



PROGRAMMING GUIDE

SOL-ARK + ARK BATTERY PROGRAMMING GUIDE

(Non-closed loop version)

This guide is designed to simplify the programming process of ARK Battery & Sol-Ark inverters. Failure to comply with the manual may result in damage to your system.

Be sure to follow NEC guidelines for proper wiring and cabling methods.

MINIMUM NUMBER OF BATTERIES REQUIRED PER INVERTER (SINGLE INVERTER SYSTEMS)

	ARK 512100	ARK 512200	ARK 256200
Sol-Ark 5K	2	2	Not Supported
Sol-Ark 8K	2	2	Not Supported
Sol-Ark 12K	2	2	Not Supported
Sol-Ark 15K	3	2	Not Supported

MINIMUM NUMBER OF BATTERIES REQUIRED FOR DOUBLE STACK INVERTER SYSTEMS

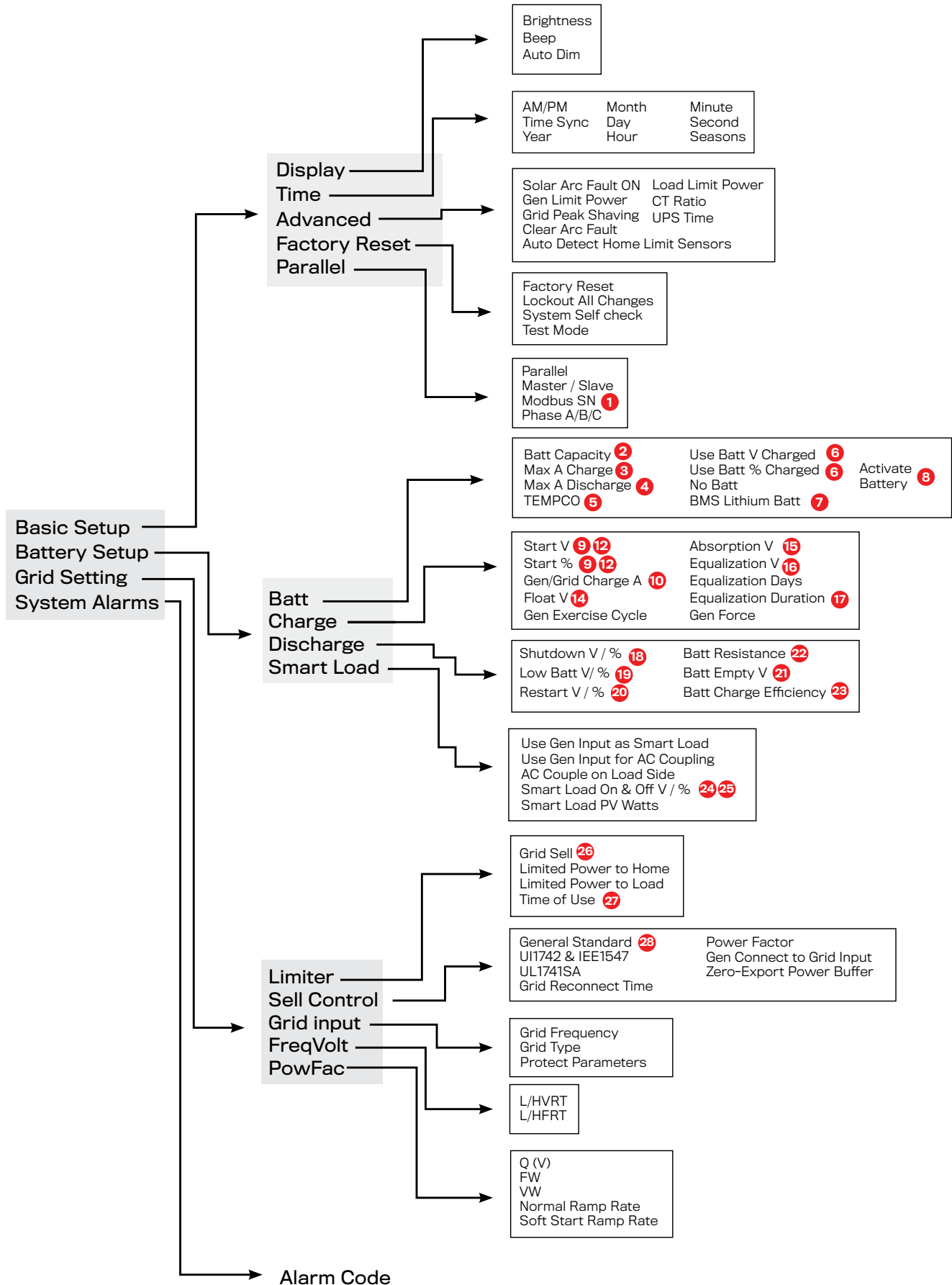
	ARK 512100	ARK 512200	ARK 256200
2x Sol-Ark 12K	4	3	Not Supported
2x Sol-Ark 15K	6	4	Not Supported

Note: When powering up the inverter, set the breaker of each ARK Battery in the bank to the 'on' position before turning on the battery breaker on the inverter.

SETUP KEY

1	Modbus S/N	01 (default)
2	Batt Capacity	Number of batteries in the bank x capacity (AH) per battery
3	Max A Charge	Can be maxed out when following the proper battery to inverter ratios on page 2
4	Max A Discharge	Can be maxed out when following the proper battery to inverter ratios on page 2
5	Tempco	OmV/C/Cel
6	Battery V or Battery %	Choose if the inverter displays Battery Volts or Battery %.
7	BMS Lithium Batt	Leave unchecked
8	Activate Battery	Leave unchecked
9	Start V & Start % (Gen)	Max recommended discharge = 20% (or higher). See the Volts vs SOC chart on page 8
10	Charging Amps Grid/Gen	Respect your generator's limits!
11	Gen Charge	Check this box to charge with generator
12	Start V & Start % (Grid)	Max recommended discharge = 20% (or higher). See the Volts vs SOC chart on page 8
13	Grid Charge	Check this box to charge with grid power
14	Float V	54.4
15	Absorption V	57.2
16	Equalization V	57.2
17	Hours	0.0
18	Shutdown V/%	Recommended Minimum 48V or 5%
19	Low Battery V/%	Recommended Minimum 50V or 20%
20	Restart V/%	Recommended Minimum 50.6V or 25%
21	Batt Empty V	47V
22	Batt Resistance	25 divided by number of batteries in the bank
23	Batt Charge Efficiency	99
24	Smart Load OFF Batt	Max Recommend Depth of Discharge is 20%
25	Smart Load ON Batt	50-90%
26	Grid Sell	Can be maxed out when following the proper battery to inverter ratios on page 2
27	Time of use settings	Can be maxed out when following the proper battery to inverter ratios on page 2
28	Grid code standards	Follow applicable local and national codes!

SOL-ARK PROGRAMMING GUIDE



BASIC SETUP MENU

Basic Setup

Display Time Advanced Factory Reset Parallel

Brightness

Beep

Auto Dim

6005

No Battery-Related Settings

CANCEL

OK

Basic Setup

Display Time Advanced Factory Reset Parallel

AM/PM

Year

Month

Day

Hour

Minute

Second

Time Sync

PM

03

04

15

Seasons

Start M-D

1 - 1

4 - 1

8 - 1

End M-D

4 - 1

8 - 1

12 - 1

No Battery-Related Settings

CANCEL

OK

Basic Setup

Display Time Advanced Factory Reset Parallel

Solar Arc Fault ON

Clear Arc_Fault

Limit Power

9000W

Limit Power

9000W

Grid peak-shaving

Power

9000W

Auto detect Home Limit Sensors

CT ratio

2000

UPS Time

0ms

ARC parameters

030000

045000

000400

000050

000390

000055

238094

No Battery-Related Settings

CANCEL

OK

Basic Setup

Display Time Advanced Factory Reset Parallel

Factory Reset

System selfcheck

Lock out all changes

Test Mode

Lock Grid Charging & Limited

No Battery-Related Settings

CANCEL

OK

Basic Setup

Display Time Advanced Factory Reset Parallel

Parallel

Master

Slave

Modbus SN

00 1

Meter > Grid

Meter > Load

Meter Select

No Meter

Meter Select

No Meter

Phase A

Phase B

Phase C

CANCEL

OK

BATTERY SETUP

Batt Setup

Batt Charge Discharge Smart Load

Batt Capacity

200Ah

Use Batt V Charged

6

Max A Charge

100A

Use Batt % Charged

6

Max A Discharge

185A

No Battery

TEMPCO

0mV/C/Cell

BMS Lithium Batt

00

Activate Battery

8

CANCEL

OK

Batt Setup

Batt Charge Discharge Smart Load

Shutdown

46.0V

20%

18

Low Batt

47.5V

30%

19

Restart

52.0V

40%

20

Batt Empty V

47.0V

21

Batt Resistance

25mOhms

22

Batt Charge Efficiency

99.0%

23

BMS_Err_Stop

CANCEL

OK

Batt Setup

Batt Charge Discharge Smart Load

StartV

49.0V

9

49.0V

12

Start%

30%

9

30%

12

A

40A

10

100A

10

Gen Charge

11

Grid Charge

13

Float V

54.0V

14

Absorbion V

55.5V

15

Equalization V

55.5V

16

30 Days

0.0 Hour

17

Generator Exercise Cycle Day & Time>>

Mon

08

:00

20min

Gen Force

CANCEL

OK

Batt Setup

Batt Charge Discharge Smart Load

Use gen input as load output

On Grid always on

For AC Coupled Input to Gen

High Frz

62.0Hz

Smart Load OFF Batt

51.0V

80%

24

Smart Load ON Batt

54.0V

80%

25

Solar Power(W)

000W

AC couple on load side

CANCEL

OK

5

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GRID PARAMETER MENU

Grid Param

Limiter	Sell Control	Grid Input	Freq	Volt	PowFac	
☐ Grid Sell	0800	Time	Power(W)	Batt	Charge	Sell
		01:00AM	2000	50%		
☐ Limited Power to Home		05:00AM	2000	50%		
☒ Limited Power to Load		09:00AM	2000	100%		
		01:00PM	2000	100%		
☐ Time of Use	Setup	05:00PM	2000	50%		
		09:00PM	2000	50%		

CANCEL OK

Grid Param

Limiter	Sell Control	Grid Input	Freq	Volt	PowFac
☐ L/HVRT					

No Battery-Related Settings

CANCEL OK

Grid Param

Limiter	Sell Control	Grid Input	Freq	Volt	PowFac
☐ Q(V)					

No Battery-Related Settings

CANCEL OK

Grid Param

Limiter	Sell Control	Grid Input	Freq	Volt	PowFac
☒ General Standard					
☐ UL1741 & IEEE1547					
☐ UL1741SA					

Grid Reconnect Time: 60s

Power Factor: 1.000

☒ GEN connect to Grid Input

Zero Export Power: 20W

☒ Batt First ☐ Load First

CANCEL OK

Grid Param

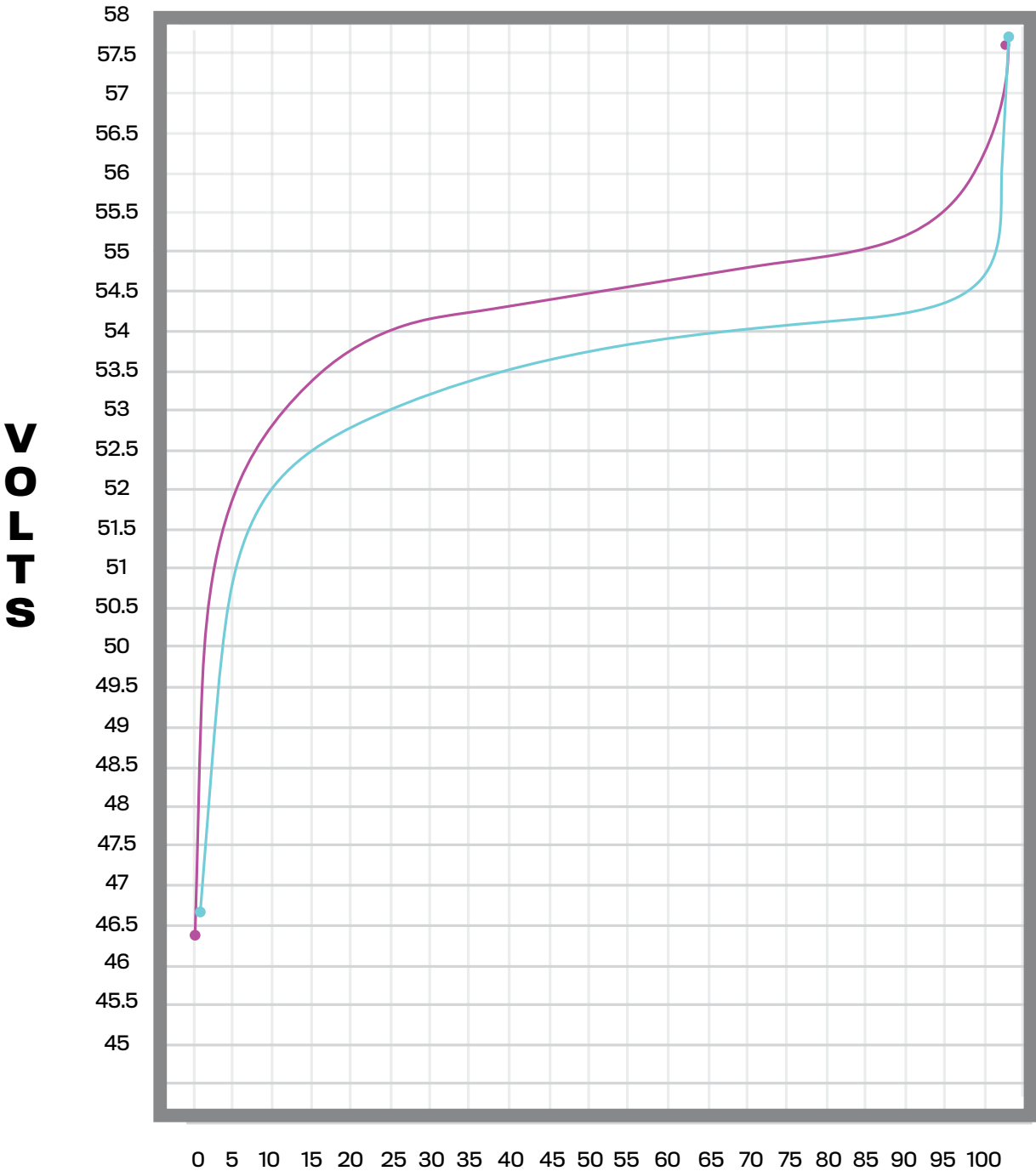
Limiter	Sell Control	Grid Input	Freq	Volt	PowFac
☐ Q(V)					

No Battery-Related Settings

CANCEL OK

CHARGING VOLTS VS SOC %

Note that some variation from these charts is acceptable. Age of batteries, temperature, cycle counts, and other factors may cause these variations.

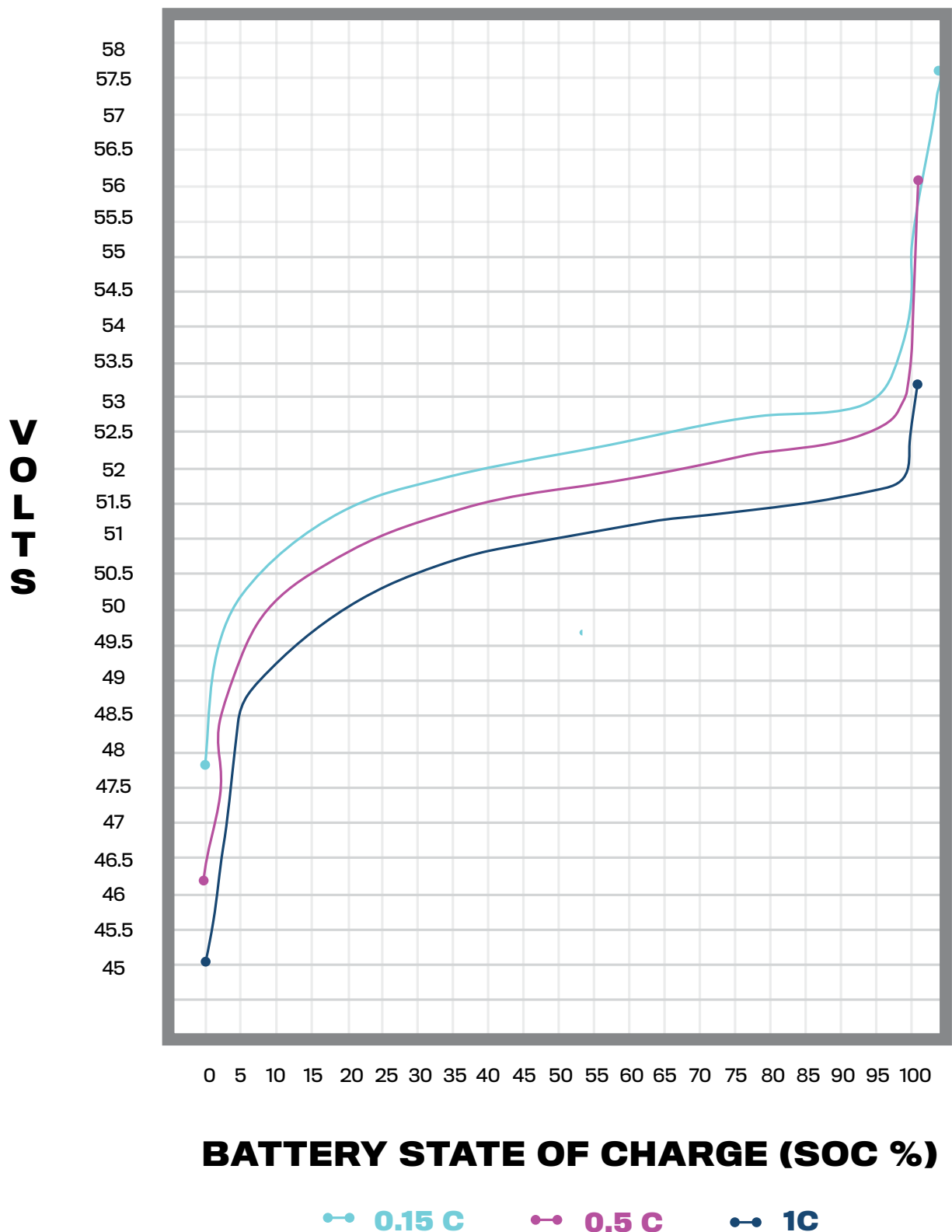


BATTERY STATE OF CHARGE (SOC %)

—●— 0.15 C —●— 0.5 C

DISCHARGE VOLTS VS. SOC %

Note that some variation from these charts is acceptable. Age of batteries, temperature, cycle counts, and other factors may cause these variations.





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