

How to use RTKCONV to convert files: BINEX to RINEX Ver.3.02

Software: RTKLIB 2.4.2 b11.

Goal for this tutorial

- Convert BINEX data to RINEX data

RTKLIB 2.4.2

<http://www.rtklib.com/>

RTKLIB 2.4.2 manual

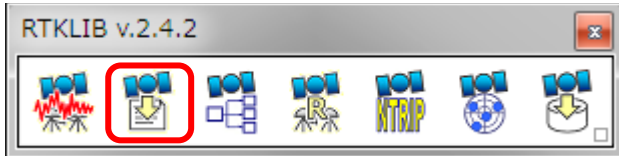
http://www.rtklib.com/prog/manual_2.4.2.pdf

RINEX 3.02 (The Receiver Independent Exchange Format, Version 3.02)

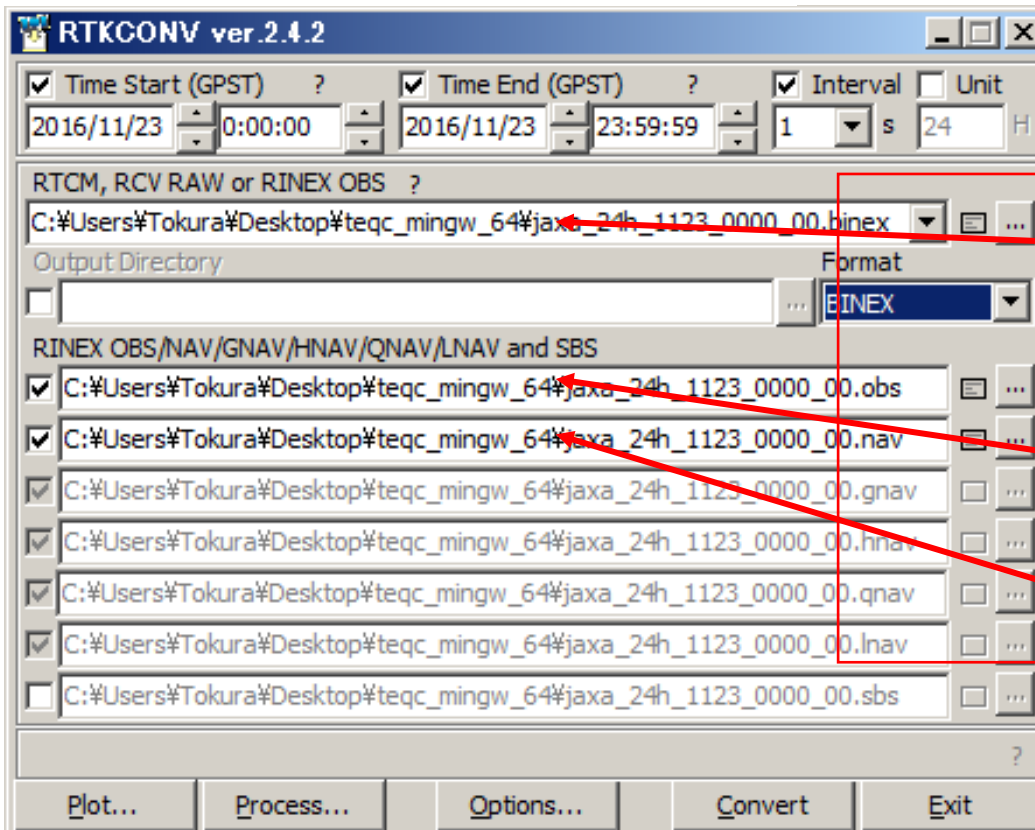
<ftp://igs.org/pub/data/format/rinex302.pdf>

Convert BINEX to RINEX

- Open RTKCONV application inside RTKLIB



- Input data

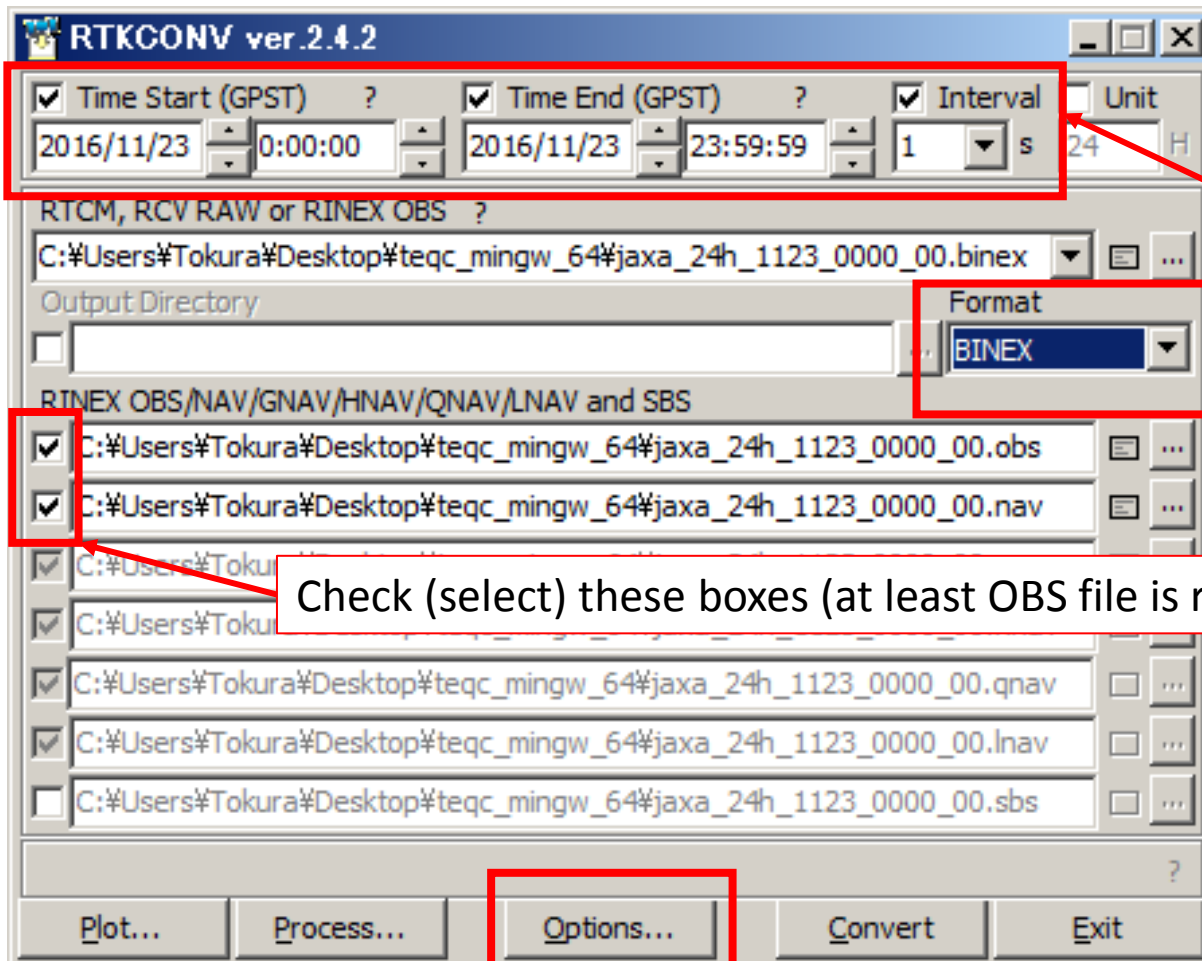


• BINEX file

• RINEX Observation data

• RINEX Navigation data

Settings 1. RTKCONV



Set the interval between data points

Set the input file format

Check (select) these boxes (at least OBS file is required)

Set the output data (Next slide)

Settings 2. RTKCONV → Options (Output data)

Set Ver. 3.02

*for multiple constellations and multiple frequencies

Select the satellite systems included in the original data

Set the output data details (Next slide)

Select the Observation Frequencies included in the original data

Select the Observation types included in the original data

C: Code, L: Carrier, D: Doppler, S: C/N_0

Settings 2. RTKCONV → Options → Mask

Select the observation codes included in the original data

*Example for multi-frequency receiver

A 19 Reference Code and Phase Alignment by Constellation and Frequency Band

TABLE A19 Reference Code and Phase Alignment by Frequency Band					
System	Frequency Band	Frequency [MHz]	Signal	RINEX Observation Code	Phase Correction applied to each observed phase to obtain aligned phase. ($\phi_{RINEX} = \phi_{original} + \Delta\phi$)
GPS	L1	1575.42	C/A	L1C	None (Reference Signal)
			L1C-D	L1S	+¼ cycle
			L1C-P	L1L	+¼ cycle
			L1C-(D+P)	L1X	+¼ cycle
			P	L1P	+¼ cycle
			Z-tracking	L1W	+¼ cycle
			Codeless	L1N	+¼ cycle
	L2	1227.60	C/A	L2C	For Block II/IIA/IIR – None; For Block IIR-M/IIF/III – ¼ cycle
			See Note 1		See Note 2
			Semi-codeless	L2D	None
			L2C(M)	L2S	-¼ cycle
			L2C(L)	L2L	-¼ cycle
			L2C(M+L)	L2X	-¼ cycle
			P	L2P	None (Reference Signal)
Z-tracking	L2W	None			
L5	1176.45	Codeless	L2N	None	
		I	L5I	None (Reference Signal)	
		Q	L5Q	-¼ cycle	
GLONASS	G1	1602+k*9/16	I+Q	L5X	Must be aligned to L5I
			C/A	L1C	None (Reference Signal)
GLONASS	G2	1246+k*7/16	P	L1P	+¼ cycle
			C/A	L2C	None (Reference Signal)

<ftp://igs.org/pub/data/format/rinex302.pdf>

A34~

Convert !

