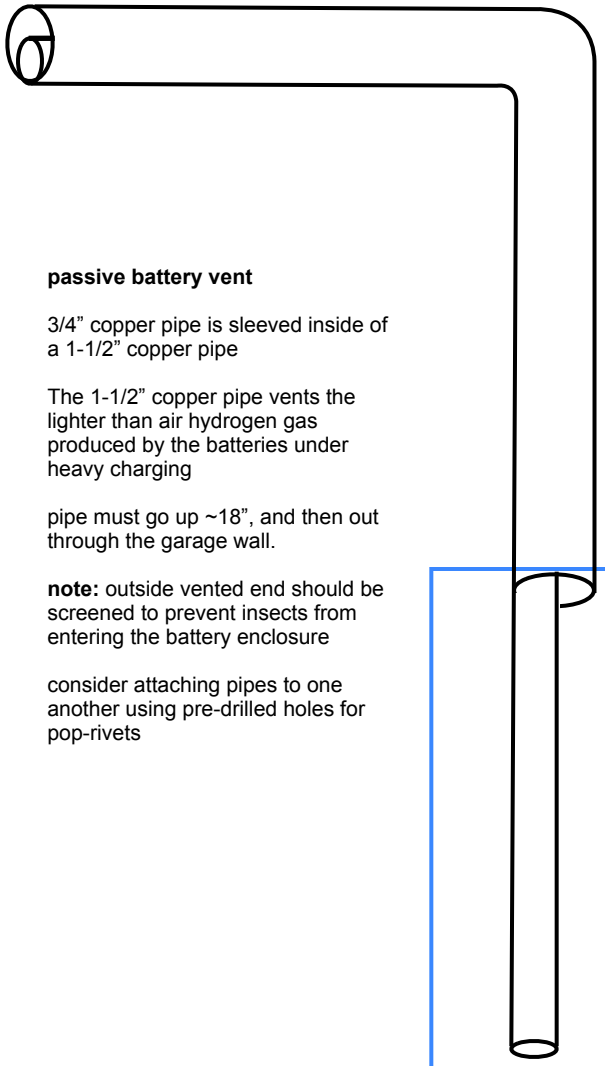


passive battery vent

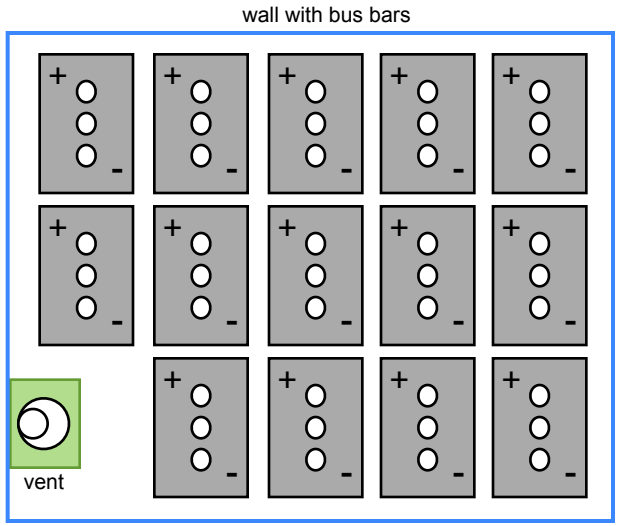
3/4” copper pipe is sleeved inside of a 1-1/2” copper pipe

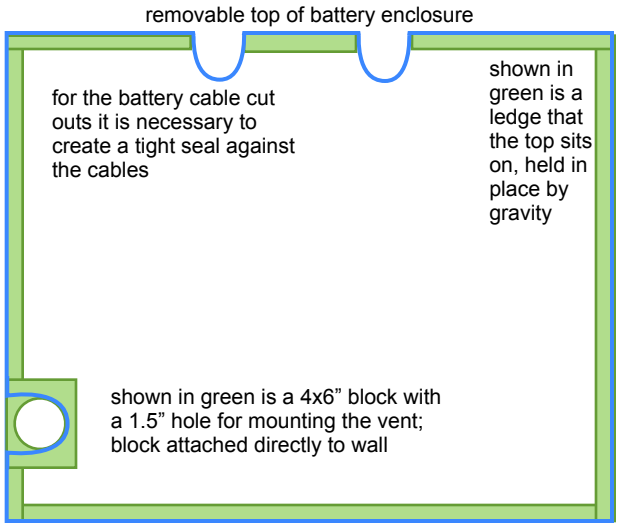
The 1-1/2” copper pipe vents the lighter than air hydrogen gas produced by the batteries under heavy charging

pipe must go up ~18”, and then out through the garage wall.

note: outside vented end should be screened to prevent insects from entering the battery enclosure

consider attaching pipes to one another using pre-drilled holes for pop-rivets





Battery Enclosure

How passive ventilation works:

The metal pipes act as a heat sinks, which effectively eliminates drafts, ensuring that venting only eliminates the lighter than air hydrogen -- an analogy to illustrate this principle is to imagine a modern vestibule (a typical grocery door entrance with a set of inner and outer doors). A vestibule creates a space of air that is somewhere between the inside and outside temperature. By opening one door, and then the other a draft is eliminated - but when both sets of doors open at the same time, a current of air is produced by the pressure gradient created between heavy cold air and light hot air. By using thermally conductive pipe, a pocket of air is created that bridges two temperature extremes, eliminating the draft. A PVC pipe would not create this thermal gradient, and would actually facilitate the creation of a draft - which is known to create swirling pockets of air capable of trapping hydrogen.

Note that hydrogen will not be created in massive quantities - but it is more often than not better to over engineer, especially when the price of copper pipe compared to PVC is insignificant compared to the overall cost of the system