



# RogersData© Navigationcircle

The RogersData© Navigationcircle combines sectional plotter, time-speed-distance computer, ruler and navigation circle template in a single device. The RogersData© Navigationcircle facilitates the solution of navigation tasks and is easy to use. Make sure to use the suitable Navigationcircle in correspondence to the scale of the sectional chart!

## Distance:

In order to read the distance between two points on a sectional chart, the scale (15) at the top of the front side (Fig. 1) of the RogersData© Navigationcircle must be used. On the scale (15) below the mark (16) the distances in NM (nautical miles) picked up with the tips (19) of the two legs of the Navigationcircle can be read. Conversely, distances on the Navigationcircle can be set and transmitted into a sectional chart by means of the tips (19).

## Flight time:

In order to determine the time of flight use the tips of the Navigationcircle (19) to pick up the distance between two waypoints. Subsequently, read the time required in minutes for your intended speed (18) on the mounted concentric circles scale (14) below the label (17).

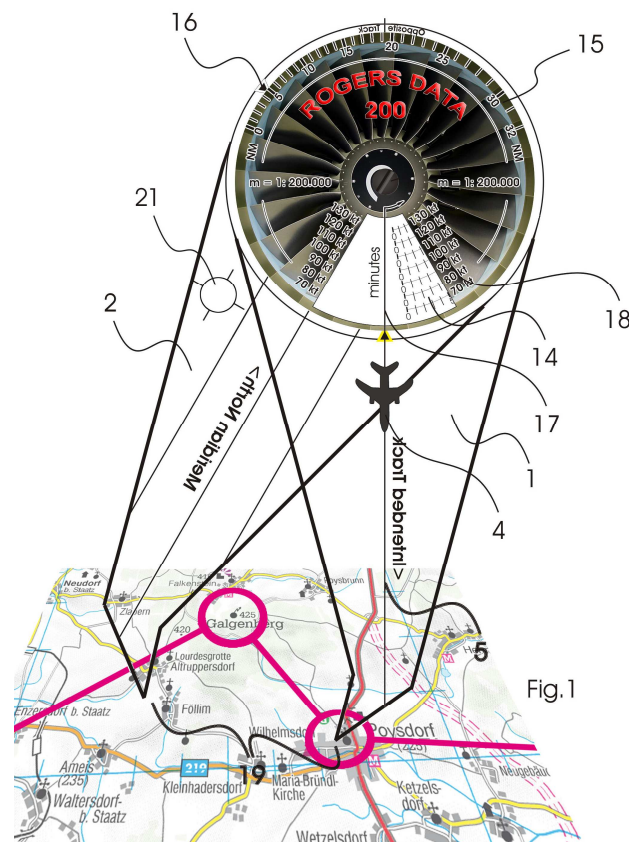


Fig. 1

## Heading:

To determine the heading use the RogersData© Navigationcircle with the back (Fig. 2) positioned on a sectional chart in such a way that the leg (1) with the aircraft symbol (4) comes to rest on the course line and the aircraft symbol and the line with the word "<Intended Track" shows in the desired direction of flight. The second leg (2) is to be rotated in such a way that the line (6) drawn through the entire middle of the Navigationcircle and the lines (7) are parallel to a meridian in the sectional chart and the word "Meridian North" defines true north. The heading is shown on the mark (9) readable exactly to one degree.

## Opposite Track:

The opposite track can easily be determined in a single step with the previously described method for determining the heading. Read the opposite track on the RogersData© Navigationcircle at the designated "Opposite Track" Marker (8) where it meets the scale (10).

## Speed measurement:

The groundspeed can be determined when using the RogersData© Navigationcircle in combination with a sectional chart. The time for a distance covered is known and the route is taken from the sectional chart by means of the tips of the Navigationcircle. For this purpose, the known time on the mounted concentric circles scale (14) below the label (17) must be determined and assigned to the respective speed (18).\*\*

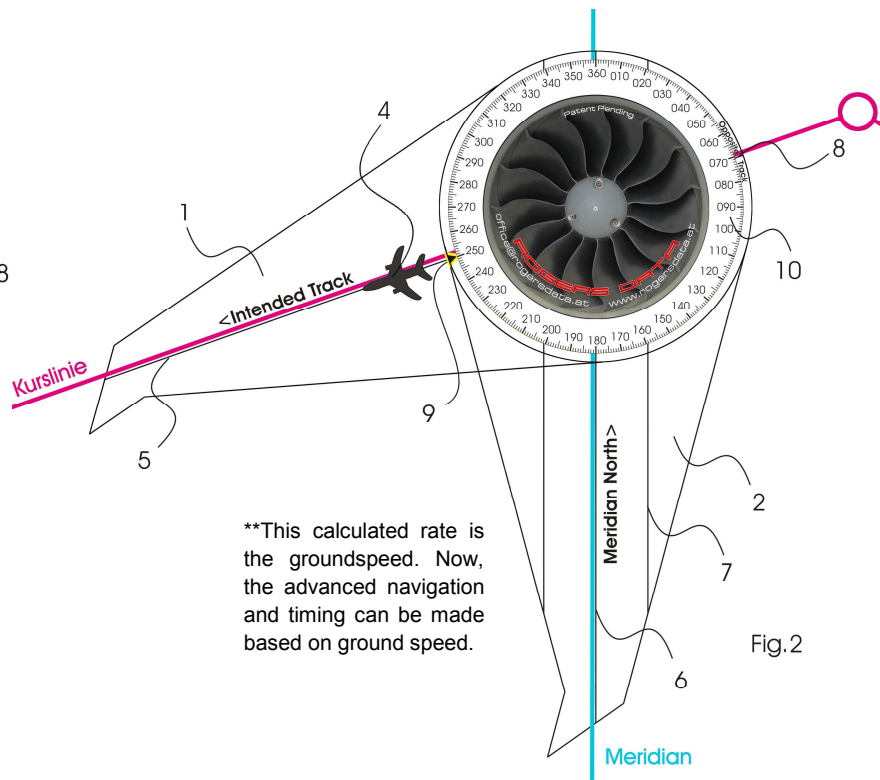


Fig. 2

\*\*This calculated rate is the groundspeed. Now, the advanced navigation and timing can be made based on ground speed.

## Path-Time measurement:

When speed and distance are known the time needed for this distance can be derived by using the scales on the front side (Fig. 1) of the Navigationcircle. In addition, when speed and time elapsed are known the exact position on the sectional chart as well as the time remaining can be determined.

## Direction finding for the determination of bearing and position:

To determine a base line in respect to a bearing of a VOR use the back (Fig. 2) of the RogersData© Navigationcircle with the mark (9) set exactly to the degree on the compass rose (10). The Navigationcircle is to be set with the leg (2) positioned on the sectional chart so that the compass rose is oriented to magnetic north of the VOR, considering the variation in the location of the VOR, respectively. Furthermore, the Navigationcircle is to be positioned so that the center line (5) of the leg (1) with the aircraft symbol aims beyond the radio navigation aid in the direction of the base line. Is a DME distance also known, the position on the base line can be determined. Set the distance in such a way that the mark (16) meets the distance on the scale (15) NM (nautical miles). Now, the accurate position along the base line can be set by means of the tips (19). If the bearings of two radio navigation aids are known, the position above the intersection of the two base lines can be determined – regarding VORs taking into account the variation of the location of a VOR; regarding NDBs taking into account the variation of the estimated position of the aircraft.

## Circle template and ruler:

The upper region of the leg (2) holds a hole with a diameter of 10mm designed as a circular template. This circular template (21) is surrounded by a cross line which serves as a centering aid. Using this hole permits track points to be outlined in the sectional chart with a circle. This procedure allows reading the details on the track point and prevents that they are covered by any line. Route points drawn with the circle template are to be connected for further determination. The RogersData© Navigationcircle can be used as a ruler along the lateral sides.

## Care instructions:

Protect the RogersData© Navigationcircle from too much heat and preferably use the recommended genuine leather bag with lining. Do not use harsh, scratch or abrasive cleaners.