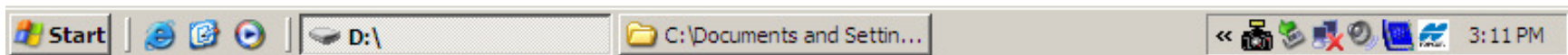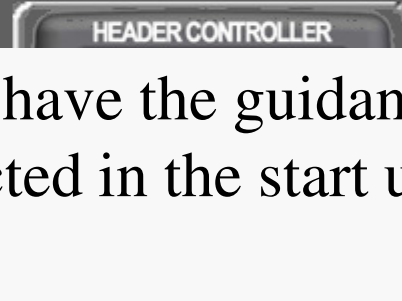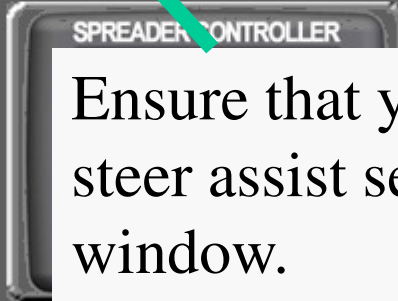# GUIDANCE
STEER ASSIST
PROGRAM

Follow through this guide to set up your Guidance in the X20

Through out this instruction any selections that are crossed out only apply to customer using the Topcon ProSteer system . The settings for the ProSteer are located in the Guidance installation manual that came with the X20 monitor.

Double tap the X20 product
selector to get started.

Ensure that you have the guidance steer assist selected in the start up window.

No valid position.

D🚫G   **NO GPS**

DISENGAGED

COWS | Big Bang Theory | Monitor harnesses | Seeding Syste... | Work | 02523908_... in color.pdf | FASTWIZ.EXE | BMSRUN.INI | SHIPSched... | Kamsack NH3 Max.doc | tire fax.doc | MB015-2011 Web Site_f...

GUIDE   FIELD 1 2 3   GENERAL SET-UP   VIEW   CAMERA   EXIT OFF

SCAN ✓   NEXT

FUNCTION BUTTONS

Camera Buttons

STATUS BAR

No valid position.
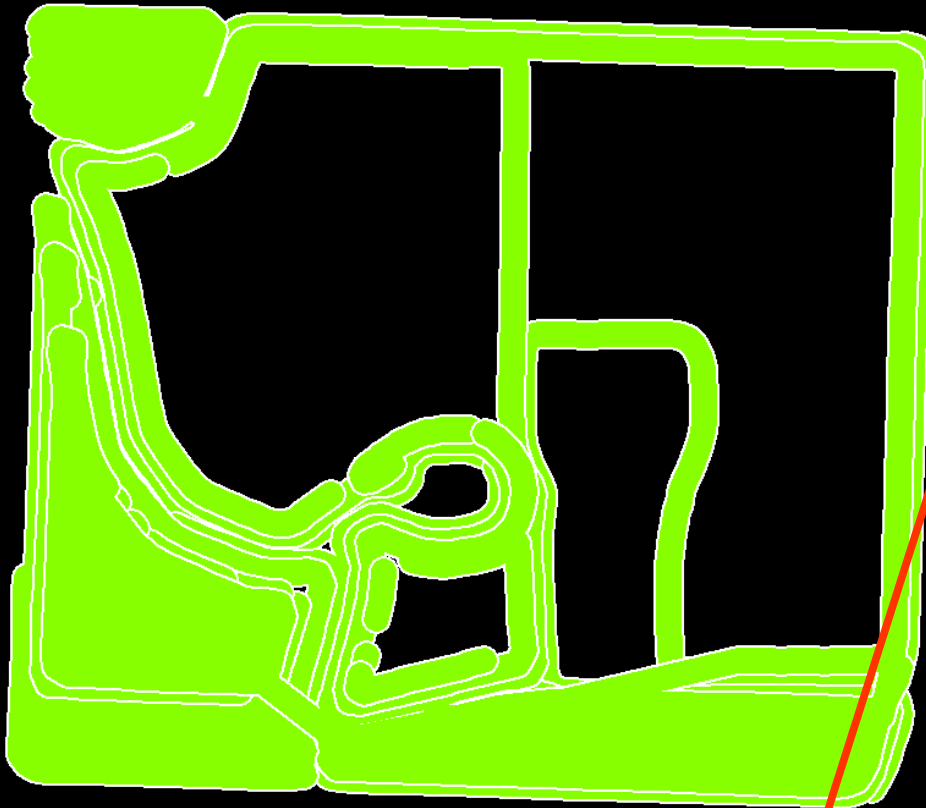
D⊘G

NO GPS

DISENGAGED

GUIDE   FIELD   GENERAL SET-UP   VIEW   CAMERA

EXIT OFF

DGPS details window . Pressing this button opens window.

COWS | Big Bang Theory | Monitor harnesses | Seeding Syste... | Work | 02523908_... in color.pdf | FASTWIZ.EXE | BMSRUN.INI | SHIPSched... | Kamsack NH3 Max.doc | tire fax.doc | MB015-2011 Web Site_f...

No valid position.

The GPS details window gives the speed, direction traveled, altitude, Number of satellites that are being received, the HDOP of the satellite signal, the Status of the DGPS signal (8 is required for good signal). You also have the ability to check distance, see how much has been seeded and the time spent seeding and the differential is the quality of the GPS.

GPS Details

Speed	0	km/hr	No Sats	0
Dir	0	deg	HDOP	0
Alt	0	m	Status	1

Trip Distance

0   km

RESET

Statistics

Area 0   Ha   Time 0   Hrs

Differential

0

Tilt

0.00°

OK

No valid position.

DⓋG

NO GPS

DISENGAGED

COWS | Big Bang Theory | Monitor | Seeding | Work | 02523908_... in color.pdf | FASTWIZ.EXE | BMSRUN.INI | SHIPSched... | Kamsack NH3 Max.doc | tire fax.doc | MB015-2011 Web Site_f...

GUIDE

FIELD
1
2

GENERAL
SET-UP

VIEW

CAMERA

EXIT
OFF

SCAN

NEXT

Pressing the General set up button will open another window for settings

No valid position.

DⓄG   NO GPS

DISENGAGED

COWS | Big Bang Theory | Monitor | Seeding | Work | 02523908_... in color.pdf | FASTWIZ.EXE | BMSRUN.INI | SHIPSched... | Kamsack NH3 Max.doc | tire fax.doc | MB015-2011 Web Site_f...

GUIDE | FIELD 1 2 | GENERAL SET-UP | VIEW | CAMERA | EXIT OFF | SCAN | NEXT

Pressing the General set up button will open another window for settings

General Setup (Default Ver 4.45.01.09S Feb 19 2008)

GRIDS
- ○ On   Spacing: [100] m
- ◉ Off
- Backlight: [■]

GUIDE
- [>>>>]
- [Virtual Road]

OFFSETS

Implement	Flow	Steer	Antenna
0.000 m	0.0 m	0.0 m	0.000 m

Antenna   Steer Point

GUIDANCE
- Lock Dir.:
  - ◉ Left first
  - ○ Right first
  - ○ Left only
  - ○ Right only
- Overlap: [0.00] m

GPS
- Port/Baud:
- [COM1: ▼]
- [19200 ▼]
- ☐ Non-diff
- ☐ 10Hz paint

UNITS
- Measure:
  - ◉ Metric
  - ○ Imperial
- Position:
  - ◉ Lat/Long
  - ○ E/N

GENERAL
- Use Toggle Switch ☑
- Vehicle nose ☑
- Draw tracks ☐
- Max. speed: [40.0] km/hr
- Simple outlines ☑
- Override available ☐

[Flag settings...]   [Steering ...]   [Line shift...]   [OK ✓]

[Working path...]   [Auto Section...]   [End of row...]

General set up window. Boxes crossed out do not apply

No valid position.

NO GPS

DISENGAGED

This bar gives you the version of software.

General Setup (Default Ver 4.45.01.09S Feb 19 2008)

GRIDS
- ○ On   Spacing: 100 m
- ⊙ Off
- Backlight: [black]

GUIDE
- >>>>
- Virtual Road

OFFSETS

Implement	Flow	Steer	Antenna
0.000 m	0.0 m	0.0 m	0.000 m

Steer Point
Antenna

GUIDANCE
Lock Dir.:
- ⊙ Left first
- ○ Right first
- ○ Left only
- ○ Right only

Overlap: 0.00 m

GPS
Port/Baud:
- COM1:
- 19200
- ☐ Non-diff
- ☐ 10Hz paint

UNITS
Measure:
- ⊙ Metric
- ○ Imperial

Position:
- ⊙ Lat/Long
- ○ E/N

GENERAL
- Use Toggle Switch ☑
- Vehicle nose ☑
- Draw tracks ☐

Max. speed: 40.0 km/hr
- Simple outlines ☑
- Override available ☐

Flag settings...

Steering ...

Line shift...

OK

Working path...

Auto Section...

End of row...

General set up window. Boxes crossed out do not apply

NO GPS

DISENGAGED

General Setup (Default Ver 4.45.01.09S Feb 19 2008)
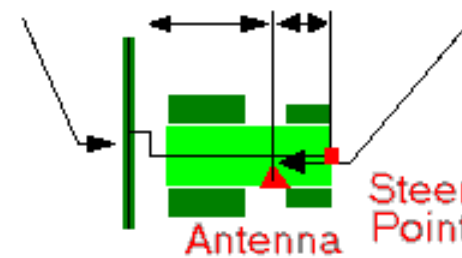
GRIDS
- ○ On
- ● Off

Spacing: 100 m

Backlight: [black box]

The **GRIDS** box allows you to turn a grid on / off on the coverage map. You can also set the size of the grids and change the background color of the coverage map.

GUIDE
[>>>>] (crossed out)
[Virtual Road] (crossed out)

GPS
Port/Baud:
- COM1:
- 19200
- ☐ Non-diff
- ☐ 10Hz paint

OFFSETS
Implement	Flow	Steer	Antenna
0.000 m	0.0 m	0.0 m	0.000 m

Antenna   Steer Point

UNITS
Measure:
- ● Metric
- ○ Imperial

Position:
- ● Lat/Long
- ○ E/N

GENERAL
- Use Toggle Switch ☑ (crossed out)
- Vehicle nose ☑
- Draw tracks ☐

Max. speed: 40.0 km/hr (crossed out)

- Simple outlines ☑
- Override available ☐

Flag settings...

Steering ... (crossed out)

Line shift... (crossed out)

OK ✓

Working path...

Auto Section...

End of row...

General Setup (Default Ver 4.45.01.09S Feb 19 2008)

GRIDS
- ○ On   Spacing: 100 m
- ◉ Off
- Backlight: ▮

GUIDE
- >>>>
- Virtual Road

OFFSETS

Implement	Flow	Steer	Antenna
0.000 m	0.0 m	0.0 m	0.000 m

GUIDANCE

GPS
- Port/Baud:
- COM1: ▼
- 19200 ▼
- ☐ Non-diff
- ☐ 10Hz paint

Steer
Point
Antenna

The **UNITS** box allows you to select between metric and imperial units of measurements and you can choose to have you position displayed in Latitude/Longitude or Eastern/Northing

UNITS
- Measure:
  - ◉ Metric
  - ○ Imperial
- Position:
  - ◉ Lat/Long
  - ○ E/N

GENERAL
- Use Toggle Switch ☑
- Vehicle nose ☑
- Draw tracks ☐
- Max. speed: 40.0 km/hr
- Simple outlines ☑
- Override available ☐

- Flag settings...
- Working path...
- Steering ...
- Line shift...
- Auto Section...
- End of row...
- OK ✓

General set up window. Boxes crossed out do not apply

No valid position.

D⊘G   NO GPS

DISENGAGED

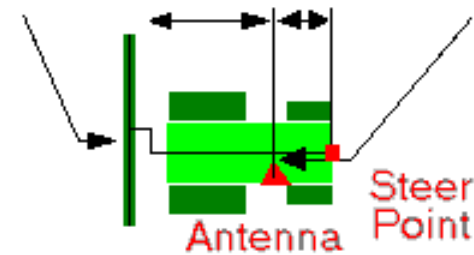## General Setup (Default Ver 4.45.01.09S Feb 19 2008)

GRIDS
○ On   Spacing: 100   m
◉ Off
Backlight: ▮

GUIDE
[>>>>]
[Virtual Road]

OFFSETS
Implement   Flow   Steer   Antenna
0.000 m   0.0 m   0.0 m   0.000 m

Antenna   Steer Point

GPS
Port/Baud:
COM1: ▼
19200 ▼
☐ Non-diff
☐ 10Hz paint

GPS box allows the correct port which should match the Y cable's long lead input into the back of the X20 monitor and the baud rate has to match the signal from the antenna. Non-diff has to be checked of if you are using an antenna not capable of DGPS. 10Hz paint should be used if you are using a receiver with 10 times per second refresh.

GENERAL
Use Toggle Switch ☑
Vehicle nose ☑
Draw tracks ☐

Max. speed: 40.0   km/hr
Simple outlines ☑
Override available ☐

[Flag settings...]   [Steering ...]   [Line shift...]   [OK ✓]
[Working path...]   [Auto Section...]   [End of row...]

General Setup (Default Ver 4.45.01.09S Feb 19 2008)

GRIDS

- ○ On   Spacing: 100   m

GUIDE

>>>>

OFFSETS

Implement	Flow	Steer	Antenna
0.000 m	0.0 m	0.0 m	0.000 m
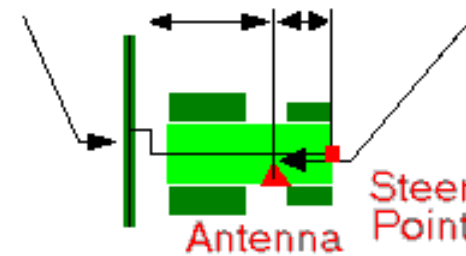
The **OFFSETS** box allows for variance in the location of the antenna. The Antenna offset needs to be used if the antenna is offset from the center of the cab. The flow is the distance from the antenna to the front row of openers. When using an articulating tractor steer and implement should be left at a value of 0.

Antenna   Steer Point

○ Right only

☐ Non-dil
☐ 10Hz paint

UNITS

Measure:
- ● Metric
- ○ Imperial

Position:
- ● Lat/Long
- ○ E/N

GENERAL

- Use Toggle Switch ☑
- Vehicle nose ☑
- Draw tracks ☐

Max. speed: 40.0 km/hr

- Simple outlines ☑
- Override available ☐

Flag settings...

Steering ...

Line shift...

OK

Working path...

Auto Section...

End of row...

General Setup (Default Ver 4.45.01.095

GRIDS
- ○ On   Spacing: 100 m
- ⊙ Off
- Backlight: [black]

GUIDANCE
- Lock Dir.:   Overlap:
- ⊙ Left first   0.00 m

Flag settings...

Working path...

Flag Settings

- ☑ **Show flags**
- ☐ **Show text**
- ☐ **Play sounds**

Flag 00	Flag 05
Flag 01	Flag 06
Flag 02	Flag 07
Flag 03	Flag 08
Flag 04	

OK ✓   **CANCEL** ✗

Selecting **Flag settings** brings up this box that allows you to pre name your flags to be placed in the field. You can select the box that will show the flags in the field, show the text for the flag and also to play an audible sound as you approach the flag.

General Setup (Default Ver 4.45.01.09S Feb 19 2008)

GRIDS
- ○ On Spacing: [100] m
- ● Off
- Backlight: [■]

GUIDANCE
Lock Dir.:
- ● Left first
- ○ Right first
- ○ Left only
- ○ Right only

Overlap: [0.00] m

UNITS
Measure:
- ● Metric
- ○ Imperial

Position:
- ● Lat/Long
- ○ E/N

GUIDE
>>>>
Virtual Roa

GPS
Port/Baud:
[COM1:]
[19200]
- ☐ Non-diff
- ☐ 10Hz pair

GENERAL
Use Toggle
Vehicle nose
Draw tracks

Flag settings...

Working path...

Steering

Auto Sectio

Working Path

Drive:
[C: ▼]

Directory: [←] [→]

```
..
Field_Data
Lynx
Microsoft.VC80.CRT
Microsoft.VC80.MFC
```

C:\LYNX

[OK ✓]   [CANCEL ✗]

The **Working path** displays the location of the folder on the X20 hard drive where the fields are saved. **The working path must be C:\Lynx\Field_Data and should not be changed as this is where the 9 field screens are saved. If the working path is changed the X20 Guidance will not be able to display and load the 9 field screens.**

Automatic Section Control uses the DGPS to control the switching of tank clutches on and off before entering and exiting headlands and overlapping.

- Selecting the Disabled turns off the automatic section control.
- Enabling the automatic section control gives you 3 options:
1. Avoid gaps - there will be no gaps - even the smallest area will be covered.
2. Avoid overlap – the tank will shut off when any part of the drill is overlapping.
3. Ignore small gaps - the gives you the ability to set the gap size for when the tank will shut off. A small gap size can be entered into this window. (the recommended size for small gap setting is 1.5 feet
- Limit to boundary – allows the tank to automatically turn off when it travels outside the boundary. The boundary needs to be completed in order for this to work.

Automatic Section Control

Mode

- ● **Disabled**
- ○ **Avoid gaps**
- ○ **Ignore small gaps**
- ○ **Avoid overlap**
- ☐ **Limit to boundary**

Small Gap Size:	0.5	metres
On Time:	5.0	sec
Off Time:	0.0	sec

OK

Auto Section...   End of row...

The end of row option is used as a warning as the end of a row is approaching after the headlands have been completed. As it approaches an audible alarm will sound. Have a check in the box beside Use to have enabled. The only when engaged check box only applies to Topcon steering (if not using Topcon steering ensure there is no check mark in the box). You can set the Detection distance, Repeat time and the # of alarms by touching the grey box beside each setting.

End of row detection

Only when engaged: ☑   Use: ☑

Detection distance: 50.0   Metres
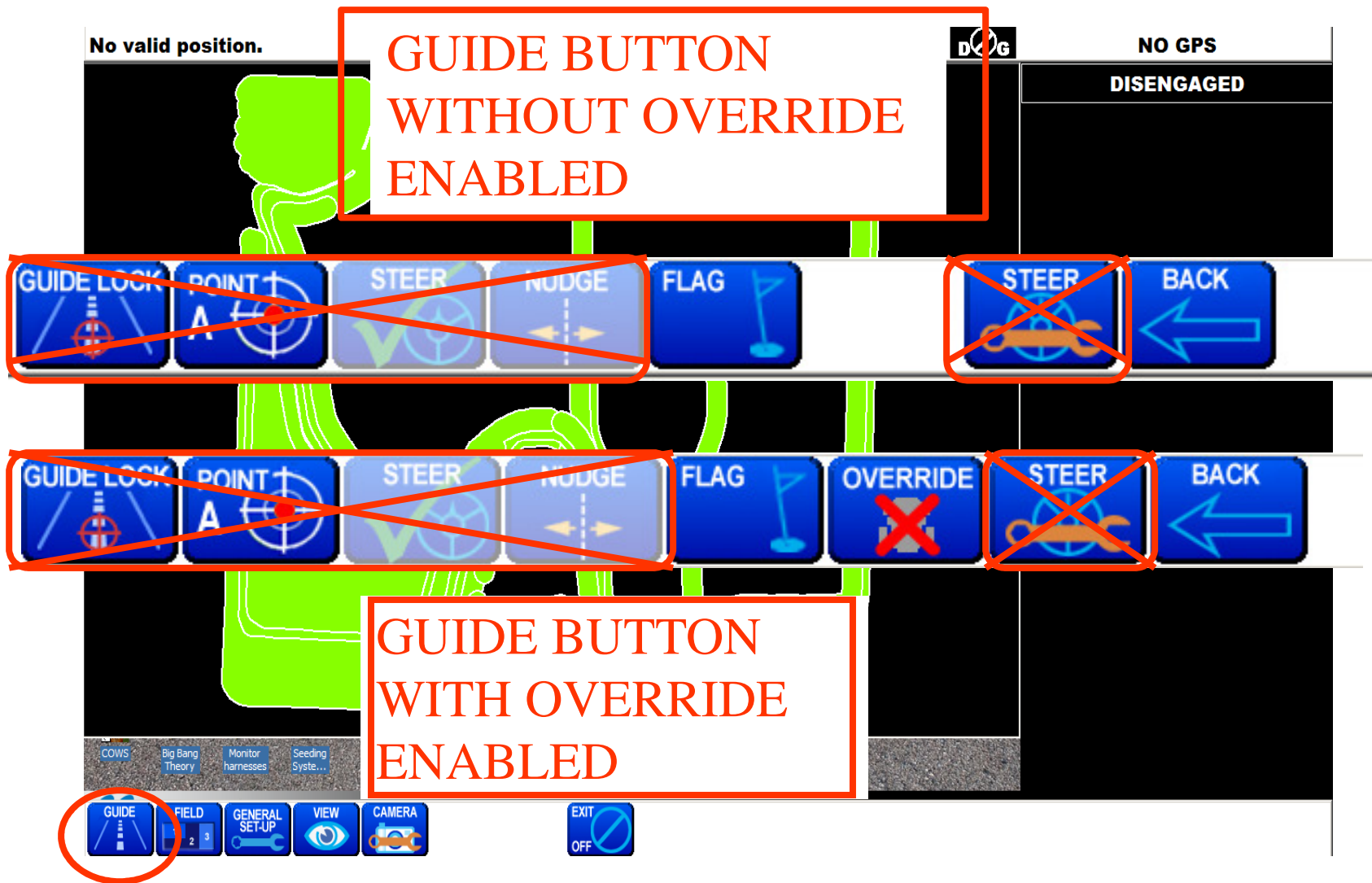
Repeat time: 1.0   Seconds

No of alarms: 2

OK   CANCEL

○ Right first
○ Left only
○ Right only

19200

☐ Non-diff
☐ 10Hz paint

UNITS
Measure: Position:
◉ Metric   ◉ Lat/Long
○ Imperial   ○ E/N

GENERAL
Use Toggle Switch ☑   Max. speed: 40.0   km/hr
Vehicle nose   ☑   Simple outlines   ☑
Draw tracks   ☐   Override available ☐

Flag settings...   Steering ...   Line shift...   OK

Working path...   Auto Section...   End of row...

No valid position.

D⊕G   NO GPS
DISENGAGED

GUIDE BUTTON WITHOUT OVERRIDE ENABLED

GUIDE LOCK | POINT A | STEER | NUDGE | FLAG | STEER | BACK

GUIDE LOCK | POINT A | STEER | NUDGE | FLAG | OVERRIDE | STEER | BACK

GUIDE BUTTON WITH OVERRIDE ENABLED

COWS | Big Bang Theory | Monitor harnesses | Seeding Syste...

GUIDE | FIELD 2 3 | GENERAL SET-UP | VIEW | CAMERA | EXIT OFF

Touching the GUIDE function button will expand the guide buttons
- The crossed out buttons are used with TOPCON auto steer and don't apply unless tractor is properly equipped.
- The FLAG button can be used to mark points of interest in the field
- The OVERRIDE button when activated in the GENERAL SETUP allows the operator to drive over and treat areas that have already been covered
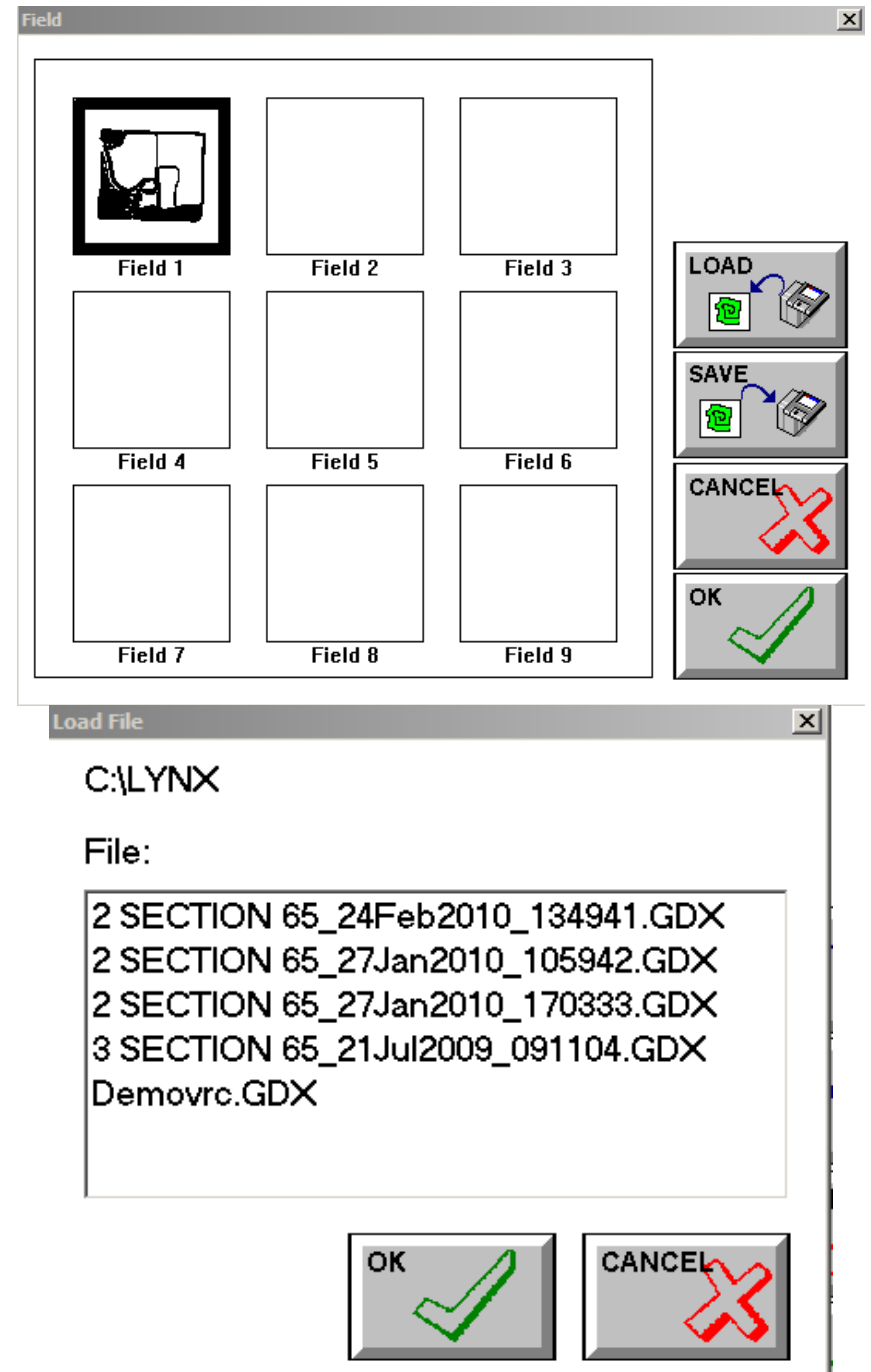- BACK button takes you back to the default function buttons
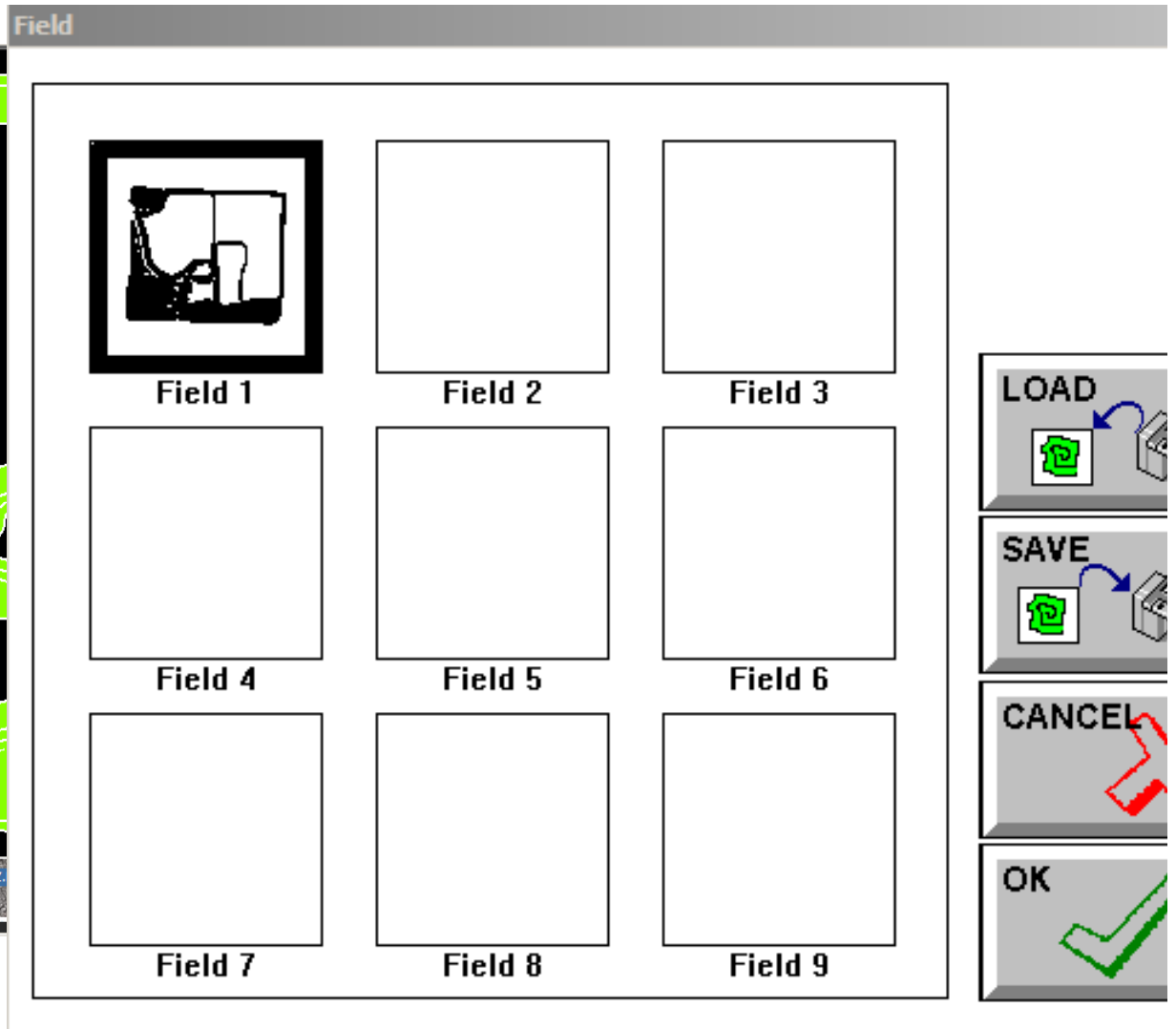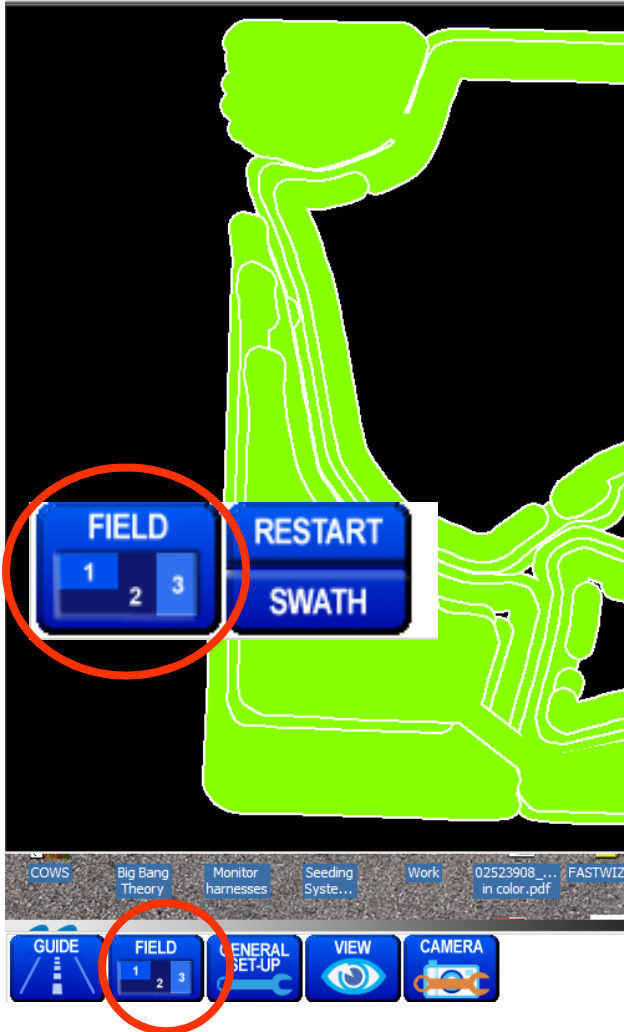
When the FIELD function button is touched it will expand to the FIELD and RESTART SWATH buttons
- When the FIELD button is touched it will open the field menu on the screen. The field menu gives you access to nine fields screens
- RESTART/SWATH button – can clear the field and/or set a new swath value
- BACK button – returns to the default function buttons

In the field menu you have the ability to recall or store nine separate fields, at anytime. Additionally you have the ability to save an infinite number, by using the SAVE button. You can then access the saved files by using the LOAD button. **(it is not recommended that you create large field files. As the field is finished either delete the field or use the SAVE button to save the field to the console)**
To select any of your fields that are loaded into the nine field's touch on that field and it will highlight Field 1.

- If we touch the OK button it will open this field in the guidance screen.
- If all 9 fields are full and we want to save the information from that field so we can load previously saved field or if we want to start a new field we have to save the data in the highlighted field box. This is done by touching the save button and the GDX viewer will open. (Refer to the GDX viewer PDF in the FAQ's on the website.for directions on using this feature)
- Once you have the field saved you can now either load a new field by touching the load button which open a selection file on the screen. From this screen you can select th field that you want to load and it will then be loaded into the field that you had highlighted (it will give you a warning asking if you want to clear all previos data on that field. If you want to start a new blank field, after you have touched the OK button and it has loaded the GDX coverage file use the RESTART SWATH button to clear the data that was in the field you loaded.
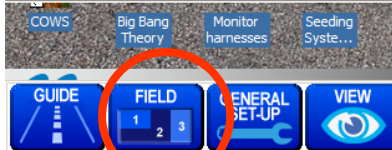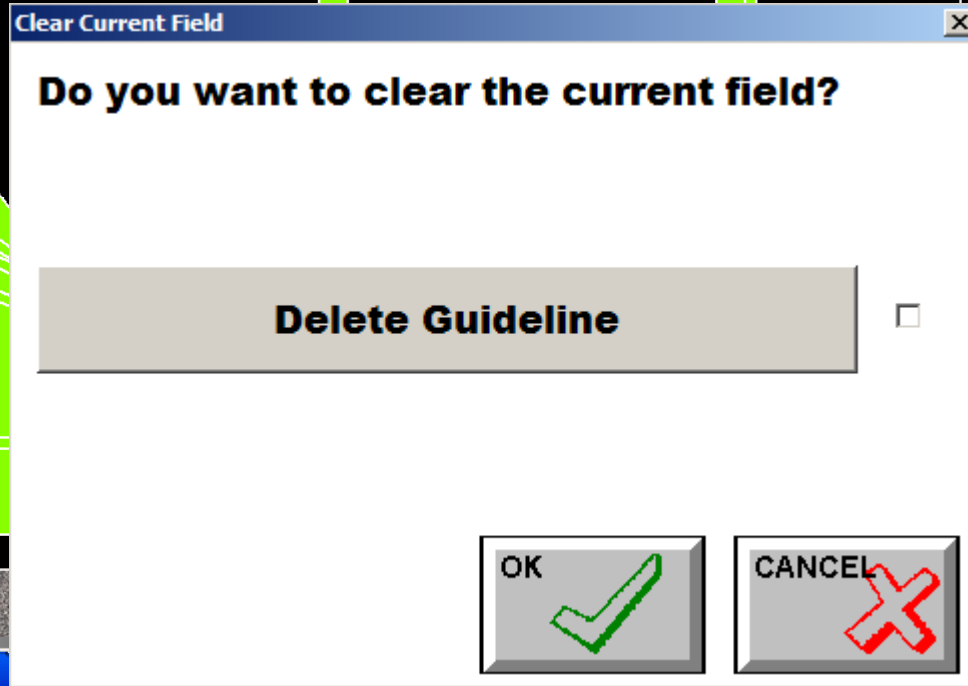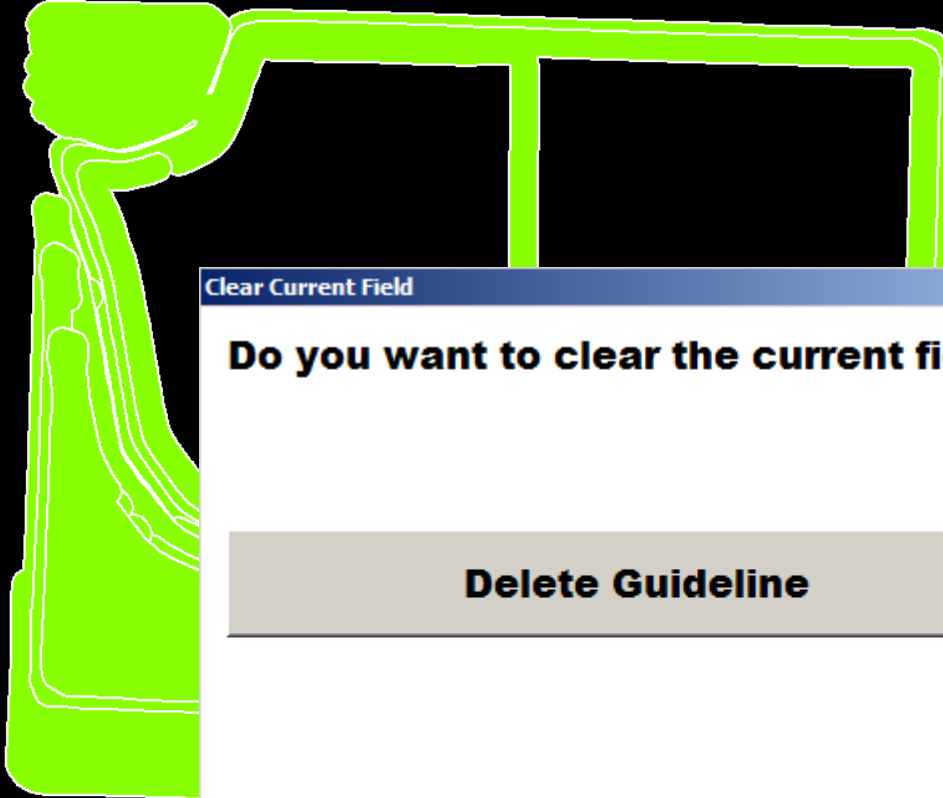
D⊘G   **NO GPS**

DISENGAGED

Clear Current Field ✕

Do you want to clear the current field?

Delete Guideline ☐

OK ✓   CANCEL ✗

COWS   Big Bang Theory   Monitor harnesses   Seeding Syste...

GUIDE   FIELD 1 2 3   GENERAL SET-UP   VIEW   OFF

FIELD 1 2 3   RESTART SWATH
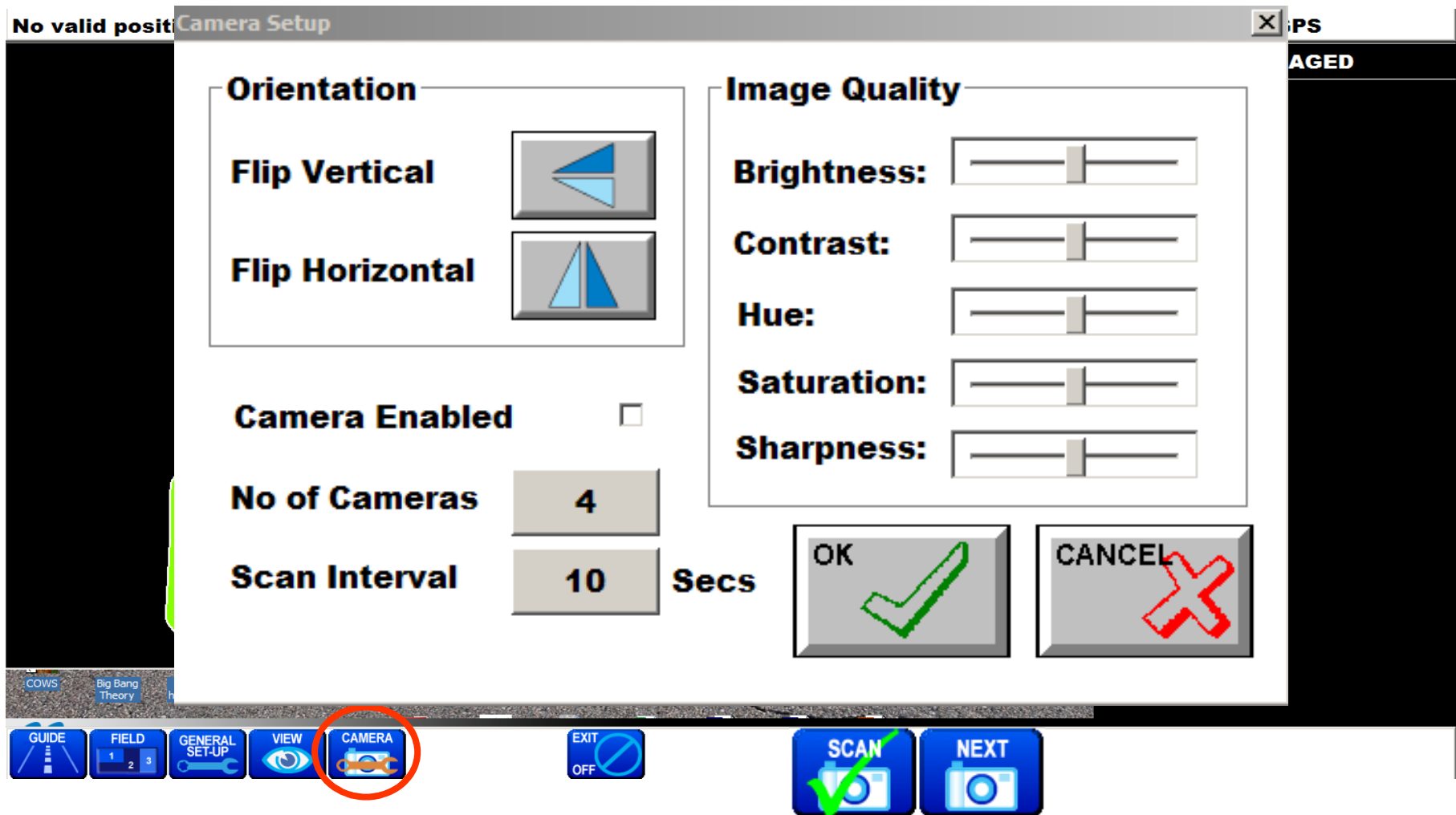
When you touch on the RESTART SWATH button it will bring this window up. It is going to ask you if you want to clear the current field, it is going to ask if want to clear the current guidelines and flag points if you had any in the coverage map (have a check box in the small box at the right by touching on the Delete Guidelines or Delete Flag Points). Once you press the OK button it will clear all previous data.
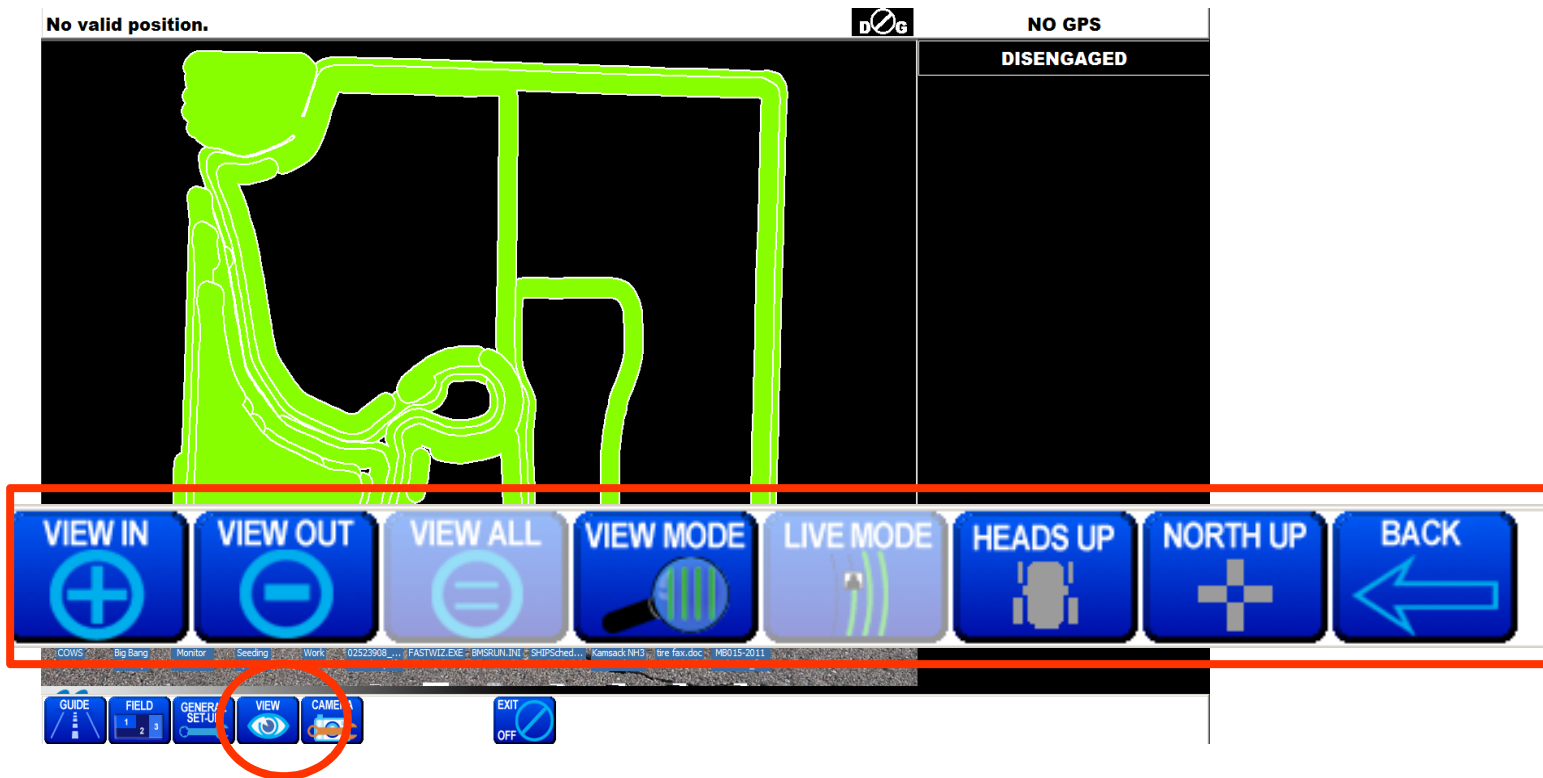
Touching the view function button expands the view buttons
- VIEW IN button – zooms in on the Coverage Map
- VIEW OUT button – zooms out of the coverage map
- VIEW ALL button – sizes the coverage map to fit within the coverage map screen (VIEW ALL button is only accessible when the VIEW MODE button is selected)
- VIEW MODE button – switches the coverage map screen from live mode to view mode (VIEW MODE allows the operator to view the coverage map without DGPS updating the vehicle position)
- LIVE MODE button – switches the coverage map screen from VIEW MODE to LIVE MODE (LIVE MODE is the default mode, which means the vehicle position is being updated by the DGPS receiver)
- HEADS UP button – selects HEADS UP mode, this is the default mode (the screen is constantly being redrawn with every DGPS update)
- NORTH UP button – selects NORTH UP mode (the screen is only redrawn about every 10 seconds)
- BACK button – displays the default function buttons again

AGED

Camera Setup

Orientation

Flip Vertical

Flip Horizontal

Camera Enabled ☐

No of Cameras 4

Scan Interval 10 **Secs**

Image Quality

Brightness:

Contrast:

Hue:

Saturation:

Sharpness:

OK

CANCEL

GUIDE | FIELD 1 2 3 | GENERAL SET-UP | VIEW | CAMERA | EXIT OFF | SCAN | NEXT

COWS | Big Bang Theory

Touching the CAMERA button brings up the camera options
- You have the option to flip the orientation of the camera's
- Adjust the image quality. When the image quality is changed it affects all the camera's.
- Number of camera's is going to be 4 (maximum number that the camera hub can support
- You can set up a scan interval that will automatically scan through the camera's at the selected interval.
- SCAN button allows the camera's to automatically scan through the camera's. When the monitor is scanning the next button becomes inaccessible.
- The SCAN button will have a green check in when disabled (touch to enable), there will be an X on the SCAN button when enabled.
- The next button allows you to manually scan camera's when the SCAN button is disabled.