

■ bORG v1.1.1 – Quick Reference

This document summarizes all SysEx commands and FN button mappings for bORG v1.1.1. Manufacturer ID is **0x7D** (non-commercial). All values are raw MIDI bytes (0–127), not ASCII.

SysEx Commands

Cmd	Data	Function	Example
01 cc	00=LINEAR, 01=FLAT, 02=STEEP, 03=PIANO, 04=SYNTH, 05=ORGAN_FIXED, 06=SOFT, 07=HYBRID	Set velocity curve	F0 7D 01 03 F7 → PIANO
02	–	Calibration START (unlock)	F0 7D 02 F7
03	–	Calibration LOCK	F0 7D 03 F7
04	–	Save settings to EEPROM	F0 7D 04 F7
05	–	Factory reset (defaults)	F0 7D 05 F7
06 vv	vv=1..127	Set fixed velocity	F0 7D 06 64 F7 → vel=100
07 cc	cc=1..16	Set global MIDI channel	F0 7D 07 0A F7 → CH10
08 pp	pp=0..127	Send Program Change	F0 7D 08 14 F7 → PC#20
09 ee pp	ee=0/1, pp=0..127	Enable/disable default patch at boot	F0 7D 09 01 28 F7 → PC#40 on boot
0A	–	STATUS to Serial Monitor	F0 7D 0A F7

LED feedback: Save=long (~400 ms), Status=double short, Channel change=triple quick. When changing channel, the firmware also sends All Notes Off on the previous channel.

FN Button + Key Configuration

FN button = Arduino pin 15 (INPUT_PULLUP, active LOW).

Enter config mode: hold FN ≥ 120 ms → LED solid ON.

Exit: release FN or 5 s inactivity.

Key (N index)	Function	LED
N0..N15	MIDI channel 1..16	Triple quick blink
N16	STATUS	Double short blink
N17	Factory reset	Long blink
N18	Calibration START	Short blink
N19	Calibration LOCK	Short blink
N20	Save EEPROM	Long blink
N21	Fixed-velocity mode	Short blink
N22	Curve: LINEAR	Short blink
N23	Curve: PIANO	Short blink
N24	Curve: SOFT	Short blink
N25	Curve: HARD	Short blink
N26	Default Patch OFF	Long blink
N27	Default Patch ON	Long blink
N28..N36	Quick Program Change slots (PC#0..8)	Short blink

Notes:

- On channel change, firmware sends All Notes Off on the previous channel.
- Default Patch value is configured with SysEx 0x09.
- LED feedback is non-blocking and does not interfere with key scanning.