FARMNAVIGATOR

G7 Dataseed

Precision GNSS system for the control of weeding implements

Efficient in all types of terrain and in any visibility conditions!

In any type of soil, crop and weed population

In any condition of visibility

Effective, precise and sustainable weeding

Precision weeding is finally economically sustainable!

The complete system for the control of weeding implements includes:

• G7 Dataseed • ECU Dataseed • All in One RTK

Dataseed Technology

Superior precision tracking of sowing by AvMap, one of the pioneers of GPS

G7 Dataseed is based on an innovative technology that allows performing automated weeding with centimeter precision **without the use of cameras or ultrasonic.**

10 Positions received per second

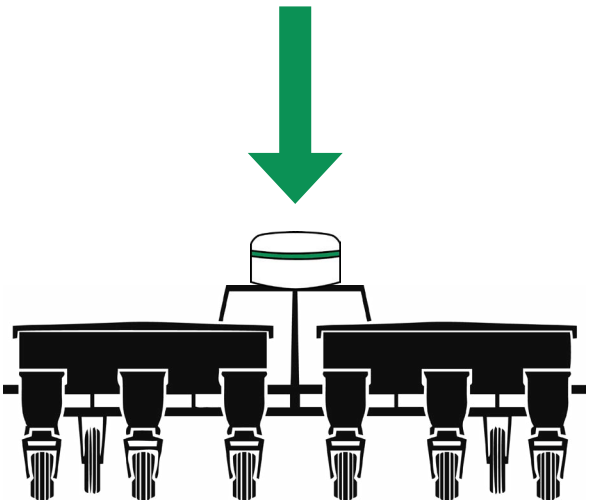
RTK centimetric accuracy

Terrain compensation

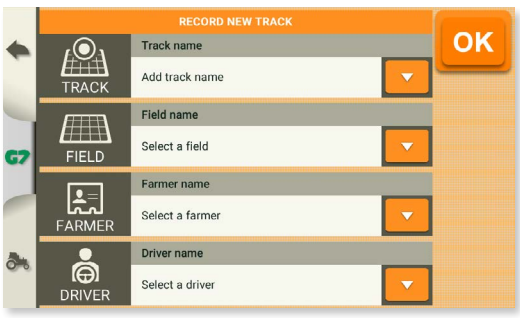
How the innovative Dataseed system works:

1. Planting

- During planting, **All in One RTK**, the high-precision GNSS receiver, is installed exactly in the center of the seed drill.
- **G7 Dataseed** records the exact track performed by the implement, including curves and any implement errors. Thanks to the proprietary Dataseed technology, the system saves the track taking into account the 10 positions per second.
- All the tracks saved on the G7 Dataseed memory can be organized by customers and fields and can be exported in the most common standard formats such as Shape, KMZ, CSV.



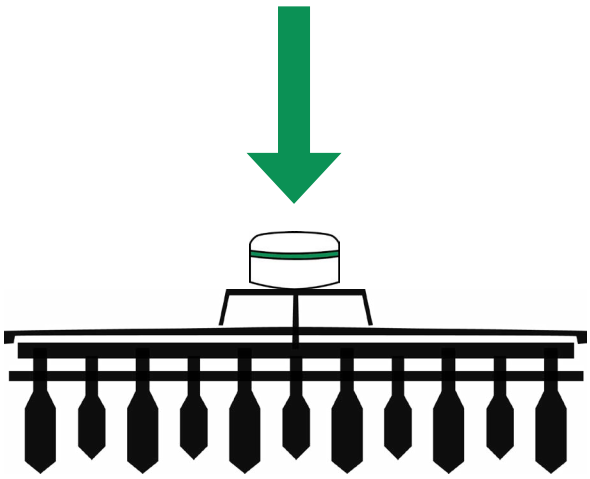
Track recording with high precision and high dot density



Creation of the sowing tracks database

2. Weeding

- During weeding **All in One RTK,** the high-precision GNSS receiver, is installed exactly in the center of the inter-row cultivator.
- The dataseed track recorded during planting is recalled on the **G7 Dataseed**.
- **ECU Dataseed** controls the translation of the automated harrow equipped with hydraulic electrovalves, by following **the exact track taken during sowing,** regardless of the driving of the tractor.



G7 Dataseed is effective where other system fail

The Dataseed method applied to an advanced satellite technology guarantees precise control of the harrow from the very first stages of the plant's germination, in any soil condition and weed population.

Ideal soil condition

- ✔ **G7 Dataseed**
- ✔ **Image recognition systems**

Early sprouting stage

- ✔ **G7 Dataseed**
  It works from the earliest stages of sprouting.
- ✖ **Image recognition systems**
  The camera cannot distinguish between cultivated area and weeds until they reach a certain size.

Abundant weeds

- ✔ **G7 Dataseed**
  It works even with abundant weeds.
- ✖ **Image recognition systems**
  The camera cannot distinguish between cultivated area and weeds if they are too abundant.

G7 Dataseed is suitable for the organic cultivation of all types of crops:

- **Potatoes**
- **Turnips**
- **Soybean**
- **Sunflowers**
- **Corn**
- **Tomatoes**
- **Beets**
- **and much more...**

FARMNAVIGATOR

The Dataseed system

Made in AvMap

GPS pioneers

The FARMNAVIGATOR line is produced by AvMap, the Italian company pioneer of positioning and satellite navigation in every environment: land, sky and sea.

G7 Dataseed

On-board 7" display computer recording the sowing tracks

Technical Specifications

- Dimensions: 188 x 146 x 33 mm
- Weight: 640 g
- Display size: 7" capacitive multitouch screen (1024 x 600 px)
- Power cable with 3 adapters: cigarette lighter, spade terminals or cobo plug
- Bracket with 3 serial ports: 2x DB9 powered 12 V DC, 1x DB9
- Wireless LAN connection compatibility
- Waterproof IP56 suitable for use on tractors without a cab
- Supply Voltage: 10-35 V DC
- Operating temperature: -10 °C / +60 °C
- Storage temperature: -30 °C / +80 °C
- Transmitting frequency range: 2400 - 2483 MHz
- Maximum transmitting power: 1mW
- Power consumption: 1.5A max @ 12 V DC (~ 18 W)

ECU Dataseed

ECU controlling the automated weeder directly on the hydraulic electrovalves

Technical Specifications

- Dimensions: 130 x 90 x 40 mm
- Weight: 500 g without harness
- Included harness: 1x main connection cable, 1x power cable, 2x electrovalves
- RS232 Serial port
- Wirless LAN connection compatibility
- Waterproof: IP67
- Supply voltage: 10-35 V DC
- Operating temperatures: -20 °C / +60 °C
- Storage temperature: -30 °C / +80 °C
- Power consumption: 14A max @ 12 V DC (~ 170 W)
- Output:
  - 2x On / Off (PWM)
  - 2x Proportional electrovalves (PWM)

All in One RTK

Connected GNSS receiver with tilt sensor and centimetric accuracy

Technical Specifications

- Dimensions: ø 98 mm x H 50 mm
- Weight: 240 g without power cable
- Power cable: 4 m Conxall - DB9
- Triaxial accelerometer + gyro
- Steel bracket: 133 x 101 mm
- Waterproof: IP67
- Supply voltage: 10-35 V DC
- Operating temperature: -20 °C / +60 °C
- Storage temperature: -30 °C / +80 °C
- Power consumption: 125 mA max @ 12 V DC (1.5 W)

Communication

- GNSS Receiver: GPS + GLONASS + GALILEO + BEIDOU + SBAS
- GNSS frequency band: L1, L2

Performance and Connectivity

- RTK accuracy +/- 2 cm
- Baseline RTK 100 Km
- Integrated NTRIP client
- Built-in cellular modem
- Automatic connection to IoT server
- Automatic updates

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