

AKKOtune – The Tuning Table for Squeezeboxes

Version 2.5



The smart innovation for analyzing and tuning accordions, bandoneons, concertinas, harmonicas; chromatic or diatonic.

What was the reason for developing AKKOtune?

When using a conventional tuning table with hand or pedal driven bellows you have to cope with some disadvantages:

- ◆ Manually and inconsistently generated air pressure effects the pitch of the reeds.
- ◆ The bellow's capacity sometimes is not sufficient to complete an electronic tone detection.
- ◆ To have the same wind direction repeatedly you have to empty the bellow in between.
- ◆ A tuning table with pedal drive consumes much space.
- ◆ A manually operated tuning table leaves only one hand to work.

AKKOtune extremely improves your tuning possibilities:

- ✓ the electronically generated air pressure can be adjusted between approx. 0.5 and 10 mbar (1 kPa), is consistent and the electronic measurement can be read from the display for push and pull (with minus symbol). The pressure is especially very important for a correct tuning of beating reeds.
- ✓ The wind is present as long as it is switched on (switch for Start / Stop).
- ✓ The wind direction can be toggled immediately from push to pull and vice versa.
- ✓ In the middle positions the air stream stops
- ✓ **AKKOtune** is suitable for desktop use or it can be mounted in a gap in a work table. It's very compact.
- ✓ You will always have both hands free to work.



The AKKOfix V2.5 Tuning Table provides practical features:

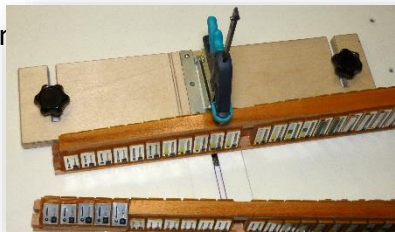
Reed block inspection

Measuring a reed block tone after tone by sliding the reed block chambers along an adjustable guide above a blow/suction hole.



Various air vents

The configuration can be changed quick and easily using swappable inserts for the blow/suction hole. So you may for example measure two reed blocks in parallel, enabling you to blow the reeds of a base-tone block together with the matching reeds of the higher or lower tuned reed block to generate a wet sound and eventually correct) the beat frequency*.



A special blow hole configuration can be made according to customer needs.



Single reed plates

Special inserts provide single reed measurement. The size may vary as the holder is flexibly adjustable.



Large test space

The AKKOfix V2.3 work surface has an adequate size so all common sized "halved" instruments can be placed on it.



Quick and easy checks

AKKOfix makes the inspection of the instrument very easy and saves you much time.

After splitting them in treble, bellow, and bass parts you may fix either treble + bellow or bass + bellow by means of two clamps. The complete treble or bass side including mounted reed blocks is placed over a large blow /suction hole. The surface cover of quality leather's rough side* provides a proper air seal.

If necessary, an appropriate mat can equalize an uneven rim of the bellow frame. Of course, fixing without treble grill is also possible.



* pictures show first version with white molliton.

You may proceed the same way for the bass.

Now you can quickly play through all tones just by selecting a register and pressing the keys/buttons.



Reversing the wind direction from push to pull is done very quickly (5), so checking for any reed which sounds incorrectly is a piece of cake.

A full instrument analysis*

Without disassembling the reed blocks the analysis can be performed much quicker than before. By leaving the reed blocks in the instrument you will measure the **genuine** tuning.

AKKOfixx V2.4 gets power from a standard notebook power supply with a wide range input and 12 VDC output. The PSU is stored in a compartment on the back side of the tuning table.

Within the tuning table only fused low voltages (12V, 5V, and 9V DC) are present for the control electronics, the air pressure sensor and the backlit Pressure LCD, and of course the blower. The power is switched on and off in the PSU power cord. The presence of the DC voltages is indicated by two LEDs on the front panel.

Air pressure is adjusted easily with a speed knob (1) and the panel gauge (2), while a start/stop switch (3) silences the blower completely. This enables you to select and keep reproducible conditions. The remote-start/stop socket (4) takes a cable from the optional reed block tuner. The slanted position of the panel gauge makes it easy to read the LCD.



There is some low noise from the blower inside the box. By means of elaborate provisions for insulating the sound it's intensity is much lower than the sound the reeds that it will have no impact on the tone measurements taken by the microphone.

Microphone arrangement with AKKOfixx V2.4

In the top plate's back area of you may install an optional gooseneck with a mic holder. The base plate can be fixed with a star knob screw to the top plate.

Microphone arrangement with AKKOfix V2.5

The top plate has a built-in USB output for incorporated microphones. The front provides 3 push buttons for selection of Mic 1, Mic 2 or both mics to be routed on the USB



output socket from below. Mic 1 is installed inside the blow hole and Mic 2 is a gooseneck application on the top plate. Both mics have an

automatic gain control for providing an always sufficient signal at the USB port.

So a connected computer may detect the generated tone frequencies without any clipping.



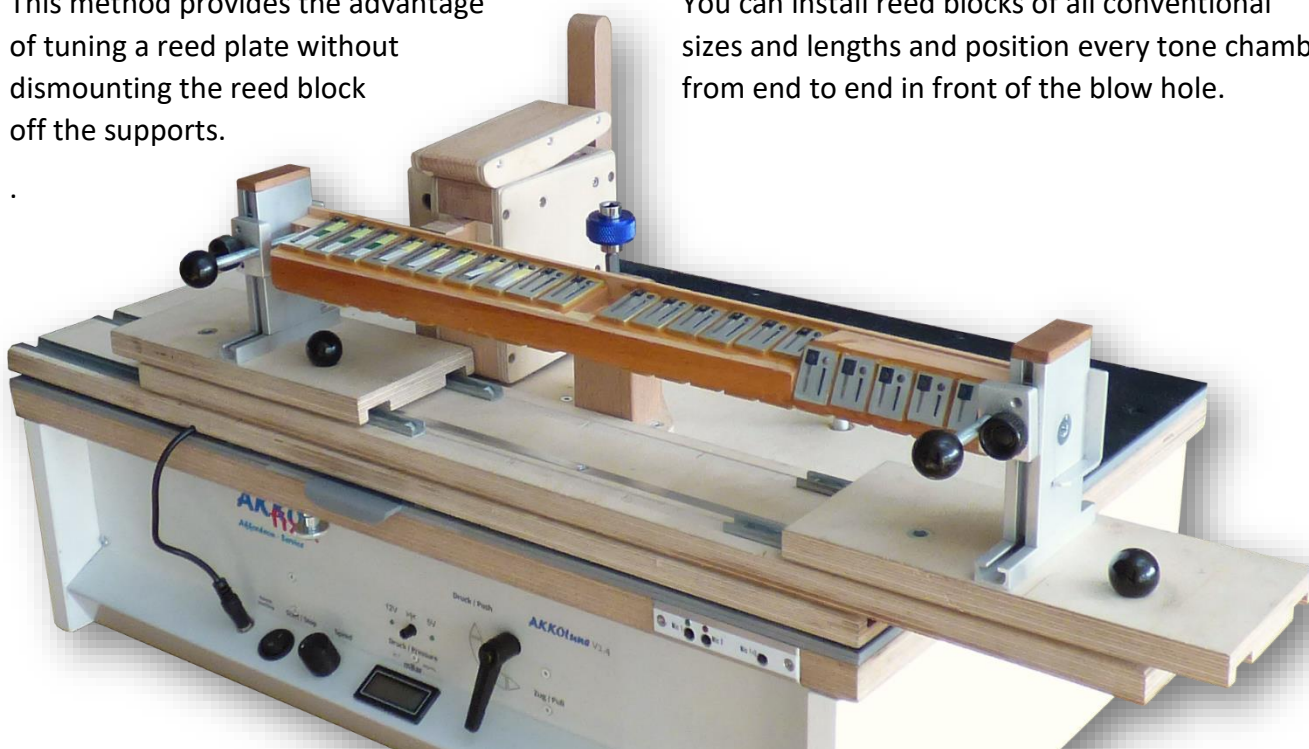
Using the Reed Block Tuner for direct tuning

As an option a functional extension device provides for direct tuning of reeds in a reed block. For this purpose the block will be clamped between two supports and can be shifted horizontally in front of a vertical positioned blow hole. Microphones with USB output detect the tone frequencies inside and outside the blow hole and transfer the signal with automatic gain control to a connected computer.

The air stream is controlled by a large rocker switch. Pushing it forward opens a flap inside the blow module and starts the blower inside the tuning table. Reversing air direction is done as before.

This method provides the advantage of tuning a reed plate without dismounting the reed block off the supports.

You can install reed blocks of all conventional sizes and lengths and position every tone chamber from end to end in front of the blow hole.



* Accordion Tuning and Analysis Software

at www.dirksprojects.nl you'll find a „Professional Accordion Tuner“, which runs on a PC.



AKKotune was optimized for the use with Dirk's Accordion Tuner and can utilize all functions of this excellent piece of software.

After experiences with Dirk's Accordion Tuner AKKotune V2.3 needed over a year of development time to include all its benefits. For the time being AKKotune is single produced in Switzerland.

AKKotune Versions 2.4/2.5 tuning table

Technical Specs

Airflow:	steady after adjustment, Start / Stop via switch
Air Pressure:	adjustable between 0.2 mbar (20 Pascal) and approx. 10 mbar (1 kPa)
Power Supply:	Leicke NT03012, 60W 12V 5A, Input 100-240 VAC, 50-60 Hz power cord with Euro plug, with cable switch, 2 m
Weight (excl. accessories):	14 kg
Dimensions:	W 600 x D 380 x H 193 mm The top plate has a 9 mm protrusion on both sides. Including the top covering the thickness is approx.. 29 mm.

Accessories Included

Air exhaust inserts:	2x round hole 8 mm and 12 mm 1x long hole 8 x 35 mm 1x large hole 50 mm for use with inspection of complete treble or bass
Reed plate guide:	1x adjustable limit stop
Instrument fixing:	2x adjustable arm with easily applicable downholder 1x bracket for high instruments / bass parts

AKKOblock Reed Block Tuner

Technical Specs

Weight:	3,7 kg
Dimensions:	B 600 x D 220 x H 210 approx. mm when shifting the main slide the excess length on sides will be approx. 19 cm (with support slides in extreme positions approx. 30 cm)
Holding capacity:	reed blocks of 18 cm to 45 cm length nominally; extended capacity with added support slide shifting.
Microphones:	2x integrated inside and outside the blow module, with automatic gain control, USB output, 1x socket B

Accessories Included

Air exhaust inserts:	1x blow hole block, slim, round hole	8 mm
	1x blow hole block, broad, round hole	12 mm
Cables:	1x stereo 2 x 3,5 mm jack, 50 cm length	
	1x USB-cable 1,5 m length, USB-B / USB-A	
Adjustment key:	1x Torx-Bit 90 mm T30, with rotary handle	
Fixing screws:	2x M6 screws with ball grip for fixing base plate to top plate of tuning table	

For special requirements resp. option specs please don't hesitate to contact us by email.

Subject to technical change without prior notice.

Please also watch the introductory Video on Youtube.com: AKKOtune Tuning Table



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