

E-11 TROOPER BLASTER UPGRADE

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This kit is for a Hasbro, Kenner, PVC, or other E-11 prop. Using our state-of-the-art technology and engineering experience, we have created the ultimate modification that creates simulated laser bolt lighting along with loud blaster sounds and recoil effects.

The blaster includes the following features:

- Selectable tri-color blaster bolt effect.
- 1W amplifier for loud sound playback
- Blaster sound played on trigger press, stun sound played on extended press.
- Programmable modes that are accessible via trigger:
 - Red, blue, or purple blast color for each sound
 - Fire select mode: single shot, 3-round, or full auto shot mode
 - Unlimited or limited ammo mode
 - 4 sounds available for blaster/stun sounds
 - Visual aid in selecting each mode
- Force feedback motor gives realistic effect for each shot
- Status LEDs for power, fire select mode, ammo out.
- The blaster works off a standard 9-volt battery.

INSTALLING THE KIT INTO A HASBRO BLASTER

If you are planning on installing the kit in a Hasbro E-11 blaster, below are the steps to do this.

- Remove all screws.
- You will also have to cut the scope front and back pieces off, since these are CA glued on.
- Take apart both pieces. Gut the blaster, pulling out the electronic boards, speaker, and wiring.
- Cut the blaster tip off so it is flush.



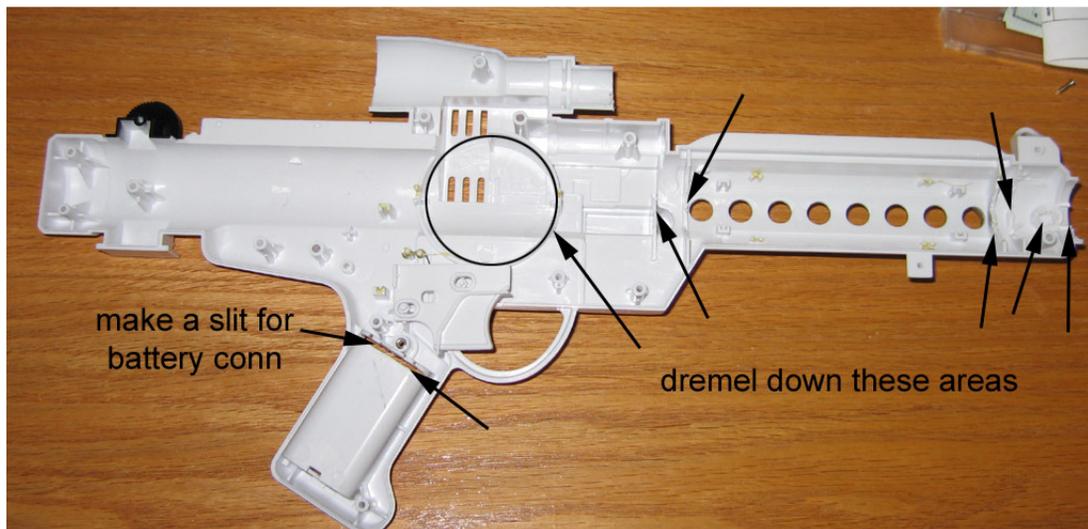
- You will now have to start dremeling out the inside of the blaster in order to fit everything. A drum sanding wheel works great here and will do the job nicely.

NOTICE: There is no warranty on kits!! It is your responsibility to install the board. Kits cannot be returned! This kit can consume a lot of current. Be careful if you plan to use a battery source that is capable of delivering a lot of current. Contact a professional if you need assistance. Hyperdyne Labs assumes no responsibility for the misuse of this kit.

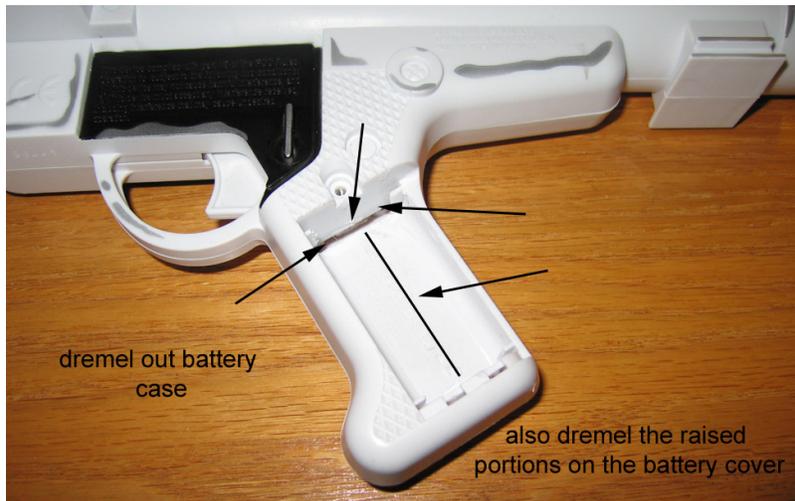
- Take the top part of the blaster and dremel down these locations (including the circular area):



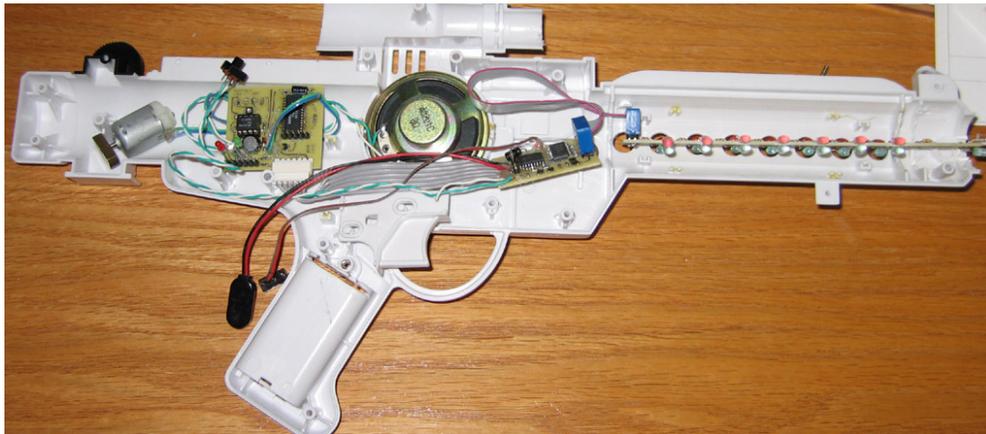
- Next take the bottom part of the blaster and dremel out these areas, including the circular area:



- You will also have to dremel out the battery compartment. Remove the battery tabs with some cutters and dremel out a slit. Also dremel the fins and tabs inside the battery compartment flush. Do the same for the inside part of the battery cover. This will allow the 9V battery to fit with the cover on.
- **NOTE:** Don't cut off the tabs on the bottom of the battery cover! They will still work and will hold the cover in place when installed with a battery.



- Test fit the kit inside the bottom part of the blaster. Here is a pic of where all the components fit:

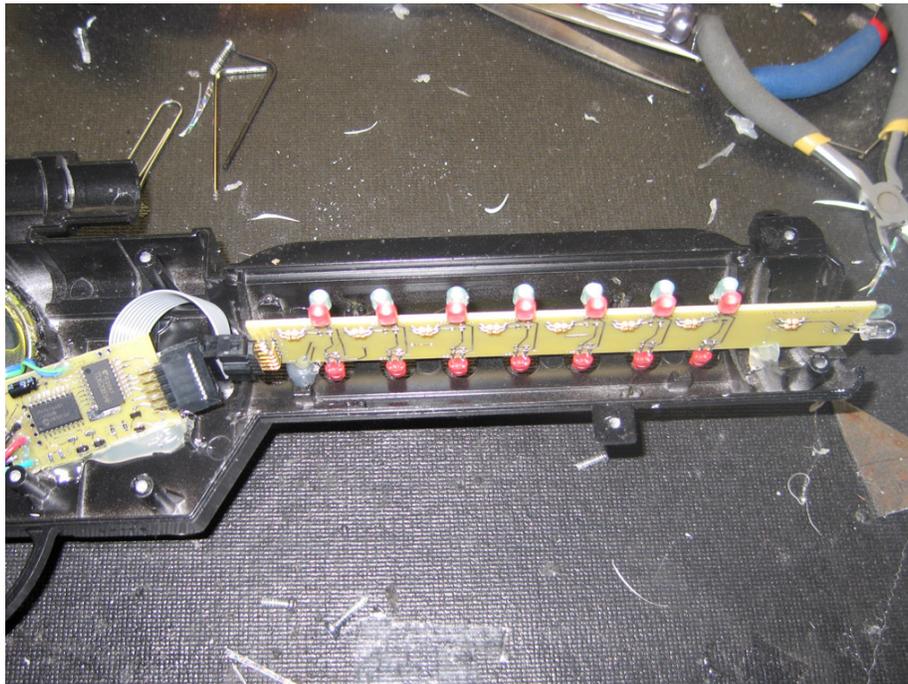


Try and put the top shell on and see if you need to dremel the locations down and further so the pieces fit together without rubbing on the speaker, boards, etc. You want the shells to snap back together without forcing them!

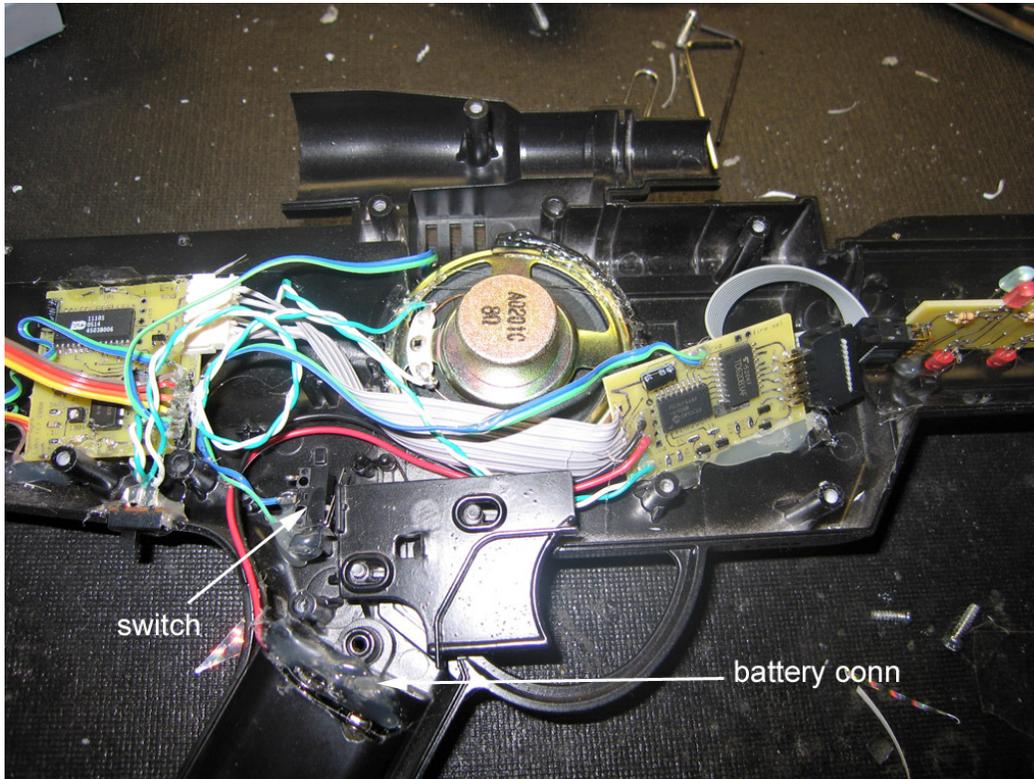
- Once all dremeling is done, cut out a small rectangular area behind the grip for the on/off switch.



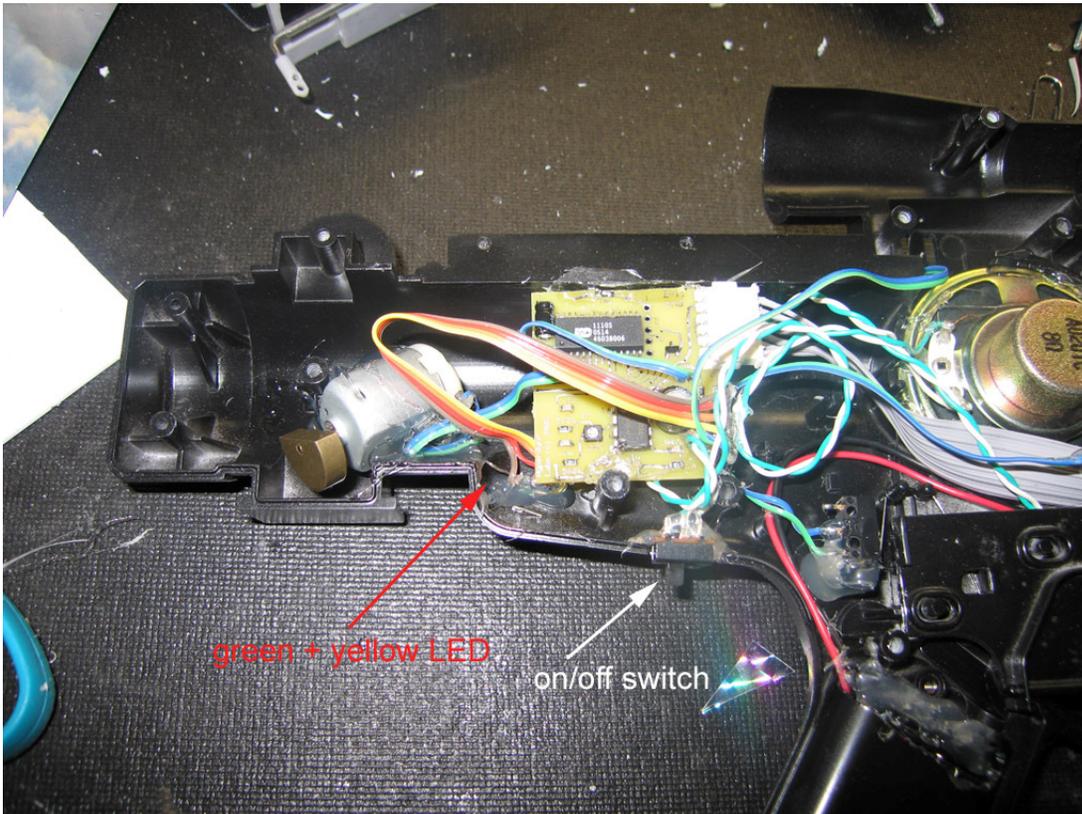
- You can paint the blaster now (if you have a non black version). For later models of the Hasbro E-11, it should already be black.
- After painting is done and dry, you can start installing the electronics! First start with the blaster bolt light board. You will install everything in the bottom half of the blaster. Line up the LEDs with the holes on barrel (skipping the first hole). Hot glue the front and back of the LED board to the bottom of the shell and wait until it dries.



- Next glue down the speaker and the sound board. The sound board will fit down in the area shown with a snug friction fit. Apply a small amount of glue to hold it in place. Put some glue around the speaker also to prevent it from moving around.
- Next install the trigger lever switch. Glue it to the small plastic post so it presses up against the trigger mechanism. Press and release the trigger so you can test that the switch clicks when the trigger is fully depressed. Glue it in place.



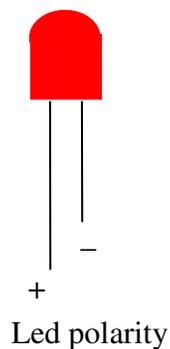
- Also slide the 9V battery connector through the slit you cut earlier. Line it up from the other side and glue it down. Make sure a 9V battery fits flush in the battery compartment so the cover will fit over it.



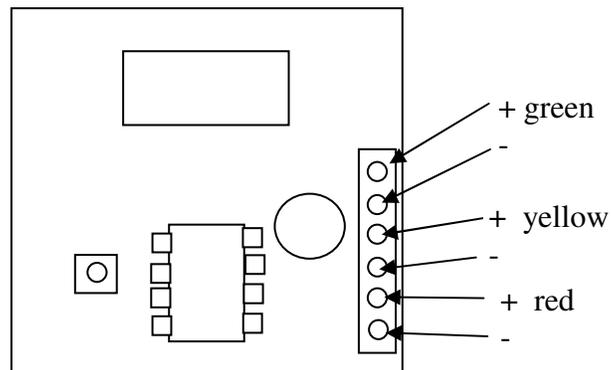
- Next glue the vibration motor down so it cannot move. Also glue down the on/off switch into the rectangular area you cut out before.
- The 3 LED lights are optional and can be installed if need be. They are not wired up, so the installer will have to wire them up. Follow the directions below.

3mm optional LED connections:

The sound board has 3 LEDs that it controls for visual feedback on your blaster. The green LED is power, the yellow is for the selected fire mode, and the red is the ammo ok indicator. To wire up the LEDs, you will need some wire and a soldering iron. The header on the sound board has 6 connections. From the top, the connections are:



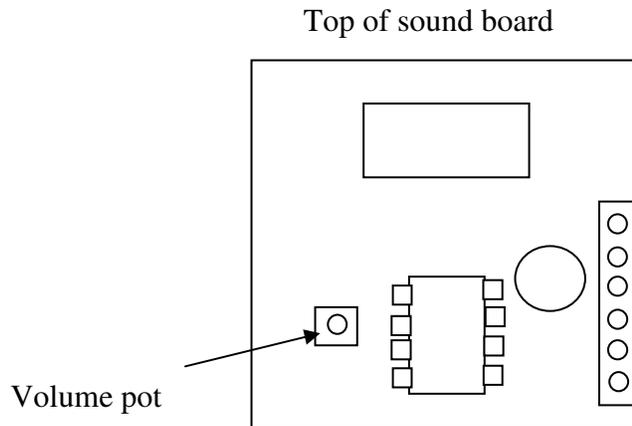
Top of sound board



You can solder wires to the headers and the LEDs to the other end of the wires. Make sure you abide polarity, which is shown above. The + side of the LED connects to the + side of the header, the – side goes to the negative header pin.

Volume control:

The sound board also has a tiny volume potentiometer on board. You can use a small jewelers screwdriver to change the volume to meet your needs. The amp is rated up to 1W.



- After you have finished installing all the boards, make sure the top piece will fit and does not rub on any of the boards. If it does, you might need to do some additional dremel work until the top piece fits over the bottom blaster shell and snaps back together without gaps.
- One the blaster snaps back together, screw it back together with the screws you removed in step 1.
- **Electronic assembly is done! Install a battery and make sure the blaster turns on.**

Adding accent pieces:

If your are adding accent pieces, you can glue them on if you want. The pieces include the hengstler counter, magazine, stock pieces, muzzle cap, cylinder caps, end cap, and strap holder. Here are a couple pictures showing the locations of the pieces.

You can use C/A glue, hot glue, or epoxy to glue the pieces to the blaster body.





You can also add coiled wires from the counter to the cylinder blocks.



Congratulations!! This completes your blaster.

The next section covers the features and operational instructions for your blaster.

E-11 BLASTER OPERATIONS MANUAL

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USING THE FEATURES OF YOUR BLASTER

Operation is simple, turn on the blaster using the convenient on/off slide switch located on the underside of the blaster. After a small boot period, the blaster will play out a ready (cocking) sound.



Now just pull the trigger and release to get a simulated blaster bolt w/ sound. The red barrel lights will travel down the barrel ending with a flash. The internal vib motor also simulates a recoil with every shot. If you hold the trigger for around 1 second then release it, you will get a stun sound effect instead of the blaster sound effect, along with a bright blue stun effect!

Status LEDs:

There are 3 status LEDs on the finished blasters – green, yellow, and red.

- The green LED denotes that the blaster is on and charged. When the green LED is off, the power switch is off or you are out of ammo (in limited ammo mode only).
- The red LED is the ammo ok indicator. When the red LED comes on, this means you are out of ammo (in limited ammo mode only). You have to wait 15 seconds while the blaster emulates a power cell recharge. When this cooldown time passes a recharge sound plays out and the red LED goes out. You can now fire the blaster again.
- The yellow LED denoted the active fire-select mode.
 - Yellow LED off: single-fire mode selected
 - Yellow LED on: 3-round burst mode selected
 - Yellow LED blinking: full-auto mode selected

Changing different blaster modes:

Cycling through the different modes is easy and is entirely controlled via the trigger button. When you hold the trigger down for a long period of time, the blaster will enter the programming mode, which will allow you to change any of the blaster settings. For each mode, each red LED of the blaster barrel will light up in sequence. You change the setting in that mode by releasing the trigger when the corresponding LED is lit.

Here is a table of how to cycle through each mode and make a setting change:

Trigger held down until	Mode selected	Available settings	Default setting
1 st barrel LED lit	Select-fire mode	1) Single fire 2) 3-round burst 3) 10-shot auto	Single fire
2 nd barrel LED lit	Blaster bolt color	1) Red 2) Blue 3) Purple	Red
3 rd barrel LED lit	Stun bolt color	1) Red 2) Blue 3) Purple	Blue
4 th barrel LED lit	Ammo mode	1) Unlimited ammo 2) Limited 25 shot w/ cooldown	Unlimited
5 th barrel LED lit	Blaster sound	1) E-11 standard 2) E-11 stun 3) Smuggler DH-17 4) Clone DC-17	E-11 standard
6 th barrel LED lit	Stun sound	1) E-11 standard 2) E-11 stun 3) Smuggler DH-17 4) Clone DC-17	E-11 stun
7 th barrel LED lit and LEDs begin to sequence	Resets all settings back to defaults		

With the default factory settings, the blaster is set up to do single fire, red blaster bolt, E-11 blaster sound, blue stun bolt, E-11 stun sound, and unlimited ammo mode.

As an example, let's say you want to change the default blaster bolt color to blue and the blaster firing sound to the clone DC-17 sound.

You would first hold the trigger down until the 2nd barrel LED lights. Release the trigger. The blaster will confirm the change with a beeping sound. Now fire the blaster once and the bolt color should now be blue. Next hold the trigger down until the 5th LED lights, then release. After the beep confirmation do this again and release once the 5th LED lights. After the beep again do it one more time, and you will have selected the 4) sound which is the clone blaster sound. Fire the blaster and confirm it for yourself!

NOTE:

- Once you pass the last setting for a given mode, the next setting simply wraps back to the beginning. So if you wanted to change the color back to red in the above example, you would have to hold the trigger until the 2nd LED lights and release (do this a total of 2 times) to cycle back to the red blaster bolt color.
- All settings are remembered when the blaster is powered off.
- If you ever need to start from the default settings, just hold the trigger until the last barrel LED lights, then the red LED will all sequence forward followed by the blue LEDs. Once this sequencing begins release the trigger. The blaster will reset to default and reboot. The blaster ready sound will also play out again.

This programming mode may seem complicated, but it is very easy to get used to. Plus you can change a large number of settings to fully customize your blaster on the fly. You can choose a mix of colors and sounds and firing modes that meet your needs w/o cumbersome programming or the need for a computer or other mechanism.

Changing the battery:

Just unscrew the original battery compartment and replace the 9v battery. That is it!



WARNING: Do not point this toy weapon at anyone. Do not point the muzzle flash at a person's eyes, as the flash is very bright. Do not put the blaster up to a person's ear, as the loudness of the blaster sounds at this range can cause hearing damage. Hyperdyne Labs assumes no liability to the misuse of this toy.

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