

anago

ensure optimum sharpness

Operating Manual

Anago Trimmer Sharpness Tester (TST) Series

- TST100



Version 1.1
October 2018
MAN-OP-TST

Anago Trimmer Sharpness Tester (TST) Series Operating Manual

© 2003-2018 ... Anago Ltd

All rights reserved. No parts of this work may be reproduced in any form or by any means - graphic, electronic, or mechanical, including photocopying, recording, taping, or information storage and retrieval systems - without the written permission of the publisher.

Products that are referred to in this document may be either trademarks and/or registered trademarks of the respective owners. The publisher and the author make no claim to these trademarks.

While every precaution has been taken in the preparation of this document, the publisher and the author assume no responsibility for errors or omissions, or for damages resulting from the use of information contained in this document or from the use of programs and source code that may accompany it. In no event shall the publisher and the author be liable for any loss of profit or any other commercial damage caused or alleged to have been caused directly or indirectly by this document.

Printed: October 2018 in New Zealand

About

About Anago

Anago Limited is a technology company based in Hamilton, New Zealand. Established in 2001, Anago specializes in products that improve safety and production performance, primarily in the food processing industry. Anago invented and commercialized the world's leading knife sharpness testing technology.

Anago's knife sharpness testers (KSTs) have been instrumental in the improvement of knife sharpness levels and the optimization of sharpening methods throughout the United States, Australasia, and Europe. Within food processing companies, these improvements have directly resulted in increases in production yield and output as well as reduced musculoskeletal disorders amongst workers.

To complement their KST range of products, Anago has developed AnagoSafe, a benchmarking software for comprehensive incident, hazard, and absence management.

Anago also provides customised sharpness testing technology and consulting services to specialist blade manufacturers (including the medical industry), processors and researchers.

Anago knife and blade sharpness testing technology is represented and serviced globally by Anago direct and through a distributor and service agent network. Please contact Anago to find your nearest representative.

About this manual

This operating manual accompanies the Anago Trimmer Sharpness Tester (TST) 100. The manual introduces basic functions of the TST, shows how to use the TST in conjunction with the Anago Analyzer software and provides an overview of possible operating errors with their respective solutions.

The sections covered include:

- a general introduction to the TST
- detailed guidelines on how to use the TST set up menu
- instructions on how to test trimmer blades, both with and without the Analyzer software
- a basic troubleshooting section
- product and system specifications

This operating manual is a working document. We welcome suggestions and recommendations for its improvement. Please email support@anago.co.nz to offer suggestions or to request information to be added.

Table of Contents

About	0
Part I General Information	1
1 Welcome	1
2 Quick Start Guide	2
3 Analyzer Software - TST Mode	3
Part II Components & Setup	5
1 Interface	5
Calibration	6
Screen & Lighting	9
Diagnostics	11
About	13
2 Test Media	14
3 Blade Handles	16
Part III Testing	17
1 Stopping a Test	22
2 Saving Test Results	23
Running a Test from the Software	24
Automatic Saving	26
Transferring Results After Running a Test	28
Part IV Troubleshooting	30
Part V Specifications and Version Information	31
Part VI Warranty	33

1 General Information

1.1 Welcome

First of all, CONGRATULATIONS!

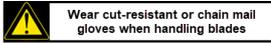
You now own the world's best system for accurately, objectively and repeatedly testing and auditing trimmer blade sharpness.

With the Anago Trimmer Sharpness Tester you can now:

- Test and record the sharpness of blades
- Analyze and compare blade sharpness between people, departments and facilities
- Compare blade sharpness at different times
- Graph sharpness results in an easy-to-read format
- Print sharpness data
- Export sharpness test results
- Monitor sharpness levels remotely with the Anago Sharpness Dashboard
- **Control the quality of sharpness at your facility**

1.2 Quick Start Guide

Quick Start Guide - TST1000 Standard



See Operating Manual for more details

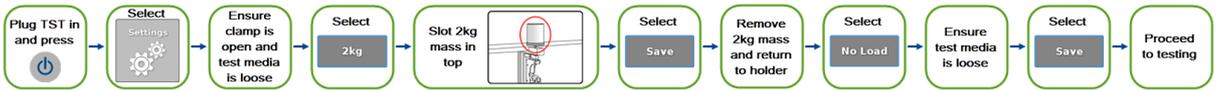
Blade types	Q620	620M2	Q750	750M2	Q850	850M2	Q1000	1000M2
TST test option	Whizard 620		Whizard 750		Whizard 850		Whizard 1000	
Handle size*	620		750 / 850		1000			
Handle orientation in TST	Horizontal		Horizontal		Diagonal		Diagonal	

*found on the side of the handle

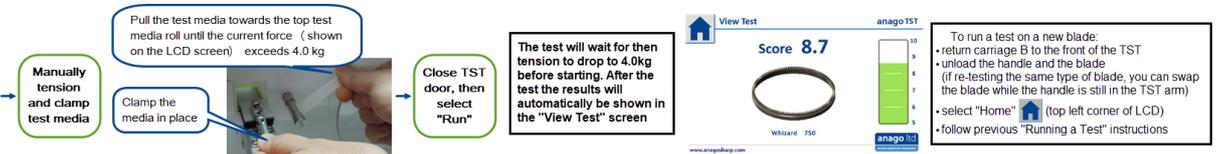
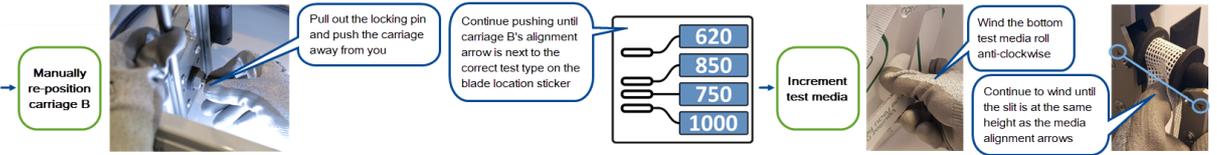
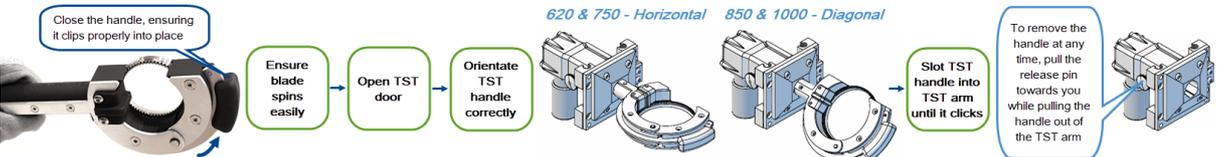


Calibrating

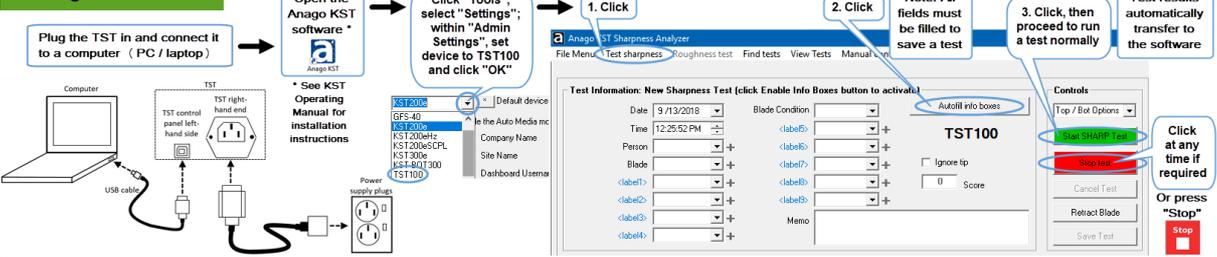
Calibrate load cell before first use, then weekly / fortnightly



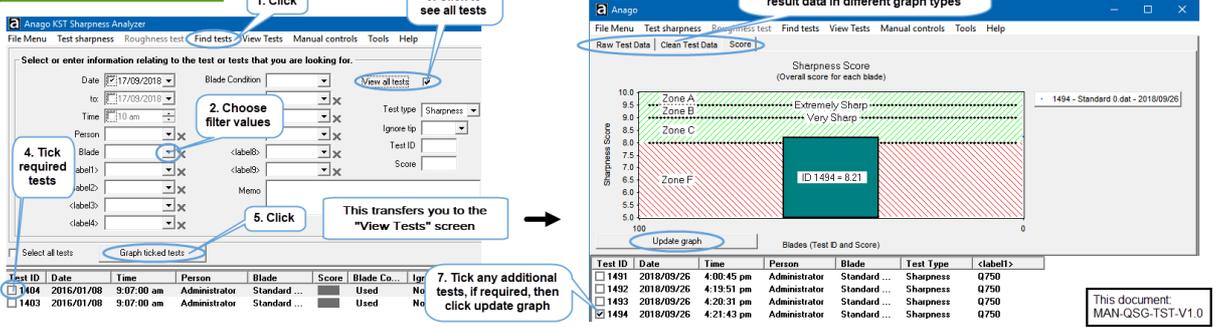
Running a Test



Testing with a PC



Finding Saved Tests



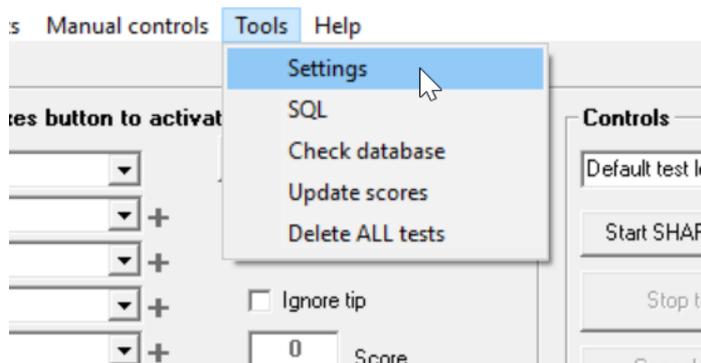
Poster-size (A3) copies of this guide are available; please contact sales@anago.co.nz for requests.

1.3 Analyzer Software - TST Mode

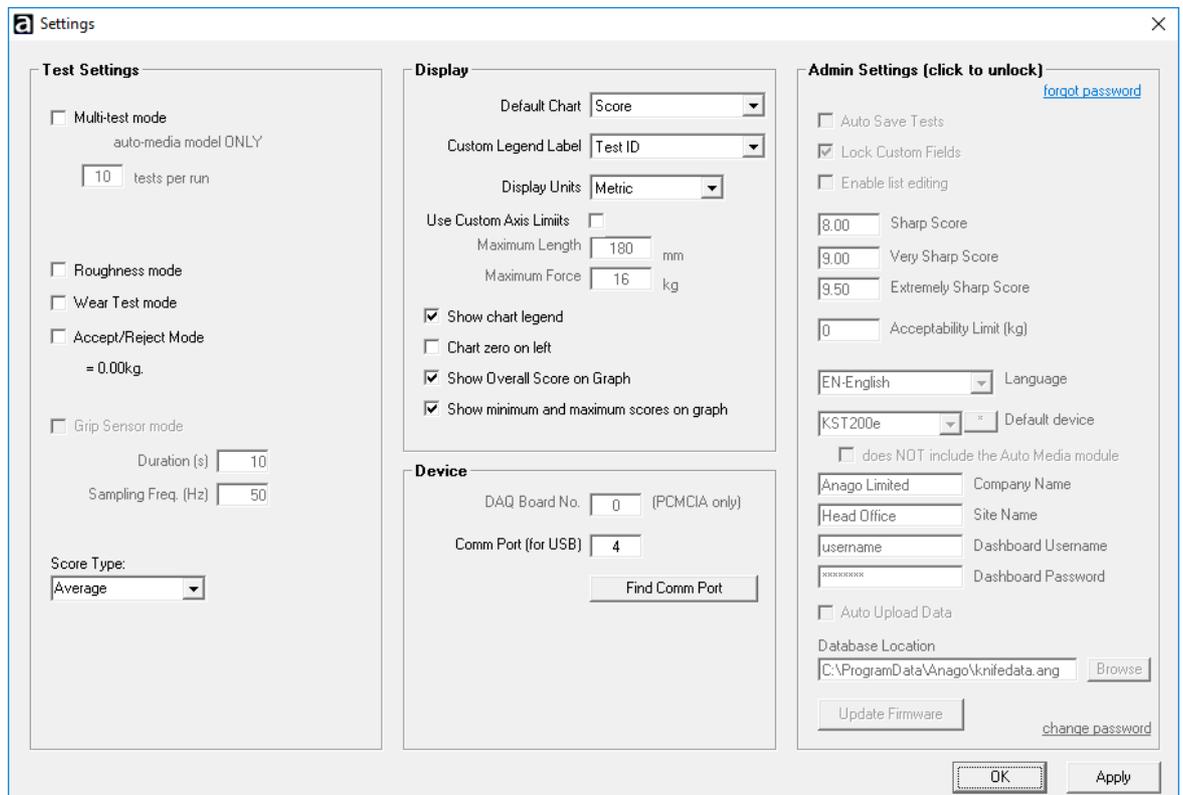
The TST can be used in conjunction with the Anago KST Analyzer Software, once the software has been set to TST mode. This enables test results to be recorded and saved for the future.

Setting the Analyzer Software to TST mode

1. Open the Anago KST Analyzer Software
2. Click "Tools" and select "Settings"



3. Click within the "Admin Settings" on the right-hand side



This will prompt you to enter a password. Note: the default admin password is Adm1n

4. Type in the admin password, then click "OK"

This will unlock the Admin settings.

5. Click the drop-down arrow next to "Default device" and select "TST100"

Admin settings (unlocked)

Auto Save Tests Setup Dashboard

Lock Custom Fields

Enable list editing

Sharp Score

Very Sharp Score

Extremely Sharp Score

Acceptability Limit (kg)

EN-English Language

KST200e * Default device

GFS-40 Hide the Auto Media module

KST200e Company Name

KST200eHz Site Name

KST200eSCPL Dashboard Username

KST300e Dashboard Password

KST-BOT300

TST100

PaceUP

Auto Upload Data

Database Location

C:\ProgramData\Anago\knifedata.ang Browse

Update Firmware [change password](#)

OK Apply

6. Select "OK"

The software has now been set to TST mode.

Refer to [Saving Test Results](#) ^[23] for details on using the software in conjunction with the TST.

2 Components & Setup

2.1 Interface

The Anago TST has a simple touch-screen interface which allows access to machine functions and settings and displays test progress.

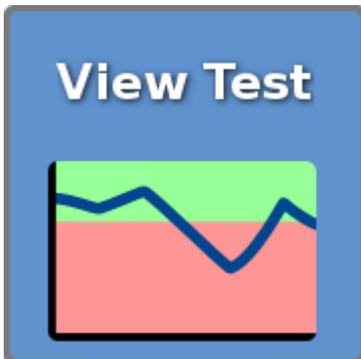
- Press **Power**  to switch on the TST
- Select the required icon to enter the sub-menu
- Press **Home**  at any time to return to the original screen



New Test

This page enables the user to run a new test.

The new test screen allows you to select the correct blade type for the test. It also shows the current force of the load cell and reports back on which stage of the test the TST is in.



View Test

This page enables the user to see the results of the last test performed.

Note: Turning the TST off and on again will lose the last test result. For saving and storage options, use the [Analyzer Software](#) ²³.



Settings

This page is broken into four sections. For more details, refer to the individual chapters:

- [Calibration](#) ⁶
- [Screen & Lighting](#) ⁹
- [Diagnostics](#) ¹¹
- [About](#) ¹³

2.1.1 Calibration

The calibration process requires the use of the standard 2 kg (4.41lb) calibration mass included with the Anago TST.

TST Calibration Mass

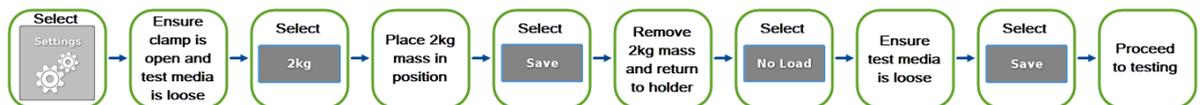
The TST calibration mass, part number TST-CM-2, has a blue rod attached to it (see image). This allows the calibration mass to quickly and easily be placed onto the load-cell from above.



Calibration is performed by Anago prior to shipment, however, **we recommend recalibrating:**

- before** using the TST **for the first time**
- every 1 to 2 weeks during normal operations
- whenever the TST may have suffered significant vibration (e.g. during transport or from a knock)
- after particularly blunt trimmer blades have been tested

Calibration - Overview

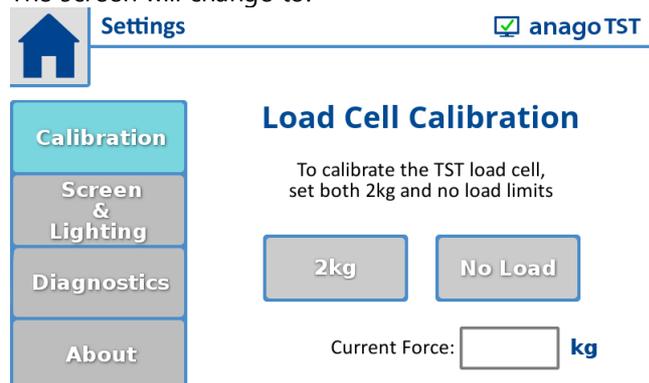


Calibration - Detailed

Note: Both the 2kg load and the 0kg load need to be set in order for calibration to be successful.

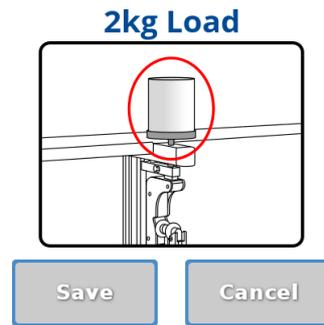
- Select the **Settings**  option located on the right side of the home page

The screen will change to:



- Select **2kg Load** 

This will cause the following to appear:



- Insert the calibration mass into the top slot, as shown

Note: For your convenience, the 2kg mass is stored inside the TST. It is situated about midway up the right hand-side near the front.

- Simply lift the calibration mass from here and slot it into the top of the load-cell

Note: Ensure the media clamp is open and the media is loose

3. Select **Save** to save, or **Cancel** to cancel

The screen will return to the calibration home:

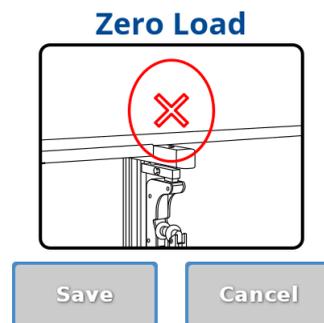
Load Cell Calibration

To calibrate the TST load cell,
set both 2kg and no load limits



4. Remove the weight from the load-cell and return it to the TST calibration mass holder
5. Select **No Load**

This will cause the following to appear:



- Ensure there is no weight on the load cell, i.e. that the media clamp is open and the test media is loose

Note: If you forgot to open the clamp when setting the 2kg load, you will need to re-calibrate the 2kg load. Any excess weight pulling on the load cell will change its measurement and have an impact on any test results.

6. Select **Save** to save, or **Cancel** to cancel

The screen will return to the calibration home:

Load Cell Calibration

To calibrate the TST load cell,
set both 2kg and no load limits



Current Force: kg

We recommend that you ensure calibration has been successful before continuing to testing. Do this by checking the **Current Force** in kg on the calibration home page: Current Force: kg

7. Insert the 2kg mass above the load-cell and ensure the **Current Force** shows 2.00kg

Current Force: kg

8. Remove the 2kg mass from the load-cell and ensure the **Current Force** changes to 0.00kg

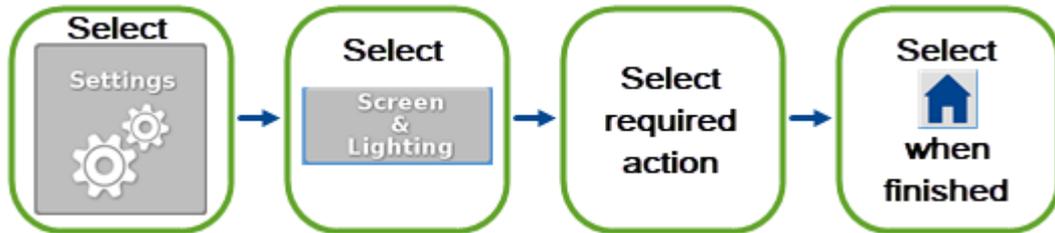
Current Force: kg

Your Anago TST is now calibrated and ready for [sharpness testing](#)¹⁷.

2.1.2 Screen & Lighting

The screen & lighting page can be found under the settings page. It allows you to change the brightness of the LCD screen and manually turn the case light (located within the TST) on and off.

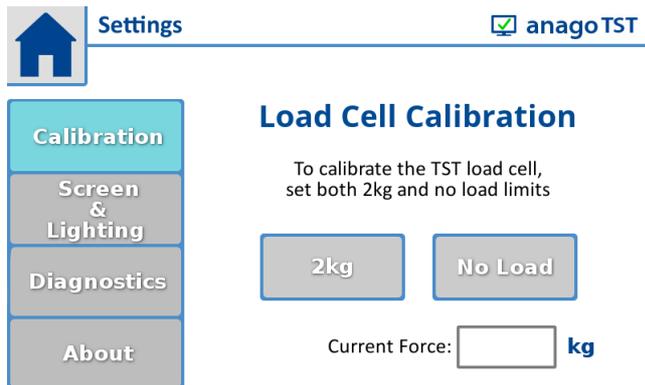
Screen & Lighting - Overview



Screen & Lighting - Detailed

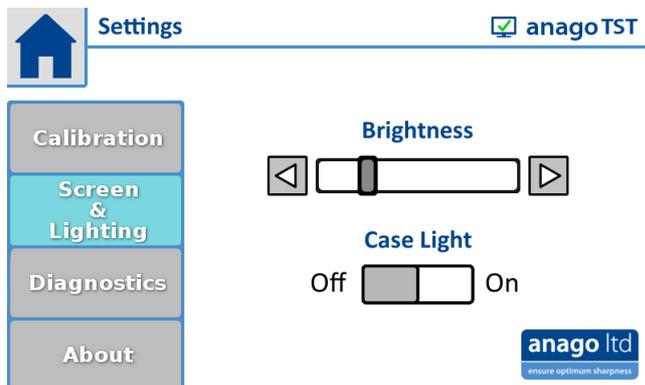
1. Select the **Settings**  option located on the right side of the home page

The screen will change to:



2. Select **Screen & Lighting** 

The screen & lighting page will appear:



LCD Brightness

To increase the brightness level of the LED, tap the **Right Arrow**  until the required brightness is reached.

To decrease the brightness level of the LED, tap the **Left Arrow**  until the required brightness is reached.

Case Light

To turn the case light on, tap the right hand side of the rectangle, so that it appears as shown:



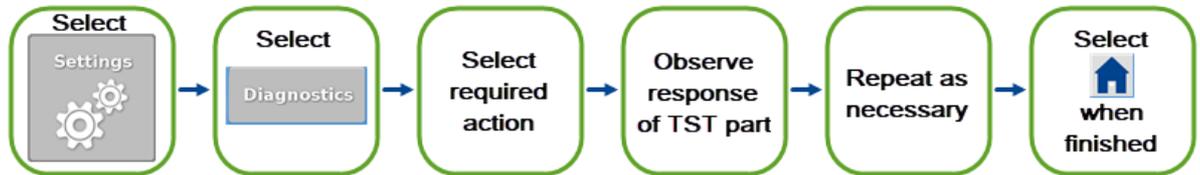
To turn the case light off, tap the left hand side of the rectangle, so that it appears as shown:



2.1.3 Diagnostics

The diagnostics page can be found under the settings page. It allows you to manually operate parts of the TST to check that they are working correctly.

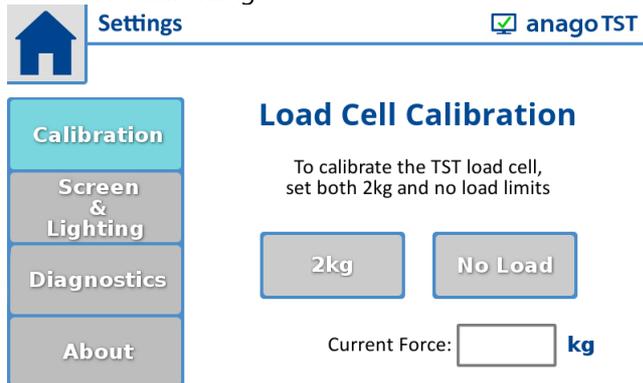
Diagnostics - Overview



Diagnostics - Detailed

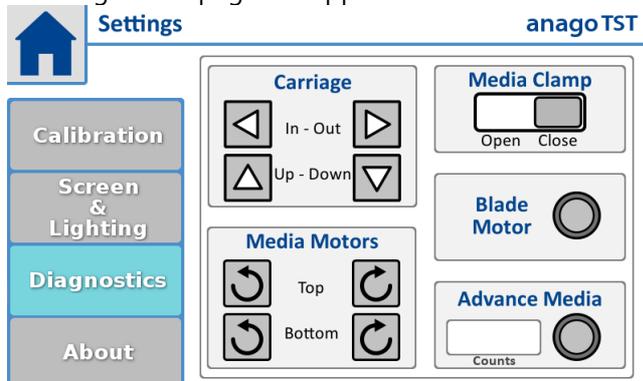
1. Select the **Settings**  option located on the right side of the home page

The screen will change to:



2. Select **Diagnostics** 

The diagnostics page will appear:



Carriage

In - Out - This setting is not applicable to the manual version of the TST.

Up - down - This setting causes carriage A to move up and down

- Press down and hold the  button to move carriage A upwards
- Press down and hold the  button to move carriage A downwards

Media Motors - This setting is not applicable to the manual version of the TST.

Media Clamp - This setting is not applicable to the manual version of the TST.

Blade Motor

- Press down on the **Button** 

When working correctly, the motor should make a sound. If it doesn't, the motor may have been damaged and may require replacement. Contact support@anagosharp.com for support options.

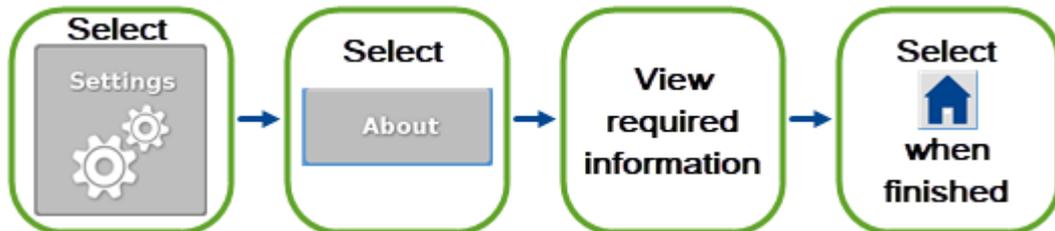
- Press down on the **Button**  to stop the blade spinning

Advance Media - This setting is not applicable to the manual version of the TST.

2.1.4 About

The about page can be found under the settings page. It allows you to view the serial number and hardware version of the Trimmer Tester. It also tells you the current firmware version of the sharpness tester.

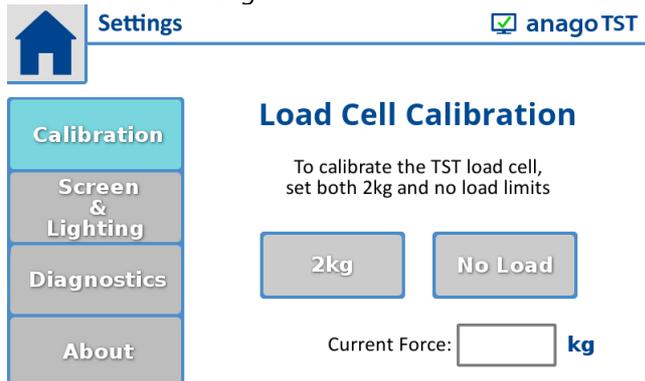
About - Overview



About - Detailed

1. Select the **Settings**  option located on the right side of the home page

The screen will change to:



2. Select **About** 

The about page will appear:



The following information is available:

SN is the unique serial number of the TST

H/w is the hardware version of the TST

F/w is the firmware version of the TST

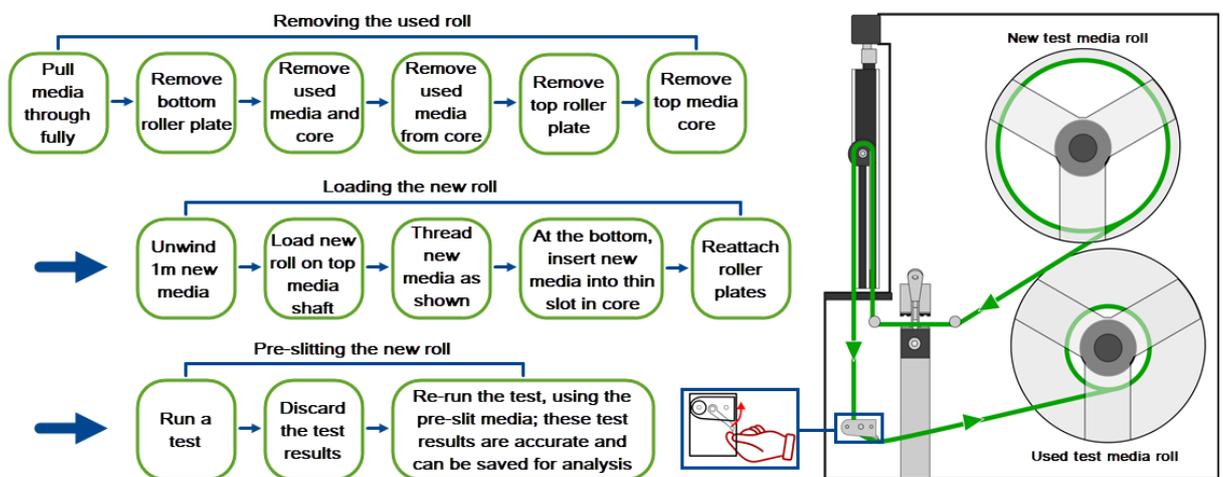
2.2 Test Media

The Anago TST comes with a roll of **Sharpness Test Media** already installed. When the roll is finished, a new roll needs to be loaded.

Please note, a normal trimmer sharpness test is run by cutting through one side of test media. After loading a new roll, the first test will cut through both sides of test media and the score will display incorrectly (lower than it actually is). **Discard the results of the first test**, then proceed testing as normal.

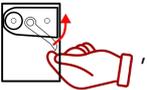
Contact Anago at sales@anago.co.nz to order new rolls of Sharpness Test Media, using the consumables code: ST-TM-5. This is a 5 roll pack, where each roll is 25 meters long.

Test Media Loading Process - Overview



Test Media Loading Process - Detailed

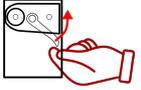
Removing the used roll of test media

1. Open the TST door to enable access the test media
2. Horizontally cut through the test media to enable easy removal
3. Turn the black thumb screw holding the bottom tri-spoke media roller plate (located in front of the used test media roll) anti-clockwise and place both screw and plate to the side
4. Releasing the bottom self-locking clamp by lifting the right hand side upwards remove the used media and the black media core 
5. Remove the used test media from the core - the core can now be reused
6. Turn the black thumb screw holding the top tri-spoke media roller plate (located in front of the empty test media roll) anti-clockwise and place both screw and plate to the side
7. Remove the empty black media core from the top media shaft

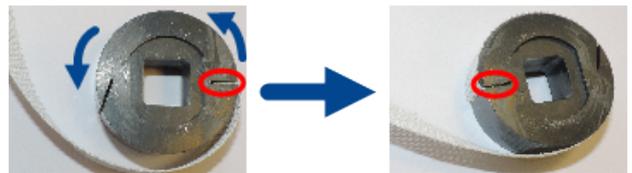
Loading the new roll of test media

1. Unwind sufficient length of the new media roll that it can be thread from top to bottom (just over one meter)

The media core has two different sides. One side has a full circle whilst the other side has a broken circle.

2. Ensuring the full circle faces away from you, slot the test media core over the top media shaft adapter
3. Re-attach the top tri-spoke media roller plate, turning the black thumb screw clockwise until tight
4. Thread the test media underneath the guide pins and through the manual tensioning clamp
5. Thread the test media up over the black toothed half rollers, ensuring they are both lying flat, and down the other side
6. Releasing the bottom self-locking clamp by lifting the right hand side upwards , thread the test media through

7. Ensuring the empty media core's full circle faces away from you, insert the new test media into the thin perpendicular slot and wind the media around to hold it in place, as shown opposite

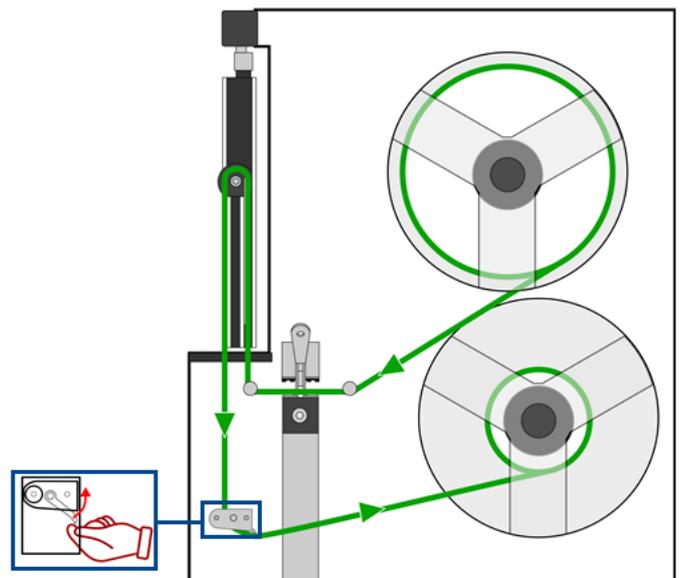


8. Slot the test media core over the bottom media shaft adapter, ensuring the test media flows in an anti-clockwise direction
9. Re-attach the bottom tri-spoke media roller plate, turning the black thumb screw clockwise until tight
10. Completed, the TST media should look as shown

Once completed, a 'dummy test' needs to be run, so that the test media is pre-slit for proper testing.

Pre-slitting the test media

1. Run a test, as per normal
2. Discard the test results from this first test



Testing can now continue as normal, i.e. winding the test media through until the pre-cut slit is level with the media alignment arrow. See [Testing](#) ⁽¹⁷⁾ for details. Happy testing!

2.3 Blade Handles

Your TST comes with 3 different blade handles which work with 8 different blades in two different orientations:

Trimmer Blade Testing Table								
Blade types	Q620	620M2	Q750	750M2	Q850	850M2	Q1000	1000M2
TST test option	Whizard 620		Whizard 750		Whizard 850		Whizard 1000	
Handle size*	620		750 / 850				1000	
Handle orientation in TST	Horizontal		Horizontal		Diagonal		Diagonal	

*this information is located on one side of the TST handle

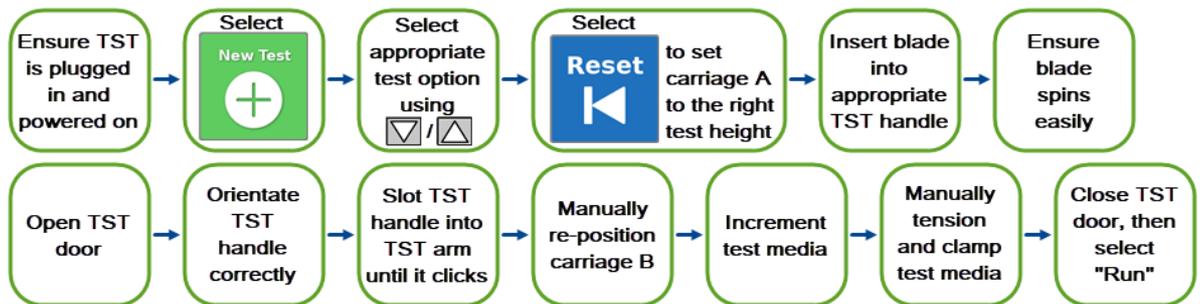
Refer to [Testing](#) ¹⁷ for details on how to insert a blade into a handle, how to orientate and insert a handle into the TST arm and how to remove the handle and blade.

3 Testing

The TST100 allows you to run a sharpness test without a PC being attached. It calculates the score locally and displays the results on the LCD screen. For saving options, refer to [Saving Test Results](#) ^[23].

Note: we recommend [calibrating](#) ^[6] on a regular basis to ensure consistency.

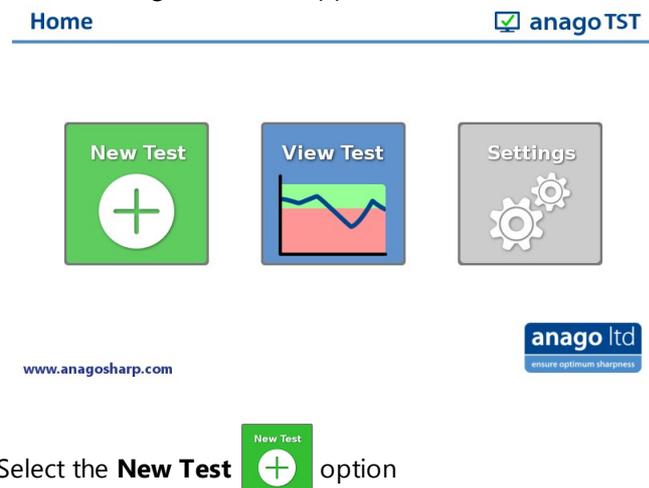
Testing - Overview



Testing - Detailed

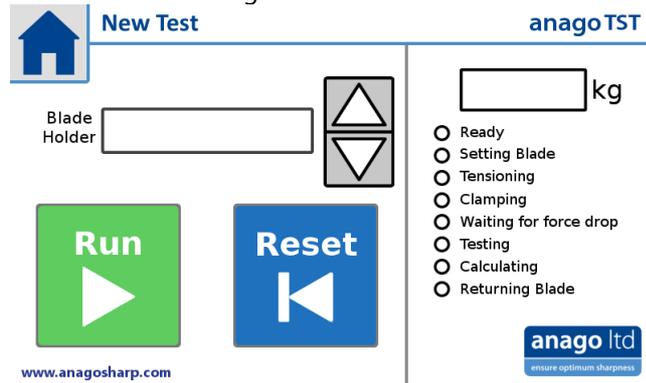
1. Ensure the TST is plugged in to a power supply
2. Press the **Power** button  located on the side of the panel

The following screen will appear:



3. Select the **New Test**  option

The screen will change to:

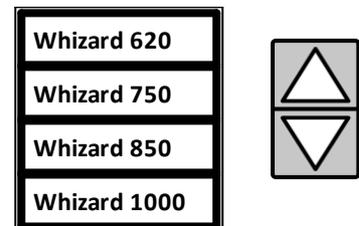


4. Review this table for details on which test option, handle size and handle orientation to use

Trimmer Blade Testing Table								
Blade types	Q620	620M2	Q750	750M2	Q850	850M2	Q1000	1000M2
TST test option	Whizard 620		Whizard 750		Whizard 850		Whizard 1000	
Handle size*	620		750 / 850				1000	
Handle orientation in TST	Horizontal		Horizontal		Diagonal		Diagonal	

*this information is located on one side of the TST handle

5. Use the **Up**  and **Down**  arrows to cycle through the menu, shown opposite, and select the required TST test option



6. Select the **Reset**  button - this will cause Carriage A to move to the correct starting position for the blade to be tested

7. Locate the appropriate handle size for the type of blade being tested

8. Open the handle by pulling back on grip on the locking arm



9. Fit the trimmer blade in place by aligning the guides with the groove

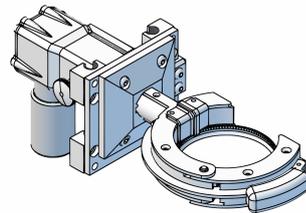


10. Close the handle, ensuring that it clips properly into place at the end

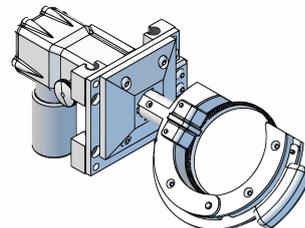


11. Ensure the blade is able to spin freely
12. Open the TST door by lifting it upwards
13. Insert the TST handle into the TST arm, ensuring the correct orientation

The horizontal orientation is for test options 620 and 750 and looks like this:



The diagonal orientation is for test options 850 and 1000 and looks like this:



It is very important you insert the handle in the correct way.

The 620 and 1000 handles are designed so that they can only be inserted the correct way.

Ensure care is taken when using the 750 / 850 handle.

14. Ensure the handle clicks into place

You may need to pull the black retention pin towards you, to allow the handle to click into place.

15. Ensure the handle cannot slip out by pulling it gently to the right

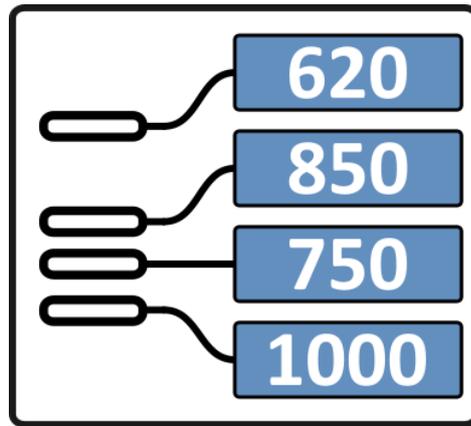
16. Manually re-position Carriage B

This is best done by using your right hand to pull out the locking pin at the bottom, whilst simultaneously using your left hand to push the carriage away from you.



17. Continue to re-position Carriage B until the alignment arrow on Carriage B is next to the correct test type on the blade location sticker

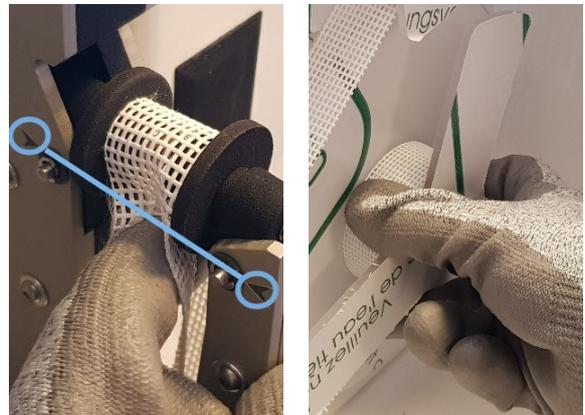
There is a slot for it to click into at this location.

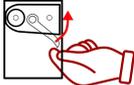


18. Increment the test media

This is best done by putting your left finger in the pre-cut slit whilst winding the bottom test media roll anti-clockwise with your right hand.

19. Continue to increment the test media until the pre-cut slit is in line with the media alignment arrows (drawn in blue)



Note: if you accidentally wind the media too far, release the bottom self-locking clamp by lifting the right hand side upwards  and gently pull the media upwards, then try again.

20. Manually tension the test media to above 4kgs

This is done by holding the test media near the in-feed roll (the top roll) and pulling the test media to the right until the **Current Force** in kg Current Force: **kg** shows 4.0kg and slightly above. You can also use the right roller bar to lever your thumb against, if required.



21. Clamp the media in place using the lever attached near the clamping jaws of the media clamp
22. Close the TST door
23. Double-check the correct test option has been selected (selection of the wrong size may cause damage to the TST)
24. Select "Run"
25. The test will pause and wait for the force to be at the correct level (approx 4kg) then it will run a test

The results will automatically be displayed on the LCD screen in the "View Tests" screen.

To run a test on a new blade:

1. Return Carriage B to the front of the TST
2. Unload the handle and the blade (if re-testing the same type of blade, you can swap the blade while the handle is still in the TST arm)
3. Select **Home**  (located in the top left-hand corner of the LCD screen)
4. Run a test as [per normal](#) 

Happy testing!

3.1 Stopping a Test

If, for any reason, a test needs to be stopped, it can be stopped at any stage.

Testing from the TST

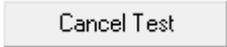
- Press the **Stop**  button

After stopping the test, the testing process needs to begin from the start again, i.e. resetting Carriage A's height and incrementing the test media if it has been cut. Failure to increment the test media when it has already been slit will result in an incorrect test result (higher than it actually is).

Testing from the Analyzer Software

- Press either the **Stop**  button or the **Stop test**  button within the Analyzer Software

If you use the **Stop**  button, the software will continue to wait for data to be received from the TST. You do not need to do anything else within the software to re-run the test.

If you use the **Stop test**  button, you will need to use the **Cancel Test**  button before you can use the Start SHARP test  button.

Regardless of how you stop the test, the testing process on the TST itself needs to begin from the start again, i.e. resetting Carriage A's height and incrementing the test media if it has been cut. Failure to increment the test media when it has already been slit will result in an incorrect test result (higher than it actually is).

3.2 Saving Test Results

Saving test results requires the Anago KST Analyzer Software. The software should be set to TST mode. See [Analyzer Software - TST Mode](#)^[3] for details.

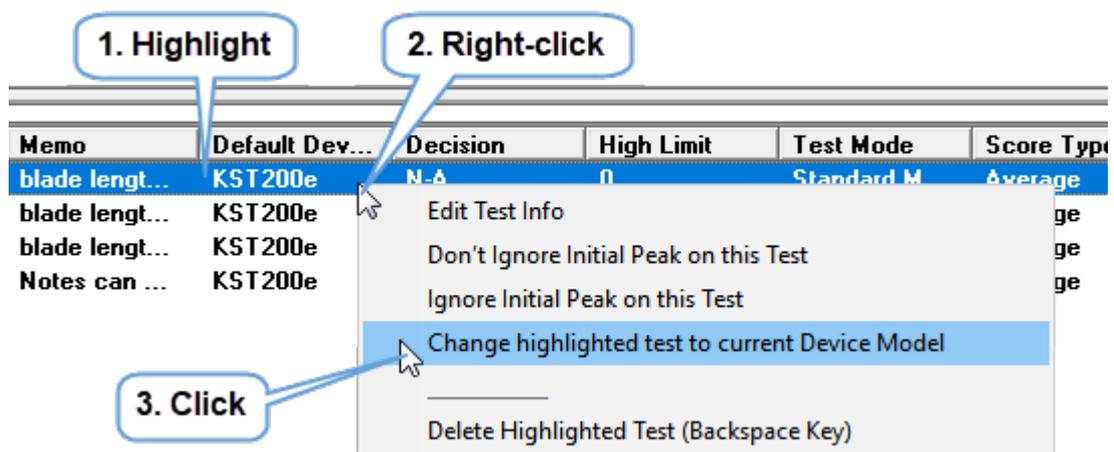
There are two ways to save test results:

1. Start running the test from the software, or
2. Run the test on the TST, then use the "Get Test Data" function

We recommend using the first option when testing multiple blades, as the data transfers automatically, and can also be set up to [save automatically](#)^[26], if required.

Note: If you accidentally save a test in a mode other than TST, you can update this information by first setting the [Analyzer Software to TST Mode](#)^[3] then editing the test information in the test list to update the device type.

1. Highlight the required test to change
2. Right-click within the test
3. Click "Change highlighted test to current Device Model"



The test information will now have the current default device saved.

3.2.1 Running a Test from the Software

When a test is run directly through the Analyzer Software, results will be transferred automatically.

The **Start SHARP Test**  button connects the software to the TST and tells the software to await the results. It **does not** cause the blade motor to start or Carriage A to move up and down and run a test. For this reason, you can set up the software fully, before setting up the hardware to run a test.

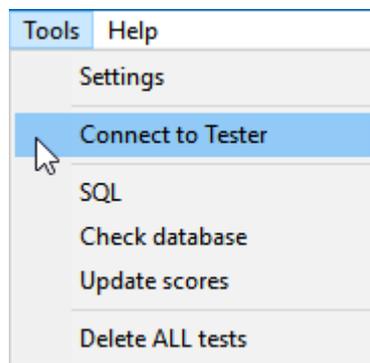
Testing from the Software

1. Ensure the TST is plugged in, switched on and connected to a PC / laptop

2. Open the Anago KST Analyzer Software



3. Click "Tools" and select "Connect to Tester"



The software will attempt to connect to the default device. If the software has already been set to TST mode, the bottom left-hand corner will say "Searching for TST100":

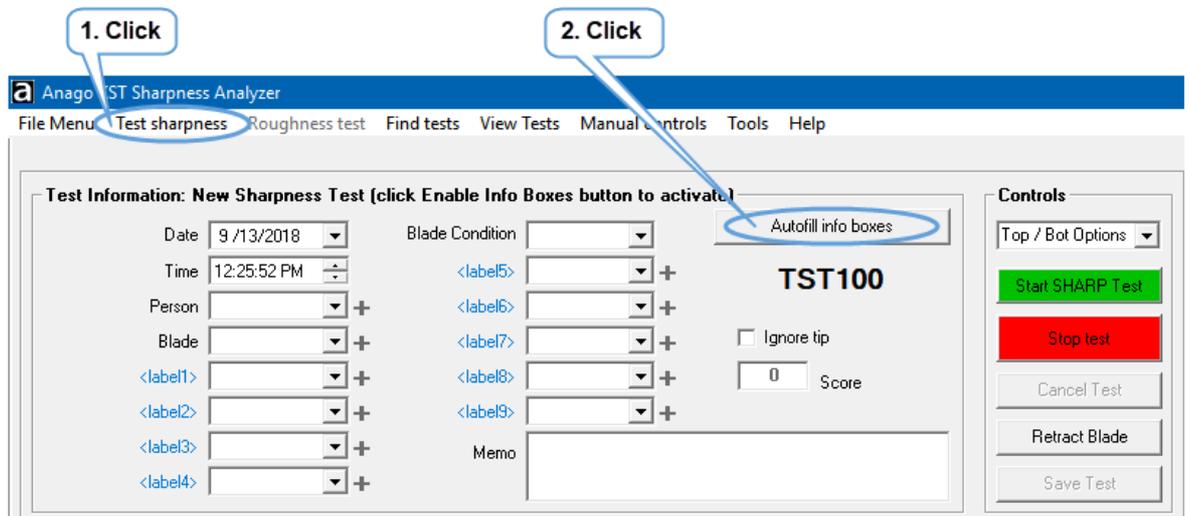


If the Analyzer Software tries to search for a different device, [set the Analyzer Software to TST mode](#)³¹.

4. Click "Test Sharpness" on the menu bar

5. Click the "Autofill info boxes" button to automatically fill the test information with the information from the most recent test. Alternatively, enter the new test details in the boxes provided by typing over the existing text or by clicking on the down arrows on the right of each box to open a list of previously entered data. Using the drop down lists as much as possible will prevent typos.

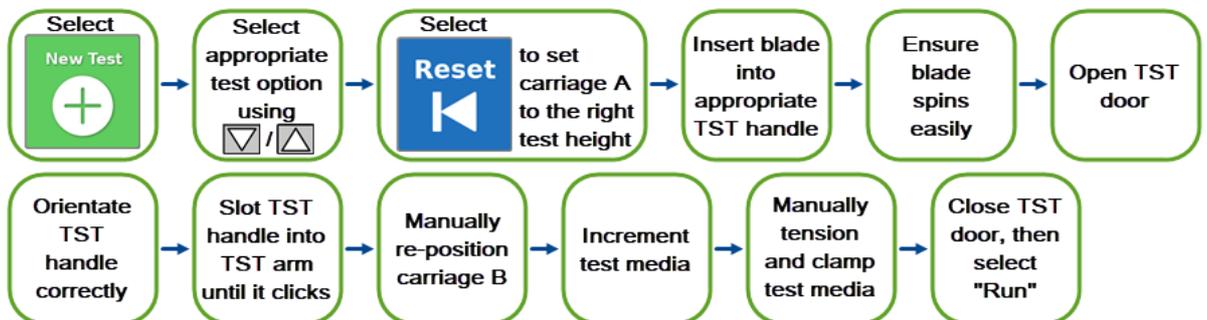
Note: All boxes apart from SCORE and MEMO need to be filled before the test will save.



6. Click the **Start SHARP Test**  button

This sets the software up to automatically receive the results from the TST once a test has been run.

7. Proceed to run a test, as per normal, on the TST (refer to [Testing](#) ^[17] for details - an overview is included here)



After the test has run, the results will automatically be transferred to the software. In addition, they will display on the LCD screen.

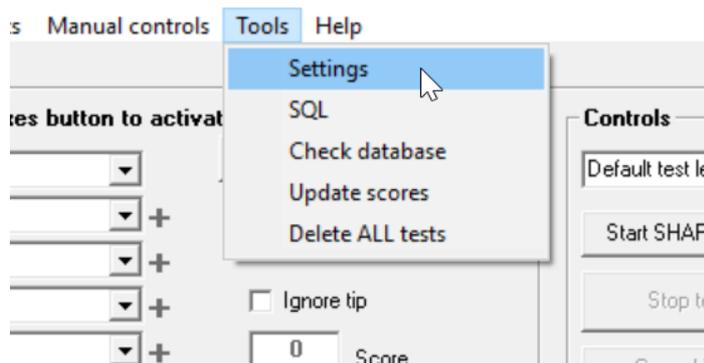
You will be prompted to save the results. Select if you would like them to be saved, or not. If you would like the results to save automatically every time, follow the instructions in [Automatic Saving](#) ^[20].

3.2.1.1 Automatic Saving

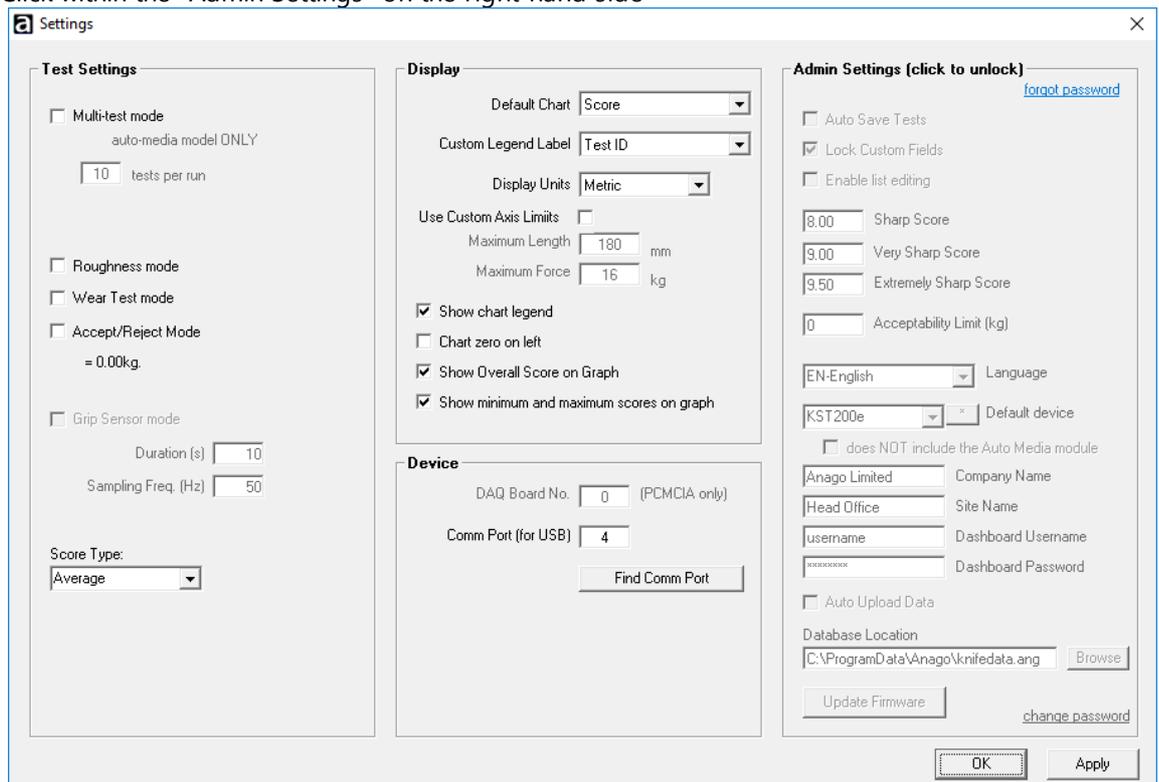
The Analyzer Software includes an automatic saving feature. This causes the software to bypass the "do you wish to save" prompts and saves the test results automatically. We highly recommend this function.

Using Auto Save

1. Click "Tools" on the menu bar and select "Settings"



2. Click within the "Admin Settings" on the right-hand side



This will prompt you to enter a password. Note: the default admin password is Adm1n

3. Type in the admin password, then click "OK"

This will unlock the Admin settings.

4. Check the box next to "Auto Save Tests"

Admin (click to unlock)

Auto Save Tests

Lock Custom Fields

Enable list editing

Sharp Score

Very Sharp Score

Extremely Sharp Score

Acceptability Limit (kg)

Language

Default device

does NOT include the Auto Media module

Company Name

Site Name

Dashboard Username

Dashboard Password

Auto Upload Data

Database Location

[change password](#)

- Select "OK"

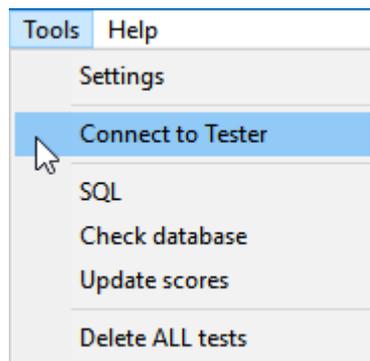
Tests will now automatically save when run.

3.2.2 Transferring Results After Running a Test

If you have already run a test on the TST and would like to transfer the results to the software, use the "Get Test Data" function.

Using the "Get Test Data" Function

1. Ensure the TST is connected to a PC / laptop
2. Open the Anago KST Analyzer Software 
3. Click "Tools" and select "Connect to Tester"



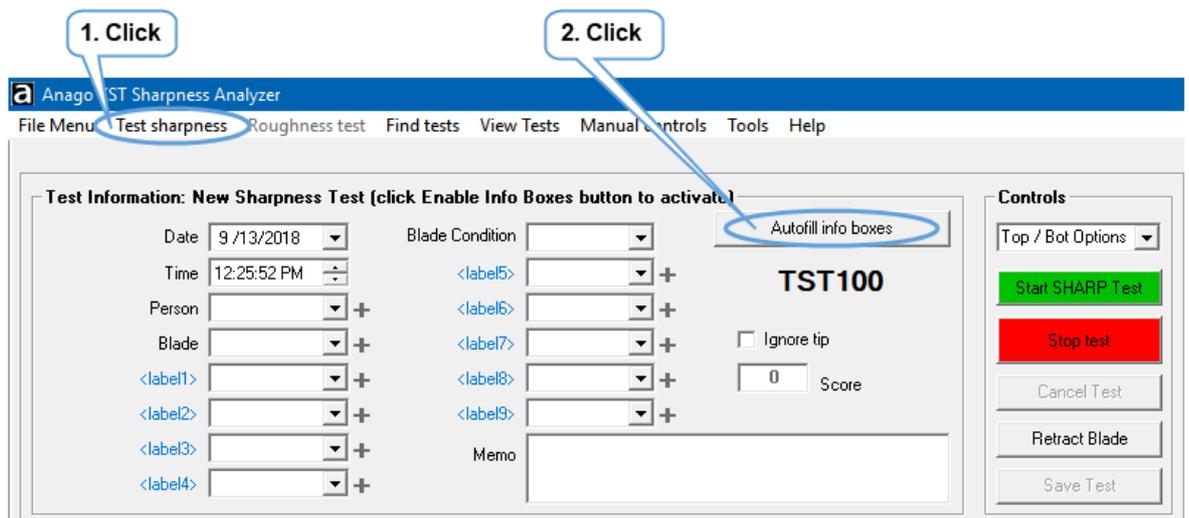
The software will attempt to connect to the default device. If the software has already been set to TST mode, the bottom left-hand corner will say "Searching for TST100":



If the Analyzer Software tries to search for a different device, [set the Analyzer Software to TST mode](#) ³.

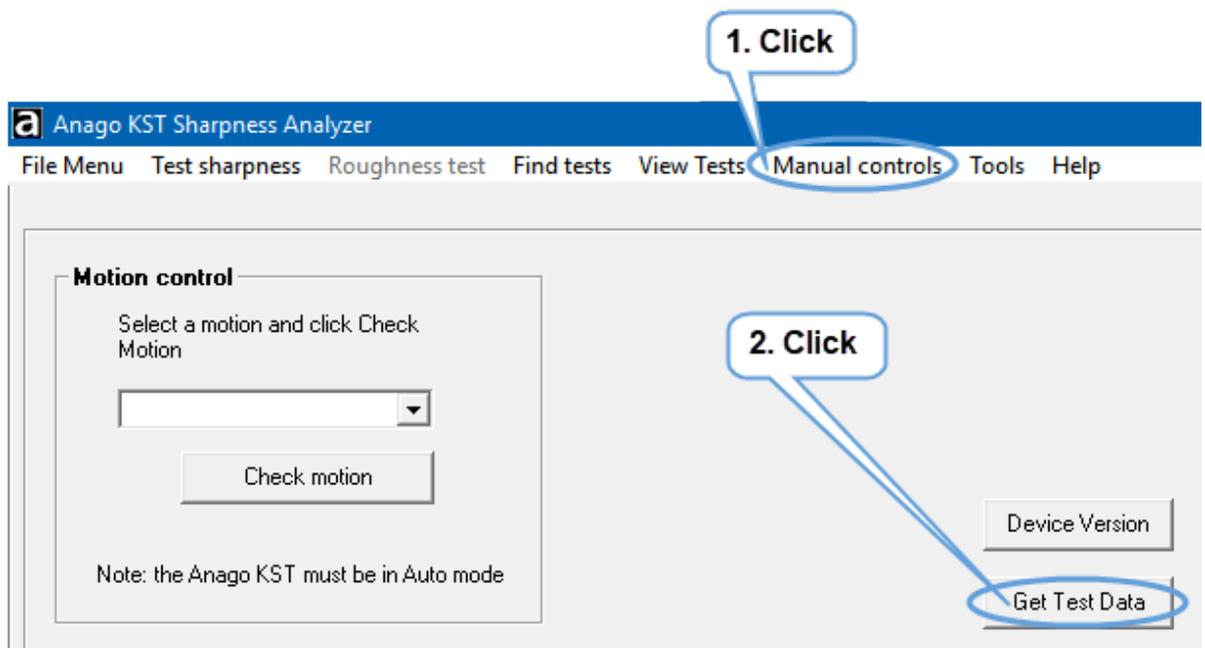
4. Click "Test Sharpness" on the menu bar
5. Click the "Autofill info boxes" button to automatically fill the test information with the information from the most recent test. Alternatively, enter the new test details in the boxes provided by typing over the existing text or by clicking on the down arrows on the right of each box to open a list of previously entered data. Using the drop down lists as much as possible will prevent typos.

Note: All boxes apart from SCORE and MEMO need to be filled before the test will save.



6. Click "Manual Controls" on the menu bar

7. Click "Get Test Data"



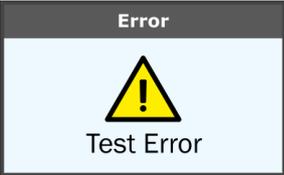
You will be prompted to save the results. Select if you would like them to be saved, or not.

4 Troubleshooting

Support / Suggestions

Please contact support@anago.co.nz if you require assistance, wish to offer suggestions for added functionality or wish to report a fault.

Here is an overview of possible error messages, their causes and probable solutions:

Error Message / Type	Causes	Solutions
	<p>For safety reasons, neither the blade carriage nor the blade motor will work when the door is open or if the door is opened during operation.</p>	<ul style="list-style-type: none"> • Close the door and try again <p>Note: If you opened the door during testing, you will need to start the test again from the beginning, i.e. before any test media has been cut.</p>
	<p>"Force Overload" occurs when too much force is placed on the load cell, e.g. when dull blades are tested or the blade handle has been inserted incorrectly.</p>	<ul style="list-style-type: none"> • Remove the blade handle from the TST arm and ensure the blade is correctly in place - it should be able to spin freely • Ensure the media hasn't got stuck; pull through, if required • Calibrate the load cell, then continue testing as normal
	<p>This occurs when you hit 'stop' at any stage of operation, i.e. resetting the height of Carriage A or during a test.</p>	<ul style="list-style-type: none"> • Ensure everything is as it should be and try again <p>Note: If you stopped during testing, you will need to start the test again from the beginning, i.e. before any test media has been cut.</p>
	<p>This occurs when the media tension is below 4.0 kg.</p>	<ul style="list-style-type: none"> • Pre-stretch media and tension it slightly higher than 4.0kg before clamping
	<p>This occurs when there is insufficient data to generate a score, e.g. a blade hasn't been loaded, or very little force has been placed on the media during testing.</p>	<ul style="list-style-type: none"> • Ensure there is a blade in the blade handle and the handle is locked in the TST arm • Ensure Carriage B is in the correct starting place • Ensure there is test media loaded and that it has been incremented correctly • Re-run the test

5 Specifications and Version Information

Product and System Specifications

Items Included in Your Package

- Anago Trimmer Sharpness Tester (TST)
- Anago KST Analyzer Software
- Anago TST Device Drivers (included on Anago Sharpness Tester USB)
- USB Cable
- Power Cable
- 2 FREE rolls of test media (sufficient for between 670 and 760 tests, depending on blade type being tested)
- 2kg calibration mass

TST Specifications

- Power supply for TST = 230/240 VAC, 50 Hz or 110 VAC, 60 Hz
- Dimensions = 600 x 445 x 388 (L x H x W)

Version Information

TST Firmware version

- Ensure the TST is plugged in and switched on
- Select the **Settings**  option located on the right side of the display screen
- Select **About** 

The screen and lighting page will appear:

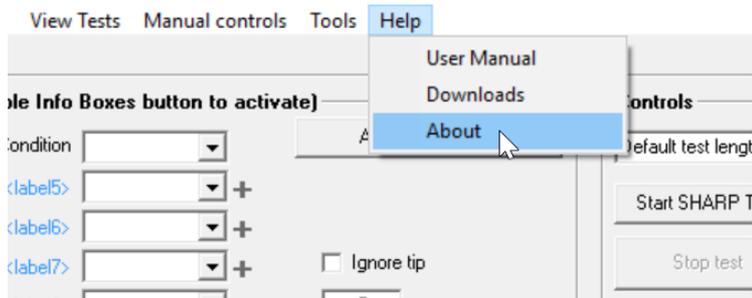


The firmware version is stated after "F/w:". In the example shown, the firmware version is 12.34.

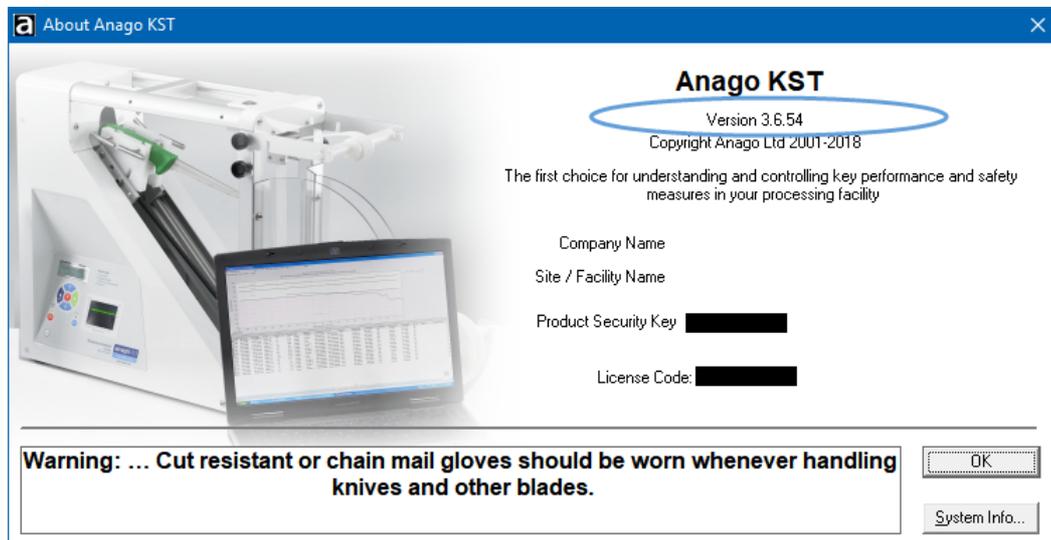
Software version

The software version information for the Anago KST Analyzer Software can be found within the software.

- Click "Help" on the menu bar and select "About"



The version number is displayed at the top of the "About" window.



6 Warranty

1. Anago Limited Product Warranty and Liability for Defects

- 1.1 Anago warrants that the products supplied are fit for purpose and free from defects for a period of twelve (12) months from the date of delivery.
- 1.2 All other guarantees, warranties and representations in relation to the products or their supply implied by law or otherwise are excluded except to the extent that Anago cannot lawfully exclude them.
- 1.3 Anago will not be liable, whether pursuant to this warranty or otherwise;
 - a. for any indirect or consequential loss (including loss of business or profits) incurred by the customer as a result of breach of the warranty or any defect in the product;
 - b. for fair wear and tear or willful or accidental damage to the product;
 - c. for any damage caused by abnormal use or failure to properly maintain or service the product.
- 1.4 Anago's liability to the customer, whether pursuant to this warranty or otherwise, is limited to the value of the product and Anago may at its option either:
 - a. repair any defective product; or
 - b. replace any defective product; or
 - c. pay to the customer the price the customer paid to Anago for the product.
- 1.5 Anago will not have any liability to the customer, whether pursuant to this warranty or otherwise, for any defect in the product or other claim unless:
 - a. the customer notifies Anago of the defect or claim within 14 days of the customer becoming aware of the defect or claim; and
 - b. the customer allows Anago to fully investigate the defect or claim.

