

# TECHNOCHANTER 2G OPERATION MANUAL (Northumbrian version)

## EARPHONES

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

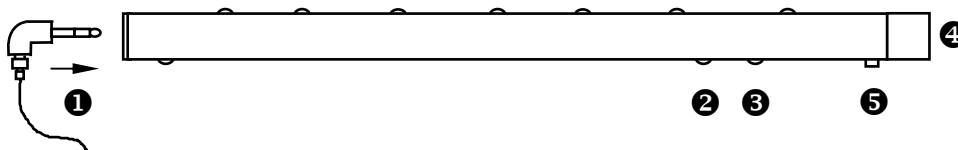
## SWITCHING ON/OFF

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

With earphones connected and sound off, the chanter enters a power saving mode after approx. 30 seconds. In this mode the batteries will last for months.

## 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 ②  | -control ③                        | both ② ③                                     |
|------------------------|-----------------------|---|-----------------------------------|--|
| Drones on              |                       | turn drones on  |                                   |  |
| Chanter on             |                       | turn chanter on   |                                   |  |
| Sound off              |                       | turn sound off  |                                   |  |
| Sensitivity (option 1) |                       | increase  | decrease                          | -  |
| Sensitivity (option 2) |                       | increase  | decrease                          | -  |
| Pitch                  |                       | increase  | decrease                          | Key<br>D > F > F# > G ><br>A(440) > Bb > C > |
| Metronome              |                       | increase tempo  | decrease tempo                    | two times to turn on<br>third time turns off |
| Drones                 |                       | increase volume   | decrease volume                   | tuning (key of F)<br>G+g > a >               |
| Scale                  |                       | lowG, lowA, B, C#, D, E, F#, highG, highA (Scottish smallpipes) | <> lowG, A, B, C, D, E, F#, highG | <> lowG, A, B, C, D, E, F, highG             |
| Volume                 |                       | increase  | decrease                          | start volume                                 |
| MIDI                   |                       | -   | -                                 | enter MIDI mode                              |

## VOLUME

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

**! PLAYING AT A 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 dependent on 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

In the NSP key of F, the low G goes from 261Hz up to 533Hz in steps of 3 to 4Hz.

The key of the chanter can easily be set to D, F, F#, G, A440Hz, Bb, or C.

## 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) Beat the tempo again on the +/-controls.
- 5) The metronome continues in that tempo.
- 6) Touch +/-controls again holding the Metronome fingering combination to make the metronome turn off.

A green LED blinks at the upper end of the chanter **1** in addition to the metronome sound.

## 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. (NB. MIDI cable is sold separately. See [www.fagerstrom.com](http://www.fagerstrom.com).)

The LEDs light up briefly at the upper end of the chanter **1** indicating that the chanter has entered MIDI mode.

The chanter is fixed to channel 1. The bass is fixed on channel 15 and the tenor fixed on channel 16.

The default G is MIDI note number 65 (F). 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 the metronome is not available.

## FINGERING

### NSP fingering

| Silent | low G | A | B | C | D | E | F/F# | high G |
|--------|-------|---|---|---|---|---|------|--------|
| ●      | ●     | ● | ● | ● | ● | ● | ●    | ○      |
| ●      | ●     | ● | ● | ● | ● | ● | ○    | ●      |
| ●      | ●     | ● | ● | ● | ○ | ● | ●    | ●      |
| ●      | ●     | ● | ● | ● | ● | ○ | ●    | ●      |
| ●      | ●     | ○ | ● | ● | ● | ● | ●    | ●      |
| ●      | ●     | ● | ○ | ● | ● | ● | ●    | ●      |
| ●      | ●     | ● | ● | ● | ● | ● | ●    | ●      |
| ●      | ○     | ● | ● | ● | ● | ● | ●    | ●      |

### Scottish Smallpipes fingering

| low G | low A | B | C | D | E | F | high G | high A |
|-------|-------|---|---|---|---|---|--------|--------|
| ●     | ●     | ● | ● | ● | ● | ● | ●      | ○      |
| ●     | ●     | ● | ● | ● | ● | ● | ○      | ○      |
| ●     | ●     | ● | ● | ● | ○ | ○ | ○      | ○      |
| ●     | ●     | ● | ● | ○ | ○ | ○ | ○      | ○      |
| ●     | ●     | ● | ○ | ○ | ○ | ○ | ○      | ○      |
| ●     | ●     | ○ | ○ | ○ | ○ | ○ | ○      | ○      |
| ●     | ○     | ○ | ○ | ○ | ○ | ○ | ○      | ○      |
| ○     | ○     | ○ | ○ | ○ | ○ | ○ | ○      | ○      |

v=vibrato

## BATTERIES

The chanter uses two 1.5 Volt LR44, SR44 or V357 type batteries (Ø11.6 x 5.4mm). The lifetime of the batteries is up to 40h of playing. Battery lifetime in MIDI mode is up to 110h. The battery lifetime depends on the capacity of the batteries.

When the red LED at the upper end of the chanter ❶ is blinking slowly, the batteries soon need replacing. When the red LED is on constantly, the batteries are flat. Always replace all batteries.

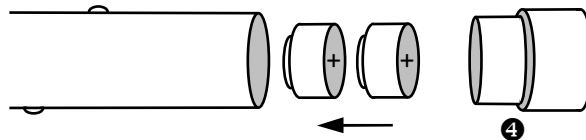
If the chanter does not start correctly, or runs only for a few minutes before shutting itself off, the chanter needs new batteries.

## CHANGING THE BATTERIES

Remove the screw ❺. Remove the plug ❹ from the chanter by pulling it outwards.

Tap the battery end of the chanter against the palm of your hand in order to get the old batteries out.

Insert the new batteries with their positive end, marked ⊕, towards the plug and put the plug back on.



Secure the plug by fastening the screw again ❺. Do not use a tool to tighten the screw.

## PRECAUTIONS

**Do not expose the chanter to high temperatures** (e.g. in a car during daytime). High temperatures can damage the batteries 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 batteries are ok and inserted the correct way.

Symptom: Red LED is on.

Solution: Batteries are flat. Change the batteries.

Symptom: Chanter makes a loud clicking noise.

Solution: Chanter is in MIDI mode. Disconnect and reconnect the earphones without fingering the combination for MIDI mode.

## 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 the standards:  
FCC 47 CFR Part 15 Subpart B,  
ICES-003 Issue 6,  
CISPR 32: 2015,  
EN 55032: 2015