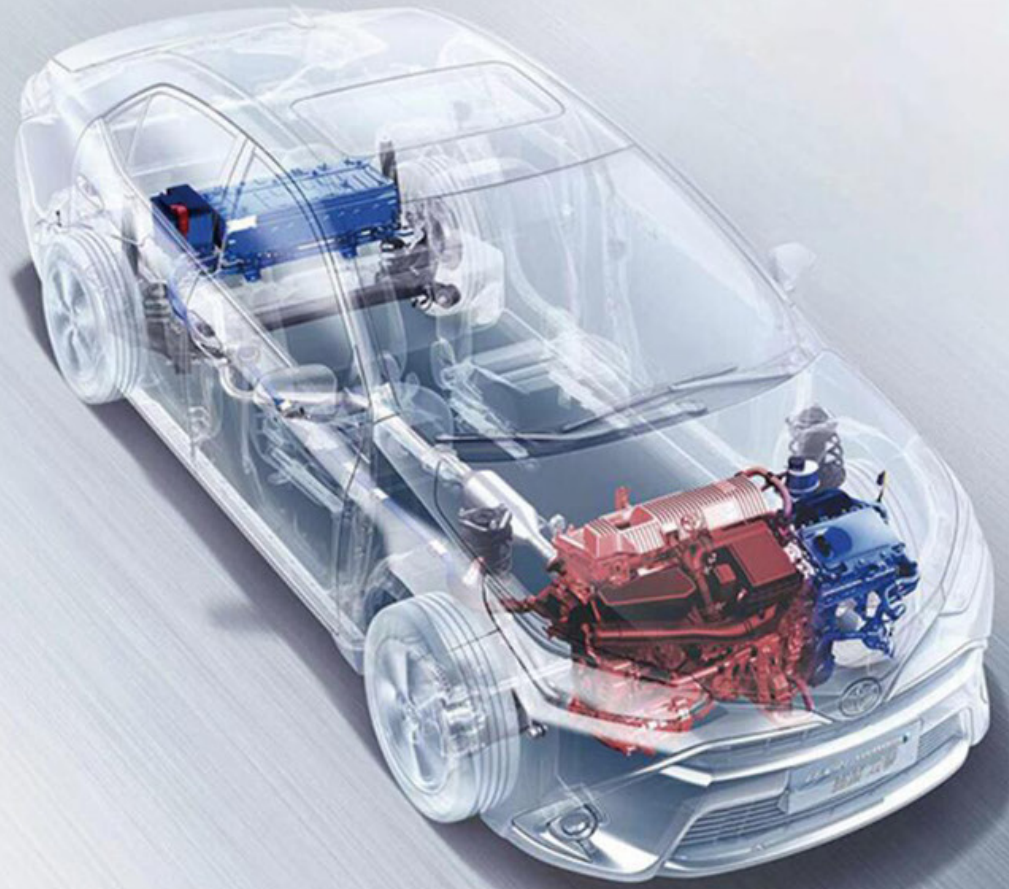


Hybrid Battery Machine
for Charging and Discharging

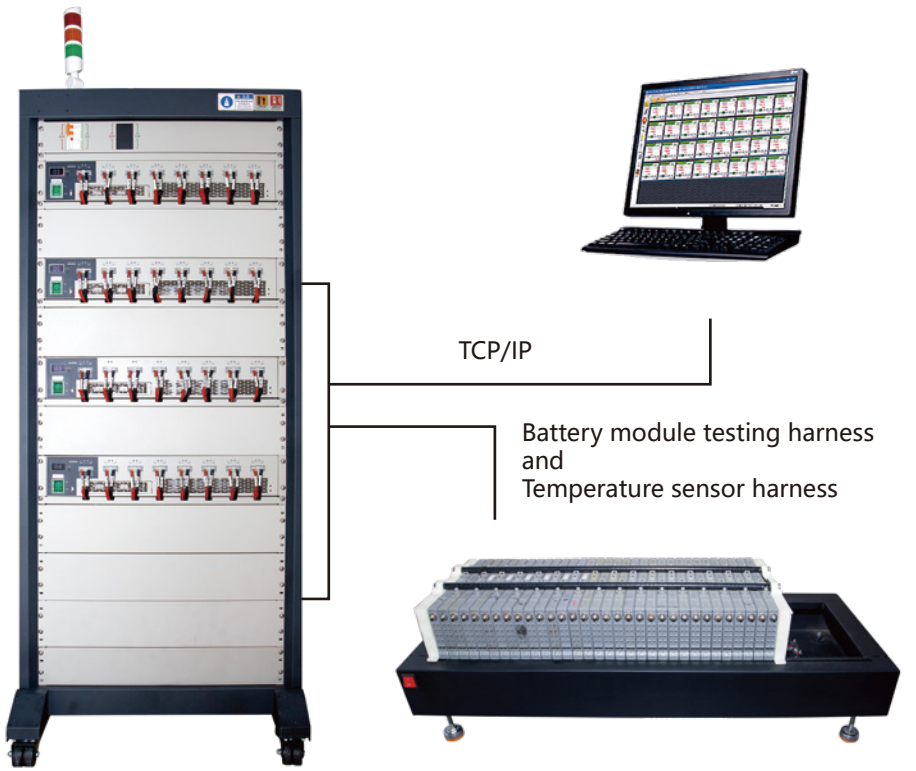
YESA Machine言商

The Pragmatic workers for the circular economy

循環經濟的務實工作者

CONTENTS

目錄

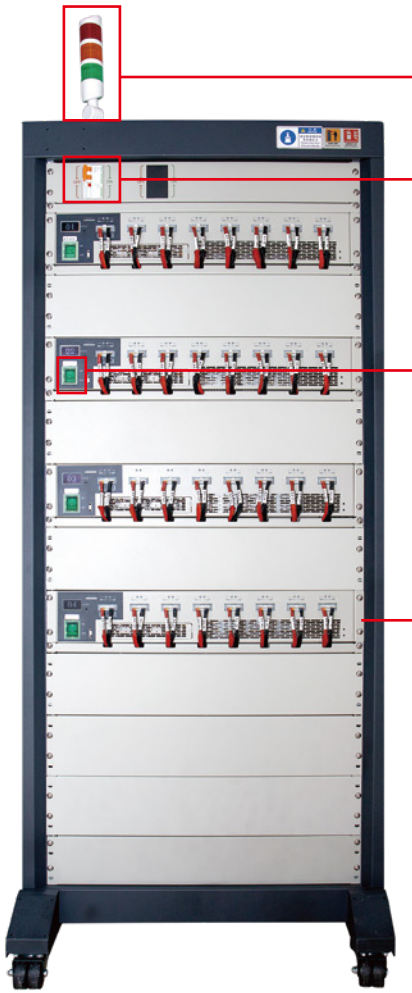


Equipment Introduction

Machine Configuration

Channel

1 unit



Alarm light

Main Power Button

Unit Power Button

Cabinet *4 units

8 Channels each unit
(each channel connect one battery module ,
The unit quantity is aptional)

Equipment Introduction

Testing Machine	
Model	ACTS-20V5A
Power Supply	100~120V or 200~240V
Testing Channels	8 Channels/Unit
Channel Work	Completely Independent
Fit Battery	Ni-Mh/Ni-Cd,Lithium,LifePO4
Voltage Range	0~20V
Voltage Accuracy	0.1%FS + 0.1%RD
Current Range	±5A
Current Accuracy	0.1%FS + 0.1%RD
Work Mode	Charge:CC,CV,CCCV, Discharge:CD,CP,CR
Communication	0.1%FS + 0.1%RD
Protection	Min/Max Voltage/Current Min/Max Temperature
Testing Data	Save as file,Export to Excel or Txt Discharge Capacity Report
Work Power	100W/Channel
Temperature Sensor	8 Channels for each unit
Temperature Range	-25~125
Sensor Function	Next Step,Finish,Stop Testing

For Original Ni-MH Hybrid batteries

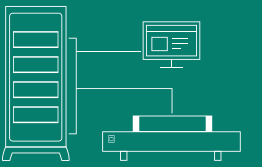
-Test
-Screen out repairable and non-repairable batteries
-Capacity Filter
-Reassemble new battery pack

For Replacement batteries

-Stock batteries maintenance
Balancing for stocked over 6 months batteries or different bulk batteries

-Failure batteries checking
Provide the testing data to battery supplier ,to learning about the battery defective condition and entering the fast track of the after-sale claims

Charge and Discharge Procedures



Hardware Preparation

Core steps

1.Put battery pack on the cooling table

2.Connect testing battery module

3.Connect computer

Software Operation

Core steps

1.Launch ACTS software
(login/automatically connect)

2.Check or reset the IP and ID from the unit
(include alarm light)

3.Scan battery SN

4.Process loading or setting

5.Charging & Discharging
(according to what program is loaded)

Battery pack reassemble

Core steps

1.Data export testing and archive

2.Dismount the irreparable battery modules from the battery pack

3.Mark the similar voltage and capacity battery modules and put into storage

Charge and Discharge Procedures

Hardware Preparation

Machine and its accessaries

- Machine
- Cooling Table
- Test Cable
- Network Cable
- Temperature Test Cable
- LAN Switch
- Network Adapter Cable
- Power Cable
- Scanner
- USB with Software Program Inside
- Clip

Machine

Cooling Table

USB with
Software Program Inside

Clip

Scanner

Temperature Test Cable

LAN Switch

Power Cable

Network Adapter Cable

Test Cable

Network Cable

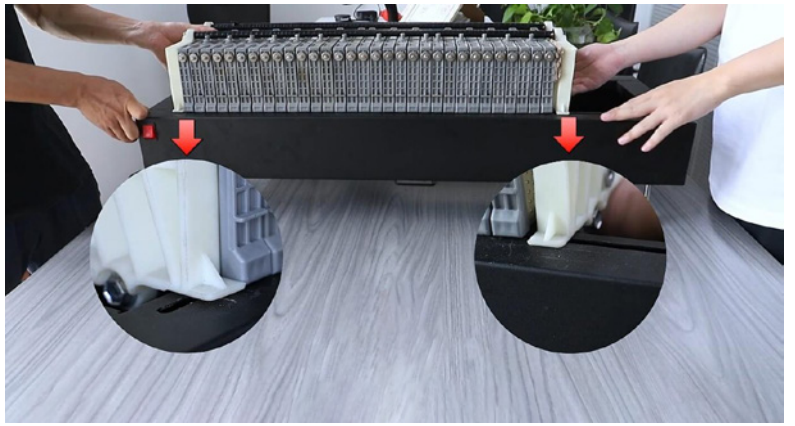
Charge and Discharge Procedures

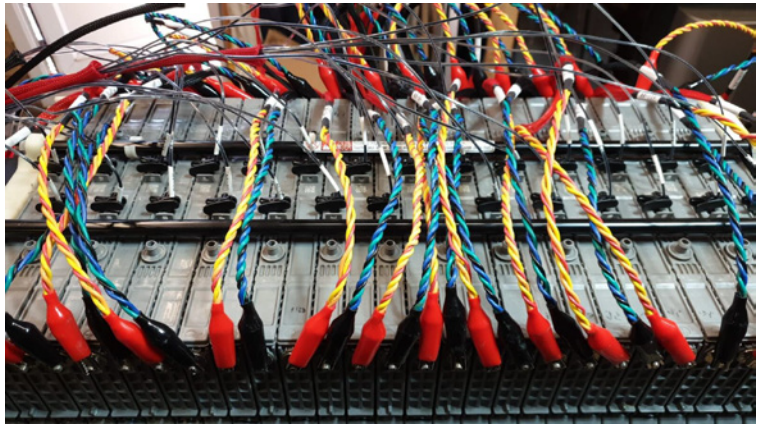
2-1

Hardware Preparation

Installation Procedure

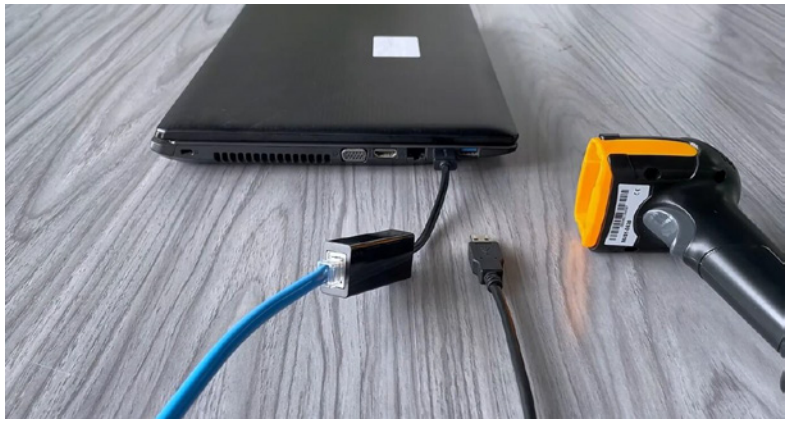
1. Put the battery pack on the cooling table
2. Connecting the battery
3. Connecting the computer





1 2

3

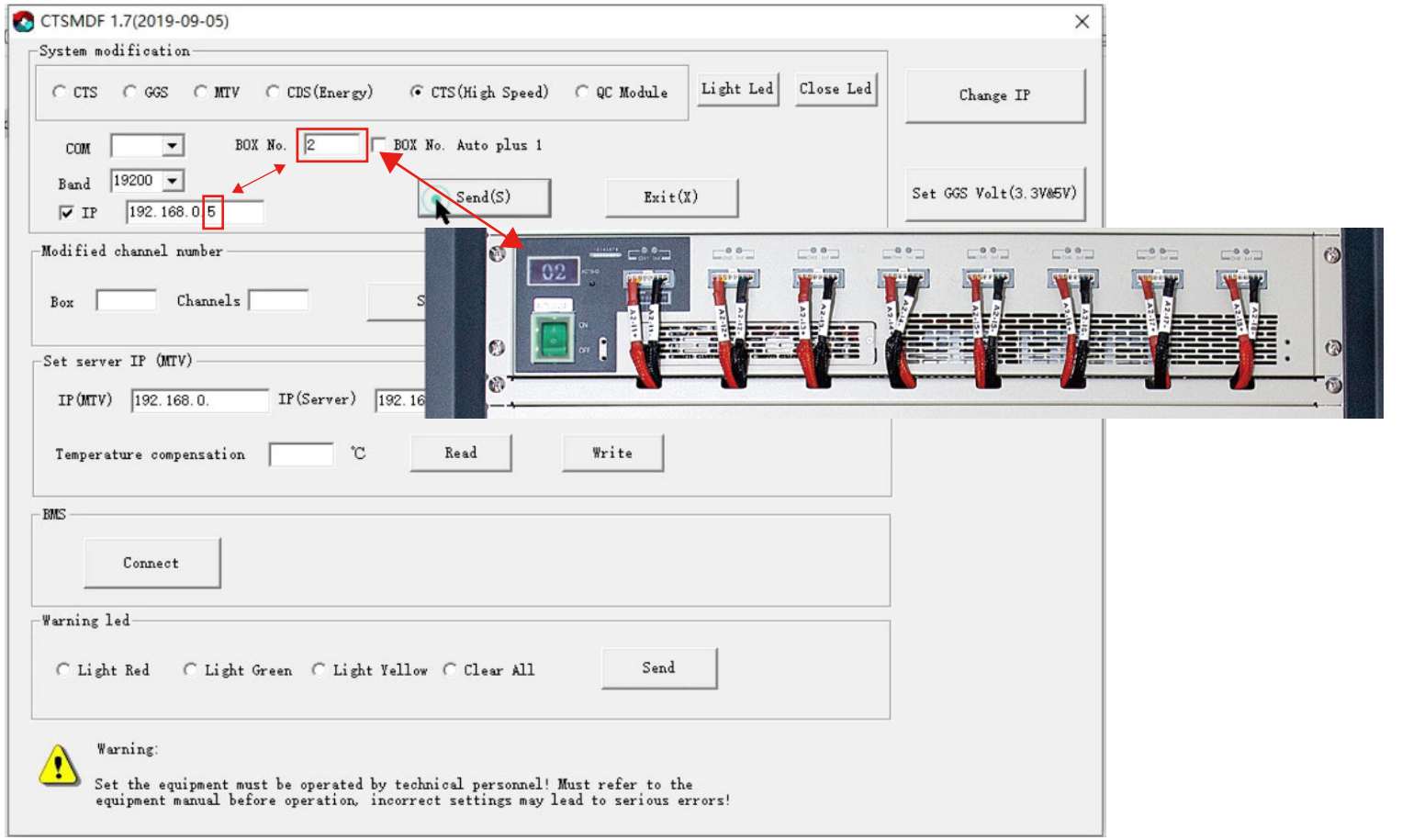


Charge and Discharge Procedures

Software Operation

ID Editor

To change the ID of unit



ACTS → Change ID number → CTSBidMaker_V1.7_E.exe

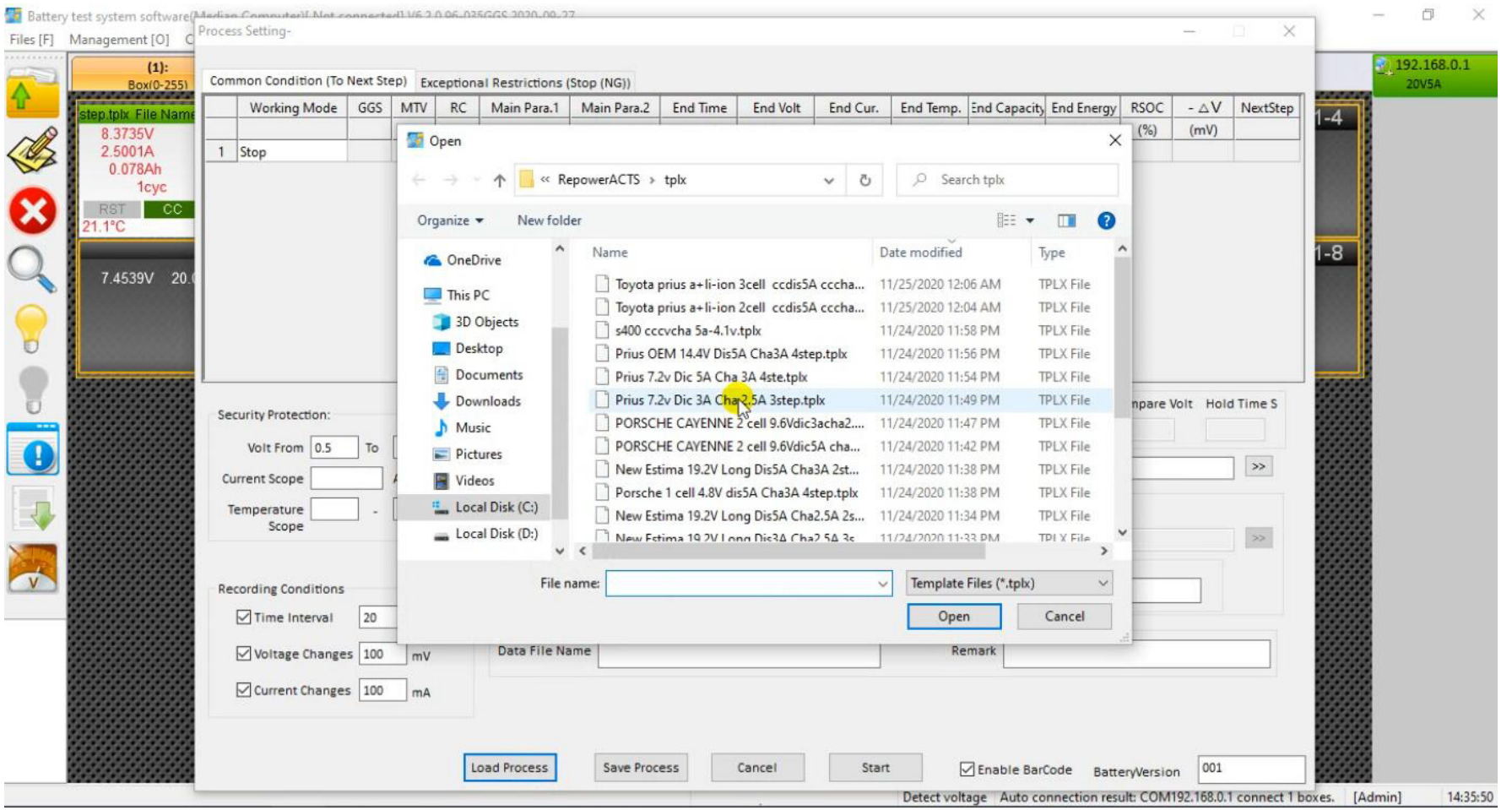
Plese watch YouTube and Facebook for more software operation videos
https://www.facebook.com/battery.yesa/videos/708097831156558
https://www.youtube.com/watch?v=sM0n8CAZw7Q

Charge and Discharge Procedures

Software Operation

Select Load Process

Click "Start" → Load Process → Select "car model"



Click "Start" → Load Process → Select "car model"

Plese watch YouTube and Facebook for more software operation videos
https://www.facebook.com/battery.yesa/videos/708097831156558
https://www.youtube.com/watch?v=sM0n8CAZw7Q

Charge and Discharge Procedures

Software Operation

Scanner Using Steps

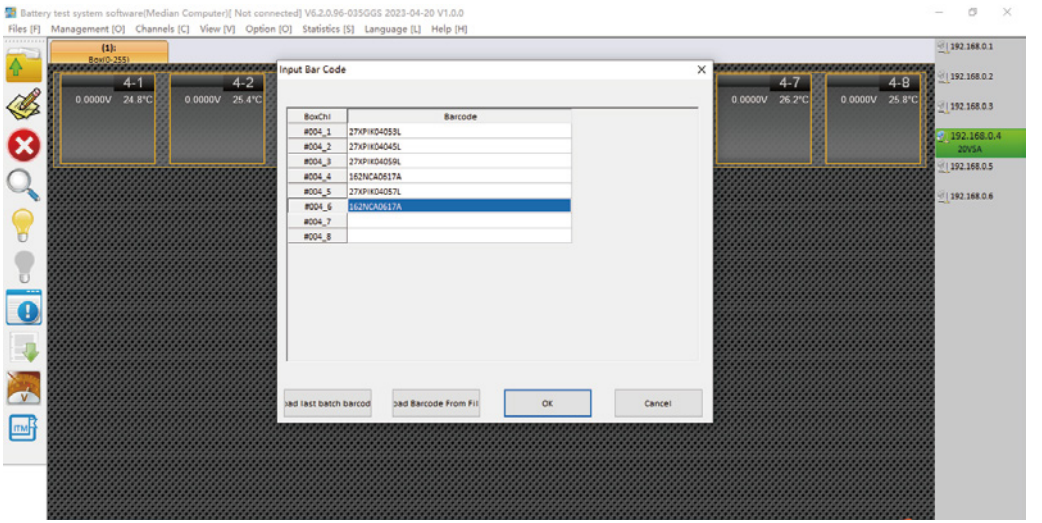
1. Connect the bar code gun to the computer

2. Create a. txt file

3. Use the scanner to scan the battery code

4. Save the. txt file

5. Import the program

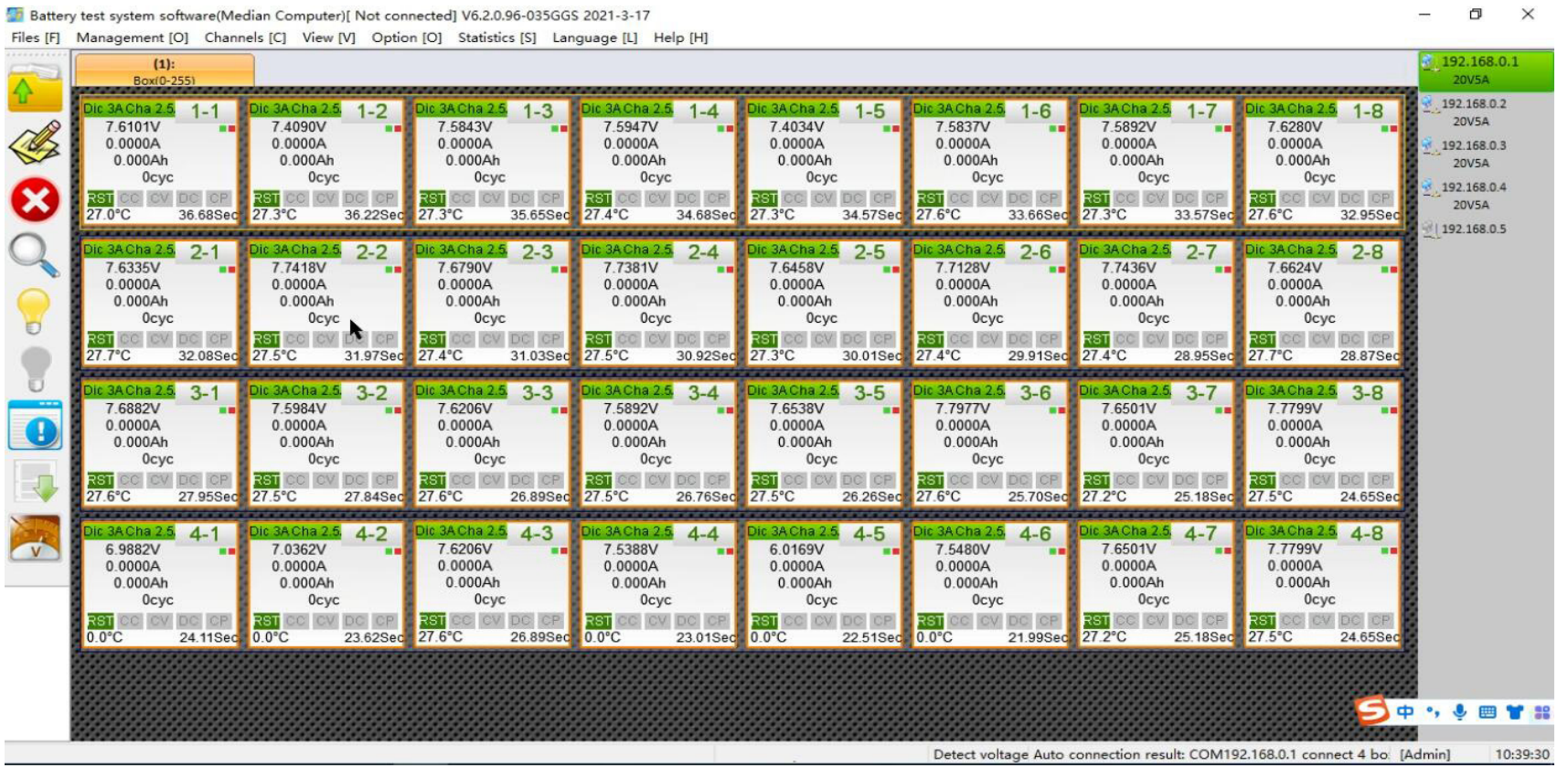


Plese watch YouTube and Facebook for more software operation videos
https://www.facebook.com/battery.yesa/videos/708097831156558
https://www.youtube.com/watch?v=sM0n8CAZw7Q

Charge and Discharge Procedures

Software Operation

Charging & Discharging
by multi cycles



Plese watch YouTube and Facebook for more software operation videos
https://www.facebook.com/battery.yesa/videos/708097831156558
https://www.youtube.com/watch?v=sM0n8CAZw7Q

Charge and Discharge Procedures

Software Operation

Data Viewing

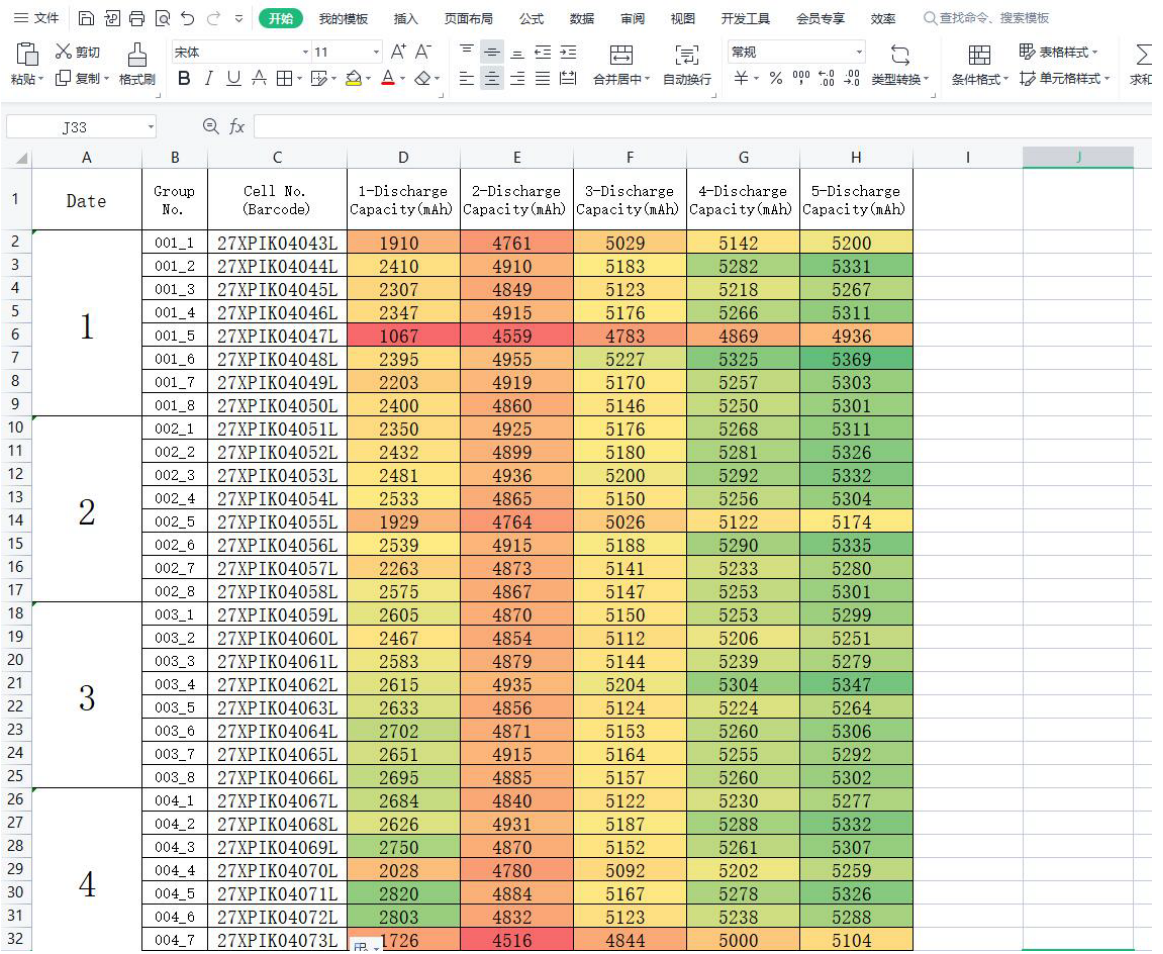
Plese watch YouTube and Facebook for more software operation videos
https://www.facebook.com/battery.yesa/videos/708097831156558
https://www.youtube.com/watch?v=sM0n8CAZw7Q

Charge and Discharge Procedures

Battery pack reassemble

Extract the capacity data of each battery cycle, make excel and on-file, as to query and repack the battery pack in the future.

Right-click a single channel and select Export EXCEL



	A	B	C	D	E	F	G	H	I	J
1	Date	Group No.	Cell No. (Barcode)	1-Discharge Capacity(mAh)	2-Discharge Capacity(mAh)	3-Discharge Capacity(mAh)	4-Discharge Capacity(mAh)	5-Discharge Capacity(mAh)		
2	1	001_1	27XPIK04043L	1910	4761	5029	5142	5200		
3		001_2	27XPIK04044L	2410	4910	5183	5282	5331		
4		001_3	27XPIK04045L	2307	4849	5123	5218	5267		
5		001_4	27XPIK04046L	2347	4915	5176	5266	5311		
6		001_5	27XPIK04047L	1067	4559	4783	4869	4936		
7		001_6	27XPIK04048L	2395	4955	5227	5325	5369		
8		001_7	27XPIK04049L	2203	4919	5170	5257	5303		
9		001_8	27XPIK04050L	2400	4860	5146	5250	5301		
10	2	002_1	27XPIK04051L	2350	4925	5176	5268	5311		
11		002_2	27XPIK04052L	2432	4899	5180	5281	5326		
12		002_3	27XPIK04053L	2481	4936	5200	5292	5332		
13		002_4	27XPIK04054L	2533	4865	5150	5256	5304		
14		002_5	27XPIK04055L	1929	4764	5026	5122	5174		
15		002_6	27XPIK04056L	2539	4915	5188	5290	5335		
16		002_7	27XPIK04057L	2263	4873	5141	5233	5280		
17		002_8	27XPIK04058L	2575	4867	5147	5253	5301		
18	3	003_1	27XPIK04059L	2605	4870	5150	5253	5299		
19		003_2	27XPIK04060L	2467	4854	5112	5206	5251		
20		003_3	27XPIK04061L	2583	4879	5144	5239	5279		
21		003_4	27XPIK04062L	2615	4935	5204	5304	5347		
22		003_5	27XPIK04063L	2633	4856	5124	5224	5264		
23		003_6	27XPIK04064L	2702	4871	5153	5260	5306		
24		003_7	27XPIK04065L	2651	4915	5164	5255	5292		
25		003_8	27XPIK04066L	2695	4885	5157	5260	5302		
26	4	004_1	27XPIK04067L	2684	4840	5122	5230	5277		
27		004_2	27XPIK04068L	2626	4931	5187	5288	5332		
28		004_3	27XPIK04069L	2750	4870	5152	5261	5307		
29		004_4	27XPIK04070L	2028	4780	5092	5202	5259		
30		004_5	27XPIK04071L	2820	4884	5167	5278	5326		
31		004_6	27XPIK04072L	2803	4832	5123	5238	5288		
32		004_7	27XPIK04073L	1726	4516	4844	5000	5104		

Right-click a single channel and select Export EXCEL

Plese watch YouTube and Facebook for more software operation videos
https://www.facebook.com/battery.yesa/videos/708097831156558
https://www.youtube.com/watch?v=sM0n8CAZw7Q

Test Data and Repair Effect View

Repair effect instance

Capacity increases by
9% to 12% on average

Toyota Prius Battery Data
(Before Reconditioning)
Capacity Low

Toyota Prius Battery Data
(After Reconditioning)
Capacity Increased

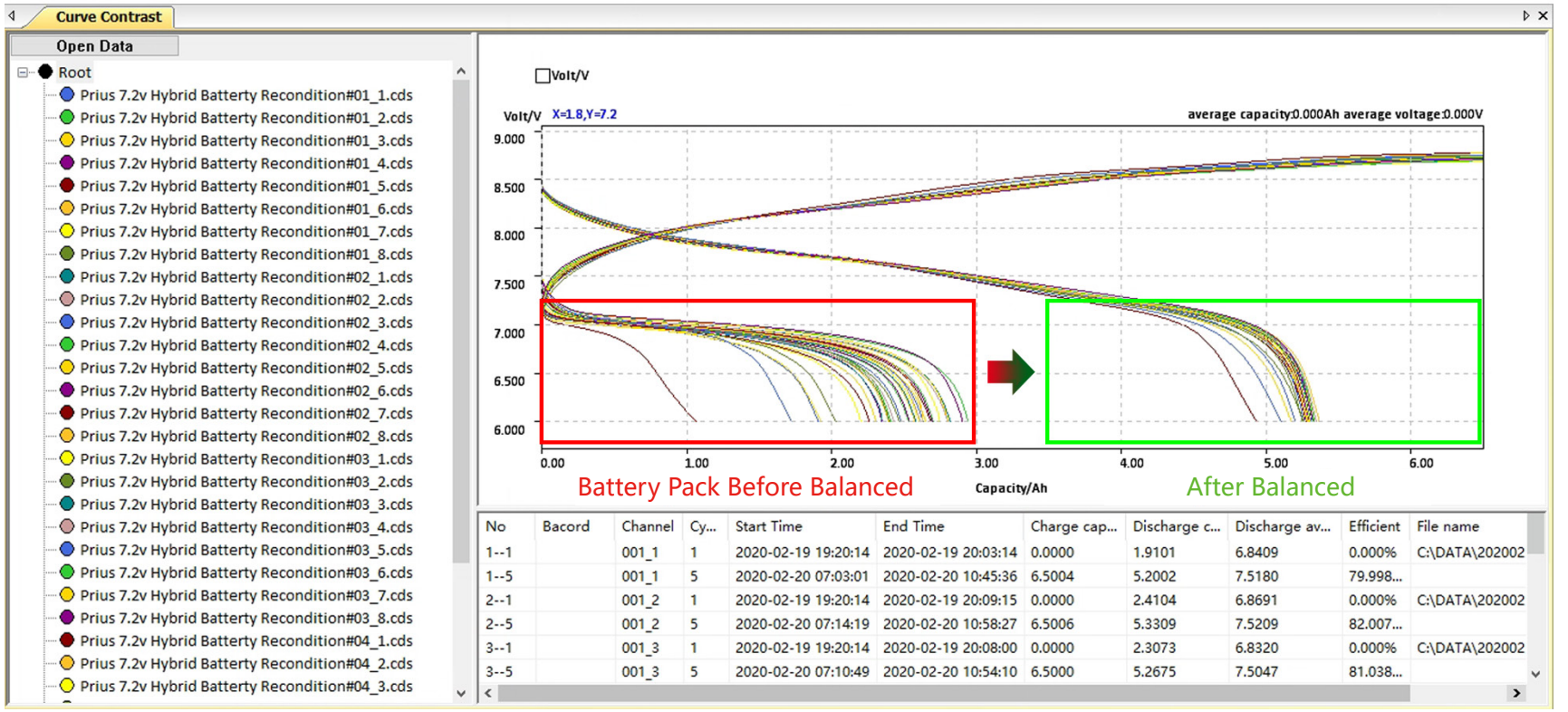
Group No.	Cell ...	1-Discharge Capacity(mAh)	2-Discharge Capacity(mAh)	3-Discharge Capacity(mAh)	4-Discharge Capacity(...	5-Discharge Capacity(mAh)
01_1		1910.064	4761.298	5028.825	5142.378	5199.847
01_2		2410.381	4910.254	5182.758	5282.289	5330.578
01_3		2307.310	4848.755	5122.607	5218.310	5267.061
01_4		2347.477	4915.054	5175.820	5265.689	5310.629
01_5		1067.036	4558.706	4782.805	4868.576	4936.209
01_6		2395.437	4955.339	5227.393	5324.725	5368.990
01_7		2203.324	4918.984	5170.184	5257.234	5302.697
01_8		2400.452	4859.787	5146.139	5249.614	5300.500
02_1		2350.066	4924.531	5175.562	5267.774	5310.847
02_2		2432.050	4899.337	5180.473	5280.784	5326.035
02_3		2480.898	4935.773	5199.806	5292.314	5331.587
02_4		2532.756	4864.837	5150.403	5256.095	5303.777
02_5		1928.597	4763.936	5026.048	5121.593	5174.159
02_6		2539.225	4915.095	5188.400	5289.576	5334.584
02_7		2262.780	4872.828	5140.788	5233.083	5280.428
02_8		2575.323	4866.800	5146.973	5252.968	5300.729
03_1		2604.931	4870.418	5149.542	5253.397	5299.307
03_2		2467.235	4854.169	5111.653	5205.613	5251.205
03_3		2582.844	4879.293	5144.289	5238.904	5279.052
03_4		2615.342	4934.622	5204.140	5303.716	5347.378
03_5		2633.489	4855.843	5124.295	5223.779	5264.343
03_6		2702.135	4870.741	5152.577	5259.858	5305.777
03_7		2650.526	4914.946	5163.898	5254.960	5291.635
03_8		2694.581	4885.420	5157.356	5260.020	5301.691
04_1		2683.792	4839.678	5122.016	5230.385	5277.084
04_2		2626.072	4931.020	5187.228	5287.770	5331.986

Plese watch YouTube and Facebook for more software operation videos
https://www.facebook.com/battery.yesa/videos/708097831156558
https://www.youtube.com/watch?v=sM0n8CAZw7Q

Test Data and Repair Effect View

Balancing effect instance

Toyota Prius Battery Data (After Reconditioning)

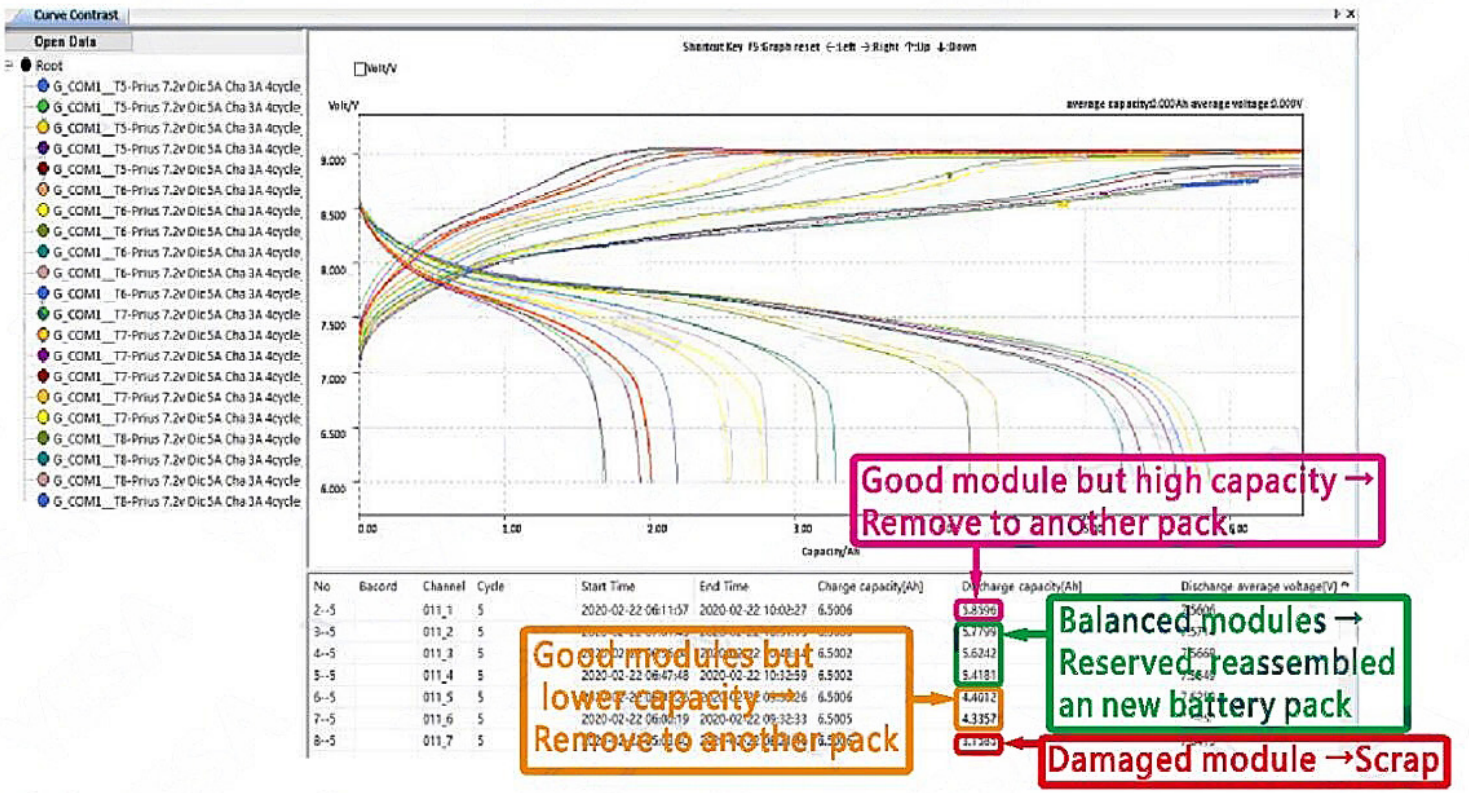


Plese watch YouTube and Facebook for more software operation videos
https://www.facebook.com/battery.yesa/videos/708097831156558
https://www.youtube.com/watch?v=sM0n8CAZw7Q

Test Data and Repair Effect View

Battery capacity division

Grade and store the battery according to the repaired capacity. The newly constituted battery pack must be of the same capacity, otherwise, after installation on the car, a battery error code will appear.

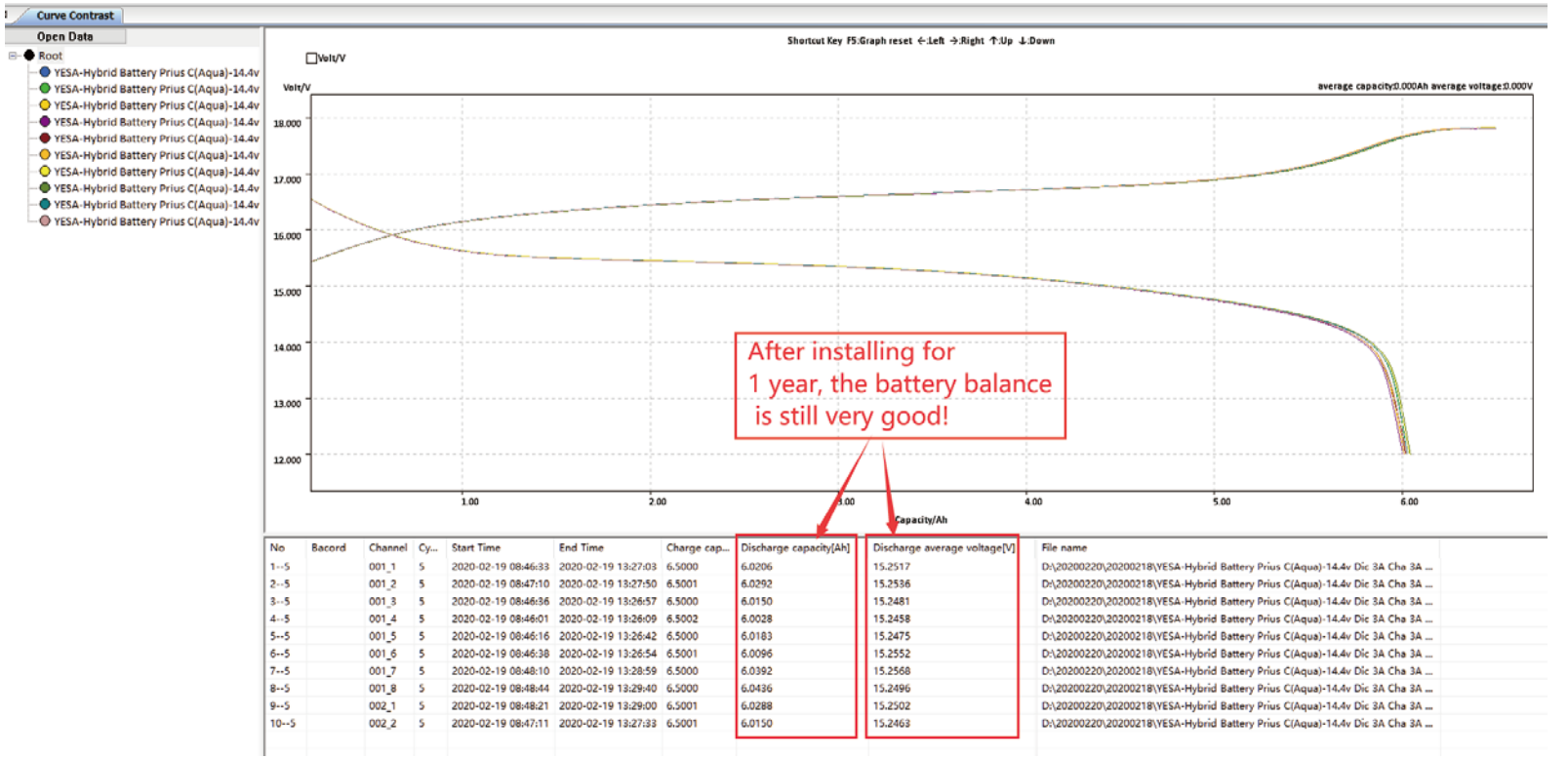


Plese watch YouTube and Facebook for more software operation videos
https://www.facebook.com/battery.yesa/videos/708097831156558
https://www.youtube.com/watch?v=sM0n8CAZw7Q

Test Data and Repair Effect View

After 1 year .....

After installing on car for 1 year,the battery balance is still very good!



Plese watch YouTube and Facebook for more software operation videos
https://www.facebook.com/battery.yesa/videos/708097831156558
https://www.youtube.com/watch?v=sM0n8CAZw7Q

THANKS

YESA machines are used all over the world

Up to August ,2023 ,the customers from all over the world use YESA Machine more than 4000 channels

CONTACT US

Yesa Technology Co.,Ltd.

info@yesabattery.com

+86 755-88855368

www.yesa-tech.com

Room 13M,Building 6-B,BaoNeng Science and Technology Park,Longhua, Shenzhen.P.R.China