

# **MIL-STD-704F Training**

# **Aircraft Electric Power Characteristics**

### TRAINING PROGRAM DESCRIPTION

Two and a half days of focused International and Online Training on MIL-STD-704F

by

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GDS Engineering R&D, Inc.

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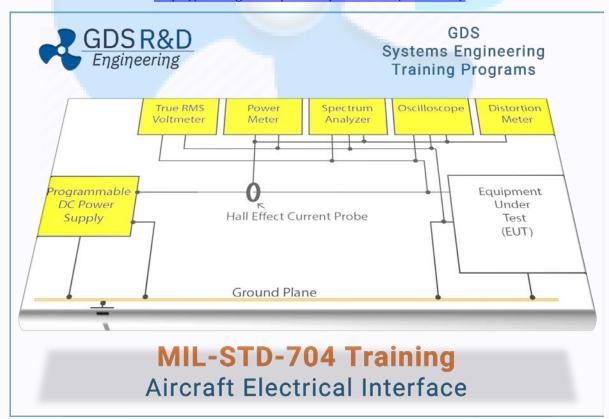
#### Foreword

This training is an important step for testing your military equipment for Aircraft Electric Power Characteristics for the targeted test requirements and platform requirements described in MIL-STD-704F. The training focuses on the test sections described in these standard documents:

"MIL-STD-704F
Department of Defense Interface Standard: Aircraft
Electric Power Characteristics"

The instructors share their experience and knowledge gained by working long years in the field with designing products and performing tests in accordance with such as MIL-STD-810H, RTCA-DO-160, and MIL-STD-704F. The slides are supported by many graphics and test videos for the efficiency and clarity of the information and each session is planned in accordance with the tests described in MIL-STD-704F. Sessions include presentations on platform level requirements, guides, and lessons learned items based on MIL-STD-704F. The training also includes test process and requirements overview in view of DOD Systems Engineering Processes. Dr. Ismail Cicek is the lead instructor of this training and several experienced test personnel and design engineers help complete the training sessions. The following link describes Dr Cicek's experiences in the topic with more detail:

https://www.globaldynamicsystems.com/dr-i-cicek/



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## Purpose of the Training

The main goal of this training is to have a good understanding of equipment testing in accordance with MIL-STD-704F standard document.

The attendees completing this training are expected to have knowledge in the following areas:

- Understand MIL-STD-704F Standard Test Sections and Test Procedures
- Understand the MIL-STD-704F platform level requirements and additional material provided
- Be able to write a list of susceptibilities
- Understand the test process goals and activities
- Develop test plans, and schedule tests
- Execute tests
- Understand test results
- Create test reports
- Be able to resolve issues in the test results by means of change recommendations, or accepting the anomalies with risk assessment.

### Training Scope

The training sessions cover the following topics with annotated slides, test photos, videos, and additional reference material from standards, specifications, and FAA/EASA guides and documents:

- MIL-STD-704F Definitions; Types of Operations, Aircraft Power Systems, General Requirements, Introduction.
- Compliance with MIL-HDBK-704-1 Aircraft Electrical Power Specifications.
- MIL-HDBK-704-2 Test Procedures for Demonstrating Aircraft Suitability of Use Equipment.
- MIL-HDBK-704-3 Three Phase, 400 HZ, 115 Volt.
- MIL-HDBK-704-4 Single Phase, Variable Frequency, 115 Volt.
- MIL-HDBK-704-5 Three Phase, Variable Frequency, 115 Volt.
- MIL-HDBK-704-6 Single Phase, 60 Hz., 115 Volt.
- MIL-HDBK-704-7 270 VDC
- MIL-HDBK-704-8 28 VDC

Read more details about this training content and schedule at the <u>GDS Website:</u> http://www.GlobalDynamicSystems.com

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### Instructors

Training is provided by Dr Ismail Cicek with over 20 years of experience in the environmental qualification testing of products in accordance with, such as, MIL-STD-810H and RTCA-DO-160G. An Avionics Chief Engineer, a Certified Verification Engineer (FAA/EASA) with over 18 years of experience presents the EMI/EMC sections. Training is also assisted by our personnel experienced in design and environmental testing of military and aerospace equipment.

Read DAU Paper: "A New Process for the Acceleration Test and Evaluation of Aeromedical Equipment for U.S. Air Force Safe-To-Fly Certification". Click to display this report.

GDS Team has provided MIL-STD-810, RTCA-DO-160, MIL-STD-461 training courses to more than five hundred students and over one hundred organizations around the world since 2009. Read more details about the instructors at <a href="https://www.GlobalDynamicSystems.com">https://www.GlobalDynamicSystems.com</a>.

## Training Schedule and Execution Type

- Online training using ZOOM.
- Led by live two instructors experienced in the field by both testing and lecturing.
- Two and a half days of focused online training schedule is typically as follows
  - o 1st Day: 08:00 16:30 (Lunch Break between 12:30 and 13:30)
  - o 2nd Day: 08:00 16:30 (Lunch Break between 12:30 and 13:30)
  - o 3rd Day: 08:00 12:00
  - o Time zone: Central European Time (CET)
- Attendees will receive a Training Certificate.
- Training includes knowledge check quizzes, a competition type, fun way or learning with prizes.

#### Attendees will receive a Training Certificate.

Visit <u>GDS Website</u> to check the calendar of scheduled training classes and for registration information. Or, send an email to us with your registration request: <u>info@GlobalDynamicSystems.com</u>.

Or call us to further discuss about your training needs. Ph: +1 (937) 912-1220 (USA) | Ph: +90 (537) 210-4068 (Turkey)

Our training calendar includes all open training classes, including RTCA-DO-160, MIL-STD-810, MIL-STD-704F and MIL-STD-461.

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## **Training Contents (Detailed)**

The electrical interface definition of military aircraft is made with the MIL-STD-704 standard. The standard document also includes 8 separate guide documents according to the electrical power type. In the training, the tests specified in the standard documents and guides are explained and discussed in detail.

#### 2.5 days of training covers the following topics:

- MIL-HDBK-704-1 Compliance to Aircraft Electrical Power Characteristics.
- MIL-HDBK-704-2 Guidance for Test Procedures for Demonstration of Utilization Equipment Compliance to Aircraft Electrical Power Characteristics Single Phase, 400 HZ, 115 Volt
- MIL-HDBK-704-3 Guidance for Test Procedures for Demonstration of Utilization Equipment Compliance to Aircraft Electrical Power Characteristics Three Phase, 400 HZ, 115 Volt.
- MIL-HDBK-704-4 Guidance for Test Procedures for Demonstration of Utilization Equipment Compliance to Aircraft Electrical Power Characteristics Single Phase, Variable Frequency, 115 Volt.
- MIL-HDBK-704-5 Guidance for Test Procedures for Demonstration of Utilization Equipment Compliance to Aircraft Electrical Power Characteristics Three Phase, Variable Frequency, 115 Volt.
- MIL-HDBK-704-6 Test Procedures for Demonstration of Utilization Equipment Compliance to Aircraft Electrical Power Characteristics Single Phase, 60 HZ, 115 Volt.
- MIL-HDBK-704-7 Guidance for Test Procedures for Demonstration of Utilization Equipment Compliance to Aircraft Electrical Power Characteristics 270 VDC.
- MIL-HDBK-704-8 Guidance for Test Procedures for Demonstration of Utilization Equipment Compliance to Aircraft Electrical Power Characteristics 28 VDC.



# **Training Material**

The Instructors present the topics using the presentation slides with references to MIL-STD-704F sections and contents with the inclusion of information included from relevant regulations, standards, and specifications. The lecturers provide slides for sharing their own experience and knowledge gained by working long years in the field and performing tests in accordance with RTCA-DO-160, MIL-STD-810, MIL-STD-461, and MIL-STD-704. The slides are supported by many graphics and test videos for the efficiency and clarity of the information.

The slides and other sharable course material will be shared with the registered students before the class using GOOGLE DRIVE.

- Registration includes all presentations and additional material shared before the class.
- Registration includes all presentations and additional material shared before the class. Visit <u>GDS</u>
   <u>Website</u> to display the details of the registration process.

The RTCA-DO-160G standard must be purchased separately through RTCA, Inc. website at <a href="https://www.rtca.org/standards/publications/">https://www.rtca.org/standards/publications/</a>.



GDS Engineering R&D, Inc. is an official member of RTCA Organization.



### Our References

We have provided training courses to more than 100 companies and organizations and over 500 individual trainees so far.



































































































