

Characterization of the BREATH input on the VL1-m Synthesizer

From a posting by Art Whitfield to the WIND listserv in December, 1996

*Warning *

Info contained below involved doing things with a VL1-m that Yamaha never intended be done in a home setting. Use these results at your own hardware risk. Your mileage may vary, and don't call me if you blow up your VL1-m!

As promised (or threatened), here's the rest of the data on characterization of the front panel Breath Control Input (BC) on the VL1-m.

Sleeve = +5V

Ring = BC Analog In

Tip = -12V

By putting a resistance between BC and -12, you can change the BC value in the VL1. To collect the data below, I was watching the screen:

UTIL/SYSTEM/BREATH CONTROL CURVE

Tip-to-Ring....BC

Resistance.....Value

36K.....126

50K.....123

75K.....97

100K.....71

150K.....50

200K.....37

300K.....22

400K.....14

500K.....10

600K.....6

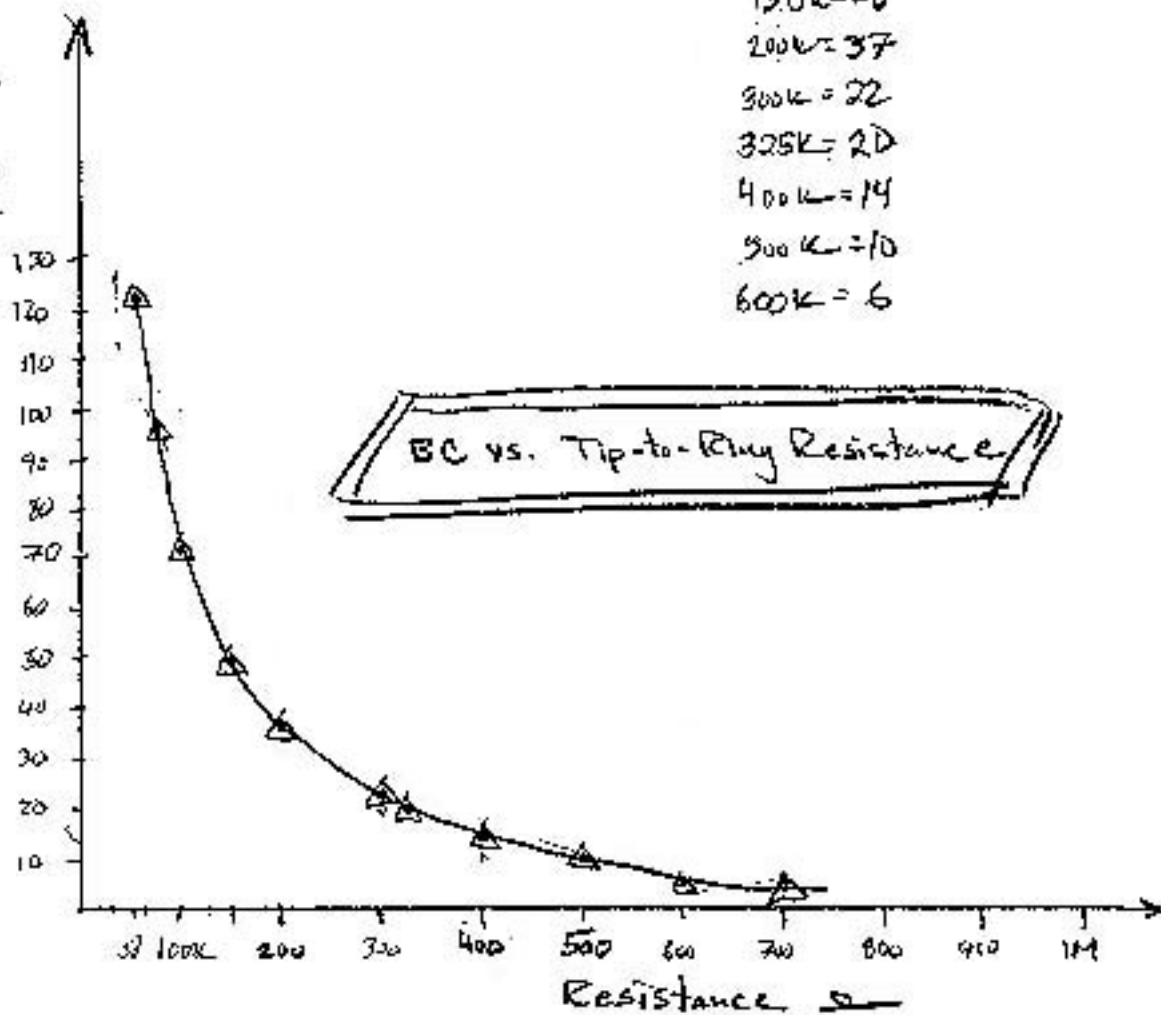
As mentioned earlier, this is not a linear response, but by altering the BC curve on this same screen, you can easily compensate and make the VL produce linear BC data.

I've been primarily been puttering with an FSR+50K series resistor. This gives me really nice touch response (VL curve set to straight line). The log nature of the BC input feels good.

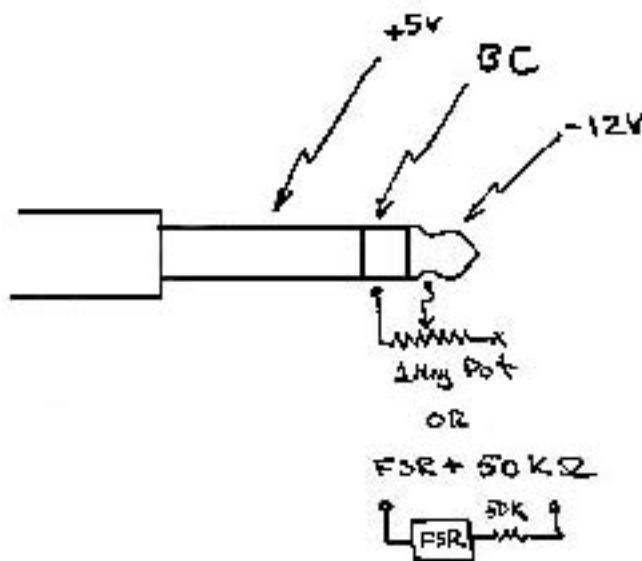
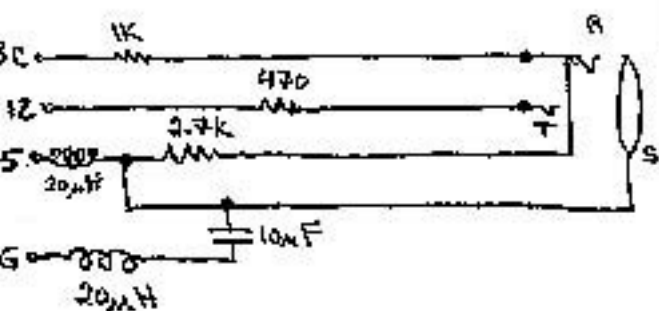
Characterization of VL1-m Breath Input

| Tip to Ring Ω | BC Value |
|----------------------|----------|
| 36K | 116 |
| 50K | 123 |
| 75K | 97 |
| 100K | 71 |
| 150K | 56 |
| 200K | 37 |
| 300K | 22 |
| 325K | 20 |
| 400K | 14 |
| 500K | 10 |
| 600K | 6 |

BC Values util / system / breath control curve



Schematic of Input per VL1-m Svc. Manual



[Signature]
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