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ICAO chart Europe 1:500.000 spring edition is available from now on (price for update: 280,- EUR net). Customers with subscription will receive the update automatically.



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AERO Friedrichshafen

We are happy to meet you at the AERO 2019 in Friedrichshafen from April 10th to 13th.

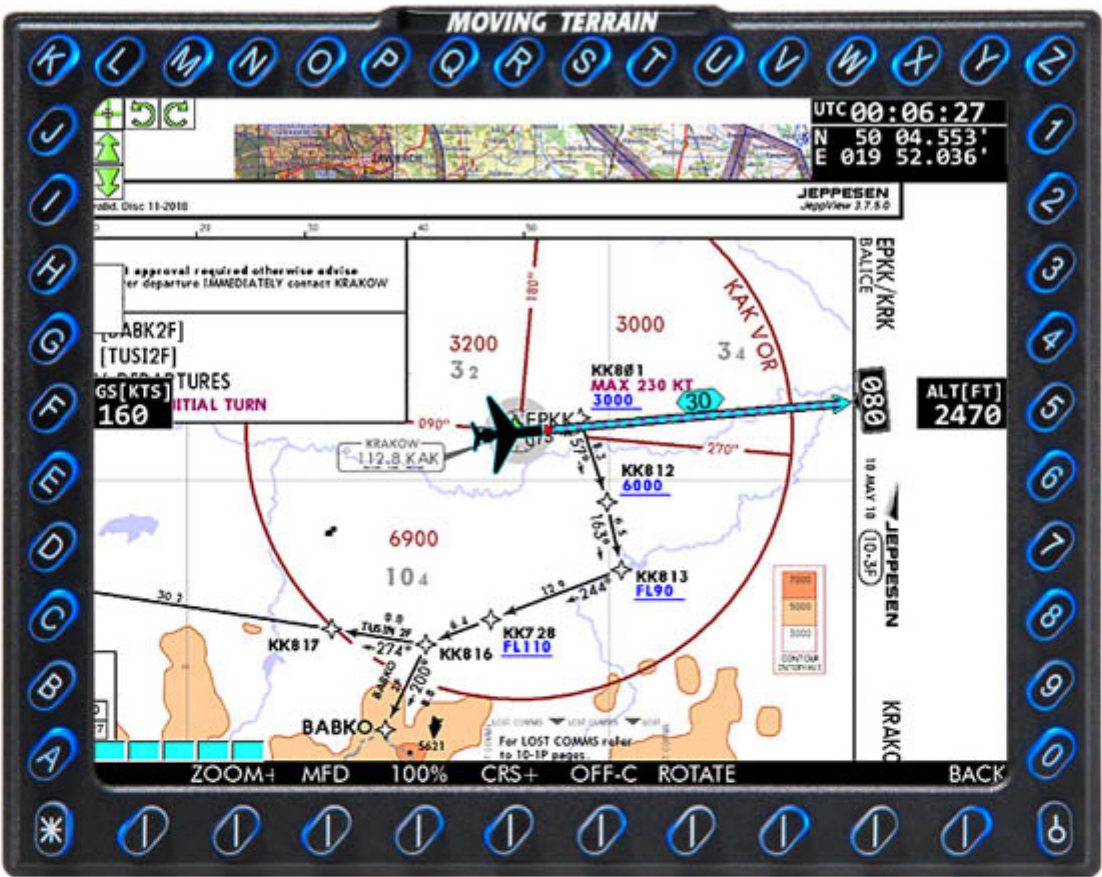
We welcome you in hall A3, booth A3-305.

During the show we offer a **discount of 15%** for all MT VisionAir X and a **little present** is waiting for you.



Integration of True Scale Procedures

For many years, actually decades the AIP offered true scale SID and STAR procedures. Recently, as Jeppesen is finally also producing scale SIDs and STARs (and increasingly expanded coverage in recent weeks) we have immediately integrated them. This allows to use them in the MT system as Moving Map: a referenced map which can be flown.



Example: EPKK (Balice, Krakow); SID BABKO & TUSIN 2F RNAV DEPS

Our Terminal Waypoint database – directly fed into the VFR/IFR main database – is fully available, so that the procedures can be easily overlaid and flown in the best possible way.



Moving Terrain supplies regularly updated APT, VOR, NBD, Enroute-Waypoints and Terminal waypoints.

History of an accident in the light of MT-VisionAirX on board

(description shortened)

On a winter day in Dec 2017 we departed in a snow storm out of EDDM to Stavanger Norway ENZV in our company's Jetprop. Weather at destination was also forecasted in light snow with typical winds at the Norwegian west coast expected. While the destination was quite suitable for landing for the ETA in Stavanger, some of the territory we overflowed certainly was not good for any sort of approach. Particularly the southern tip of Norway still "sigmated" with severe ice conditions. The enroute weather was actually good, mostly IMC though. The ride was smooth.

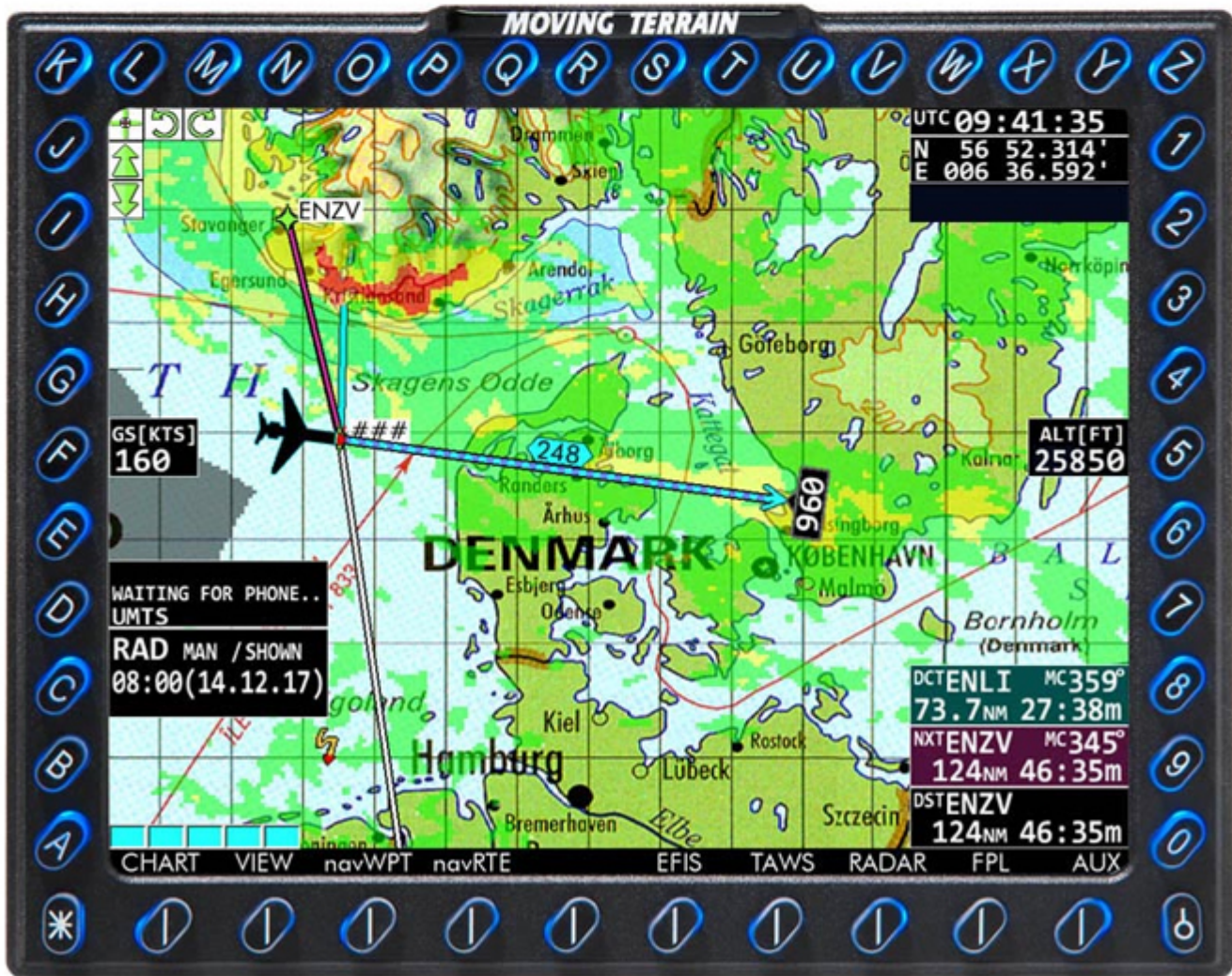


Picture 1: Jetprop in good IFR weather conditions, in and out of IMC

In FL260, in the descent for approach into Stavanger we noticed **strong smell of electrical fire and the outset of smoke in the cabin.**

Territorial orientation: We were aware that we were 100km from land equally far from Norway and Denmark **over the ocean.** The true scale chart on MT providing immediate **feel for distance** without any button pushing.

Radar download: We had just received the latest radar download. The MT VisionAir radar picture was certainly crucial in our decision not to follow Norwegian ATC with a vector 010° probably to Lista or Kristiansund. The MT-VisionAir showed a combination, severe ice and mountains on heading 010°, much to dangerous we decided. ATC kept insisting on radar vector 010° several times, we disregarded immediately and flew to Denmark.



Picture 2: Position of emergency, destination Stavanger, ATC Vector 010° and our escape on heading 100°. We realized the combination of coastal mountains and severe ice and low visibility on heading 010°.

Battery backup during load shedding phase: In an attempt to counter and alleviate the perceived electrical fire, we shut down the high amperage systems and pulled fuses, and had no risk at anytime to loose navigation or orientation due to our battery backup. With this in mind, we had less pressure in a high workload phase.

No tablet floating around, everything built in – certified: in the following rapid descent with steep pitch attitude it helped that we had no loose device floating around, but a firmly integrated navigation unit, certified for all environmental conditions, such as rapid decompression and cold or hot temperatures.



Picture 3: Firm installation, an advantage in an emergency

Nearest airfield function together with weather: On the way in to the Danish coast we saw the few airports on the chart and the nearest APT function gave us immediately the radio freq. and time & distance to go. We called Thisted APT tower to hear they had snowstorm and low visibility, not an option for an emergency landing with an iced up windscreen.

Trend vector ideal for optimized flight without autopilot: Other than some people thought, it was not a valid idea to fly the descent on AP with the aggressive overspeed. Far beyond red line the AP tends to hunt up a pitch oscillation in the Jetprop. The **hand flying is so effective with the trend vector**. It seems no big factor, but pilots who use the vector find it so much easier than just having a position indication on a map – again **less workload**, a key to survival.

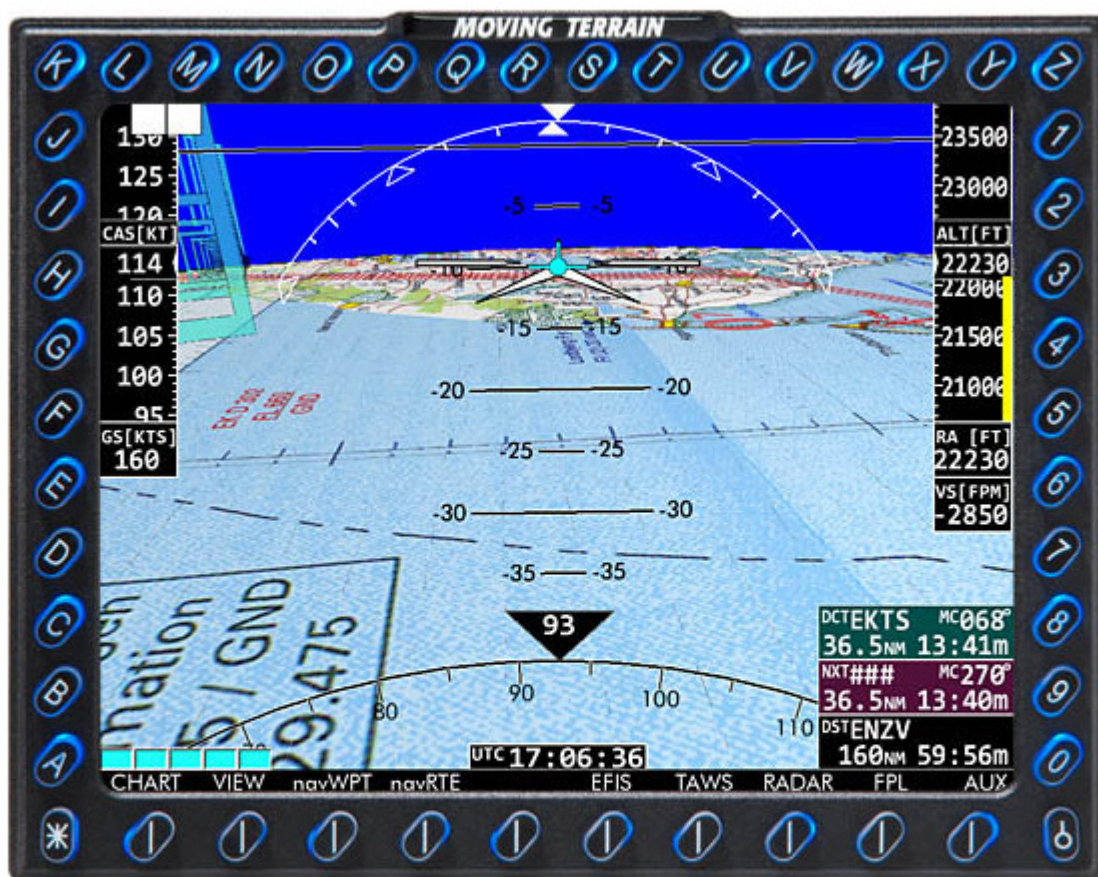
See picture 2: The trend vector is pointing to the Danish coast. What you cannot see – only in an animated picture – is the motion of the vector with the aircraft. It is easy to do well if you see what you do: any left right steering motion reflects immediately on the arrow.

The following tasks were to be dealt with during the first minutes

- judging on the situation and the trend of the emergency condition during the next minutes
- managing a rapid descent with all its duties + hand flying the aircraft
- communicating with and deciding against the instructions of Norwegian ATC
- calculation the descent and the arrival on the oceansurface or if stretched on the coast
- navigating and steering the aircraft in the fast descent
- electrical load shedding to minimize the hazard of progressing electrical fire
- realizing the warning lights and the popping of fuses and making a plan whether to react to that or immediately or later
- trying to contact Copenhagen to obtain Denmark APTs weather despite strongly interrupted communication
- informing passengers to avoid panic on board
- etc

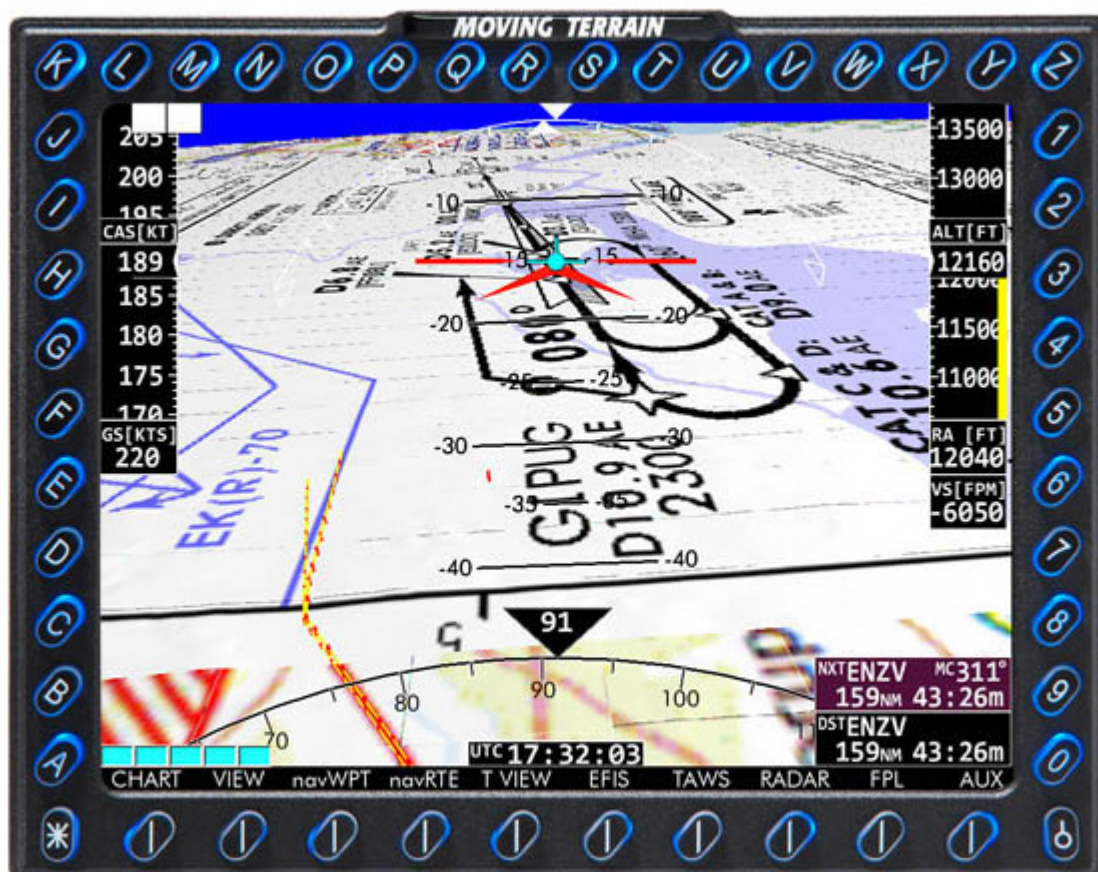
So, as human capabilities do have a limit, any reduction in workload and any **information that is there without doing anything** is a fantastic help. And the workreduction itself could have made all the difference in our later success in saving the souls on board and the aircraft.

Glide Path Indicator (GPI) showing future: The GPI would show the point of touchdown under power or with a failed engine. It shows whether the coast or an airport is reached with present flightpath – without programming anything! In other emergencies it would also show e.g. whether a mountain range can be overflowed with the current climb rate.



Picture 4: The Glide Path Indicator

In a desperate attempt to melt ice from the windscreen (no more WS-De-Ice due to load shedding) before landing we generated some 5°C Ram-Temperature-Rise from high speed descent thru icing. No ATC could vector an aircraft in such a condition, but with MT-VisionAir X we could fairly easy design our 2nd 11000ft steep descent onto the ILS at 4000-5000fpm, so that we reached the ILS comfortably around the IAF. An enormous safety factor preventing us for vectoring around and accumulating more ice ... and the ILS chart on the MT-VisionAir can be ideally used to arrive at the IAF with a rapid descent.



Picture 5: targeting IAF during rapid descent (unusual approach – weather mandated)

Maintaining orientation during low level orbiting around the airport: With poor visibility in snow with a ceiling finally below 300ft it was even impossible to keep the RWY in sight at all times during circling for the tower fly by's. Plus, we had to do maneuvering to generate g loads and yaw conditions, even to avoid flocks of geese – who flew their own missions in this lousy snow storm. Reading and performing emergency checklists were an additional distraction from navigation at less than 1 km visibility. Again position awareness without pushing a button made all the difference – and no risk of losing MT-VisionAir X by shutting-down electrical busses.



Picture 6: Our Jetprop after touchdown at some 50kts, ceiling 300ft, Aalborg TWR to the far left

Landing safely in Aalborg with a broken hydraulic system and gear in 3 different positions (left out but unlocked, right half out nose up and doors frozen). Picture 6 is showing weather conditions at landing. During the proceeding emergency it was mostly worse.

MT VisionAir X – the proven Rescue System for real emergencies.

Best regards
Your MT-Team

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