NOTHING LESS THAN
ALL YOU NEED
IOS // OS X // WINDOWS
MULTI-PURPOSE USB MICROPHONE

Made for

iPod  iPhone  iPad

Made for iPhone 6s, iPhone 6s Plus, iPhone 6, iPhone 6 Plus,
iPhone 5, iPhone 5s, iPhone 5c, iPad (4th generation),
iPad Air, iPad mini, iPod touch (5th generation)

// DGT 450
USER MANUAL

SOUNDS LIKE  LEWITT

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# // Intro

Thank you for choosing a LEWITT DGT 450!

In brief: It's one of the most capable USB microphone on the market. It's compatible with Windows, Mac and even iOS devices. It can be used to record vocals, instruments, ambient sound, samples, podcasts and more.

Be sure to check out our Breakout Box although it's not included in the package - it's a clever additional accessory available online and at your local dealer. With this little box you will be able to plug in and record your guitar, synthesizer, mixing desk or any other line output-equipped device. You can also plug in any MIDI input device directly and record everything on seperate tracks in one run ...

You see, this is way more than a simple USB microphone: it's your Digital Multi-Tool.

## // Features

- **//** Professional small diaphragm capsule for authentic recordings of any acoustic event
- **//** Switchable to cardioid polar pattern
- **//** Illuminated user interface for quick and easy handling even in dark environments
- **//** Recording with iPhone, iPod touch or iPad
- **//** Bus-powered on PC & Mac
- **//** Zero-latency direct monitoring
- **//** Mixable direct monitoring and tape return signal for host device playback and zero-latency monitoring of the microphone
- **//** Asynchronus USB transfer: precise internal clock handles the samplerate timing to avoid jitter and ensure bit & pitch accurate audio reproduction

## // Top applications

- **//** Home studio and live recording
- **//** Sample and demo recording
- **//** Podcasts and YouTube productions
- **//** Mobile / outdoor recording
- **//** Streaming

# // Recording Modes

We've built two different recording modes into your DGT 450 to make it more versatile, we'd like to briefly introduce them to you here:

**Cardioid Mode //** Best used for vocal recording or other applications where you need good rear rejection.

**Singer/Songwriter Mode //** Only availbale with the Breakout Box (not inlcuded). Channel 1 is the cardioid mic and channel 2 is the line input. Use this mode for simultaneous recording of acoustic and line sources. For example: plug in your guitar to the line input and sing into the microphone to put the two signals on separate tracks. If you plug a stereo source into the line input, it will be summed mono (this could possibly cause phase issues on some synthesizers).

# // Setup

Connect the hi-speed 18-pin data connector with the microphone, then connect the USB plug to the computer or the lightning connector to your iOS device. If you need to extend the USB cable, be sure to use a HI-SPEED-compatible USB extension cord. We do not recommend the use of USB hubs, but if you need to, only use a powered hub or use the USB port to power the DGT 450.

**OS X (10.6 and up) //** Connect the DGT 450 to the USB port.
Open "system preferences" in the  menu at the top of the screen.
Click on the "Sound" icon.
Click the "Output" tab and select "DGT 450".
Click the "Input" tab and also select the "DGT 450".
Download the **Control Center at www.lewitt-audio.com/DGT-Series/DGT-450/Downloads** in order to change the settings of your DGT 450 from your computer

**Windows //** Connect the DGT 450 to the USB port.
Download and install the drivers – please follow the onscreen instructions.
To use the DGT 450 with your preferred sequencer / digital audio workstation, refer to the software manual.
Download the **Control Center at www.lewitt-audio.com/DGT-Series/DGT-450/Downloads** in order to change the settings of your DGT 450 from your computer.

**iOS //** Just plug and play. Make sure that a power supply is connected to the USB port.

# // User Interface



**1** **Input indicator //** Displays active recording mode
a // Cardioid Mode
b // Singer/Songwriter Mode

**2** **Monitoring modes //** Mix the output signal of your device with the input signal of your microphone – simply put: hear the playback and your voice at the same time ...
**Return //** Monitor the output of your PC, Mac or iOS device
**Direct //** Monitor the input of the DGT 450 without any latency

**3** **High-pass filter //** Use these filters to get rid of unwanted low frequencies like wind, footsteps, structure-borne noise, ... The high-pass filter at 80Hz affects the microphone and line input at 12dB per octave.

**4** **Pre-Attenuation //** For loud signals to prevent clipping. -10 dB of pre-attenuation affect the microphone only.

**5 LED Graph //** Displays a value for some settings like headphone gain, input gain, and others.

**6 I/O Gain //** Input and output gain settings

**7 Jog Dial //** Push and turn to change settings.

**8 Status Indicator //** Displays the current state of the microphone:

Illuminated white **//** Standard mode
Not illuminated **//** Settings mode
Illuminated red **//** Overload has occurred.
Decrease the gain or change the pre-attenuation setting.

**9 USB //** use the dedicated USB port as power supply for the DGT 450. As long as it's connected to a PC's USB port, it will be powerd via the data connection.

**10 Breakout Box** (not inlcuded) **//** Adds the functionality of an interface to your DGT 450.

**11 Data Connector //** Connects your DGT 450 to your device.

**12 Headphone Jack //** Plug in your headphones here.

**13 MIDI In //** Plug in your MIDI device here.

**14 Line In //** Plug in your instrument here.

# // Operating the microphone

The following will walk you through all the settings of your DGT 450.
**Standard Mode //** This is the default state of the device when you power it on (**8** is illuminated white).

**Settings Mode //** This is where you can change all the settings on your DGT 450 including recording modes, monitoring options, high-pass filters, pre-attenuation and gain. The illuminated LEWITT logo will turn off as soon as the microphone switches to Settings Mode. Press the jog dial **7** to enter the settings mode, to switch from setting to setting and rotate it to change the selected setting.

**Headphone/Output Gain //** The headphone symbol is lit. Rotate the jog dial to change the output volume. **ATTENTION**: Your DGT 450 has a professional, built-in headphone amp. Be sure to check your gain settings befor using headphones, the signal can be very loud. Honestly, we mean it - this can seriously harm your ears.

**Input Gain //** Press the jog dial until the input gain symbol is lit. We use a very fine gain control – there are intermediate steps that do not show up on the LEDs. The settings will change depending on the selected recording mode. You can set input gain levels for all recording modes individually.

   **Cardioid Mode selected //** Gain L R will be lit. Rotate the jog dial to change the gain.

   **Singer/Songwriter Mode selected** (only available with the optional Breakout Box) **//** Gain L will be lit first. This lets you set the gain for the left channel – in this mode, it's the cardioid microphone. Press the

jog dial; Gain R will now be lit. This lets you change the gain of the right channel – in this mode, it's the line input.

**Recording Mode //** The selected recording mode symbol is lit. Rotate the jog dial to change the recording mode if a Breakout Box is connected to the DGT 450. Press the jog dial to switch to the next setting.

**Monitoring Mode //** Use the jog dial to blend between tape return monitoring and direct monitoring **2**. The LED graph **6** shows the mixture of the two modes. Press the jog dial to switch to the next option.

**Low-cut Filter //** Set the low cut **4** with the jog dial. Available settings are: flat and 80Hz@12dB/Oct.

**Pre-Attenuation //** Set the pre-attenuation **5** by rotating the jog dial the options are 0dB, -10dB.

# // Tech Data

**// Microphone**
Acoustical operating principle //
pressure gradient transducer, permanently polarized,
XY-stereo

Transducer Ø //
17 mm / 0.67 inch

Polar pattern //
Cardioid

Frequency range (3 dB) //
50 to 20,000 Hz

Dynamic range of mic. amp. //
≥ 93 dB (A)

Pre-attenuation pad //
10 dB

Low cut Filter //
12 dB / octave at 80 Hz

Front to back ratio @ 1kHz //
≥ 15 dB (A)

Analog gain range //
0 to 44 dB

Microphone self noise (0 dB gain) //
≤ 25 dB (A)

Limiting SPL (0 dB gain) //
≥ 118 dB (A)

**// General**
Resolution //
24 Bit

Sample rates //
44.1 kHz  // 48 kHz // 88.2 kHz // 96 kHz

Supply voltage //
on iOS additional 5V / 500mA micro-USB power
supply required

Connector //
18-pin lockable hi-speed connector

**Dimensions //**
138 x 52 x 36 mm
5,43 x 2,04 x 1,42 inch

**Net weight //**
310 g, 10.9 oz

**// Compatible Platforms**
**Apple and PC //**
OS X (10.6 and up) , Windows XP, 7, 8 and 8.1

**iOS Platforms //**
Made for iPhone 6s, iPhone 6s Plus, iPhone 6,
iPhone 6 Plus, iPhone 5, iPhone 5s, iPhone 5c,
iPad (4th generation), iPad Air, iPad mini,
iPod touch (5th generation)

**// Line-in**
**Input impedance //**
1 Meg ohm / 10 pF

**Full scale input voltage (0 dB gain) //**
0.7 VRMS, -0.9 dBu (re 0.775 VRMS)

**Input dynamic range //**
≥ 96 dB (A)

**Frequency response //**
20 to 20,000 Hz

**Operating principle //**
Mono line input

**Analog gain range //**
0 to 12dB

**// Headphones**
**Output power //**
20mW at 16 ohm, THD < 0.5%
16mW at 32 ohm, THD < 0.5%

**Frequency response //**
20 to 20,000 Hz

**Headphone volume control //**
- 60 dB to 0 dB

# // Saftey Guidelines

// The capsule is a sensitive, high precision component. Make sure you do not drop it from high heights and avoid strong mechanical stress and force.

// To ensure high sensitivity and best sound reproduction of the microphone, avoid exposing it to moisture, dust or extreme temperatures.

// Keep this product out of the reach of children.

// Do not use force on the switch or cable of the microphone.

// When disconnecting the microphone cable, grasp the connector and do not pull the cable.

// Do not attempt to modify or fix it. Contact qualified service personnel in case any service is needed. Please do not disassemble or modify the microphone for any reasons as this will void users warranty.

// The casing of the microphone can be cleaned easily using a wet cloth, never use alcohol or another solvent for cleaning. If necessary the foam wind stopper can be washed with soap water. Please wait till it is dry before using it again.

// Please also refer to the owner's manual of the component to be connected to the microphone.

# // Warranty

All products manufactured by LEWITT GmbH feature a limited two-year warranty. This two-year warranty is specific to the date of purchase as shown on your purchase receipt.

LEWITT GmbH shall satisfy the warranty obligations by remedying any material or manufacturing faults free of charge at LEWITT's discretion either by repair or by exchanging individual parts or the entire appliance. Any defective parts removed from a product during the course of a warranty claim shall become the property of LEWITT GmbH.

While under warranty period, defective products may be returned to the authorized LEWITT dealer together with original proof of purchase. To avoid any damages in transit, please use the original packaging if available. Please do not send your product to LEWITT GmbH directly as it will not be serviced. Freight charges have to be covered by the owner of the product.

For further information please visit www.lewitt-audio.com or check your warranty card.

# // Regulatory Information

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Declaration of conformity can be requested at **info@lewitt-audio.com**.

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CE