## TRIUMPH-VS AS A BASE VIA UHF

**Note:** To return to *Main* screen, press the *Home* button on the front panel of TRIUMPH-VS.

- Note: Always tap Apply or press the Apply button \_\_\_\_\_, to save the settings and parameters into receiver's memory.
  - 1. To set up the base station, tap *Settings* on the *Main* screen:





2. Then *Communication* ► *UHF*:

S GNSS	>	Antenna	29 78°C		UHF	>	34J Map 14:30 78°C
	>	RTK/DGPS Settings	>		GSM (CSD)/GPRS	>	🛃 LAN >
Actions	>	111 Units	>		Wi-Fi	>	👤 Network Services >
Photo & Voice	>	Advanced	>				
M Interference Spectrum	>	Save Settings	>				
👪 Mounting Method	>	Recall Settings	>				
Back Enter parameters of UHF, GSM, E	Ethernet, a will be	WiFi, and Bluetooth. In GNSS screen you transmitted/received by them.	-	Ba	Configu	ation of the ir	nternal UHF transceiver

## Figure 2. Communications ► UHF

- 3. Set the UHF modem parameters:
  - Frequency
  - Protocol and its parameters

- Output power
- Specify the antenna (external or internal)



**Figure 3. UHF parameters** 

4. To setup the frequency, select the value from the list, by tapping on the *Frequency*. If there is no needed frequency value, tap *Add* or *Edit* and insert/edit the frequency:

a second second			Y
452787500	Add	Edit	Delete
464750000	464725000		
464700000	464650000		
464625000	464600000		
464550000	464500000		
462400000	462375000		
462125000	461100000		
461075000	461025000		
458600000	455810000		
452787500	449225000		
448810000	447800000		

**Figure 4. UHF Frequency** 

5. The protocol parameters can be reviewed/ changed by tapping on the *Protocol* button. Use JAVAD protocol type if base and rover are the JAVAD GNSS receivers .



**Figure 5. Protocol parameters** 



6. Modem is configured now. Return to *Main* screen and tap *Settings*  $\rightarrow$  *GNSS*.

Figure 6. GNSS

- 7. Tap Receive Data (Rover) and ensure the reception from all channels is turned off.
- 8. Then tap *Transmit Data (Base)* and set up the parameters of the transmit data: RTK-JPS full and period 1 Hz.

5S 🔏 😳 😒 <	1 77°C	1 · · · · · · · · · · · · · · · · · · ·	Transmit	Data	44J Map	14:51 77*
leo 💟 QZSS 💟 SBAS		UHF Modern	RTK - JPS full	>	1 Hz	>
Transmit Data (Base)	>	GSM (CSD)	None	>	None	>
Real-Time Networks (RTNs)	>	TCP Server	None	>	None	>
Duration	>			A		
Accept Position Results of	>					
Accept Position Results of	>	_				
	eo 2 QZSS 2 SBAS Transmit Data (Base) Real-Time Networks (RTNs) Duration Accept Position Results of	AL       Map       Ma	Accept Position Results of	SS Add   Add   Map   14.51   14.51   Transmit Data (Base)   Transmit Data (Base)   Real-Time Networks (RTNs)   Duration   Accept Position Results of	SS All Map   14.51   eo   QZSS   SBAS   Transmit Data (Base)   Real-Time Networks (RTNs)   Duration   Accept Position Results of	SS     Map     Transmit Data     Map       eo     QZSS     SBAS     Image: Comparison of the second of th

## Figure 7. Transmit data parameters

9. Click on the UHF icon, check the Sent parameter. Ensure this parameter value is on the increase.



Figure 8. Status of the radio

10. Specify antenna parameters and antenna height. Tap *Settings* > *Antenna*:

Internal	>	Definitions	6	>				-		
Measured Height	1.543 m	Slant	Verti	cal O	Radius	_	81.0 mm	Definition	5	>
External (if conne	ected)		JAV_T	RIUMPH-1R	L1 offset	>	L2 offset	>	L5 offset	>
Ext.Ant.Cable Ty	RG174/U	Ext.Ant.Cab	ole Length	0.0 m	Measured Vertic	al Heig	ht Offset			0.0 m
Antenna Type:	Auto 🔵	Int	O Ext	0						

**Figure 9. Antenna parameters** 

Select antenna type (internal/external) and enter the antenna height. If the internal antenna is selected, specify the vertical height offset for Triumph-VS (0.04 m).

11. Specify the mounting method (*Settings* ► *Mounting Method*) - On Tripod. Disable Correct by Compass, Correct by Level, and Lift&Tilt.



**Figure 10. Mounting Method** 



12. Ensure the receipt of the satellite signals is turned on, tap *Settings* > *GNSS*:

Figure 11. GNSS

13. If the data recording for base station is needed, activate the data recording in *Record Data*, specify what data will be recorded to internal memory and/or SD card:

Record data wh	en satellites are m	ore than	1 satellite
FTP Upload			
	Format	Period	AFRM
Int. memory	None >	1 Hz >	None >
SD Card	None >	None >	None >

## Figure 12. Record data

14. Set up the duration: stop record manually or specify the time. Disable Delay and Auto repeat:



**Figure 13. Duration parameters** 

±± ≑ ₹	Photo & Voice	9 44J	0 50 ≤ 14:55 77°C	<u>1</u> 1 = 1	Bottom Camera	99 44J	0 💽 <	11) D 1:55 77°C
	Bottom Camera	>			Take Picture	None		
	Front Camera	>			Record in Internal memory			
	Record Voice	>			Record in SD card			
	Screen Shots	>						
±. ÷ ₹	B Front Camera	8 44J	0 2 <00 → 14:55 77°C	<u>,</u>	Voice Settings     Record Voice Period	None 9	0 💽 1	<b>⊲⊪)</b> 4:55 77°C
	Take Picture	None			Record Voice Period	None		
	Record in Internal memory				Record in Internal Memory			
			-			_		
	Record in SD card				Record in SD Card			

15. Disable voice and photo recording in the appropriate windows:

Figure 14. Photo and Voice recording parameters

16. Tap Settings > Actions, and select Fixed Base Station



Figure 15. Actions ▶ Fixed Base Station

17. Press *Action* button in on the front of TRIUMPH-VS to switch to *Action* screen. Tap on the Fixed Base Station name and set the base parameters :



Figure 16. Base station parameters

18. Enter Base station coordinates: *Base Station Coordinates* > *Enter Position:* 

TT T O	Base Position	ap 10:31 48°C	$\frac{1}{2}$ = $\frac{1}{2}$	<b>F</b>	0 Ent	er Position	Map	<b>⊲</b> 𝗤) □ 10:32 49°C
Select From List		> 0			Latitude	+055° 47' 54.51642"		
Enter Position		> 🔘			Longitude	+037° 31' 15.07856"		
Calculate position for	-	10 sec ()			Altitude	378.356 m		
					Coordinal	te System: WGS84		
Gancel Manually type	the coordinates for the center of the map.	Apply	Cancel					Apply

Figure 17. Base station position

19. Tap Apply on all screens, then return to Action screen (by pressing Action button).



Figure 18. Action screen

20. Now base station is configured. Please do not move it!

21. Press Action button, to switch to Command screen and tap Start. To stop the base operation tap Stop.

	Yellow Stone 84	Start
1.06m 1.68m	0	Stop
		Clear
	Figure 19. Command screen	1

22. Press *Action* button, to return to *Action* screen. In the *Action* screen ensure the base station is transmitting corrections:



Figure 20. Base station is transmitting corrections

23. To disable Base station, after finishing the work, tap *Settings* ► *GNSS* ► *Transmit Data (Base)*, and set UHF modem format to None. Otherwise the base station operation will continue.