

Expensive/Slow/Dangerous
to test

Real System

Real Time

Charger

charging code
doesn't know it is
connected to real
battery

Charger can
apply constant
current or terminal
voltage

Charger reads
current and
terminal voltage

Battery

hidden:
state of charge
open circuit voltage

Free/Fast/Trivial
to test (once it is setup)

Fake System

Programmable
Time

Charger

charging code
doesn't know it is
connected to simulated
battery

Charger can
apply constant
current or terminal
voltage

Charger reads
current and
terminal voltage

Battery (simulator)

hidden:
state of charge
open circuit voltage

