

QUICK-START GUIDE

StylusScope®

MODEL 1 · AUDIO ANALYSER

WELCOME

BEFORE YOU START

Thank you for choosing StylusScope. This guide covers the first steps; the full User Manual explains every function and every number. Download it from **stylusscope.com**.

Play one track. Get a number. Compare it with the same number from when the stylus was new. Wear shows up in the signal long before your ears notice it. StylusScope measures it, so you can act early.

IN THE BOX

ITEM	DETAILS
StylusScope analyser	Model 1 Audio Analyser
Infrared remote control	needs 2 × AAA batteries, not included
USB-A to USB-C cable	1 m, for power
Stylus cleaning brush	
IR receiver cover	small black L-shaped clip
StylusScope Test Record	12-inch, 33 1/3 rpm, sides A and B

> **NOTE** no mains adapter is supplied: any USB charger or port giving 5 V at 500 mA will do. Keep the packaging: it is the safest way to send the unit for service.

READ FIRST

SAFETY

WARNING the Test Record carries continuous tones, sweeps and noise at high levels, and they reach your loudspeakers or headphones. Turn the volume down before you play any test track: loud high tones can also damage tweeters.

CAUTION switch the amplifier off, or turn it fully down, before you connect or disconnect anything.

CAUTION the RCA inputs accept the output of a phono stage, up to 1 V RMS (3 V RMS with the −10 dB attenuator). Many DACs deliver 5 to 10 V, which can damage the input. Never connect a DAC, a line output that carries other sources, or a loudspeaker or headphone output.

CAUTION the USB STICK socket is for a USB memory stick only, and the AUX I2C socket for StylusScope add-on devices only.

- Power StylusScope only from 5 V USB, through the POWER 5V socket.
- Keep it away from liquids, damp, radiators and direct sunlight.
- There are no user-serviceable parts inside.
- Never disconnect the power during a firmware update or data export.

GETTING TO KNOW IT

YOUR STYLUSSCOPE



1 · Display
Measurements, functions and graphs.

2 · METERING (Btn1)
Measure, store, standby.

3 · ANALYSIS (Btn2)
Choose and run a function, open its help.

4 · Status LED
Standby, counting, wear check due.

Four gestures, printed beside each button: • press, •• double, ••• triple, – hold for a second.

	BTN1 · METERING	BTN2 · ANALYSIS
•	Average 12 readings	Next function
••	Store to memory	Run the function
•••	Standby	Help page
–	Continuous measuring	Previous function

Point the **remote** at the front face. **OK** runs a function.



5 · HOME
Opens settings.

6 · MENU
Goes back.

STEP 1

CONNECTING



TURNTABLE → **PHONO STAGE** → **STYLUSSCOPE** → **AMPLIFIER**

StylusScope stays permanently after a **separate phono stage**, so its odometer counts every hour the stylus plays.

1. Amplifier off. Connect the phono stage output to **INPUT**, left to left.
2. Connect **PASS-THR.** to the amplifier input the phono stage used before.
3. Check that all three **INPUT ATTN.** switches are UP, at 0 dB.
4. Plug the USB cable into **POWER 5V** and a USB power source. The measuring screen appears.

Phono stage built into your amplifier? Please write to support@stylusscope.com first: we will advise on your system.

STEP 2

FIRST MEASUREMENT

Your first measurement checks the level from your phono stage. Nothing is stored yet.

1. Switch the amplifier on, volume low. Clean the stylus with the brush, from back to front.
2. Play side B, track B1: the 1 kHz reference tone, two minutes long after its announcement.
3. When the screen reads about 1000 Hz, press **Btn1**. The status line counts `AVERAGING: 1/12` to 12 and shows `LOCKED/AVERAGED`.
4. Read `LEVEL` and `THD` for both channels: white is left, red is right.

LEVEL ABOVE 500 MV?

Switch in the −10 dB attenuator. It is read only at start-up:

1. Lift the stylus and disconnect the USB power.
2. Set all three **INPUT ATTN.** switches DOWN, to −10 dB. Always all three together.
3. Reconnect the power. `-10dB` appears at the top of the screen. Measure B1 again.

STEP 3

STANDBY AND THE ODOMETER

Triple-press Btn1 for standby: the screen goes dark and the odometer counts every minute a record plays. Any button, or **OK**, wakes it. Leave StylusScope powered permanently.

LED	MEANING
Off	Measuring screen or a function is open. Not counting.
Green	Standby, no signal.
Blue	Standby, a record is playing: the odometer counts.
Orange	A wear check is due, every 50 playing hours. Clears when you run F2 STYLUS WEAR.

> **NOTE** it counts only in standby, and returns there by itself after 10 minutes. For a stylus that has already played, enter its hours by hand (Manual 7.7).

Not connected permanently? CDC SETUP item 5 turns the odometer into a timer started and stopped with the red key on the remote (Manual 6.8).

STEP 4

STORING THE BASELINE

Every later wear check is compared with the baseline. Store it when your setup is final, ideally in the first few playing hours.

1. Clean the stylus. Play side A, track A1: after the announcement the 5 kHz tone plays for one minute.
2. At about 5000 Hz press **Btn1**; wait for **LOCKED/AVERAGED**.
3. Double-press **Btn1**: **STORED TO MEMORY**.
4. Press **Btn2** until **STYLUS WEAR** shows, then double-press **Btn2**.
5. F2 offers the baseline: double-press **Btn1**, and again at **STORE BASELINE?**
6. **BASELINE SAVED**: lift the stylus and triple-press **Btn1** for standby.

> **CAUTION** use track A1 only. Track A4 also ends in 5 kHz, but 12 dB louder: StylusScope cannot tell them apart by frequency.

New stylus? Hold Btn1 + Btn2 while powering on, then store a new baseline (Manual 6.6).

STEP 5

THE WEAR CHECK

When the LED turns orange, or whenever you like: clean the stylus, play A1, **Btn1** to average, **Btn1 ••** to store, select STYLUS WEAR with **Btn2** • and run it with **Btn2 ••**. The result is logged automatically.

ON SCREEN	MEANING
L level	Output change since the baseline, in dB.
L THD	Distortion change, in percentage points: 4.5 % to 5.7 % shows +1.2 %.
Base @	The hours at which the baseline was taken.

READING THE RESULT

Run-in. A new stylus polishes itself in: distortion often falls a bit in the first 50 hours. Not a fault.

Scatter. No two readings are identical. One check is one point; watch the trend in the Wear History graph (remote **HOME**, then **4**).

Dust. A speck on the tip changes distortion more than hundreds of hours of wear. Clean before every check.

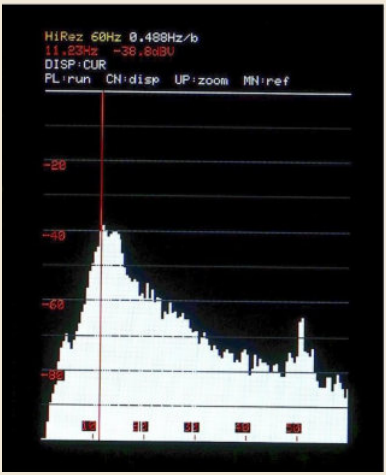
No verdict. StylusScope shows what has changed and by how much, not when to replace the stylus. The decision stays with you. With precise measurements, the Wear History graph and the results of our Collective Data Collection (CDC) project, your decision will be better founded than the questionable stylus lifetimes suggested by cartridge manufacturers.

Please share your automatically logged wear checks with us, so that together we can finally answer an 80-year-old question: when should I change my stylus? Thank you.

EXAMPLE 1

ARM AND CARTRIDGE RESONANCE

Every tonearm and cartridge pair resonates at a low frequency. Usually recommended: 8 to 12 Hz, clear of record warps and footfall, below the music. Until now it took a calculation; here the cartridge itself is the sensor.



RESONANCE AT 11.2 HZ

1. Select FFT ANALYSER with **Btn2** • and run it with **Btn2 ••**. Remote **HOME**: Input **L-R VERT**, Range **Hi-Res 1 kHz**, Level zoom **100 dB**, Averages **12**.
2. Play side A, track A4: two minutes of silent groove.
3. **PLAY**, then **PLAY** again to average. Keep still.
4. **UP** twice for the 60 Hz window; move the cursor onto the peak.

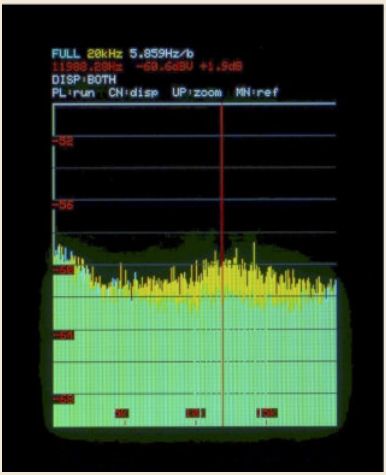
The peak at the cursor is the resonance. Outside 8 to 12 Hz? A lighter or heavier headshell, or a cartridge of different compliance, moves it.

EXAMPLE 2

CARTRIDGE LOADING

A moving-magnet cartridge changes its sound with capacitive loading. See what it does in your own system.

1. Select FFT ANALYSER with **Btn2** • and run it with **Btn2** ••. Remote **HOME**: Input **L+R MONO**, Range **Full 20 kHz**, Level zoom **20 dB**, Averages **36**.
2. Play side B, track B4: one minute of white noise after the sweep.
3. **PLAY**, **PLAY**; when averaging is complete, **MENU** stores the reference.
4. Change the loading, play B4 again and average once more.
5. **OK** shows both traces; read any frequency with the cursor.



AT95E · 100 PF VS 320 PF

Audio-Technica AT95E: the reference (cyan & green) is the 100 pF of the cable alone. Adding 220 pF (320 pF in total) gives a broad rise (yellow) of about 2 dB around 12 kHz, enough to change the sound.

> **CAUTION** volume down while you switch the loading.

StylusScope®

Full user manual, firmware updates and video guides: **stylusscope.com** ·
Support: **support@stylusscope.com**

COMPLIANCE

StylusScope meets the requirements of the EU Electromagnetic Compatibility Directive 2014/30/EU, the RoHS Directive 2011/65/EU and the corresponding UK regulations (CE, UKCA). Tested to EN 55032 and EN 55035 (Class B); RoHS assessed to EN IEC 63000. Declarations of conformity are available on request.

FCC STATEMENT (USA)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: reorient or relocate the receiving antenna; increase the separation between the equipment and the receiver; connect the equipment into an outlet on a circuit different from that to which the receiver is connected; consult the dealer or an experienced radio/TV technician for help. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Responsible party in the USA: Approve-IT Inc., 8011 34th Ave. South, Suite 342, Bloomington, Minnesota 55425, USA. info@approve-it.net, +1 651-647-5930.

Disposal. The crossed-out wheeled bin symbol on the product means it must not be disposed of with household waste. At the end of its life, take it to a collection point for electrical and electronic equipment.

StylusScope® is a registered trade mark of Life-Changer Ltd. One year warranty from delivery: see the User Manual.

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