



PAM3M

Antenna Stand

Manual

1 INDEX

1 Index 1

2 Safety instructions, general instructions, decommissioning 3

 2.1 Operator responsibility 3

 2.2 Danger caused by energy 3

 2.2.1 Danger from electrical energy 3

 2.2.2 Danger from mechanical energy 4

 2.3 Residual hazards 4

 2.3.1 Risk of injury by malfunctions 4

 2.3.2 Risk of impact, tripping falling 4

 2.3.3 Danger of slipping 4

 2.3.4 Explosion hazard through flammable detergents 5

 2.3.5 Risk of injury from irritant, health damaging or caustic substances 5

 2.3.6 No entry for unauthorized persons 5

 2.3.7 Risk of death by falling loads 5

 2.3.8 Risk of injury from hot surfaces 5

 2.3.9 Risk of injury from use by unauthorized persons or third parties 6

 2.3.10 Danger from laser beams 6

 2.4 General instructions 6

 2.5 Decommissioning 7

 2.5.1 Switching off the system 7

 2.5.2 Storage of the system 7

 2.5.3 Dispose of the system 7

3 General Instructions and Precautions 8

4 Technical Data of Antenna Stand PAM3M 9

5 Assembly Groups 10

6 Installation and Principle of Functions 10

7 Care and Maintenance 13

Appendix

Warranty Statement 15

Declaration of Incorporation 16

EC declaration of conformity 17

Drawings 18

2 SAFETY INSTRUCTIONS, GENERAL INSTRUCTIONS, DECOMMISSIONING

2.1 Operator responsibility

- Make sure that the system is operated only by personnel who have been authorized and instructed by the operator.
- Define an area of risk, which must not be entered while operating the system.
- Affix the instructed person's signature, that the operating instructions have been read and understood.
- Ensure that a copy of the entire operating manual is permanently ready to hand at the system.
- Determine the responsibility in accordance with the different fields of duty exactly. (Maintenance, upkeep, etc.)

2.2 Danger caused by energy

2.2.1 Danger from electrical energy



The device may only be connected to a power supply, where the protective conductor has a proper grounding.



Any damage or interruption of the protective conductor inside or outside of the device, or interruptions of the protective earth terminal can result in injury.



The electrical commissioning of this device may only be performed by authorized personnel. The legal local rules and safety regulations must be adhered to.



Even when the device is turned off, there remains residual electrical energy in conduits!



Working at electrical components may only be performed by qualified electricians, before that the system must be disconnected from the mains.

2.2.2 Danger from electrical energy



Caused by the movements of parts of the system, there is a risk of crushing as well as drawing-in hazard during operation. The defined area of risk must not be entered. While the system is stationary, there is a risk of impact as well as tripping hazard.

2.3 Residual hazards



Despite all precautions taken, there may occur unobvious residual hazards. These can be reduced by considering the safety advises, the intended use and the operating instructions.



2.3.1 Risk of injury by malfunctions



Malfunctions or operating conditions which may affect the safety, force the shutdown of the system by separating the power supply.



Before re-commissioning of the system, proper restoring of the intended condition is required.



2.3.2 Risk of impact, tripping falling



After removal of panels or plates, as required e.g., for maintenance, there is a danger to stumble against or to trip over parts of the system, or to fall in maintenance hatches.

2.3.3 Danger of slipping



During the operation or caused by malfunctions of the system there may form contamination or leak on ground near the system.

2.3.4 Explosion hazard through flammable detergents



During the maintenance there is a risk of explosion if highly flammable detergents are used for cleaning the system.

2.3.5 Risk of injury from irritant, health damaging or caustic substances



There are dangers when handling consumable supplies like oils, detergents, etc.

While working with these, the currently valid operating and work instructions or safety data sheets for handling of the respective substances must be observed.



2.3.6 No entry for unauthorized persons



There is risk of injury if unauthorized persons enter the pre-defined area of risk of the system. The operator must ensure that unauthorized persons, as visitors, customers, etc. have no access to the risk of area of the system.



2.3.7 Risk of death by falling loads



In the defined danger zone there is risk of death caused by human error or insufficient secured loads.

During installation, repair or maintenance of the system, appropriate lifting devices must be used, and the personal protective equipment must be used.



2.3.8 Risk of injury from hot surfaces



Especially motors are heating up during operation and cause risk of burning. Before maintenance and repair it is necessary to ensure that all components are cooled down.

2.3.9 Risk of injury from use by unauthorized persons or third parties



There are risks if unauthorized persons or third parties operate the system via the control unit while personnel are staying unauthorized in the area of risk.

2.3.10 Danger from laser beams



During setup operation of the device laser systems are used. Never look into the laser beam! Wear safety glasses!

2.4 General instructions



Before carrying out any repairs, always contact The EMC Shop previously.



Independent repairs or modifications to the equipment may cause warranty to expire. Before any repairs, the electrical power supply must be interrupted. At many points of the individual component's voltages appear that can cause injuries when touching. Only trained staff may carry out settings and / or repairs to the devices. At the capacitors inside the device can still be voltage even if the device is powered off.



Regularly inspect and maintenance all devices in accordance with the provided instructions

Only use spare parts that are ordered or recommended by the manufacturer.



The devices must be clean and free of dust. A dirty or dusty environment may cause electrostatic interference.



To prevent electromagnetic interference, we use filters with a high leakage.



These filters are installed in each phase and the neutral conductor. The filters are principally used in products which are grounded to the floor, for example AM, CAM, TAM, EAS, TD, WPTC, MVCF. The filters are also installed into turn tables with higher loads, starting at TT2.0-1t. In most EMC chambers no Residual Current protective device (RCD) is installed. This is legit when sockets are built for a specific item of electrical equipment. In this case, the high leakage current has no effect.

If you are planning to install an RCD in the EMC chamber, then a 30mA RCD is too small!

You must use a 300mA RCD!

Technical changes and errors expected as product enhancements are made regularly. Pictures included are for illustration only and do not represent all possible configurations.

2.5 Decommissioning

2.5.1 Switching off the system



Stop all remote controls by external software!

Move the devices to their parking positions (see instructions for the control unit)!

Turn off the respective control unit and devices with their power switches and disconnect the equipment from the power supply!



2.5.2 Storage of the system

Turn off the system, disconnect all data connections between control units and devices!

The storage area must be cool and dry to avoid corrosion on the individual devices of the system. The room temperature of the storage area must be constantly between 5°C and 25°C, the humidity must not be more than 50%.

- Prepare the individual parts of the system to avoid any external damaging influences during storage!
- If necessary, use cardboard, wooden boxes, and other packaging material!
- Secure all components against accidental tilting and instability!

2.5.3 Dispose of the system



This device must be disposed according to the applicable regulations and legislation from domestic waste. By collecting and recycling of recyclable materials the natural resources are conserved, and it is ensured, that all the applicable regulations for the protection of health and the environment are considered.

3 GENERAL INSTRUCTIONS AND PRECAUTIONS

Before this device is applied with power:

Ground it properly through the protective conductor of the power cable to a power source provided with protective earth contact. Any interruption of the protective (grounding) conductor, inside or outside the device, or disconnection of the protective earth terminal could result in personal injury.

The electrical installation of this product must be accomplished by an individual who is authorized to so do by the appropriate local authority. The installation must be compliant with local electrical safety codes.

Only qualified personnel are allowed to operate or service this equipment.

Before making service, contact The EMC Shop

Service or modifications of the device by yourself may void your warranty.

If you attempt to service the unit by yourself, disconnect all electrical power before starting.

There are voltages at many points in the components which could, if contacted, cause personal injury. Only trained service personnel are allowed to perform adjustments and/or service procedures upon this device. Capacitors inside this instrument may still be charged even when instrument is disconnected from its power source.

Stay clear of moving components during the operation of the device.

Do not operate the device while somebody is close to moving parts.

The protection of the **area of risk** at site is part of the operator.

Read this manual completely before starting installation. This equipment must be installed and operated only by qualified personnel.

Regularly inspect all equipment and conduct scheduled maintenance in accordance with the factory recommendations provided. Only use replacement parts and fasteners ordered directly from the factory.

Information presented enclosed is subject to change as product enhancements are made regularly. Every effort has been made to ensure that the information in this manual is accurate. However, no liability or guarantee is assumed for the up-to-dateness, correctness and completeness of the information provided herein.

Pictures included are for illustration purposes only and do not represent all possible configurations.

4 TECHNICAL DATA OF MANUAL ANTENNA STAND PAM3M

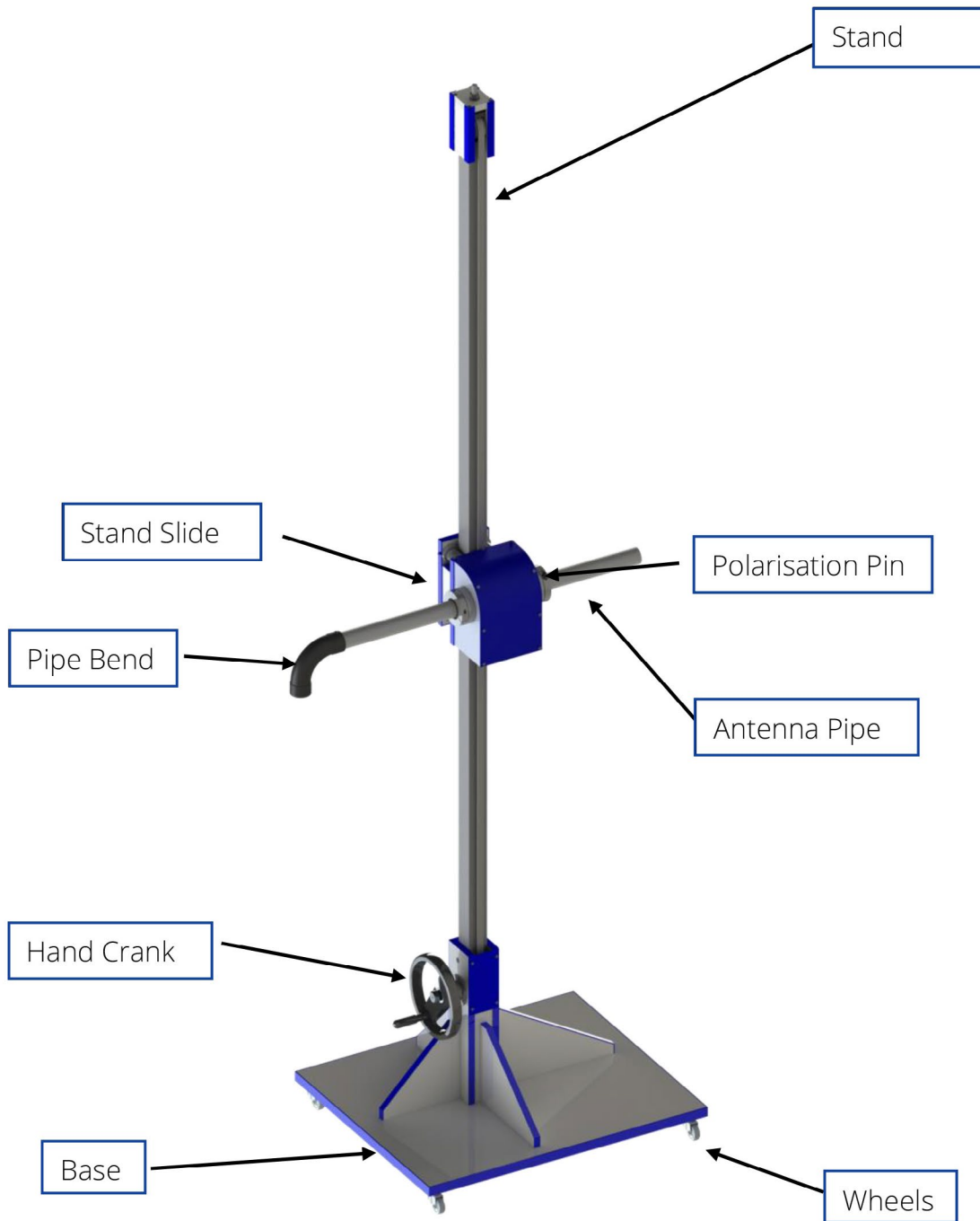
Antenna height adjustable manually	1.0 - 3.0 m
Total mast height	3.4 m
Load capability max.	max. 15 kg (when balanced)
For long and heavy antennas a counter weight is required to balancing the load	Depending on the distance of the antenna centre of gravity
Material of antenna stand	Plastic and reinforced fiberglass
Mast cross-section	60 mm x 60 mm
Base (L x W)	0.9 m x 0.75 m
Movable with 4 wheels	
Manual polarization	0°/90° (vert./hor.)
Operating temperature	10° C – 35° C
Total weight approx.	35 kg

Brief description

The PAM3M manual antenna stand is especially designed for measurements in electromagnetic absorption chambers at a fixed measurement height. The PAM3M has no metal parts (except for the wheels).

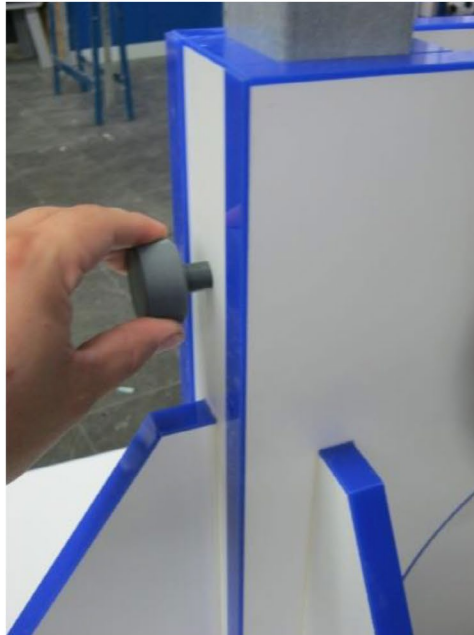
Antenna adapters for most commercially available antennas are available on request. All antennas during polarization rotate around their axis to eliminate any elevation errors. Polarization change is performed manually. The antenna height can be adjusted manually.

5 ASSEMBLY GROUPS



6 INSTALLATION AND PRINCIPLE OF FUNCTIONS

1) Insert the lower stand tube in the base frame and fix it with the plastic screw

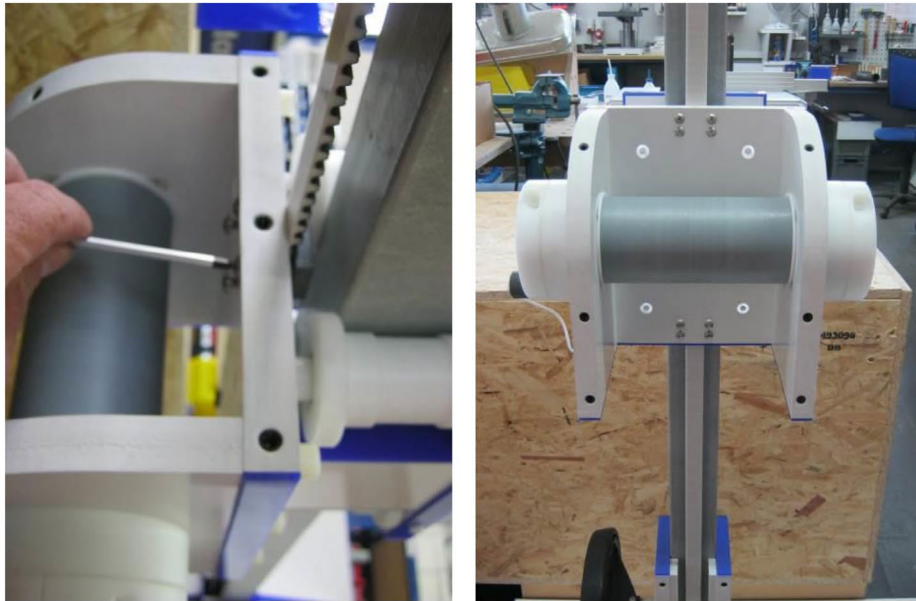


2) If the mast tube is divided, join together the divided stand tubes, and fix it with the plastic screws. Take care of the marking!

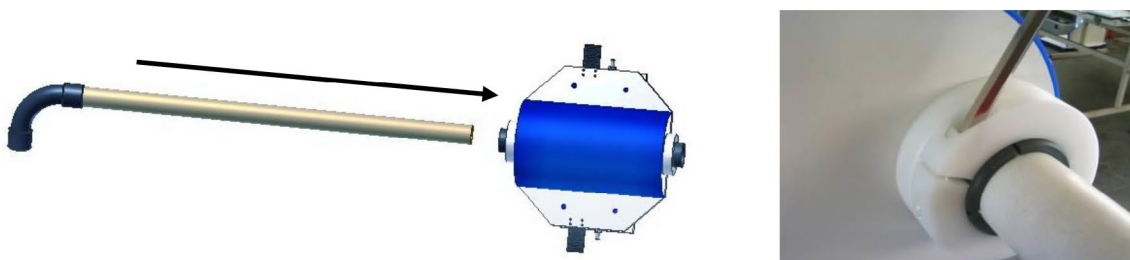


3) Install the stand slide into the stand tube

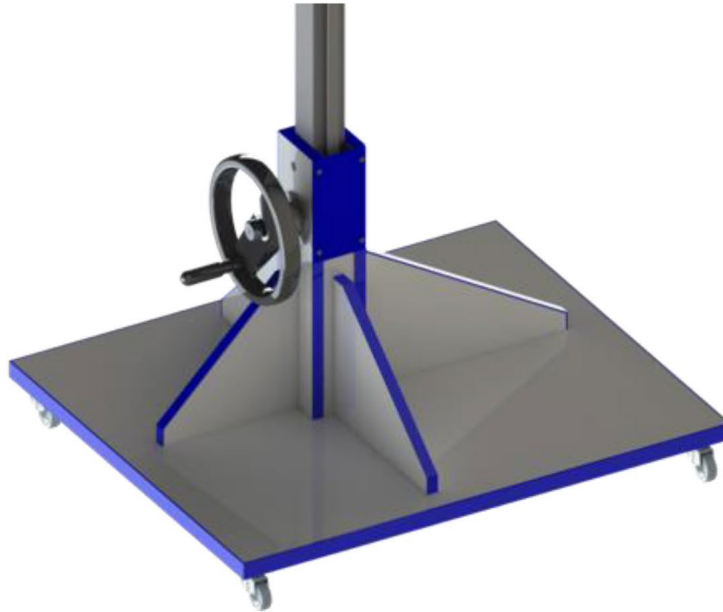
4) Fix the toothed belt at the stand slide with the screws and tension the belt carefully at the stand head.



5) Insert the antenna pipe into the hollow shaft of the stand slide and fasten the fixing screws carefully at both sides



- 6) The height of the antenna stand can be adjusted manually.
Pull out the hand crank and rotate the crank until the needed height is reached.
The hand crank is secured with a spring, which snaps in automatically



- 7) For changing the polarisation of the stand, pull out the polarisation pin and turn the antenna pipe by 90°. There are two hard stops for vertical and horizontal position.

**CAUTION!**

Do not position the antenna mast underneath **halogen headlights** or any other heat source – the plastic design could get damaged.

7 CARE AND MAINTENANCE

- Clean the surfaces of the stand tube and the casters at the stand slide when dirty by using a plastic cleaner with a soft cloth.

Note: Do not use solvents for cleaning!

- Once in a while, the axles of the casters at the stand slide must be lubricated with conventional machine oil, whereby no oil should reach the running surface of the castors.

Note: No lubricant must be used at the driving axle (drive unit, toothed wheel)!

- Quarterly the bearing at the hand crank must be greased and the tightness of the fixing screws at the hand crank must be checked.

Routine Maintenance

To ensure a high level of reliability of operation, a long working life of the products, and substantially to avoid major repair costs, we offer the option of a maintenance contract with our service department.

This maintenance contract is carried out by our service engineers who accurately check and examine all the important components and functions at regular intervals of time, to be agreed from case to case.

The contract covers the mechanical and electrical or electronic parts of our products as well as the cooling units, safety devices, alternative and optional equipment, where these have been fitted to the products.

The details of the services to be provided by our maintenance service are agreed from case to case. We shall be happy to provide a suitable quotation on request.

Warranty Statement

The EMC Shop, hereinafter referred as The EMC Shop, warrants that our standard products are free from defect in materials and workmanship for a period of one year from date of shipment if maintenances are done regularly. Standard The EMC Shop products include the following:

- Antenna Masts and Stands
- Turntables and Turn Devices
- Cable Guide Rails
- Controllers
- Dynamometers for the automotive industry

If the Buyer notifies the Seller of a defect within the warranty period, the Seller will at the Seller's option, either repair and/or replace those products that prove to be defective. There will be no charge for warranty services performed at the location The EMC Shop designates. The customer must, however, prepay inbound shipping costs and any duties or taxes. The EMC Shop will pay outbound shipping cost for a carrier of The EMC Shop's choice, exclusive of any duties and taxes. If The EMC Shop determines that warranty service can only be performed at the customer's location, the customer will not be charged for The EMC Shop's travel related costs.

This warranty does not apply for:

- Improper storage of our products outside our area of influence
- Errors during installation, commissioning, or operation
- Wear and tear during normal operations
- Unqualified maintenance works
- The application of unsuitable equipment and materials
- The results of repair work or other activities undertaken on our products, which have not been expressly approved by us.
- Consumable items such as fuses, batteries, etc
- Products which have been operated outside the specifications

Note: Please always contact The EMC Shop before shipping equipment to us.

Declaration of Incorporation

in accordance with EC -Machinery Directive 2006/42/EC, appendix II, No. 1 B

We hereby declare that the positioning system, consisting of:

Product:	PAM3M
Serial Number:	214243M
Year:	2024
Manufacturer:	The EMC Shop

as delivered is designed for installation into a system. The general safety and health requirements according to appendix I of the Machinery Directive are applied and have been observed.

Additionally, the positioning system in according to the following directives:

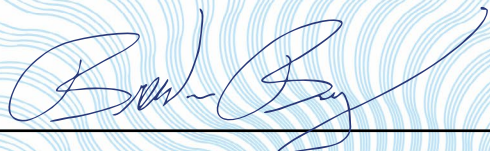
- | | |
|--------------|--|
| - 2014/30/EU | Electromagnetic compatibility – EMC directive |
| - 2014/35/EU | Electrical equipment directive |

Basis for that are the following harmonized standards:

- | | |
|----------------------------|------------------|
| - DIN EN 55011:2022-05 | Class B |
| - DIN EN 61000-4-2:2009-12 | Level 2/3 |
| - DIN EN 61000-4-3:2021-11 | Level 2 |
| - DIN EN 61000-4-4:2013-04 | Level 2 |
| - DIN EN 61010-1:2020-03 | |

*The relevant technical documentation according to appendix VII B have been issued.
The commissioning of the positioning system is prohibited until it has been installed into a system which then meets the requirements of the EC Machinery Directive 2006/42/EC.*

Managing Director: _____



EC declaration of conformity

in accordance with EC Directive RoHS 2011/65/EU

Our products comply with the regulation of Directive 2011/65/EU of the European Parliament and the Council dated 08.06.2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment and the observance of the maximum concentration in homogeneous materials by weight Cadmium < 0,01%, and lead, mercury, hexavalent chromium (Cr6 +), polybrominated biphenyls (PBB), polybrominated diphenyl ethers (PBDE), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP) < 0,1% according to Annex II of the Directive. We hereby declare that all our products are produced RoHS compliant.

