

MT - TCAS Manual

Contents

1. MT TCAS Software	2
1.1. Dynamic synchronized simulation technology DSS	2
1.2. The critical cylinder	2
1.3. Symbols	3
1.4. Switching MT TCAS monitoring on/off	4
1.5. MAP Mode	5
1.6. MFD Mode	6

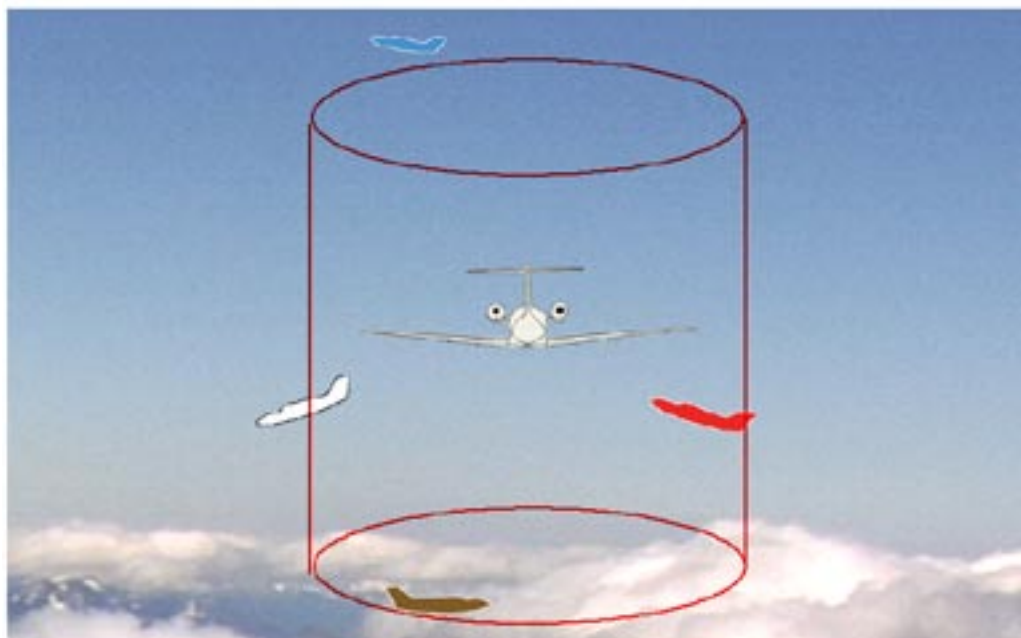
1. MT TCAS Software

1.1. Dynamic synchronized simulation technology DSS

As soon as other air traffic has been detected in the vicinity, a simulator is activated in parallel. The latter is calibrated to and analyzes the flight characteristics of the respective aircraft. This enables the pilot to determine at a glance the direction and speed (15-second arrow = trend vector) of approaching aircraft.

Each aircraft with transponder recognition is individually interrogated and analyzed by the sensor. This produces a transparent picture of surrounding air traffic.

1.2. The critical cylinder



Moving Terrain places a "critical cylinder" around your own aircraft.

The **radius** of the critical cylinder is **1 nm**.

Its **height** is **1000 feet**.





The **vertical position** of your own aircraft in the critical cylinder depends on the **current flight path**:

Own flight path	Relative altitude in feet	
	above	below
Normal flight	> 500	< -500
Climb	> 1000	
Decent	> 0	< -1000

1.3. Symbols

Surrounding traffic is shown by flashing lights (more conspicuous, esp. on chart) and color coding:

Displayed as an airplane (SQUAWK shown in white box)

	blue - above the critical cylinder
	brown - below the critical cylinder
	red - within the critical cylinder, dangerously close
	white - same altitude as the critical cylinder, but outside the danger zone

If the speed of another aircraft is too low to represent its speed, it will appear as a diamond instead of an airplane.

Stated altitude is relative to your own aircraft (in 100 feet).

Red arrow pointing upwards: Climbing faster than 500 fpm

Red arrow pointing downwards: Descending faster than 500 fpm

Speed vector:

The 15-second arrow on the nose of surrounding aircraft permits conclusions to be drawn on the aircraft category.

1.4. Switching MT TCAS monitoring on/off TCAS



If the TCAS button is pressed, the following button bar will appear (TCAS is not yet active = not yet shown in the info box)



- ON / OFF TCAS information monitoring to MFD switched on/off
- MFD
- UNR Ryan Tcad switch in the UNRESTRICTED MODE
- GND Ryan Tcad switch in the GROUND MODE
- BACK Return to further functions of the MT program

1.5. MAP Mode

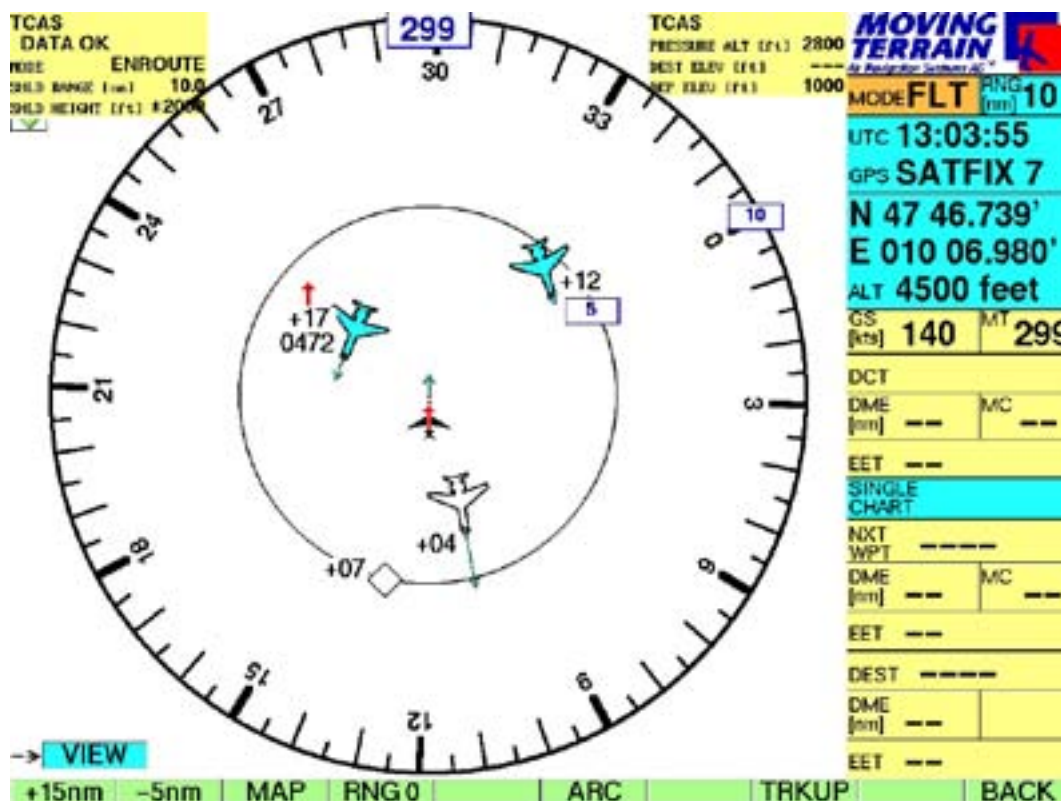


The TCAS mode is shown at the top left of the main window. If DATA OK appears, TCAS data is being received. If NO DATA appears, no TCAS data is being transmitted.

Air traffic within the optical range of the TCAD sensor (depends on Ryan TCAD mode) is displayed on the chart in relation to the terrain.



1.6. MFD Mode



The boxes at top left and right display information from the Ryan TCAD:

Mode: GND = GROUND
 DEP = DEPARTURE
 ENR = ENROUTE
 APP = APPROACH
 UNL = UNLIMITED

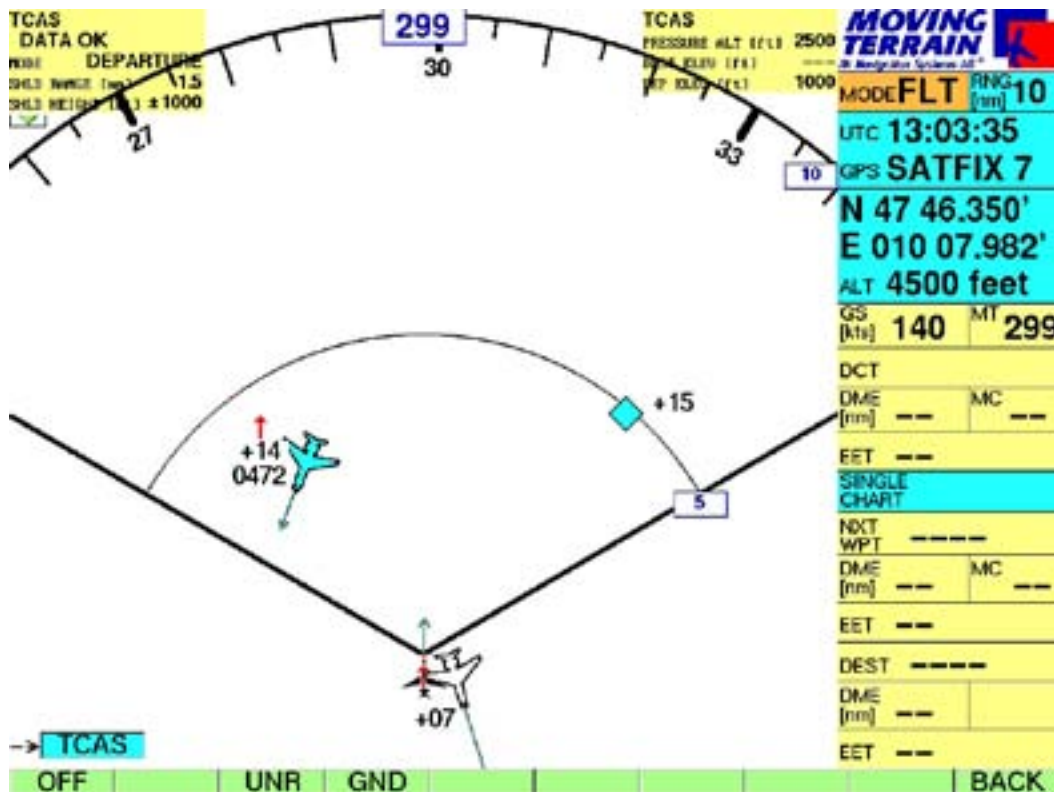
Press Alt: Pressure altitude

Dep Elev: Elevation of departure airfield

Dest Elev: Elevation of destination airfield

Shield Size: Radius and height (incl. positioning above/below or above+below your own aircraft) of the Ryan TCAD sensor's sighting cylinder (depends on mode).

ARC-Mode



Notes on dedicated mode:

- The sighting cylinder of the Ryan TCAD sensor changes according to the set mode (information displayed in top line).
- In exceptional cases, signals can be received from other aircraft located outside the sighting cylinder determined by the set mode, but these must be treated with caution.
- Moving Terrain's "critical cylinder" is fixed at 1 nm.
- Since several modules (TCAS, MT Satellite radar) can be depicted in MFD mode at the same time, the set range is valid for all. For example, the MFD can be set at 800 nm for assessing the current weather situation. However, as no TCAS data is available at long distances, there is little point in setting the MFD mode to such radii when only the TCAS is operating. Anmerkungen zum MFD Mode (=Dedicated Mode)