LANDMARK
Spatial Solutions, LLC

LandMark Spatial Solutions GPS/Solo Forest Cheat Sheet

A. Basic GPS Wisdom
1. <u>DOPS</u> – Indication of satellite quality (the lower the value the better).
2. <u>WAAS</u> – Real-time correction signal, status bar will read DGPS. Uncorrected = GPS.
3. Need 4 SATs to get a 3D GPS location.

> DGPS HDOP: 0.9 10 of 11 Satellites 17684K
> N: 3,611,418.87 m E: 247,570.60 m

B. Field GPS Wisdom (Solo Forest)
1. <u>Solo Project File = .udf</u>

2. <u>3 Mapping Questions to ask yourself:</u>
   1. Is this feature Static or Dynamic? 🚩 **or** ⏱ (Static=stationary, Dynamic = in motion).
   2. Is this a new feature, or am I adding to one in progress? If new, select a feature from the **ALL** tab. If adding to a feature in progress, select the **In Progress** tab. **NEVER USE THE RECENT TAB!!!**
   3. If it is a new feature, is what I am mapping a Point, Line, or Area? What is the end product?

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3. <u>2 Toolbars</u>

   - Zoom
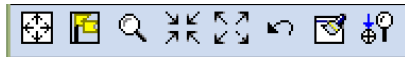
   - Mode

   Zoom To Buttons;
   Everything
   Logged Data
   Zoom Window
   IN
   OUT
   Previous (not Undo!)
   Refresh screen
   Follow GPS

4. <u>2 Dropdown Lists</u>

   - What are you logging with?
   - • Log With GPS Location
   - Log With Manual Stylus Point
   - Log With Laser

   - What are you trying to do with your stylus?
   - Stylus Selects Manual X,Y Location
   - Stylus Selects Basemap Feature
   - Stylus Selects Whole Feature
   - Stylus Deletes Multiple Points
   - • Stylus Selects Logged Data
   - Stylus Does Freehand Redlining
   - Stylus Edits Basemap Features

5. <u>6 Mode Toolbar Shortcut Buttons</u>
   - Single Flag – Starting something static
   - Create Grid
   - Flag with a Stopwatch – Logging dynamic data
   - Tape Measure – Measure lengths and bearings
   - Compass – Navigate
   - Export to Shapefile

6. <u>Solo Tricks</u>
   a. To clear the keyboard from any screen in Solo, simply touch anywhere else on the screen
   b. To check polygon acres, change your Stylus to Select Whole Feature and touch anywhere on the feature.
   c. To edit a feature or the nodes in a feature, simply double-click on that feature
   d. If you are trying to do something in Solo like select a GPS or basemap feature and it is not working, then check what your Stylus is set to

C. Office GPS Wisdom

Step #1 - Export shapefiles on handheld .
      a. Select File > More > Export.
      b. If necessary, change Project Settings by selecting Options > Projections > **General Tab** and make Position Display = Northing-Easting and Distance Units = meters. Verify that the **Zone tab** is set to the correct Coord. System (for example UTM, NAD 1983, Zone ??
      c. Check "Prompt for Filenames", Export, and rename each shapefile as it is created if necessary.

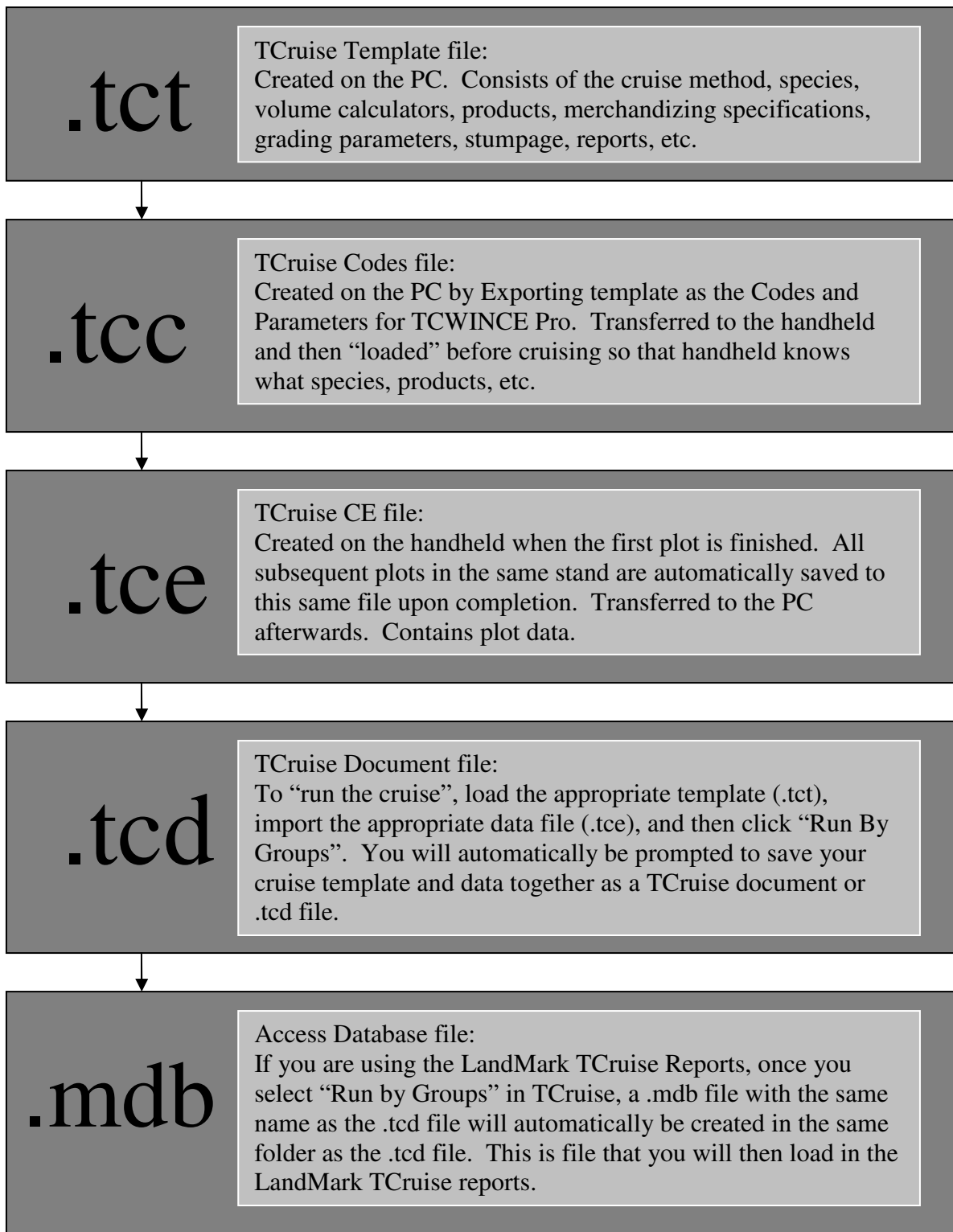**Step #2** - Synchronize handheld with PC.

Step #3 - Transfer Shapefiles from handheld to PC.
      - The Data Path in Windows Explorer to Handheld is as follows:
            Mobile Device\My Windows Mobile\My Documents\Solo\Export
      - Remember that you must transfer all 4 parts of the shapefile, .shp, .shx, .dbf, and .prj to PC.

D. Troubleshooting

1. **Lockups or "screen freeze"** - Perform a Soft Reset by holding down the On/Off button for 5 seconds.

2. **No GPS Signal** : (perform these steps in this order until problem is resolved.)
      a. To reset the Bluetooth connection in Solo, select Tools > GPS Configure > Restart.
      b. Make sure battery is plugged in and has been charged.
      c. Check Solo Forest settings to make sure Receiver type is set for Garmin 17N.
      d. Soft reset the Nomad.
      e. Call LandMark Spatial Solutions Tech Support at (866) 395-5440, x 2.

3. **Can't Sync with PC:**
      a. Make sure ActiveSync 4.5 is installed on your PC.
      b. Make sure USB cable is plugged in properly.
      c. Disable any other PDA sync programs such as HotSync that may block the Activesync connection.
      d. Restart your PC.
      e. Disable any Firewall settings that may be blocking Activesync.
      f. Call LandMark Spatial Solutions Tech Support at (866)395-5440, x2.

4. **Handheld won't turn OFF** : Keep pressing the On/Off button until the unit Soft Resets.

5. **Bluetooth Connection Drops**: In Solo Forest, select Tools > GPS Configure > Restart.

6. **TCruiseCE Default IME Error**: (ie TCruise drops to the background and will not open)
      Go to Start > Settings > System Tab > Memory > Running Programs Tab, and then select TCruiseCE and Activate. If you avoid ever selecting the X in the upper right hand corner of TCruiseCE, then you will probably never have this problem.

TCruise Flowchart

.tct

TCruise Template file:
Created on the PC. Consists of the cruise method, species, volume calculators, products, merchandizing specifications, grading parameters, stumpage, reports, etc.

.tcc

TCruise Codes file:
Created on the PC by Exporting template as the Codes and Parameters for TCWINCE Pro. Transferred to the handheld and then "loaded" before cruising so that handheld knows what species, products, etc.

.tce

TCruise CE file:
Created on the handheld when the first plot is finished. All subsequent plots in the same stand are automatically saved to this same file upon completion. Transferred to the PC afterwards. Contains plot data.

.tcd

TCruise Document file:
To "run the cruise", load the appropriate template (.tct), import the appropriate data file (.tce), and then click "Run By Groups". You will automatically be prompted to save your cruise template and data together as a TCruise document or .tcd file.

.mdb

Access Database file:
If you are using the LandMark TCruise Reports, once you select "Run by Groups" in TCruise, a .mdb file with the same name as the .tcd file will automatically be created in the same folder as the .tcd file. This is file that you will then load in the LandMark TCruise reports.

NOTE: Always type the file extension when naming or saving any TC file on the desktop.

Summary RTI Instructions using GPS Data

A. GPS a Stand

Follow the directions in the manual for this activity.

B. Create a Cruise Grid in the selected Stand

1. Make your Stylus = Stylus Selects Logged Data
2. Click on the Stand that you GPSed above.
3. Check your acres for that Stand
4. Click Tool > Generate Grid
5. Click Change Settings and enter the desire chain spacing for that cruise.
6. Set Alignment point (if desired) by selecting Alignment Point > Map Tab > Menu > Zoom to Logged Data and then select the corner to align on. Click OK and OK.
7. Change the Waypoint Icon (if desired) by double tapping on the default icon and then select the Symbol box and select a new Icon. Select OK..
8. If you want to have Solo push the Stratum to TCruise automatically, type the Stratum name in the Waypoint Label box and insert a ; (ex. PlantedPine;). Select OK.
9. Uncheck Output Gridlines (if needed).
10. Select Generate Grid. Change the Start Index and add a Prefix if needed. (NOTE: Make sure you have unique Plot Ids if you are appending different grids from multiple polygons.) Select OK and then OK to the waypoint filename and location. The grid should be displayed.

C. Open TCruise and Initiate RTI in Solo Forest

1. Push your TCruiseCE button
2. Select Import a code-param file and then click on that file and then click OK. Select Edit > Tract Info and input the Cruise Date and Cruisers ID.   Select OK. Select Edit > Current Params and verify your cruise method. Select OK.
3. Select the GIS button in TCruiseCE or push your Solo Forest Button.
4. Click Tool > More > RTI
5. Make your Stylus = Stylus Selects Logged Data
6. Use the Zoom Window tool 🔍 to zoom into where you want to start cruising.
7. Click on the Navigate Tool 🧭 📱 and then click on the Map tab and select the grid point you want to go to and then click OK and start navigating.
8. When you get near the plot, slow down and little and when you are asked "Do you want to Log a Plot in TCruise", select "Yes".
9. Click OK to the Plot Info screen and then enter your Cruise data using the spreadsheet or Ops > Tally screen.
10. Click >F at the end of the first plot and then name that Cruise and Select the TCruiseCE folder as the Folder. Click OK.
11. Select the GIS button in TCruiseCE or push your Solo Forest button and then Cancel out of the Navigate screen and select your next plot (or the last plot in the cruise line) in the Map tab and then navigate to your next plot.

D. Load a Photo or Topo

Do exactly the same thing you did for loading a shapefile except choose the correct folder and make your Filetype = .tif or .sif.

Summary RTI Instructions using Shapefiles

A. Load the Digitized Shapefile
1. Select View > Map Layers.
2. At the bottom of the Layers screen, click the Add Layer Button .
3. Open the Folder that contains your shapefiles. Use the Up Folder button in the upper left hand corner to help locate that folder.
4. Make your file Type = Arc Shapefile (*.shp).
5. Select the appropriate shapefile by clicking on it and then clicking OK.
6. Click OK again in the Layers screen.
7. Click Skip on the Display a Legend Screen.
8. Select Yes to the Basemap Config File Question and then click OK to the filename and location for that file.
9. Click Zoom to Everything on the Zoom toolbar if you do not have GPS hooked up to display the shapefile.

B. Load the Grid Waypoint File (if already created)
1. Select File > Settings
2. Select the Files Tab
3. Select Browse under "Waypoint File" and load the correct .WAY file.

C. Create a Cruise Grid in the selected Stand
1. Make your Stylus = Stylus Selects Basemap Feature
2. Click on the Stand that you located above.
3. Check your acres for that Stand by clicking the gray box inside the double red line.
4. Click Tool > Generate Grid
5. Click Change Settings and enter the desire chain spacing for that cruise.
6. Set Alignment point (if desired) by selecting Alignment Point > Map Tab > Menu > Zoom to Everything and then select the corner to align on. Click OK and OK.
7. Change the Waypoint Icon (if desired) by double tapping on the default icon and then select the Symbol box and select a new Icon. Select OK..
8. If you want to have Solo push the Stratum to TCruise automatically, type the Stratum name in the Waypoint Label box and insert a ; (ex. PlantedPine;). Select OK.
9. Uncheck Output Gridlines (if needed).
10. Select Generate Grid. Change the Start Index and add a Prefix if needed. (NOTE: Make sure you have unique Plot Ids if you are appending different grids from multiple polygons.) Select OK and then OK to the waypoint filename and location. The grid should be displayed.

D. Open TCruise and Initiate RTI in Solo Forest
1. Push your TCruiseCE button
2. Select Import a code-param file and then click on that file and then click OK. Select Edit > Tract Info and input the Cruise Date and Cruisers ID.   Select OK. Select Edit > Current Params and verify your cruise method. Select OK.
3. Select the GIS button in TCruiseCE or push your Solo Forest Button.
4. Click Tool > More > RTI
5. Make your Stylus = Stylus Selects Logged Data
6. Use the Zoom Window tool to zoom into where you want to start cruising.
7. Click on the Navigate Tool and then click on the Map tab and select the grid point you want to go to and then click OK and start navigating.
8. When you get near the plot, slow down and little and when you are asked "Do you want to Log a Plot in TCruise", select "Yes".
9. Click OK to the Plot Info screen and then enter your Cruise data using the spreadsheet or Ops > Tally screen.
10. Click >F at the end of the first plot and then name that Cruise and Select the TCruiseCE folder as the Folder. Click OK.
11. Select the GIS button in TCruiseCE or push your Solo Forest button and then Cancel out of the Navigate screen and select your next plot (or the last plot in the cruise line) in the Map tab and then navigate to your next plot.

E. Load a Photo or Topo
Do exactly the same thing you did for loading a shapefile except choose the correct folder and make your Filetype = .tif or .sif.