V Expressions Ltd

VAULT X Expansion Pack

a sound enhancing expansion pack for the Roland TD-50X Drum Module

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Thank you for purchasing V Expressions Ltd's **VAULT X for TD-50X**!

This expansion pack intended for the TD-50X provides 30+ Brand Name stereo drum kit selections.

Please note that Vault X will not load or work in an Original (Non-Expanded) TD-50.

The pack features 30+ kit models from my acoustic drum collection. Each drum set was created by directly referencing their acoustic counterparts. All kits were modeled with very low ambience, then production was added. This pack is great for performing and recording.   The acoustic drum kits in this pack were programmed and created with the feel of direct mic'ing along with added ambience, eq, and compression. All models feature ambience in stage, studio, or room environments.

While developing these kits, I went through my drum collection and found my favorite snares, drum kits, and one –offs to create from. These represent some of my favorite collectible kits and drums I've owned through the years.   Many you've heard of, maybe others not so much. All have a unique flavor that the TD50X was able to faithfully re-create.

For all experience levels and functionality, this pack will deliver a great enhancement to the TD-50X. It supplies pre-programmed support to all four AUX triggers. AUX 3 is optimized for a 5th-tom setup (Hi Tom). The other AUX add an additional 3 cymbals.

The **VAULT X** expansion pack has been ear-created on the TD-50X from scratch on a highly expressive platform.

 Exclusively created V Expressions Ltd sample .WAV data has been utilized. These samples have been generally used in the sub layer instrument setting to supply various kits with unique sounds without affecting performance, dynamic feel, and adaptive pad response.

Vault X Kit Listing:

Kit #
70-Noble& Cooley	Star 1 Ply
71-Sleishman Omega	
72-Sonor Rosewood	
73-GMS SE	
74-Pearl Reference	Pure Series
75-Premier Genista	
76-Ludwig Centennial	
77-Tama Granstar	
78-Revelation	Custom Shop Oak
79-Brady Drums	
80-Gretsch Nitro	
81-Slingerland Radioking	
82-Rogers Big R	
83-Eames Drums	
84-ASBA Stainless	France
85-DW Exotic	
86-Leedy	
87-Fibes	
87-Lignum	Stave
89-Ayotte	
90-Mapex Orion	
91-Trixon Speedfire	
92-Spaun	
93-BlackBeauty	
94-WFL	
95-Precision Drum Co	Wood Hoops
96-Yamaha Recording	Custom
97-Sakae	Celestial
98-Remo w/ Roto	
99-Peavey Radial Pro 1000	
100-Premier Elite	

Getting Started

To increase customer understanding and awareness, we proudly offer this step-by-step instruction manual to ensure quick and smooth implementation with our expansions.

Comprised of both Roland's and our very own streamlined step-by-step instructions, this helpful document will answer all your questions and get you on your way to playing your new kits.

IMPORTANT - READ BEFORE CONTINUING!!

Accidents can always happen!

We highly recommend backing up your current module to save personal modifications before loading any expansion from V Expressions Ltd. It is important you follow our steps in this guide to achieve the best results during the processes of module back-up, file preparation, and loading of your new V Expressions Ltd expansion.

NOTE: To preserve your pad setup, user sample list, and any custom kits you've created –
It is recommended to use our supplied backup file to copy (using copy feature with SD Tab)
the individual kits and load them one at a time.

Custom user kits **WILL BE ERASED during a load of your expansion backup file**. However, your module's **factory reset data is never touched**, and this original factory state of your module can always be reset at any time. You can load **VAULT X** as a Backup or individually load each kit one by one by using the copy feature.

Please take a moment to read all procedures below before attempting them. If you have questions before attempting any of the procedures below, please refer to your Roland TD-50X Reference or Quick Guide manual, or feel free to email **V Expressions Ltd** from the appropriate link on our website at www.vexpressionsltd.com

When you are ready to begin, start with Section I below.

Section I: Apply Latest Updates

FOR YOUR INSTALLATION AND EXPANSION TO WORK PROPERLY, YOUR MODULE MUST HAVE THE LATEST FIRMWARE UPDATE(S) IMPLEMENTED BEFORE YOU BEGIN!

Using Version 1.00 or newer: No update is required at time of pack release: 1/2022.

Section II: Formatting your SD Card in the TD-50X

Skip to Section III if you have already used SD Card with your module!

If you have never used your SD Card with your module, and have no data on it, you may format the card in the module to create your Roland folder structure.

IMPORTANT! Any data on the SD Card WILL BE deleted by formatting the card in the module!

Step 1: Carefully insert your SD Card into the TD-50X module.
Step 2: Press the **SD CARD** Button.
Step 3: PAGE DOWN 2X
Step 4: Press F4 FORMAT
Step 5: Arrow Right and Press **ENTER** (OK) to confirm and execute the format.
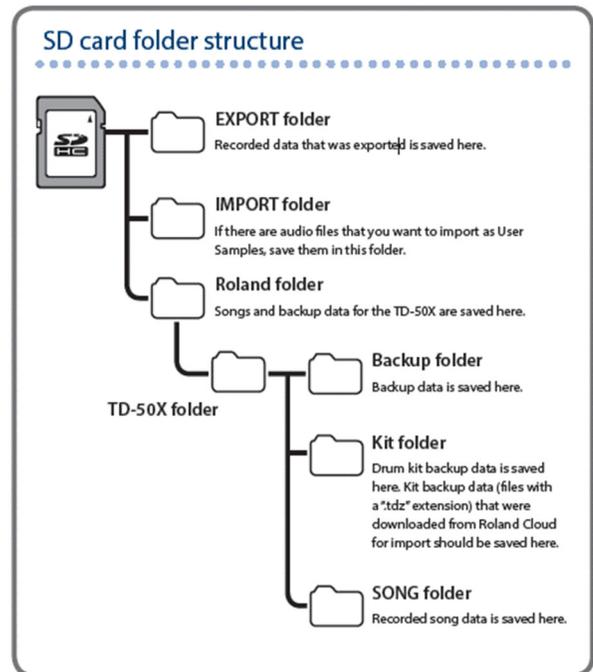
Note: Press Cancel if you do not wish to Format your SD Card.

Section III: Backing up your TD-50X Before Loading the VEX Pack

Make a backup of your module before you continue!

> **Step 1:** Insert your SD Card in the TD-50X module
> **Step 2:** Press SD Card
> **Step 3:** Choose F1 Save
> **Step 4:** Use the dial and arrow buttons to make backup settings –
> choose an empty backup other than Bank 11.
> **Step 5:** Press **SAVE** (*you can name backup; once done Press EXIT*)
> **Step 6:** Press **EXECUTE**, Arrow Right and then Press **ENTER**.

Note: Press Cancel at any time if you do not wish to Save a backup to your SD Card.

SD card folder structure

EXPORT folder
Recorded data that was exported is saved here.

IMPORT folder
If there are audio files that you want to import as User Samples, save them in this folder.

Roland folder
Songs and backup data for the TD-50X are saved here.

TD-50X folder

Backup folder
Backup data is saved here.

Kit folder
Drum kit backup data is saved here. Kit backup data (files with a ".tdz" extension) that were downloaded from Roland Cloud for import should be saved here.

SONG folder
Recorded song data is saved here.

Section III: Saving Your Newly created TD50X Backup to your computer

Ensure the expansion number is unique from any backup number already on your SD card in the "Roland > TD-50X > Backup" folder. Any backup of the same number in this folder WILL BE OVERWRITTEN!

Step 1: Insert your SD Card into your computer's reader.
Step 2: Open the Roland > TD-50X > Backup folder.
Step 3: Drag your new backup to your desktop.
Step 4: Create a Folder to store the file in, and move file to this folder.
Step 5: Once complete: Eject and or remove the SD Card.

Section III: Preparing Your Expansion

Memory Loading Requirements: We recommend a 2 - 16GB SD CARD and a computer/laptop with an SD Card reader.   We use a SanDisk 16GB card.

Backup File Information

- One backup file (expansion) supplied: Features a 5 Tom Setup and 3 AUX Cymbals.

  - **BKUP-011.TD0:** This is **Bank 11**, and will read as: TD50X**VAULTX**
    (5 Tom setup with 3 Aux Cymbals: AUX 1, 2 and 4: Cymbals, Aux 3: Hi Tom)

- **NOTE:** Module Kits 1-69 will remain Factory Default
- **VAULT X** Kits 70-100 are optimized for stereo headphone use.
- Kit 70 appears first upon loading.

- Digital Pads*, and all Aux triggers are supported.   ***VH-14 was not used or tested with this pack, but will work.**
- Kits **VAULT X** Drum kits will load in as Kits 70-100.
- All **VAULT X** Drum kits are supplied with the Snare Crosstick active using the PD140-DS.
- To best optimize your trigger performance, please read the Performance Settings Guide on pages viii/ix of this manual.
- You will set all your slider levels to "0" to start with. Adjust as necessary.

Sample Data Information

- **VAULT X** is supplied with **custom recorded V Expressions Ltd sample .wav files: 44.1 / 16 BIT**
- These samples are embedded in the backup and kit files you downloaded and will load automatically.
- Avoid: Renaming or Optimizing the **VAULT X** Sample Data after it loads. Doing so may harm the model.

Section III: Transferring VAULT X to your SD Card

Ensure the expansion number is unique from any backup number already on your SD card in the "Roland > TD-50X > Backup" folder. Any backup of the same number in this folder WILL BE OVERWRITTEN! Vault X is Backup 11.

Step 1: Insert your SD Card into your computer's reader.
Step 2: Open the Roland > TD-50X > Backup folder that came with your download.
Step 3: Open the Roland > TD-50X > Backup folder on your SD Card.
Step 4: Drag Backup 11 from the download to this folder: "Backup" (on SD Card).
Step 5: Once complete: Eject and or remove the SD Card.

Section IV: Loading Backup Data from an SD Card

Don't forget! Scroll to the number of your file to see and load it. *(Vault X is delivered as bank #11, unless you change it.)*

Option A: Load Entire Backup from an SD Card	*page 54 in your TD-50X manual*

Press the "KIT" button at any time to cancel the process.

Step 1: Insert your SD card into the TD-50X.
Step 2: Press the [SD CARD] button.
Step 3: Press the PAGE [UP] button several times to access page 1 (SD CARD BACKUP ALL).
Step 4: Press the [F2] (LOAD) button.
Step 5: Choose loading settings. (Scroll to Bank 11 – named: TD50X VaultX / Keep the user sample boxed checked)
Step 6: Press the [F5] (LOAD) button.
Step 7: Select "OK" and press the [ENTER] button.

If it says "No Backup Data" – You need to scroll the dial and select Bank 11
Repeat Step 6/7   *(or) if still not working: the pack on SD card is not properly loaded – read Section III and perform steps.*

If Screen says: "Processing"   it's working! This will take about a minute as all the sample data loads in.

Once the load completes: Almost ready but………you are NOT done!

Note: Perform these following steps to align the pack properly to your kit!

Step 8: Recalibrate your VH10 or 11/12/13/ *D14 Hi Hat – but if you have a floor pedal with pad setup instead…then skip this.
Step 9: Make sure your pad settings match your kit's pad types.
Step 10: Re-save a copy of **VAULT X** to your SD Card with your corrected pad settings.

*D14 – The Roland digital VH-14 Hi Hat: V Expressions LTD has received their VH-14 but did not use it to program this pack.
The VH-13 was used.   Your VH-14 will still work with this pack.

Note: You can copy individual kits from your main backup using the Copy > SD tab in the copy section of your module.
Therefore, we do not provide "individual" kits with your expansion as there is no need for them.

Step 1: Insert an SD card into the TD-50X.
Step 2: Hold down the [SHIFT] button and press the [SD CARD] button.
Step 3: Press the PAGE [UP] button several times to access page 1 (SD CARD BACKUP ALL).
Step 4: Press the [F1] (KIT) button.
Step 5: Press the [F3] (SD CARD) button.
Step 6: Choose loading settings. (Select the source and destination kits.)
Step 7: Press the [F5] (COPY) button.
Step 8: Select "OK" and press the [ENTER] button.

Repeat this process for each kit you want to load individually.

By loading the Kits only – your Trigger settings and Bank setups will not be disturbed.

Pad Configuration

The pad assignments and trigger information are set to standard Roland default trigger settings for the following pads:

Kick:	KD-140
Snare:	PD-140DS
Tom(s) 1-4:	PD108/PD128
HH:	VH-13
Ride:	CY-18DR
CR1/2:	CY-14 /CY-14
Aux 1-4:	A3=PD108/A1,2,4=CY12c

If your pad setup is different than the above-mentioned groupings you will need to write down any/all of your pad types and/or custom trigger settings you may have adjusted. After loading **VAULT X**, you may need to recreate all the custom pad settings you have made (pad type, sensitivity, re-trig, etc.)

This will help align **VAULT X** with your kit configuration. This is important when using your module with other brands.

Note: Try not to overdrive your pad triggers. Lower Sensitivity as much as possible without losing all your volume.

IMPORTANT: If your pad setup is different than the above, you will need to write down any/all of your pad types and/or custom trigger settings you may have adjusted. After loading, you may need to recreate all the custom pad settings you have made. (pad type, sensitivity, re-trig, etc.)

If you are using custom trigger, older Roland pads, or other hardware: Please take a moment to write down your personal pad and trigger settings before loading your expansion.

IE: Kick drum is a KD-140, Snare is a PD-140 DS, Tom 1 is a PD-108…………………

Kick: _____

Snare :   _____

Hi Hat: _____

Ride: _____

Tom 1 :   _____

Tom 2:   _____

Tom 3:   _____

Tom 4:   _____

Crash 1:   _____

Crash 2:   _____

Aux 1:   _____

Aux 2:   _____

Aux 3:   _____

Aux 4:   _____

Performance Settings

Trigger Sensitivities…

Roland Default TD-50X Sensitivities range from 6-9 depending on which pad you strike. The rule is: the higher the sensitivity setting, the louder the sound will be, but you lose dynamics.

By adjusting the Sensitivity and Threshold settings, this will help prevent mis-triggers, velocity issues, and playability concerns you may be having.

To adjust up or down: go to Pad Settings and mess with the Sensitivity values. Remember: Increasing this value increases the sensitivity, so that even soft strikes on the pad are sounded at high volume (less dynamic). Decreasing this value too much reduces sensitivity, so that even strong strikes on the pad are sounded at low volume (less dynamic). Finding the middle road while you play your drum kit is key.

Note: Try not to overdrive the pad sensitivities with your playing. Look at the meter on the module and try to keep the hardest strikes just below max velocity

Trigger Threshold…

Threshold pertains to the minimum sensitivity of the pad. This setting allows a trigger signal to be received only when the pad is hit above a determined force level (a.k.a. velocity). Threshold can be used to generally prevent a pad from mis-triggering because of vibrations from other drums/pads. Check this with your pads and adjust accordingly. Usually a setting ranging from 2 to 6 is acceptable, but if you still find mis-triggering happening, keep adjusting up. This setting works in tandem with the XTALK setting.

Advanced Trigger Settings…

 SCAN TIME: 1.4 is optimal / 2.0 is standard

Strike Force: You may notice that identical hits (velocity) you play may produce sound at different volumes. Adjust the "Scan Time" so your way of hitting/playing can be detected more precisely by the module. While repeatedly hitting the pad at a constant force, gradually raise the Scan Time value from 0ms, until the resulting volume stabilizes at the loudest level. At this setting, try both soft and loud strikes to make sure that the volume changes appropriately. With higher settings, latency increases so set this to the lowest value possible you are comfortable with

RETRIG CANCEL: 1 for Roland Pads is standard – 6 for all types of Roland CY Cymbals is standard.

Correcting mis triggering:

Important when you are especially using acoustic drum triggers or "non" Roland brand triggers.
Many aftermarket triggers produce altered waveforms, which may also cause mis-triggering. This occurs at the decaying edge of the waveform which is annoying when you hear it. Retrig Cancel detects this and prevents it from occurring. To Adjust: while repeatedly striking the pad, raise the "Retrig Cancel" value until retriggering no longer occurs. Although setting this to a high value prevents retriggering, it then becomes easy for sounds to be omitted when the drum is played fast (roll etc.). Set this to the lowest value possible while still ensuring that there is no retriggering.

You can also eliminate this problem of retriggering with the Mask Time setting. Mask Time does not detect trigger signals if they occur within the specified amount of time after the previous trigger signal was received. Retrig Cancel detects the attenuation of the trigger signal level and triggers the sound after internally determining which trigger signals were actually generated when the head was struck, while weeding out the other false trigger signals.

MASK TIME: 4-8ms is optimal / 8-10ms is standard.

Double triggering prevention: When playing a kick trigger – it is quite common for the beater to bounce back and hit the head a second time immediately after the intended strike. Many times, on acoustic drums the beater stays against the head and you do not hear it. Anyway, this bounce back causes a single hit to "double trigger." The Mask Time setting helps to avoid this extra dbl trigger. Once a pad has been hit, any additional trigger signals occurring within the specified "Mask Time" will be ignored.

Adjust the "Mask Time" value while playing the pad.

When using a kick trigger, try to let the beater bounce back and hit the head very quickly, then raise the "Mask Time" value until there is no more sound made by the beater rebound.

XTALK CANCEL: 15-30 is optimal / 30-80 is standard and will depend on your setup.

Do not be afraid to max these values out. When multiple pads/drums/cymbals are attached to the same stand, this Crosstalk Cancel setting prevents vibrations produced by a strike from falsely triggering the other pads/drums/cymbals. For example, if Crash 2 is falsely triggered when you strike TOM 2, you will increase the XTalk Cancel value of Crash 2 until crosstalk no longer occurs.

Note: If the setting is too high, a strike played on Crash 2 **might** be omitted when Tom 2 and Crash 2 are played simultaneously. If you experience this lower both XTALK values on both pads.

Tips & Tricks

Using VAULT X with a live PA…

VAULT X kits 70-100 are optimized for STEREO/HEADPHONE USE. The settings below will help dial in your drum sound thru speakers.

Room/OverHeads/MFX Reverbs: Avoid the larger hall settings when gigging. Most of time: Less is more. **To adjust: Press "AMBIENCE", then "ROOM – OVERHEADS"** and adjust LEVEL. MFX settings are found at mixer button then paging down.

PAN: Tom and cymbal separation can also be adjusted using the PAN edit feature to widen or reduce the depth of your instruments without harming the kit model. Keeping a tighter pan will sound better through the PA.

Master EQ: Reduce or Add low/hi eq frequency amounts to even out your kit models on the PA. Use PAD EQ settings to help fine tune the sounds of the kit. Sometimes reducing Bass is the way to add Treble. Subtractive EQ-ing works well with Boomy PA's.

SNARE EQ/VOL: To help your Snare cut through the mix…. Snare depth is at 160-250 HZ, Snare body is at 400-630, Snare clarity is at 2 kHZ. Adjust the EQ frequencies in your snare channel until your Snare is cutting while guitars and vocals are present. Crank the output volume level of the snare in the TD-50X to assist.

LOW XSTICK / HI HAT PEDAL VOL: To adjust: Press "Mixer", then KIT VOL – use arrows/dial to make adjustments.

STEREO L/R OUT to PA: For a simple stereo connection to the mixing console use the TD50X XLR outputs.   You can then add / reduce the desired effects to accommodate the current environment.

** MONO L Output: If in Mono, send your signal via the L MONO OUT. We suggest panning to L30 on all triggers for your particular gig kit. This should greatly enhance your drum set's power in the PA. Panning this way should give you much stronger/ punchier audio and help curb the "drown in effects" wash sound.

Contact & Support

If you have questions before attempting any of the procedures above, please refer to your Roland TD-50X owner's manual, or feel free to email **V Expressions Ltd** from the appropriate link on our website at www.vexpressionsltd.com

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