MobileMapper 100 and ArcPad 10

This application note offers assistance with the configuration of ArcPad 10 on the MobileMapper 100. It is a supplement to instruction manuals and publications that are available from Ashtech and ESRI. The ArcPad Install Guide provides information about installing ArcPad 10 on the PC and use of the ArcPad Deployment Manager.



After ArcPad 10 is installed on the MobileMapper 100 click on Start and then Settings.



Tap on System

🛃 System		🏹 🗲 8:03	×
Certificates	5	Encryption	
	Customer Feedback		
Error Reporting	-	Managed Programs	Ta Gł
	External GPS	1	
Memory	- 🌮	Remove Program	ms
<u>_</u>	Regional Setting	⁹⁵	
Screen Back		Task Manager	·
😹 Settings		🏹 🗲 8:04	OK
GPS Settings			
Choose the por obtain GPS data will need to com	t that program a. Any program municate with	s will use to 1 that uses GPS this port.	
GPS program po	ort:		_ (
(None)			- N
			n

Tap on External GPS

On the Programs tab choose None for the GPS program port.

Programs	Hardware	Access	

<i>≣</i> Settings 👘 🏹 📢 8:05 🕅	
GPS Settings	
Specify the hardware port to which your GPS device is connected. For more information, see the GPS device manufacturer's documentation.	On the Hardware tab
GPS hardware port:	GPS Hardware port:
(None) 🔹	
Baud rate: 4800 ▼	Baud rate: 4800
Programs Hardware Access	
🐉 Settings 🛛 🗰 🏹 📢 8:08 🕅	
GPS Settings	
Windows Mobile manages access to your GPS device and allows multiple programs to obtain GPS data simultaneously. If you clear this check box, some programs may not be able to obtain GPS data.	On the Access tab put a check in the box.
Manage GP5 automatically (recommended)	Click OK and X as appropriate to return to the desktop.
Programs Hardware Access	

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GPS Hardware port: (None)

🞥 GNSS Toolbox 🛛 💭 式 8:15 🕅	
Image: OptionsImage: OptionsImage: OptionsImage: OptionsOptionsImage: OptionsImage: Options <td>Open the GNSS Toolbox and tap NMEA Output</td>	Open the GNSS Toolbox and tap NMEA Output
Trouble About Turn off GNSS shooting	
■ GN55 Toolbox	
Port: COM2 Baud Rate: 9600	On the NMEA Output tab choose COM2 and a Baud rate of 9600

NMEA Output	Messages	

On the messages tab there are alternative choices that work. Both of the messages choices illustrated here will work with ArcPad 10. Note: Some software changes the NMEA message settings. When using a variety of software return to the NMEA messages settings and check the appropriate boxes.

😹 GNSS Toolbox	₩ Yx	€ 8:1	9 OK
GGA	1 sec	•	
🖌 GLL	1 sec	•	
GSA	1 sec	•	
GSV	1 sec	-	
	1 sec	-	
	1 sec	-	
VTG	1 sec	-	
ZDA	1 sec		
🔐 GN55 Toolbox	#* \].	€ 10:2	22 OK
GGA	1 sec	•	
	1 sec	*	
GSA	1 sec	-	
GSV GSV	1 sec	-	
RMC	1 sec	-	
RRE	1 sec	-	
VTG	1 sec	•	
ZDA	1 sec	•	

This group of NMEA messages will work with ArcPad.

This group of NMEA messages will work with ArcPad.

😹 GNSS Toolb	ох	-	Y,	€	8:31	OK
Tracking mode:						
GPS/GLONASS L1				•]	
Use SBAS						
Elevation mask:	5			deg		

Choose GNSS Settings appropriate for the work environment and the resources and options available.

Test alternatives and use the choice that consistently provides the best results in the work environment.

🦉 ArcPad - Until 🛛 🗰 🏹 🃢 8:34	6 OK
ArcPad Options	
Default Maps & Data Path	
\Storage Disk	
Public Files Path	
\Program Files\ArcPad	
Other Additional Paths Applets	•
\Program Files\ArcPad\Applets	

In ArcPad Options set the paths.

Changes require an exit from ArcPad. When ArcPad is opened again the changes will take effect..





Use GPS Preferences to set ArcPad to use the GPS receiver.

The protocol will be Ashtech Postprocessing if GPSDifferential is installed.

Changes made in GPS Preferences require an exit from ArcPad. The changes will be used when ArcPad is started again.



GPS Preferences		
Antenna Height [2] m
Geoid Separation	-27.131	m
Use Map Units for H	eight Units	
Height Units Mete	r:m	л Ц
Use Height In Datum	n Transform	

🗶 GPS Height	🔏 Datum	🔔 Alerts	•	۲
db 😣 👘				٠

Antenna height is the typical height of the GPS antenna above the ground.

The geoid separation is the difference between the ellipsoid height measured by the GPS receiver and NAVD88 elevations.

The NGS Geodetic Toolkit provides a way to compute the geiod separation for any location in the USA.

http://www.ngs.noaa.gov/cgibin/GEOID_STUFF/geoid09_prompt 1.prl

After making changes exit from ArcPad and start it again.

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GPS Initialization String

& GPS Height & Datum Alerts				
& GPS Height & Datum 🔥 Alerts				
A state of the second stat	🔏 GPS Height	K Datum	Alerts	

When using SBAS corrections best results are obtained with the GPS Datum set to D_ITRF_2000

😹 ArcPad - Until		¶× €	8:48	OK
GPS Preferences				
🕦 GPS Datum				
D_NAD_1983_NSRS200	7			•

🔏 GPS Height	🔏 Datum	🔔 Alerts	••
db 😵			-

Most RTK base stations and networks in the USA transmit corrections related to NAD83(CORS96).

When using RTK or differential corrections that are related to a modern version of NAD83 best results are obtained with the GPS Datum set to D_NAD_1983_NSRS2007

Changes made to the GPS Preferences require an exit from ArcPad. The changes will take effect when ArcPad is started again.



ArcPad 10 is computing a position and is now ready for field work.

Please direct questions, comments, and suggestions for improvements to this document to Phil Stevenson.

This is not intended to replace the instruction manuals and publications that are available from Ashtech and ESRI.

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Phil Stevenson April 21, 2011