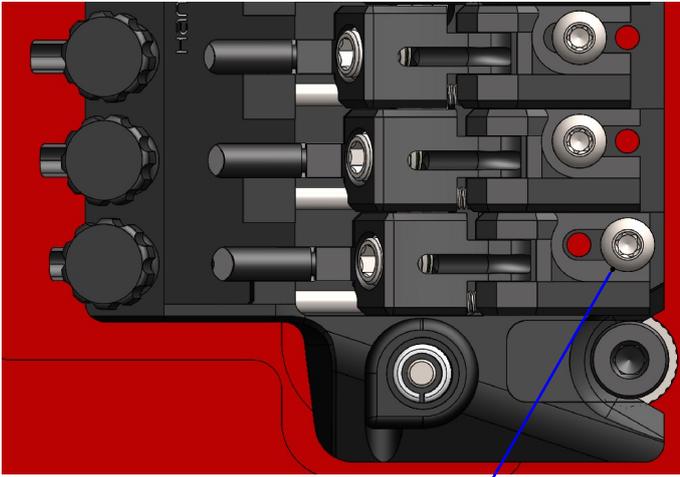
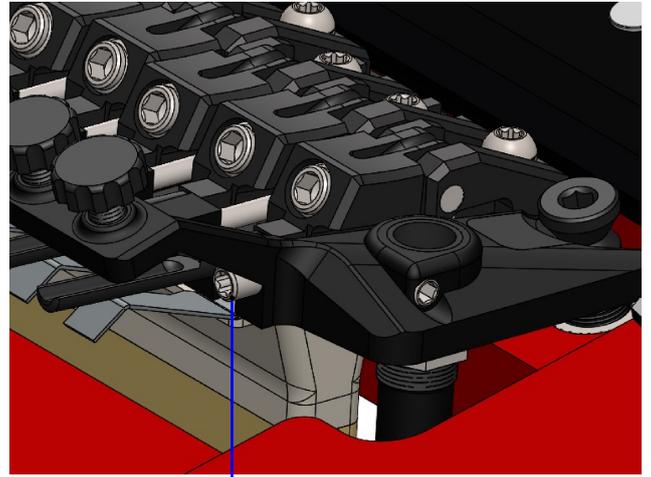


# INTONATION ADJUSTMENT PROCEDURE



①

Saddle Lock Screw  
(M3 Titanium T10 Torx Head)



②

Intonation Adjustment Screw  
(M2.5 Titanium T10 Torx Head)

## 1. Purpose

This document describes the correct and safe procedure for saddle intonation on the Hantug Locking Tremolo Pro. Following the specified order of operation is essential to prevent uncontrolled saddle movement, loss of adjustment, or screw disengagement under string tension.

## 2. System Overview

Screw	Location	Function
1.Saddle Lock Screw	Top of saddle	Locks the saddle firmly in position
2.Intonation Adjustment Screw	Rear of the Tremolo	Moves the saddle forward/backward for intonation

## 3. Importance of Adjustment Order

If the Intonation screw is turned while the saddle lock screw is fully tightened, the intonation screw may loosen from the bridge, particularly when turned counter-clockwise. If the saddle lock screw is loosened afterward, the saddle may suddenly release and move forward due to string tension, resulting in loss of the intonation setting.

## 4. Correct Intonation Adjustment Procedure

**Step 1- Preparation:** Tune the instrument to pitch, ensure the tremolo is in its neutral playing position, and use the correct hex size.

**Step 2- Loosen Saddle Lock Screw:** Slightly loosen the saddle lock screw only enough to allow controlled saddle movement. Do not fully loosen.

**Step 3- Adjust Intonation:** Turn the intonation screw clockwise to move the saddle backward, or counter-clockwise to move it forward. Ensure the intonation screw remains flush against the rear of the baseplate with no visible gap.

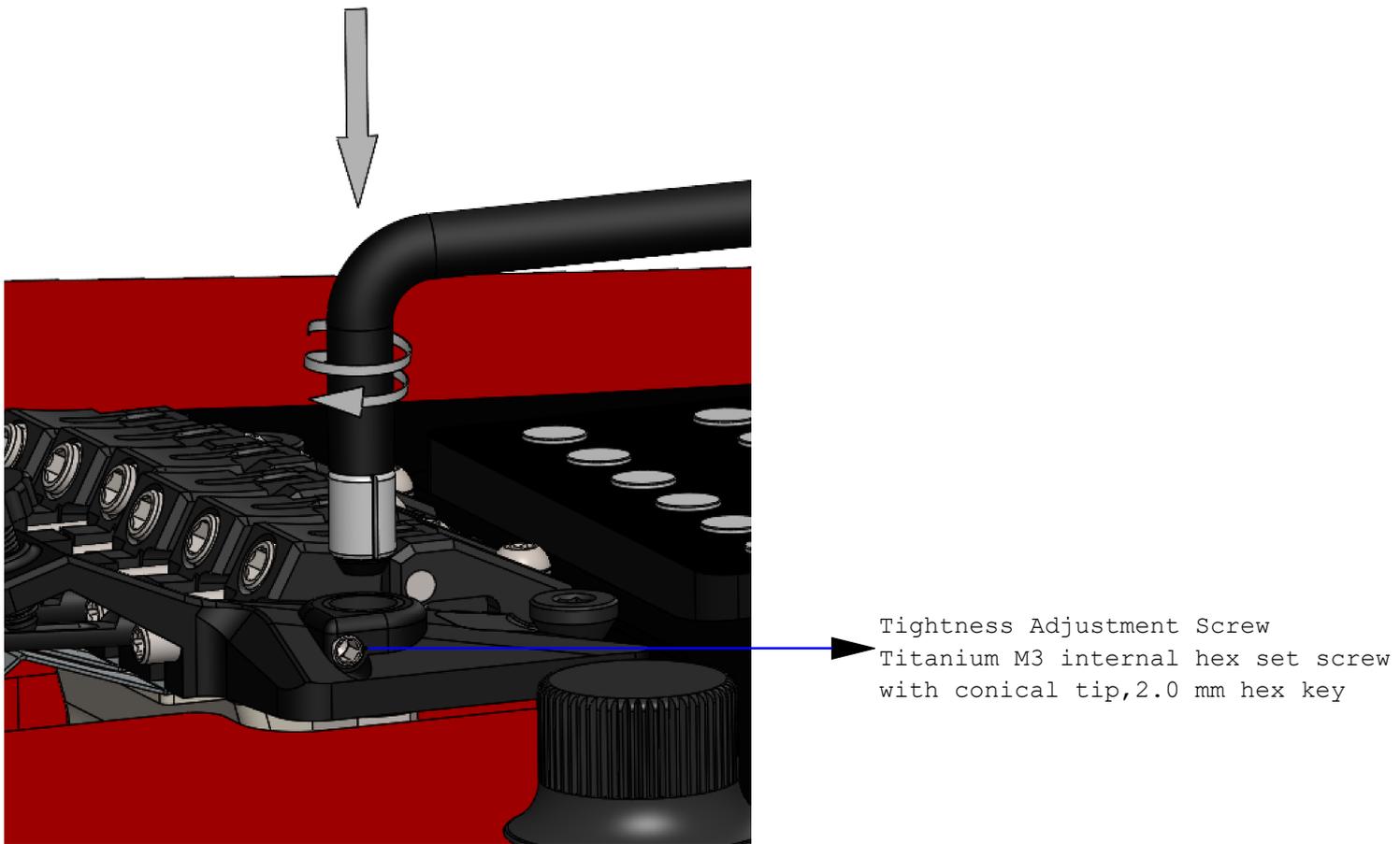
**Step 4- Lock the Saddle:** Firmly re-tighten the saddle lock screw once correct intonation is achieved.

**Step 5- Final Check:** Re-check tuning and intonation, and confirm the saddle is fully locked.

## 5. Best Practices

Adjust one saddle at a time. Never force the intonation screw against a locked saddle. Avoid large adjustment under string tension. Minor tuning changes during adjustment are normal.

# TREMOLO ARM INSTALLATION



## 1. Overview

The Hantug Locking Tremolo Pro features a threaded tremolo arm system with adjustable height and tension control. Proper installation ensures smooth operation, stable positioning, and long term reliability.

## 2. Tremolo Arm Installation

- Step 1 - Prepare the Socket:** Ensure the tightness adjustment screw is loosened to allow free rotation.
- Step 2 - Insert the Arm:** Insert the tremolo arm into the socket while applying gentle downward pressure.
- Step 3 - Engage the Thread:** Rotate the arm clockwise until it engages with the internal screw.
- Step 4 - Fully Seat the Arm:** Continue turning clockwise until the arm reaches its mechanical stop. Do not force.

## 3. Arm Height & Tension Adjustment

**Height Adjustment:** Rotate the arm counter-clockwise to set the desired playing height.

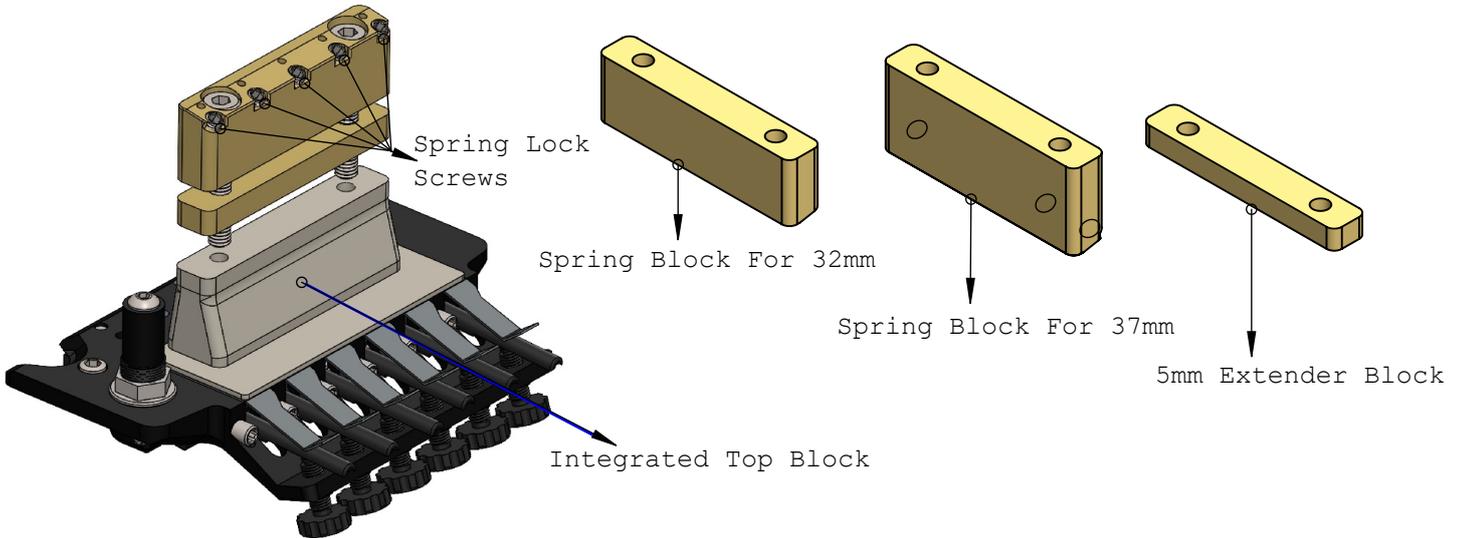
**Tension Adjustment:** Once height is set, tighten the side tension adjustment screw until the arm rotates smoothly but remains in position when released.

## 4. Notes & Best Practices

- Always loosen the side tension screw before installing or removing the arm.
- Do not force the arm beyond its stop position.
- Make small adjustments for best control.

Resistance preference is subjective and can be adjusted to taste.

# MODULAR TREMOLO BLOCK



## 1. Overview

The Hantug Locking Tremolo Pro uses a modular tremolo block system consisting of an integrated Top Block and interchangeable block components that define the final tremolo block height.

Unlike traditional systems adjusting the block height does not require disassembly of the tremolo components.

Traditional systems that rely on a separate shim placed between the tension plate and the block, the Hantug system uses an Integrated Top Block + Spring Block architecture.

The Integrated Top Block always remains mounted to the tremolo and never needs to be removed; block height is adjusted only by changing the Spring Block configuration

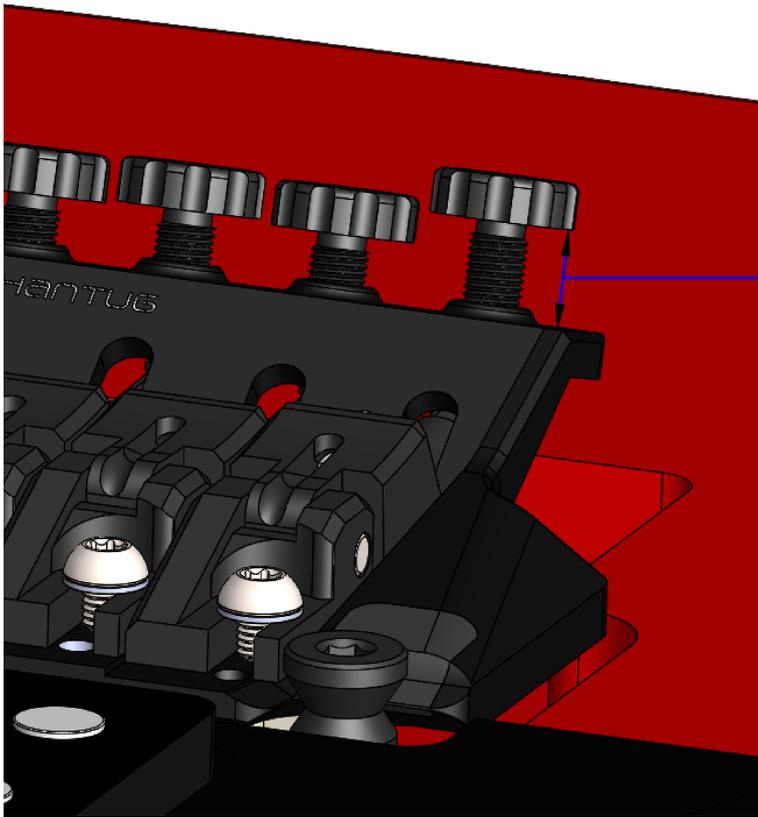
## 2. Block System Description

**Integrated Top Block:** Always integrated with the tremolo assembly, Forms the upper section of the tremolo block and replaces the need for any separate shims. This component remains installed at all times.

**Spring Block (Interchangeable):** Brass block mounted beneath the Integrated Top Block. Spring Blocks are available in different heights to define the total block height. Each tremolo spring mounting hole includes an individual **spring lock screw** to secure the spring and prevent movement inside the mounting hole

Total Block Height	Block Configuration
32 mm	Integrated Top Block + Spring Block (32mm)
37 mm	Integrated Top Block + Spring Block (37mm) - Factory Installed
42 mm	Integrated Top Block + 5mm Extender Block + Spring Block (37mm)

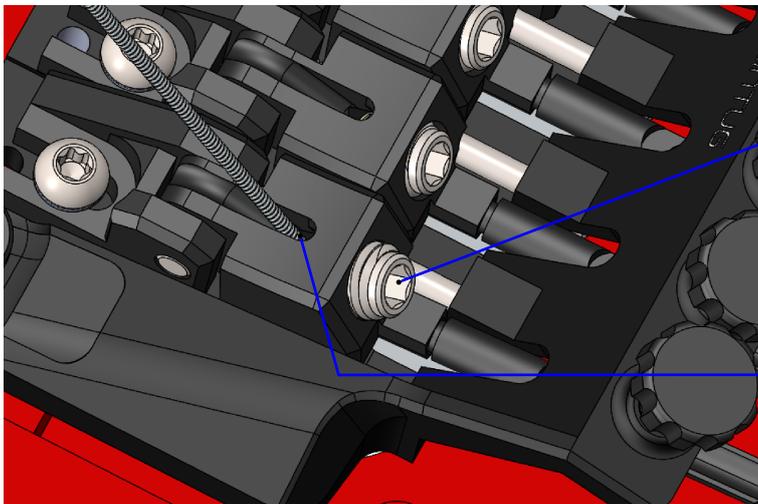
# STRING INSTALLATION PROCEDURE



## Step 1 - Set the Fine Tuner to Maximum Up Position

Turn the fine tuner fully counter-clockwise until it reaches its upper limit. This position provides maximum clearance and makes the string lock screw easier to access.

\*Both string lock screws and fine tuner screws feature titanium-to-titanium and titanium-to-stainless steel (helicoil) threaded interfaces. To prevent micro-galling and to ensure smooth, consistent operation, a small amount of anti-seize (Molykote) compound is applied to these threads. This does not cause any self-loosening, does not affect tuning stability, and is used solely to improve thread life and long term reliability.

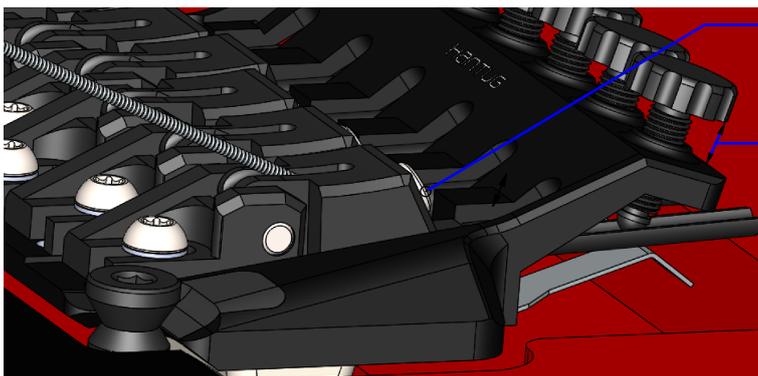


## Step 2 - Loosen the String Lock Screw

Loosen the string lock screw just enough to allow string insertion.

## Step 3 - Insert the String

Insert the string fully into the saddle, until it reaches the internal stop. Ensure the string is seated straight and fully inserted before tightening.



## Step 4 - Lock the String

Tighten the string lock screw firmly until the string is securely locked.

## Step 5 - Return the Fine Tuner to Mid Position

Before tuning, rotate the fine tuner back to its middle position. This provides equal adjustment range for fine tuning in both directions.