



1. Which Buttons Control the Slave Function?

The Slave function is controlled using two buttons on the controller:

| Controller Button | Function |
|-------------------------|----------------------------------|
| OPTIONS | Pair / arm Slave (trailer) |
| SHARE (short press) | Select & enable routing to Slave |
| SHARE (long press, ±2s) | Unpair / stop Slave session |

2. OPTIONS Button - Pairing & Arming the Slave
What OPTIONS does

Starts the Master ↔ Slave pairing

Arms the trailer for control

Opens a temporary ESP-NOW session

Behavior

Press OPTIONS once

Master sends a pair request

Slave responds and becomes bound

Trailer is now armed and ready

- Important:

Pairing is session-based

Power-cycle = pairing is lost

OPTIONS must be pressed again after restart

3. SHARE Button - Slave Routing Control

The SHARE button controls which channels are sent to the Slave.

Short Press (Tap)

Used to:

Select a Slave (if multiple are paired)

Enable or disable routing to that Slave

How it works

Each tap selects a Slave index

After selection, routing is toggled

Example (multi-slave support):

1 tap → Slave 1

2 taps → Slave 2

Selected Slave toggles routeEnabled

-Timing:

Tap window: 450 ms

Taps must be within this window



4. What Gets Routed to the Slave?

When routing is enabled for a Slave:

Always Local (Truck)

Motor 1

Servo 1

Routeable (Truck OR Trailer)

Motors 2 / 3 / 4

Servos 2 / 3 / 4

If:

No Slave is bound

Slave is not armed

-Channels automatically fall back to local control

This guarantees safe operation.

5. SHARE Long Press (± 2 Seconds) - Unpair / Stop Slave What it does

Cancels the ESP-NOW session

Clears Slave bindings

Disables all trailer routing

When to use

Changing trailers

Troubleshooting

Resetting the system

After a long press:

Trailer is no longer controlled

OPTIONS must be pressed again to re-pair

6. Safety Logic (Built Into Firmware)

Your firmware includes important protections:

Slave commands are ignored if not armed

Motors stop if:

Low voltage detected

Slave connection is lost

Lights may remain active for visibility

Motors & servos never activate accidentally



7. Typical User Flow (Real Example)

Power truck and trailer

Press OPTIONS → trailer pairs

Tap SHARE → enable routing

Drive normally

Use trailer functions via Slave

Long-press SHARE to disconnect trailer

8. Summary (Manual-Friendly)

OPTIONS = pair & arm trailer

SHARE (short) = select / enable trailer routing

SHARE (long) = disconnect trailer

Motors & servos auto-fallback to truck if trailer is unavailable

This design ensures:

- Safe operation
- Modular trailers
- Multi-slave support
- Realistic truck-trailer behavior