

Table of contents:

Obsah

1. Remote Commands
 1. Platform support
 2. DISPLAY A TEXT MESSAGE
 3. DISPLAY A QUESTION
 4. DISPLAY A CHAT MESSAGE
 5. SEND DESTINATION AND/OR WAYPOINT(S) AND/OR DEPARTURE
 6. NAVIGATION ROUTE STATISTICS
 7. NAVIGATION INFORMATION
 8. STOP NAVIGATION
 9. GET LAST KNOWN GPS POSITION
 10. NAVIGATION SOUND
 11. SOUND WARNINGS (OBSOLETE - SEE NAVIGATION INFORMATION)
 12. CHANGE APPLICATION WINDOW SIZE
 13. MINIMIZE APPLICATION WINDOW
 14. MAXIMIZE APPLICATION WINDOW
 15. RESTORE MINIMIZED/MAXIMIZED APPLICATION WINDOW SIZE
 16. EXIT THE APPLICATION
 17. START/STOP SENDING GPS POSITIONS
 18. START/STOP RECEIVING GPS POSITIONS
 19. SET APPLICATION MODE
 20. MAP ICONS
 21. MAP POSITION AND ZOOM
 22. GET REMOTE SOFTWARE VERSION
 23. GET COMMUNICATION PROTOCOL VERSION

1. Remote Commands

COM/TCPIP connection has to be set up in Pocket/PC Navigator settings. Or in Android TCPIP server running on port 4242. This page refers only to "no VTU" type of connection.

Every command starts with '\$' and ends with '\n' or '\r\n'.

1.1. Platform support

Command	Windows	Android
DISPLAY A TEXT MESSAGE	yes	yes
DISPLAY A QUESTION	yes	yes
DISPLAY A CHAT MESSAGE	yes	no
SEND DESTINATION AND/OR WAYPOINT(S) AND/OR DEPARTURE	yes	yes *PCD format is not supported
NAVIGATION ROUTE STATISTICS	yes	yes
NAVIGATION INFORMATION	yes	no

STOP NAVIGATION	yes	yes
GET LAST KNOWN GPS POSITION	yes	yes
NAVIGATION SOUND	yes	no
SOUND WARNINGS (OBSOLETE - SEE NAVIGATION INFORMATION)	yes	no
CHANGE APPLICATION WINDOW SIZE	yes	no
MINIMIZE APPLICATION WINDOW	yes	yes
MAXIMIZE APPLICATION WINDOW	yes	yes
RESTORE MINIMIZED/MAXIMIZED APPLICATION WINDOW SIZE	yes	no
EXIT THE APPLICATION	yes	yes
START/STOP SENDING GPS POSITIONS	yes	no
START/STOP RECEIVING GPS POSITIONS	yes	no
SET APPLICATION MODE	yes	yes
MAP ICONS	yes	no
MAP POSITION AND ZOOM	yes	yes
GET REMOTE SOFTWARE VERSION	yes	yes
GET COMMUNICATION PROTOCOL VERSION	yes	yes

1.2. DISPLAY A TEXT MESSAGE

1.2.1. Format

```
$message="message";instant
```

1.2.2. Description

shows a message on remote device

1.2.3. Protocol version

- 1.0.0 or later
- 2.0.3 or later for "instant parameter"

1.2.4. Availability

- tcp/ip or com

1.2.5. Parameters

- parameter is a text enclosed in quotation marks to display on remote device
- when parameter "instant" is used the message is shown immediately; placeholder icon is displayed

otherwise

1.2.6. Return values:

- "ok" on success or "error" when failed
- "busy" when the remote device is busy responding to another command

1.3. DISPLAY A QUESTION

1.3.1. Format

```
$message="message";ask;instant
```

1.3.2. Description

shows a question on remote device (can be answered with "yes" or "no")

1.3.3. Protocol version

- 1.0.0 or later
- 2.0.3 or later for "instant parameter"

1.3.4. Availability

- tcp/ip or com

1.3.5. Parameters

- parameter is a text enclosed in quotation marks to display on remote device
- when parameter "instant" is used the message is shown immediately; placeholder icon is displayed otherwise

1.3.6. Return values

- "yes" or "no" as the answer to question on success or "error" when failed
- "busy" when the remote device is busy responding to another command

1.4. DISPLAY A CHAT MESSAGE

1.4.1. Format

```
$chat="message"
```

1.4.2. Description

- sends a new message to chat window

1.4.3. Protocol version

- 2.0.0 or later

1.4.4. Availability

- tcp/ip or com

1.4.5. Parameters

- parameter is a text enclosed in quotation marks to display on remote device

1.4.6. Return values

- none

1.5. SEND DESTINATION AND/OR WAYPOINT(S) AND/OR DEPARTURE

1.5.1. Format

```
$destination=50.074525,14.409428;...;50.074421,14.409226;"Text";ask;navigate  
;departure;instant  
$destination=50.074525,14.409428,"waypoint  
name";...;50.074421,14.409226;"Text";ask;navigate;departure;instant  
$destination=clear
```

1.5.2. Description

- sends routing points with possible text message/question and possibility to start navigation on remote device
- each routing point can have a name
- use format PCD:TN131XY instead of a coordinate value to place the routing point on given postcode
- clear to clear all waypoints

1.5.3. Protocol version

- 1.0.0 or later
- 1.4.1 or later for \$destination=clear
- 2.0.1 or later departure parameter added (first coordinate is departure point)
- 2.0.3 or later for "instant parameter"
- 2.0.4 or later for waypoints names
- 2.0.5 or later to use postcodes as routing point location

1.5.4. Availability

- tcp/ip or com

1.5.5. Parameters

- route points order is waypoint1;...;waypointN;destination
- use parameter "Text" to display text
- use parameters "Text";ask to display question
- parameter "navigate" to start navigation on remote device
- when parameter "instant" is used the message is shown immediately; placeholder icon is displayed otherwise

1.5.6. Return values

- for a message "ok" on success or "error" when failed
- for a question "yes" or "no" as the answer to question on success or "error" when failed
- "failed" when a routing point could not be added (no road nearby)
- "busy" when the remote device is busy responding to another command
- "small buffer" when the command is too long

1.6. NAVIGATION ROUTE STATISTICS

1.6.1. Format

```
$navigation_statistics
```

1.6.2. Description

- returns distance (in meters) or time (in seconds) to destination and nearest waypoint

1.6.3. Protocol version

- 2.0.2 or later

1.6.4. Availability

- tcp/ip or com

1.6.5. Parameters

- none

1.6.6. Return values

- distance to waypoint, time to waypoint, distance to destination, time to destination
- example: 1000,60,2000,122
- "not navigating" when not currently navigating

1.7. NAVIGATION INFORMATION

1.7.1. Format

```
$navigation_info=recalculation_warning:on
$navigation_info=recalculation_warning:off
```

```
$navigation_info=sound_warning:on  
$navigation_info=sound_warning:off  
$navigation_info=waypoint_info:on  
$navigation_info=waypoint_info:off
```

1.7.2. Description

- turns specific navigation informations on or off
- "recalculation_warning:on" - returns "recalculating" whenever the route is recalculated
- "sound_warning:on" - enables sound warning before every navigation voice command (same as \$sound_warning=start)
- "waypoint_info:on"
 - returns "waypoint 1 reached", "waypoint 2 reached", "waypoint N reached" and "destination reached" whenever the route point is reached or
 - returns "waypoint 1 missed", "waypoint 2 missed", "waypoint N missed" whenever the waypoint is missed

1.7.3. Protocol version

- 2.0.2 or later (recalculation_warning, sound_warning)
- 2.0.4 or later (waypoint reached info)
- 2.1.1 or later ("lost" status)

1.7.4. Availability

- tcp/ip or com

1.7.5. Parameters

- none

1.7.6. Return values

- "ok" on success or "error" when failed
- "busy" when the remote device is busy responding to another command
- "sound" when a navigation voice command occurs
- "recalculating" when a recalculation occurs
- "lost" when a route should be recalculated but is forbidden

1.8. STOP NAVIGATION

1.8.1. Format

```
$stop_navigation
```

1.8.2. Description

- stops navigation on remote device

1.8.3. Protocol version

- 1.2.0 or later

1.8.4. Availability

- tcp/ip or com

1.8.5. Parameters

- none

1.8.6. Return values

- "ok" on success or "error" when failed
- "busy" when the remote device is busy responding to another command

1.9. GET LAST KNOWN GPS POSITION

1.9.1. Format

```
$last_position
```

1.9.2. Description

- get last known gps data from remote device

1.9.3. Protocol version

- 1.2.0 or later

1.9.4. Availability

- tcp/ip or com

1.9.5. Parameters

- none

1.9.6. Return values

- when last position is known:
latitude(degrees),longitude(degrees),altitude(meters),speed(km/h),course(degrees)
- when last position is unknown: "unknown"
- "error" when an error occurred
- "busy" when the remote device is busy responding to another command

1.10. NAVIGATION SOUND

1.10.1. Format

```
$sound_volume=volume
```

1.10.2. Description

- set sound volume on remote device

1.10.3. Protocol version

- 1.2.0 or later

1.10.4. Availability

- tcp/ip or com

1.10.5. Parameters

- "on" - system volume does not change and navigation messages are played
- "off" - system volume does not change and navigation messages are not played
- volume values from 0 to 100 set operation system sound volume to 0-100 percent

1.10.6. Return values

- "ok" on success or "error" when failed
- "busy" when the remote device is busy responding to another command

1.11. SOUND WARNINGS (OBSOLETE - SEE NAVIGATION INFORMATION)

1.11.1. Format

```
$sound_warning=start  
$sound_warning=stop
```

1.11.2. Description

- request to send warning before a sound is played

1.11.3. Protocol version

- 1.2.0 or later

1.11.4. Availability

- tcp/ip or com

1.11.5. Parameters

- start - starts sending sound warning
- stop - stops sending sound warning

1.11.6. Return values

- "ok" on success or "error" when failed
- "busy" when the remote device is busy responding to another command

1.12. CHANGE APPLICATION WINDOW SIZE

1.12.1. Format

```
$window=left,top,width,height,[border|noborder]
```

1.12.2. Description

- set remote device application window size

1.12.3. Protocol version

- 1.0.0 or later

1.12.4. Availability

- tcp/ip or com

1.12.5. Parameters

- values are in pixels

1.12.6. Return values

- "ok" on success or "error" when failed
- "busy" when the remote device is busy responding to another command

1.13. MINIMIZE APPLICATION WINDOW

1.13.1. Format

```
$minimize
```

1.13.2. Description

- minimize remote device application window

1.13.3. Protocol version

- 1.0.0 or later

1.13.4. Availability

- tcp/ip or com

1.13.5. Parameters

- none

1.13.6. Return values

- "ok" on success or "error" when failed
- "busy" when the remote device is busy responding to another command

1.14. MAXIMIZE APPLICATION WINDOW

1.14.1. Format

```
$maximize
```

1.14.2. Description

- maximize remote device application window

1.14.3. Protocol version

- 1.0.0 or later

1.14.4. Availability

- tcp/ip or com

1.14.5. Parameters

- none

1.14.6. Return values

- "ok" on success or "error" when failed
- "busy" when the remote device is busy responding to another command

1.15. RESTORE MINIMIZED/MAXIMIZED APPLICATION WINDOW SIZE

1.15.1. Format

```
$restore
```

1.15.2. Description

- restore remote device minimized or maximized application window

1.15.3. Protocol version

- 1.1.0 or later

1.15.4. Availability

- tcp/ip or com

1.15.5. Parameters

- none

1.15.6. Return values

- "ok" on success or "error" when failed
- "busy" when the remote device is busy responding to another command si

1.16. EXIT THE APPLICATION

1.16.1. Format

```
$exit
```

1.16.2. Description

- exits the application

1.16.3. Protocol version

- 2.0.2 or later

1.16.4. Availability

- tcp/ip or com

1.16.5. Parameters

- none

1.16.6. Return values

- "ok" on success or "error" when failed

1.17. START/STOP SENDING GPS POSITIONS

1.17.1. Format

```
$gps_sending=start;nmea  
$gps_sending=stop
```

1.17.2. Description

- start/stop sending current nmea data

1.17.3. Protocol version

- 1.2.0 or later

1.17.4. Availability

- tcp/ip or com

1.17.5. Parameters

- start;nmea: start sending gps positions in nmea format
- stop: stop sending gps positions

1.17.6. Return values

- for start;nmea: gps positions in nmea format or "error" when failed
- for stop: "ok" on success or "error" when failed
- "busy" when the remote device is busy responding to another command

1.18. START/STOP RECEIVING GPS POSITIONS

1.18.1. Format

```
$gps_receiving=start  
$gps_receiving=stop
```

1.18.2. Description

- start/stop receiving nmea data

1.18.3. Protocol version

- 1.3.0 or later

1.18.4. Availability

- tcp/ip or com

1.18.5. Parameters

- start: start receiving gps positions in nmea format
- stop: stop receiving gps positions

1.18.6. Return values

- "ok" on success or "error" when failed
- "busy" when the remote device is busy responding to another command

1.19. SET APPLICATION MODE

1.19.1. Format

```
$set_mode=day  
$set_mode=night
```

1.19.2. Description

- set application mode

1.19.3. Protocol version

- 1.2.0 or later

1.19.4. Availability

- tcp/ip or com

1.19.5. Parameters

- day: show application in day mode colors
- night: show application in night mode colors

1.19.6. Return values

- "ok" on success or "error" when failed
- "busy" when the remote device is busy responding to another command

1.20. MAP ICONS

1.20.1. Format

```
$icon_new=42;50.074525,14.409428;"C:\My Pictures\Icons\icon1.ico"  
$icon_new=42;50.074525,14.409428;"C:\My Pictures\Icons\icon1.ico";"Text"  
$icon_move=42;50.074800,14.409627  
$icon_move=42;50.074800,14.409627;"Text"  
$icon_delete=42  
$icon_delete=all
```

1.20.2. Description

- create, move and delete an icon on map

1.20.3. Protocol version

- 1.4.0 or later

1.20.4. Availability

- tcp/ip or com

1.20.5. Parameters

- icon_new command : icon number, coordinate, path, [text]
- icon_move command : icon number, coordinate
- icon_delete command : icon number
- icon_delete command : "all" to remove all icons

1.20.6. Return values

- "ok" on success or "error" when failed
- "busy" when the remote device is busy responding to another command

1.21. MAP POSITION AND ZOOM

1.21.1. Format

```
$map_set_position=50.074525,14.409428,50  
$map_set_position=50.074525,14.409428
```

1.21.2. Description

- sets map view position to given coordinate and zoom

1.21.3. Protocol version

- 2.1.0 or later

1.21.4. Availability

- tcp/ip or com

1.21.5. Parameters

- latitude, longitude, zoom (zoom can be omitted)

1.21.6. Return values

- "ok" on success or "error" when failed

1.22. GET REMOTE SOFTWARE VERSION

1.22.1. Format

```
$software_version
```

1.22.2. Description

- returns remote device application software version

1.22.3. Protocol version

- 1.0.0 or later

1.22.4. Availability

- tcp/ip or com

1.22.5. Parameters

- none

1.22.6. Return values

- software version (e.g. 8.0.42) or "error" when failed
- "busy" when the remote device is busy responding to another command

1.23. GET COMMUNICATION PROTOCOL VERSION

1.23.1. Format

```
$protocol_version
```

1.23.2. Description

- returns communication protocol version

1.23.3. Protocol version

- 1.0.0 or later

1.23.4. Availability

- tcp/ip or com

1.23.5. Parameters

- none

1.23.6. Return values

- protocol version (e.g. 1.0.0) or "error" when failed
- "busy" when the remote device is busy responding to another command

