

# TECHNOPIPES OPERATION MANUAL

(French 16"/French 20"/Medieval/Great Highland version)

## EARPHONES

Use a pair of ordinary Walkman stereo earphones. (Typically 16 Ohm impedance and Ø3.5mm plug.)

**! DO NOT USE MONO EARPHONES AS THIS MIGHT DAMAGE THE CIRCUITRY.**

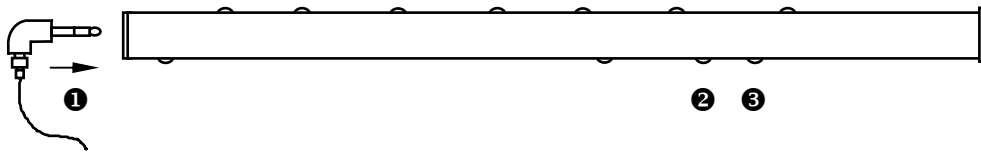
## SWITCHING ON/OFF

The chanter is switched on by connecting the earphones to the upper end of the chanter **1** and switched off by disconnecting the earphones.

**! REMEMBER TO DISCONNECT THE EARPHONES TO SAVE THE BATTERY WHEN THE CHANTER IS NOT BEING PLAYED.**

## SETTINGS

All settings are controlled by the +control **2** and the -control **3** together with a specific fingering combination for each setting.



Setting	fingering combination	+control <b>2</b>	-control <b>3</b>	both <b>2 3</b>
Drones on		turn drones on		
Chanter on / Recording		increase playback speed	decrease playback speed	recording mode / normal mode
Sound off		turn sound off / stop recording / pause playback		
Sensitivity		increase	decrease	-
Pitch		increase	decrease	key A > C > D > F > G > A > Bb > C >
Metronome		increase tempo	decrease tempo / add sub-beat	two times to turn on third time turns off
Drones		increase volume	decrease volume	Configuration (key of A) <b>A+a</b> > A+e+a > e > d >
Sound		Highland pipes key of Bb	<b>Medieval</b> key of A	French 16 inch key of G
Factory reset		-	-	Restore factory settings. Marked in <b>bold</b> font in this chart.
Volume		increase	decrease	start volume
MIDI		increase chanter channel no.	decrease chanter channel no.	enter MIDI mode

## VOLUME

The output volume depends to some extent on the type of earphone plugged in.

**! PLAYING AT HIGH VOLUME MIGHT DAMAGE YOUR HEARING.**

## PLAYING

The contacts of the chanter are electrical and not mechanical, meaning they do not have to be pressed down to become activated. The grip does not have to be any firmer than that on the pipe chanter.

Start-up sequence:

- 1) Start drones by playing the *Drones on* fingering combination.
- 2) Start chanter by playing the *Chanter on* fingering combination.

## SENSITIVITY

It could happen, from time to time, that your fingers are very dry, causing them to become poor conductors. The chanter, being dependant of electrical conductivity, may then have some trouble playing the note your fingers indicate, instead producing a squeaky sound, or the wrong note. You then need to increase the sensitivity. Sometimes, on the other hand, your fingers may be very warm and short-circuit the chanter through a very thin film of sweat, so that the chanter fails to detect that a finger no longer is on a contact. You then need to decrease the sensitivity. The sensitivity can be set to five different levels.

## PITCH

The chanter starts with Medieval sound/fingering in the key of A (440Hz) as default. The low A goes from 185Hz up to 738Hz in steps of 0.1 to 0.7Hz.

With *Sound* set to Highland pipes, the chanter starts in the key of Bb (466Hz). Set to French 16 inch, the chanter starts in the key of G (392Hz). With *Sound* set to French 20 inch, the chanter starts in the key of D (294Hz). The key of the chanter can easily be set to A220Hz, C, D, F, G, A440Hz, Bb, or C. The accuracy is within  $\pm 3$ Hz.

## MIDI

MIDI (Musical Instrument Digital Interface) is an electronic communications protocol that enables electronic musical instruments, computers, and synthesizers etc. to communicate with each other. MIDI does not transmit an audio signal - it transmits digital data messages defining parameters such as pitch and volume of the musical notes to play. See <http://www.midi.org> for further reading.

MIDI mode is entered if MIDI combination is fingered at the time the MIDI cable is connected.

The chanter is initially set to channel 1, but can be set between 1 and 14. The bass is fixed on channel 15 and the tenor fixed on channel 16. The default A is MIDI note number 69. In MIDI mode, the volume settings for chanter and drones affect the note velocity. It is up to the receiver to interpret the velocity data. (In MIDI mode, metronome and recording are not available.)

## METRONOME

The metronome does not start at any given tempo. You set the tempo like this:

- 1) Hold the *Metronome* fingering combination.
- 2) Think of a tempo in you head.
- 3) Beat the tempo once on the +/-controls (both contacts at the same time).
- 4) (OPTIONAL) Add sub-beats by touching the -control.
- 5) Beat the tempo again on the +/-controls to set the main beat.
- 6) The metronome continues in that tempo.
- 7) Touch +/-controls again holding the *Metronome* fingering combination: the metronome turns off.

## RECORDING

The chanter can record more than 1200 notes. You can play along with the recorded notes to practice phrases, seconds, etc. When recording, the first note and the last note preceding the *Sound off* note are not stored for simplifying the creation of loops. The recorded track is played back on the right channel, and you play along on the left channel. The playback speed can be set between  $\frac{1}{4}$  and 2 times the recorded speed.

Typical recording sequence:

- 1) Start drones and chanter.
- 2) Play the *Recording* fingering combination.
- 3) Put your lower hand thumb on both the +control and -control. A high pitched beep indicates recording mode.
- 4) Record as long as you like, or until the memory is full (indicated by a low pitched beep).
- 5) Play the *Sound off* note.
- 6) Start playback by turning drones on.
- 7) Start chanter and play along.
- 8) Exit recording mode by 2) and 3) above. A low pitched beep indicates normal mode.

## FINGERING

The chanter can play four different fingerings (see separate fingering chart):

- 1) Great highland bagpipes fingering. (Lower hand thumb hole not used.)
- 2) Medieval fingering. (Lower thumbhole must be used as ground when playing the notes with only one finger on the chanter.)
- 3) French 16 inch closed fingering. To play the second octave, the top hand thumb hole has to be left open, or alternatively, the bottom most hole must be closed.
- 4) French 20 inch open fingering. To play the second octave, the top hand thumb hole has to be left open, or alternatively, the bottom most hole must be closed.

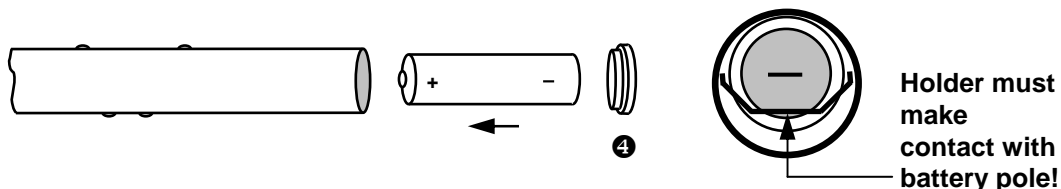
## BATTERY

The chanter uses one 1.5Volt AAA/LR03 alkaline battery, or one 1.2Volt AAA/HR03 NiMH rechargeable battery. The chanter will run approx. 10 hours on a 1000mAh NiMH rechargeable battery, or 20 hours in MIDI mode. A rechargeable battery is recommended as it will be cheaper in the long run.

If the chanter does not start correctly, or runs only for a few minutes before shutting itself off, the chanter needs a new battery.

## CHANGING THE BATTERY

Remove the end cap ④ from the chanter by firmly pulling it outwards. Move the battery holder to the side to allow the battery to slide out slightly. Tap the battery end of the chanter against the palm of your hand in order to get the battery out. Insert the new battery with the **negative** pole towards the end cap. Make sure the battery holder makes **electrical contact with the negative pole**. Put the end cap back on.



## PRECAUTIONS

**Do not expose the chanter to high temperatures** (e.g. in a car during daytime). High temperatures can damage the battery and distort plastic parts.

**Handle the chanter carefully.** Dropping it can damage the circuit board and housing, and can cause the chanter to malfunction.

**Keep out of reach of small children.** Product contains small parts.

## **TROUBLESHOOTING**

- Symptom: Chanter does not start at all.  
Solution: Make sure the battery is ok. Make sure the battery holder makes electrical contact with the battery pole.
- Symptom: Chanter does not start correctly, or runs only for a few minutes before shutting itself off.  
Solution: Change/charge the battery.
- Symptom: Chanter makes a clicking noise on one channel, and sounds with a low pitch on the other.  
Solution: Chanter is in MIDI mode. Disconnect and reconnect the earphones without fingering the combination for MIDI mode.
- Symptom: Chanter gets hot by the bottom end.  
Solution: Battery is inserted the wrong way. Insert the battery the correct way.

## **MAKER**

Anders Fagerström Electronics AB  
Anundsgatan 8  
S-753 34 Uppsala  
Sweden

e-mail: [anders@fagerstrom.com](mailto:anders@fagerstrom.com)  
Web page: [www.fagerstrom.com](http://www.fagerstrom.com)  
Telephone: +46 70 523 55 98  
VAT No: SE556835323801



This device complies with the following standards:  
FCC part 15, subpart B,  
EN 55 013, EN 55 020,  
AS/NZS CISPR 13