



**Electronics manufacturer specialising in radio**

Premium partner for customised test solutions in the fields of  
**mobile communications, automotive and defence technology**

– Development – Production – Service –

# // Competence Quality Reliability



Your partner company for  
customised solutions -  
"Development, Production &  
Service" all from one source.

- // High-frequency technology
- // EMC technology
- // CNC milling technology



# // *The Company*

*Development and manufacture of customised products*

## **Telecommunications / mobile communications sector**

An important sector is the telecommunications industry for which we manufacture shielding boxes, relay switch panels, coupling fields and air interface adapters (air interface emulation) 2G/4G/5G/IoT/WiFi/TETRA. We offer software solutions for the control of our devices and systems and integrate desired programme sequences.

## **High frequency and measurement technology**

Our high frequency components include e.g. programmable attenuators, semiconductor switches, hybrid couplers, power dividers, RF filters, coaxial relays, etc.

For EMC measurement technology we sell relay switching units and other accessories.

## **CNC milling technology**

We produce high-precision milled parts in our modern CNC production centres. From prototypes to series production, especially according to customer specifications. Our mechanical product range also includes standard aluminium enclosures such as profile enclosures, milling cassettes and 19" racks.

# // *The Company*

*The company history at a glance*

Foundation of MTS Mikrotechnik  
as a developing and producing  
company in the field of EW

1980

1995

2005

2020

Relocation of the company  
into a new company building  
in Mertingen

Change of the company name  
MTS Mikrotechnik to  
MTS Systemtechnik with  
new shareholders

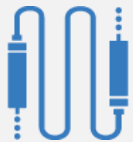
25 years of MTS Systemtechnik



# // *Main products*



Systems for the distribution of LF, video and RF signals in the fields of tele- and satellite communication as well as radio surveillance.



Development and production of active and passive components for high-frequency technology



Manufacture of mechanical components for the aerospace, high-frequency and optical industries

# // *Company facts*

## **Company**

Administration, sales and production - all under one roof. Worldwide representatives for the marketing of MTS products.

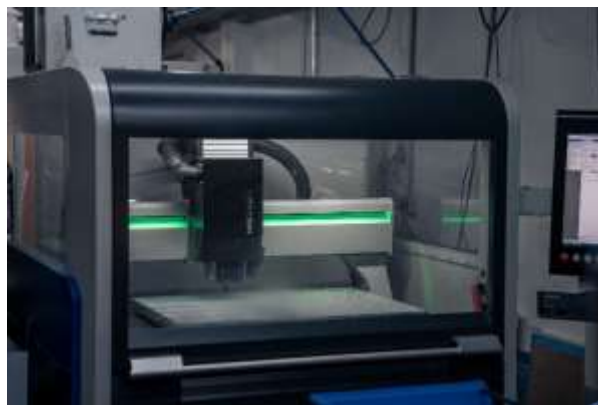
## **Employees**

50 employees in full and part time, consisting of engineers, technicians, skilled workers and trainees

## **Training**

- Electronics technician (m/f/d) for devices and systems
- CNC cutting machine operator (m/f/d)
- Industrial clerk (m/f/d)

# // *Company facts*

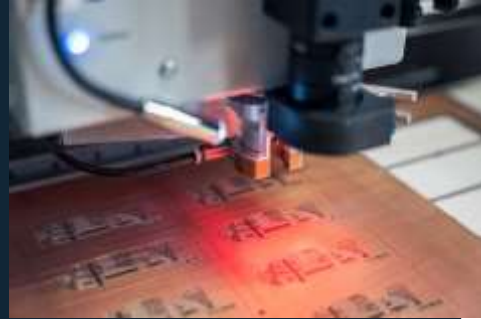


DIN EN ISO 9001:2015 certified

(Development, production, distribution)

Modern measuring devices and machines





## // **Competences**

- // In-house development, simulation and production of high-frequency components and systems
- // Software and hardware laboratory
- // System integration
- // EMC absorber chamber
- // CAD services
- // CNC machining centre
- // Modern production processes
- // Quality standard DIN EN ISO 9001





# // *Our markets*



Our customers are developers and manufacturers of highly sensitive equipment in the mobile communications, telecommunications, aerospace, defence, medical, automotive and electronics markets. MTS Systemtechnik stands for cutting-edge technology, absolute reliability, discretion, transparent processes and certified quality.





**MTS radio field  
emulations for testing  
military communication**



**Enables  
field tests  
on side**



# // Radio Field Emulation AIAD



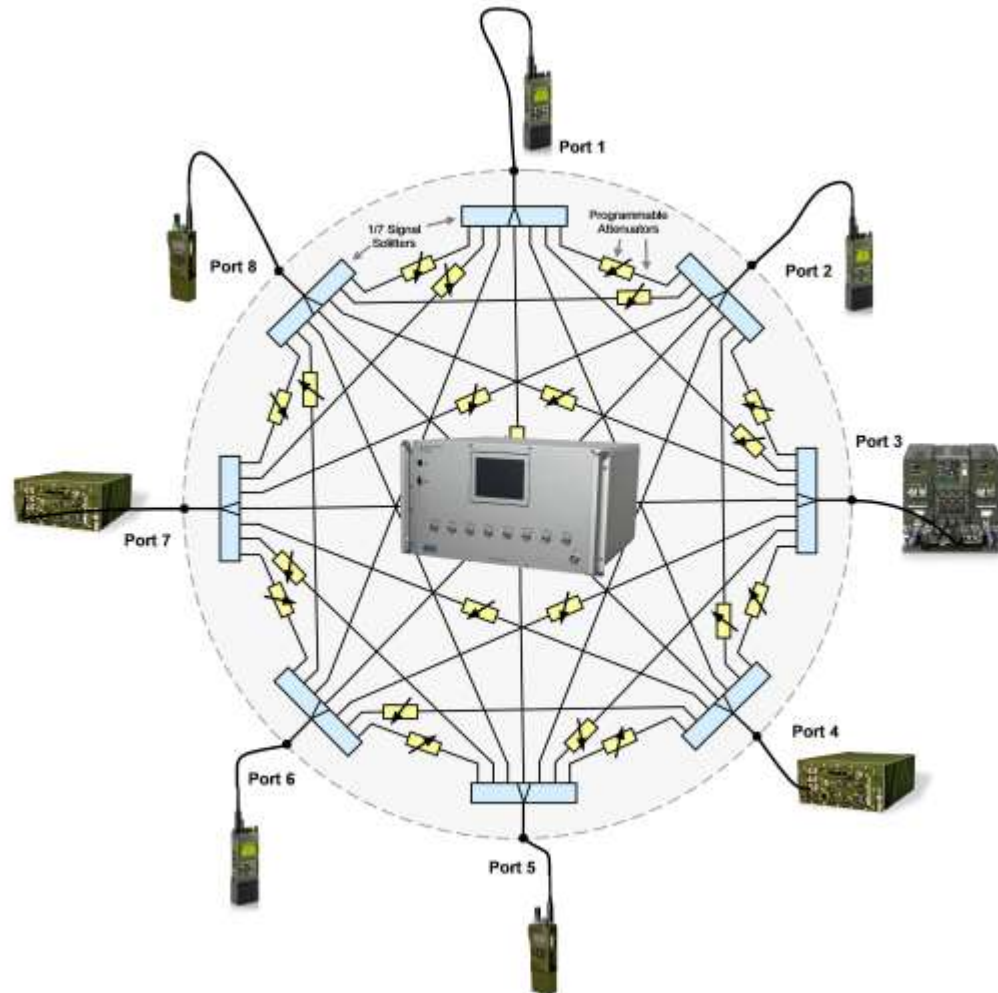
## Development or integration of tactical communication systems

### *Current approach OTA (Over-the-Air-Testing):*

The basic development and functional testing are carried out by the manufacturer in accordance with the relevant specifications or standards. The integration, the function in active operation, takes place in OTA field tests. Only here can range tests, cell changes, interoperability, dynamic movements, multi-user operation etc. be tested under real conditions. This is associated with considerable costs due to the provision of equipment, personnel and space. The time factor for these tests is also immense.



# // Radio Field Emulation AIAD



## Development or integration of tactical communication systems

### *Procedure with MTS AIAD series:*

With our AIAD systems, any transmission situations, conditions or problem cases that occur in field tests can be generated in advance. This is possible because we do not operate the radio 'over the air', but exclusively by wire. The transmission characteristics of a radio link are simulated with a network of RF components. In terms of radio technology, all objects appear as if they are in a free field. This brings real reality into the test laboratory.

# // *Radio Field Emulation AIAD*

## Development or integration of tactical communication systems

- // Any application, situation and/or problem case can be simulated in the laboratory.
- // Scalable number of participants (ports) and configuration possible.
- // Field tests are reduced to a minimum.
- // Even systems with extreme transmission powers of 10 W and more can be connected directly to the AIAD+ solution.
- // Vendor-independent and reproducible results.
- // Extremely wide frequency range for the simultaneous use of all radio technologies.



# // Radio Field Emulation AIAD

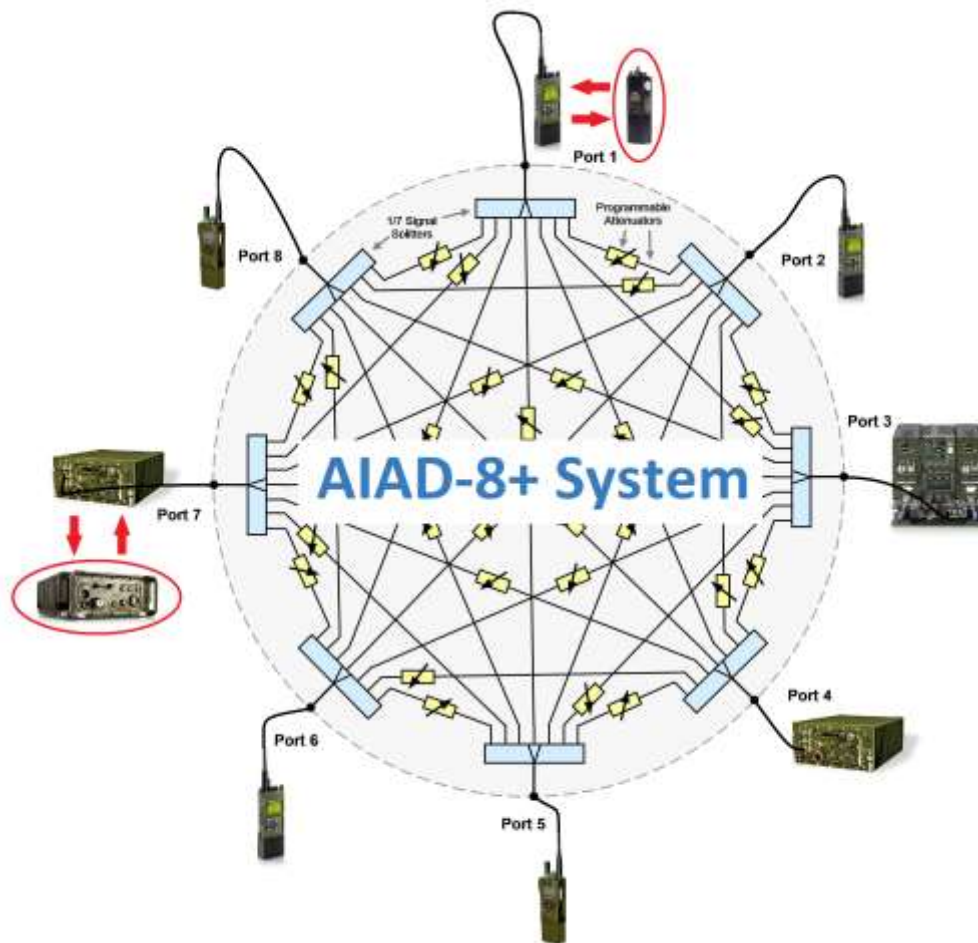


**Replace obsolete systems or certify new ones**

*Current approach (Over-the-Air-Testing):*

Functional tests are carried out on a demonstrator or scaled-down test environments, which are usually customised or only cover a small range of functions. Tests under real conditions with the existing technology are usually not carried out or can only be realised with a great deal of personnel and material expenditure. This is a similar issue to development or integration.

# // Radio Field Emulation AIAD



**Replace obsolete systems or certify new ones**

*Procedure with MTS AIAD series:*

The MTS radio field simulations can be used to reproduce any situation, condition or problem in the laboratory. New developments or systems that have become obsolete are connected to the network via RF cables. A quick exchange of different brands or types is very easy to handle. Independent measurement of the specifications of the devices and systems is also possible.



# // *Radio Field Emulation AIAD*

## Replace obsolete systems or certify new ones

- // Any situation or known critical case can be easily reproduced.
- // The performance of the new systems can be comprehensively tested in conjunction with real equipment.
- // Manufacturer-independent testing.
- // Field tests are only necessary for mechanical loads.
- // Shortening of the validation process.
- // Acceleration of operational readiness.

# // Radio Field Emulation AIAD

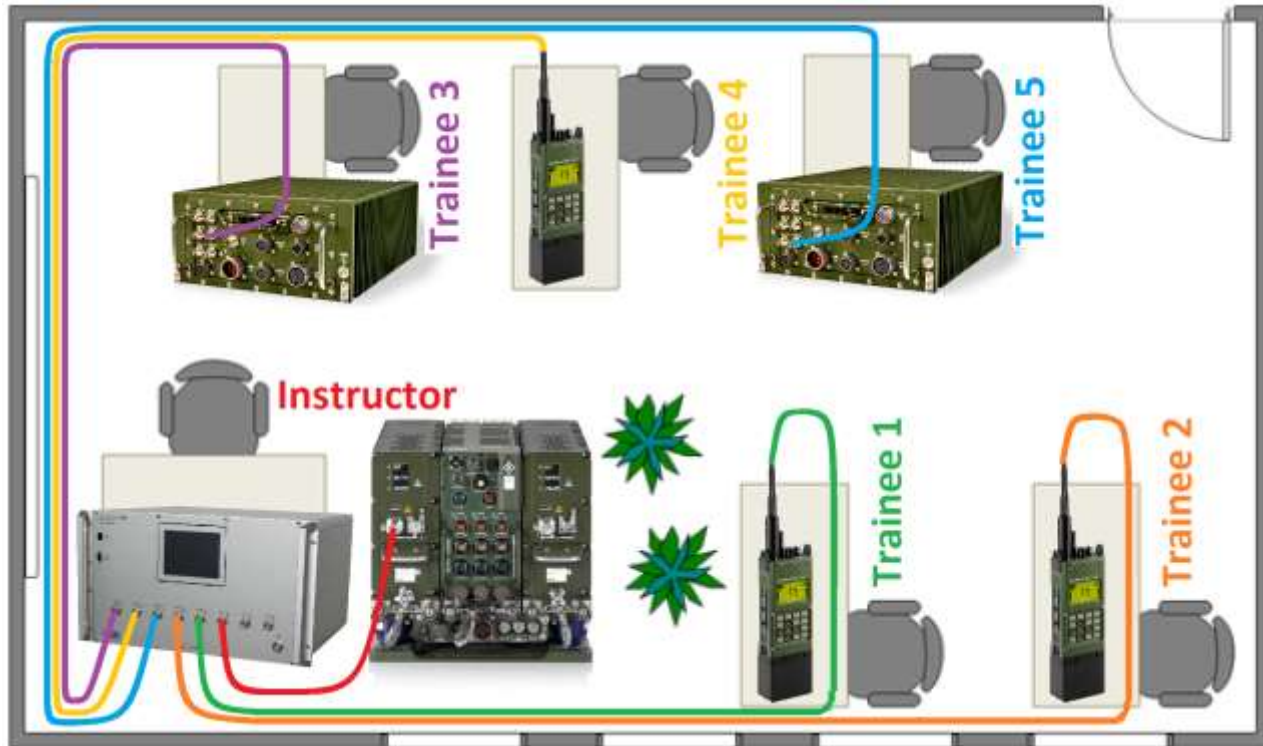


## Education and training

### *Teaching methodology:*

Basic theoretical and practical content is traditionally taught in courses or practice models. However, skills are only consolidated and automatised in the long term if they are constantly applied and repeated. Extreme situations or rare events are difficult to train, as there is no real-life operation. Routine is only achieved in real exercises with all units involved.

# // Radio Field Emulation AIAD



## Education and training

### *Procedure with MTS AIAD series:*

The AIAD can be used to simulate any situations, conditions or extreme cases in the training room. As already mentioned several times, the basic structure is the same as with the previous applications. All trainees are connected to each other via the AIAD network and the trainer can dynamically create any possible constellation. This allows knowledge levels and learning checks to be queried and combat simulations to be carried out - all without having to leave the building.



# // *Radio Field Emulation AIAD*

## Education and training

- // Any real-life situation can be easily reproduced by a instructor.
- // Training objectives are achieved in the shortest possible time, as they can be reproduced and repeated as often as required.
- // Quick and varied verification of learning success.
- // Field tests are almost no longer necessary.
- // Easy handling for the trainer.
- // Saves resources and time.
- // New scenarios or problems can be added very easily.



# // *Radio Field Emulation AIAD*

## Summary

With AIAD system solutions, any state of a radio link can be modelled dynamically. This enables realistic testing of the performance of radio systems or components in live operation. Reliable, reproducible, on site.



**We bring the wireless environment to  
your home**

# // Accessory

- // RF components
- // Shielding boxes series MSB
- // Shielded racks series SRK
- // Installation service
- // RF cable assembly
- // Mechanics



Other configuration possible on request!



## // *Contact us*

Gewerbepark Ost 8

86690 Mertingen

Germany

[info@mts-systemtechnik.de](mailto:info@mts-systemtechnik.de)

Tel.: +49 9078 91294-0

[www.mts-systemtechnik.de](http://www.mts-systemtechnik.de)