Taege RC300 controller ver2.30

Operators Manual

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QUICKSTART CALIBRATION

Taege RC300 controller ver2.30

1. Press the On/Off button.

turns the controller on.

2. Press the Hopper button to choose the correct hopper (Front, Back or Insect)

3. Press the Up/Down buttons

To select the correct crop to calibrate (1-25)

4. Press the +/- button

to increase/decrease the target seeding rate.

5. Place the calibration tray under the sponges by moving the collector tray.

Press the Prime button

This primes the metering system. The dispay shows the hopper being primed. Empty the calibration tray and reposition under sponges.

6. Press the **Cal** button

you will see the following screen.

```
Front CALIBRATION
Calibrate
Target Weight
Alt Rate Weight
Run to Empty
 1-9      Please Select
```

7. Press the **Cal** button 3x times

And you will see the following screen.

```
   Front Calibrate
Running Calibrate
        11 s
+/-  to adjust
Cancel to abort
```

(Every time you press the **Increase/decrease** button

One second will be added or subtracted for each press of the button so more/less seed is collected

The numbers count down to 0 (zero)

8. Weigh the seed collected using the scales provided (grams.)

9. Use the **Prime** & **Cal** buttons

To high light the number you want to change.

10. Use the increase or decrease buttons and enter the weight.

```
   Front Calibrate
Weight in GRAMS
(1-999999)
Value : 1407
Ok  or  Cancel
```

Press **O.K.** button and then the **Cancel** button

To return to the operating screen

11 .Press Run/Stop button and you will see the following screen.

```
0.000 ha                xxxxxx
Front              25.50kg
0.00kph
```

You are ready to go.

As you move, the **CURSOR** will move up & down on the screen this tells you the drill is operating and the **kph** will be displayed.

CALIBRATION

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1. Press the ON/Off button.

This turns the controller on.

2. Press the Hopper button to choose the correct hopper

(Front, Back or Insect)

3. Press the UP/Down buttons

select the correct crop to calibrate (1-25)

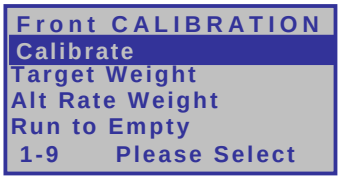
4. Press +/- buttons  to increase/decrease the target seeding rate.

5. Place the calibration tray under the sponges by moving the collector tray
Press and hold the Prime button

this primes the metering system. The dispay shows the hopper being primed.
Empty the calibration tray and reposition under sponges

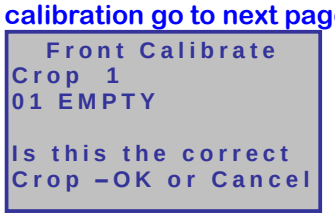
6. Press the Cal button 

you will see the following screen



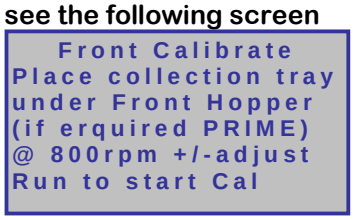
7. Press the Cal 

button again and you will see the following screen (advanced calibration go to next page)



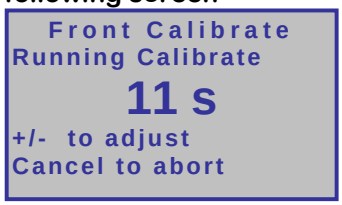
8. Press the Cal button

again and you will see the following screen



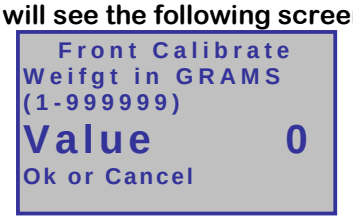
9. Press the Cal button again

and you will see the following screen



Every time you press the **Increase/decrease** buttons

while this number is counting down **1 second** will be **added/substracted** from the count so that **more/less** seed will be collected. The numbers will count down to 0 and the motor will stop.You will see the following screen



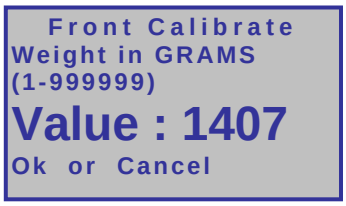
10. Weigh the seed collected using the scales provided (grams.)

11. Use the **Prime** & **Cal** buttons 

and highlight the number you want to change.

12. Use the increase or decrease buttons 

and enter the weight.



Press **O.K.** button

to return to the operating screen.
(Calibration invalid) see TROUBLESHOOTING

13. Press Run/Stop 

and you will see the operating screen

You are ready to go.
As you move, the **CURSOR** will move up & down on the screen this tells you that the drill is operating and **kph** will be displayed.

ADVANCED CALIBRATION

Taege RC300 controller ver2.30

This feature is availble for each and every crop setting. Your Taege Technican or Taege Dealer will instruct you about this feature during the introduction to your drill. This feature has been added to enhance the calibration of grasses and small seeds and enables the operator to better match the realtime sponge roller speed to that of calibration speed.

7. Press the Cal 

button again and you will see the following screen

```
  Front Calibrate
Crop  1
01 EMPTY

Is this the correct
Crop –OK or Cancel
```

8. Press the Cal 

button again and you will see the following screen

```
  Front Calibrate
Place collection tray
under Front Hopper
(if erquired PRIME)
@ 800rpm +/-adjust
Run to start Cal
```

Press the +/- buttons 

to **increase/decrease** to the rpm desired for this crop calibration. Each press will **increase/decrease** the calibration motor speed by 100rpm.
TOO CHECK THE SPONGE ROLLER SPEED PRESS THE PRIME BUTTON.

When the calibration is saved the sample motor speed is saved.
The standard calibration speed is 900rpm.

GO to 9 above

Setting theTarget Weight

Taege RC300 Controller ver2.30

Press the **Cal** button

using the navigate buttons scroll to

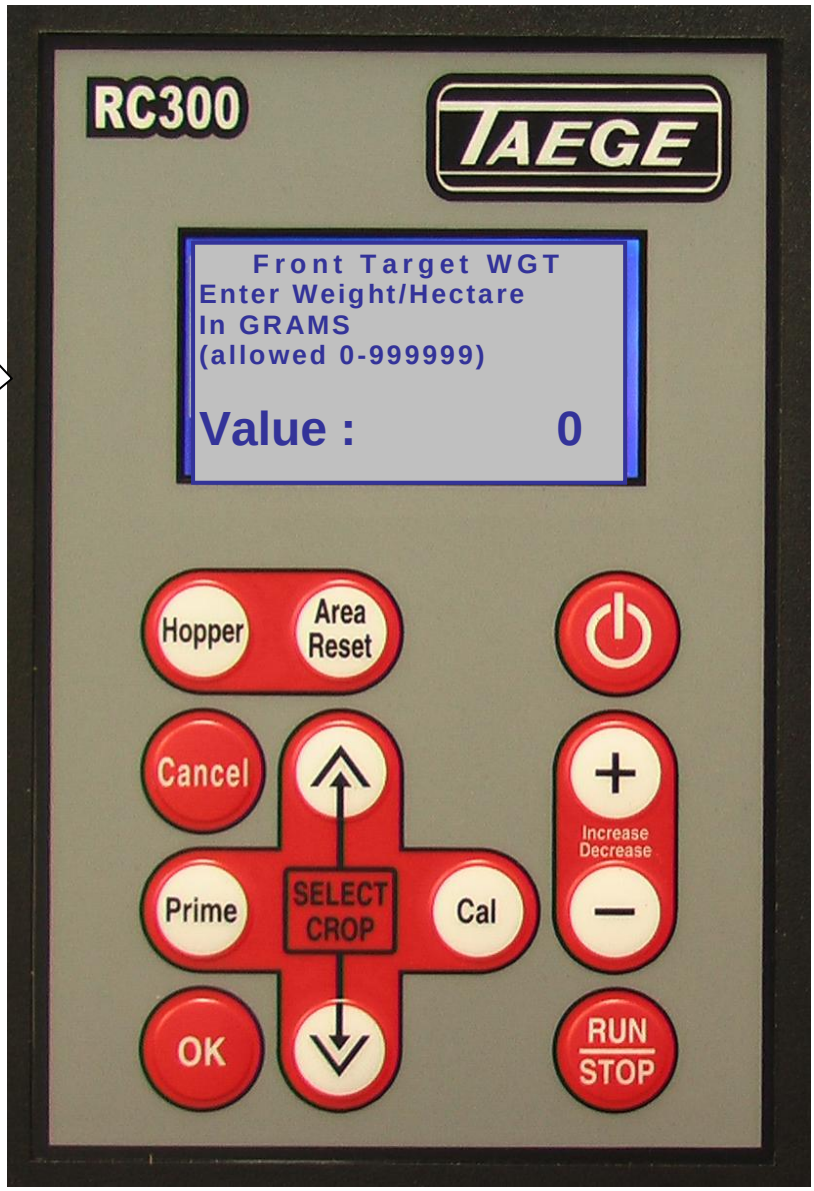
Target Weight

Press the **OK** button

you will see this screen. Using the Prime/Cal buttons

and the +/- buttons

put in the Target Weight in Grams.
Press the **OK** button.



The Target Weight can also be set both by pressing the +/- button

both before and after calibration in the RUN mode.

CALIBRATION TEST

Taege RC300 Controller ver2.30

You are able to test your calibration settings the following way

Series 300 ---------- 36m = 100th ha
Series 360 ---------- 28m = 100th ha
Utility Drill ---------- 34m = 100th ha

1. Press the 

Run/Stop button and you will see a screen similar to this.

2. Press & hold the 

Area Reset for 3 seconds to Reset the Distance and Area.

3. You should now see the following screen

4. Place the Seed Calibration Trays under the sponges. Spin the Jockey or ground wheel and stop as soon as the screen reads the following.
(This is 100th ha)

5. Weigh the seed collected, it should be close to 100th of your target seeding rate.
i.e. For 25.5 kg/ha target weight you should have collected 255g of seed

6. You can press the 

Increase/Decrease buttons to alter the Target Seeding Rate
(If the weight is not similar to 100th of the target rate then recalibrate by repeating steps 1 to 6)

CALIBRATE DISTANCE

With Wheel Sensor or Wheel Encoder
Ver 1.03 >2.2x>2.3x

1. Press here in the **Stopped** mode to toggle between the **Hopper** and **Area /Reset** screens

2. Press and press again and hold here for 3 seconds to reset the **Area/Reset** totals.You will see this screen.

```
Reset
Area in
3>2>1
```

3. Cal button

You will see the following screen.

```
Distance/Area Menu
Calibrate Distance
Display Version

1-2  Please Select
```

Press **OK** button

Go to **5.**

4. By selecing this screen you will see the software version of your controller.

```
Distance/Area Menu

Display Version
1-2  Please Select
```

5.

```
CALIBRATE DISTANCE
To Calibrate this
unit drive at least
100 meters

Press RUN to START
```

6. Press the **RUN/STOP**button

You will see this screen.

```
CALIBRATE DISTANCE
Counting Pulses
                0
 Press RUN to STOP
when distance reached
```

7. Drive your measured distance and the wheel count will increase until you stop.

```
CALIBRATE DISTANCE
Counting Pulses
             2356
 Press RUN to STOP
when distance reached
```

8. When you stop press the **Run/STOP** button.


```
CALIBRATE DISTANCE
Counting Pulses
            39000
 Press RUN to STOP
when distance reached
```

9. Enter your measured distance (usually 100m) then press the **OK** button.


```
CALIBRATE DISTANCE
Distance in Meters
(allowed 0-99999)
Value:        100
Ok or Cancel
```

10. Use the **Prime** and **Cal** **buttons**

to highlight the number you want to change.If your distance is not 100m. Use the **Increase/Decrease** buttons

and enter the measured distance travelled. Press the **OK** button

When completed and return to the Distance/Area screen.

You may see this screen.

```
Calibration Error !
Entered distance or
Wheel pulse count
To Small(<2000)
Calibration Refused !
Press any Key
```

The Controller will return to the operating screen.

DRILL CONFIGURATION

Taege RC300 Controller ver 2.30

This is where the information for your drill is setup in the controller

PRESS & Hold the **Cancel** button 

and at the same time press the **Cal** button 

and you will enter the drill configuration menu.

Use the **Up & Down Navigate** buttons 

to scroll thru the menu. (Windows shown below.)

Use the **Prime and Cal** buttons 

and the **Increase & Decrease** buttons 

to make any adjustments.

Press **O.K.** Button 

the controller will turn off.

Drill Configuration Menu Page 1

Always set to 1000

This is the number of pulses per revolution of the front box motor.

DRILL CONFIGURATION
Motor 1 Pulses
(1 – 9999)

Value: 1000

Drill Configuration Menu Page 2

Always set to 1000

This is the number of pulses per revolution of the back box motor.

DRILL CONFIGURATION
Motor 2 Pulses
(1 – 9999)

Value: 1000

Drill Configuration Menu Page 3

Usually set to 1000

This is the number of pulses produced by one revolution of the wheel.

DRILL CONFIGURATION
Wheel Pulses
(1 – 9999)

Value: 1000

Drill Configuration Menu Page 4

Set during distance set up.

This is the number of pulses from the wheel encoder during distance calibration.

DRILL CONFIGURATION
Distance Pulses
(200000 -380000)

Value: 350000

Drill Configuration Menu Page 5

Set during distance set up.

This is the distance travelled during distance calibration in meters.

DRILL CONFIGURATION
Distance Length
(1 – 9999m)

Value: 100

Drill Configuration Menu Page 6

Drill Width

This is the tyne spacing times the number of tynes.

DRILL CONFIGURATION
Hopper Width
Enter in millimetres
(300 – 9999mm)
Value: 3510

Drill Configuration Menu Page 7

Usually set to 900.

This is the speed of the metering system during calibration.

DRILL CONFIGURATION
Sample RPM Fast
(1 – 1499)

Value: 900

Drill Configuration Menu Page 8

Usually set to 200

This is the speed of the metering system slow down at end of calibration..

DRILL CONFIGURATION
Sample RPM Slow
(1 – 1499)

Value: 200

Drill Configuration Menu Page 9

Usually Set to 10

This is the point at which the metering system slows down during calibration.

DRILL CONFIGURATION
Sample Decelerate
(1 – 9999) in 1/10sec

Value: 10

Drill Configuration Menu Page 10

Usually Set to 120

This is the time the motor runs during calibration in .10 sec's

DRILL CONFIGURATION
Sample Minimum count
(1 – 9999) in 1/10sec

Value: 120

Drill Configuration Menu Page 11

Usually set to 10

This is the time you can add or subtract from the motor run time during calibration. (See Calibration Page for special use of this function)

DRILL CONFIGURATION
Sample Increment
(1 – 9999) in 1/10sec

Value: 10

Drill Configuration Menu Page 12

Usually set to 1200

This is the speed of the metering system during prime or run to empty operation.

Dril Configuration
Hopper Run RPM
(1 – 1499)

Value: 900

Drill Configuration Menu Page 13

Usually Set to 100

This is the setting for the length of the warning beep

DRILL CONFIGURATION
Key Beep Length
(1 – 999ms)

Value: 100

Drill Configuration Menu Page 14

Set to 1,2 or 3

This is the number of hoppers on your drill.

DRILL CONFIGURATION
Number of Hoppers
(1 – 2)

Value: 1

Drill Configuration Menu Page 15

Usually set to 5

This is the number of crops that are available as presets for the front box. Up to 25 can be saved per hopper.

DRILL CONFIGURATION
Crops Hopper 1
(1 – 25)

Value: 5

Drill Configuration Menu Page 16

Usually set to 5

This is the number of crops that are available as presets for the back box. Up to 25 can be saved per hopper.

DRILL CONFIGURATION
Crops Hopper 2
(1 – 25)

Value: 5

Drill Configuration Menu Page 16

Usually set to 5

This is the number of crops that are available as presets for the back box. Up to 25 can be saved per hopper

Dril Configuration
Crops Hopper 3
(1 – 25)

Value: 25

Drill Configuration Menu Page 17

Usually set to 250m/s

This is the motor ramp speed. Can be adjusted in 2ms increments.

DRILL CONFIGURATION
Motor Ramp Time
(1 – 9999) * 2ms

Value: 250

When you have finished entering the settings for your drill, press the OK or Cancel button.

or

The controller will automatically turn off. The action rewrites the memory in the controller and erases previous settings.

SELECTING MOTORS

Taege RC300 Controller V2.30 M4 & M6 motors

Press & Hold the **Cancel** button 

at the same time press the **Area/Reset** button 

and you will enter the MAINTENANCE screen.

Use the **Up & Down Navigate** buttons 

to Select Motors press **OK** button

Select the correct motor.Press **OK** 

Select the correct motor. Press **OK** 

Select the correct motor. Press **OK** 

The controller will return to the operaing screen.

(Select motors will always ask you to select 3x motors even though you may have selected only one hopper in the setup menu.)

DO NOT CHANGE THESE SETTINGS UNLESS THE MOTORS HAVE BEEN CHANGED


```
Motor 1
M4 PULSE
M4 ENCODER
M6 ENCODER
63PM057
  1–4 Please Select
```

```
Motor 2
M4 PULSE
M4 ENCODER
M6 ENCODER
63PM057
  1–4 Please Select
```

```
Motor 3
M4 PULSE
M4 ENCODER
M6 ENCODER
63PM057
  1-4 Please Select
```

ALTERNATE WEIGHT

Taege RC300 Controller ver2.30

Press the **Cal** button

Using the navigate buttons scroll to

Alt Rate Weight

Press the **OK** button

You will see this screen.
Using the Prime/Cal buttons

And the +/- buttons

Put in the Alternate Weight in Grams.
Press the **OK** button.

The Alternate Weight can be preset for all crop settings and on all hoppers. It can be more or less than the Target weight. Mainly used where variable ground conditions demand different seeding rates. This setting changes the seeding rate instantly whilst on the move by pressing the PRIME button, returns to the target weight when the PRIME button is pressed again. Seeding rates can also be changed on the move simplely by pressing the

+/- button 

Run to Empty

Taege RC300 Controller ver2.30

Press the Cal button

Then use the navigate

buttons and scroll to

Run to Empty

Press the OK button

You will see this screen. Use the RUN/STOP

button to start and stop the selected hopper
Press the **Cancel** button

to return to the operating screen.

The Run to Empty function is used to assist the cleanout of the hopper between different crops

NO NEED TO USE A VACUUM CLEANER

WARNING: Care should be taken to keep hands away from the sponge rollers in the hopper(s). It is recommended that a small brush is used for final cleaning.

NAME CROP

Taege RC300 Controller ver2.30

Twenty-five crop settings are available for each hopper (see **Drill Configuration**). Every time you calibrate the drill, the settings are automatically saved for that hopper and the crop number you have calibrated. You can name this saved calibration setting at any time with names up to 14 characters in length and if you are drilling the same crop again in a short period of time there is no need to recalibrate and rename. Simply scroll to the crop you have saved, press **'Run'** and go drilling. You can update names simply by renaming over the top of any saved calibration setting.

1. Press here  to turn on the unit.

2. Press the **Hopper** button

and go to the correct hopper.

3. Press the **up/down** navigate

buttons to find the crop you want to name.

4. Press the **Cal** button

and you will see the following screen.

```
Front CALIBRATION
Calibrate
Live Calibration
Target Weight
Alt Rate Weight
 1-9      Please Select
```

5. Use the down navigate

Button  to highlight

```
Name Crop
```

```
Front CALIBRATION
Live Calibration
Target Weight
Alt Rate Weight
Name Crop
 5-9     Please Select
```

6. Press the **OK** button

and you will see the following screen.

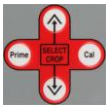
```
!"#$%'()*+,-./012
3456789:;<=>?@ABCDE
FGHIJKLMNOPQRSTUVWX
YZ[\]^_`abcdefghijk
lmnopgrstuvwxyz{|}~

S? 01  EMPTY
```

7. Pree the **Hopper** button

to delete the current name.

Use the **navigate** buttons



to move the highlighted cursor over the letter you want to use

Press the **Run/Stop** button

to add each letter to the name.

When the name is complete press **OK** Button  this will save the name and the controller will return to the operating screen.

NAME HOPPER

Uses the same method but in the Name Hopper menu

MAINTENANCE

Taege RC300 Controller ver2.30

Press & Hold the **Cancel** button

at the same time press the

Area/Reset button you will enter the MAINTENANCE screen.

```
Diagnostics
```

press **OK** button

You are now in the DIAGNOSTIC MODE you will see the following screen.

```
   DIAGNOSTIC MODE
11.96 Volts   RPM:     0
Wheel:Open
MSw:Open:Close:Close
Pw%:     0:      0:     0
RPM:     0:      0:     0
```

OK

The controller will return to the operating screen.

The **DIAGNOSTIC MODE** screen enables onboard diagnosis of all sensors, encoders and motors and assists with trouble shooting in the event that you drill does not operate. This is the screen that your TAEGE Technician or TAEGE Dealer will ask you to activate this screen to solve problems in the field.

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Dealer

Phone

TOTALS

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In the Operating window PRESS the

OK button 

You see a window similar to this

```
TOTALS          front-25
Crop: 25   EMPTY
Current:          0.000
      :           0.000
      :           0.000
      :           0.000
Oldest :          0.000
```

This is the TOTALS window

Totals for the last 5 crop areas are stored here.
The Ha totals are stored each time you reset the area for this hopper and this crop with the

Area/reset button

Press the **OK** button

and the controller will return to the operating screen.

The **TOTALS MODE** screen enables the operator to record the last 5 reset areas for each crop setting. The controller can retain 5x25=125 area totals for each hopper