

# TVC-TT-16

### Tower turntable with bayonet lock

This mechanical function unit was designed for 1/16th scale anti-aircraft tanks. The mechanically solid design with bayonet locking and the transparent base make the unit particularly interesting for fast-moving turrets with infrared transmission.





### 1 Note

Installation of the module requires intermediate to advanced modeling skills. Soldering skills are required to connect the wiring. Inexperienced modelers and persons aged under 16 years old should seek the assistance of an experienced modeler. Always switch off power when working on the wiring. Especial take care when connecting more than one receiver energy source. Prevent the device from getting wet. Check loads before connecting them to the modul at a current limited, or fuse protected source.



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# 2 Scope of delivery

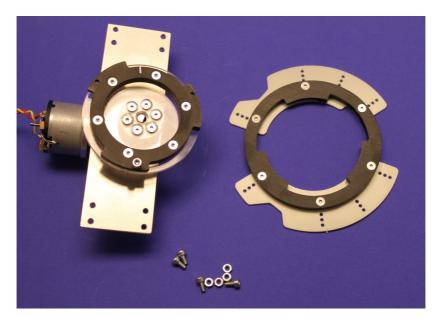


Figure 1: Scope of delivery: left the chassis part, right the turret part



## 3 Assembly

The assembly in a Tamiya Gepard is shown here.

The turret section can be glued or screwed to the turret floor from the inside with the GRP segments attached on the outside. The bayonet ring can later be removed with the six screws for servicing.

If the towers are already glued, this can also simplify assembly by unscrewing the GRP segments, into the tower and then screwing them back into the ring.



The GRP segments have a recess for the area under the weapon nacelle. (The area is marked red in the picture). During assembly, make sure that the ring is centred on the circular turret opening.

The turret base (C1) of the Tamiya kit has a ring at the bottom for centring in the hull opening. We have removed this ring, as can be seen in the picture. It is no longer necessary and is rather annoying.





The drive unit is screwed onto the side walls of the chassis with the aluminium plate. There are different tubs for the Gepard. The first edition from the 1970s had a tub that guided the aluminium over the tracks, resulting in a closed interior.

This has been omitted in the second edition, which is designed as a display model. It is relatively easy to fit aluminium profiles (40 x 10 x 1.5mm) to close the interior again.

However, this results in a different height. This can be compensated for by loosening the screw in the receiver of the acrylic glass disc and moving it on the gearbox output shaft.

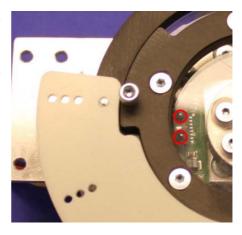
Mounted unit.







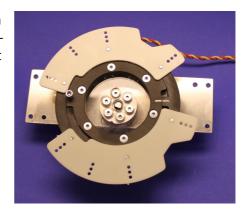
If the model has an infrared Scalebus transceiver, it must be installed so that the two black plastic eyes look through the Plexiglas. The infrared module can be fixed there with double-sided adhesive tape.



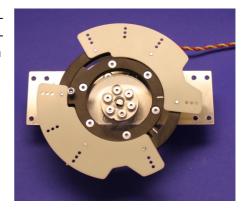


## 4 Operation

To close, align the upper ring with the white marking and turn it clockwise by approx. 20 degrees until it stops.



In the assembled model, this requires a long Allen key which is inserted through the gunners hatch of the turret.



Loosening is carried out in reverse order.



## **5** Glossary of terms

**BEC B**attery **E**liminator **C**ircuit

This circuit replaces a extra Battery needed for the receiver and connected servos, by generating a fixed voltage from the drive battery.

- **ESC** Electronic Speed Controller

  This is a unit to control the speed and direction of a DC motor.
- Light Emmitting Diode
  A light-emitting diode (LED) is a semiconductor device that emits visible light when an electric current passes through it. Benefits of LEDs are low power requirement and long life. Disadvantages is the more complicated wiring, compared to a classic bulb, it has a polarity and a resistor is needed to limit the current.
- **Scalebus** The Scalebus is a development of **SGS electronic** to connect controllers and modules to compose solutions for complex RC models.
- **SBus** The Sbus has been introduced by **Futaba** to simplify the wiring between RC Receivers and servos / esc.
- **SBus** The SBus was introduced by the company **Futaba** to simplify the wiring between receiver and servos/controllers. This is especially useful for models with many controllers.
- **IBus** The IBus was introduced by the company **Flysky** to simplify the wiring between receiver and servos/controllers. This is especially useful for models with many controllers.
- **SUMD** The SUMD sum signal has been introduced by the company **Graupner** to simplify the wiring between receiver and servos/controllers. This is especially useful for models with many controllers.



Abbre- vation	meaning	explanation
Stick	<b>S</b> tick	Stick not self centering
StickS	<b>S</b> tick	self centering Stick
	<b>S</b> elfcentering	
TSMS	<b>T</b> hree <b>S</b> tage	self centering momentary switch with three
	<b>M</b> omentary	stages
	<b>S</b> witch	
TSS	<b>T</b> hree <b>S</b> tage	switch with three stages
	<b>S</b> witch	
Pot	<b>Pot</b> entiometer	linear- or rotary knob
PotC	<b>Pot</b> entiometer with <b>C</b> enter key	linear- or rotary knob with a center key

Table 1: Abbrevation for the manipulators in the transmitter housing



## 6 Important

This equipment described above has been tested and inspected for quality and function. And it is intended for installation and use only as described above. This equipment does not contain any user serviceable parts. The supplier accepts no responsibility, financially or otherwise, for damages caused by use or misuse of the equipment described above. The equipment must be protected from exposure to water to prevent short circuit. Do not open the equipment or attempt to change function, wiring, or documentation in any way. Do not connect to incorrect voltage or reverse the battery polarity. Do not use in a careless or abusive fashion around persons or property. Do not attempt to repair. Any legitimate use, e.g. Installation in a model makes the user responsible to ensure that the operating instructions and non-liability agreement are provided to the purchaser of the module described above.

Do operate the device only in the permissible operating conditions. Do not make any changes to the controller through. The device shall not be exposed to splashing water or rain (causing a short circuit).

### 6.1 Warning

Due to choking hazard caused by small parts that may be swallowed, this product is not suitable for children under 6 years of age.

### 6.2 Environmental protection

For defective devices, repair is possible in many cases. Please contact us. If you do decide to dispose of the device, you will be making a contribution to environmental protection if you return the device to a municipal collection point for recycling. Electronic devices do not belong in household waste.



#### 6.3 Address

SGS electronic Zeppelinstraße 36 47638 Straelen Germany / Europe

#### 6.4 Contact

Web www.sgs-electronic.de info@sgs-electronic.de

Ust-IdNr.: DE 249033623 WEEE-Reg.-Nr.: DE 90290947

#### 6.5 Document date

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#### 6.6 Documentation

We reserve the right to make updates, changes or additions to the information and data provided.

The documentation that accompanies your product applies.

Please note that documents obtained later via download may not correspond to the status of your module.