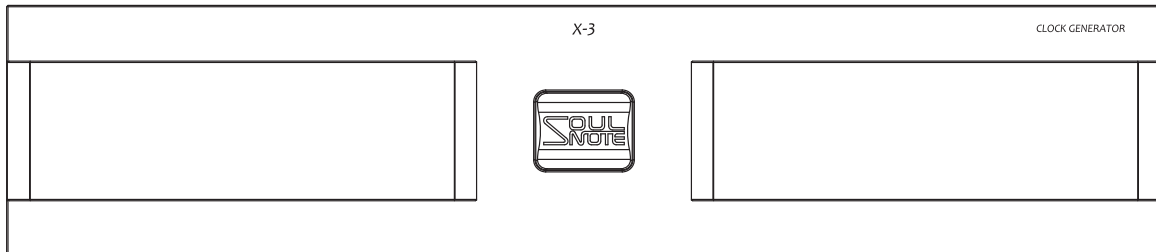


# **X-3H** User Guide

## **CLOCK GENERATOR**



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### Supplied Accessories

• Power cable .....	1	• Spike pin .....	3
• SMA-SMA clock cable.....	1	• Hex key for spike pins .....	1
• SMA-BNC conversion plug .....	1	• User Guide (this manual) .....	1
• Wrench for clock cable.....	1		

## Safety Precautions



### CAUTION

RISK OF ELECTRIC SHOCK  
DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

### WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

A warning that an apparatus with CLASS I construction shall be connected to a MAINS socket outlet with a protective earthing connection.

# IMPORTANT SAFETY INSTRUCTIONS

## READ BEFORE OPERATING EQUIPMENT

This product was designed and manufactured to meet strict quality and safety standards. There are, however, some installation and operation precautions which you should be particularly aware of.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings.  
Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
10. Only use attachments/accessories specified by the manufacturer.
11. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
12. Unplug this apparatus during lightning storms or when unused for long periods of time.
13. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
14. Batteries shall not be exposed to excessive heat such as sunshine, fire or the like.



### CAUTION:

- To completely disconnect this product from the mains, disconnect the plug from the wall socket outlet. The mains plug is used to completely interrupt the power supply to the unit and must be within easy access by the user.
- Never use the unit with any other cord except the supplied power cord.

### NOTE ON USE

#### WARNINGS

- Avoid high temperatures.  
Allow for sufficient heat dispersion when installed in a rack.
- Handle the power cord carefully.  
Hold the plug when unplugging the cord.
- Keep the unit free from moisture, water, and dust.
- Unplug the power cord when not using the unit for long periods of time.
- Do not obstruct the ventilation holes.
- Do not let foreign objects into the unit.
- Do not let insecticides, benzene, and thinner come in contact with the unit.
- Never disassemble or modify the unit in any way.
- Ventilation should not be impeded by covering the ventilation openings with items, such as newspapers, tablecloths or curtains.
- Naked flame sources such as lighted candles should not be placed on the unit.
- Observe and follow local regulations regarding battery disposal.
- Do not expose the unit to dripping or splashing fluids.
- Do not place objects filled with liquids, such as vases, on the unit.
- Do not handle the mains cord with wet hands.
- When the switch is in the OFF position, the equipment is not completely switched off from MAINS.
- The equipment shall be installed near the power supply so that the power supply is easily accessible.

### DECLARATION OF CONFORMITY

We declare under our sole responsibility that this product, to which this declaration relates, is in conformity with the following standards:

EN60065, EN55032, EN55020.

Following the provisions of Low Voltage Directive 2014/35/EU and EMC Directive 2014/30/EU.

### A NOTE ABOUT RECYCLING:

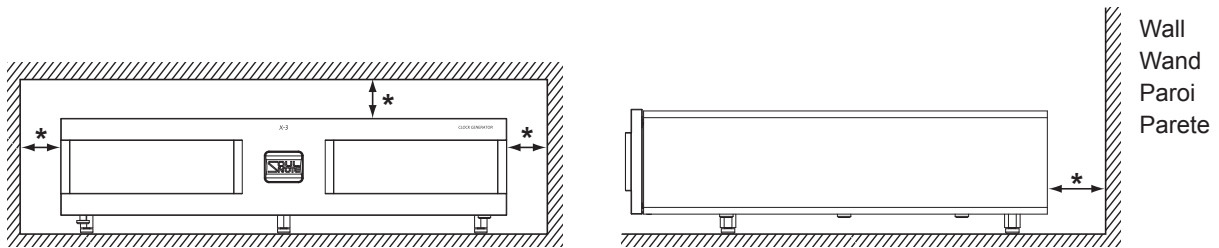
This product's packaging materials are recyclable and can be reused. Please dispose of any materials in accordance with the local recycling regulations. When discarding the unit, comply with local rules or regulations.

Batteries should never be thrown away or incinerated but disposed of in accordance with the local regulations concerning battery disposal. This product and the supplied accessories, excluding the batteries, constitute the applicable product according to the WEEE directive.



Pb

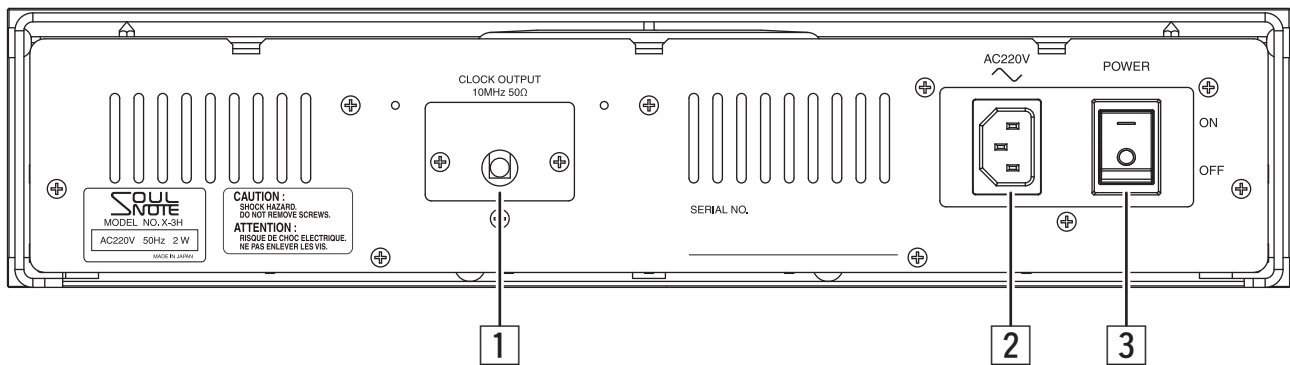
### CAUTIONS ON INSTALLATION



**\* For proper heat dispersal, do not install this unit in a confined space, such as a bookcase or similar enclosure.**

- Leave sufficient clearance (at least 10 cm) from the wall, (at least 5 cm) from top surface of the unit.
- Do not place any other equipment on this unit.

# Rear Panel Names and Functions



## 1 10 MHz Clock Output Terminal (CLOCK OUTPUT)

Use a clock cable to connect to an external 10 MHz clock terminal such as D-3, S-3, or D-2.

Since this is an SMA terminal, when using a general BNC cable, be sure to use a BNC female – SMA male conversion adapter.

### Precautions on connecting a clock cable

- When connecting a clock cable to a device, be sure to turn off the power of the device first.
- The clock output terminal is intentionally not secured in order to maintain the audio quality.
- When connecting an SMA cable, plug the cable straight into the terminal. Otherwise, the screw cannot be turned easily.
- First, turn the screw with your fingers as far as it will go.
- Then, use the supplied wrench to lightly tighten the screw to the point where it cannot be turned easily.
- **Do not overtighten the screw.**

- To fully enjoy the performance of the unit, it is recommended that you use an RCC-1 cable (sold separately) instead of the supplied SMA clock cable.

## 2 AC Inlet (100 V AC)

Connect to a 220 V AC wall outlet (mains) with the supplied power cable.

### Notes:

- **Do not use any electrical contact cleaner or the like in the AC inlet area.**
- To maintain the audio quality, use the supplied power cable.
- Connect the power cable to the AC wall outlet (mains) by inserting the power plug prong with the engraved OO symbols into the ground side (the longer hole). If you reverse the orientation of the power plug, you cannot fully enjoy the performance of the unit.
- Firmly insert the power cable into the end of the AC inlet.
- The ground terminal and the housing are not connected.
- The AC inlet is intentionally not secured in order to maintain the audio quality.

## 3 Power Switch

Press the “-” side to turn on the power and press the “o” side to turn off the power.

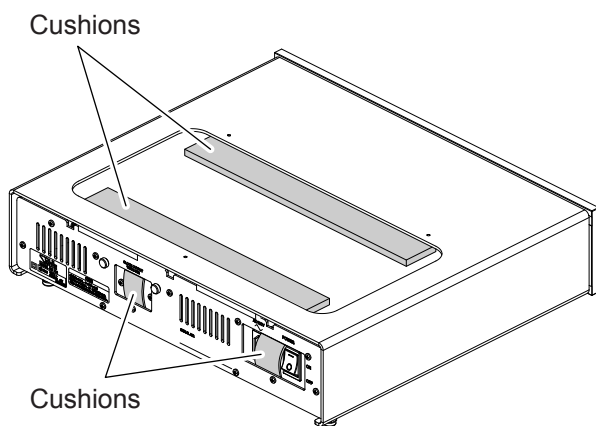
### Notes:

- In order to maintain the audio quality, the unit is not equipped with functions other than the clock output, such as power status indications. The power on/off status can be confirmed with pressed state of the switch.
- In order to maintain the audio quality, it is good to keep the power on all the time.
- The power switch is intentionally not secured in order to maintain the audio quality.

## Protection Pads for Transport

Before use, be sure to remove the pads from the unit. With the pads left attached, you cannot fully enjoy the high audio quality of the unit.

- In order to maintain the audio quality, the top cover and terminals on the rear panel are intentionally not secured.
- If you shake the unit, you will hear a rattling sound. It is not an abnormality.
- When you transport the unit, reattach the pads to the original places.

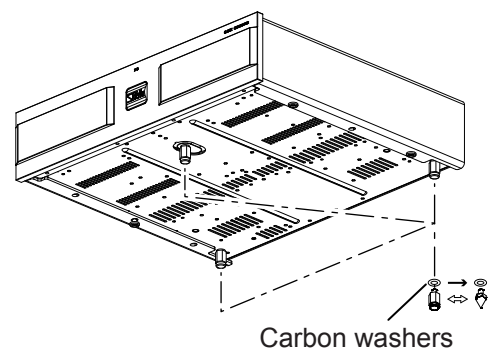


## Attaching the Spike Pins

By replacing the feet with the supplied spike pins, you can tune the audio quality. Point grounding makes the sound focus and auditory lateralization sharper. Furthermore, the audio quality can be subtly tuned by changing the material of the surface on which this equipment is installed.

### Notes:

- When replacing the feet with the spike pins, remove the carbon washers from the feet, and then reattach them to the spike pins.
- When the spike pins are attached, it may be difficult to keep weight balance stable. Take great care not to carelessly apply a force on the corners of the main unit.



### ⚠ Cautions

- When using the spike pins, be extremely careful not to get injured, etc.
- When using the spike pins, be careful that the surface on which the main unit is installed such as the surface of a table, shelf, etc., may become damaged.

## Features of X-3

### **Feature 1: SC-cut Ultra-low Phase noise OCXO**

Adopted an SC-cut ultra-low phase noise OCXO (Oven Controlled Crystal Oscillator) which achieves high audio quality.

### **Feature 2: Naked Foil Resistor**

For the output resistor that greatly influences the audio quality of the clock, a satellite-grade ultraprecision resistor with a superior temperature characteristic and low heat noise was further customized specially for the unit. This extraordinary naked foil resistor is one of the important factors of the great audio quality.

### **Feature 3: SMA Output Terminal**

Adopted an SMA terminal of 20 GHz or more for the output terminal. Focusing on achieving higher audio quality, only one output terminal is provided. To enjoy the dynamic sound of the music, it is highly recommended that you use an RCC-1 cable (sold separately) instead of the SMA-SMA 50 ohm clock cable supplied with X-3.

### **Feature 4: High-power Non-feedback Power Supply**

For the power supply required for the crystal oscillator, a 200 VA toroidal transformer that has the largest capacity among 100 W amplifiers is adopted. For the rectifier diode, ultra-fast SiC diode is adopted for the first time. A multitude of electrolytic capacitors with low magnification and low capacity are connected in parallel to make up a group of rectifier capacitors. For regulators, SOULNOTE unique non-feedback power is supplied.

### **Feature 5: Quiet Power Supply Environment**

The unit is not equipped with any functions that are unnecessary for the crystal oscillator such as power LED or relays. This enables the unit to provide a quiet power supply environment.

### **Feature 6: Housing Designed with Highest Priority Placed on Audio Quality**

We newly developed a housing specially for X-3. The top cover with the top-bottom sides unsecured can prevent air-dumping. In addition, an unsecured AC inlet, an unsecured output terminal, 3 spike supports located just under the transformer, titanium washers, and carbon washers are adopted. These parts and ideas were adopted as a result of placing the highest priority on audio quality.

- For more detailed information, refer to our website or Facebook page.  
<https://www.kcsr.co.jp/soulnote.html>



## Troubleshooting

### No sound is output. (The unit does not start.)

- Check that the power of the main unit is on.
- Check the connections of the external devices.
- Check that the power of the external devices is on.
- Check that the operations and settings on the external devices are correct.
- Check that the screw of the SMA cable is tightened all the way.

## Maintenance

When the unit has become dirty, wipe it clean using a soft cloth. To remove stubborn stains, dilute some dish-washing liquid in 5 or 6 times as much water, soak a soft cloth in the solution, wring it out well, wipe away the stains, and then wipe the surfaces dry with a dry cloth.

Never use alcohol, paint thinners, benzine, insecticides or other volatile substances since they may mar or remove the surface gloss.

Bear in mind that rubbing surfaces with a chemical cleaning cloth or leaving such a cloth in contact with a surface for an extended time may result in deterioration.

### Note:

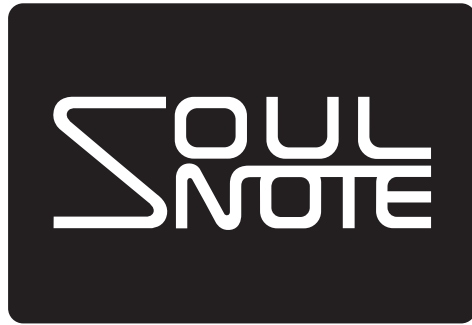
- **Do not use any electrical contact cleaner or the like in the AC inlet area. It will cause a faulty.**

## Specifications

Output.....	SMA x 1
Output frequency .....	10 MHz
Output impedance .....	50 ohms
Output level .....	1.0 Vp-p
Power voltage.....	220 V AC, 50 Hz
Power consumption.....	2 W
Maximum external dimensions	
.....	430 mm (W) x 111 mm (H) x 376 mm (D)
Weight .....	7.5 kg







**CSR International Ltd.**