CRAVE

Analog Semi-Modular Synthesizer with 3340 VCO, Classic Ladder Filter, 32-Step Sequencer and 16-Voice Poly Chain

User Support Bulletin

Introduction

The unit is carefully calibrated at the factory. The performance may change over time or due to environmental changes, and the following recalibration procedures can be used to bring it back to its factory settings.

Equipment Required

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

2. A Patch Cord
3. Small insulated trimmer screwdriver
4. Accurate, high-quality guitar tuner

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Preparation

STEP 1 Make sure your CRAVE has been powered on for at least 1 hour, and that it is in a place where the temperature will not change drastically while performing the calibration.

STEP 2 Remove all unnecessary cables from the unit.

STEP 3 Set the panel settings as shown in Figure 1.

PANEL DEFAULT SETTING (FIGURE 1)

Calibration Procedures

⚠ Follow all steps in the order in which they are presented.

VCO TUNING ADJUSTMENT

OSC SCALE

STEP 1 Connect an accurate, high-quality tuner to the VCA/LINE OUTPUT jack.

STEP 2 Press "KYBD" or "STEP" key, set the keyboard octave to 3 (OCTAVE/LOCATION LED 3 will light up), then press "STEP6" key.

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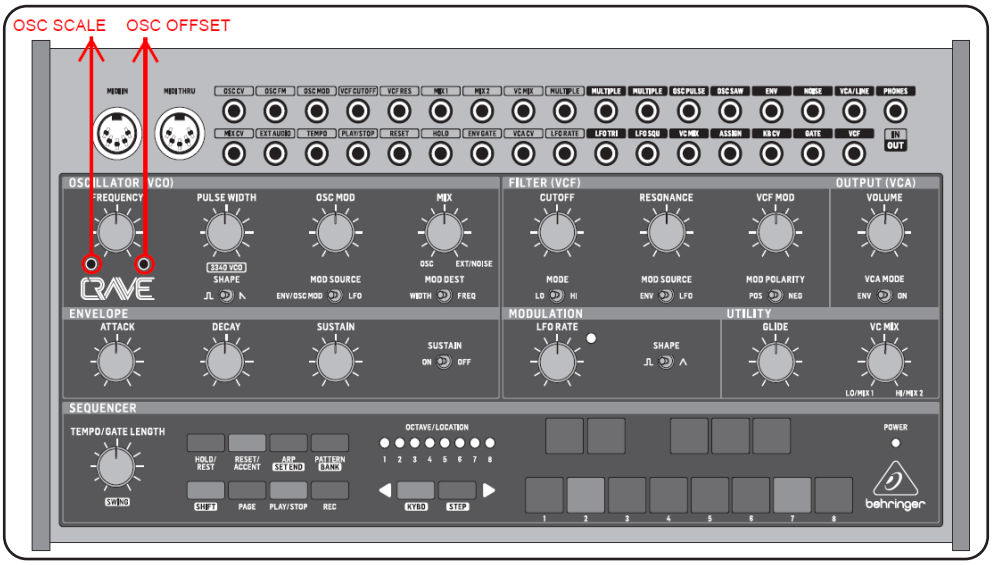
STEP 3 Adjust the panel FREQUENCY control or OSC OFFSET trimmer until the pitch is 110Hz (A2). Note that a pitch within 2 to 3 cents of the target frequency should be fine; (OSC OFFSET trimmer and OSC SCALE trimmer location shown in Figure 2).



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

STEP 4 Set the keyboard octave to 6 and press "STEP6" key.

STEP 5 Adjust the panel OSC SCALE trimmer until the pitch is 880Hz (A5). Note that a pitch within 2 to 3 cents of the target frequency should be fine.

STEP 6 Repeat steps 2 to 5 until output frequency is correct.

OSC OFFSET

STEP 1 Set the FREQUENCY control precisely to the center position.

STEP 2 Set the keyboard octave to 5 and press "STEP6" key.

STEP 3 Adjust OSC OFFSET trimmer until the pitch is 440Hz (A4). Note that a pitch within 2 to 3 cents of the target frequency should be fine. If the VCO pitch is still not correct after the adjustment is finished, you can calibrate the KB CV and adjust it again as shown in the procedures above.

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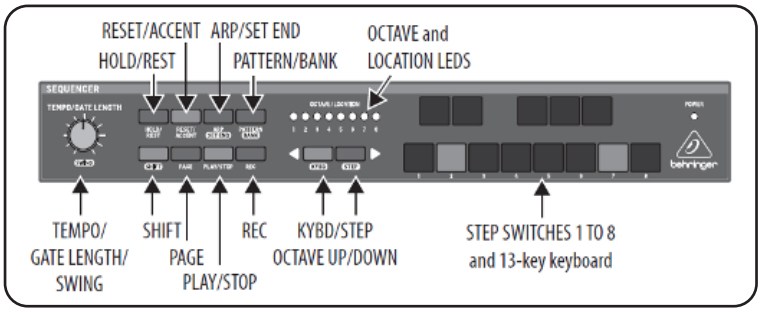
KB CV CALIBRATION

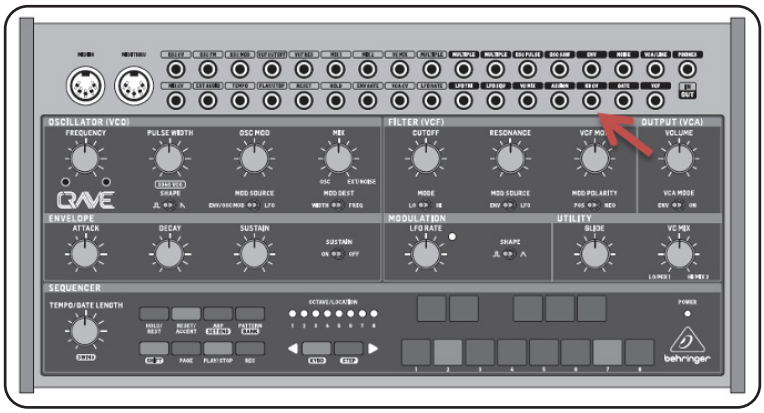


Button names and LEDs

In the user CV calibration mode, the buttons have new functions as shown in the tables below:
There are three test points A / B / C to be calibrated. Their target voltage is -5 V / 0 V / 5 V respectively.

Button Name	Function
HOLD/REST	Select test mode A
RESET/ACCENT	Select test mode B
ARP/SETEND	Select test mode C
PATTERN/BANK	—
SHIFT	—
PAGE	—
PLAY/STOP	—
REC	Save

Button Name	Function
STEP1	Select X1 (about ±1 mV)
STEP2	Select X2 (about ±4.5 mV)
STEP4	Select X3 (about ±9 mV)
STEP4	Select X4 (about ±45 mV)
STEP5	—
STEP6	—
STEP7	—
STEP8	—
KYBD	Decrease
STEP	Increase



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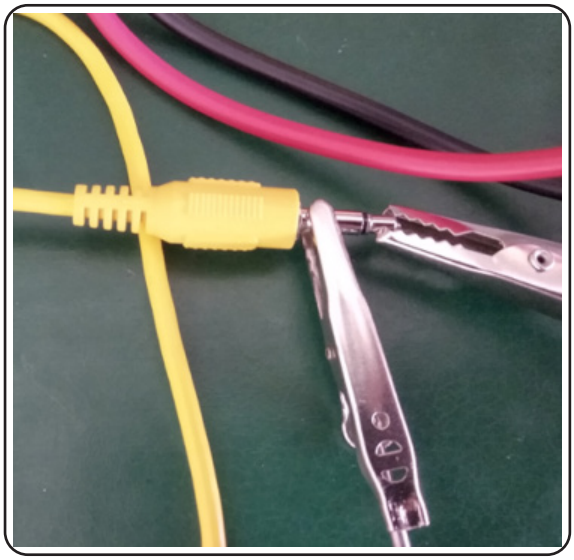
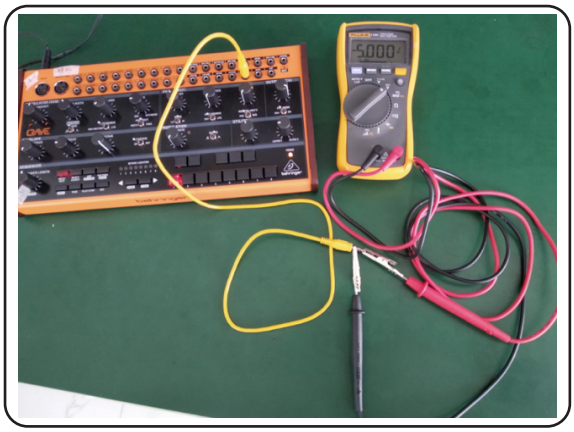
STEP 1 Press "KYBD + STEP" then power up; All the LEDs will light up in the sequencer.

STEP 2 Then press "SHIFT + 1" to enter user CV calibration.

STEP 3 Measure the output of phone jack named "KB CV".





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STEP 4 Press "HOLD/REST" to select test mode 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 "-5 V"(±1 mV). (Press "STEP1""STEP2""STEP3" or "STEP4" to select the speed of adjust "X1""X2""X3" or "X4")

STEP 5 Press "RESET/ACCENT" to select test mode B.
Press "KYBD" or "STEP" to adjust the value until it close to target level "0 V" (±1 mV).

STEP 6 Press "ARP/SETEND" to select test mode C.
Press "KYBD" or "STEP" to adjust the value until it close to target level "5 V" (±1 mV).

STEP 7 Press "REC" to save and finish CV calibration.

STEP 8 Calibration done, power off the CRAVE.

End of Procedure