Buzz Bus

User Manual

Version	1
Date	12/13/2025
Models	Starter, Starter Plus, Standard, Standard Plus, Deluxe
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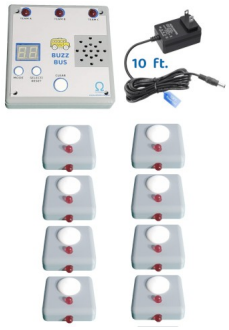
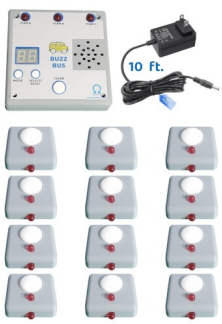
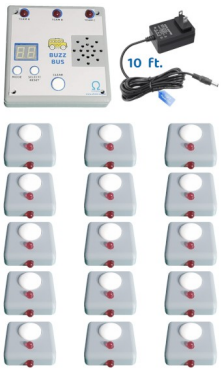
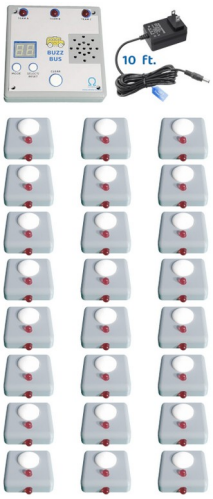
Table of Contents

I. Quick Start

Table 1: Parts List

Item	Qty	Description
Master Control Unit	1	Coordinates buzz-ins, timer functions, sound
Power Adapter	1	10 ft. AC (120V) to 5V@1A power adapter. Plug: 5.5mm OD x 2.5mm ID
Buzzer Chains	1-3	Chains of 4-8 buzzers depending on model (see below chart)

Table 2: Parts included per model

Starter	Starter Plus	Standard	Standard Plus	Deluxe
				
2 Teams	**2 Teams**	**3 Teams**	**3 Teams**	**3 Teams**
4 Buzzers/Team	**5 Buzzers/Team**	**4 Buzzers/Team**	**5 Buzzers/Team**	**8 Buzzers/Team**
8 Buzzers	**10 Buzzers**	**12 Buzzers**	**15 Buzzers**	**24 Buzzers**

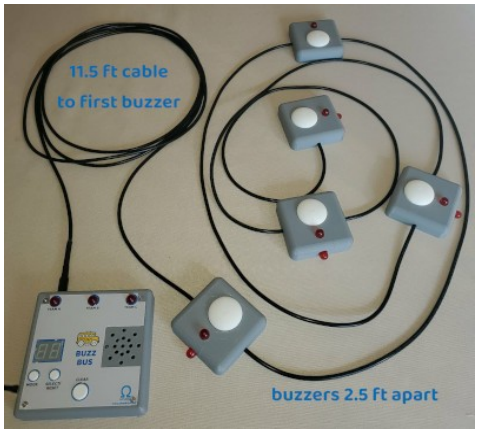


Figure 1: Buzz Bus setup showing one 5-buzzer chain plugged into Team A connector

II. System Description

A. Master Control Unit

A	**Team A, Team B, and Team C LED Indicators** **Flashing:** Indicates current winning team. Winning buzzer's LED will be solid-on (option O1=0) or flashed (option O1=1). If option O2=1 (Team Play), all other winning team buzzers will also light. If option O2=0 (Solo Play), then only that single winning buzzer will light. **Solid:** Indicates a queued win for that team. Buzz Bus will remember which buzzer buzzed in, and will advance to that team when the operator presses CLEAR button.
B	**Two-digit LED display** **RUN mode.** Buzz Bus default mode. Displays current timer mode (none/5/15/60 secs) when timer is idle, or the countdown value if timer is running, paused, or done. **Diagnostics and Options mode.** Operator can run diagnostics and options to view/edit.
C	**MODE, SELECT/RESET, and CLEAR buttons** **MODE:** Cycle through timer modes, diagnostics, and options. **SELECT/RESET:** When in RUN mode (default), starts and optionally pauses/un-pauses timer. Long-press resets the timer. When in Diagnostics and Options mode, selects diagnostic command to run or modifies option values when in edit option state. **CLEAR:** Clears winning team. If option O6=1, advances to next recorded winner. If no additional winning teams are queued, system will reset. If option O6=0, system resets.
D	**DC Power Input** Plug the included 120VAC/5VDC power adapter into your outlet. Plug the other end of the adapter into this port. When plugged in, system should perform LED check and beep once. There is no power switch.
E	**Team A, Team B, Team C Buzzer Chain Connectors** Team A, Team B, and Team C buzzer chains with a 3.5mm stereo plug should be inserted into these connector ports. Serial chains can theoretically support up to 16 buzzers per chain.

B. Buzzer Chains

Buzzer chains are sets of 4-8 buzzers connected serially to the Master Control Unit. Buzzer behavior is controlled via options on the Master Control Unit.

Buzzer chains have orientation. While you can plug any buzzer chain into any Team A, B, or C connector on the Master Control Unit, the direction of the lower/horizontally facing LED on buzzers should point “in”. Otherwise, the lower/horizontally facing LED may be pointing towards players if tables are laid out in standard left/center/right of the operator. Your Buzz Bus should include one left-facing and one right-facing chain. If your model includes a third chain, it may be either a left- or right-facing chain.

III. System Modes

A. Run Mode

This is the default system mode for Buzz Bus. On power-up, Buzz Bus configures itself via option settings located in its persistent memory and enters Run Mode.

While in Run mode, Buzz Bus listens for player buzz-in attempts from all teams and coordinates winner acknowledgment based on configurable options. Buzz Bus also responds to MODE, SELECT/RESET, and CLEAR button presses to change Timer Modes, enter Diagnostic and Options Mode, control the timer manually, and clear the system for the next round.

- **Clear and reset Buzz Bus** by pressing the CLEAR button until all Team LEDs are off.
  - If queuing is enabled (option O6=1), you may need to press CLEAR multiple times.
  - If queuing is disabled (option O6=0), then pressing CLEAR once will fully clear and reset Buzz Bus.
- **On first buzz-in**, Buzz Bus will flash the corresponding Team LED (A, B, or C) indicating successful buzz-in.
  - If in Team Play mode (option O2=1), all Buzzer LEDs on winning team will light per option O1.
  - If queuing is enabled (option O6=1), successive buzz-ins from other players on other teams will be indicated by a solid light on the corresponding Team LED indicator.
- **All buzz-ins**, whether first (immediate), or initiated from the queue, will be accompanied with an audible buzz-in sound
  - Buzz-in sounds are configurable via option O3 (plain tone, or 2 variations of melodies)
- **Buzzer LED behavior** is configurable. See options O1 and O2 for Buzzer configuration details.
- **All buzz-ins may set the numeric display** to some value according to active Timer Mode.

    - If auto-countdown timer is enabled (option O5=1), then countdown will be started immediately.
    - If auto-countdown timer is not enabled (option O5=0), then the timer can be manually started and optionally paused/un-paused using the SELECT/RESET button. Long-press SELECT/RESET to reset the timer.
- **An audible warning beep** (option O4=2 or option O4=5) will be played as the countdown timer reaches the number of seconds left (2 or 5) specified in option O4. Warning beep can be disabled by setting option O4=0.

B. Timer Modes

When in Run Mode (default), the numeric display will behave differently based on the current Timer Mode and configured options.

Table 3: Timer Modes

Timer Mode	Behavior on buzz-ins
0	Display reads the ID of the winning buzzer. ID=0 is the first buzzer in the chain.
5	Display will be set to 5 seconds. If option O5=1, countdown timer will auto-start.
15	Display will be set to 15 seconds. If option O5=1, countdown timer will auto-start.
60	Display unchanged. Timer is controlled manually using SELECT/RESET button.

Note: If option O5=0, numeric display will be set but will not auto-start. Countdown timer can always be manually started, paused, and un-paused using the SELECT/RESET button, even if auto-start is enabled.

Note: Timer Mode = 60 is designed to be used for “Lightning” or “60 Second” rounds. Buzz-ins will still be acknowledged, but the timer can only be controlled manually.

The active Timer Mode can be changed at any time when in Run Mode by pressing MODE button. The numeric display will show the new Timer Mode (0, 5, 15, 60) as MODE is pressed. Buzz bus defaults to Timer Mode = 0 (none) on power up. The active Timer Mode is not saved when Buzz Bus is powered down.

C. Diagnostics and Options Mode

Press both MODE and SELECT buttons at the same time for more than one second when in RUN mode to enter Diagnostics and Options Mode. Buzz Bus will play two short beeps and present the first diagnostic command to run.

In Diagnostics and Options mode, pressing MODE will advance to the next diagnostic command to run or option to view/edit.

Pressing SELECT button on a diagnostic command will run that diagnostic.

Pressing SELECT button on an option will show the editable value for that option. Pressing SELECT

when in this state will cycle through all available values for that option. Options are automatically saved to persistent memory when changed. Pressing MODE button when in the state will exit out of option editing for that option and display the next option (O1-O6) in the list.

Pressing CLEAR at any time will end Diagnostics and Options mode and return to RUN mode.

Diagnostics

Two diagnostic commands are available for Buzz Bus and can only be run when in Diagnostics and Options mode.

Table 4: Diagnostic Commands

Diagnostic	Description	Action Performed
L-	LED Test	Turns on all Master Control Unit and all Buzzer LEDs. SELECT button toggles all LEDs on/off. MODE button ends the diagnostic check and advances to the next diagnostic command option.
P-	Ping Test	Cycles through all available Buzzers on all Team chains. For each buzzer, Buzz Bus briefly shows the Buzzer ID on the numeric display as well as turning on its LED. Buzz Bus then sends 99 ping check messages, and shows the number of successful transactions. It should be 99/99.

Options

Options can be viewed/edited only when in Diagnostics and Options mode. Changing any option is immediately saved to persistent memory and all options are reloaded from memory on next power-up.

Table 5: Options

Option	Description	Value	System Behavior
O1	Buzzer LED Flash	0	Solid LED for buzz-ins
		1	Flashing LED for buzz-ins
O2	Solo or Team Play	0	Solo Play. Only winning buzzer LED light per option O1.
		1	Team Play. All buzzer LEDs on winning team light per option O1.
O3	Buzz-In Sound	0	Plain tone sound on buzz-ins
		1	Melody of notes style #1 on buzz-ins
		2	Melody of notes style #2 on buzz-ins
O4	Timer Warning	0	No audible warning beep during countdown
		2	Short audible beep at 2 seconds remaining in countdown
		5	Short audible beep at 5 seconds remaining in countdown
O5	Auto-Countdown	0	Manual timer control
		1	Timer automatically starts on buzz-in per active Timer Mode

O6	Queue Buzz-ins	0	Buzz Bus will not queue buzz-ins. Typically used for game setups when clearing for all other teams should happen after incorrect answers. Full system clear every time CLEAR button is pressed.
		1	Buzz Bus will queue buzz-ins. It will remember team and player buzz-ins during multi-team buzz-in attempts. Typically used to give team or player, in correct win order, the opportunity to provide an answer. Pressing CLEAR button will promote any queued winners to active winner until no further queued buzzes.

IV. Troubleshooting

A. Buzzers

Symptom	Suggestion
Buzzer is not responding. No LED activity, nothing.	The Buzzer is likely not getting power. Make sure the Master Control Unit is plugged in and functioning. Make sure the Buzzer Chain connector is fully inserted into the Master Control Unit. If the problem persists, contact Ohmbrew for further guidance.
Buzzer rapidly blinks its LED for less than 1 second whenever button is pressed.	The Buzzer is not receiving an acknowledgment from the Master Control Unit after it attempts to buzz in. The Buzzer is getting power, but there is a communication error. Make sure the Buzzer Chain connector is fully inserted into the Master Control Unit. If it is still failing, then there may be a break in the Buzzer Chain. Contact Ohmbrew for replacement options.

B. Master Control Unit

Symptom	Suggestion
Master Control Unit doesn’t appear to do anything when its plugged in.	Master Control Unit should perform brief LED check and beep once when plugged in. If it does not do this, verify it is being powered with a 5V power adapter (plug: 5.5mm OD 2.5mm ID) that is plugged into a standard 120VAC outlet. It the problem persists then contact Ohmbrew for replacement options.
Master Control Unit is not acknowledging buzz-ins from either Team A, Team B, or Team C.	Make sure the respective Buzzer Chain connector is fully inserted into the Master Control Unit. Try other Buzzer Chains on the faulty connector. If the problem persists on just one connector, the issue may be internal to the Master Control Unit. Contact Ohmbrew for replacement options.