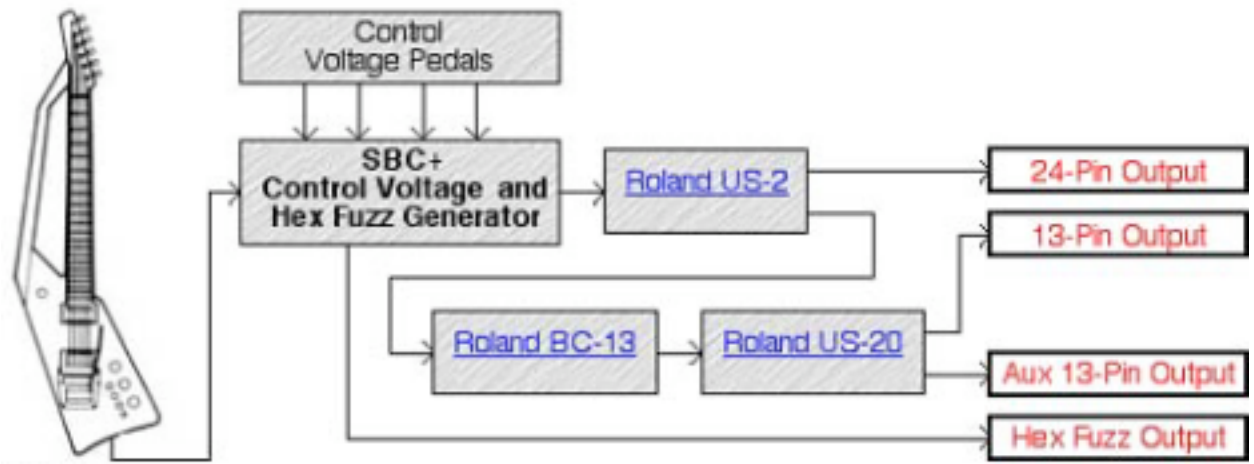


SBC+

**Version 1.1
Notes and Revisions**

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VERSION 1.1 Notes:

1) **Auxiliary 13-Pin Output.**

Version 1.1 of the SBC+ adds a new, auxiliary 13-pin output. This additional hardware output greatly increases the power and flexibility of the SBC+. You could now think of the SBC+ as being a US-2, BC-13 and US-20 all in one box!

2) **Terms and Definitions**

In order to avoid confusion, lets create some standard definitions for the SBC+. The three outputs of the SBC+ will be referred to as:

- A) Primary 24-Pin Output:** This is the original, 24-pin output of the SBC+
- B) Primary 13-Pin Output:** This is the original, 13-pin output of the SBC+.
- C) Auxiliary 13-Pin Output:** This is the new, 13-pin output of the SBC+.

3) SW1/SW2 TRS 1/4" (Rear Panel) and White "AUX" Switch (Front Panel)

Version 1.1 of the SBC+ adds two new connectors, and three new front panel switches. In addition to the rear, **Auxiliary 13-Pin Output** there is a new TRS, 1/4" jack located directly beneath the original remote jack. The new **SW1/SW2** footswitch connects to this jack via a TRS 1/4" cable.

Located just to the right of the front panel SW1 and SW2 switches is a new, white cap covered switch with the label "**AUX 13.**" This is a "swap" switch that functions much like the CV#1 and CV#2 "swap" switches on the front panel.

IN SUMMARY:

When the front panel, white "AUX" switch is in the down position:

Front Panel SW1 and SW2 sends messages to the **Primary 13-Pin Output**.

Footswitch SW1 and SW2 sends control signals to the **Auxiliary 13-Pin Output**.

When the front panel, white "AUX" switch is in the up position:

Front Panel SW1 and SW2 sends messages to the **Auxiliary 13-Pin Output**.

Footswitch SW1 and SW2 sends control signals to the **Primary 13-Pin Output**.

APPLICATION NOTES:

You are using the SBC+ with a VG-88 and a G-303. You want to step through programs on the VG-88 while playing your guitar. Plug in the SW1/SW2 footswitch, and flip the white "AUX" switch in the up position.

Now, you can use SW1 to step down through programs, and SW2 to step up through programs.

*You do not need a third synth plugged into the **Auxiliary 13-Pin Output** to use the white "AUX" switch.*

4) Blue “VOLUME” and “MUTE” Switches (Front Panel)

While the Version 1.1 of the SBC+ adds a new, 13-pin output, it does not add any additional volume control knobs, or mute features. Instead, Version 1.1 hardware allows the user to assign the Volume and Mute functions that used to be permanently assigned to the Direct Guitar Output.

I have noticed that many 13-pin GR Synth users (VG-88, GR-33, GI-10) never used the Direct Guitar Output feature. In fact, the GI-10 does not even provide a Direct Guitar Output! For example, on the VG-88, any patch can program the effects and level control for the Direct Guitar Output, eliminating the need for a dedicated volume control.

For this reason, I decided to make the Volume and Mute functions assignable. The front panel blue “Volume” switch selects either the Direct Guitar Output or the **Auxiliary 13-pin Output** to the Volume Control.

The front panel blue “Mute” switch selects either the Direct Guitar Output or the **Auxiliary 13-pin Output** to the footswitch Mute Control.

IN SUMMARY:

When the front panel, blue “VOLUME” switch is in the down position:

The knob assigned to control the Direct Guitar Output controls the volume of the Direct Guitar Output. This is either the Front Panel “Reso/G-Vol” knob or the CV#2 (resonance) knob on the guitar controller.

A control voltage of MAXIMUM OUTPUT is send to the **Auxiliary 13-Pin Output**.

When the front panel, blue “VOLUME” switch is in the up position:

The knob assigned to control the Direct Guitar Output controls the volume of the **Auxiliary 13-Pin Output**. This is either the Front Panel “Reso/G-Vol” knob or the CV#2 (resonance) knob on the guitar controller.

A control voltage of MAXIMUM OUTPUT is send to the Direct Guitar Output.

When the front panel, blue “MUTE” switch is in the down position:

Pressing on Footswitch Number 3, “GTR/AUX” will mute or un-mute the output of the Direct Guitar Output.

When the front panel, blue “MUTE” switch is in the up position:

Pressing on footswitch number 3, “GTR/AUX” will mute or un-mute the output of the **Auxiliary 13-Pin Output**.

APPLICATION NOTES:

You are using the SBC+ with a VG-88 and a GR-33. You want to be able to blend the volume levels of the VG-88 and GR-33 while playing your guitar. The foot pedal controllers on the VG-88 and GR-33 have already been assigned to other functions, so they are not available as volume pedals. You also want to suddenly mute the outputs of either the VG-88 or GR-33.

- 1) Put the front panel CV#1 switch in the down position. The red LED will light. This means the front panel “Filter/S-Vol” knob is controlling the Synth Volume of the **Primary 13-Pin Output**. Turn the front panel “Filter/S-Vol” all the way clockwise to the maximum position.
- 2) Put the front panel CV#2 switch in the down position. The red LED will light. This means the front panel “Reso/G-Vol” knob is controlling the Guitar Volume of the Direct Guitar Output. Turn the front panel “Reso/G-Vol” all the way clockwise to the maximum position.
- 3) Put the front panel blue “VOLUME” in the up position. The “Reso/G-Vol” knob is now assigned to the volume of the **Auxiliary 13-Pin Output**.
- 4) Plug a CV Pedal (Yamaha or Korg type) into rear panel input CV#1. Now, by moving the pedal up and down, you can vary the volume of the **Primary 13-Pin Output**.
- 5) Plug a CV Pedal (Yamaha or Korg type) into rear panel input CV#2. Now, by moving the pedal up and down, you can vary the volume of the **Secondary 13-Pin Output**.
- 6) Pressing the footswitch number 2 “13” will mute the **Primary 13-Pin Output**.
- 7) Put the front panel, blue “MUTE” switch in the up position.
- 8) Pressing the footswitch number 3, “GTR/AUX” will mute the **Secondary 13-Pin Output**.

The Direct Guitar signal is still available for the VG-88 and GR-33, since the SBC+ sends a maximum level control signal to devices not being controlled by a volume knob .

Please refer to the flow diagram on the next page.