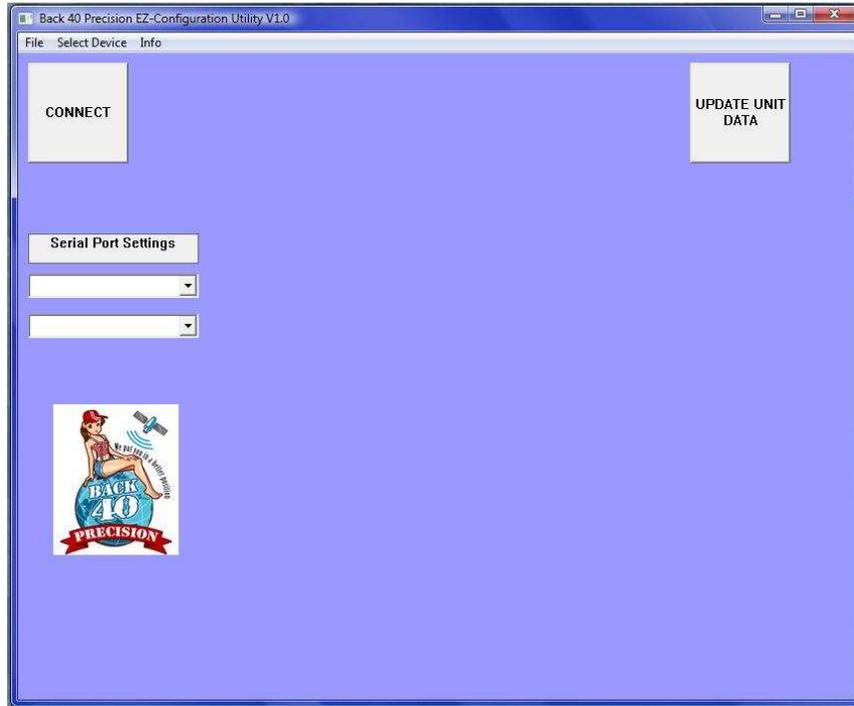# BACK 40 PRECISION INC, EZ Configuration Utility

Software Users Guide
Version 1.7 April, 2017

RTKonnect with firmware 2.8.0.0 and later will require EZ-Configuration Utility version 1.7 or later
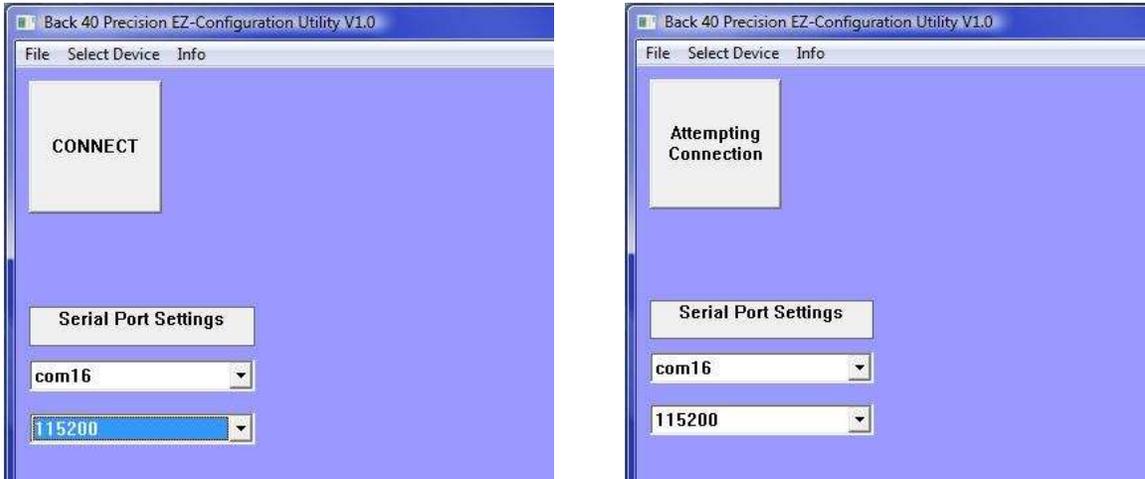
OPERATING REQUIREMENTS:
A computer running Windows Vista or newer operating system.
Either a 9-pin RS232 Serial port or a USB to 9-pin serial adapter.
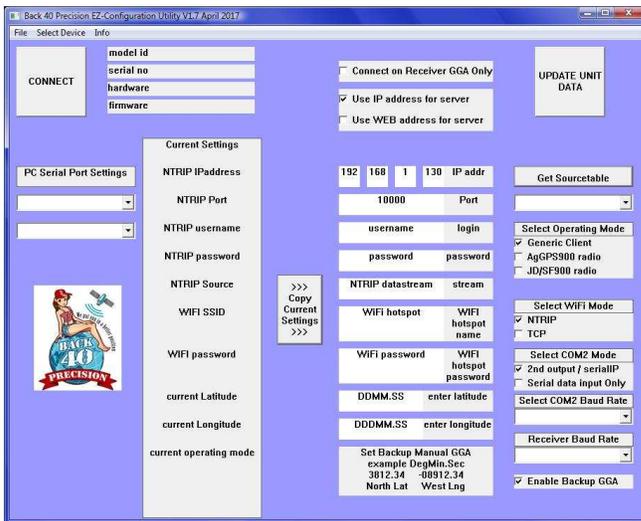An Internet connection to use the search for NTRIP sourcetable function.

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Use With RTKonnect

1: Use the drop down menu to select the Serial port that the device is plugged into.
2: Select the appropriate baud rate. For the RTKonnect 115200 is the default speed.
3: Press the "**CONNECT**" button. The text on the button will change to "**Attempting Connection**".

4: When the device has been captured, the correct device edit boxes will appear on the screen. Alternatively the "**Select Device**" toolbar menu may be used to show the edit boxes. The text on the "**CONNECT**" button will now read, "**DISCONNECT**".
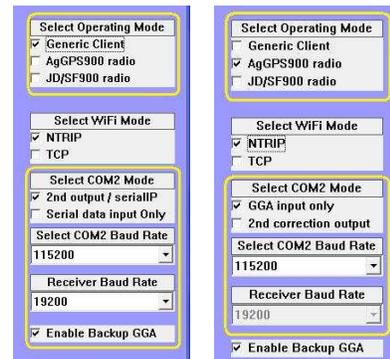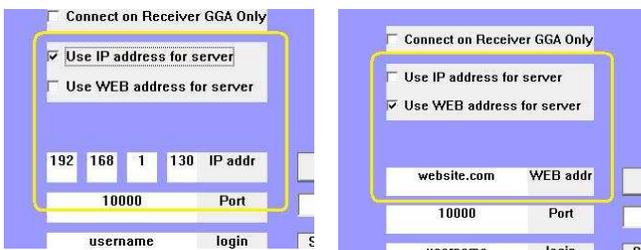

New features 1.7 include:

Checkbox to only allow the RTKonnect to make a server connection if the GNSS receiver is sending a GGA.

Checkbox to enable or disable manual backup GGA.

Multiple baud rates to match the GNSS receiver baud rate options. Receiver Baud Rate dropdown.

Multiple baud rates and operation settings for Com2 depending on Operating Mode Selection.

Checkbox changes Server address from IP number address and website address

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5: The boxes on the left will show the current device settings. The edit boxes on the right allow the user to enter the needed settings for the NTRIP client to operate.

Refer to your RTK provider for your NTRIP account settings.

Enter your NTRIP caster IP address in the top 4 edit boxes. Example 123 234 345 456

Or enter your NTRIP server WEB address Example rt.igs.org

Enter your NTRIP caster port number in the 2nd box down. Example 10000

Enter your NTRIP caster username in the 3rd box down. Example username
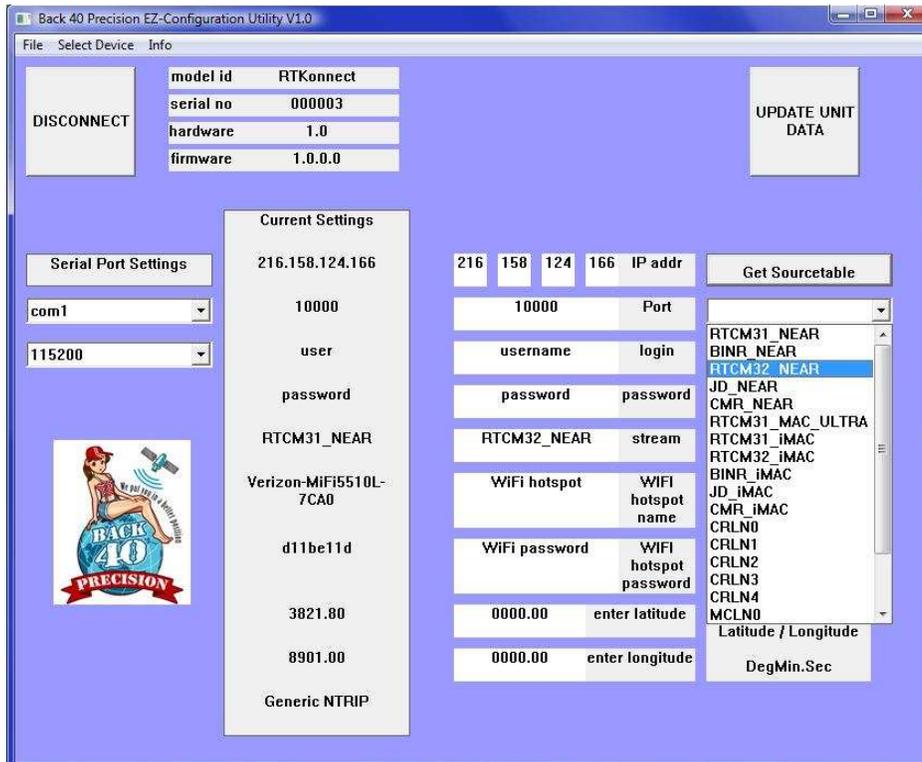
Enter your NTRIP caster password in the 4th box down. Example password

Enter your NTRIP datastream name in the 5th box down. Example STLS1

If you have an Internet connection you can press the "**Get Sourcetable**" button. If the IP/WEB address and port are set correctly the list of available datastreams will appear in the drop down list. Select one and it will automatically be filled into the edit box.

6: If you are using the WiFi connection enter your WiFi hotspot SSID in the 6th box down. Make certain to enter this name **_EXACTLY_** as it is shown on your WiFi source device.

Enter your WiFi hotspot password in the 7th box down.

Enter a Latitude in the 8th box down. This is used as a manual GGA position message sent to the caster if the RTKonnect does not see a GGA message from the receiver itself. This should be in the format of DegreeMinute.Second. Example 3812.65

Enter a Longitude in the 9th box down. Example -09185.65

IMPORTANT: The Longitude must be 5 digits ahead of the decimal point. This is 3 digits for degrees and 2 digits for Minutes. A (-) negative sign will cause the Latitude to be South or the Longitude to be West.

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7: Select the Operating Mode of the RTKonnect. Use *Generic Client* for most applications. The current firmware also supports emulation of an AgGPS900 joey radio for use with 252, 262, 372 receivers.

8: Select the WiFi mode of the unit by checking the appropriate mode for your usage. Select if the RTKonnect should use the NTRIP login standard or a TCP connection.

9: Select the desired mode and baud rate for COM2. When the RTKonnect is operating as a *Generic Client*, COM2 may be set as a second correction output and will send a connect message out so if connected to an external VPN modem it can perform a login of SerialIP. When operating in radio emulation mode, COM2 can be set to receive GGA from the receiver's other serial port, or set to send out a second correction stream. This is useful if other machines with radios are operating in the near area. Multiple machines could share the single connection.

9: Select the *Receiver Port* baud rate. When in *Generic Client* mode this port is configurable to match the receiver port baud rate. When in radio emulation mode this port is set by the unit itself.

10: Select if you wish to have the *Manual Backup GGA* message be ENABLED or not. If enabled the RTKonnect will send the backup position message to the server if it has not seen a GGA message from the receiver. If disabled it will not send the backup position message out.

11: Press the "**UPDATE UNIT DATA**" button. In a short time you should see a message box appear either confirming that all settings were saved to the unit or a failure message box will appear.

You may now press the "**DISCONNECT**" button to close the serial connection. You will receive a message box appear confirming the device acknowledged the disconnect command.

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Power down and restart the device to check for correct operation.
If there is any issues recheck that the NTRIP data and WiFi data were entered correctly.

IMPORTANT: failure to power down and reboot the device will prevent the new WIFI settings from taking effect until the next power cycle.

RELEASE NOTES:

9-1-2015
Beta V0.3: communicates with RTKonnect product only. Allows setting NTRIP user data into device EEPROM memory. Lists all serial ports found at startup from com1 to com20. Program can get NTRIP sourcetable from a caster so the user can select from available datastreams.

9-8-2015
V1.0: Fixed bug on data length read back from device prior to release. Added ability to set the RTKonnect unit to operate in standard GENERIC NTRIP mode, or to emulate an AgGPS900 radio to make usable with certain combinations of CNH equipment.

11-20-2015
V1.1: Added ability to read the Sourcetable from non-standard commercial caster software.

1-20-2016
V1.3: Added ability to set backup GGA to any hemisphere in the globe with negative degrees for both latitude and longitude. Added ability to set serial port baud rates on RTKonnect to match the GNSS receiver. Effective if RTKonnect firmware 2.1.0.0 or newer.

3-12-2017
V1.5: Added ability to set RTKonnect to only make a connection if GGA is being seen from the GNSS receiver. Added ability to set RTKonnect to DISABLE the manual backup GGA if desired. Effective if RTKonnect is firmware 2.7.0.0 or newer.

4-8-2017
V1.7: Added ability to set RTKonnect to use a WEB address for the server as well as an IP address. Added ability to adjust the Receiver Serial Port baud rate. Added ability to set COM2 to output a correction stream when the unit is in radio emulation mode.
Effective if RTKonnect is firmware 2.8.0.0 or newer.

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