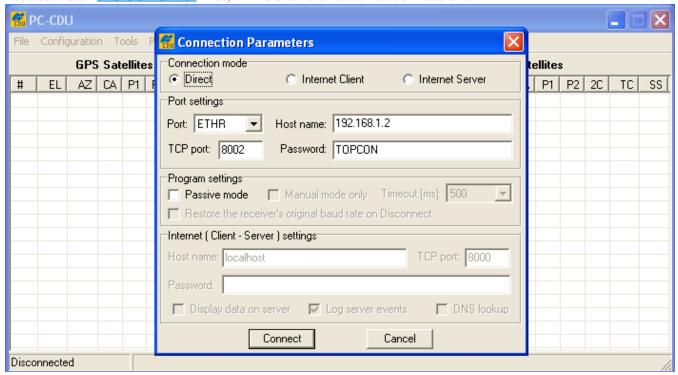
## How to Update an Options Authorization File (OAF) on a Topcon Receiver (GB-1000, Net-G3A, etc.)

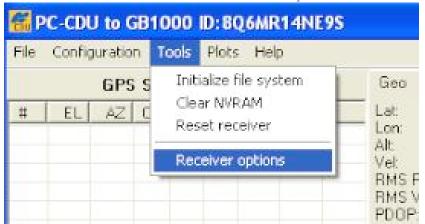
668 Freddy Blume November 23, 2015 <u>Topcon GB-1000</u>, <u>Topcon NET-G3 and NET-G3A</u> 3437

Many features of Topcon GNSS receivers can only be enabled by applying an Options Authorization File (OAF) which is supplied by the manufacturer. Once you receive an OAF from Topcon, you must apply it to the receiver using the Windows utility <u>PC-CDU</u>

1. Launch PC-CDU and connect to your receiver, either using ethernet, serial port or USB (you may need to install this USB driver first). This shows an ethernet connection:



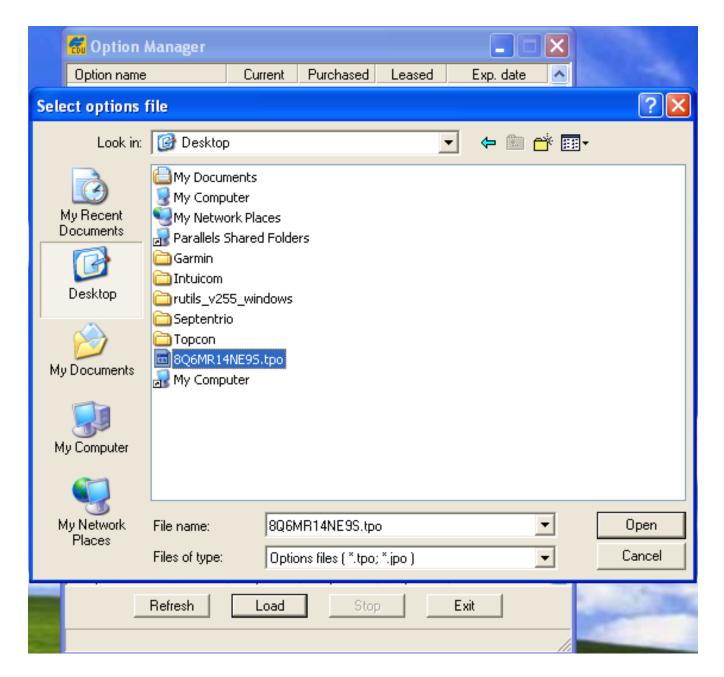
2. From the "Tools" menu select "Receiver Options":



3. The currently enabled options set will display. Click "Load" to add the new file.

Option name         Current         Purchased         Leased         Exp. date           GPS         yes         yes         yes         2/2/2008           GLONASS         yes         yes         yes         2/2/2008           L1         yes         yes         yes         2/2/2008           L2         yes         yes         yes         2/2/2008           Cinderella         yes         yes         yes         2/2/2008           Position update rate (Hz)         20         20         20         2/2/2008           Rosition update rate (Hz)         20         20         20         2/2/2008           Raw data update rate (Hz)         20         20         20         2/2/2008           Code differential Base         yes         yes         yes         2/2/2008           Code differential Rover         yes         yes         yes         2/2/2008           RTK Base         yes         yes         yes         2/2/2008           RTK Rover (Hz)         20         20         20         2/2/2008           BTK Rover (Hz)         20         20         2         2/2/2008           Levet Markers         2         0         2	祝 Option Manager					>
GLONASS         yes         yes         yes         2/2/2008           L1         yes         yes         yes         2/2/2008           L2         yes         yes         yes         2/2/2008           Cinderella         yes         yes         yes         2/2/2008           Position update rate (Hz)         20         20         20         2/2/2008           Raw data update rate (Hz)         20         20         20         2/2/2008           Code differential Base         yes         yes         yes         2/2/2008           Code differential Rover         yes         yes         yes         2/2/2008           RTK Base         yes         yes         yes         2/2/2008           RTK Rover (Hz)         20         20         20         2/2/2008           Memory (Mb)         1024         1024         1024         2/2/2008           Co-Op Tracking         yes         yes         yes         2/2/2008           L-PS Timing Signal         2         2         2         2/2/2008           In-Band Int. Rejection         1         0         1         2/2/2008           Frequency Input         yes         yes <td< td=""><td>Option name</td><td>Current</td><td>Purchased</td><td>Leased</td><td>Exp. date</td><td></td></td<>	Option name	Current	Purchased	Leased	Exp. date	
L1 yes yes yes 2/2/2008 L2 yes yes yes yes 2/2/2008 Cinderella yes yes yes 2/2/2008 Position update rate (Hz) 20 20 20 2/2/2008 Raw data update rate (Hz) 20 20 20 2/2/2008 Code differential Base yes yes yes 2/2/2008 RTK Base yes yes yes 2/2/2008 RTK Base yes yes yes 2/2/2008 RTK Rover (Hz) 20 20 20 20 2/2/2008 RTK Rover (Hz) 20 20 20 2/2/2008 RTK Rover (Hz) 4 1024 1024 2/2/2008 RTK Rover (Hz) 20 20 20 2/2/2008 Memory (Mb) 1024 1024 1024 2/2/2008 L-PS Timing Signal 2 2 2 2 2/2/2008 L-PS Timing Signal 2 2 2 2 2/2/2008 In-Band Int. Rejection 1 0 1 2/2/2008 In-Band Int. Rejection 1 0 1 2/2/2008 Frequency Input yes yes yes 2/2/2008 Frequency Input yes yes yes 2/2/2008 Serial Port A (Kbps) 460 460 460 2/2/2008 Serial Port B (Kbps) 460 460 460 2/2/2008 Serial Port C (Kbps) 460 460 460 2/2/2008 Serial Port C (Kbps) 460 460 460 2/2/2008 Serial Port D (Kbps) 460 460 460 2/2/2008	GPS	yes	yes	yes	2/2/2008	
L2         yes         yes         yes         2/2/2008           Cinderella         yes         yes         yes         2/2/2008           Position update rate (Hz)         20         20         20         2/2/2008           Raw data update rate (Hz)         20         20         20         2/2/2008           Code differential Base         yes         yes         yes         2/2/2008           Code differential Rover         yes         yes         yes         2/2/2008           RTK Base         yes         yes         yes         2/2/2008           RTK Rover (Hz)         20         20         20         2/2/2008           RTK Rover (Hz)         20         20         20         2/2/2008           Memory (Mb)         1024         1024         1024         2/2/2008           Memory (Mb)         1024         1024         1024         2/2/2008           Co-Op Tracking         yes         yes         yes         2/2/2008           1-PPS Timing Signal         2         2         2         2/2/2008           Event Markers         2         0         2         2/2/2008           In-Band Int. Rejection         1         0	GLONASS	yes	yes	yes	2/2/2008	
Cinderella         yes         yes         yes         2/2/2008           Position update rate (Hz)         20         20         20         2/2/2008           Raw data update rate (Hz)         20         20         20         2/2/2008           Code differential Base         yes         yes         yes         2/2/2008           Code differential Rover         yes         yes         yes         2/2/2008           RTK Base         yes         yes         yes         2/2/2008           RTK Rover (Hz)         20         20         20         2/2/2008           Memory (Mb)         1024         1024         1024         2/2/2008           Memory (Mb)         1024         1024         1024         2/2/2008           Co-Op Tracking         yes         yes         yes         2/2/2008           1-PPS Timing Signal         2         2         2         2/2/2008           Event Markers         2         0         2         2/2/2008           In-Band Int. Rejection         1         0         1         2/2/2008           In-Band Int. Rejection         1         0         1         2/2/2008           Frequency Input         yes	L1	yes	yes	yes	2/2/2008	
Position update rate (Hz)         20         20         2/2/2008           Raw data update rate (Hz)         20         20         20         2/2/2008           Code differential Base         yes         yes         yes         2/2/2008           Code differential Rover         yes         yes         yes         2/2/2008           RTK Base         yes         yes         yes         2/2/2008           RTK Rover (Hz)         20         20         20         2/2/2008           Memory (Mb)         1024         1024         1024         2/2/2008           Co-0p Tracking         yes         yes         yes         2/2/2008           1-PS Timing Signal         2         2         2         2/2/2008           Event Markers         2         0         2         2/2/2008           In-Band Int. Rejection         1         0         1         2/2/2008           Multipath Reduction         yes         yes         yes         2/2/2008           Frequency Input         yes         yes         yes         2/2/2008           Frequency Input         yes         yes         yes         2/2/2008           Serial Port A (Kbps)         460	L2	yes	yes	yes	2/2/2008	
Raw data update rate (Hz)         20         20         2/2/2008           Code differential Base         yes         yes         yes         2/2/2008           Code differential Rover         yes         yes         yes         2/2/2008           RTK Base         yes         yes         yes         2/2/2008           RTK Rover (Hz)         20         20         20         2/2/2008           Memory (Mb)         1024         1024         1024         2/2/2008           Co-Op Tracking         yes         yes         yes         2/2/2008           1-PS Timing Signal         2         2         2         2/2/2008           Event Markers         2         0         2         2/2/2008           In-Band Int. Rejection         1         0         1         2/2/2008           Multipath Reduction         yes         yes         yes         2/2/2008           Frequency Input         yes         yes         yes         2/2/2008           Freq. Lock and Output         yes         yes         yes         2/2/2008           Serial Port A (Kbps)         460         460         460         2/2/2008           Serial Port C (Kbps)         460	Cinderella	yes	yes	yes	2/2/2008	
Code differential Base         yes         yes         2/2/2008           Code differential Rover         yes         yes         yes         2/2/2008           RTK Base         yes         yes         yes         2/2/2008           RTK Rover (Hz)         20         20         20         2/2/2008           Memory (Mb)         1024         1024         1024         2/2/2008           Memory (Mb)         1024         1024         1024         2/2/2008           Co-Op Tracking         yes         yes         yes         2/2/2008           1-PPS Timing Signal         2         2         2         2/2/2008           Event Markers         2         0         2         2/2/2008           In-Band Int. Rejection         1         0         1         2/2/2008           Multipath Reduction         yes         yes         yes         2/2/2008           Frequency Input         yes         yes         yes         2/2/2008           Freq. Lock and Output         yes         yes         yes         2/2/2008           Serial Port A (Kbps)         460         460         460         2/2/2008           Serial Port C (Kbps)         460         460<	Position update rate (Hz)	20	20	20	2/2/2008	
Code differential Rover         yes         yes         yes         2/2/2008           RTK Base         yes         yes         yes         2/2/2008           RTK Rover (Hz)         20         20         20         2/2/2008           Memory (Mb)         1024         1024         1024         2/2/2008           Memory (Mb)         1024         1024         2/2/2008           Co-Op Tracking         yes         yes         yes         2/2/2008           1-PPS Timing Signal         2         2         2         2/2/2008           Event Markers         2         0         2         2/2/2008           In-Band Int. Rejection         1         0         1         2/2/2008           In-Band Int. Rejection         1         0         1         2/2/2008           Multipath Reduction         yes         yes         yes         2/2/2008           Frequency Input         yes         yes         yes         2/2/2008           Freq. Lock and Output         yes         yes         yes         2/2/2008           Serial Port A (Kbps)         460         460         460         2/2/2008           Serial Port B (Kbps)         460         460	Raw data update rate (Hz)	20	20	20	2/2/2008	
Code differential Rover         yes         yes         yes         2/2/2008           RTK Base         yes         yes         yes         2/2/2008           RTK Rover (Hz)         20         20         20         2/2/2008           Memory (Mb)         1024         1024         1024         2/2/2008           Memory (Mb)         1024         1024         1024         2/2/2008           Co-Op Tracking         yes         yes         yes         2/2/2008           1-PPS Timing Signal         2         2         2         2/2/2008           Event Markers         2         0         2         2/2/2008           In-Band Int. Rejection         1         0         1         2/2/2008           In-Band Int. Rejection         1         0         1         2/2/2008           Multipath Reduction         yes         yes         yes         2/2/2008           Frequency Input         yes         yes         yes         2/2/2008           Freq. Lock and Output         yes         yes         yes         2/2/2008           Serial Port A (Kbps)         460         460         460         2/2/2008           Serial Port B (Kbps)         460	Code differential Base	yes	yes	yes	2/2/2008	
RTK Rover (Hz)         20         20         2/2/2008           Memory (Mb)         1024         1024         1024         2/2/2008           Co-Op Tracking         yes         yes         yes         2/2/2008           1-PPS Timing Signal         2         2         2         2/2/2008           Event Markers         2         0         2         2/2/2008           In-Band Int. Rejection         1         0         1         2/2/2008           In-Band Int. Rejection         1         0         1         2/2/2008           Multipath Reduction         yes         yes         yes         2/2/2008           Frequency Input         yes         yes         yes         2/2/2008           Serial Port A (Kbps)         460         460         460         2/2/2008           Serial Port B (Kbps)         460         460	Code differential Rover	yes		yes	2/2/2008	
Memory (Mb)         1024         1024         1024         2/2/2008           Co-Op Tracking         yes         yes         yes         2/2/2008           1-PPS Timing Signal         2         2         2         2/2/2008           Event Markers         2         0         2         2/2/2008           In-Band Int. Rejection         1         0         1         2/2/2008           Multipath Reduction         yes         yes         yes         2/2/2008           Frequency Input         yes         yes         yes         2/2/2008           Frequency Input         yes         yes         yes         2/2/2008           Freq. Lock and Output         yes         yes         yes         2/2/2008           Serial Port A (Kbps)         460         460         460         2/2/2008           Serial Port B (Kbps)         460         460         460         2/2/2008           Serial Port C (Kbps)         460         460         460         2/2/2008           Serial Port D (Kbps)         460         460         460         2/2/2008           Infrared Port	RTK Base	yes	yes	yes	2/2/2008	
Co-Op Tracking         yes         yes         2/2/2008           1-PPS Timing Signal         2         2         2         2/2/2008           Event Markers         2         0         2         2/2/2008           In-Band Int. Rejection         1         0         1         2/2/2008           Multipath Reduction         yes         yes         yes         2/2/2008           Frequency Input         yes         yes         yes         2/2/2008           Freq. Lock and Output         yes         yes         yes         2/2/2008           Serial Port A (Kbps)         460         460         460         2/2/2008           Serial Port B (Kbps)         460         460         460         2/2/2008           Serial Port C (Kbps)         460         460         460         2/2/2008           Serial Port D (Kbps)         460         460         460         2/2/2008           Parallel Port	RTK Rover (Hz)	20	20	20	2/2/2008	4
1-PPS Timing Signal         2         2         2         2/2/2008           Event Markers         2         0         2         2/2/2008           In-Band Int. Rejection         1         0         1         2/2/2008           Multipath Reduction         yes         yes         yes         2/2/2008           Frequency Input         yes         yes         yes         2/2/2008           Freq. Lock and Output         yes         yes         yes         2/2/2008           Freq. Lock and Output         yes         yes         yes         2/2/2008           Serial Port A (Kbps)         460         460         460         2/2/2008           Serial Port B (Kbps)         460         460         460         2/2/2008           Serial Port C (Kbps)         460         460         460         2/2/2008           Serial Port D (Kbps)         460         460         460         2/2/2008           Infrared Port         yes         yes         2/2/2008           Parallel Port         no         yes         2/2/2008           Sp.Sp. Direct         no         yes         2/2/2008           BAIM         yes         yes         yes         2/2/2008	Memory (Mb)	1024	1024	1024	2/2/2008	
1-PPS Timing Signal         2         2         2         2/2/2008           Event Markers         2         0         2         2/2/2008           In-Band Int. Rejection         1         0         1         2/2/2008           Multipath Reduction         yes         yes         yes         2/2/2008           Frequency Input         yes         yes         yes         2/2/2008           Freq. Lock and Output         yes         yes         yes         2/2/2008           Serial Port A (Kbps)         460         460         460         2/2/2008           Serial Port B (Kbps)         460         460         460         2/2/2008           Serial Port C (Kbps)         460         460         460         2/2/2008           Serial Port D (Kbps)         460         460         460         2/2/2008           Infrared Port         yes         yes         yes         2/2/2008           Parallel Port         no         yes         2/2/2008           Sp.Sp. Freq. Hop.         no         yes         2/2/2008           RAIM         yes         yes         yes         2/2/2008           Datums support         yes         yes         yes	Co-Op Tracking	yes	yes	yes	2/2/2008	
Event Markers         2         0         2         2/2/2008           In-Band Int. Rejection         1         0         1         2/2/2008           Multipath Reduction         yes         yes         yes         2/2/2008           Frequency Input         yes         yes         yes         2/2/2008           Freq. Lock and Output         yes         yes         yes         2/2/2008           Serial Port A (Kbps)         460         460         460         2/2/2008           Serial Port B (Kbps)         460         460         460         2/2/2008           Serial Port C (Kbps)         460         460         460         2/2/2008           Serial Port D (Kbps)         460         460         460         2/2/2008           Infrared Port         yes         yes         2/2/2008           Parallel Port         no         yes         2/2/2008           Sp.Sp. Freq. Hop.         no         yes         2/2/2008           RAIM         yes         yes         yes         2/2/2008           Datums support         yes         yes         yes         2/2/2008	1-PPS Timing Signal				2/2/2008	
Multipath Reduction         yes         yes         yes         2/2/2008           Frequency Input         yes         yes         yes         2/2/2008           Freq. Lock and Output         yes         yes         yes         2/2/2008           Serial Port A (Kbps)         460         460         460         2/2/2008           Serial Port B (Kbps)         460         460         460         2/2/2008           Serial Port C (Kbps)         460         460         460         2/2/2008           Infrared Port D (Kbps)         460         460         460         2/2/2008           Infrared Port Parallel P		2	0	2	2/2/2008	
Multipath Reduction         yes         yes         yes         2/2/2008           Frequency Input         yes         yes         yes         2/2/2008           Freq. Lock and Output         yes         yes         yes         2/2/2008           Serial Port A (Kbps)         460         460         460         2/2/2008           Serial Port B (Kbps)         460         460         460         2/2/2008           Serial Port D (Kbps)         460         460         460         2/2/2008           Infrared Port         yes         yes         2/2/2008           Parallel Port         no         yes         2/2/2008           Sp.Sp. Freq. Hop.         no         yes         2/2/2008           Sp.Sp. Direct         no         yes         2/2/2008           BAIM         yes         yes         yes         2/2/2008           Datums support         yes         yes         yes         2/2/2008	In-Band Int. Rejection	1	0	1	2/2/2008	
Freq. Lock and Output         yes         yes         2/2/2008           Serial Port A (Kbps)         460         460         2/2/2008           Serial Port B (Kbps)         460         460         460         2/2/2008           Serial Port C (Kbps)         460         460         460         2/2/2008           Serial Port D (Kbps)         460         460         460         2/2/2008           Infrared Port		yes	yes	yes	2/2/2008	
Serial Port A (Kbps)       460       460       2/2/2008         Serial Port B (Kbps)       460       460       460       2/2/2008         Serial Port C (Kbps)       460       460       460       2/2/2008         Serial Port D (Kbps)       460       460       460       2/2/2008         Infrared Port	Frequency Input	yes	yes	yes	2/2/2008	
Serial Port A (Kbps)       460       460       2/2/2008         Serial Port B (Kbps)       460       460       460       2/2/2008         Serial Port C (Kbps)       460       460       460       2/2/2008         Serial Port D (Kbps)       460       460       460       2/2/2008         Infrared Port	Freq. Lock and Output	yes	yes	yes	2/2/2008	
Serial Port B (Kbps)       460       460       460       2/2/2008         Serial Port C (Kbps)       460       460       460       2/2/2008         Serial Port D (Kbps)       460       460       460       2/2/2008         Infrared Port		460		460	2/2/2008	
Serial Port D (Kbps)         460         460         2/2/2008           Infrared Port		460	460	460	2/2/2008	
Serial Port D (Kbps)         460         460         2/2/2008           Infrared Port		460	460	460	2/2/2008	
Infrared Port		460	460	460	2/2/2008	
Parallel Port          no         yes         2/2/2008           Sp.Sp. Freq. Hop.          no         yes         2/2/2008           Sp.Sp. Direct						
Sp.Sp. Freq. Hop.          no         yes         2/2/2008           Sp.Sp. Direct			-	-		
Sp.Sp. Direct          no         yes         2/2/2008           RAIM         yes         yes         yes         2/2/2008           Datums support         yes         yes         yes         2/2/2008				-		
RAIM         yes         yes         2/2/2008           Datums support         ves         ves         ves         2/2/2008				-		
Datums support ves ves 2/2/2008		yes		-		
Befrech Load Stop Evit				-		1
Treffesti Load Stop Exit	Refresh	Load	Stop		Exit	

4. Select the new options file on your hard drive. Note that the file should be named according to the receiver ID shown on the window of the main PC-CDU screen:



5. Click "Open" after selecting the proper file. If the load is successful you will quickly see the following screen, followed by a receiver reset and disconnection:

					ب
Option name	Current	Purchased	Leased	Exp. date	^
GPS		success	absent		
GLONASS		success	absent		
L1		success	absent		
L2		success	absent		
Cinderella		success	absent		
Position update rate (Hz)		success	absent		
Raw data update rate (Hz)		success	absent		
Code differential Base		success	absent		
Code differential Rover		success	absent		
RTK Base		success	absent		
RTK Rover (Hz)		success	absent		
Memory (Mb)		success	absent		
Co-Op Tracking		success	absent		
1-PPS Timing Signal		success	absent		
Event Markers		success	absent		
In-Band Int. Rejection		success	absent		
Multipath Reduction		success	absent		
Frequency Input		success	absent		
Freq. Lock and Output		success	absent		
Serial Port A (Kbps)		success	absent		
Serial Port B (Kbps)		success	absent		
Serial Port C (Kbps)		success	absent		
Serial Port D (Kbps)		success	absent		
Infrared Port		success	absent		
Parallel Port		success	absent		
Sp.Sp. Freq. Hop.		success	absent		
Sp.Sp. Direct		success	absent		
RAIM		success	absent		
Datums support		success	absent		
Magnetic azimuth		success	absent		~
Refresh	Load	Stop		Exit	

If this does NOT happen, then the OAF you have selected is not compatible with this receiver. Select a different file or contact Topcon for assistance with a new file. You should include your receiver ID number (which can be copied when selecting "About" from the "Help" menu on the main PC-CDU screen).

6. You will be presented with the same connection screen as in step (1) above. When you reconnect the newly loaded options will be displayed as in step 3. Check to make sure that the new settings you have requested from Topcon have been enabled. Then click "Exit" and resume receiver operations.

## Online URL:

https://kb.unavco.org/article/how-to-update-an-options-authorization-file-oaf-on-a-topcon-receiver-gb-1000-net-g3a-etc-668.html