GTA SUITE SOFTWARE



USER'S GUIDE

AGCO® GTA100 Communicator





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GENERAL INFORMATION

INTRODUCTION

The GTA100 Communicator software application allows a user to transfer data logged on a memory card from a GTA Console, or a Fieldstar Terminal, to a **computer**. The data is organized and presented as **Jobs** that can be previewed or exported into one or more formats for use in other third party applications.

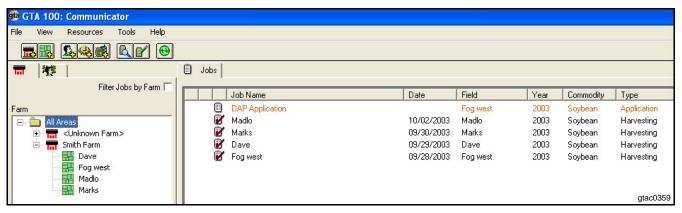


FIG. 1

FIG. 1: The screen view above shows the GTA100 main program window.

A **Job** consists of user-defined information and actual machine logged data. User defined information includes:

- Operator Name
- Job Name
- Farm Name
- Field Name
- Operation Type
- Implement Width (for pull type implements)

Some information can also be entered directly into the GTA Console, or Fieldstar Terminal, by the user. All user-defined information can be edited using GTA100 software.

GTA Console in a tractor will automatically log date, time, console ID, and machine hours; as long as a Secure Digital (SD) memory card is inserted into the console.

DATA LOGGING HARDWARE

Data can be read or written, for use in GTA Software products, using a FIELDSTAR Terminal (1), GTA Console I (3) or GTA Console II (4).

Fieldstar® Terminal





FIG. 2

FIG. 2: Fieldstar Terminal (1) uses a PCMCIA Linear Flash Card (2).

GTA Consoles

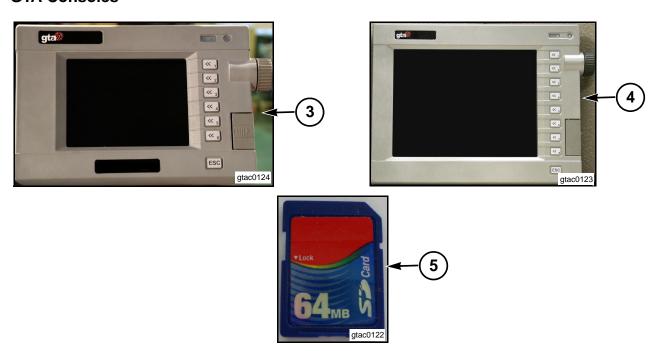


FIG. 3

FIG. 3: GTA Consoles (3 and 4) use SD Memory Cards (5).

PC SOFTWARE

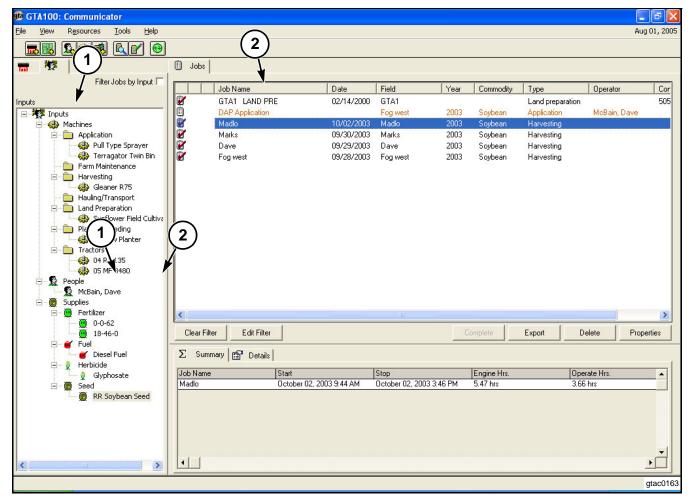


FIG. 4

FIG. 4: GTA100 Communicator has an easy to use software interface that processes and exports machine-generated data. The data can be processed by the user, or can be exported for use by an agronomic consultant.

The main screen consists of two components:

- Resource Manager (1)
 - Farm tab
 - Inputs tab
- Data Viewer (2)
 - Jobs tab

NOTES

APPLICATION

RESOURCE MANAGER

Farm Tab

FIG. 5: The **Farm** tab (1) stores multiple farms and fields. Its "tree" structure enables the user to easily view the fields that belong to certain farms.



FIG. 5

Inputs Tab

FIG. 6: The **Inputs** tab (2) can be used to create and record key information for **Machines**, **People**, and **Supplies**.

Resource information may include:

- Make and Model
- Date of Last Service
- Hours to Next Service
- Charge per Hour or Acre
- Serial Number
- · Photo of Machine
- · Operator's Information
- Cost per Hour
- Contact Details
- Personnel Photos
- Supplies
- Cost per Unit
- Cost per Acre
- Default Application Rate per Acre
- Product Restrictions
- Regulatory Information

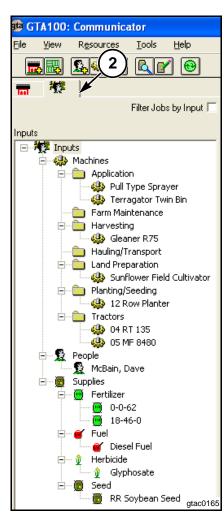


FIG. 6

DATA VIEWER

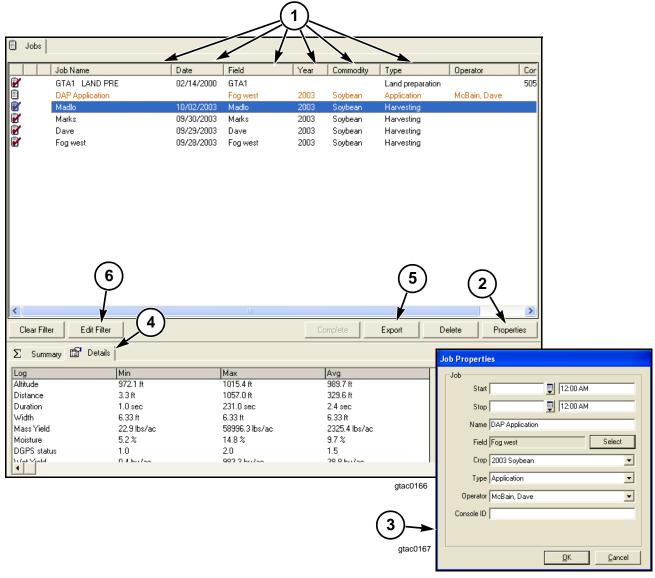


FIG. 7

FIG. 7: The Jobs tab shows all jobs stored within GTA100 Communicator. Jobs can be sorted in either ascending or descending order, by clicking on the column headers (1).

The **Properties** button (2) displays the information for the selected job in the job properties window (3). This information can be changed if needed.

The **Job Summary** and **Details** tabs (4) provide a short overview of the information stored within a job. The Details tab displays the minimum, maximum, and average values for any information logged by the terminal/console in relation to the selected job.

The **Export** button (5) is used to export job data from GTA100 Communicator. Job data can be exported in the following formats:

Comma Separated Value (*.csv)

- Shape Files (*.shp)
- FODM XML Files (*.XML)

The **Edit Filter** button (6) is used to filter jobs shown on the Jobs tab.

FIG. 8: The **Job Filter** window filters job data by any of the following criteria:

- Date
- Farm and Field
- Year
- Commodity
- Job Type
- Operator
- Console ID
- Input (Machine, Person, and Supply)
- Job Status (Completed or Planned)

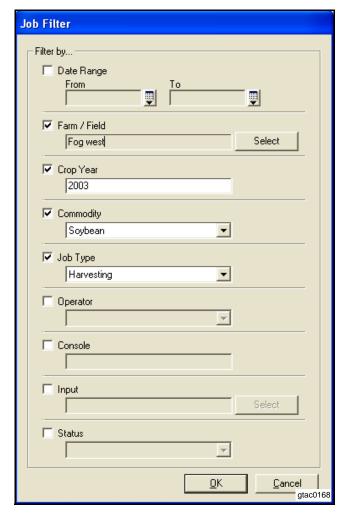


FIG. 8

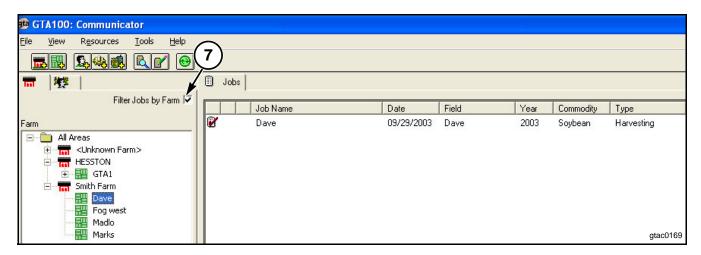


FIG. 9

FIG. 9: Jobs can also be filtered by Farm, Field, or Input by checking either the **Filter Jobs by Farm** or **Filter Jobs by Input** boxes (7).

FILE MENU OPTIONS

Backup Project

FIG. 10: The data files for the program will be copied to the location that you specify. It is recommended to store backup files on removable media such as a CD or Memory Card.

IMPORTANT: It is a good practice to backup data on a regular basis.

Restore Backup

The data files for the program can be restored in the case of a system failure or other unforeseen problem. The restore function can also be used to move data to a new computer.



FIG. 10

Read Job Data

Read Job Data button



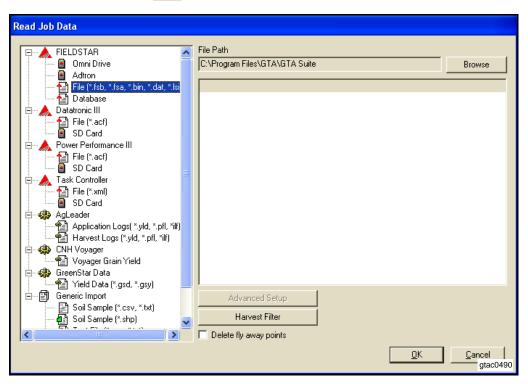


FIG. 11

FIG. 11: Job data may be imported into GTA Suite from several controller types or locations:

- FIELDSTAR (data card, individual file, or Open Office Database)
- Datatronic III, Power Performance III (SD Card or .acf file)
- Task Controller (SD Card or .xml)
- Third Party Data (individual files)
- Generic Import (Soil Sample, Text Files, or FODM .xml)

Write Job Data

Write Job Data button



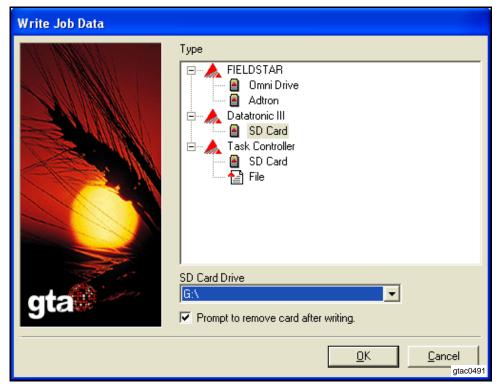


FIG. 12

FIG. 12: Job data can be written to these media devices:

- SD Card Device
- Linear PCMCIA Card Drive

Synchronize Trac Mate

Synchronize Trac Mate button



Job data can be transferred to a Personal Digital Assistant (PDA) running Farmworks Trac Mate software. The jobs can be modified in Trac Mate and then imported back into GTA100.

Application

VIEW MENU OPTIONS

FIG. 13: View menu

Show Retired Land Areas

Retired Land Areas will be shown by selecting this option.

Show Retired Inputs

Retired Inputs will be shown by selecting this option.



FIG. 13

Enterprise Properties

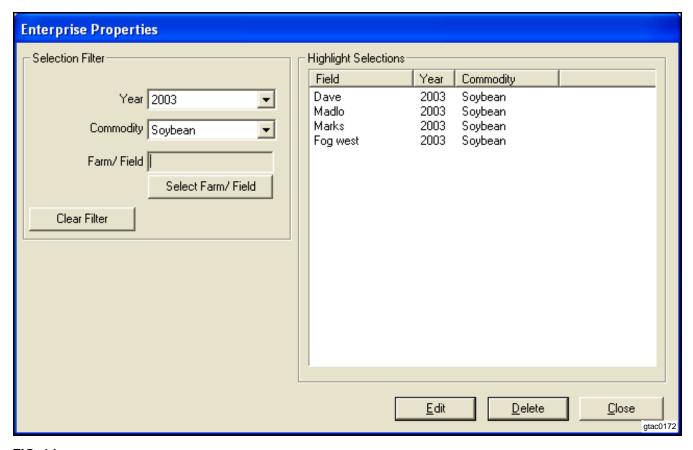


FIG. 14

FIG. 14: Enterprise Properties will be shown by selecting this option.

An **Enterprise** is a combination of a year and commodity that is used to help sort jobs by field.

NOTE: The Enterprise Property is created automatically upon reading data into the system.

Use the **Enterprise Filter**, as shown in this screen, to view jobs associated within a given year and commodity. Individual job selections can be Edited and Deleted as needed.

RESOURCES MENU OPTIONS

FIG. 15: The **Resources** menu has options for the entry of:

- New Farm
- New Field
- New Person
- New Machine
- New Supply
- Other (Commodities, Markers)

Click on any one of the above options to enter information specific to the option.



FIG. 15

NEW FARM

New Farm button



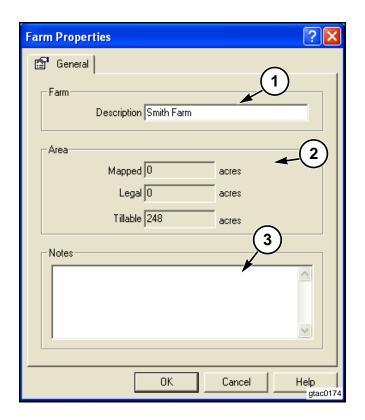


FIG. 16

FIG. 16: Clicking on the **New Farm** button, or selecting the New Farm option, will open the **Farm** Properties window. The name of the farm can be entered in the **Description** box (1). The **Area** of the farm (2) cannot be entered because this information is calculated based on the area of the fields that are listed under the farm. The **Notes** portion (3) of this properties window can be used to record comments unique to the individual farm.

NEW FIELD

New Field button



FIG. 17: Clicking on the New Field button, or selecting the New Field option, will open the Field Properties window. The Field Properties window has three tabs; general, legal and photo.

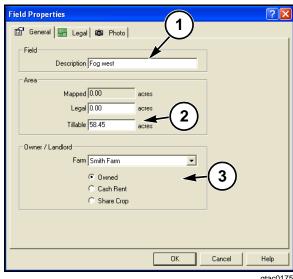
Enter a field name in the **Description** area (1). Enter the field's tillable number of acres in the Tillable box (2).

The last section (3) is used to define which farm the field belongs to and whether it is owned, cash rented, or share cropped.

NOTE: Field **Description** and **Tillable** acres are REQUIRED.

FIG. 18: Detailed legal information, defining the field, can be entered on the Legal tab (4).

The legal land description can be entered in the Legal section (5) of this screen.



gtac0175

FIG. 17

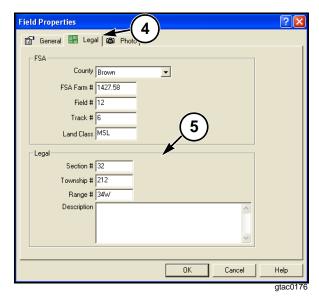
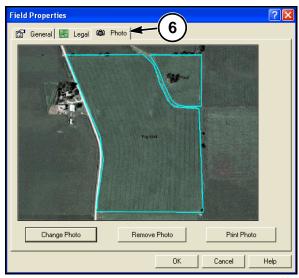


FIG. 18



gtac0177

FIG. 19

FIG. 19: The Photo tab (6) allows the user to import an Aerial image of the field.

GTA Suite supports the common file types listed below:

- Windows bitmaps, .bmp
- Tag Image File, .tif
- Paint, .pcx
- JPEG, .jpg

NOTE: The user is responsible for obtaining all photos.

NEW PERSON

New Person button

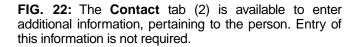


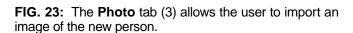
FIG. 20: Clicking on the **New Person** button, or selecting the New Person option, will open the **New Person Properties** window. This window allows for the entry of farm personnel.

There are four entry tabs for information:

- General
- Address
- Contact
- Photo

FIG. 21: The **Address** tab (1) is shown to the right. It is not required to enter this information to establish a person in the database.





NOTE: The user is responsible for obtaining all photos.

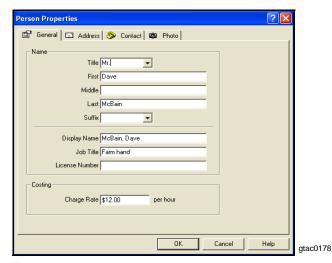


FIG. 20

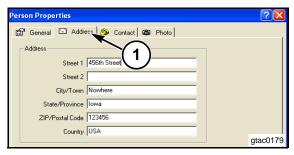


FIG. 21



FIG. 22



gtac018

FIG. 23

NEW MACHINE

New Machine button



FIG. 24: Clicking on the **New Machine** button, or selecting New Machine option, will open the **New Machine** Properties window. This allows detailed information, for machines used, to be entered.

Four input tabs are shown in the **Machine Properties** window:

- General
- Service
- Options
- Photo

The **General** tab requires that a Machine Description and Category be entered.

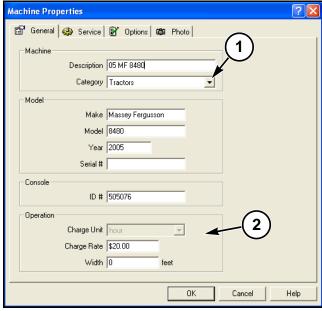
The **Category** drop-down menu (1) indicates the type of job the implement is used for.

Entering data in the **Operation** section (2) of this window is needed to create accurate Cost per Hour and Cost per Acre reports.

FIG. 25: The **Service** tab (3) is very useful for reporting service intervals for machinery.

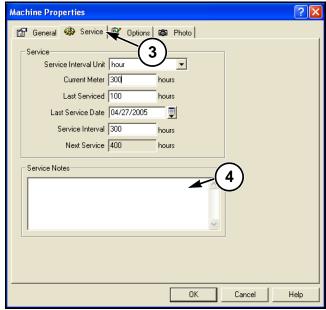
NOTE: When using GTA Consoles, it is unnecessary to enter Current Meter information because the console will record that information and upon importing, it will update automatically.

Service related comments can be entered in the **Service Notes** box (4) at any time during the life of the Implement.



gtac0182

FIG. 24

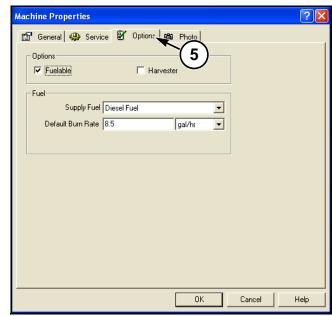


gtac0183

FIG. 25

FIG. 26: The **Options** tab (5) allows the user to enter the fuel attributes of the machine.

The entry of these options greatly increases the value of data collected for Fuel Consumption reports. It is recommended to define all fuel types, such as diesel or gasoline, under supplies on the **Inputs** tab, before entering machine properties.



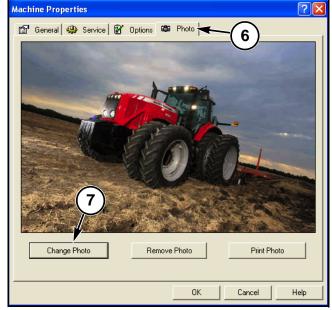
gtac0184

FIG. 27: The **Photo** tab (6) can be used to import a digital image of any implement used in the production enterprise.

Pictures saved to the computer, can be imported under **Machine Properties**, using the **Change Photo** button (7).

NOTE: The user is responsible for obtaining all photos.





gtac0185

FIG. 27

NEW SUPPLY

New Supply button



FIG. 28: Clicking on the **New Supply** button, or selecting New Supply option, will open the **New Supply Properties** window. In the Supplies Properties window, supplies used in the farming operation can be entered.

Four input tabs are shown in the Supply Properties window:

- General
- Chemical
- Fertilizer
- Restrictions

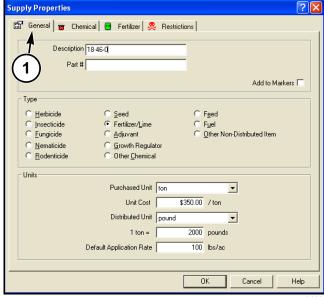
The **Description**, **Type**, and **Units** sections are required entries on the **General** tab (1).

After completing the **General** tab, the **Chemical**, **Fertilizer** and **Restriction** tabs can be completed.

FIG. 29: The **Chemical** tab (2) of the **Supply Properties** window allows the user to enter complete and accurate product information so as to maintain good records of the pesticides applied.

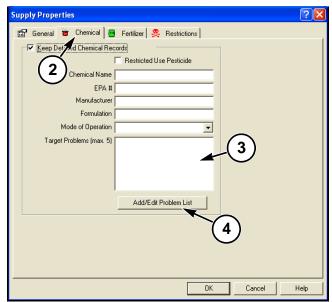
The **Target Problems** entry area (3) allows the producer to identify up to five pests per product.

Pest lists can be created by clicking on the **Add/Edit Problem List** button (4).



gtac0186

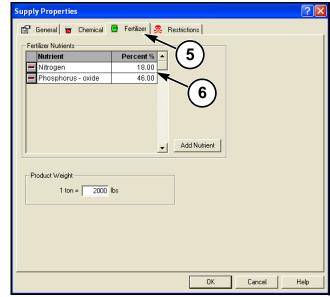
FIG. 28



gtac0188

FIG. 29

FIG. 30: The **Fertilizer** (5) tab of the **Supply Properties** window is used to enter the fertilizer's analysis. Clicking on the white box under the **Nutrient** category will bring up a drop box to allow the user to select their desired nutrient. Clicking on the white box (6) under the **Percent** category will allow the user to input the appropriate percentage.



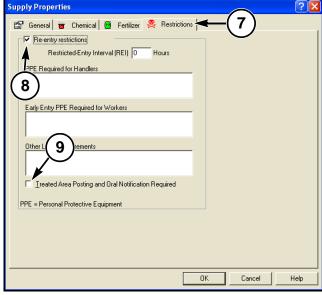
gtac0187

FIG. 31: The **Restrictions** (7) tab of the **Supply Properties** window is used to enter the appropriate information as prescribed by the pesticide's label.

NOTE: The **Re-entry Restrictions** box (8) needs to be checked in order to input information.

The final box on this screen will signify the need for **Posting Treated Areas and Oral Notification Required** (9). Some states require the posting of various pesticide applications on the perimeter of the crop production area.

FIG. 30



gtac0189

FIG. 31

OTHER

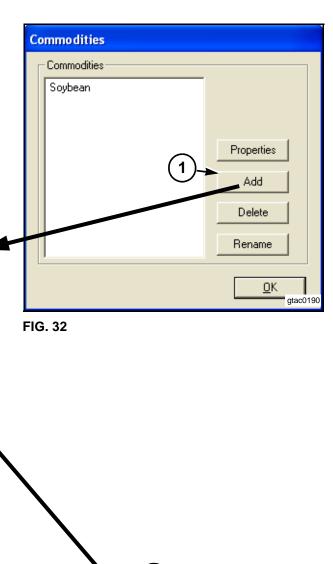
FIG. 32: The **Commodities** window is used to identify the common crops in a production enterprise. A crop list can be viewed by clicking on Add (1). Once a crop is selected the user can click **OK**, causing a window to open allowing the user to input or change the **Commodity Properties**.



FIG. 33

FIG. 34: The **Commodity Properties** window (2) contains details for a specific crop. The **Properties** section of this window is used to identify the unique characteristics of each crop.

NOTE: Defining the information unique to the Commodity allows for accurate crop calculations in GTA Suite.



Commodity Properties Commodity: Description Soybean Properties: Units bushel • 60.00 lbs/bu Density 13.00 % Moisture \$0.00 /bu Value Color • <u>0</u>K Cancel gtac0439

FIG. 34

MARKERS

FIG. 35: The **Markers** window enables the user to create a list of meaningful Markers to be used when collecting and logging data in the field.

The **Markers** created and listed in the window are spatial identification labels. The Fieldstar Terminal can use this group of labels to log spatial data representing single-point or multiple-point data.

Markers can be deleted or renamed using the buttons in this window.



FIG. 35

TOOLS

FIG. 36: The **Tools** menu has been created to allow machine specific software applications to be included in the software.

For tractors equipped with a Datatronic 3 Console:

SD Card Tool

- Allows downloading, editing and saves tractor settings to a computer.
- Setting can be written back to a card, allowing the use of the same setting each year.

NOTE: For a more detailed description of the SD Card Tool, see Appendix I at the end of this Training Manual.

Installing SD Card Tool

- Using the GTA Suite Installation CD, browse contents and open the Tools folder.
- Select the SD Card Tool folder and run setup.exe, to install the software.
- After installing the SD Card Tool, it will be available under the Tools menu.

HELP

FIG. 37: The **Help** menu option is primarily for verification of software versions as well as checking for product updates.



gtac0126

FIG. 36



FIG. 37

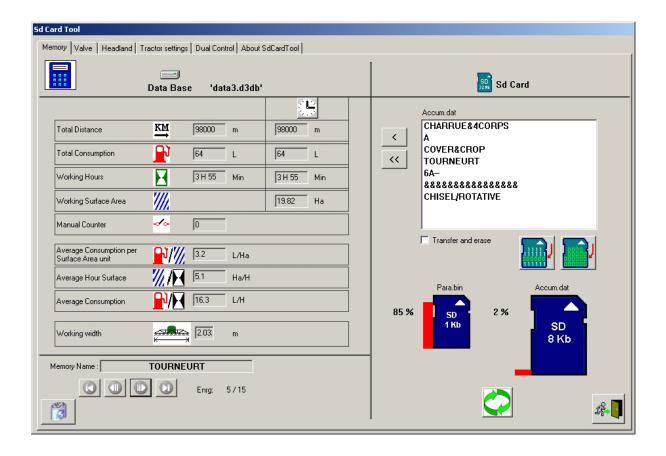
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NOTES

APPENDIX

SD Card Tool - Users Manual



For use with:

Massey Ferguson - Datatronic 3 AGCO - Datatronic 3 Challenger - Power Performance 3

Revision 1.3 Date 1/5/05

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1. SD Card Tool Introduction

The SD Card Tool is a PC based software program. The program can read and write memory values and tractor settings stored to an SD card in the tractors GTA Console. Please see the accessories and options section in the tractors user manual for instructions on how to do this.

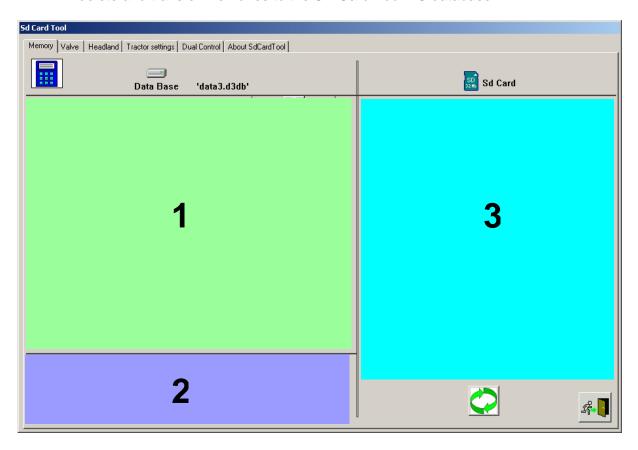
To access the program open the GTA Suite and click on the "Tools" menu, a drop down list will appear to show the SD Card Tool menu.

The SD Card Tool program is made up of six sections

- Memory Accumulated Values
- <u>Valves</u> Electro-Hydraulic
- <u>Headland</u> Management
- Tractor Settings
- Dual Control
- About SD Card Tool

The six sections are designed into three areas:

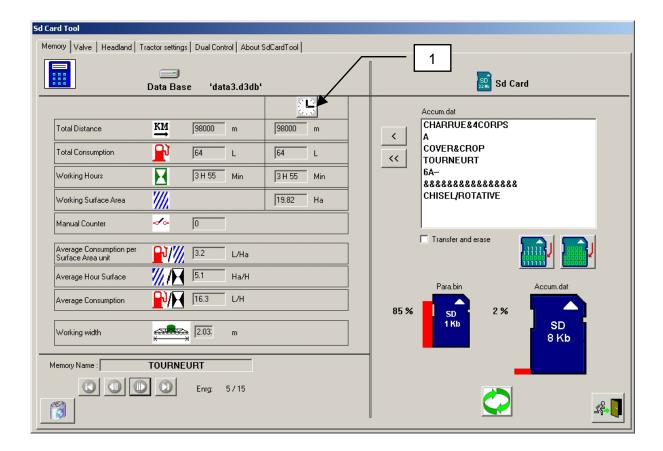
- 1. The main area displays or sets data in the PC database of the SD Card Tool program.
- 2. The second area allows the user to navigate the PC database, to delete memories, and to transfer memories to the SD Card.
- 3. The third area displays the memories names on the SD Card, and has controls to delete and transfer memories to the SD Card Tool PC database.



2. Area 1 Functions - Memories & Settings

2.1 Memory – Accumulated Values Page

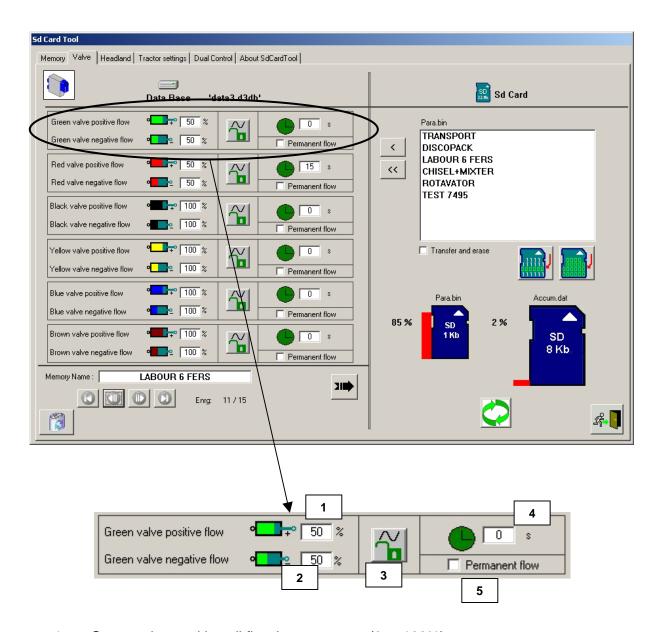
This page displays all the accumulated values of a selected Datatronic 3 or Power Performance 3 memory e.g. working area, fuel consumption, working hours, and distance travelled. These values are transferred from the SD Card and held in the SD Card Tool PC database, see section 4.2.



1 - This icon displays the trigger that activated the count function in the memory e.g. hitch down, PTO on, etc; this also determines when the tractor was in or out of work to calculate the worked area.

2.2 Electro-Hydraulic Spool Valve Settings Page

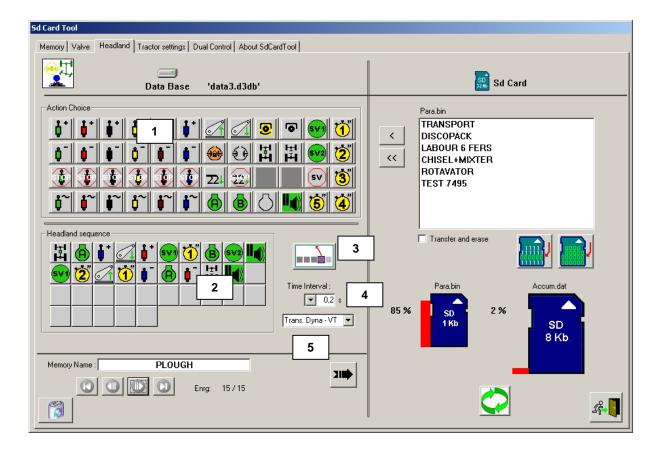
This page displays the stored electro hydraulic spool valve settings stored within the displayed memory. The user can adjust these settings and then transfer them to the SD Card for use in the tractor. It is possible to adjust the settings as detailed below for up to 6 valves.



- 1 -Green valve positive oil flow in percentage (0 to 100%).
- Green valve negative oil flow in percentage (0 to 100%).
- 3 -Click on this button for activate or deactivated the valve into floating position.
- Operation time until the valve kicks-out (0 to 60 s).
- 5 -Click on this box to have a permanent oil flow from the valve.

2.3 Headland Settings Page

This page enables the generation of a headland sequence or displays a sequence stored in a memory. Depending on the tractor specification it is possible to choose between 46 different headland actions from the matrix to generate a headland sequence with up to 35 actions in total. This sequence can then be transferred to the SD Card for use in the tractor.

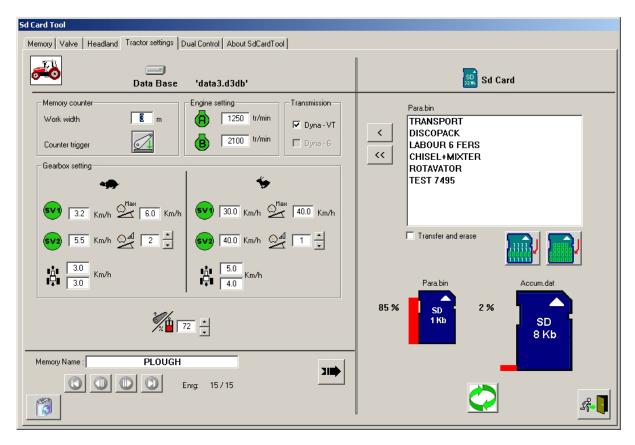


- 1 Headland Action
- 2 Headland sequence
- 3 Button to delete the last action in the sequence
- 4 Drop down list to set the time between each action
- 5 Drop down list to choose the tractor transmission type

To insert an action in the headland sequence (2), click on an action icon (1). To replace an action in the sequence, click on the action icon to be removed, an ? icon will appear, then click on another action to replace the ?.

2.4 Tractor Settings Page

This page enables parameters to be set for working width, memory count activation, transmission, engine speeds and oil flow priority between the hitch and spool valves. The transmission settings only work on a tractor with a Dyna-VT (CVT) type transmission. The transmission type is selected in the drop down list in the headland settings page. All the values are transferred into the DCC when the memory is activated in Datatronic 3 or Power Performance 3.





In this area, set:

- The working width
- The memory count activation trigger (click on the button to change the event selection)

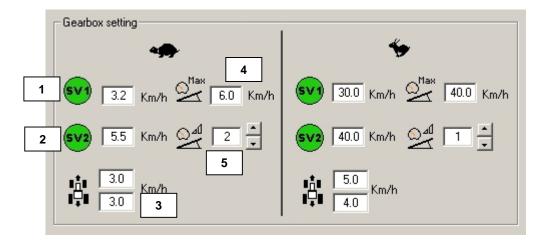


In this area, pre-set memory A & memory B engine speeds in rotation per minutes.



This area enables the oil flow priority to be set between the hitch and the hydraulic spool valves. (In this example, 10% hydraulic oil flow to the spool valves / 90% to the hitch flow)

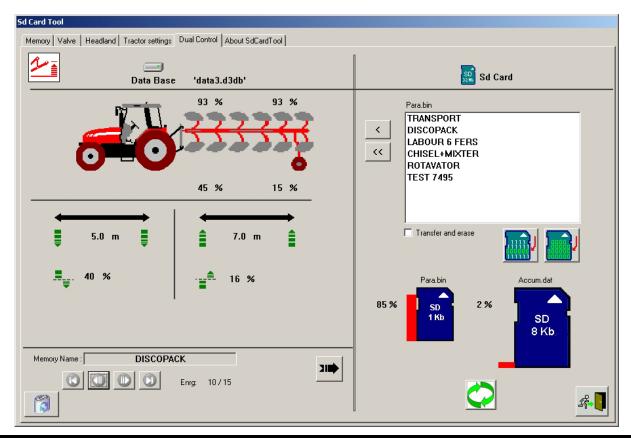
This area enables the transmission parameters for Low range and High range to be set on a Dyna-VT (CVT) type tractor.



- Set the cruise control speed SV1
- 2 Set the cruise control speed SV2
- 3 Set the start speed in forward and reverse directions
- 4 Set the Max. speed in pedal mode
- 5 Set the pedal mode response between 0 and 3

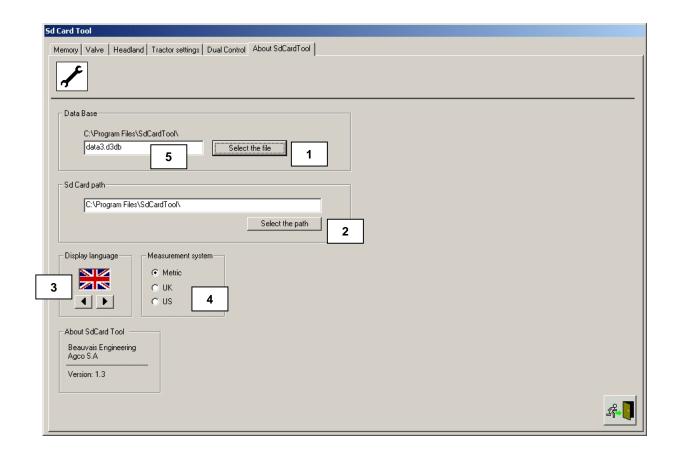
2.5 Dual Control Settings Page

This page displays the dual control settings and calibrations connected to the selected memory and transfer them to the SD Card for use in the tractor. It is not possible to change any settings in this page,



2.6 About SD Card Tool Page

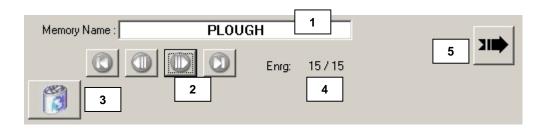
This page allows application settings to be made for the SD Card Tool Program. It also displays the program version number e.g. 1.3



- 1 This button enables navigation to and selection of the SD Card Tool PC database file, this is done through a normal Windows "Open file" command. To create a new database file, write a new name in box 5 followed by the extension ".d3db" and a new database file (.d3db) will be created.
- 2 This button enables selection of the SD Card path; this is done through a normal Windows "Open file" command.
- 3 Select the language, English, French or German.
- 4 Select measurement system, Metric, UK or US.

3. Area 2 Functions – Memory / Settings Navigation

3.1 PC Database Memory Navigation



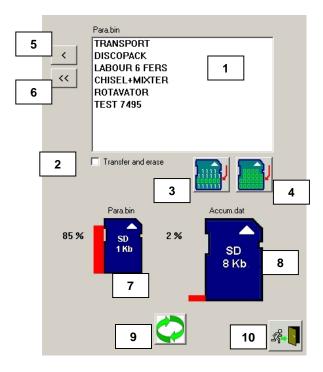
- 1 Displays the current memory name
- 2 Buttons to navigate through the PC data base
- 3 Button to delete the current displayed memory
- 4 Number of displayed memory and the total number of memories stored in the database
- 5 This button transfers the current displayed memory to the SD Card

3.2 Creating A New Memory

To create a new memory, first write a new name in the memory name box (1). A
new memory is created with all values set to 0 and adjustments can then be made
to the settings.

Area 3 Functions - SD Card

SD Card Management



- 1 -Window displaying the names of the memories stored on the SD Card.
- 2 -Check this box, to automatically erase the selected memory when it is transferred in PC database.
- This button erases the selected memory on the SD Card.
- This button erases all memories on the SD Card.
- This button transfers the selected memory in to the PC Data base.
- This button transfers all memories in to the PC Data base.
- 7 -This icon displays via a percentage figure and bar graph the amount of space used in the "accum.dat" file on the SD Card.
- 8 -This icon displays via a percentage figure and bar graph the amount of space used in the "para.bin" file on the SD Card.
- This button refreshes the list of memories displayed in the memory window 1. Use 9 this if the SD Card has been connected or inserted after the SD Card Tool application has been opened.
- 10 Exit button, to close the program.

4.2 Reading SD Card Memories

To read a SD Card memory, select it in the memory list by left clicking on it in list box (1) and then use button (5) to transfer it in to the PC database.

4.3 File Types

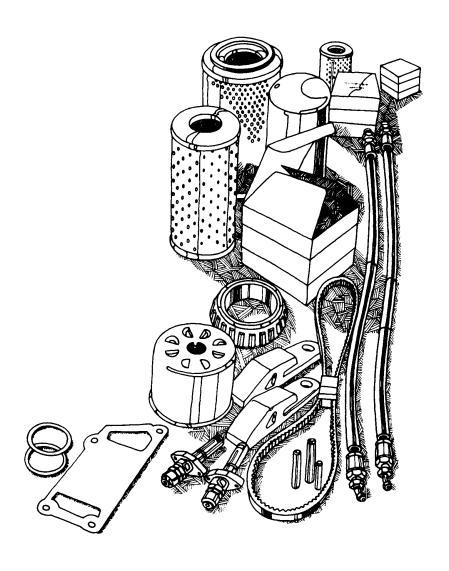
- Para.bin this file holds the information for Electro Hydraulic Valves, Headland Management, Tractor Settings and Dual Control.
- Accum.dat this file holds the accumulated values stored in Datatronic 3 / Power Performance 3 memories.

Please note that the file relating to the accumulated values is different to the one relating to the other parameters. For this reason, it is possible that the list of memories attached to the "Memory" page might not be the same as the list attached to the other pages.

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