



**EASA.21J.117**

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## FLIGHT MANUAL Supplement No 12

### Electronic accelerometer

**Doc. No: B2-OL-03\_uz12-EN**

NAME-TYPE/MODEL: MDM-1 FOX

CONCERNS: Electronic accelerometer  
an electronic board instrument introduced, as an alternative to the  
originally used mechanical unit

*Supplement No 12 to Flight Manual, MDM-1 „FOX” glider – iss. III,  
Flight Manual, MDM-1 „FOX” MDM-1P „FOX-P” gliders – iss. IV,  
is approved under the authority of DOA ref. EASA.21J.117*

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## Section 0

### RECORD OF REVISIONS

Any revision of the present Supplement must be recorded in the following table.  
The new or amended text in the revised page should be indicated by a black vertical line on the left-hand margin, while the Revision Number and the Date should be shown in the bottom left hand side of the page

Revision Number	Affected Section	Affected Pages	Date of Issue	Approval	Date of Approval	Date of Insertion	Signature

## Section 1

### GENERAL

The electronic accelerometer was introduced to the design and production of the MDM-1 "FOX" glider due to difficulties with the purchase / limited availability of the mechanical unit, originally used in the project.

For an Aerobatic category glider, the accelerometer is a mandatory element of equipment - indicated by airworthiness requirements, hence only models of the device approved in the glider design are allowed for installation. The electronic accelerometer(s) installed in the glider is an alternative solution to the mechanical device.

Supplement No 12 is organizing the records in the glider FM (Flight Manual) related to the electronic accelerometer, transferring them to this document.

## Section 2

### LIMITATIONS

Installation of electronic accelerometer does not change the operating limitations of the glider.

In Section 2, added information on the instrument models used in the FOX project:

TL-3424, manufacturer TL ELEKTRONIC, CZECH REP.

Vega INFO-1, manufacturer MGL AVIONICS, SOUTH AFRICA

which includes the marking of the instrument dial and overload indication additional elements and their importance for the operation of the glider.

#### 2.3A Electronic accelerometer markings

Marking	Value	Significance
Red diode on front instrument panel and (TL-3424) WARNING MAX or WARNING MIN message on upper part of instrument display. (MGL INFO-1) Pointer on yellow field and acceleration value highlighted by a yellow flashing background	+7g / -5g	Maximum allowed (positive / negative) manoeuvring load factor with two person crew.
Red diode on front instrument panel and (TL-3424) ALARM MAX or ALARM MIN message on upper part of instrument display. (MGL INFO-1) Pointer on red field and acceleration value highlighted by a red flashing background	+9g / -6g	Maximum allowed (positive / negative) manoeuvring load factor with one person crew.  (allowed take-off weight 450kG)

### **Section 3**

#### **EMERGENCY PROCEDURES**

Installation of electronic accelerometer does not affect emergency procedures.

### **Section 4**

#### **NORMAL PROCEDURES**

Installation of electronic accelerometer does not affect normal procedures.

### **Section 5**

#### **PERFORMANCE**

Installation of electronic accelerometer does not affect glider performance.

### **Section 6**

#### **WEIGHT AND BALANCE**

Installation of electronic accelerometer does not affect glider weight, loading plan or balance (centre of gravity).

## Section 7

### GLIDER AND SYSTEMS DESCRIPTION

Installation of an electronic accelerometer on a glider entails changes in the arrangement of the instrument panel elements and in the glider's electrical system.

In Section 7, information on the installation of the instrument models used in the project was added, including the arrangement of devices in the front and rear cockpits and the wiring diagram for the glider with electronic accelerometers.

## 7.2. Cockpit controls.

General view from glider front and rear seat is shown in Figs. 7.1 and 7.2.

Fig.7.1 Front seat view.

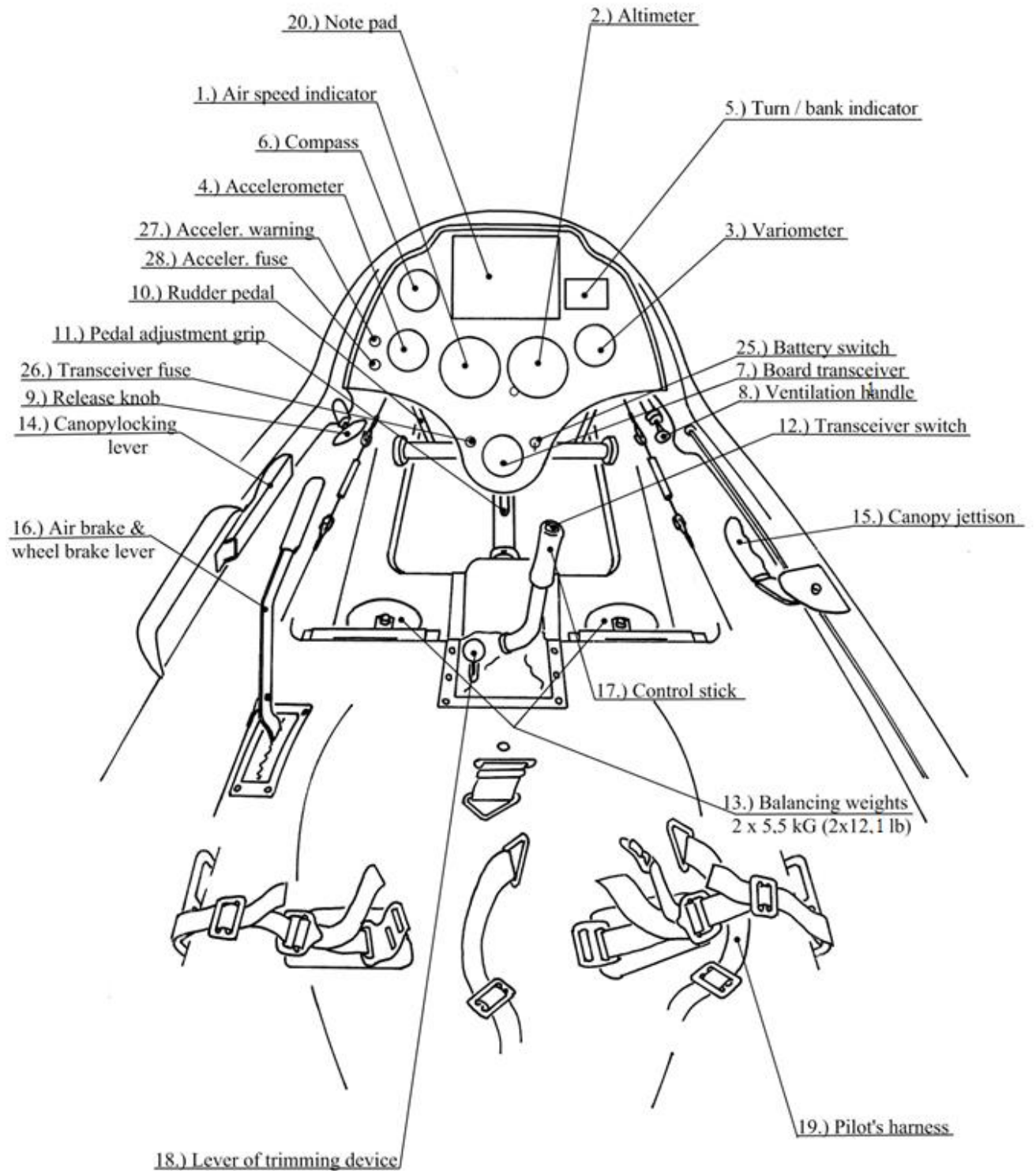
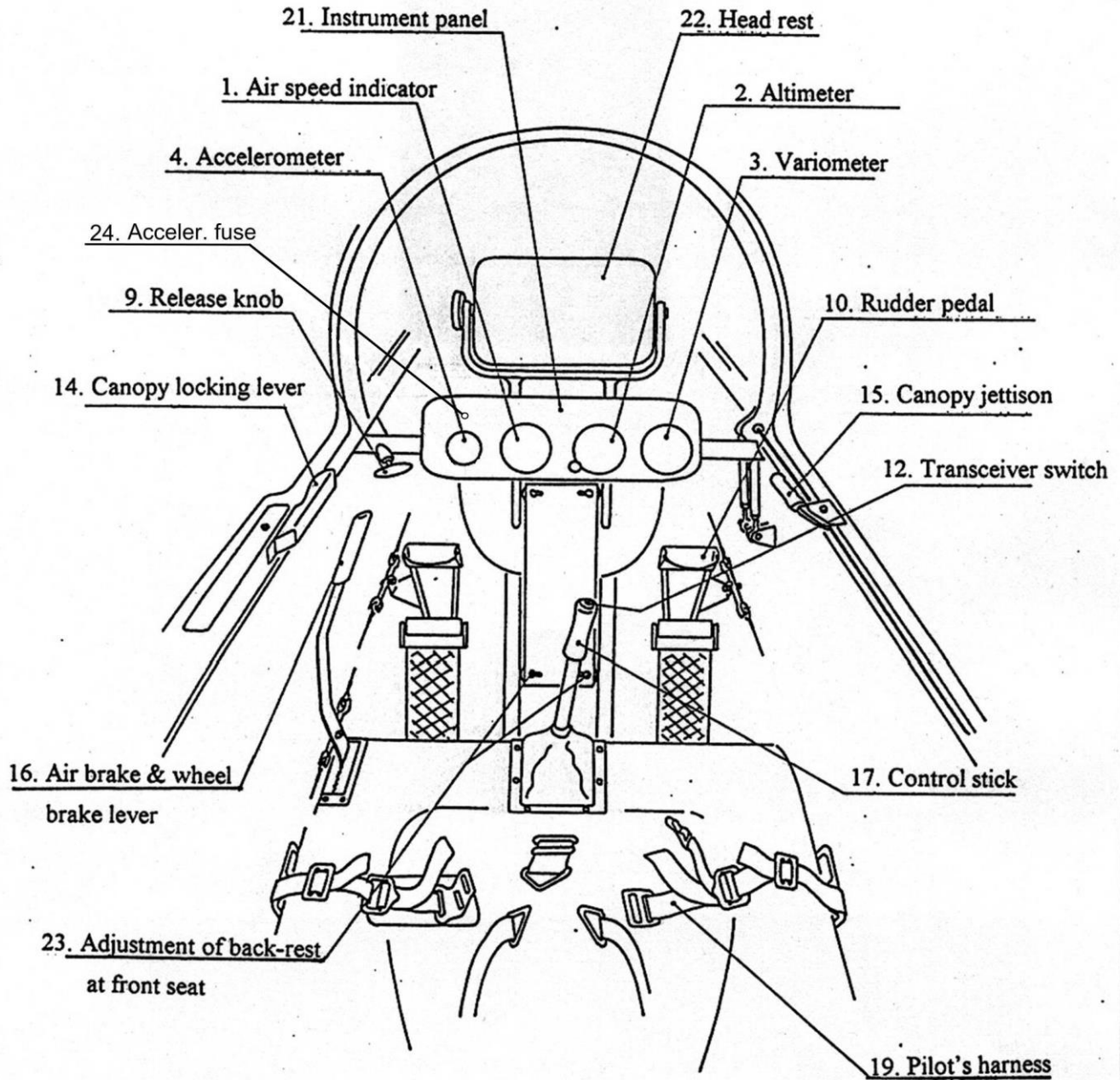


Fig.7.2 Rear seat view.





### 7.3. Instrument panel.

On the glider with electronic accelerometer installed, the initial setup for acceleration range and instrument operation mode is completed at glider producer, and stored in the instrument memory protected with password (see actual version of manuals):

TL-3424 User Manual, TL elektronik /

Vega INFO-1 Operating Manual, MGL Avionics

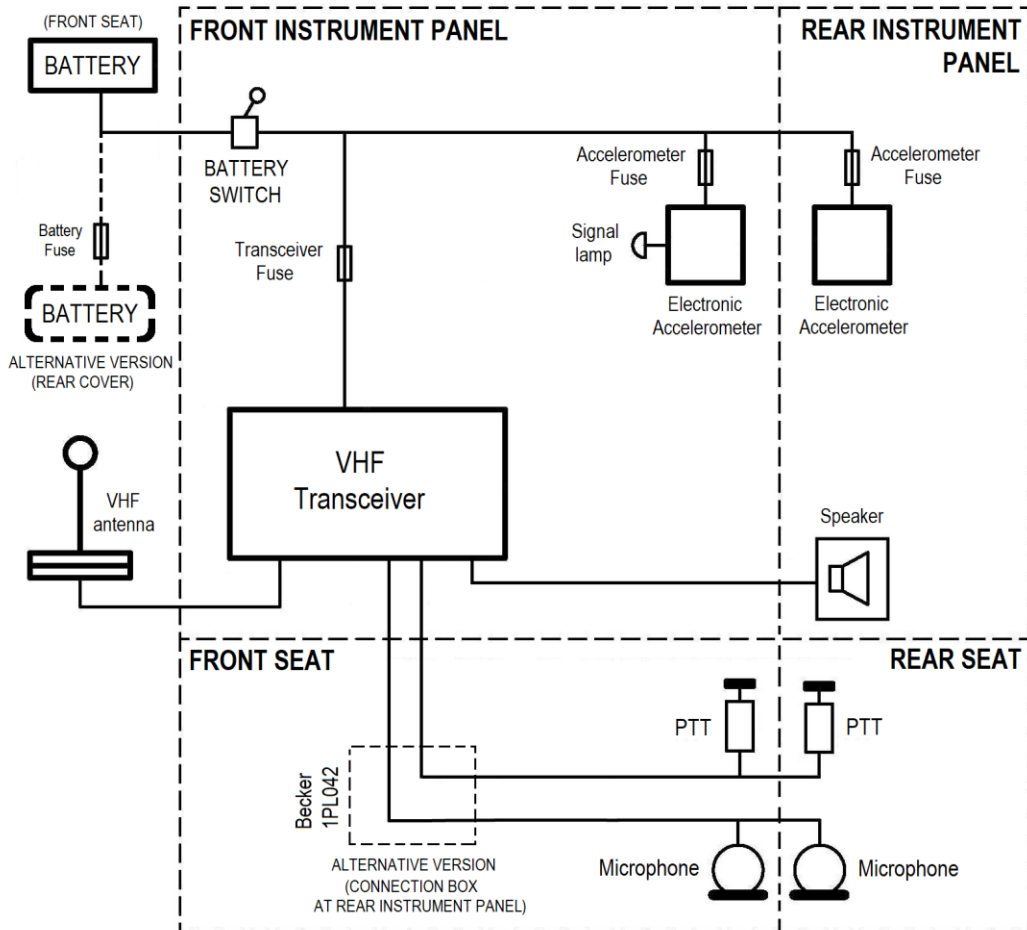
Reaching the acceleration limit value is signalized with message on instrument display and with warning light in instrument panel at front seat, at two levels, corresponding to glider manoeuvring load factors.

for 2-person crew) / warning level	( <b>TL-3424</b> ) message „WARNING MAX” or „WARNING MIN” on upper part of display + signalization by red light (LED) ( <b>Vega INFO-1</b> ) Indicator on yellow field and acceleration value is highlighted by a yellow flashing background + signalization by red light (LED)
for solo flying / alarm level	( <b>TL-3424</b> ) message „ALARM MAX” or „ALARM MIN” on upper part of display + signalization by red light (LED) ( <b>Vega INFO-1</b> ) Indicator on red field and acceleration value is highlighted by a red flashing background + signalization by red light (LED)

**NOTE:** *No acceleration warning lights are provided in the rear instrument panel. Exceeding g-load limit load is only displayed on instrument as: “WARNING” and “ALARM” messages (TL-3424) or indicator on yellow / red field and acceleration value highlighted by a yellow / red flashing background (Vega INFO-1).*

## 7.12. Electrical system.

Fig. 7.4. Glider electrical system with electronic accelerometers installed



## Section 8

### GLIDER HANDLING, CARE AND MAINTENANCE

Installation of electronic accelerometer does not affect glider handling and maintenance.

The operation of the electronic accelerometer and the rules for setting the acceleration limits and operating mode are described in item 7.3 of this document.

The manufacturer's requirements for instrument service/verification are given in the glider's Technical Service Manual.

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