

SOWING MONITOR HECTARE COUNTER "ALTUR SEED COUNTER" MODEL

INSTRUCTIONS FOR USE

The "ALTUR SEED COUNTER" Monitor controls the operation of the 1 to 8 rows sowing machines. It also measures the advance speed, the partial covered area and the total covered area and the distance run.

At start-up, the monitor is automatically preset as a sowing control plus hectare counter.

EXECUTION OF VARIOUS FUNCTIONS

1 - START-UP

To switch the "ALTUR SEED COUNTER" Monitor on press key once ON/OFF.

2 - PROGRAMMING

Programming can take place when starting the monitor before starting to work.

a) WHEEL CIRCUMFERENCE PROGRAMMING

To select the circumference wheel, press key (P) until CIRCONF.m. is displayed.

By keys + & - preset the wheel circumference in meters and centimetres (meters with 2 decimals figures).

b) WIDTH PROGRAMMING

To select the width press key (P) until LARGH.FILA m. is displayed.

Set the row spacing in meters and centimetres by keys + & -

c) SENSITIVITY PROGRAMMING

To select the sensitivity press key (P) until SENSIBILITA is displayed.

Set the required sensitivity 1 to 9 by keys + & -

3 - TO SILENCE THE ALARM

Press key (P) once

4 - HOW TO CUT OFF ROWS

Press key (P) once. *ESCLUSIONE FILE* is displayed. To return to the normal sowing activity with all the sowing machine rows, press key (P) once.

*NORMAL * is displayed.

5 - PHOTOELECTRIC CELL TEST

Press keys HA/P & HA/T (HA SUB & HA TOT) at the same time. TEST FOTOCELLULE is displayed. To quit the test press key (P) once

6 - SETTING AREA AND DISTANCE COUNTS TO ZERO

To set the PARTIAL AREA, TOTAL AREA and DISTANCE to zero, press the relevant key without releasing it until the displayed datum is set to zero (approx. 5 seconds).

DESCRIPTION OF THE VARIOUS FUNCTIONS

START - UP

Press key ON/OFF once. ALTUR SEED is displayed followed by a short acoustic signal to let the operator know it is ready for working. Then NUMERO FILE is displayed followed by the number of connected rows.

MAKE SURE THE NUMBER OF ROWS AND THE NUMBER OF LIT WARNING LIGHTS IS EQUAL TO THE NUMBER OF ROWS OF THE SOWING MACHINE.

If the number of lit warning lights is not equal to the number of the rows of sowing machine, check the following:

- 1) - Make sure the photoelectric cells are not disconnected from the monitor.
- 2) - There are not seeds on the disc in front of the photoelectric cells,
- 3) - The photoelectric cells and the reflecting point are clean.

The monitor should be switched on preferably before loading the discs with the seeds or after starting as soon as started you have to sow.

If at start up the alarm sounds intermittently and *ALARM* is displayed, the monitor is not connected with the sowing machine the way it should.

PROGRAMMING

In order to measure the distance run, the advance speed and the covered surface, the wheel circumference and the rows spacing must be correctly programmed first.

To select the width programming, press key (P) repeatedly.

To modify the value of width programming, press keys + & - . To increase the number press key + , to decrease the number press key - .

Moreover the sensitivity of sowing control must be correctly programmed.

a) HOW TO PROGRAM CIRCUMFERENCE

If the sensor is mounted on the wheel, measure the circumference of the wheel after mounting the sensor, by approximating it to the nearest centimetre.

Measurement method: mark the wheel with a chalk and measure the distance run by a full revolution (for a higher precision you can measure various revolutions and make an average).

If several magnets are mounted on the wheel, you shall calculate the wheel circumference divided by the number of magnets you have mounted.

If the magnetic sensor is mounted on an axle that turns together with the wheel, enter the data of the machine advance at every passage of one magnet in front of a sensor.

If you can, measure the machine advance directly at every passage of a magnet in front of a sensor or calculate it, for example, by measuring the machine advance to let the axle turn 10 times with the magnet then divide the distance run by 10 to calculate the advance at every turn.

To select the circumference, press key (P) at start-up until C.m. is displayed (that means circumference in meters).

Keys + & - are used to set the circumference in metres and centimetres.

Ex.: 2 meters and 10 centimetres circumference: set 2.10.

You can check that the entered circumference datum is correct by checking a measure of none distance or of a none surface.

If need be, correct the circumference datum until the measurement is correct.

b) HOW TO PROGRAM THE WORKING WIDTH

To select the working width, at start-up press key (P) until L.m. is displayed (that means LARGHEZZA meters).

Keys + & - are used to set the width between the rows in meters and centimeters.

Ex.: distance between rows = 45 centimeters: set 0,45

The working width total is given increasing the width programming (L.m.) by number of rows sowing really.

c) HOW TO PROGRAM SENSITIVITY

Monitor "ALTUR SPEED" can work with 9 sensitivity of control, 1 to 9. The low numbers are used for most exact sowing, the high numbers are used when is not required an high precision of sowing.

Sensitivity between 1 and 3 is recommended for spacing sowing and average seeds, ex. maize, beet, etc.

For closely sowing or with irregular seeds or with a poor preparation of land for sowing, ex. soya-bean, sunflower, beans, etc., is recommended to set an higher number, ex. 4 or 5.

It will be advisable to start-up sowing with numbers of low sensitivity, if there are signals of error continually, clean the photoelectric cells, check the working conditions and, if necessary, increase the sensitivity programming number.

W O R K

- SOWING CONTROL

While sowing the warning lights go off and come on again when sowing stops.

In case of an even distribution while sowing the warning light of the relevant row will blink.

If the unevenness is higher like for example, repeated missing seeds, the warning light of the relevant row will blink and the alarm will resound for a short time.

When the unevenness is serious, the warning light comes on and the alarm sounds continuously.

- TO SILENCE THE ALARM

To silence alarm and restart normal operation press key (P) once.

If key (P) is not pressed, the alarm goes off automatically after approximately 15 seconds.

- HOW TO CUT OFF ROWS

At work press key (P) to select 2 types of sowing:

* NORMALE* for sowing with all the rows

* ESCLUSIONE FILE* * to cut off one or more rows from the sowing machine.

Press key (P), the monitor will alternatively select the two sowing conditions.

When you start working with some rows cut off, the alarm will sound shortly to inform that the monitor is in the *ESCLUSIONE FILE* (Row Cut Off Mode). The warning lights of the rows that do not work, will stay on and the monitor will check the distribution of the other rows.

When the monitor is the *ESCLUSIONE FILE* (Row Cut Off Mode), and you start sowing again with all the sowing machine rows, the monitor will automatically control all the rows.

- TEST

Check the functional ability of the photoelectric cells. To do so press keys *AREA PARZIALE* & *AREA TOTALE* (HA/P & HA/T) at the same time.

TEST FOTOCELLULE is displayed.

If the photoelectric cells work correctly, when you pass a finger in front of it or let the disk with seeds rotate, the warning light of the relevant row comes on and an acoustic signal goes off.

To start working normally again press key (P) once.

- WARNING

Clean the photoelectric cells periodically, as the reflection point in front of a photoelectric cells with a brush or with a clean cloth. Never use any abrasive material.

- MEASUREMENT KEYS

HA (PARTIAL AREA)

It is used to measure single work passes and to carry out periodical check in hectares (ha) with 2 decimal figures.

HA (TOTAL AREA)

Used to maintain the constant count or the total count of the covered surface in hectares (ha) with 2 decimal figures.

KM (DISTANCE)

Used to measure the distance run in kilometres (km) with 2 decimal figures.

KM/H (SPEED)

Used to measure the speed in kilometres per hour (km/h) with one decimal figure.

- ZERO SETTING

To set the measured data to zero, press the relevant key without releasing it until the monitor goes off. (approx. 5 seconds).

In the course of sowing work, you can select the required display, for example AREA, VELOCITA km/h (SPEED), DISTANZA/km (DISTANCE).

To operate in the function of manoeuvre, "NORMALE" will be displayed.

At start up again, the monitor will resume the programmed measurements.

SOWING CONTROL MONITOR AND HECTARE COUNTER

“ALTUR SEED COUNTER”

INSTRUCTIONS FOR MOUNTING THE MAGNETIC SPEED SENSOR

Select a position where to fix the magnet or to the wheel hub or the sowing machine or on a shaft turning proportionally to the wheel.

Select a position to fix the sensor support in order to have the magnet pass 4-6 mm in front of the sensor tip when rotating.

The magnet can be fixed with plastic straps or with a good quality glue.

A few turns of insulating tape around the hub and on the magnet will help preventing the magnet from detaching itself.

The sensor support can be fixed with a screw, a bolt or welded on the sowing machine frame.

Shape the support and adjust the distance from sensor to magnet. It is important for the distance not to exceed 4 to 6 mm.