Attach a Battery to the IC-703/703+
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The IC-703 only draws about 2.1-amps at 10-watts output (12 volts needed for 10-watts), and 1.6-amps at 5-watts output (9.6 volts needed for 5-watts). Receive current drain is about 310 ma in the battery-saving mode. Because of this low current drain, you can get excellent operating time using either 9.6-volt 3.3-AH (~$30 with charger) or 12-volt 3.5AH (~$32 with charger) NiMH RC batteries available from www.batteryspace.com (check their other battery/charger combinations). The dimensions of these batteries are such that they can be easily mounted to the side of the IC-703 for simpler portable operation. And they even look good when mounted!

For this project you will need the optional MB-72 carrying handle. This carrying handle mounts on one side of the IC-703, and four rubber feet mount on the other side. On the "rubber feet" side, mounting holes for the optional mobile mount are also available.

From your local hardware store, purchase a piece of 0.040" thick aluminum plate and cut it to the dimensions shown in Figure 1. PC board material and plexi-glass will also work well, but aluminum is sturdier. While you're at the hardware store, pick up two 4mm x 10mm flat-head metric screws. Drill and countersink the two mounting holes shown so screw heads are flush with the surface of the mounting plate. If you don't have any, you'll also need to buy ¼" rubber grommets and 8" tie-wraps (you'll need two of each).

I changed the RC battery connectors to Anderson PowerPole connectors, and added an in-line fuseholder (Mouser 441-R347C @ $1.48) and ATO fuse (Mouser 576-0257004.PXPV @ $0.40). If you do this, _**CAREFULLY**_ cut the cable making sure you don't short the two leads (these RC batteries can deliver a peak short-circuit current of 30-amps!). A safer way to do this is to just make an RC-to-PowerPole adapter cable.

To mount everything, pass the two metric screws through the mounting plate and through the two ¼" rubber grommets, and attach the plate to the side of the IC-703. The front and back edges of the mounting plate will rest on the MB-72 rubber feet. Now simply mount the battery to the mounting plate with two tie-wraps.   The photos show everything.

There are several options for charging these batteries. Batteryspace sells normal (CH-1230-ULBX for 6-9.6V batteries) and fast (CHUN-122 for 6-12V batteries) chargers for $6 & $30 respectively. The inexpensive charger takes 10-15 hours to charge the battery. The 900/1800ma switchable fast charger charges the battery in about 1-4 hours, depending on the battery capacity and charge rate used.

I prefer the 12V 3500mah laptop battery, as it permits the full 10-watts output if you need it. It can also be discharged to 0.9 volts/cell before the IC-703 gives the low battery warning (the 9.6V battery can only be discharged to 1.1v/cell). However, you can only charge this 12V battery with the slow charger that comes with it, or at the 900ma charge rate of the BatterySpace fast charger. However, at the 900 ma charge rate, you can still fully charge this battery in about 4-hours.
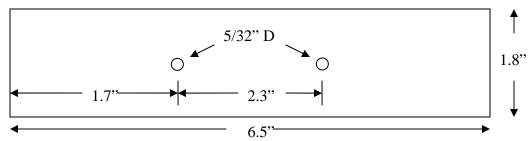
Figure 1: Battery Mounting Plate Dimensions

9.6V battery (top), parts (center), 12V battery (bottom)

Aluminum plate mounted on IC-703

12V battery mounted – Side view

12V battery mounted – Front view

9.6V battery mounted – Side view

9.6V battery mounted – Front view