

# GATE Control Station v0.9 beta Manual

Version: v2.1

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## 1. Introduction

The **GATE Control Station App** works in tandem with the USB-Link module giving you easy access to TITAN's functions and allows you to update the firmware of the drop-in module, the Tactical Programming Card and the USB-Link.

Thanks to the App you can also read the trouble codes stored in the TITAN Drop-in Module in order to find out reasons of problems.

## 2. Update

#### 2.1 Gate Control Station

Using the most recent software versions ensures stable functioning of the device and allows for taking advantage from all its features.

Thanks to the GATE Control Station App you can easily check availability of the newest software versions and send it to your device.

Check availability of the newest software versions for the GCS App choosing **Check update**.

Update	Configuration	Diagnostic Trouble Codes		
DEVICE			USB-Link	
Device:	Disconnected		Status:	Connected
Software version:	N/A		Software version:	0.3
Serial number:	N/A		Serial number:	BETA_U_033
PCB data:	N/A		PCB data:	2016_07_08_P_1.0
Update			Update	
Web 14			Web Manual	
Manual			Call and a second	Update
Software upd	ate: -		Sortware version: -	
Nuclear		a	Version: v	Check update Abort
version:	·	Check update		
			C	
		11	Send report to GATE	
Up	date	Abort	User note:	
			_	
GATE Control Station				
Software update: 1	rour version is up to c	Sate		
		Check update		
			Report status: -	Send Save
				USB-Link: Connected

Fig.1

If the new software version is available, you will see an appropriate statement. Choose **Download** to start downloading.

When the downloading is done, open the ZIP file. The newest software version is ready to use.

The available updates are also being checked automatically when you are running the App.

#### 2.2 USB-Link

To make the update of your device please follow the steps below:

- Install the USB-Link module.
- Run the GATE Control Station App.
- The information USB-Link: Connected should appear in the bottom right corner

Update	Configuration	Diagnostic Trouble Codes			
DEVICE			USB-Link		
Device:	Disconnected		Status:	Connected	
Software version:	N/A		Software version:	0.3	
Serial number:	N/A		Serial number:	BETA_U_033	
PCB data:	N/A		PCB data:	2016_07_08_P_1.0	
Update			Update		
	1		Web Manual		
Web Manual			Software version: -		Update
Version:	v	Check update	Version:	Check update	Abort
U	pdate	Abort	Send report to GATE User note:		
GATE Control Station Software update:	Your version is up to d	ate			Â
		Check update	Report status: -	Send	
				USB-Link: Connecte	ed

Fig.2

 Check availability of the newest software versions for the USB-Link choosing Check update. If the USB-Link software version is outdated, click Update to start updating the firmware.

Update Configuration Diagnostic Trouble Codes	
DEVICE	USB-Link
Device: Disconnected	Status: Connected
Software version: N/A	Software version: 0.2
Serial number: N/A	Serial number: BETA_U_033
PCB data: N/A	PCB data: 2016_07_08_P_1.0
Update	Update
	Web Manual
Web Manual	Indate
Software undate: -	Software version: Available (version 0.3)
	Version: 0.3  Check update Abort
Version:   Check update	
	Send report to GATE
Update Abort	User note:
	×
GATE Control Station	
Software update: Your version is up to date	
Charlesedate	*
Check update	Report status: - Send Save
	USB Units Committed
	USB-Link: Connected

Fig.3

There is an option to update the USB-Link's firmware to the most recent version saved on your computer disc. Choose **Manual**, select file with the program saved on your computer disc and click **Update**.

Update	Configuration	Diagnostic Trouble Codes			
DEVICE			USB-Link		
Device:	Disconnected		Status:	Connected	
Software version:	N/A		Software version:	0.2	
Serial number:	N/A		Serial number:	BETA_U_033	
PCB data:	N/A		PCB data:	2016_07_08_P_1.0	
Update			Update		
Web Manua			Web Manual		
Manua			Eler main un0 2	hin	Update
Software up	date: -		rile: main_vpv.s.		
Verier		Charlester		Select file	Abort
version:	· ·	Check update			_
			Send report to GATE		
	Indate	Abort	User note:		
	pase		over note.		
					<sup>^</sup>
GATE Control Station					
<b>C</b> - <b>D</b>	Management and the second second				
sortware update:	Your version is up to d	ate			-
		Check update			
			Report status: -	Sen	d Save
				USB-Link: Conr	nected

Fig.4

#### 2.3 Drop-In Module

To make the update of your device please follow the steps below:

• Connect the TITAN Drop-in Module to the USB-Link.





• In the bottom right corner the information **Device: TITAN** should appear. It confirms connection to the device.

Update	Configuration	Diagnostic Trouble Codes			
EVICE			USB-Link		
Device:	TITAN		Status:	Connected	
Software version	n: 1.7		Software version:	0.2	
Serial number:	BETA_T_008		Serial number:	BETA_U_033	
PCB data:	UNKNOWN		PCB data:	2016_07_08_P_1.0	
Update			Update		
			Web Manual		
Web Manu	la		web manadr		Undate
Software u	ndate: -		File: main_vp0.3	Ubin	opuare
Jontmarte G				Select file	Abort
Version:		Check update			·
			Send report to GATE		
	Update	Abort	User note:		
					<u>^</u>
ATE Control Station					
Software update	: Your version is up to a	iate			
					*
		Check update	Report status: -	Send	Save
				USP Links Com	
				USB-LINK: Conn	ected

Fig.6

#### Cascade connection is forbidden (USB-Link->Tactical Programming Card->TITAN) (Fig.7).



• Check availability of the newest software versions for the USB-Link choosing **Check update**. If an update is available, click **Update** to start updating the firmware.

GATE Control Station BETA v0.88			
Update Configuration Diagnostic Trouble Codes			
DEVICE Device: TITAN Software version: 1.7 Serial number: BETA_T_008 PCB data: UNKNOWN Update Web Manual Software update: - Version:  Check update	USB-Link Status: Connected Software version: 0.2 Serial number: BETA_U_033 PCB date: 2016_07_08_P_1.0 Update Web Manual File: main_vp0.3.bin Select file Abort		
Update Abort	Send report to GATE User note:		
GATE Control Station	1		
Software update: Your version is up to date	•		
	nepuri status: • Sena Save		
	USB-Link: Connected Device: TITAN		

Fig.8

There is an option to update the Drop-In's firmware to the most recent version saved on your computer disc. Choose **Manual**, select file with the program saved on your computer disc and click **Update**.

#### 2.4 Tactical Programming Card

To make the update of your device please follow the steps below:

• Connect the Tactical Programming Card.



Fig.9

• The information **Device: PROGRAMMING CARD** should appear. It confirms connection to the device.

Cascade connection is forbidden (USB-Link->Tactical Programming Card->TITAN) (Fig.7).

 Check availability of the newest firmware versions for the Tactical Programming Card choosing Check update. If an update is available, click Update to start updating the firmware.

Update	Configuration	Diagnostic Trouble Codes			
EVICE Device: Software version Serial number: PCB data: Update Web Manu Software u Version:	PROGRAMMING 0.6 000000000 2016_08_29_P_1.0 aal pdate: -	CARD	US8-Link Status: Software version: Serial number: PCB data: Update Web Manual File: main_vp0.3	Connected 0.2 BETA_U_033 2016_07_08_P_1.0 Join Select file	Update Abort
ATE Control Station	Update	Abort	Send report to GATE User note:		
Software update	e: Your version is up to di	Check update	Report status: -		• Send Save
				USB-Link: Device:	Connected PROGRAMMING C4

Fig.10

There is an option to update the TPC's firmware to the most recent version saved on your computer disc. Choose **Manual**, select file with the program saved on your computer disc and click **Update**.

## 3. Configuration

Every TITAN Drop-in Module can be configured in such a way that it exactly adjusts to your individual preferences. The very convenient method of the device's configuration is the GATE Control Station App. It has all the available features, some of which are not even in the Tactical Programming Card.

## ATTENTION: Each time you run the GATE Control Station App, the default configuration appears. The real configuration saved in the TITAN Drop-in Module may differ.

After ticking the preferred options and clicking **Save**, the chosen configuration will be saved in the TITAN Drop-in Module. If you want to modify the already saved configuration, you should click **Read**.

Help				
Update Confi	guration Diagnostic Trouble Codes			
age A		Page B		
PRE-COCKING MODE	PRE-COCKING BOOST	BURST	BURST MODE	
OFF	O OLOW MID HIGH	© 2 <b>●</b> 3 ○ 4 ○ 5 ○ 8	10 III TRIG	
AUG MODE TRIGO	GER SENSITIVITY	ROF CONTROL		
● OFF ○ ON ○ 1		◎ 50% ◎ 60% ◎ 70% ◎	80% 🔘 90% 💿 100%	
		BATTERY CELL	ROF STAB.	
		● AUTO ◎ 2 ◎ 3 ◎	◎ 4	
BATTERY PROTECTION	LOW BAT. WARNING	SNIPER DELAY		
◙ OFF ⊚ LIPO ⊚ LIFE	● OFF ◎ 3.2V ◎ 3.4V	OFF 0.5s 1s 2s 3s VIB     GEAR RATIO		
FIRE SELECTOR MODE				
SAFE SAFE SAFE SAFE SEMI SEMI SEMI SEMI BURST AUTO SEMI BURST	<ul> <li>SAFE</li> <li>SAFE</li> <li>SEMI</li> <li>SEMI</li> <li>BURST</li> <li>SEMI</li> <li>BURST</li> <li>T</li> <li>AUTO</li> <li>BST/AUT</li> <li>AUTO</li> </ul>	бтоск	•	
YCLE DETECTION	30-ROUNDS LIMIT	SENSORS		
OFF   OFF	OFF ON	Gear tooth YES NO	Fire selector SAFE SEMI AUTO	
	Default	Trigger	Trigger Sense	
Save Kead	Settings Settings		·	
		US	B-Link: Connected	
afiguration sayed		De	TITAN	

Fig.11

You can set the default settings at any time clicking **Default Settings**. Only after choosing **Save**, the default settings will be saved in the TITAN Drop-In Module.

Choosing **Restore Factory Settings** results not only in restoring the factory settings, but also in deleting adaptation and **GEARS RATIO** configuration is set to **STOCK**. You are required to re-set the **GEAR RATIO**.

Please note that the information about sensors is very useful during the TITAN Drop-in Module installation or trigger sensitivity adjustment.

ATE Control Station BETA v0.89 Help				
Update Configuration Diagnostic Trouble Codes				
Page A PRE-COCKING MODE PRE-COCKING BOOST	Page B BURST BURST MODE			
OFF SMART AUTO     OLOW MID HIGH	© 2 ● 3 ◎ 4 ◎ 5 ◎ 8 ◎ 10 ● FULL ◎ TRIG			
AUG MODE         TRIGGER SENSITIVITY           Image: Construction of the sensitivity         Image: Construction of the sensitivity           Image: Construction of the sensitivity         Image: Construction of the sensitivity           Image: Construction of the sensitivity         Image: Construction of the sensitivity           Image: Construction of the sensitivity         Image: Construction of the sensitivity           Image: Construction of the sensitivity         Image: Construction of the sensitivity           Image: Construction of the sensitivity         Image: Construction of the sensitivity           Image: Construction of the sensitivity         Image: Construction of the sensitivity           Image: Construction of the sensitivity         Image: Construction of the sensitivity           Image: Construction of the sensitivity         Image: Construction of the sensitivity           Image: Construction of the sensitivity         Image: Construction of the sensitivity           Image: Construction of the sensitivity         Image: Construction of the sensitivity           Image: Construction of the sensitivity         Image: Construction of the sensitivity           Image: Construction of the sensitivity         Image: Construction of the sensitivity           Image: Construction of the sensitivity         Image: Construction of the sensitivity           Image: Construction of the sensitivity         Image: Construction of the sensitivity <td colspan="4">ROF CONTROL</td>	ROF CONTROL			
	BATTERY CELL         ROF STAB.           ● AUTO         2         3         4         ● OFF         O N			
BATTERY PROTECTION LOW BAT. WARNING OFF LIPO LIFE OFF 3.2V 3.4V	SNIPER DELAY			
FIRE SELECTOR MODE SAFE SAFE SAFE SAFE SAFE SAFE SEMI SEMI SEMI BURST SEMI BURST AUTO SEMI BURST AUTO BST/AUT AUTO	GEAR RATIO			
CYCLE DETECTION         30-ROUNDS LIMIT           ◎ OFF ◎ ON         ◎ OFF ◎ ON	SENSORS Gear tooth YES NO SAFE SEMI AUTO			
Save Read Default Factory Settings Settings	Trigger 1 2 3 4 5 FIRE			
Configuration saved.	USB-Link: Connected Device: TITAN			

Fig.12

**Gear tooth** – shows the gear sensor's functioning. In case of the teeth detection, YES goes green. Contrary, rotating the tooth results in NO going green.

Fire Selector – shows the current selector position.

**Trigger** – pulling the trigger results in activating subsequent sensors (1-5). Some sensors may activate even if the trigger is released (depending on the trigger).

**Trigger sense** – FIRE goes green in the moment when the trigger will reach the specified position of the required sensitivity (firing a shot).

Below you can find the description of additional functions.

**PRE-COCKING** MODE – thanks to this function, you gain a trigger reaction similar to a real gun. It allows for initial spring compression, which speeds up the trigger response significantly. There are three modes:

- **OFF** PRE-COCKING is turned off.
- **SMART** slow trigger action compresses the spring, and fast trigger action fires the shot. If the spring is compressed, the slow trigger action does not produce any result.
- AUTO the spring is automatically compressed after each shot.

**PRE-COCKING** mode can be adjusted also without GATE Control Station. To do so, you must switch the selector to **SEMI** position and fire a shot. Do not release the trigger until you will have set the Pre-cocking and the vibration will have started.

The **SMART** mode is activated when you are switching the selector to **SEMI** while the trigger is held down.

The **AUTO** mode is activated when you are switching the selector to **AUTO** while the trigger is held down.

You turn the **PRE-COCKING** off if you switch the selector to **SAFE** while trigger is held down.

#### Each change is signaled by long motor vibration.

**PRE-COCKING** BOOST – if the PRE-COCKING function is turned on, it enables to determine the strength of spring compression.

**BURST** – enables you to shoot a pre-determined number of BBs, which is very useful in MILSLIM and when using low-caps. The BURST mode is available after adjusting the proper selector function.

#### **BURST MODE** – enables two BURST operating modes:

- FULL pulling the trigger results in shooting a pre-determined number of BBs,
- **TRIG** pulling the trigger results in starting shooting a pre-determined number of BBs, whereas releasing the trigger stops the sequence.

**TRIGGER SENSITIVITY** – it allows you to adjust the trigger to your preferences and level of skills. All trigger's sensors which are covered (eg. by trigger) when you connect the Drop-In Module to the TPC,

are not available for the trigger sensitivity. The TRIGGER SENSITIVITY is also the first trigger stage (AUG1), if the AUG MODE is enabled.

**ROF CONTROL** - enables a reduction in a gun's rate of fire in the range from 50% to 100%.

**ROF STABILIZATION** – allows you to change the way the ROF Control works:

**ON** - ROF Control uses PWM to decrease ROF. Thanks to this, gearbox works smoothly what decreases wear and tear of AEG internal parts.

**OFF** - ROF Control adds breaks between shots to decrease ROF. It gives you more realistic experience.

**BATTERY CELL** – the TITAN drop-in Module detects the number of cells automatically. There is no need to reprogram TITAN every time you replace the battery. If you are not sure how many cells your battery has, just choose AUTO.

Please note that the AUTO option works well only when the battery if fully charged.

**BATTERY PROTECTION** – protection against over-discharge of the battery. You should specify your battery type and the TITAN Drop-in Module will automatically adjust the minimum voltage level for this kind of battery.

**LOW BATTERY WARNING** – when the battery voltage drops to a specified level (in relation to one cell), the motor will vibrate at regular intervals.

In case of LIPO batteries, the function can be activated for the voltage level **3.2V** or **3.4V**. In case of LIFE batteries, the function can be activated for the voltage level **2.7V** or **2.9V**.

FIRE SELECTOR MODE – enables determining a firing mode for different selector positions.
CYCLE DETECTION – Thanks to the gear sensor, TITAN precisely detects in which position the cycle should finish. Therefore, even the shortest trigger action produces at least one full cycle.
Thanks to the cycle detection function you get:

 Automatic BURST – there is no need to set the burst time. You can set the burst between two and 10 shots;

- Automatic PRE-COCKING Pre-cocking is fully operational in SEMI, BURST and AUTO modes and there is no need to set the pre-cocking boost manually. You can simply set the pre-cocking as HIGH, MID or LOW;
- **FULL CYCLE** when the pre-cocking is off, TITAN ensures that the gearbox completes a full cycle. You gain a higher reliability.

Disabling the CYCLE DETECTION allows you to fire a shot even if the gear sensor is damaged. The dropin module works well in safe mode.

**30-ROUNDS LIMIT** – when the trigger is jammed in AUTO mode, an AEG can fire max. 30 shots. To fire more shots, you should release the trigger. You can check the current state of the function on the sensors' display.

**GEAR RATIO** – it allows you to define the type of gear in AEG. Available types: **STOCK**, **TORQUE**, **SPEED DSG**.

**SNIPER DELAY** – it lets you to set delay between each SEMI shots to simulate the delay from reload or recoil. You can set **0.5s**, **1s**, **2s** or **3s** delay.

**AUG MODE** – it allows you to set two different trigger sensitivities. Pulling the trigger slightly produces SEMI or BURST fire and pulling the trigger further produces BURST or AUTO fire (depending on the fire selector mode). The first trigger stage is set as the TRIGGER SENSITIVITY.

## 4. Diagnostic Trouble Codes

In the Diagnostic Trouble Codes window you can check if there are some errors or problems concerning the TITAN Drop-in Module. Each error or warning is automatically highlighted in red as in the screenshot below.

😨 G	ATE Control Station BETA	v0.88	data ya	watch madels (1988)	Dog - Kattly March	X			
File									
	Update	Configuration Diag	nostic Trouble Codes						
	UVP1	UVP2	OCP1	OCP2	OTP	MOTR DISC			
	E01	E02	E03	E04	E05	E06			
	E07	EOS	E09	E10	E11	E12			
	E13	E14	E15	NT1	NT2	NT3			
	Clear								
	DTC read successfully. USB-Link: Connected Device: TITAN								

Fig.13

All the possible Trouble Codes are described below:

- UVP1 your battery is discharged
- UVP2 the voltage is lower than 3.8V
- **OCP1** overcurrent protection
- OCP2 the motor power supply circuit is shorted
- OTP the drop-in module temperature is too high
- MOTOR DISC you pulled the trigger but the motor did not move

If you need to know how to interpret other trouble codes, please contact us at: support@gatee.eu.