

tone
dexter®

User Guide

Version 2.0



Audio Sprockets®



Compliance

USA: This product complies with FCC part 15 Class B requirements for home or office use.

CANADA: This product complies with ICES-003 Issue 6 Class B requirements.
CAN ICES-3 (B)/NMB-3(B)

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User Guide Print Version 2.0-1

Introduction

This user guide applies to firmware release V2.0 and later. Most of the material also applies to earlier versions.

ToneDexter is a full featured preamp system for acoustic instruments that have a pickup. It uses new technology that allows the pickup to sound like a microphone placed in front of your instrument. Incorporating patented digital signal processing technology and a pristine analog signal path, ToneDexter works with guitar, violin, mandolin, dobro, ukulele, upright bass, and most other acoustic stringed instruments.

ToneDexter is intended for instruments fitted with piezo pickup systems, either passive or active. Magnetic pickups are not recommended due to their higher distortion and string position dependence, but nonetheless may sometimes yield usable results.

ToneDexter Firmware Versions

ToneDexter comes with (**GEN**) firmware (software that runs and resides in ToneDexter) optimized for Guitar, Dobro, Viola, Cello, Bouzouki, Mandola, Mandocello, Baritone Guitar. Separate versions of software are available for (**HGH**) higher pitched instruments like Violin, Mandolin, Banjo and Ukulele, and (**BAS**), a version optimized for Upright Bass.



When you power up ToneDexter it first shows the firmware version, and then the type: **GEN**, in the LED display.

You can update to the latest version and change firmware versions to match your type

of instrument using FAT32 formatted SD cards (not included but available for less than \$10 and usually formatted FAT32. New SD cards of 32G or less come formatted for FAT32) that can be inserted into the card slot on the left side of ToneDexter.

The latest versions of software can be downloaded free of charge from the support page on our website. Update instructions can be found on our web and in this guide on page 22.

ToneDexter Controls and Connections

Output Level

Sets output for the 1/4" main output: off to +6dB. The DI Output may be set to follow this control if rear DI Fixed/Mar switch is set to Var.

1/4" Instrument Output

Volume controlled by Output Level: off to +6dB. Balanced TRS; unbalanced w standard instrument jack.

Notch

Variable Feedback Control. Turn clockwise to enable smart feedback reduction based on instrument resonances. Fully CW is 100%. Green LED lights when engaged. Reverts to conventional notch filter when running in bypass mode or for WaveMaps created before V2.0.

Bass Treble

Low and high shelving EQ. LED shows when controls are engaged off center. Frequency shown on main display.

Mute/Tune/Edit/Scroll

In **Run** (playing) mode, quick press mutes output and engages **Tuner** on the main display. Hold for **Bypass**. Press this switch, then the right switch to enter **Training** and **Edit** modes. Tap once, then hold for **Foot Scroll** mode. Tap again to return to **Run** mode.

LED Display

Run mode: Shows WaveMap number e.g. R12 for run mode preset. 12. Occupied slots have a dot in lower right display. Also displays Bypass, Tuner, Training, EQ Frequency, and Editing info.

Pickup Level

Sets pickup input level with metering LEDs.

1/4" Instrument Input

Works with active or passive acoustic pickups.

WaveMap Select

Selects from 22 WaveMap sound presets. Two banks selected by the A/B switch on rear. R1-R11, R12-R22.

Character Select

Blends the ToneDexter processed sound with the pickup, also provides settings for a more focused, punchy sound. Full mic sound when fully clockwise.

Boost/Scroll/Edit/Train

In **Run** (playing) mode this gives a 0-8dB gain boost adjusted with the Boost Gain knob on rear. Also used in **Edit** mode for copying WaveMaps and starting the setup/training process to capture a mic sound. If in **Scroll** Mode, tapping scrolls through all active WaveMaps. Long presses scroll backwards.





Phase
Flips phase of all outputs.
Helps reduce feedback in live situations.

Mic In Female XLR
Used only during training with 48v phantom for active mics.

Option A/B
Bank select for stored WaveMaps: R1-11, R12-22

Headphone 1/4" Stereo Jack & Level Control

Power In
9-15VDC 6W either polarity (PSU included).

Effects Loop
1/4" TRS for inserting external effects pedals.

Boost Gain Control
Sets level of extra output gain (from 0-8dB) when you tap the Boost switch on front panel.

DI Out Male XLR
Balanced output nominal -9dBV.

DI Fixed/Var
DI output can be set to a fixed level or follow the front panel Output Level control.

Getting Started

By way of introduction, a WaveMap® is a transformation filter that ToneDexter creates, stores, and uses. It is also known as an impulse response (IR), and is used to process the sound of the pickup to make it sound like your microphone.

It's necessary to create at least one WaveMap for your particular instrument by training ToneDexter with a microphone. Once that's done, the mic is no longer needed. Up to 22 WaveMaps can be stored, in two banks of 11 each. These can be for the same instrument with different mics or mic positions, or for different instruments. ToneDexter does not come with any existing WaveMaps.

Besides your instrument fitted with a pickup, you will need a decent quality microphone, a stand to hold it, and to make things easy, a pair of headphones.

Check out the Get Started Fast Videos:
audiosprockets.com/tonedexter



Definition of Terms Used

- **tap** – a quick press and release to one of the two footswitches.
- **press and hold** – pressing and holding a footswitch for at least one second until the display changes and the action takes effect.
- **Mute** switch – the left footswitch
- **Boost** switch – the right footswitch
- **slot** – one of 22 WaveMap storage locations selectable with the **WaveMap Select** knob, in conjunction with the **Option A/B** switch.

Preparing for Training ToneDexter

- Make sure you have the right firmware installed for your type of instrument. See page 22.
- Plug headphones and your acoustic instrument pickup into ToneDexter, switch off any active EQ settings in your guitar. ToneDexter only works with piezo pickups found in most acoustic instruments, magnetic pickups are not recommended.
- Plug a mic into the rear mic XLR which provides 48v phantom power.
- Position the mic in front of your instrument in a place that sounds good. For guitar there are four suggested mic locations:
 1. **Down under:** 6" out and 6" down from the bottom hollow of the guitar, point the mic up at where the picking hand is.
 2. **Up top:** The mirror image of down under, on the upper (bass) side.
 3. **Neck joint:** 10" – 15" away in the front, pointing straight at the place where the body meets the neck.
 4. **Over nut:** 12-15" directly above the nut, pointed back at the sound hole.

Down Under



Up Top



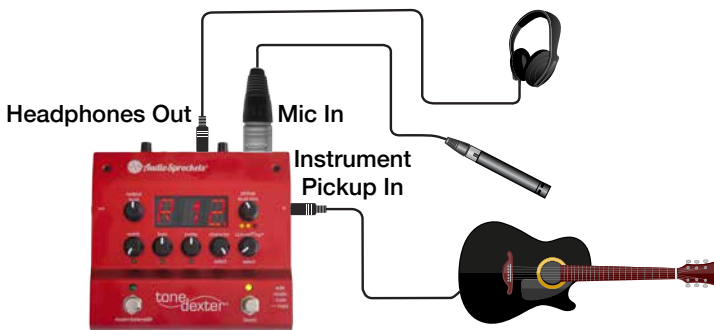
Over Nut



Neck Joint



- Listen on headphones, play and adjust the **Pickup Level Trim** so the middle yellow LED lights with moderate to strong playing. The red LED should only come on briefly for the very loudest playing.
- Try switching the **Phase** switch on the rear to get the most bass, this only affects what you hear in headphones.



Helpful Setup Hints

- Previously, ToneDexter automatically made corrections to improve feedback immunity to the WaveMap during its creation, if training started from slots 1-21. Starting with V2.0, this feature has been changed significantly. Now, every new WaveMap will contain the full mic'd studio sound with no reduction in bass response. The **Notch** control can then be used to dynamically dial in just the right amount of feedback mitigation for each live situation and sound preference.
- Once you are setup don't move the position from your mic to the instrument while training for that particular sound.
- You can store several WaveMaps using different mics and/or mic locations, and decide later which ones to keep or move to different locations
- You can train anywhere, you don't need a refined acoustic space as the WaveMap picks up very little of the room sound.
- A small diaphragm condenser mic is recommended. Large diaphragm mics can also work well but may be more finicky about placement.

Dynamic mics, such as common vocal mics, can yield usable results, though generally will not have as much high frequency information. Tube (valve) mics, due to their higher non-linearity, are not recommended but may yield good results nonetheless. Both cardioid and omnidirectional pickup patterns will give excellent results. Active ribbon mics may also be used. Passive ribbon mics may be used so long as they can tolerate 48V phantom power. If using a passive ribbon mic, consider plugging in the mic with the unit unpowered, then applying power after that.



Learning Phase...

1. Tap the Mute switch to enter **MUTE&TUNE mode**, then tap the Boost switch to enter **TRAIN mode**. The display will show **LV** (for level), and a rotating bar. At any point during the training, you can abort the process by tapping the **Mute** switch. This will take you back to **MUTE&TUNE mode** where you can easily start over or go back to **RUN mode**.



2. Level Setting Phase – Auto adjust mic level by repeatedly strumming the upper 4 strings at the 4th or 5th fret, middle range double stops for violin, or arco open A or D string for upright bass. The rotating bar will stop when the automatic level adjustment is finished.

3. **Learning Phase** – Once the rotating bar stops, the learning phase has begun, and the display will show **TL_**.



4. During the learning phase, it is possible to toggle back and forth between the training-in-progress sound **TL_** and the mic sound **ML_** by tapping the **Boost** switch. This way, you can hear the mic in the headphones and adjust its position as necessary to achieve the sound you want. If you do adjust the mic position, tap the **Mute** switch to abort the session and then tap the **Boost** switch to start again, as the levels will be incorrect if you don't start over after moving the mic.

5. With the display showing **TL**, start playing, and ToneDexter will learn your sound. Just play normally and cover the entire range. You can stop playing at any time then resume but keep the same mic to instrument position. The display will increment from **TL1** to **TL9** in



less than 1 minute as ToneDexter matches the pickup to your mic sound. Feel free to use the **Boost** switch to toggle back and forth between **M** (mic) and **L** (Learned WaveMap pickup sound) as desired; it will not affect training. Best training results are obtained with harmonically rich content such as chords and double stops. Single notes are not required.

Learning Phase Completed...

1. Once the learning phase completes, the display changes to **T12** (for trained, showing the current slot number, in this case 12). This is the **Freeze phase**.



2. To confirm that you're happy with the new sound, tapping the **Boost** switch will allow you to audition the bypass pickup (display shows **P** for pickup), the microphone (display shows **M** for mic), the WaveMap in the current slot if there is one (displays shows **S** for stored), and the newly trained WaveMap (display shows **T** for trained).

It will cycle through those options in succession with repeated taps to the **Boost** switch. If for any reason you want to start over, tap the **Mute** switch to abort the training session then tap the **Boost** switch to restart training.

3. Once you're sure that you like the trained sound, use the **WaveMap Select** knob select a preset slot in which to store the new WaveMap. As you scroll through the slots, you will hear the audio change. Occupied slots have a lit dot, empty slots do not. If the slot contains an existing WaveMap, you will hear it. If not, you will hear bypass sound. You may again audition by successively tapping the boost switch.

4. To store the newly created WaveMap, press and hold the **Boost** switch. (It doesn't matter which audition mode **P**, **M**, **S**, or **T** is selected when you do this.) At this point, the training session will end, the sound will change to the new WaveMap, and you'll be back in **RUN mode**.



Unless you want to create additional WaveMaps, the mic can be disconnected.

ToneDexter Connectivity

Live

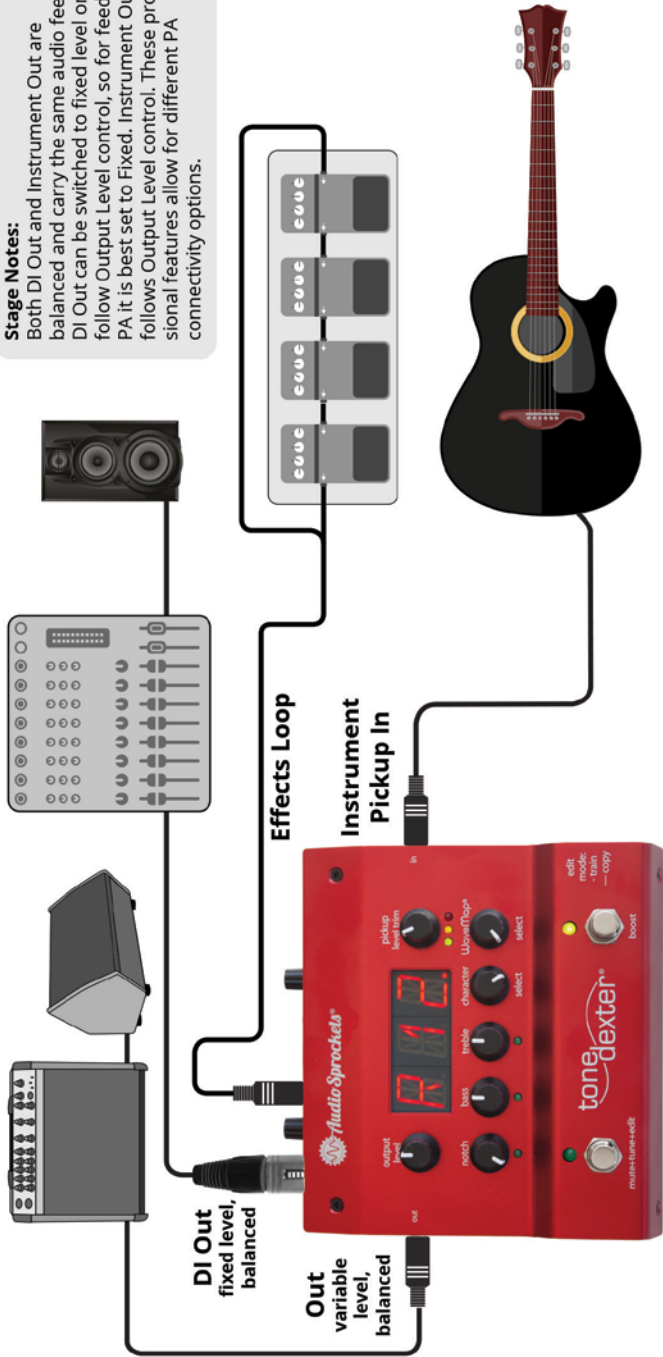
Stage Amp, Monitors, Monitor Mixer

PA Mixer

PA Speakers

tone_dexter®

Stage Notes:
Both DI Out and Instrument Out are balanced and carry the same audio feed. DI Out can be switched to fixed level or to follow Output Level control, so for feeding PA it is best set to Fixed. Instrument Out follows Output Level control. These professional features allow for different PA connectivity options.



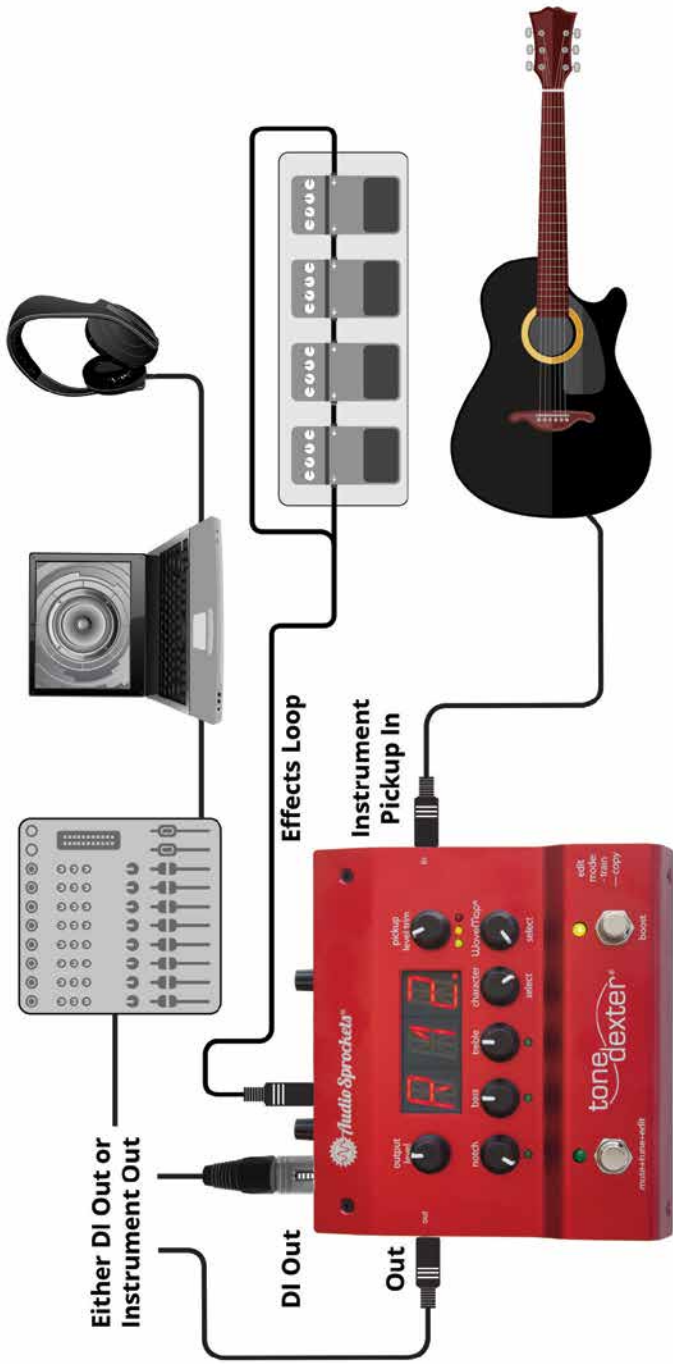
Studio

tone
dexter®

Mixer/Interface

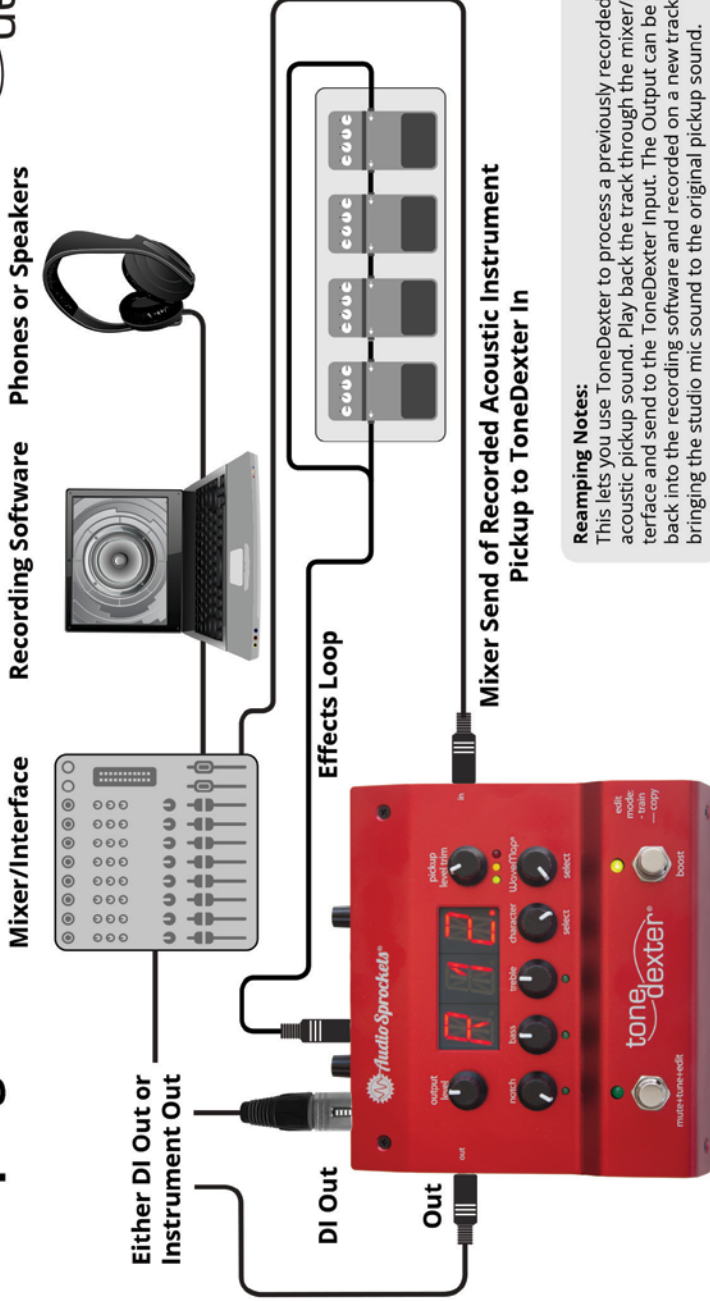
Recording Software

Phones or Speakers



Reamping

tone
dexter®



Modes of Operation

RUN Mode

This is the normal mode of operation for playing. The display shows **R** (for run) along with the WaveMap number being used. If the number has a dot next to it, it means there is a WaveMap in that slot and it will be heard. If there is no dot, the slot is empty, and the signal passes straight through unaltered except by EQ and/or the feedback notch if engaged. Use the **WaveMap Select** knob to choose between 11 WaveMap storage locations in each bank. The **Option A/B** switch allows selecting between the lower bank 1-11 and the upper bank 12-22. When changing the selection, the sound will immediately change to the WaveMap stored in that slot.

During **RUN** mode, the **Notch** control will provide smart feedback reduction, adjustable from none to full. This control defaults to a simple notch when in bypass, playing from an empty slot, or playing a WaveMap created prior to V2.0 firmware.

RUN Mode with boost

Tap the **Boost** switch and the unit will add anywhere from 0dB to 8dB more gain, as set by the **Boost** knob on the rear. This is useful for solos or to switch from flat picking to fingerpicking where more gain is required. Tap the **Boost** switch again to get back to normal level. The boost circuitry is analog and is located after the effects return jack, so it will not affect the pickup level trim or diminish signal headroom. Note that boost is not audible in the headphone output, nor is the effects loop.

FOOT SCROLL mode

This will allow you to select WaveMaps without having to manually move the **WaveMap Select** knob, thus freeing you from having to reach down to change presets.

If necessary, tap the Mute switch to get from **RUN mode** to **MUTE&TUNE mode**.

From **MUTE&TUNE mode**, press and hold the **Mute** switch (until the display shows **SEL**) to enter **FOOT SCROLL mode**. Audio will remain muted.

Tap the **Boost** switch to scroll up through successive active WaveMaps. Empty slots will be skipped. Scrolling past slot 22 wraps back to slot 1.

To reverse scroll, press and hold the **Boost** switch to step backward through successive active WaveMaps, one at a time.

Tap the **Mute** switch to get back into **RUN mode** with the slot you just selected.

Keep in mind that the active slot will likely now be out of sync with the **WaveMap Select** knob and/or the **Option A/B** switch. Moving either of those controls will immediately give control back to them, and override the selection you made with **FOOT SCROLL mode**.

BYPASS mode

Press and hold the **Mute** switch (until the display shows **BYP**) to enter **BYPASS mode**. The sound will immediately change to the unprocessed pickup. (This will remind you why you need a Tone-Dexter!) EQ and notch will still be active if engaged. Remember, empty slots do not have a lit dot, and will play bypassed as well.

BYPASS mode with boost

Tapping the **Boost** switch toggles the extra boost gain on and off.

MUTE&TUNE mode

Tapping the **Mute** switch will mute all outputs (except the head-phone jack) and engage the built-in tuner. Play a single note at a time to tune your instrument. The display vector rotates clockwise if sharp, counter-clockwise if flat. It stops rotating if tuning is within 1 cent. The rotation may stop anywhere along the circle, and not just straight up as you might expect. It is more akin to a strobe tuner than the more common clip on types. In addition, the left decimal dot indicates flat, the right dot sharp, and the center dot lights if tuning is within 2 cents. The tuning standard is A = 440Hz. Tap the **Mute** switch again to get back to **RUN mode**.

TRAINING mode

Tap the **Mute** switch to enter **MUTE/TUNE mode**. Then tap the **Boost** switch to enter **TRAINING mode**.

TRAINING mode consists of three phases: **Level Setting**, **Learning**, and **Freeze**. These occur in automatic succession once **Training mode** has begun. At any time during any of the **TRAINING mode** phases, you can tap the **Mute** switch to abort **TRAINING mode** and then tap the **Boost** switch to start over.

The unit starts with the **Level setting phase** where the mic path gain is automatically adjusted to match the pickup level.

Next comes the **Learning phase** where the WaveMap is constructed as you play. If desired, tap the **Boost** switch to toggle the headphone audio audition between mic **M** and training-in-progress **T**. If you choose to reposition the mic, then tap the **Mute** switch to abort **TRAINING mode** and tap the **Boost** switch to start over.

After the **Learning phase** is complete, the unit enters **Freeze phase**. Tap the **Boost** switch to toggle the audio audition between mic **M**, bypass pickup **P**, newly trained WaveMap **T**, or the currently stored WaveMap **S** (if the slot is not empty). Press and hold the **Boost** switch to store the trained results in the selected slot or tap the **Mute** switch to abort **TRAINING mode**.

EDIT mode - copy and paste

Stored WaveMaps may be copied and pasted to any slot. The original is left intact.

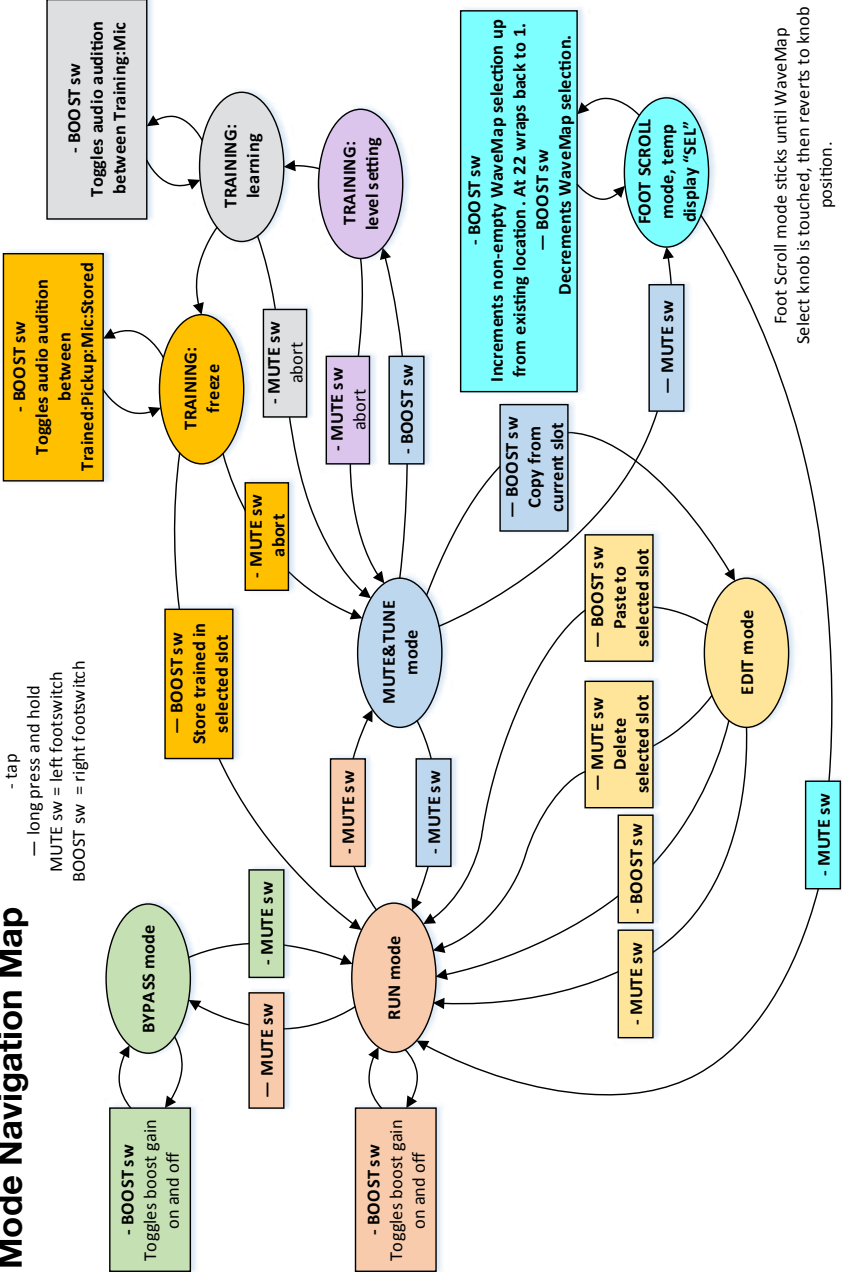
1. Make sure the slot to be copied is selected.
2. Tap the **Mute** switch to enter **MUTE/TUNE mode**.
3. Press and hold the **Boost** switch to enter **EDIT mode**.
4. Select a new slot to paste into. Remember: occupied slots have a lit dot, empty slots do not.
5. Press and hold the **Boost** switch to paste it into the newly selected slot. If you paste into the same slot as it came from, the WaveMap will remain unchanged.

EDIT mode – delete

Unneeded WaveMaps may be deleted.

Mode Navigation Map

- tap
 — long press and hold
 MUTE sw = left footswitch
 BOOST sw = right footswitch



Foot Scroll mode sticks until WaveMap Select knob is touched, then reverts to knob position.

1. Tap the **Mute** switch to enter **MUTE/TUNE mode**.
2. Press and hold the **Boost** switch to enter **EDIT mode**.
3. Make sure the slot to be deleted is selected.
4. Press and hold the **Mute** switch to delete it.

Controls

Pickup Level Trim

Adjusts gain of the pickup to get your signal into the proper operating range of the system. The LED indicators serve as the level metering. The green light should light with soft playing, the yellow LED should light with moderate to strong playing. The red LED should not light unless an unusually strong signal is present. A frequently lit red LED indicates the gain is too high and distortion may result.

Output Level

Sets the desired output level for the 1/4" main output on the left side of the unit. The DI output may optionally be set to follow this output level control.

WaveMap Select

Selects one of 11 stored WaveMaps in each bank. Occupied slots have a lit dot next to the display number, empty slots do not.

Option A/B switch

Selects one of two banks of 11 WaveMaps, for a total of 22 WaveMaps that can be stored.



Character Select

This is a multipurpose control that alters the sound of the current WaveMap to achieve a more focused, punchy sound relative to what the microphone heard. In addition it allows blending of the unprocessed pickup with the WaveMap. Blending occurs only on the left half of the dial range.

Note that when using the blend mode, the raw pickup signal is time and polarity aligned with the WaveMap to avoid any phasing or comb filter effects.

Fully clockwise

- Full mic sound
- Display shows **CH2**

2 o'clock position

- 50/50 blend of focused WaveMap and mic sounds
- Display shows **CH1**

12 o'clock straight up position

- Focused WaveMap sound
- Display shows **CH0**

Counter-clockwise from straight up

- Blends unprocessed pickup with focused WaveMap CH0 sound
- Continuously variable from 30% (fully CCW) to 99% (almost straight up)
- Display shows blend percentage **Bnn** where **nn** is the percentage of focused WaveMap CH0 sound. **B30** would be 30% focused WaveMap CH0 sound, blended with 70% raw pickup sound.

Treble

This is a shelving equalizer that boosts or cuts 9dB. The inflection start points for various firmware versions are:

GEN (general firmware) and **HGH** (high firmware)

- 2KHz

BAS (bass firmware)

- 1KHz

Bass

This is a combination equalizer that functions as both a 0-9dB boost shelving equalizer and a variable cut highpass filter. The boost inflection start points are shown for various firmware versions. The variable highpass (lowcut) range is adjusted appropriately for each type.

GEN (general firmware)

- 125Hz

HGH (high firmware)

- 125Hz (when operating in low bank slots 1-11)
- 250Hz (when operating in high bank slots 12-22)

BAS (bass firmware)

- 63Hz

Notch

The Notch control provides continuously variable, smart feedback reduction. It takes advantage of intelligence about your instrument's resonances discovered during WaveMap creation. When you turn the control clockwise, these hotspot trouble frequencies

are reduced to give you more volume before feedback. Fully counter clockwise is 0% mitigation, the LED is off. The low-end resonances are left intact. Turning clockwise gives progressively more feedback reduction, with the resonance hotspots intelligently filtered for maximum help and minimal impact to your sound. Adjust to suit your taste, and per the demands of your live performance environment.

When in bypass mode, playing from an empty slot, or playing a WaveMap created prior to V2.0 firmware, the Notch control converts to a traditional narrow notch filter that will attenuate a single frequency. To reduce feedback when it occurs, rotate it clockwise slowly to find and stop the offending frequency. It will have minimal impact on the sound.

The notch frequency ranges for the various firmware versions are:

GEN (general firmware)

- 73Hz (D2) to 392Hz (G4)

HGH (high firmware)

- 73Hz (D2) to 392Hz (G4) (when operating in low bank slots 1-11)
- 124Hz (B2) to 466Hz (A#4) (when operating in high bank slots 12-22)

BAS (bass firmware)

- 37Hz (D1) to 165Hz (E3)

The EQ lights will go out when the EQ controls are centered and therefore off. EQ and Notch are automatically disabled during training **level setting** and **learning phases**, and in audition modes **P** and **M**. The EQ and Notch controls only affect the real-time run signal, and are not stored with the WaveMap. They are also active when in bypass or playing from an empty slot.

Phase switch

The **Phase** switch on the rear panel changes the phase (flips the polarity) of all the outputs. This is significant for two reasons.

- When playing through loud sound reinforcement, one phase/polarity position will usually be less prone to feedback than the other. Try both positions if you're experiencing feedback issues.
- When you're training with headphones, the sound of the headphone signal will combine with the acoustic leakage path to your ear. The "correct" phase will be the one that has the

most perceived bass, the other position will sound more anemic. Headphones vary, so try both positions. The position of the phase switch does not affect training, only your perception of the sound.

DI variable/fixed switch

On the rear panel, this switch determines if the DI Output is a fixed



level or follows the output level control. Fixed level can be useful for situations where you want to use the output level control to adjust your personal monitoring via the 1/4" output jack and have that not affect what is sent to the front-of-house mixer via the XLR DI output.

Connections

Input

- 1/4" phone jack on the right side of the unit
- Works with passive or active pickups
- Input impedance: 1M Ω if using a standard mono plug, 10M Ω if using a TRS plug with RING unconnected
- Gain range: off to +27dB
- Maximum signal level before clipping: +3dBV

Mic Input

- Female XLR jack on the rear
- Only used during training
- Provides 48V phantom power for active mics

- Differential input impedance: 2.5K Ω
- Maximum signal level before clipping: -29dBV

Output

- 1/4" phone jack on the left side of the unit
- Volume controlled by **Output Level** control with range: off to +6dB
- Muted during training
- Output impedance: 300 Ω unbalanced, 600 Ω impedance balanced
- Headroom above nominal level: 15dB
- Nominal output level: -15dBV balanced or unbalanced
- Maximum output level (include +8dB boost): +14dBV balanced or unbalanced
- If connected, the pin 1 ground to the DI output jack is disconnected to prevent ground loops.

DI Output

- Male XLR jack on the rear
- Level is either fixed or follows the output level control, depending on the **DI fixed/var** switch on rear.
- Muted during training
- Output impedance: 600 Ω balanced differential
- Headroom above nominal level: 15dB
- Nominal output level: -9dBV balanced differential
- Maximum output level (include +8dB boost): +20dBV balanced differential
- To prevent ground loops, pin 1 ground is disconnected when a phone plug is connected to the 1/4" output jack.

Effects Loop

- 1/4" TRS phone jack on rear
- Tip send, Ring return
- Send output impedance: 300 Ω unbalanced
- Headroom above nominal level: 15dB

- Nominal output level: -15dBV unbalanced
- Return input impedance: 1M Ω
- Nominal return level: -15dBV

Headphones Output

- 1/4" stereo phone jack on rear, for critical listening during training
- Volume set by the **Headphones Level** control on the rear
- Works with low or high impedance headphones
- Output impedance each side: 110 Ω
- The effects loop and boost feature are not audible in the headphones.

Power

Accepts 9-15VDC regulated supplies of either polarity. Requires a 6W supply.



A Note about Hum

If you are using a passive piezo pickup, you may hear some AC power line hum if your system is not grounded. In normal use ToneDexter will be connected to an amplifier or PA system which is grounded, and you will not experience any noticeable hum. But if you do experience hum when training using just headphones, plugging one of the outputs into a grounded system will eliminate the hum.

Firmware Loading Instructions via SD Card

Old or new versions or alternate versions like BAS and HGH may be loaded at your discretion. Any existing WaveMaps will be preserved. Due to format differences, BAS firmware WaveMaps are not visible to GEN and HGH firmware, and vice versa. Each set of 22 WaveMaps exists in a distinct and separate part of memory.

1. From the Audio Sprockets website, download the compressed zip file corresponding to the firmware version you want to install, and put it someplace convenient on your computer, such as the desktop.
2. Click open or unzip the zip file to view its contents. It should include these three files:
 - app.bin
 - dsp.bin
 - “name”.txt - where “name” indicates the version. (This file is not strictly necessary but serves to indicate which version of the code you are dealing with.)
3. This is important - don't copy the zip file! Rather, extract or copy the three files inside the zip file to the root of the SD card.
4. The card must be formatted as FAT32. exFAT and NTFS formatting will not work. Most cards sized 32G or less come formatted to FAT32.
5. Click open the SD card to view the contents and verify the files are present. They should be visible without having to look inside any folder contained on the SD card.
6. Power down your ToneDexter by unplugging the power supply from AC line power (rather than by unplugging the power jack on the back of ToneDexter).
7. Push the SD card into the slot on the side of ToneDexter, with the card contacts facing down.
8. Plug the power supply back into AC line power. When ToneDexter powers up, it looks for the presence of the SD card and reads the files.
9. The display will show **UPD**, and soon after some moving dots to indicate the upgrade is in process. The process will finish automatically and then display the new code version, followed by either:

- **GEN** (general release)
- **HGH** (higher pitched instruments like violin, banjo, ukulele, etc.)
- **BAS** (upright acoustic bass)

10. Remove the SD card from the slot.

Additional Notes

1. If you forget to remove the SD card before the next power up, it will unnecessarily go through the upgrade process again at the next power up, but there will be no harm done.
2. If you accidentally lose power during the upgrade process, just start the process over and all will be well.
3. There is no problem going straight from any older version to the latest version without having to go through every version in between.

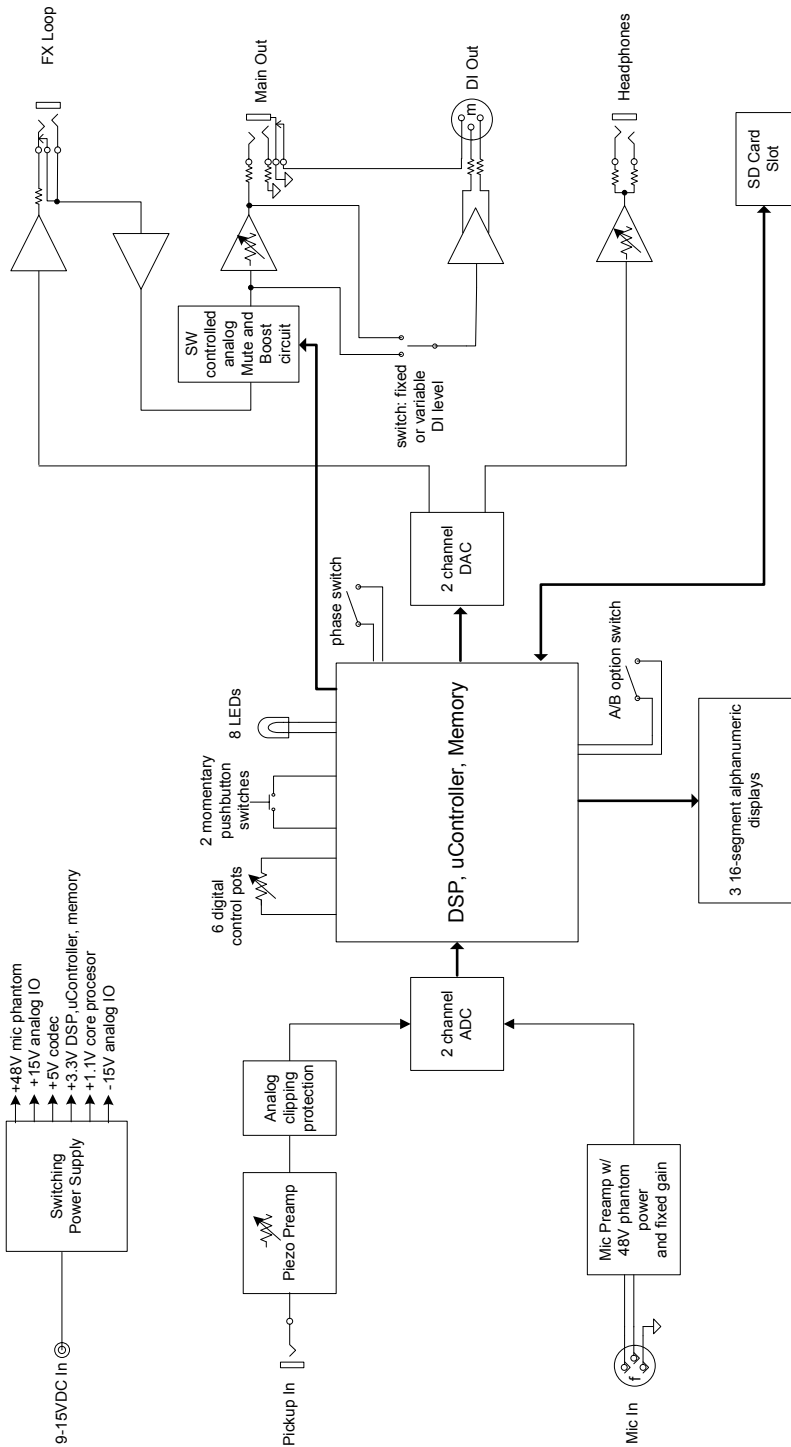
Getting WaveMaps In and Out of ToneDexter via SD Card

Using a special software utility, users can extract all WaveMaps within ToneDexter to an SD card for archive and backup onto their computer. Likewise, WaveMaps from their computer can be loaded or reloaded into ToneDexter via the SD card.

This software utility and instructions for using it can be found on the Audio Sprockets support page.



Block Diagram



ToneDexter WaveMap Presets

#	Description	#	Description
1		12	
2		13	
3		14	
4		15	
5		16	
6		17	
7		18	
8		19	
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Additional support and operational information is available on the Audio Sprockets website including:

SUPPORT - [AudioSprockets.com/support](https://www.audiosprockets.com/support)

- Frequently Asked Questions FAQs with sections about which pickups work with ToneDexter, power supply info and general questions about operation and training
- Firmware Versions - Version history, downloads and install
- Setup and Training videos
- WaveMap Transfer and Archive, info and how-to video
- Support Request Forms

WAVEMAPS FOR SILENT & ELECTRIC GUITARS, ELECTRIC VIOLINS & CELLOS

- [AudioSprockets.com/tonedexter/wavemap-downloads](https://www.audiosprockets.com/tonedexter/wavemap-downloads)

- Free WaveMaps for Yamaha Silent Guitars, Gibson and Fender style Electric Guitars
- WaveMaps for Electric Violins and Cellos from ThePickupTest.com

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