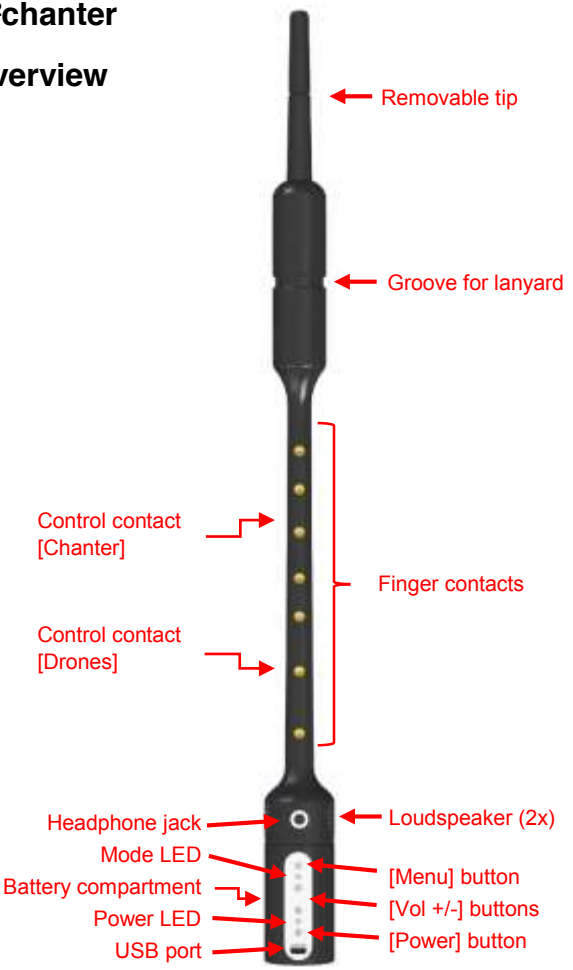
Solda

p²chanter

p²chanter

overview



Quick Reference

(short: < 1 second, long: > 1 second)

Switching on	Short press of the [Power] button
Switching off	Hold the [Power] button for ca. 2 sec
Toggle between Practice Chanter and Pipe Chanter* modes	Short press of the [Power] button while the instrument is switched on
Restoring the factory settings	Hold the [Menu] button while switching on the instrument
Changing the overall volume	Press the [Vol+]/[Vol-] buttons
Adjusting the volume of the drones	While drones are ON and chanter is OFF: Press the [Vol+]/[Vol-] buttons
Practice Chanter mode	**(Power LED lights up green)**
Starting/stopping chanter	Short touch of the [Chanter] contact
Starting/stopping the drones/metronome	Short touch of the [Drones] contact
Toggle between drones and metronome	Long press of the [Menu] button while the Mode LED is OFF
Adjusting metronome speed	While metronome is ON and chanter is OFF: Press [Vol+]/[Vol-] buttons
Adjusting metronome volume	While metronome is ON, touch the [Drones] contact while changing the [Vol +/-] setting.
Changing instruments	Briefly press [Menu] until Mode LED lights up yellow; select instrument using [Vol+]/[Vol-]
Tuning	Briefly press [Menu] until Mode LED lights up red; tune by pressing [Vol+]/[Vol-] as follows: short = almost steplessly long = one half step

Pipe Chanter Mode*	**(Power LED lights up red)**
Starting/stopping the drones/chanter	Sound generation starts/stops at the predefined pressure threshold
Configurating pressure thresholds	Briefly press [Menu] until the Mode LED lights up red; fill the bag to the desired air pressure; briefly touch the [Chanter] or [Drones] contact to save the current pressure as threshold for chanter/drones, respectively
Steady Blowing training	Briefly press [Menu] until the Mode LED lights up yellow; a long touch of the [Chanter] contact starts/stops training. To increase/decrease sensitivity, briefly touch the [Chanter]/[Drones] contact, respectively.

* optional pressure sensor module required

LED Signals

Power LED	Mode LED	Meaning
off	off	p²chanter is switched off
off	red	Firmware Update Mode (see separate instructions)
green	off	Practice Chanter Mode
green	yellow	Instrument selection (i.e. sound)
green	red	Tuning
red	off	Pipe Chanter Mode
red	yellow	Steady Blowing Training Mode
red	red	Adjustment of pressure thresholds for chanter and drones
red/green flashing		Low battery voltage; batteries should be replaced soon

Getting Started

Batteries

The p²chanter is powered by two (2) AAA batteries. Slide open the lid to access the battery compartment. Observe the correct polarity when inserting new batteries. In case of low battery voltage, the Power LED starts flashing red and green. Distorted instrument sounds indicate that the batteries are running low and should be replaced.

Using rechargeable batteries is not recommended due to the risk of deep discharge, which may damage the batteries beyond repair.

Note: Remove the batteries before storing the instrument for an extended period of time to avoid damage from leaking battery fluid.

Using the Power Button

To switch on the p²chanter, briefly push the [Power] button. The previously selected settings are automatically loaded during start-up. To switch off the p²chanter, push the [Power] button and hold it for 2 seconds. The instrument will switch of automatically if not in use for a while.

Restoring the factory settings (Reset)

Pushing the [Menu] button during start-up restores all settings of the p²chanter to their factory defaults. Individual settings can be reset by simultaneously holding down (>1 sec) the [Vol +] and [Vol -] buttons while making the respective adjustments.

Headphone output

The p²chanter is equipped with a 3.5mm jack for stereo headphones with a minimum impedance of 16 ohms. Plugging in headphones deactivates the integrated speakers.

The headphone jack can also be used for connecting the p²chanter to an external amplifier using a stereo cable.

Lanyard

The provided lanyard can be put over the mouthpiece and slips into the groove.

Note: Always unscrew the tip from the mouthpiece to avoid injuries when using the lanyard.

Practice Chanter Mode

(Power LED green)

The p²chanter can be used as a standalone practice chanter, using either headphones or the integrated speaker. The pitch and sound generated by each fingering depend on the instrument selection.

It is also possible to add accompanying drone sounds. Volume, tone and pitch of the p²chanter can be adjusted within a wide range.

Activating and deactivating sounds

The drones are activated by briefly (< 1 sec) touching the [Drones] contact. The chanter is activated by briefly touching the [Chanter] contact. A second touch of the [Chanter] contact mutes all sounds (chanter and drones). After activating the sound output of the p²chanter, you can play melodies by touching the finger contacts. Observe the fingering charts for different instrument types (see Appendix).

Volume

Use the [Vol +/-] buttons to control the volume of the instrument. If the drones are switched on and the chanter is switched off, this adjustment changes the volume ratio between chanter and drones. Otherwise it affects the master volume of the p²chanter.

Metronome

The p²chanter offers a metronome function as an alternative to the drones. To toggle between the two options, push and hold (> 1 sec) the [Menu] button, with the Mode-LED turned off. You can adjust the metronome speed using the [Vol +/-] buttons while the metronome is switched on and the chanter is switched off. To start/stop the metronome, briefly touch the [Drones] contact. To adjust the metronome volume, touch the [Drones] contact while changing the [Vol +/-] setting.

Selecting an instrument/sound

The p²chanter allows you to practice different instrument types. The selection affects the sound as well as the fingering (see Appendix for individual charts). To select an instrument, push the [Menu] button briefly (repeat if necessary) until the Mode LED lights up yellow. Use the [Vol +/-] buttons to choose among the available alternatives. The Mode LED blinks to confirm your selection.

To close the Settings menu, briefly touch the [Menu] button again. If no button is used for several seconds, the menu closes automatically (Mode LED goes out).

Tuning

The frequency of the sounds generated by the p²chanter can be adjusted within a range of +/- 12 half steps. To do so, push the [Menu] button briefly (repeat if necessary), until the Mode LED lights up in red. You can now adjust the pitch using the [Vol +/-] buttons. A series of short presses raises/lowers the pitch almost steplessly, whereas a long press (> 1 sec) changes it by one half step.

To restore the default frequency, push the [Vol+] und [Vol-] buttons simultaneously for >1 sec.

Note: The selected settings are used for all playing modes of the p²chanter and will be stored when switching off the instrument!

Pipe Chanter Mode

(Power LED red)

If the p²chanter is equipped with the **optional** pressure sensor module as pictured below, it can be used for pressure-controlled playing. Place a few layers of hemping (waxed or unwaxed) on the corrugated upper section of the p²chanter to fit the diameter of the bagpipe's chanter stock. Push the p²chanter together with the pressure sensor module into the chanter stock, just like a regular chanter. Make sure the p²chanter locks firmly in place and cannot fall out of the stock.

When playing your bagpipe with the p²chanter, you can use its drones for accompaniment or mute them with corks.

After switching on the instrument, push the [Power] button briefly (< 1 sec) to toggle between the Practice Chanter and Pipe Chanter modes. The Power LED changes colour to confirm the selection.

In Pipe Chanter mode, drones and chanter are activated and deactivated by the air pressure inside the bagpipe. It is therefore not possible to switch them on or off using the [Drones] and [Chanter] contacts.

Adjusting air consumption

For an even more realistic approximation of an analog chanter, air consumption can be adjusted by turning the valve ring. It simulates the amount of air normally consumed by the reeds of the chanter and the drones. This makes it possible to practice the coordination of blowing, pressing and playing in addition to training arm pressure.

Turn the ring clockwise to decrease air consumption, or counter-clockwise to increase it.

When the valve ring is open, a slight hiss is heard. This is normal and can be drowned out by raising the volume or using headphones.

Note: To adjust air consumption, it is sufficient to turn the valve ring by 0 - 3 mm. Never turn the ring by more than 3 mm. Otherwise, the p²chanter may fall out of the stock and be damaged.

Using the p²chanter in Pipe Chanter Mode requires an effective moisture control system in order to prevent damages to the pressure sensor module and the instrument. During practice, the pressure sensor module must be checked for moisture at regular intervals and wiped dry if necessary.

Inserting the pressure sensor module

1	2	3
		
Unscrew the mouthpiece of the p²chanter. *<u>Note</u>: Never hold the p²chanter from the battery compartment while unscrewing the mouthpiece!*	Mount the valve ring. It serves as a stopper against the chanter stock and facilitates the adjustment of air consumption.	Push the pressure sensor module into the expansion connector of the p²chanter. The module snaps into place with an audible click.

Steady Blowing Training

In Pipe Chanter mode it is possible to practice steady blowing, i.e. keeping the pressure inside the bag at a constant level. Deviations from the nominal pressure are indicated by sounds: either HighA (pressure too high) or LowA (pressure too low). The signal continues until the pressure inside the bag returns to the nominal value. The purpose of this training is to keep the pressure inside the bag at a constant level without triggering either warning sound.

To activate Training Mode, push the [Menu] button briefly (repeat if necessary), until the Mode LED lights up yellow. To start (or stop) training, hold the [Chanter] contact for >1 sec. The target pressure value corresponds to the pressure threshold for the chanter (see the following section). You can adjust the sensitivity of the pressure measurement (hysteresis) in six steps by briefly touching the [Drones] contact (reduce) or the [Chanter] contact (increase). A sound confirms the selection.

Adjusting the pressure thresholds

The threshold values for activating and deactivating the drones and the chanter can be adjusted separately in the Settings menu. To enter the menu, push the [Menu] button briefly (repeat if necessary), until the Mode LED lights up in red.

Fill the bag with air until reaching the desired pressure. Briefly touch the [Drones] contact to adopt the current value as the threshold value for the drones, or the [Chanter] contact to use it as the threshold for the chanter. For a finer

adjustment, keep your finger on the [Drones] / [Chanter] contact while changing value with [Vol +/-].

To restore the default thresholds, push the [Vol+] und [Vol-] buttons simultaneously for >1 sec.

To close the Settings menu, briefly touch the [Menu] button again. If no button is used for several seconds, the menu closes automatically (Mode LED goes out).

<u>Notes:</u> The chanter threshold cannot be set lower than the threshold for the drones.

The pressure thresholds are saved when switching off the instrument and restored automatically the next time you activate the function.

The Metronome function is not available in Pipe Chanter mode.

To adjust the pitch or change instrument sounds, you must switch to Practice Chanter mode, as these settings cannot be altered in Pipe Chanter mode.

Appendix

Warnings

To avoid hearing damage, do not use the p²chanter at excessive volumes. Start playing softly and only gradually increase the volume to the desired level. This is particularly important when playing through headphones!

Do not use headphones at high volumes for extended periods of time.

The instrument must not come into contact with liquids.

High temperatures (> 50°C/120°F) can damage the instrument and the batteries inside.

At very low temperatures, condensation may form inside the p²chanter. In this case it must not be used until fully dried.

The p²chanter contains no user-serviceable parts. In case of a defect, please contact your local dealer or the manufacturer.

Maintenance

From time to time, the p²chanter should be wiped clean with a dry, lint-free cloth. Do not use abrasive and/or chemical detergents.

The gold-plated contacts may be cleaned with a jewellery polishing cloth if necessary.

After playing in the Pipe Chanter mode, remove the valve ring and wipe any moisture off the pressure sensor and the upper part of the p²chanter.

Fingering charts

(1) Great Highland Bagpipe

Note	G low	A low	B	C nat	C	D	E	F nat	F	G piob	G high	A high
upper hand	●	●	●	●	●	●	●	●	●	●	●	○
	●	●	●	●	●	●	●	●	●	○	○	○
	●	●	●	●	●	●	●	○	○	●	○	○
	●	●	●	●	●	●	○	●	○	○	○	●
lower hand	●	●	●	●	●	○	●	●	●	●	●	●
	●	●	●	○	○	○	●	●	●	●	●	●
	●	●	○	●	○	○	●	●	●	●	●	●
	●	○	○	○	●	●	○	○	○	○	○	○
MIDI Note	68	70	72	74	74	75	77	79	79	80	80	82

(2) Scottish Smallpipe

Note	G low	A low	B	C nat	C	D	E	F nat	F	G high	A high
upper hand	●	●	●	●	●	●	●	●	●	●	○
	●	●	●	●	●	●	●	●	●	○	○
	●	●	●	●	●	●	●	○	○	○	○
	●	●	●	●	●	●	○	●	○	○	●
lower hand	●	●	●	●	●	○	●	●	●	●	●
	●	●	●	○	○	○	●	●	●	●	●
	●	●	○	●	○	○	●	●	●	●	●
	●	○	○	○	●	●	○	○	○	○	○
MIDI Note	56	58	60	61	62	63	65	66	67	68	70

(3) GHB Whistle* (D)

Note	C	D	E	F#	G	A	B	C high	D high	E high	F# high	G high
upper hand	●	●	●	●	●	●	●	●	○	○	○	○
	●	●	●	●	●	●	●	○	○	●	●	●
	●	●	●	●	●	●	○	○	○	●	●	●
	●	●	●	●	●	○	○	○	●	●	●	●
lower hand	●	●	●	●	○	●	●	●	●	●	●	○
	●	●	●	○	○	●	●	●	●	●	○	○
	●	●	○	○	○	●	●	●	●	○	○	○
	●	○	○	●	●	○	○	○	○	○	●	●
MIDI Note	72	74	76	78	79	81	83	84	86	88	90	91

*Drone sounds are not available with this selection.

MIDI

MIDI (**M**usical **I**nstrument **D**igital **I**nterface) facilitates the electronic transfer of information on the notes played.

The p²chanter is equipped with a Mini-USB port for direct connection to a computer without the need for additional hardware, utilising the internal drivers of the operating system. Installation of device-specific hardware drivers is not necessary. On the computer, the p²chanter appears as a “MIDI In” port to which the notes played on the instrument are transferred. The analysis of the data provided by the p²chanter requires appropriate software. It is not possible to control the p²chanter from the computer (”MIDI Out”).

To activate MIDI communication, establish the USB connection <u>before switching on</u> the p²chanter.

The note values transmitted depend on the instrument selection (see the fingering chart in the previous section). Changes to the p²chanter’s volume are not transmitted. Chanter data is transmitted via channel 1, drone date via the following channels.

If "Great Highland Bagpipe" is selected, pitch bend values are transmitted in addition to the actual notes. They are used to create just intonation, whereas the MIDI default is equal temperament.

Software updates

The p²chanter is equipped with a USB interface to facilitate upgrades to the device software. Any future software updates will be available on the manufacturer's website, together with installation instructions.

The current firmware version of the p²chanter can be verified by holding down the [Vol+] and [Vol-] buttons while switching on the instrument. The Mode LED blinks a certain number of times in red and yellow to signal the main firmware release and its version number, respectively (e.g. 3x red + 7x yellow = version 3.7).

Support

For feedback and questions, please contact the manufacturer.

Homepage: http://www.p2chanter.com

E-mail: info@p2chanter.com

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EC Declaration of Conformity

in accordance with Directive 2014/30/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to electromagnetic compatibility.

The following product:

Equipment: Electronic musical instrument
Brand name: Solda
Model/type: p²chanter

is herewith confirmed to comply with the requirements set out in the relevant Community harmonisation legislation relating to electromagnetic compatibility and safety:

- EN 55013:2013
- EN 55020:2007
- EN 50581:2012

This declaration is made for and on behalf of the manufacturer:

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Bonn, 1 August 2014

(Erik Solda, CEO)

Company information

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Disposal

Electronic equipment such as the p²chanter must not be disposed of as household waste!

At the end of its service life, the device must be brought to an appropriate collection point according to the Waste Electrical and Electronic Equipment Directive (WEEE).

Batteries

Dispose of used batteries according to local regulations. Batteries do not belong in domestic waste!