

LVOL07  
:WAV00  
;VOC00

VCXX TOY KEYS  
 , ATK00 .REL00

	2	3		5	6	7		9	0		-
Q	W	E	R	T	Y	U	I	O	P	@	*

	S	D		G	H	J	
Z	X	C	V	B	N	M	

RETURN  
PLAY

A USERS GUIDE TO...

# VCXX TOY KEYS

**FOR THE COMMODORE VIC-20**

BY: RYAN LISTON  
2021

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# **ABOUT**

## **VCXX TOY KEYS**

### **AUTHOR:**

**RYAN LISTON (includes VIZNUTS PWP PULSE WAVE CODE)**

### **DATE:**

**Sept/7/2021**

### **TARGET:**

**COMMODORE VIC-20**

### **EXPANSION:**

**ANY OR NONE**

### **DESCRIPTION:**

**A simple playable toy keyboard with voice selection,  
pulse wave selection and a simple attack/release  
envelope.**

### **FEATURES:**

**15 Voice variations  
15 selectable pulse wave forms  
3 octave keyboard  
Attack/release envelope**

**\*CVXX Toy Keys is tuned for true interval note values. This is tuned  
approx. 3/7 flat to standard western tuning but presents more accurate  
space between notes.**

# PACKAGE

**VCXX Toy Keys** is distributed as a compressed file package (**VCXX TOY KEYS.zip** or **VCXX TOY KEYS.7z**.) The package contains files for easy direct usage with **Vice**, **Sdiec**, and **Tapuino**. It also contains file for the user to create their own disk, tape or cart if so desired for personal use. **TOY KEYS** is intended as a community release. While it is intended for tape I wanted to make it easy for the user to use as they wish in whatever media they wish.

## PACKAGE CONTESENTS

**TOY KEYS.d64** : Disk image

**TOY KEYS.tap** : Tape image

**tkart.prg** : Cartridge loader @ \$A000

**tkart.bin** : Rom image place @ \$A000

**tkart** : Cartridge loader for **sdiec** @ \$A000

**toy keys.prg** : Loader for disk format

**tk.prg** : Toy keys program @ \$1200

**toy keys/ts** : prg files for **sdiec**

**tape load.prg** : loader for tape format

**tape make.prg** : Writes **TS.prg** to tape format

**tape load/tape make** : Tape writer files for **sdiec**

**TAPE MAKE.d64** : Tape writer disk image

**TOY KEYS.wav/TOY KEYS.mp3** : audio format

**DEV KIT** : file containing full source code and dev files.

**TOY KEYS USERS GUIDE.pdf** : users guide

# SETUP

**\*VCXX Toy Keys is designed to run with any memory expansin. Do not force load.**

**Disk :**

- 1. insert disk**
- 2. load "\*",8**
- 3. run**

**Tape :**

- 1. insert tape**
- 2. press shift+run/stop**
- 3. press play on tape**

**S2diec :**

- 1. copy TOY KEYS and TS to a sd card**
- 2. insert sd into sdiec**
- 3. load "TOY KEYS",8**
- 4. run**

**Cart loader :**

- 1. load "TKART",8,1**
- 2. sys 64802**

**Audio format :**

- 1. record TOY KEYS.wav or TOY KEYS.mp3 to a cassette**
- 2. (see tape)**

**Using the tape maker**

- 1. load "TAPE LOAD",8**
- 2. save "TOY KEYS"**
- 3. press play+record on tape**
- 4. load "TAPE MAKE",8**
- 5. run**

**\*you will receive a syntax error. This is due to the tape maker over writing and corrupting the original basic code. This is ok.**

## VOICE CONTROLS

**Press return to toggle between the editor and the player.**

**VOLUME (VOL) : L=volume up. Shift+L=volume down.**

**Volume sets the peak gain of the envelope. 15 is max. 0 is off.**

**WAVE FORM (WAV) : :=wave up. Shift+:=wave down.**

**0=the Vics normal square wave. 1-15=pulse waves provided by Viznuts pwp pulse wave technique.**

**The selected wave form is applied across all active voices except for the noise channel.**

**VOICE (VOC) : ;=voice up. Shift+:=voice down**

**VOC selects between different combinations of the Vics 4 voice channels**

**0=all voices off**

**1=bass**

**2=tenor**

**3=tenor+bass**

**4=alto**

**5=alto+bass**

**6=alto+tenor**

**7=alto+tenor+bass**

**8=noise**

**9=noise+bass**

**10=noise+tenor**

**11=noise+tenor+bass**

**12=noise+alto**

**13=noise+alto+bass**

**14=noise+alto+tenor**

**15=noise+alto+tenor+bass**

## A/R ENVELOPE

**ATTACK (ATT) : ,=attack up. Shift+=attack down (0-99)**

**Attack determines the amount of time it takes for the volume to reach the peak gain (VOL) when a key is pressed.**

**RELEASE (REL) : .=release up. Shift+=release down (0-99)**

**Release determines the amount of time it takes for the volume to reach 0 after a key is released.**

**The envelope does not re-trigger when a new key is pressed. If a new key is pressed the new note triggers but the envelope continues**

**When volume=0 and a key is pressed the attack slope is triggered. Volume increases by 1 every  $\text{int}(\text{att}/\text{vol})$  ticks of the jiffy clock until volume=vol.**

**If a key is still held down after the attack slope has ended then the note will hold at peak gain until released.**

**When a key is released the release slope is triggered. Volume decreases by 1 every  $\text{int}(\text{rel}/\text{vol})$  ticks of the jiffy clock until volume=0. If a new key is pressed before volume=0 then the attack slope will be triggered from the current volume level.**



## KEYBOARD LAYOUT

<b>C1=Z</b>	<b>C#1=S</b>	<b>D1=X</b>	<b>D#1=D</b>
<b>E1=C</b>	<b>F1=V</b>	<b>F#1=G</b>	<b>G1=B</b>
<b>G#1=H</b>	<b>A1=N</b>	<b>A#1=J</b>	<b>B1=M</b>
<b>C2=Q</b>	<b>C#2=2</b>	<b>D2=W</b>	<b>D#2=3</b>
<b>E2=E</b>	<b>F2=R</b>	<b>F#2=5</b>	<b>G2=T</b>
<b>G#2=6</b>	<b>A2=Y</b>	<b>A#2=7</b>	<b>B2=U</b>
<b>C3=I</b>	<b>C#3=9</b>	<b>D3=0</b>	<b>D#3=0</b>
<b>E3=P</b>	<b>F3=@</b>	<b>F#3=-</b>	<b>G3=*</b>
<b>G#3=(pound)</b>	<b>A3=(arrow up)</b>		
<b>A#3=(clr/home)</b>	<b>B3=(insert/delete)</b>		

**vol=l/shift+l      wav=:/shift+:    voc=;/shift+;**  
**att=,/shift+,      rel=./shift+.**