on apparatus.
18. **WARNING:** The mains plug is used as disconnect device, the disconnect device shall remain readily operable.

### Safety Precautions



The lightning flash with the arrowhead symbol in an equilateral triangle is intended to alert the user to the presence of non-insulated "dangerous voltage" inside the appliance that may be of sufficient magnitude to constitute a risk of electric shock.



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.

## Section 2: Introduction

Thank you for choosing the Monkey Banana Turbo Series professional digital bi-amplified Studio Reference Monitors.

In these pages, you'll find a detailed description of the features of the Turbo Series, step-by-step instructions for its setup and use, and full specifications. You'll also find a warranty card enclosed-please don't forget to fill it out and mail it in so that you can receive online technical support and we can send you updated information about these and other Monkey Banana products in the future.

With proper care and adequate air circulation, your Turbo Series will operate trouble free for many years. We recommend you record your serial number in warranty card provided for future reference.

The Turbo Series were designed and tested by veteran audio engineers to meet your needs in a studio monitoring environment. It focuses on the functional goal of delivering pure, original sound without any additional coloration. The Turbo Series monitor is self-powered, directly accepting a line-level signal and digital signal from a variety of sources.

The Turbo Series were designed to overcome all the limitations of conventional studio reference monitors within the digital audio environment. This system delivers a wide-range frequency response by employing two extraordinary drivers and unique crossover technology. It boasts a stable and balanced low-mid frequency response along with a defined mid and high-frequency response as well. Both drivers are magnetically shielded for desktop music production.

## Section 3: What's in the box?

Turbo series boxes contain:  
One Turbo series speaker  
One detachable AC power cord  
This manual

## Section 4: Turbo Series Features

### 1. System

Turbo series are designed for precise monitoring of 24-bit 192KHz S/PDIF digital audio signal or line level analog audio signal. Their features are high SPL output and broad bandwidth in a small enclosure size. They are suitable for a wide variety of tasks, such as near field monitoring, broadcast and TV control rooms, surround sound systems and home studios. The Minimum Diffraction Enclosure and advanced directivity waveguide technologies provide excellent frequency balance even in difficult acoustic environments.

### 2. Woofer

- A.** A loudspeaker motor structure for very high power handling and high linear excursion. The use of our specially-designed ferrite magnet motor structure has generated much more magnetic flux than the ordinary magnet motor structure and could provide long-term stable and powerful driving force to the loudspeaker.
- B.** In addition to the magnetic field can provide sufficient power, we had incorporated the steam flow balancing technology with five 6mm diameter vents on the voice coil bobbin. Through these vents during the excursion of the loudspeaker, the air pressure in the magnetic gap will maintain internal and external completely consistent, at the same time these vents could be a very efficient cooling system for the heat dissipation. At the same time these vents are also a very effective solution to eliminate the unbalanced air pressure mechanical distortion due to the piston movement of the loudspeaker.
- C.** The pole piece had opened a 15mm vent, this could provide sufficient cooling effect of the loudspeaker, and avoid long-term operating heat to cause distortion and damage.
- D.** The voice coil winding height reaches 14mm and guarantee the loudspeaker

will never be out of balance in the magnetic field, and avoid linear distortion.

**E.** The spider uses three corners support structural design, good support voice coil can be maintained in the middle of the magnetic circuit, and the choice of high restoring and flexible cone materials make the spider free from fatigue.

**F.** The weight design of the cone use the smallest ratio versus the voice coil, at the same time compound with high rigidity material, partition movement had minimized.

Linear cone shape design makes compressed air to form a broad sound field as much as possible. In the case of off-axis even 40 degrees can still clearly hear the sound.

**G.** After years of efforts, our Turbo series loudspeaker engineers have developed a unique cone material which incorporated PP and ceramic in perfect proportion and with very high conductivity as well as excellent aesthetic sound.

### **3. Tweeter**

**A.** In the tweeter design, the introduction of new NdFeB neodymium magnet circuit design. These magnetic material can produce larger-oriented magnetic field, so that there is sufficient driving force for tweeter, magnetic flux density reaches 13500 Gauss.

**B.** Tweeter design integration of new aerospace materials technology, using nano-magnetic particles, evenly applied to the magnetic system loop, ferrofluid thermal conductivity coefficient is 600% higher than air, and can effectively improve the voice coil cooling conditions, and double the input power of the tweeter.

The viscosity of the ferrofluid can adjust the damping, reducing the Q value of loudspeakers, improve transient response, it will help to improve the frequency response of loudspeakers to ideal.

Filled with ferrofluid can make voice coil suspended, automatic positioning, reducing friction and magnetic yoke coil occurrence, thereby reducing speaker distortion, especially in high-order harmonic distortion.

### **4. Vent Port**

The air vent hole in the rear panel is called a Sub-frequency vent port and is designed to allow the discharge of extremely low frequency occurring below 60Hz.

### **5. Enclosure**

The Turbo's enclosure has an important role in shaping the overall sonic response. In order to provide more stable performance, the Turbo's enclosure employs a special high acoustic efficiency MDF and unique interior reinforcement designed to absorb vibration and impact generated under extreme conditions. The custom design on the front panel will aid in diffraction and will benefit stereo imaging.

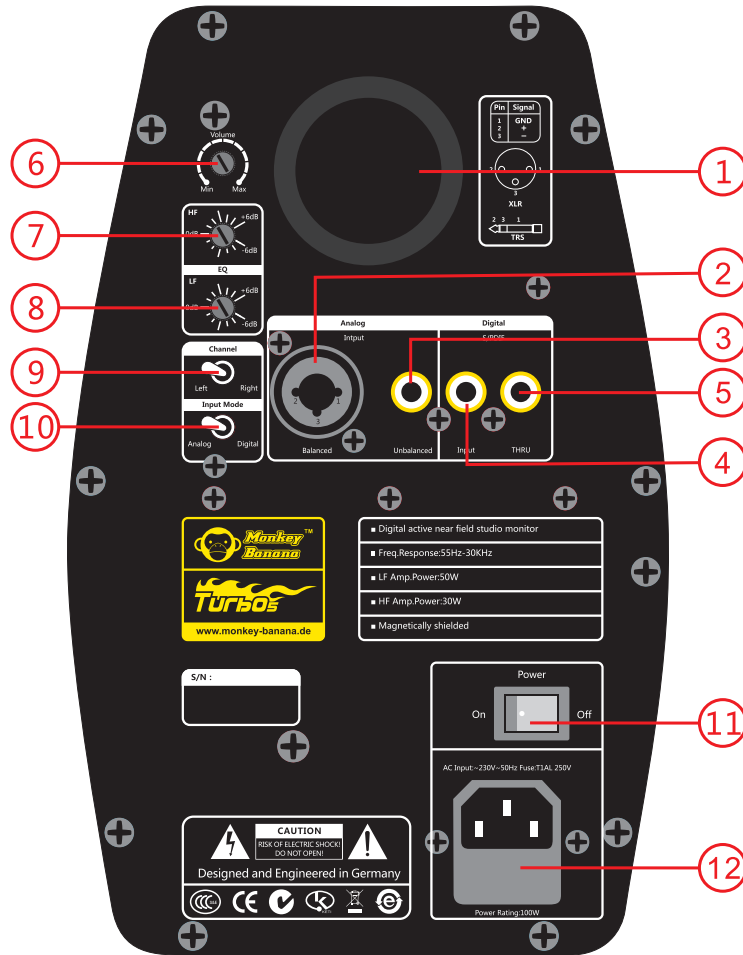
### **6. Power amplifier**

The active crossover network and power amplifiers for the Turbo series are specially designed for their woofers and tweeters. The network properly distributes low, mid, and high frequency to the driver components in order to reduce distortion and loss of sound, thus achieving a naturally balanced sound.

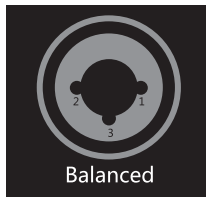
In order to generate powerful, ultra-crisp sound, there are two separate power amplifiers inside the Turbo series for driving the woofer and tweeter separately in a high-end bi-amp structure. The power delivers to the woofer and tweeter drivers at a low-rated distortion.

## Section 5: Front and Rear Panel Features

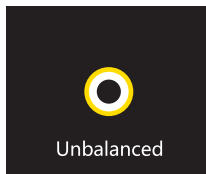
### Rear Panel



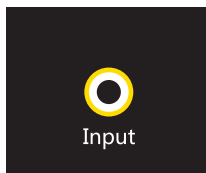
**1. Vent Port:** This port aids in reproduction of very low frequency by discharging frequency below 60Hz.



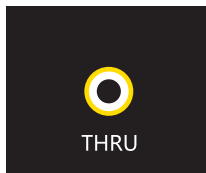
**2. XLR&TRS Input(+4dBu):**This combo input jack accepts both XLR and 1/4" TRS-type connectors. Connect your audio interface, mixer, or other line-level audio source to this jack.



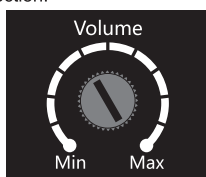
**3. RCA Input (-10dBv):**The RCA input accepts unbalanced signals used to connect signals from unbalanced -10dB devices.



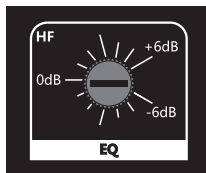
**4. S/PDIF Input:** RCA for S/PDIF coaxial digital input.



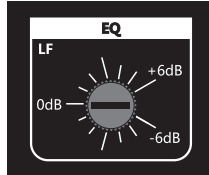
**5. S/PDIF THRU:**The output for stereo connection.



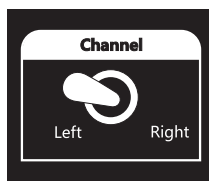
**6. Volume Knob:** This knob adjusts the gain level. When operating the unit for the first time, start with the volume control set all the way off. Slowly raise the volume control to reach a comfortable listening level.



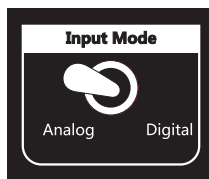
**7. HF Knob:**10KHz +/-6dB adjustable. The frequency response is flat when the knob is in the "9:00"position. Rotating the knob towards the right will boost the corresponding frequency



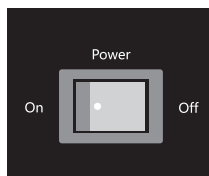
**8. LF Knob:**100Hz +/-6dB adjustable. The frequency response is flat when the knob is in the "9:00" position. Rotating the knob towards the right will boost the corresponding frequency band by 6dB, and rotating it towards the left will cut the frequency by 6dB.



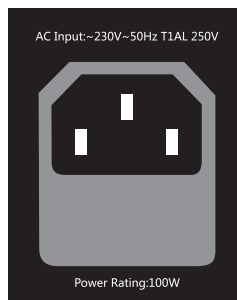
**9. Channel Select:**The Left/Right switch is available only at digital input.



**10. Input Mode Select:**Analog or Digital input source selector.



**11. Power Switch:**This Switch powers on and off.



**12. AC Inlet:**This socket accepts a standard IEC-type power cable.





13. **Power LED:** The front panel houses the Power LED, which indicates whether the speaker(amplifier) power is on or off.

## Section 6: Setting Up Your System

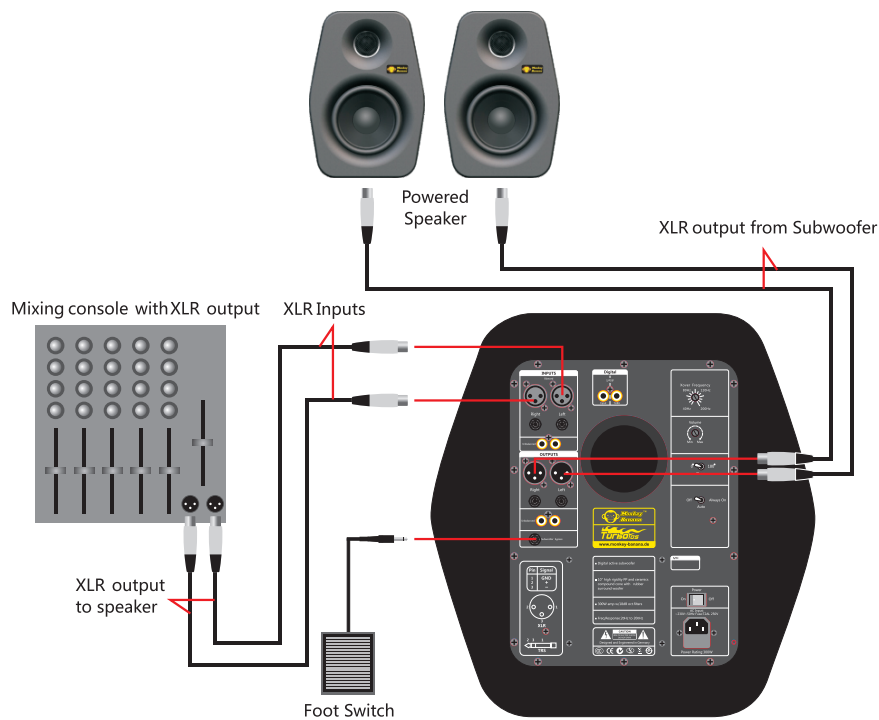
For optimal performance of the Turbo series, please read the following thoroughly and carefully prior to installation.

### Unpacking:

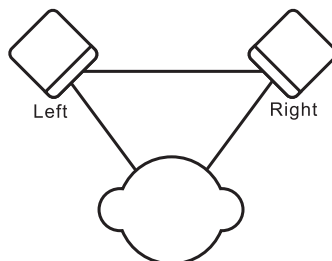
Please do not touch the speaker cones. The Turbo set is packaged in the box tightly, so your attention is required when taking the monitors out of the boxes. To avoid possible damage to the speaker units, hold both sides of the monitor in order to pull it out of the box. The speaker cones should not be touched in order to avoid damage even after they are out of the box.

### Placement:

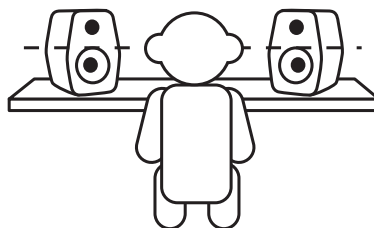
Placing the speakers is one of the most important procedures in order to monitor sound accurately. To monitor with the Turbo performing to their maximum capability, an appropriate listening environment and correct placement are required. Please refer to the following for correct Turbo placement.



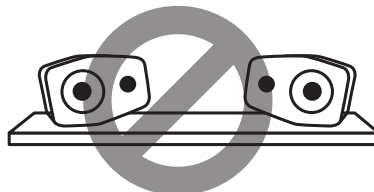
1. The two units and the listener should basically align to form a regular triangle. Refer to the following diagram.



2. Position the monitors so that the top of the woofers are level with your ears in a normal listening environment. Refer to the following diagram.

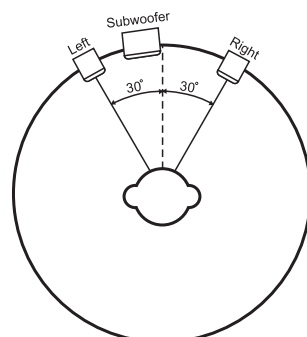


3. Place the Turbo series vertically with the woofer at the bottom. Placing the Turbo series horizontally are not recommended.



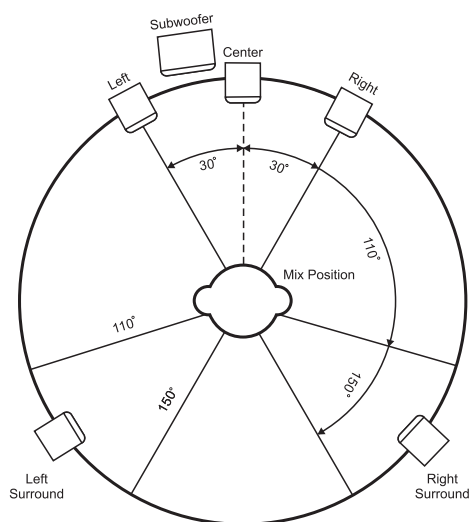
4. In two channel with Subwoofer production applications, the common listening distance is generally 1 to 1.5 meters from the left and right speakers. The speakers should be placed so the position of the listener and the two speakers form an equilateral triangle. Refer to the following diagram.

#### 2 Channel System with Subwoofer



5. In 5.1 Surround Sound production, the listening distance for all speakers from any speaker is typically 1.5 to 2 meters. The placement of the left and right speakers should form an equilateral triangle with the mix position. The center speaker should be placed half way between the left and right speakers at exactly the same distance from the mix position. The left surround and right surround speakers should be placed the same distance as the left, center and right speakers, and positioned 110 degrees to 150 degrees relative to the center speaker. The distance and position of the subwoofer can be adjusted to produce best bass response in the room. Refer to the following diagram.

#### 5.1 Surround Sound System



**Remarks:** Do not place any obstacles that may block the flow of air in front or between the Turbo series. Also remove reflective materials such as glass, mirrors or metal from the monitoring environment. Place those materials away from the path of the sound from the Turbo series.

#### Audio Connections

**Note:** Make sure that the main Power switch is set to the off position and connect the supplied IEC power cable into the AC inlet. Before plugging in and turning on, remember the "last on first off" rule of power amplifiers. When powering up your system, be sure that all the wires are connected, turn your mixer and any other corresponding equipment on, and then last turn on your Turbo series. When powering down, turn off your Turbo series first and then your mixer and other corresponding equipments.

The Turbo series feature balanced XLR/TRS "Combo" and unbalanced RCA-type analog inputs and S/PDIF RCA-Type digital input on the rear panel. Connect the outputs of your mixer, audio interface, or other line-level and digital-level devices to these inputs.

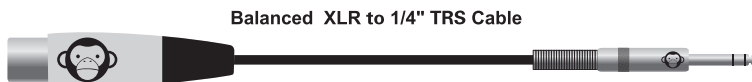
Connect professional equipment with balanced outputs to the XLR or 1/4"TRS input of the speaker using balanced signal cables. Connect consumer equipment with unbalanced outputs to the RCA input of the speaker. We recommend that you use high-quality balanced or unbalanced cables for input connections. (More information is refer to the following wiring Guide.)

#### Things that go Hum!

When running power cables, be careful not to run the AC power cords or AC extension cords in parallel to your input cables. This will help reduce any AC hum that can be picked up. If you have to cross an AC line with an audio line, try to cross them at a 90 degrees angle for the least amount of induced hum. Using the Turbo balanced input connectors will greatly protect against the induced hum thanks to the common mode rejection that its balanced input circuit provides.

## Section 7: Wiring Guide

There are several ways to interface the Turbo, depending on your exact monitoring set-up. Follow the cable diagrams below for connecting your monitor system.



## Section 8: Technical Specification

Turbo Mode	Turbo4	Turbo5	Turbo6	Turbo8	Turbo10s
Type	Digital active near field studio monitor				
LF Driver:	4 inches Magnetically Shielded PP ceramic cone	5.14 inches Magnetically Shielded PP ceramic cone	6.12 inches Magnetically Shielded PP ceramic cone	8 inches Magnetically Shielded PP ceramic cone	10 inches Magnetically Shielded PP ceramic cone
HF Driver	1-inch natural silk dome				
Frequency Response	60Hz-30KHz	55Hz-30KHz	50Hz-30KHz	45Hz-30KHz	20Hz to 40Hz-200Hz
HF Level	-6dB ~ +6dB Variable @ 10KHz				
LF Level	-6dB ~ +6dB Variable @ 100Hz				
Crossover Frequency	3KHz				
LF Amplifier Power	30W	50W	60W	80W	300W
HF Amplifier Power	20W	30W	30W	30W	
S/N Ratio (A weighted)HF/LF	>88dB/92dB	>90dB/95dB	>92dB/98dB	>94dB/100dB	>90dB
THD+N @Rated Power HF/LF	0.06%/0.03%	0.05%/0.02%	0.05%/0.02%	0.04%/0.02%	0.08%
Input Connectors	XLR/TRS Combo Connectors, RCA Connectors, SPDIF Connectors for digital signal				
Output Connectors	SPDIF Thru Connector for digital signal				
Input Mode Select	Analog or Digital				
Channel Select	Left or Right (Digital Input Mode)				
Polarity	Positive signal at + input produce outward LF cone displacement				
Input Impedance	20K ohms balanced, 10K ohms unbalanced				
Input Sensitivity	+4dBu(Balanced), -10dBv(Unbalanced)				
Net Weight	4.5 kg/9.9 lb	5.9 kg/12.9 lb	7.6 kg/16.7 lb	12.2 kg/26.8 lb	18.7 kg/41.1 lb
Gross Weight	6 kg/13.2 lb	7.5 kg/16.5 lb	9.1 kg/20 lb	15 kg/33 lb	22.4 kg/49.2 lb
Dimension	L287 x W255 x H346 mm L11.29 x W10.03 x H13.62 in	L320 x W287 x H389 mm L12.60 x W11.30 x H15.31 in	L365 x W322 x H449 mm L14.37 x W12.67 x H17.67 in	L425 x W385 x H523 mm L16.73 x W15.15 x H20.55 in	L500 x W500 x H523 mm L19.68 x W19.68 x H20.59 in

## Section 9: TURBO SERIES 4-YEAR LIMITED WARRANTY

MONKEY BANANA warrants the original purchaser that all Company sealed New Audio Products be free from defects in material and workmanship, under normal and proper use, for a period of four years (4) from the date of purchase (as shown on the original sales receipt with serial number affixed/written on it)

The four (4) years warranty period is valid only if the product is from the original MONKEY BANANA Company and the warranty return card is properly filled out and sent to the official agent of MONKEY BANANA Company. The official agent will collect the warranty return card together with the defective speaker and send back to MONKEY BANANA Company for repairing. MONKEY BANANA Company owns the final right to reject any RMA products from the agent/purchaser without any contacting first!

### A. Four (4) years limited warranty plan coverage guidelines

First and Second year: MONKEY BANANA company pays for labor, parts and ground freight (Only in China mainland) both ways

Third and Fourth year: MONKEY BANANA company pays for labor and parts only, Customer must pay for the freight both ways.

### B. Warning

Products (sent for repair) that are tested by MONKEY BANANA professional technicians and deemed to have no problems will not be covered to the four (4) year limited warranty. Customer must pay for the labor and freight both ways.

### C. MONKEY BANANA agrees to repair or replace-at our option-all such defective products/parts subject to the following provisions:

1. Defective products/parts have not been altered or repaired by other than Original MONKEY BANANA Company,
2. Products/parts are not subjected to negligence, misuse, improper use, or accident, damaged by improper line voltage, used with incompatible products, or have its serial number or any part of it altered, defaced, removed or have been used in any way that is contrary to MONKEY BANANA's written instructions.
3. Product repaired, the warranty period based upon the original product warranty period of calculation; if the product is repaired and return date from the end of repair is less than a month, from the date of return the product after repaired do have one-month free warranty period.

### D. Warranty Limitations

MONKEY BANANA warranty does not cover products that have been modified and/or abused, including but not limited to the following:

1. Damages to speaker cabinet and cabinet finish due to misuse, abuse, or improper use of cleaning material/methods, Bent speaker frame, broken speaker connectors, holes in speaker cone, surround and dust cap, burnt speaker voice coil, due not to follow the manual consciously
2. Any damage caused by the accident, misuse or improper use, negligence, burnt, soak, abrasion, rust or dip-dye, lightning strike and other force majeure.
3. Without the official instruction from our technical engineers, fading, deterioration of speaker components and finish due to improper exposure to elements
4. Bent Amplifier casing, damaged finished casing due to misuse, abuse or improper use of the cleaning material.
5. Burnt tracers on PCB due to improper use
6. Product/part damaged due to poor package or abusive shipping conditions
7. Subsequent damage to other products
8. To alter on the original series number label or completely without series number
9. Damage caused by the compatible problem with the third software (including driver process and BIOS)
10. Not the legal edition from MONKEY BANANA company
11. Any accessories from MONKEY BANANA Company do not include in the warranty service.

A warranty claim will not be valid if the warranty return card is not properly filled and returned to the official agent of MONKEY BANANA with a copy of the sales invoice.

**E. Service Request:**

To received product(s) service, please shipping the defective product back to the official agent of MONKEY BANANA Company after you have got the RMA number from them. Make sure you provide us with your complete and correct contact information. In most cases, our technicians might be able to resolve the problem over the phone, thus eliminating the need to ship the product.

**F.Shipping Instruction:**

Product(s) must be packed in its original protective box(es) to minimize transport damage.

**G.Disputes Resolution:**

All disputes-between clients and MONKEY BANANA Company-resulting from the four (4) years limited warranty policy resolved according to the laws and regulations of the People's Republic of China.

**H.Other Instructions:**

MONKEY BANANA company will not be responsible for any misfeasance / benefit loss which caused by our products

MONKEY BANANA Company owns the final right for the explanation of this warranty card. Products shall be subject to any changes without notices.

## Section 10:Return form

Important notice:  
Please do not return any goods without contacting us first.

Please fill in this form carefully, before contacting us.  
The more information we have, the more quickly we are able to process your returns.  
Thank you very much for the cooperation.

Product: \_\_\_\_\_

Invoice No: \_\_\_\_\_

Date of invoice: \_\_\_\_\_

Customer Name: \_\_\_\_\_

Contact Address: \_\_\_\_\_

Contact Tel: \_\_\_\_\_

### Cause of Return:

Please state the cause of your return, This data simplifies the handling of your request.

1. Incorrect delivery address

2. Return of good, what did you dislike:

- |  |                                       |
|--|---------------------------------------|
| <input type="checkbox"/> Visual appearance | <input type="checkbox"/> Sound/Output |
| <input type="checkbox"/> Other reason:     |                                       |

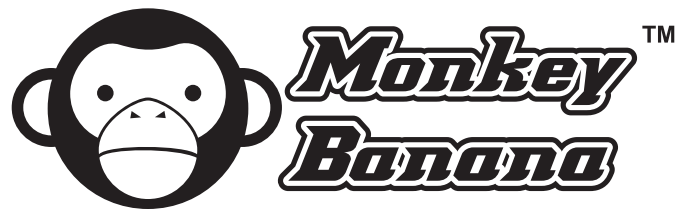
3. Defect (visual):

- |   |  |
|---|--|
| <input type="checkbox"/> Dents/Scratches      | <input type="checkbox"/> Rattling (loose part) |
| <input type="checkbox"/> Grid deformed/broken | <input type="checkbox"/> Quality of the finish |
| <input type="checkbox"/> Screw thread askew   |  |

4. Defect (technical):

- |  |   |
|--|---|
| <input type="checkbox"/> LED defect            | <input type="checkbox"/> loudspeaker hums           |
| <input type="checkbox"/> No sound from speaker | <input type="checkbox"/> Sound distortion/incorrect |





[www.monkey-banana.de](http://www.monkey-banana.de)  
**COLOR YOUR STUDIO**



Design pleasure

[www.monkey-banana.de](http://www.monkey-banana.de)