

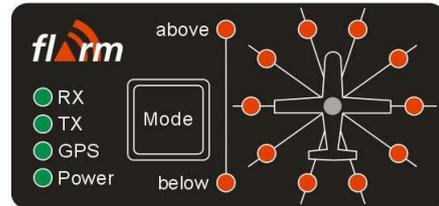
Operation

The external display is a display- and operating-unit in addition to FLARM. The regulations for FLARM as described in the manuals for FLARM are applicable including those for safety and liability. In this manual for the external display only display and sound signals are described which differ from FLARM. The manual may be used for external displays with hardware version 1.0 and 2.0. Displays version 1.0 do not show the LEDs “above” and “below” and the brightness of the red LEDs can’t be altered. The physical dimensions of the two versions are identical.

Panel

The panel consists of the following 5 components:

- o Button [Mode]
- o 4 vertically arranged green Status-LEDs
- o 10 circularly arranged red Collision-LEDs
- o 2 red LEDs for the indication of the relative height of the traffic
- o internal sound emitter (behind the aircraft symbol)



Functions of the Collision-LEDs and “above” / “below”

The Collision-LEDs show the horizontal bearing to the most threatening moving object relative to ones own track over the ground. The circle is divided by these LEDs in segments of 36°, the first LED being situated at 018° and the last one at 342°. Corresponding to the level of threat one LED will flash at 2 Hz (low threat), at 4 Hz (medium threat) or at 6 Hz (immediate threat), accompanied by an acoustic warning signal. In Mode “nearest” the LED will be illuminated constantly and no acoustic warning signal is given as long as no danger of collision exists.

In case of immobile objects (cables, antennas etc.) the two uppermost LEDs (018°/342° and 054°/306°) will flash alternately. The flashing frequency and the height of the acoustic warning signal are dependent on the threat level.

The 2 LEDs “above” and “below” shows the vertical bearing to the most threatening moving object relative to ones own height as long as the angle exceeds about 7°. In case of immobile objects no relative vertical bearing is given.

The change to Mode “Nearest” is indicated by 2 Collision-LEDs which move symmetrically from top to bottom. When leaving the Mode “Nearest” the indication moves from bottom to top. The Mode of an external display is independent of the Mode of the FLARM or of an additional external display.

Switching on the external display

The external display is powered by the FLARM and switching on the FLARM starts the external display. A short acoustic signal is given followed by the 2-digit indication of the display software (LED 018° = 1, LED 054° = 2 ... LED 342° = 0). This is followed by a self test, where as the Collision-LEDs are lit in clockwise order, the “above”, “below” and Status-LEDs in this order. After this self test the 3-digit software version of the FLARM is indicated by means of the Collision-LEDs (as with the 2-digit indication of the display software). After this presentation the external display is operational.

When switching on the FLARM the external display is always in Mode “Nearest” and the volume of the sound emitter is on loud.

Configuration

The Setup of the external display allows the user to set a number of different values which will be appear as standard setting when switching on. To get to Setup the button “Mode” has to be pressed while switching on the FLARM; a brief acoustical signal is given.

The Status-LEDs signal the setup parameter and the Collision-LEDs, the set value. From one to the other parameter the button “Mode” has to be pressed for 3 seconds. A short pressing of the button changes the value within the chosen parameter.

Once all settings are done the FLARM incl. the external display have to be restarted (i.e. power off and then on again).

If in a two-seater two external displays are installed, the display for the backseat has to be configured as “Display PAX” so that only one display influences the configuration on the FLARM.

Parameter	Status LED	Collision-LED 1 018°	Collision-LED 2 054°	Collision-LED 3 090°	Collision-LED 4 126°	Collision-LED 5 162°	Collision-LED 6 198°
Brightness of the red LEDs	RX	weak	dimmed	slightly	normal	very	full
Configuration Two-seater	TX	Display PIC	Display PAX				
Presentation of FLARM	GPS	LED: on acoustic signal: on	LED: out acoustic signal: on	LED: out acoustic signal: out	LED: on acoustic signal: out		
Baud rate	RX+TX	4800 bits/sec	9600 bits/sec	19'200 bits/sec	28'800 bits/sec	38'400 bits/sec	57'600 bits/sec

bold = standard values

Pressing the button “MODE” for longer than 20 seconds causes FLARM and external display to return to standard values and induces a restart.

Important Notice

The pilot is fully responsible for the surveillance of the airspace. The external display offers the pilot solely a supporting function. EDIATec GmbH refuses any claims in this matter.