

Freedom Work Blade Tailgate Light Bar Instruction Manual



Congratulations on your purchase of a high quality PUTCO product. Should you need any application or technical assistance, feel free to call us at: 1-800-247-3974 Monday-Friday 8:00 a.m. - 5:00 p.m. (Central Standard Time) Contact your PUTCO dealer for other quality accessories.

Please read all instructions before installation and to check to see that all parts are included.

KIT CONTENTS:	
DESCRIPTION	QTY
3M Tape Strips	4
3M ScotchLoch Splice Connector	4
Black Plastic Bracket	4
Cable Ties	8
LED Driver Box	1
LED Light Bar	1
Wireless Remote	1

Tools Required:

90% Isopropyl Alcohol
Clean Towel
10mm Socket and Wrench

You can find a full installation video on our YouTube page!



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INSTALLATION PREP

1. Verify the kit contents above and gather required tools. Contact customer service if anything is missing.
2. Clean and dry the vehicle thoroughly in location where light bar is to be installed.
3. The vehicle surface temperature must be a minimum of 15°C (60°F).

MOUNT THE LIGHT BAR

1. Install 3M tape on back of black plastic brackets. Brackets are useful if there are any obstructions on truck where light is to be installed. Brackets will hold light bar away from truck.



2. Use 90% isopropyl alcohol to prep the surface on vehicle where light bar is going to be installed.
3. Install black plastic brackets with tape onto the back of tailgate light bar. One on each end, then evenly space out the middle two. (approximately 16" on center)



4. Remove the red tape backing on all brackets. Place light bar in chosen position on the rear sheet metal of the truck below the tailgate. Do not stick tape to truck until light bar is in correct position.



5. Light bar wire should exit toward driver side of truck. If you lightly place the light bar you will temporarily be able to lift the individual brackets to help adjust and level the light bar.
6. Ensure that the light bar does not obstruct the tailgate from fully opening. If it does, lower the light bar 1-2 mm and try again. Mounting the light bar without the brackets can also help if lowering the light bar is not sufficient.
7. Once the light bar is in a satisfactory position then apply ample pressure to each bracket to promote a good bond.

NOTE: On some trucks, the tailgate light bar is easier to install if tailgate has been removed.

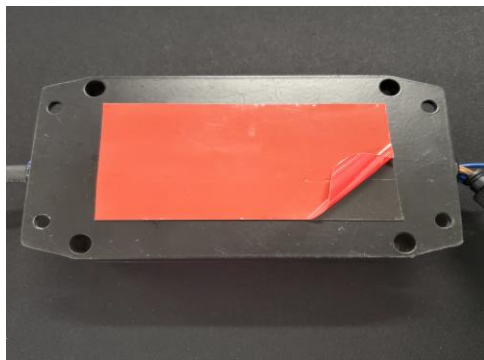
MOUNT THE DRIVER BOX



1. The Freedom Blade driver box is a small computer that controls the tailgate light bar. It comes with two holes on each side of the driver box. This allows the driver box to be mounted in many different orientations and places behind the bumper of your truck.



2. The Freedom Blade also comes with 3M automotive double sided sticky tape on the back of the driver box. If your truck has a suitable flat spot this can also be used for mounting. The 3M tape helps to reduce vibration. Clean the area before attaching the driver to increase adhesion strength. Try to use at least three of the four mounting holes to secure the driver box if not using the attached 3M tape.



CONNECT THE LIGHT BAR TO THE DRIVER

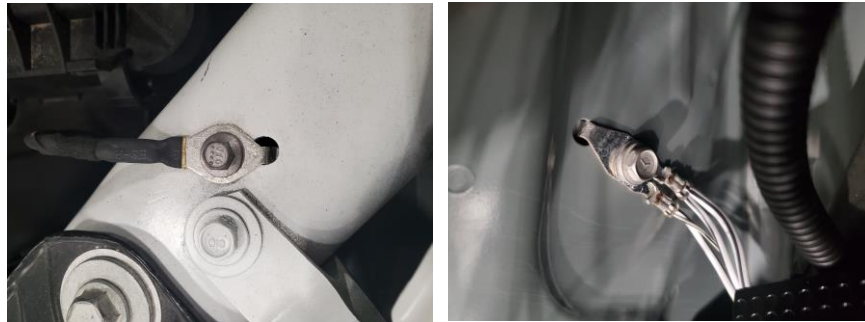


Once the light bar and driver have been mounted to your truck you can connect the two. To do so, carefully push the two M12 QD connectors together making sure to line up the key in the keyway. Do not force the connector. Once the connector is pushed in, start to spin the nut until it starts to thread. Hand tighten until the nut stops spinning to ensure a waterproof seal.

HARNESS INSTALLATION



1. Once the driver box is mounted, check in the engine bay which side of your truck the battery is located (driver vs passenger). Next, you will want to fish and route the 25' black wire bundle along with the relay to the front of your truck and towards your battery. Use a zip tie every 12-18" to secure the wire to the frame of the truck. Pay special attention when fishing the wire bundle up from the frame rail into the engine bay to avoid hot and moving parts.



- Next, you will need to find a convenient spot to mount the relay in the engine bay. If you can find a bolt that is already attaching the trucks wiring harness to the sheet metal of the engine bay, this is usually a good mounting location which also doubles as a negative/ground termination.



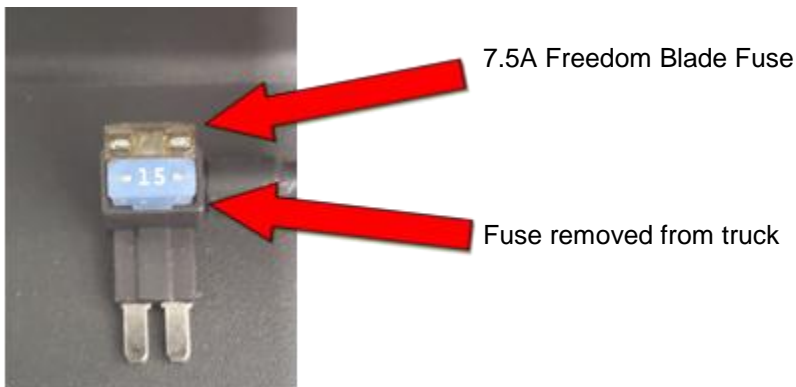
- Place the black ring terminal between the bolt and the relay flange. This location needs to be within two feet of the positive battery terminal and five feet of the fuse box. Another possible location is the battery negative terminal. This is often a 10 or 12mm bolt.



- Disconnect the battery negative terminal before proceeding! Failure to do so can result in shorting the battery and serious injury.**
- Attach the red wire with the 3/8" ring terminal to the battery positive terminal as shown above.



6. Connect the white wire that has the add-a-fuse connector on one end into the correct fuse location for your truck. We recommend using your truck's accessory, ignition or interior fuse. Please see your trucks user manual for correct fuse location. **This fuse needs to be on a circuit that turns on with truck ignition.** See table at the end of the instructions for some possible fuses. If the fuse you select is always on, the Freedom Blade will slowly drain your battery. The above photo is just an example fuse block, your trucks will probably be different.



7. Place the fuse you took out of your truck into the empty slot on the bottom of the add-a-fuse connector. If you fail to put this fuse into this slot the circuit the fuse is protecting will not get power and won't function correctly.

PATTERNS

TYPE	#	NAME	LED's	DESCRIPTION	SPEED
SOLID	1	ALL AMBER		ALL LED'S ARE ILLUMINATED AMBER.	NA
SOLID	2	ALL WHITE		ALL LED'S ARE ILLUMINATED COOL WHITE.	NA
SOLID	3	ALL BLUE		ALL LED'S ARE ILLUMINATED BLUE.	NA
DIRECTIONAL	4	AMBER DIRECT. CENTER OUT		AMBER SEGMENTS TRAVEL FROM THE CENTER OUT.	SLOW
DIRECTIONAL	5	AMBER DIRECT. RIGHT		AMBER SEGMENTS TRAVEL FROM LEFT TO RIGHT.	SLOW
DIRECTIONAL	6	AMBER DIRECT. LEFT		AMBER SEGMENTS TRAVEL FROM RIGHT TO LEFT.	SLOW
DIRECTIONAL	7	AMBER DIRECT. CENTER OUT FAST		AMBER SEGMENTS TRAVEL FROM THE CENTER OUT.	FAST
DIRECTIONAL	8	AMBER DIRECT. RIGHT FAST		AMBER SEGMENTS TRAVEL FROM LEFT TO RIGHT.	FAST
DIRECTIONAL	9	AMBER DIRECT. LEFT FAST		AMBER SEGMENTS TRAVEL FROM RIGHT TO LEFT.	FAST
DIRECTIONAL	10	AMBER DUAL DIRECT. CENTER OUT FAST		AMBER SEGMENTS TRAVEL FROM THE CENTER OUT.	FAST
DIRECTIONAL	11	AMBER DUAL DIRECT. CENTER IN FAST		AMBER SEGMENTS TRAVEL FROM THE CENTER OUT.	FAST
FLIP-FLOP	12	AMBER OFF		AMBER SEGMENT SLOWLY FLIP-FLOPS BETWEEN EACH SIDE.	SLOW
FLIP-FLOP	13	WHITE OFF		WHITE SEGMENT SLOWLY FLIP-FLOPS BETWEEN EACH SIDE.	SLOW
FLIP-FLOP	14	BLUE OFF		BLUE SEGMENT SLOWLY FLIP-FLOPS BETWEEN EACH SIDE.	SLOW
FLIP-FLOP	15	AMBER OFF		AMBER SEGMENT FLIP-FLOPS BETWEEN EACH SIDE.	MEDIUM
FLIP-FLOP	16	WHITE OFF		WHITE SEGMENT FLIP-FLOPS BETWEEN EACH SIDE.	MEDIUM
FLIP-FLOP	17	BLUE OFF		BLUE SEGMENT FLIP-FLOPS BETWEEN EACH SIDE.	MEDIUM
FLIP-FLOP	18	AMBER OFF		AMBER SEGMENT QUICKLY FLIP-FLOPS BETWEEN EACH SIDE.	FAST
FLIP-FLOP	19	WHITE OFF		WHITE SEGMENT QUICKLY FLIP-FLOPS BETWEEN EACH SIDE.	FAST
FLIP-FLOP	20	BLUE OFF		BLUE SEGMENT QUICKLY FLIP-FLOPS BETWEEN EACH SIDE.	FAST
SOLID	21	AMBER BLUE		LEFT SEGMENT AMBER, RIGHT SEGMENT BLUE.	NA
SOLID	22	BLUE AMBER		LEFT SEGMENT BLUE, RIGHT SEGMENT AMBER.	NA
SOLID	23	BLUE WHITE		LEFT SEGMENT BLUE, RIGHT SEGMENT WHITE.	NA
SOLID	24	WHITE BLUE		LEFT SEGMENT WHITE, RIGHT SEGMENT BLUE.	NA
SOLID	25	WHITE AMBER		LEFT SEGMENT WHITE, RIGHT SEGMENT AMBER.	NA
SOLID	26	AMBER WHITE		LEFT SEGMENT AMBER, RIGHT SEGMENT WHITE.	NA
BLINK	27	BLINK AMBER		LIGHT BAR BLINKS AMBER.	MEDIUM
BLINK	28	BLINK WHITE		LIGHT BAR BLINKS WHITE.	MEDIUM
BLINK	29	BLINK BLUE		LIGHT BAR BLINKS BLUE.	MEDIUM
CHECKER	30	WIDE CHECKER AMBER		LIGHT BAR WIDE AMBER CHECKER PATTERN.	MEDIUM
CHECKER	31	WIDE CHECKER WHITE		LIGHT BAR WIDE WHITE CHECKER PATTERN.	MEDIUM
CHECKER	32	WIDE CHECKER BLUE		LIGHT BAR WIDE BLUE CHECKER PATTERN.	MEDIUM
CHECKER	33	CHECKER AMBER		LIGHT BAR NARROW AMBER CHECKER PATTERN.	MEDIUM
CHECKER	34	CHECKER WHITE		LIGHT BAR NARROW WHITE CHECKER PATTERN.	MEDIUM
CHECKER	35	CHECKER BLUE		LIGHT BAR NARROW BLUE CHECKER PATTERN.	MEDIUM
FLIP-FLOP	36	AMBER BLUE		AMBER AND BLUE FLIP-FLOPS BETWEEN EACH SIDE.	MEDIUM
FLIP-FLOP	37	WHITE BLUE		WHITE AND BLUE FLIP-FLOPS BETWEEN EACH SIDE.	MEDIUM
FLIP-FLOP	38	WHITE AMBER		WHITE AND AMBER FLIP-FLOPS BETWEEN EACH SIDE.	MEDIUM

WIRELESS REMOTE



- A= POWER LIGHTBAR ON / OFF
- B= CHANGE TO NEXT STROBE PATTERN
- C= AMBER DIRECTIONAL **LEFT** PATTERN #5
- D= AMBER DIRECTIONAL **RIGHT** PATTERN #6
- C+D= SOLID WHITE PATTERN #2

All Freedom Work Blades come with a wireless remote to allow the user to easily turn the workblade on and off as well as select which pattern they want to display. The wireless remote comes with a sliding plastic cover to protect the buttons and avoid accidental presses when in your pocket. The A button on the wireless remote turns the light bar on and off. The B button goes to the next pattern and goes back to the first pattern once it reaches the end of the list. C, D and C+D will override what is currently playing and plays left directional, right directional and solid white respectively. These are useful to quickly change the displayed pattern on your truck to direct traffic around your truck or illuminate the area behind your truck at night.

NOTE: Wireless reception from remote to receiver is about 30 feet in open air. However, if the receiver box attached to the workblade harness is tucked up inside a bumper distance may be reduced down to a few feet.

NOTE: If running multiple workblades with multiple wireless remotes, the remote from one will NOT control the other workblade and vice versa. It is useful to label the remotes in this situation.

SAVING PATTERNS

The workblade comes with 38 installed patterns. The workblade will automatically save the selected pattern after it has been playing for 10 seconds. **DO NOT TURN YOUR TRUCK OFF WHILE THE LIGHT BAR IS SAVING. THIS CAN CORRUPT THE LIGHT BAR.** The next time you turn on the work blade or start your truck, the pattern you had chosen previously will resume. There is no need to select your pattern every time the workblade is restarted. The startup sequence on the workblade is not user adjustable. The startup sequence will always display white for 4 seconds, pulse amber for 4 seconds and then return to the last pattern that was selected.

LIGHT BAR BEHAVIOR

If your Freedom Work Blade is installed according to this instruction manual, your workblade will only function when the fuse you selected is active, which should only be when the truck is running. You will still need to press the A button on the remote control to turn on the light bar. When the truck is on and the light bar is off the work blade will still draw around 2 watts of power. When the light bar is on it will draw 20-60 watts of power depending on selected pattern.

NOTE: If you want to be able to use your light bar when your truck is off, the white fuse wire can be spliced into the red battery positive (+) wire. **CAUTION:** If you perform this modification it is possible to slowly drain your battery enough to not allow your truck to start even if the light bar has been off.

TROUBLESHOOTING



If your Freedom Work Blade stops working for any reason, nothing on the unit is customer serviceable besides a 7.5 amp (brown) mini automotive fuse. This fuse can be purchased at most automotive stores. If your unit is not powering on and this fuse is blown and subsequently blows when replaced, make sure no water is present in any of the connections. If replacing the fuse does not fix the issue please contact Putco for further support.



If the light bar fails to turn on, make sure the blue LED on the remote illuminates when the A button is pushed. If it does not light up, please replace the battery inside the remote by removing 3 small screws on the back of the remote and inserting a new 27A battery, reassemble then test if the light bar now illuminates.

FUSE LOCATIONS

Make	Model	Year	Fuse Number
Ford	F150	2020-2023	18, 100, 101
Ford	F250	2017-2019	17
Ford	F250	2020-2023	34
Ford	Ranger	2019-2022	22, 27
GM	Silverado 1500	2017-2022	92
GM	Silverado 2500	2017-2022	42
GMC	Sierra 1500	2020-2023	92
GMC	Canyon	2023	40
Hyundai	Santa Cruz	2022	2
Nissan	Frontier	2022	34, 35
Toyota	Tundra	2022	Active Aero (no #)

NOTE: This table should be used as a guide and is not exhaustive. Fuses change often, and with the number of trim levels, packages and model refreshes, please confirm your trucks fuse circuit turns on and off with ignition.

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