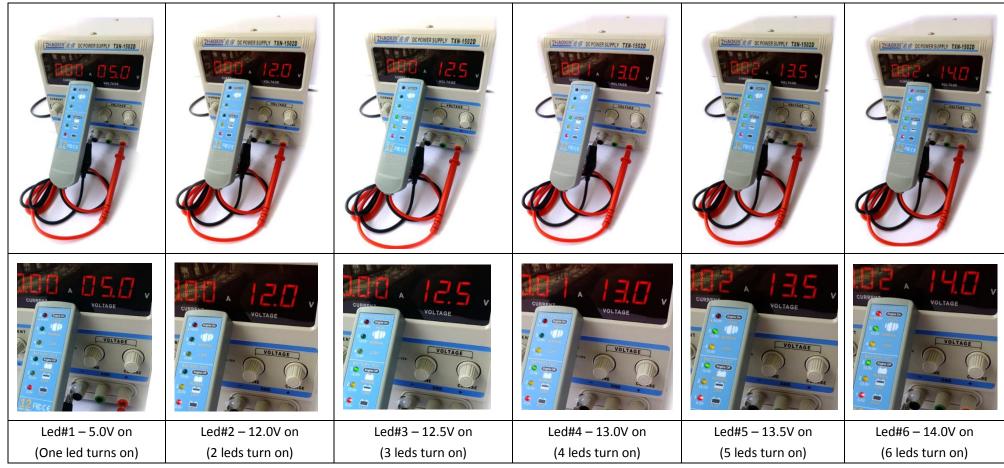
# Comparison between the Battery Testers and BioPower TECH<sup>™</sup> Charging Analyzer

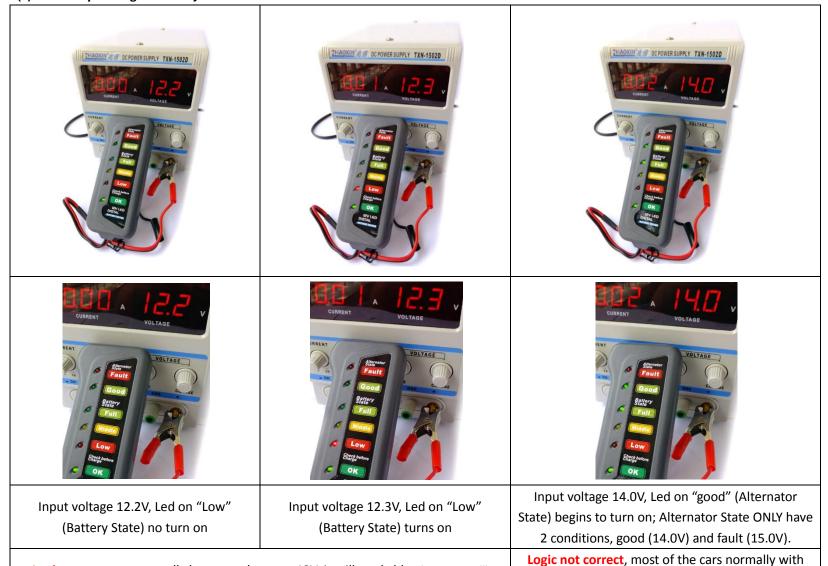
Tester Types:	Battery Alternator Tester#1	Battery Alternator Tester#2	Battery Alternator Tester#3	BioPower TECH <sup>™</sup> Vehicle
Comparison Items:				Charging System Analyzer
Pics	STATE OF THE PARTY	Account of the control of the contro		
Certificate	CE	N/A	N/A	CE & FCC
Cable Wire Material	PVC	PVC	PVC	Silicon Rubber
Wire Length (in CM)	25 CM	90 CM	N/A	78CM
With Magnetic Board or not?	No	Yes	N/A	Yes, can adhesive the tester onto vehicle metal plate
Voltage (V) display on sticker?	No	Yes	Yes	Yes, voltage LEDs 5.0V to 14.0V
3M Sticker	No	No	NA	Yes, better property & long life
IC Operating Temp. Range	N/A	0°C to +70°C (LM324N/ST)	N/A	-20°C to +70°C
Testing Accuracy	Logic not correct: Battery	Not accurate: Voltage 14.0V,	The tester with cigar lighter	Accuracy on full range testing
	"low" condition is setting	led#6 (14.0V) off;	connector will ONLY work	from 5.0V to 14.0V, and 100%
	on 12.3V, below that, led	Logic not correct: When	upon auto "ACC ON"; will not	tested for each item delivered.
	turns off; Alternator "good"	voltage drop down to 11.0V,	have a correct reading on	Details refer to (1) Intro.
	is setting on 14.0V, below	led#2 (12.0V) still on;	battery, cause when "ACC	
	that, led turns off.	IC not work in its spec. in cold	ON", input voltage will	
	Details refer to (2) Intro.	weather (below 0°C)	normally drop down 0.3~0.8V	
		Details refer to (3) Intro.	Details refer to (4) Intro.	
Retail Pricing:				US\$11.90 Suggested

## (1) Accuracy Testing on BioPower TECH<sup>™</sup> Vehicle Charging System Analyzer:



(Accurate reading on all ranges of voltage inputs)

#### (2) Accuracy Testing on Battery Alternator Tester#1:



(No voltage figure "V" display on brand sticker; Logic not correct, will misguide users both on battery and alternator tests.)

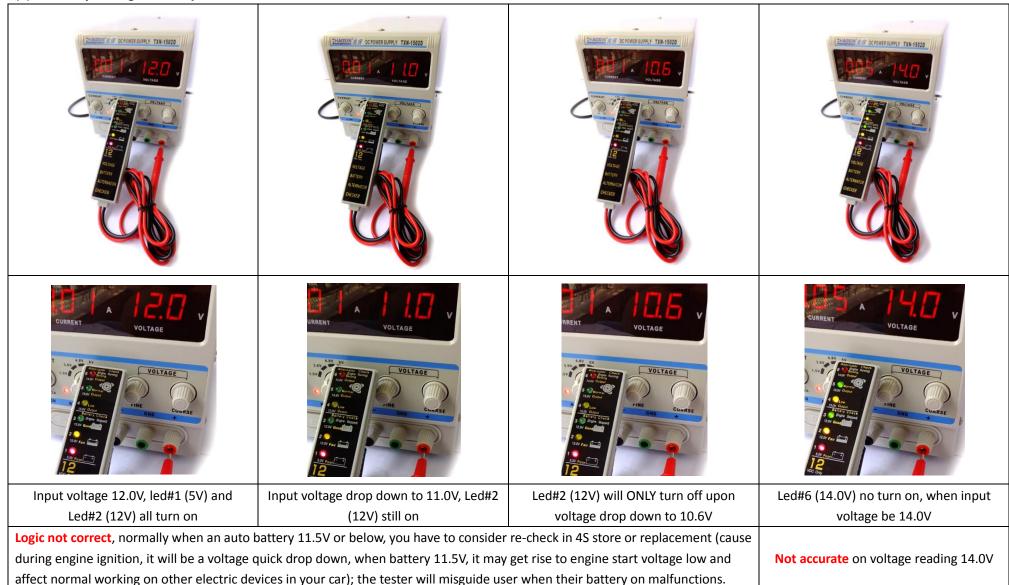
alternator output within 13.5V~14.0V; the tester will

misguide the user on alternator test.

Logic not correct, normally battery voltage on 12V, is still workable; the tester will

misguide the auto driver, should their auto battery is still good.

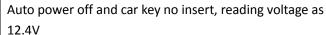
#### (3) Accuracy Testing on Battery Alternator Tester#2:



(Logic not correct on 12V testing; and not accurate on voltage reading on 14.0V)

### (4) Why "NO" on Battery Alternator Tester#3 (The Battery Tester with cigar lighter connector)?







Car key in "ACC On" (Power On) and engine off, reading voltage as 12.0V



Engine running, reading voltage as 13.8V

The Battery Tester with cigar lighter connector will ONLY work upon car key in "ACC On" (Power On), if not, it can't get power and no input voltage. Per above 3pics, you will see the voltage difference among different conditions, and will have 0.4V voltage down, when car key in "ACC On", compared by the condition of auto power off and car key no insert. That means, when you use a **Battery Tester with cigar lighter connector**, you **will get a wrong reading on actual voltage output on auto battery**. Above testing is done on a Hyundai Elantra 2012 1.6L, with battery in use for one and a half year.

Conclusions: BioPower TECH<sup>TM</sup> Vehicle Charging System Analyzer will be your better choice, when you want a certified product, with prime materials, accurate metering and reasonable price!