**RTKLib Post-Processing Piksi Multi Real World Base Station Position**

1. Collect positional data from Base Station
   1. Set up base station in desired location and connect to computer
   2. Power base station and open Swift Console
   3. Navigate to Settings tab > Solution > soltn freq and set value to 1 (collect data every one 1 sec)
   4. Click “Save to Device”
   5. Navigate to Seetings tab > serveye > broadcast and select Auto Survey button and Save to Device
   6. Navigate to Solution tab
   7. Set desired folder to save positional data to in the folder icon next to JSON log on top of the console
   8. Click “JSON log” to start and let run for a couple of hours (1.5 - 2hrs min) and click “JSON log” again to stop logging data when finished

*File will be named with the date and time stamp of logging and have a .json extension*

1. Convert files
   1. Make sure sbp2rinex is installed
   2. In terminal, navigate to folder where .json file is located
   3. Type sbp2rinex *.jsonfile* and hit Enter

*This will create 2 new files in folder, one with a sbp.nav and one with a sbp.obs extension*

1. Download RINEX file from that timepoint from a reference station near your location
   1. Go to the [CORS map website](https://www.ngs.noaa.gov/CORS_Map/) and go to where your base station was and find nearby reference station with high solution frequency
   2. Click on station and click on “Site info”
   3. Go to “Custom Files” in the lefthand menu to get data within the hour or to “Standard Files” if more than 24 hours later
   4. Put your start date, select your time zone and pick a start time of an hour before your actual start time logging and pick your site ID shown in the station info
   5. Click “Get CORSE data file”
   6. Open the downloaded zip file and copy the .o file to the original folder with the stored data or o.gz if downloading the standard files
2. RTLIB post-processing
   1. Download [RTKlib](http://www.rtklib.com/) – download the last Binary AP Package for Windows shown
   2. Save rtklib folder inside original folder with the log data
   3. Open rtklib folder > bin > rtkpost.exe
   4. Go into Options > Setting1 and change Positioning Mode from “Single” to “Static” and check in GPS checkbox in the bottom
   5. Click “OK”
   6. In the **RINEX OBS: Rover** box, select your .obs file
   7. In the **RINEX OBS: Base Station** box, select the .o file
   8. In the **RINEX Nav** box, select your .nav file
   9. Hit “Execute”
   10. Click on “View” to get your long and lat real world coordinates
3. Set real world long, lat and height coordinates for piksi multi base station
   1. Connect computer to Piksi Multi Base Station, power on and open Swift Console
   2. Go to Settings tab > Surveye
      1. Set broadcast to “True” and “Save to Flash”
      2. Set long, lat and height values
      3. Got to Advanced tab and click “Reset Piksi”

This will send a pseudo-corrected position to Rover Piksi Station

SBP2RINEX : [https://support.swiftnav.com/customer...](https://www.youtube.com/redirect?v=jaNwfdZGiCc&event=video_description&redir_token=IHpUldCjbUpfgnGz3GcnR6WOVDN8MTU1OTMxNDQ2NkAxNTU5MjI4MDY2&q=https%3A%2F%2Fsupport.swiftnav.com%2Fcustomer%2Fen%2Fportal%2Farticles%2F2804367-sbp-to-rinex-converter-and-data-post-processing)

CORS : [https://www.ngs.noaa.gov/CORS/](https://www.youtube.com/redirect?v=jaNwfdZGiCc&event=video_description&redir_token=IHpUldCjbUpfgnGz3GcnR6WOVDN8MTU1OTMxNDQ2NkAxNTU5MjI4MDY2&q=https%3A%2F%2Fwww.ngs.noaa.gov%2FCORS%2F)

RTKLIB : [http://www.rtklib.com/](https://www.youtube.com/redirect?v=jaNwfdZGiCc&event=video_description&redir_token=IHpUldCjbUpfgnGz3GcnR6WOVDN8MTU1OTMxNDQ2NkAxNTU5MjI4MDY2&q=http%3A%2F%2Fwww.rtklib.com%2F)