

ArcPad User Guide

Unit Power (Juno SB)

1. To turn on the unit, hold the power button on the upper left side of the unit for three seconds (until the screen turns on).
2. To turn off the unit, hold the power button for three seconds (a count-down will appear on the screen.)
3. In order to save the battery, when not using the unit during a project (say while driving a distance from one area to another), press the power button once to turn off the screen. Your data will be safe! Press the power button once to turn the screen on again when needed.

Collecting data with the Trimble Juno SB units

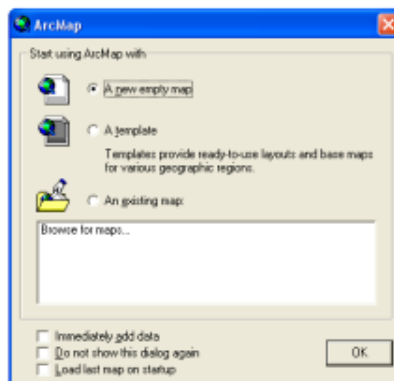
Helpful hints before you begin...

- Define the goals of your project, what do you want your students to learn?
- Acquire the GIS data (background maps, aerial photos, existing geology data) needed to address your goals. (Please refer to the Getting My GIS Data hand out)
- Stress to the students to be patient with the speed of the units, tap an item once then wait. Needlessly taping the screen 2 or more times may cause the unit to lock up.
- Use this technology as a tool to get outdoors and collect data! The focus must be on learning, understanding, and having fun with geology.

I. Starting a Project

A. Start-up directions

1. Turn on unit (Power button top of left side)
2. Start
3. Programs
4. ArcPad7.0
5. ArcPad window pops up-A new empty map-OK



6. Ready to build a map!

B. Saving your data

1. Tap the drop-down arrow next to the folder icon in the upper left-hand corner
2. Tap Save Map As
3. Name your map
4. Tap the Location drop-down and tap SD-MMC card

**Always save ALL data to SD-MCC card. Save often!*

II. How to...

A. Zoom

1. Zoom in by tapping magnifying glass with + in it
 - Draw a backwards “L” on screen until appropriate size
2. Zoom out by tapping drop-down arrow-tap Zoom Out (magnifying glass with -)
 - Draw a backwards “L” on screen until appropriate size
3. Pan allows you to move the view without changing scale
 - Tap drop-down arrow next to zoom and tap Pan (hand)

B. View Table of Contents

1. Tap icon of three stacked yellow rectangles

C. Reorder Layers

Say you have two layers, the counties_iowa layer and an air photo of the Cedar_Falls_Quadrangle. You may not be able to see the quadrangle on the map because the counties_iowa layer is on top of it. You want to view the Cedar_Falls_Quadrangle on top of the counties_iowa.

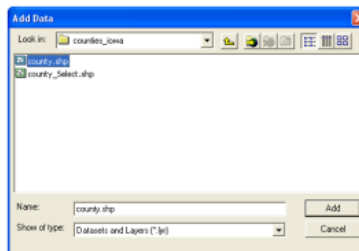
1. Access Table of contents
2. Tap the Cedar_Falls_Quadrangle to highlight it
3. Tap the upward arrow to the right of the screen
4. Tap OK

D. Activate GPS

1. Tap satellite icon
2. A screen appears: The GPS is not active. Would you like to activate it now?
3. Tap yes.
4. It may take several minutes for the satellites to acknowledge the unit. Be patient!
5. When the red icon on your map turns into cross-hairs, you are ready to take points!

II. Adding Data

1. Tap the + in the yellow diamond icon
2. Tap folder icon
3. Tap plus arrow next to SD-MMC card
4. Tap wanted file (ex. counties_iowa) and tap OK
5. Tap shapefile (ex. COUNTY.SHP)
6. Repeat for needed layers



III. Creating Data

A. Creating a Point, Polyline, or Polygon

1. Tap the drop-down arrow next to the folder in the left-hand corner
2. Tap New
3. Tap Shapefile
4. Set Type to Point, Polyline, or Polygon with regards to your project
5. Tap gray plus sign
6. Name your Field (ex. FlowerBed)
7. Tap OK
8. Repeat 5-7 for additional attributes (ex. flower species)
9. Name your Shapefile Layer
10. Tap drop-down arrow for Location and tap SD-MMC card
11. Tap Save

B. Taking a point (e.g. boulders, trees, water well, gauging station, etc.)

1. Activate GPS
2. Tap the Editor drop-down arrow (looks like a pencil) and tap your shapefile to highlight it
3. Tap the drop-down arrow next to the point icon and tap Point
4. Stand at the location where you want to take a point (say a stop sign if you worked for the city and wanted to GPS signage) and tap the satellite icon with the point
5. Tap the green arrow
6. Enter any attributes (ex. intersection for this stop sign)
7. Tap OK
8. To stop editing, tap the dropdown next to the editor icon and unselect the layer you are working on.

C. Taking a line (a road, gold vein, stream, etc.)

1. Activate GPS
2. Tap the Editor drop-down arrow and tap your shapefile to highlight it
3. Tap the drop-down arrow next to the line icon and tap Polyline
4. Stand at the location where you want to start your line (say you wanted to map a new sidewalk) and tap the satellite icon with the line. Continue tapping at even intervals until you reach the end of your line. Be sure to make a point anytime you change direction
5. Tap the green arrow
6. Enter attributes (ex. type of sealant on the sidewalk)
7. Tap OK

D. Making a polygon (a limestone quarry, pond, forest)

1. Activate GPS
2. Tap the Editor drop-down arrow and tap your shapefile to highlight it
3. Tap the drop-down arrow next to the point icon and tap Polygon
4. Stand at the location where you want to make a polygon (say the perimeter of a county park) and tap the satellite icon with the line. Continue tapping until you near your starting location
5. Tap the green arrow
6. Enter attributes (ex. type of fencing)
7. Tap OK

IV. Taking pictures and/or video with the handheld units

A. Pictures

1. Stand alone pictures

- Be sure that ArcPad is set up to use a camera
 - Tap Toolbar icon
 - Tap Options
 - Tap Camera and choose settings
 - Camera: Windows Mobile Camera
 - Default Pictures Path: /My Documents/My Pictures
 - Filename Prefix: Photo
 - Picture Quality: Leave default setting
 - Button: A5
 - Tap ok
- Press the button on the lower right side of your unit that activates the camera
- Hold down the camera button to take a picture

2. Pictures for your data

- Be sure that ArcPad is set up to use a camera
- Take a photo
- While creating attributes for your data choose the picture option
- Tap the file folder to access Pictures/Videos
- Tap desired photo
- Tap OK

B. Video

1. Start Camera
2. Hold down the Camera button until you see that seconds are being taken
3. Your video will be on the SD-MCC card

V. Transferring Data

A. From computer to unit

1. Remove SD-MCC card from unit and put into docking port in computer
2. Access IGEIN folder
3. Copy and Paste desired data from the IGEIN folder to the Removable Disk (the SD-MCC card)

B. From unit to computer

1. Remove SD-MCC card from unit and put into docking port in computer
2. Access IGEIN folder
3. Copy and Paste your data from the Removable Disk to the IGEIN folder

VI. I've collected data now what?

- A. Interacting with the University of Northern Iowa and the K-12 GIS kits
- B. Accessing your data on the Iowa Geoscience Education Information Network (IGEIN)
 - Developing website, www.exploreiowageology.org

IV. Troubleshooting

A. Unit Froze

1. Slow down! Working too fast may cause units to freeze up
2. If your unit remains frozen, turn the unit off, take out the battery, and replace it. Restart your unit. You may lose some data. Save often.

B. Cannot connect GPS

1. Tap drop-down arrow next to satellite icon
2. Tap GPS Preferences
3. Select COM4:GPS in Port drop-down

C. Losing signal

1. Too close to buildings – Move to open area
2. Too much tree/cloud cover – Move to open area

D. Maintenance

1. Don't leave the units in the sun
2. The units are not water-proof. Please be careful around streams, in the rain, etc...
3. Your unit's battery should last most of the day, but remember to charge it later.