DEGERPIPES II
ELECTRONIC BAGPIPES

Operating Manual

Overview

① *Mouthpiece*
② *Slide Switch*
③ *PHONES Jack*
④ *MIDI-Jack*

⑤ *Front Panel*
⑥ *Battery Compartment*
⑦ *Start Sensor*

Precautions

The DegerPipes Chanter will give you years of reliable service if you follow the simple precautions below:

Location
Keep the instrument away from locations where it might be exposed to high temperatures (such as direct sunlight) or humidity. Also avoid locations which are subject to excessive dust accumulation or vibration capable of causing mechanical damage.

Handle the Chanter with Care
Although the Chanter has been constructed to withstand the rigors of normal use for optimum sturdiness and reliability, avoid subjecting it to strong physical shocks (such as dropping or hitting it). Just handle the DegerPipes Chanter as you would a precision-made musical instrument.

SWITCH OFF THE CHANTER BEFORE PLUGGING OR UNPLUGGING CABLES
To prevent damage, always switch the Chanter off before plugging or unplugging cables or headphones.

DON'T OPEN THE CASE OR TRY REPAIRING THE INSTRUMENT YOURSELF
The DegerPipes Chanter contains no user-serviceable parts. Never open the case or tamper with the internal circuitry in any way, since doing so may result in damage to the instrument. Refer all servicing to your dealer or the manufacturer.

DegerPipes will not be held responsible for any damage caused by handling or operation. Opening the case voids warranty.
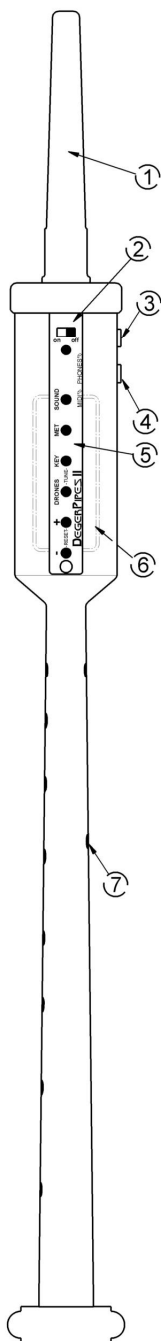
Getting Started

Insert the Battery

The DegerPipes Chanter works with 2 LR03 Volt Batteries (AAA). The battery compartment ⑥ is accessible by removing the Lid. Appropriate rechargeable batteries may also be used. Low Battery is indicated by a blinking LED. Replace rechargeable batteries soon to prevent damage by deep discharge.

Connecting Headphones

Connect the Headphones to the upper jack ②. It is possible to connect all standard headphones as used for example with portable disc players. It is also possible to connect a set of powered speakers or any line input of amplifiers or mixing consoles to this jack. Always use a stereo plug as mono plugs cause a short circuit which may damage the instrument.

Light-emitting diode (LED)

The LED shows the operating status of the Chanter. The following information is available:

Display	Function
off	Chanter is switched off or in power-save mode
one flash per second	Standby, the Chanter may be started
continuous light (short interruption shows activity)	The Chanter is active
equably	the Battery is low and should be changed
the LED blinks with the beat of the Metronome	Metronome

Power On

Use the slide switch ② to switch on the Chanter. After approximately two hours, the Chanter moves to a power-save mode. Switch the Chanter off and on to restart power.
IMPORTANT: Even in the power-save mode the Chanter consumes a little power. To lengthen the lifetime of the batteries, use the slide switch to power off the Chanter after using it.

Starting the Sound

Touch the Start-Sensor ⑦ to activate chanter sound. Touching Start-Sensor ⑦ again deactivates the chanter sound. If the upper hand is not touching the sensors, only the drones will sound. As soon as the upper hand touches the sensors, the Chanter sound is activated. If the drones volume is zero, the Chanter sound starts immediately.

Settings (volume, pitch, etc.) are stored in a non-volatile memory and will not be deleted, not even when changing the battery. The adjustments are stored when the Chanter is stopped. If you make changes, ensure that the Chanter is started and stopped before switching off.

Volume (+ -)

The volume can be adjusted by pressing the + and - keys. Avoid using headphones at very high volume levels.

Volume of the Drones (DRONES)

To adjust the drone volume, hold down the DRONES key and then adjust with the + and - keys. The drone volume can be adjusted separately for the different instrument sounds.

Baritone-Drones

Toggle the Baritone Drone by holding down the DRONES key and pressing the SOUND key

Changing the Key (KEY)

The default key of the DegerPipes Chanter is B-Flat. This is the sounding pitch of most of the modern Highland Bagpipes. The key can be adjusted by semitones with the + and - keys while holding the PITCH key. Holding the PITCH key and pressing the + and - key at the same time resets the pitch to the default of B-Flat. The keys are stored individually for the different instruments. The key is retained if the KEY button is held while changing the instrument (SOUND).

Tuning (TUNE)

The Chanter can be tuned easily with the + and - keys while holding both the KEY and DRONES keys. The tuning is global and independent of the selected instrument.

The Metronome (MET)

The built-in metronome is started by pressing the MET key twice. After pressing the key the first time, the metronome waits for two seconds for a second press. If the MET key is pressed during this time, the metronome clicks on, using this time interval. To stop the metronome, simply press the MET key once. If the metronome is stopped, press and hold the MET key for three seconds to restart the metronome with the same speed as used last time.

Switching between the different Instruments (SOUND)

Pressing the SOUND key changes the instrument from Highland Pipe to Smallpipe and vice versa.

Reset to Defaults

To reset default, simply press + and - keys at the same time.

Drones:
1. Press and hold DRONES
2. Press + and - to reset the Drone volume and deactivate Baritone Drone.

Key:
1. Press and hold KEY
2. Press + and - to reset the key to B-flat.

Tuning:
1. Press both DRONES and KEY
2. Press + and - to reset the tuning to default of 440 Hz.

Reset to Factory Settings:
1. Switch off the slide switch ② and wait at least 5 seconds
2. Press and hold + and - key
3. Switch on the slide switch ②

Fingering Mode

The fingering of the DegerPipes II Chanter is the same as the Scottish Highland Pipes.

The DegerPipes Chanter offers three choices of fingering.

1. **Minimal** (standard notes, not special effects)
2. **Standard** (allowing natural e, natural f and vibration)
3. **Extended** (fully chromatical – All semitones, extended pitch range)

Fingering mode is selected by pressing and holding any of the keys -, + or DRONES while switching on the slide switch ②. Factory default is Standard.

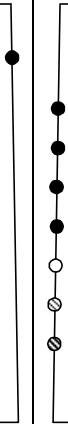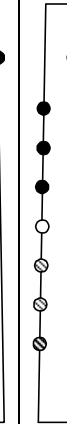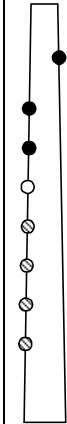| Key	Fingering
-	Minimal
+	Standard
DRONES	Extended
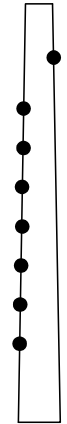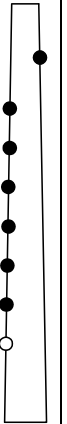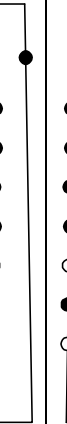
The following tables show the fingering of the DegerPipes Chanter. The holes (sensors) which are in no particular for the respective note are shown shaded in gray. Holes which cause a Vibrato are shown hatched. For proper operation, at least two sensors must be touched.

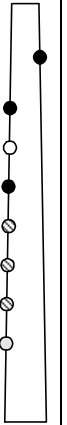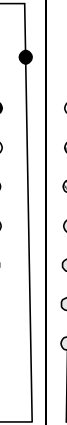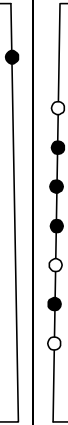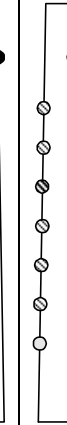|	
■	closed
□	open
▨	don't care
▨	vibrato

Minimal Fingering:

Note	low-G	low-A	B	C	D	E	F	high-G	high-A
Note-Number (MIDI)	56	58	60	62	63	65	67	68	70

Standard Fingering:

Fingering							
Note	low-G	low-A	B	natural C (Cb)	C	D	E
Note-Number (MIDI)	56	58	60	61	62	63	65

Fingering					
Note	natural F (Fb)	F	hgh G	sharp-G (G♯)	high-A
Note-Number (MIDI)	66	67	68	69	70

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Extended Fingering:

Fingering									
Note	low-G	low-A	natural B (Bb)	B	natural C (Cb)	C	D	natural E (Var.1)	natural E (Var.2)
Note-Number (MIDI)	56	58	59	60	61	62	63	64	64

Fingering						
Note	E	natural F (Fb)	F	high-G	sharp-G (G#)	high-A
Note-Number (MIDI)	65	66	67	68	69	70

Extended Fingering (cont.):

Fingering								
Note	high-Bb	high-B	high-Cb	high-C	hig-D	high-Eb	high-Eb	high-E
Note-Number (MIDI)	71	72	73	74	75	76	76	77

G Sharp (G#)

The 'normal' G (low-G as well as high-G), which is a whole note below the A, can be replaced by a sharp G. This replacement can be toggled by holding down the 'DRONES' and ' - ' buttons while switching on the Chanter using the slide switch ②. Repeating the procedure deactivates the Sharp-G mode.

The MIDI Output

MIDI stands for Musical Instrument Digital Interface. No sound is transmitted through the MIDI interface, only data. Sound is generated by the connected MIDI tone equipment. You may play the Chanter with any sound the conneced equipment is capable of producing.

An adapter cable is provided with the DegerPipes which can be plugged into the lower (MIDI) jack. The DIN plug meets the MIDI standards and may be connected to any MIDI equipment (also personal computers which are equipped with a MIDI interface).

A single MIDI interface is capable of transmitting 16 MIDI channels. The DegerPipes Chanter uses channel 1 for the chanter data, and channels 2 to 4 for the Drones.

MIDI-Channel	Note Number
1	Chanter (see Fingering-Charts)
2	58 (Tenor Drones)
3	46 (Bass Drone)
4	53 (Baritone Drone)

To prevent missing Note-Off signals, always stop the Chanter first using the sensor ⑦ before switching off the slide switch ②.

Volume

There is no volume control when MIDI output is connected. Volume must be adjusted using the volume control of the connected equipment. The drone volume is the same as used for the PHONES output.

Switching between the Well-Tempered and the Pipe Scale

The scale of the bagpipe chanter does not use the modern "well-tempered" scale mostly used for today's musical instruments. The chanter uses a Pythagorean scale to fit every note perfectly to the drones. MIDI equipment is generally unable to produce a Pythagerean scale on its own. The DegerPipes Chanter, however, is able to generate the pipe scale by sending pitch bend data to the connected equipment. To work correctly, the pitch bend range of the connected equipment must be set to two semitones. Since this is the default value of most MIDI equipment, it is rarely necessary to make any adjustments.

It is sometimes better to play the well-tempered scale, especially when playing together with other instruments. The DegerPipes Chanter only sends pitch bend data when the sound is switched to Highland Pipe. Switching to Smallpipe stops sending pitch bend data and returns to the standard tempered scale.

Using MIDI and PHONES outputs simultaneously

There are no restrictions in using both MIDI and PHONES outputs at the same time.

Extended MIDI data output (RAW-Mode)

For special purposes, it is possible to select extended data output via the MIDI connection. When selected, all activities of the Chanter are put on output via MIDI Control Change data. This information could be used for computer programs or additional external gear. A complete specification of this RAW-Mode can be found on the DegerPipes website (**www.deger.com**). The RAW-Mode may be useful for software engineers or MIDI enthusiasts.

Technical Data

Power Supply	2x AAA (LR03) alkaline batteries oder rechargeable batteries (NiMH)
Battery Lifetime	approx. 60-100 h. using alkaline batteries (depending on the connected equipment)
Dimensions	Length 350 mm without mouthpiece, 440 mm including mouthpiece, Ø 36mm
Weight	0,175 kg

Trouble Shooting

Problem	Possible Cause	Solution
• No sound at the PHONES jack or LED dark	No battery or empty battery	Insert new battery
	Adjustment for volume is too low	Increase the volume
	Headphones defective or not connected properly	Check headphones and contacts
	The internal microprocessor is in an undefined state	Switch off the slide switch, wait for at least 10 seconds and power on again
	Others	Contact your dealer or the manufacturer
• No sound from the connected MIDI device	No battery or empty battery	See above, also check if the Chanter works with earphones
	Cables not connected properly	Check cables
	The connected MIDI devices are not adjusted to receive on MIDI channel 1 or volume too low	Check adjustment at the MIDI device, check corresponding owners manual
	The internal microprocessor is in an undefined state	See above
• Sensors respond delayed or not at all	Dry skin	Use hand cream to increase the circuit capacity of the hand
• Sensors seem to 'hang', i.e. after take the finger away nothing happens	The Chanter is moist or dirty	Dry or clean the sensor area carefully. If necessary use a bit soap and water. (clean the sensor area all around)
• Adjustments are lost after switching off	The Chanter was not stopped with the sensor ⑦ before switching off	Always stop the Chanter with the sensor ⑦before switching of the slide switch ②

This Product complies with the requirements of the EMC
Directive 89/336/EEC, and carries the CE marking accordingly.

DegerPipes

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