



Fixing Geodesy Errors with MBMAX

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INTRODUCTION

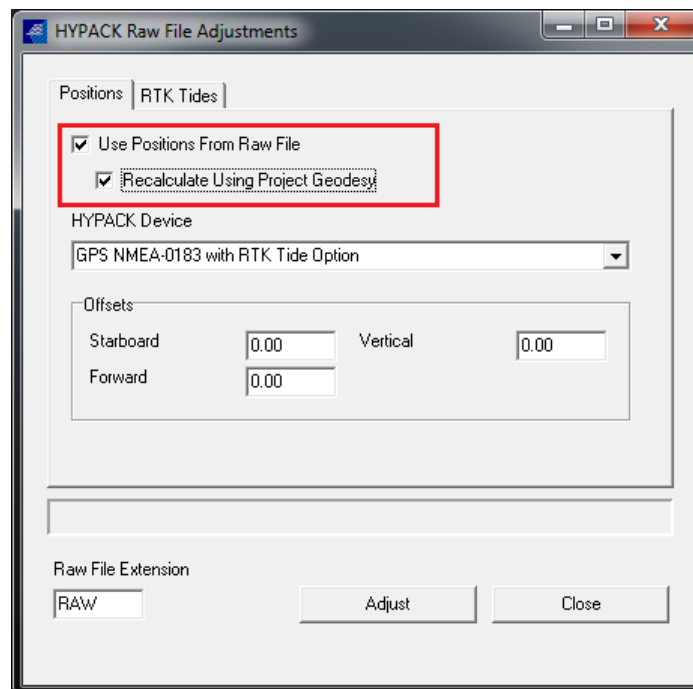
During survey, HYPACK® uses project geodetic parameters to convert from GPS latitude and longitude to grid easting and northing. If the geodetic parameters are wrong, grid positions will be wrong.

In HYPACK®, the common way to fix this is the Project Conversion program. If you just need to fix a survey, you can do that with the latest version of the HYSWEEP® EDITOR (MBMAX).

STEP BY STEP

1. **Fix the project geodesy.**
2. **Load the survey (HSX or HS2 files) into MBMAX phase 1.**
3. **Select TOOLS-HYPACK RAW FILE ADJUSTMENTS.**
4. **In the Positions tab, check “Use Positions From Raw File” and “Recalculate Using Project Geodesy”.**

FIGURE 1. HYPACK Raw File Adjustments tool in MBMAX



5. **Select the position device from the drop-down list and enter offsets if needed.**
 - If you are using a GPS, the offsets are to the antenna.
 - If you are using a POS/MV, the offsets are to the IMU.
6. **Click [ADJUST] to fix positions.**

7. **Finish up editing** as you normally would.

HOW IT WORKS

HYPACK® raw files contain the WGS84 latitude and longitude of each position point. From latitude and longitude, it's straight forward to recalculate grid positions. And that's what happens - every grid position is replaced with a new position based on the correct geodesy.

EXAMPLE

A survey was done using the Mercator projection instead of a UTM zone. Fixed in MBMAX using the steps from above.

FIGURE 2. UTM Projection (top), Mercator Projection (bottom)

