CRAVE VCO ADJUSTMENT PROCEDURES

WHAT YOU WILL NEED

1. A wide ranging and accurate tuner.
2. The calibration tool.

PREPARATION

1. Make sure your CRAVE has been powered on for at least 30 minutes;
2. Remove all unnecessary cables from the unit;
3. Set the panel settings as shown in figure 1.

VCO TUNING ADJUSTMENT

Osc scale

1. Connect an accurate, high-quality tuner to the VCA/LINE OUTPUT jack;
2. Press “KYBD” or “STEP” key, set the keyboard octave to 3 (OCTAVE/LOCATION LED 3 will light up), then press “STEP6” key;
3. Adjust the panel FREQUENCY control or OSC OFFSET VR until the pitch is 110Hz (A2). Note that a pitch within 2 to 3 cents of the target frequency should be fine; (OSC OFFSET VR and OSC SCALE VR location pls refer to figure2)
4. Set the keyboard octave to 6 and press “STEP6” key;
5. Adjust the panel OSC SCALE VR until the pitch is 880Hz (A5); Note that a pitch within 2 to 3 cents of the target frequency should be fine;
6. Repeat steps 2 to 5 until output frequency is correct;

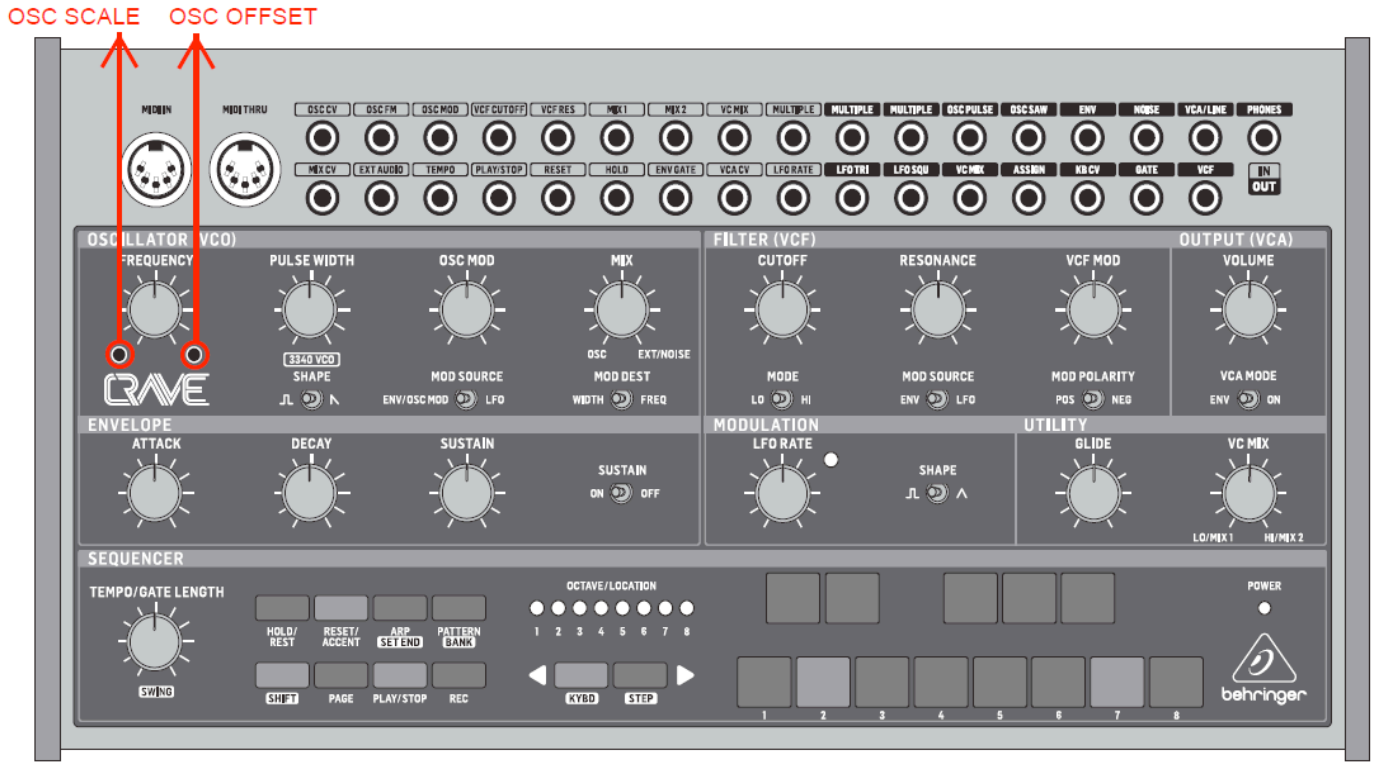
Osc offset

1. Set the FREQUENCY control precisely to center position;
2. Set the keyboard octave to 5 and press “STEP6” key;
3. Adjust OSC OFFSET VR until the pitch is 440Hz (A4). Note that a pitch within 2 to 3 cents of the target frequency should be fine.

PANEL DEDAULT SETTING (FIFURE 1)



OSC SCALE VR and OSC OFFSET VR LOCATION (FIGURE 2)



If the VCO pitch is still not correct after finished adjustment, you can calibrate the KB CV and adjust it again as the above procedures.

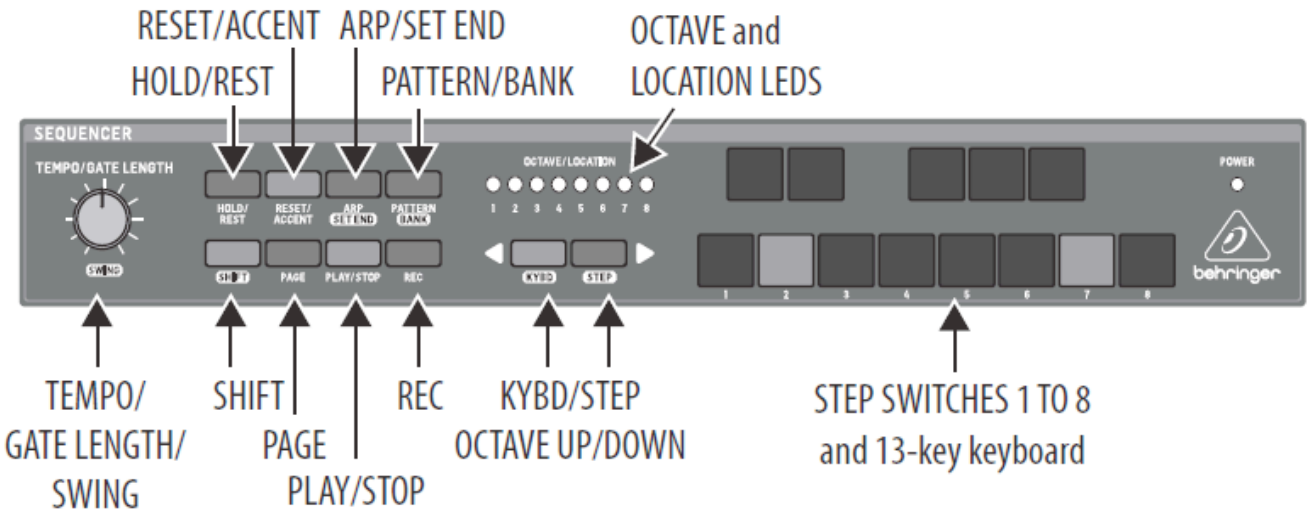
WHAT YOU WILL NEED

1. A digital voltmeter (with more than 4 significant digits).



KB CV CALIBRATION

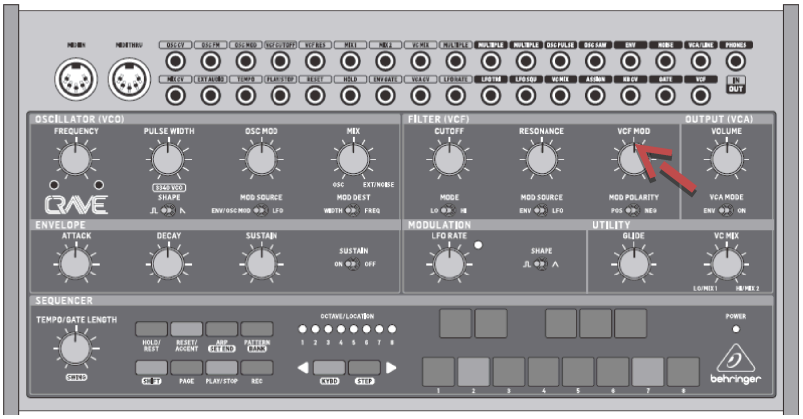
Key's name and LED



In the user CV calibration mode, the buttons has new function:

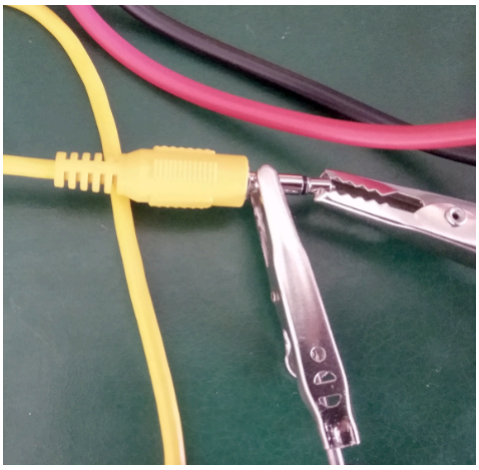
There are three test points A / B / C to be calibrated. Their target voltage is -5V / 0V / 5V respectively.

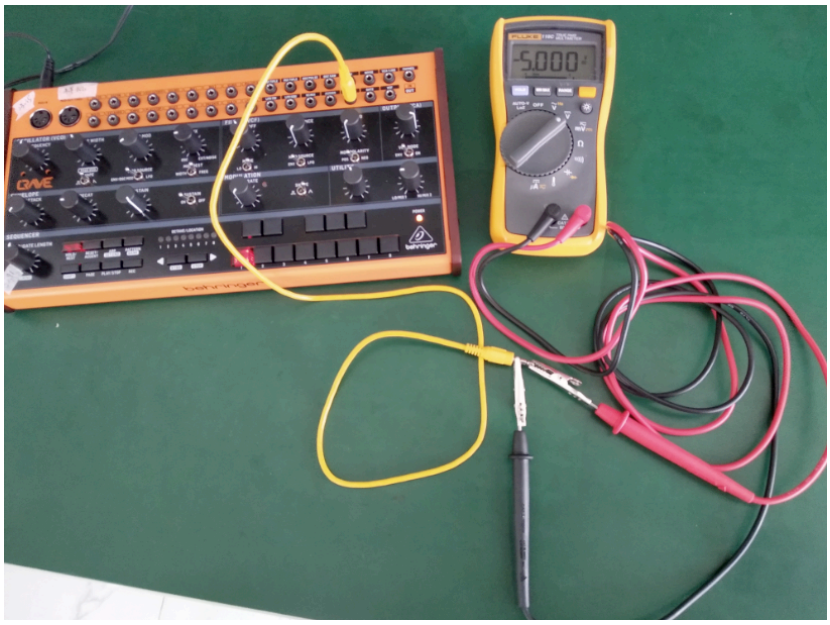
Button Name	Function		Button Name	Function
HOLD/REST	Select test point A		STEP1	Select X1 (about ±1mV)
RESET/ACCENT	Select test point B		STEP2	Select X2 (about ±4.5mV)
ARP/SETEND	Select test point C		STEP3	Select X3 (about ±9mV)
PATTERN/BANK	-		STEP4	Select X4 (about ±45mV)
SHIFT	-		STEP5	-
PAGE	-		STEP6	-
PLAY/STOP	-		STEP7	-
REC	Save		STEP8	-
			KYBD	Decrease
			STEP	Increase



1. Press “KYBD + STEP” then power up; All the LED will light up in sequencer.
2. Then press “SHIFT + 1” to enter user CV calibration;
3. Measured interface “KB CV”;







4. Press “HOLD/REST”, select test point A. You need to watch the multimeter to adjust the KBCV voltage.
   You can press “KYBD” or “STEP” to adjust the value until it close to target level “-5V”(±1mV).
   (Press “STEP1” “STEP2” “STEP3” or “STEP4” to select the speed of adjust “X1” “X2” “X3” or “X4”)
5. Press “RESET/ACCENT”, select test point B.
   Press “KYBD” or “STEP” to adjust the value until it close to target level “0V” (±1mV).
6. Press “ARP/SETEND”, select test point C.
   Press “KYBD” or “STEP” to adjust the value until it close to target level “5V” (±1mV).
7. Press “REC” to save and finish CV calibration.

Calibration done, power off the CRAVE.