

## Section 9

### Airplane Flight Manual Supplement AVE24

#### Aspen EFD1000 PFD

This AFM-Supplement is applicable and must be inserted into section 9 of the airplane flight Manual if the Aspen EFD 1000-PFD is installed in the Aquila AT01. The information of this AFM-Supplement adds or replaces information of the basic Airplane Flight Manual.



The technical content of this Airplane Flight Manual Supplement is approved under the Authority of DOA No. EASA.21J.025.

Schönhagen, 14.09.2011



Head of Airworthiness Department

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## 0.1 LIST OF REVISION AND AMENDMENTS

Issue	Reason for Amendment /Revision	Affected Pages	Date of Issue
A.01	Initial Issue	All	20. Oct 09
A.02	Documentary changes	All	14.Sept 11

## 0.2 LISTE OF EFFECTIVE PAGES

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AVE24-1	A.02	14.Sept 11
AVE24-2	A.02	14.Sept 11
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AVE24-4	A.02	14.Sept 11
AVE24-5	A.02	14.Sept 11
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## 1. General

### 1.1. Introduction

The information contained within this AFM-Supplement is to be used in conjunction with the complete Airplane Flight Manual.

This supplement provides the information necessary for the efficient operation of the Aquila AT01 when the ASPEN Primary Flight Display (PFD) EFD 1000 is installed.

This AFM-Supplement is subdivided in the chapter used in the basic airplane flight manual. All the listed chapters are affected by the Minor Change Aquila AT01-00317 „Installation Aspen PFD / MFD“.

To operate the device, a system software v1.1 or higher is required. A software update is an SI (Service Information) released on our website ([www.aquila-aviation.de](http://www.aquila-aviation.de)). To your current software version you can read in chapter 6.5.1 Equipment List and always keep up to date.

For a detailed description of the EFD1000-PFD and full operating instruction, refer to the effective issue of the Aspen EFD 1000 (PFD) Pilot's Guide, P/N 091-00005-001.

<b>NOTE</b>
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The pilot's Guide for the Aspen EFD 1000 PFD is available only in English language.

### 1.11. Terminology and Abbreviations

#### 1.11.5 Miscellaneous

PFD	Primary Flight Display
MFD	Multifunctional Display

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## **2. Limitations**

### **2.3 Airspeed Indicator Markings**

On the Primary Flight Display (PFD) will be displayed an Airspeed indicator and an altimeter. The pilot can use these indicators as information source. The analog airspeed indicator and the altimeter are the operative instrument for evaluation for speed and altitude.

The PFD-airspeed indicator markings are equal to the analog airspeed indicator. These markings are conform to the basic airplane flight manual chapter 2.3.

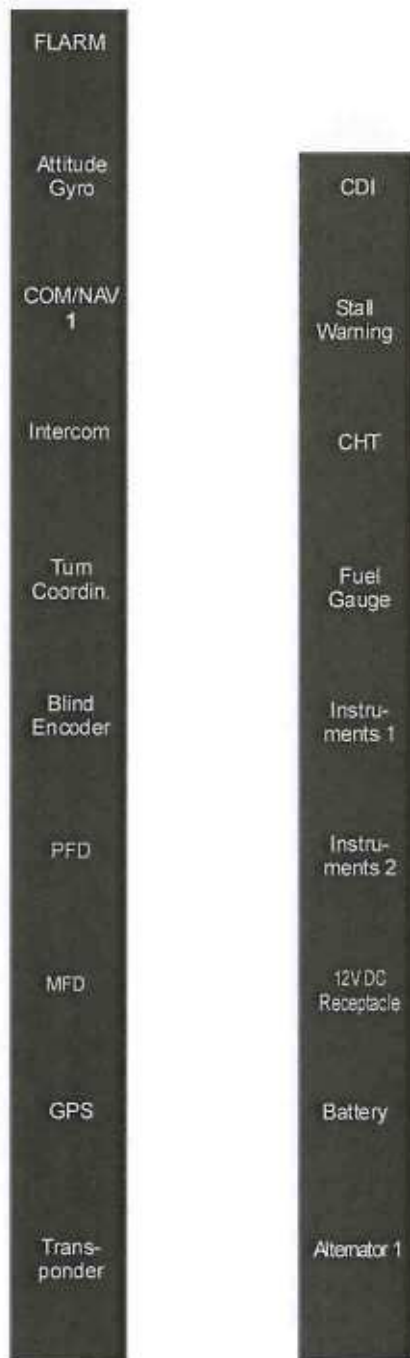
#### **2.12 Kinds of operation limits / Minimum Equipment**

If the Aquila is equipped for NVFR-operation the PFD substitute the following instruments: artificial horizon, direction indicator and vertical speed indicator.

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## 2.16 Placards

5.) On the instrument panel, adjacent to the right side of the circuit breakers:



Depending on the equipment installed in the aircraft, not every position shown above might be actually assigned with a circuit breaker. In those cases the respective positions are covered by a blank plastic plug and reserved for that application by the placard.

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### 3. Emergency Procedure

#### 3.1 Introduction

This section provides checklists with the recommended procedures for coping with various emergency situations.

Emergencies caused by aircraft or engine malfunctions are extremely rare if all pre-flight inspections and required maintenance activities are conducted properly.

Nevertheless, if an emergency situation occurs, the herein provided basic procedures are recommended to correct the problem and to master the situation.

However, it is impossible to account for all kinds and combinations of emergency cases that may arise in operation in this manual. Therefore, the pilot must be familiar with the aircraft, its systems, and its flight behaviour. Very important in such cases is a sound judgment and sufficient knowledge of the aircraft and its systems.

#### 3.10 Electrical power supply system malfunctions

##### 3.10.1 Complete Failure of Electrical System

**NOTE**

The Aspen PFD has a internal backup battery. This internal battery covers a power supply of at least 30 min. If the external power supply has a malfunction the PFD switched to the internal battery automatically. Any push button, except the „REV“ push button, must be used to stop the automatically shut down procedure of the PFD.

Check all messages on the display!!

##### 3.10.2 Alternator Failure

###### 3.10.2.1 External Alternator Failure (Generator 1)

Additional to the procedures descript in the Basic Airplane Flight Manual the brightness of the PFD-display must be adjusted to the lowest usable value (see Pilot's Guide EFD 1000 PFD).

###### 3.10.2.2 Internal Generator Failure (Generator 2)

**NOTE**

If the Aquila AT01 is equipped for NVFR-operation the electrical system will be supplied by the internal generator too.

The electric power consumption will be covered by the external generator.  
No additional actions are necessary.

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### 3.13.4 Primary Flight Display Failure

- |                        |                   |
|------------------------|-------------------|
| 1. Attitude of Flight  | STABILIZE         |
| 2. Circuit Breaker PFD | RESET, if tripped |

**NOTE**

If the MFD is installed also the functions of the PFD, especially the function of artificial horizon, direction indicator and vertical speed indicator, can be taken over by the MFD. Push the red button "REV" on the MFD.

## 4.0 Normal Procedures

### 4.5.3. Before Taxiing

**CAUTION**

The PFD can also be operated without any power supply.  
The PFD uses the internal battery for power supply (see Pilot's Guide EFD 1000 PFD).

#### 4.5.3.1 Dimming the brightness of the Display

The Aspen PFD has a light sensor which adjusts the brightness of the display depending of the environmental lightning conditions.

The brightness of the display can be manual adjusted additionally via the menu. Push the "MENU" button to achieve the adjusting menu. After pushing the left turning knob the brightness can be adjusted by turning this knob. The current setup can be saved by pushing „Menu“-button. The adjustment menu will be left automatically.

### 4.5.5. Before Take-off

Function of artificial horizon

Check for correct setting

**NOTE**

The artificial horizon (ADAHRS-modul) takes few minutes for stabilization.

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#### 4.5.13. Engine Shutdown

After switch-off of the power supply the shut-down of the PFD starts automatically.

**NOTE**

The PFD can be switched off separately by pushing the red „REV“-button.

### 5.0 Performance

No change to the basic Airplane Flight Manual.

### 6.0 Weight and Balance

No change to the basic Airplane Flight Manual.

### 7.0 Systems Description

**NOTE**

This AFM-Supplement contains the general description of the integration of the ASPEN EFD 1000-PFD into the Aquila AT01 instrument panel. For a detailed description of the EFD1000-PFD and full operating instruction, refer to the effective issue of the Aspen EFD 1000 (PFD) Pilot's Guide (P/N 091-00005-001).

The PFD will be supplied by the Avionic-bus and is protected by push-pull circuit breaker.

The circuit breaker is located in the right area of the instrument panel and is labelled by "PFD" (see chapter 2.16 of this AFM-supplement). The Avionic-bus will be activated by Avionic-switch. The avionic switch is located in the left lower area of the instrument panel. (see chapter 2.16 - Basic Aircraft Flight Manual)

## 8. Handling, Service and Maintenance

### 8.6 Handling of electronic devices-

As some voltage peaks in the electrical systems are possible during the engine start and shut-down. To save the life-time of the MFD, it is recommended to keep the PFD switched off during engine start and shutdown.

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