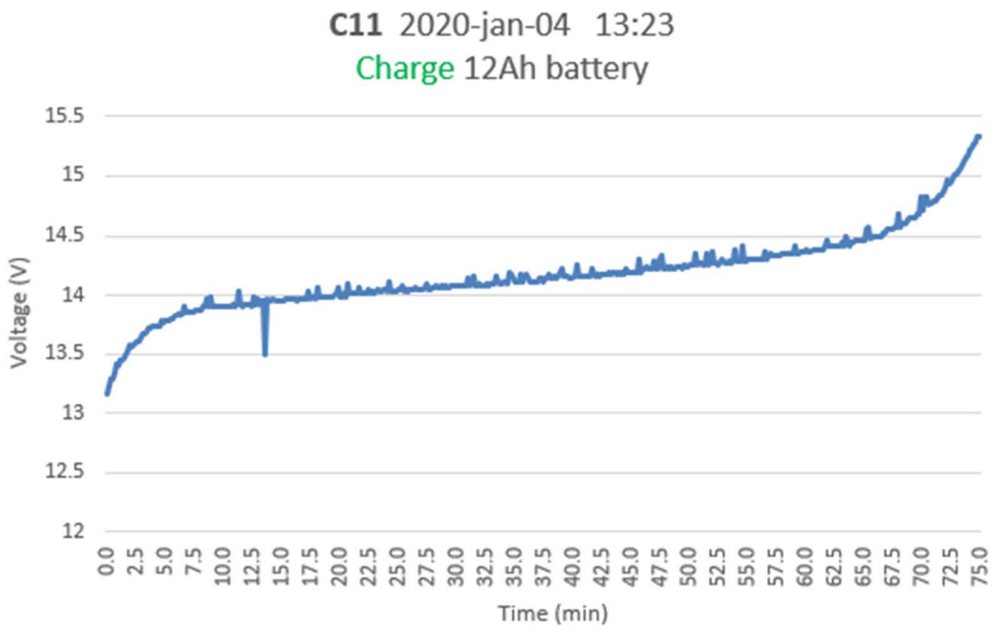
Attachment 1 - Question 1

LA1 (FLA/24Ah)	VMF - 52805 12N24, 24Ah 293A(EN)
LA2 (FLA/24Ah)	VMF - 52805 12N24, 24Ah 293A(EN)
LA11 (FLA 14.7Ah)	Yuasa - YB14L-A, 14.7Ah 190A(CCA)
S1 (FLA 30Ah)	Yuasa - YBX, 30Ah 330A(EN)
S2 (FLA 30Ah)	Yuasa - YBX, 30Ah 330A(EN)
S3 (FLA 30Ah)	Yuasa - YBX, 30Ah 330A(EN)
X1 (AGM/12Ah)	Xtreme 82-216#, 12Ah
A (AGM/12Ah)	RS-PRO 537-7305, 12Ah
B (AGM/12Ah)	RS-PRO 537-7305, 12Ah

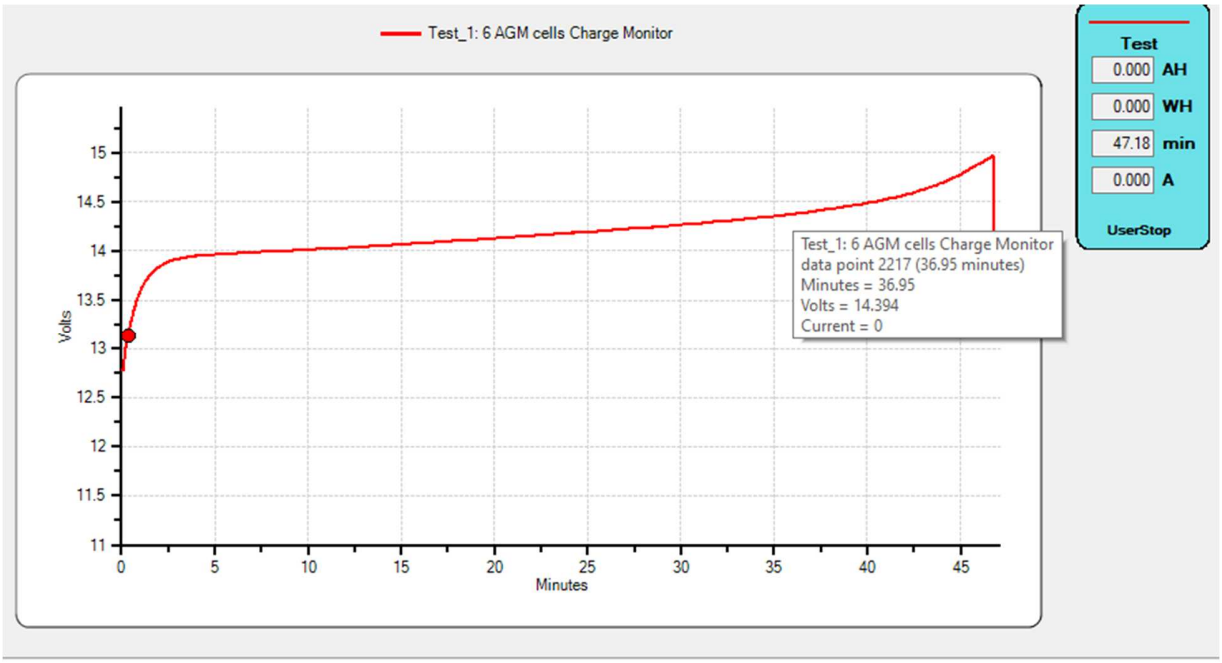
Bedini SG Classic Radiant mode, Output battery: AGM A
Input: PSU input 12.3V @ 0.805A

Load cycle	11	
after discharged with noco load	6	
after discharged with SG load	5	
excel name	0006_08	
date	2020-01-04	
start time	13:23	
temp. @ start	18	C
Volt on MM (not running)	13.04	V
measure interval	10	s
end time		
temp. @ end		C
Volt on MM (running)	15.3	V
Remarks:	*Power supply @ 12.3V, 0.805A*	
	Mismatch between MM and ARD 0.05V-0.07V	



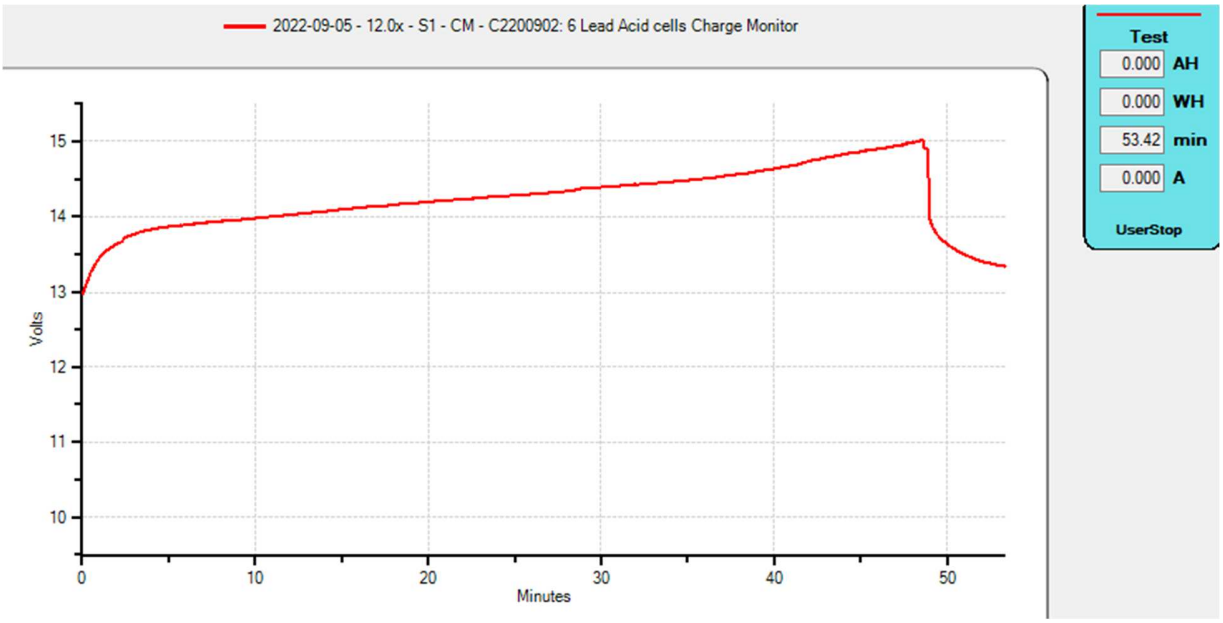
Bedini SG Generator / Common ground mode, Output battery AGM A
Input S2 + S3 in parallel 13.22-12.87V @ 1.78-1.53A

Day			Tuesday
Amp meter	-		3A max
Temp / Humidity	C / %		18 / 63
Started @	hour.min		20.02.40
Stopped @	hour.min		20.48.5
Stopwatch	min		46
Cycle	-		C220511
Date	-		2022-05-24
Rotor magnets, amount/width	-/mm		Rotor 3, 21 / 22mm
Gap	mm		6
Mode	-		CG
Power coils	-		8
Flywheel weight	kg		N/A
Output battery	ID-type		A (AGM/12Ah)
Output voltage @ rest, before/after testing	V		12.76 / 13.05
Input battery	ID-type		S2 + S3 (FLA 60Ah)
Input voltage @ rest, before/after testing	V		13.22 / 12.87
Input voltage @ start running	V		12.86
Input voltage @ end running	V		12.6
Amp @ start	A		1.78
Amp @ end	A		1.53
RPM @ start/end	rpm		239 / 266
Time to charge to 15.3V	min		46
Ah to charge to 15.3V	**Ah**		**1.27**
COP	-		0.79
(Variable) Resistance	Ohm		57.9 (fixed resistors)
Average amperage	A		1.655
Time factor	-		0.77
Correction factor			
"...@ start" = after +/- 2min of running. "...@ end" = when output batt. Is 15.3V "...@ rest after testing" = 1 hour after run has finished			Charged w. TGX 27000uF (low setting 14.9V) charger for 1.5h this morning (so a day after C220511a discharge). TGX charger fluctuates 14.7x-14.90V.



Bedini SG Generator / Common ground mode, Output battery S1
Input S2 + S3 in parallel 13.29-12.93V @ 1.94-1.5A

Day			Monday
Amp meter	-		2A max (round
Temp / Humidity	C / %		22 / 67
Started @	hour.min		12.13.55
Stopped @	hour.min		13.02.11
Stopwatch	min		48.25
Cycle	-		C220902
Date	-		2022-09-05
Rotor magnets, amount/width	-/mm		Rotor 3, 21 / 22mm
Gap	mm		6
Mode	-		CG
Power coils	-		8
Flywheel weight	kg		N/A
Output battery	ID-type		S1 (FLA 30Ah)
Output voltage @ rest, before/after testing	V		12.91 / 13.16
Input battery	ID-type		S2 + S3 (FLA 60Ah)
Input voltage @ rest, before/after testing	V		13.29 / 12.93
Input voltage @ start running	V		12.9
Input voltage @ end running	V		12.65
Amp @ start	A		1.94
Amp @ end	A		1.5
RPM @ start/end	rpm		231 / 267
Time to charge to 15.3V	min		48.25
Ah to charge to 15.3V	**Ah**		**1.38**
COP	-		0.72
(Variable) Resistance	Ohm		57.9 (fixed resistors)
Average amperage	A		1.72
Time factor	-		0.80
Correction factor			
"...@ start" = after +/- 2min of running. "...@ end" = when output batt. Is 15.3V "...@ rest after testing" = 1 hour after run has finished			Yesterday evening discharged 1Ah @ 1A out of S1. In the morning charger



Solid State Charger, V4 PCB / Common ground mode, Output: battery LA1
Input: PSU 12V @ 1.57-1.36A

Test ID			**230607 CM**
Date			2023-06-04
Temp	C		17
Rel. humidity	%		58
Time start			9.14
Settings			
Active device - ID			STP20N95K5 - 1
Peak voltage on scope +/-	V		1440
Freuquency	Hz		110
Coil Core			weld rods
Coil induct. / coil	mH		267
Duty cycle	%		50
When discharged			yesterday afternoon
AH discharged			1
Amp meter			DMM - 1

	Input			
	Source			PSU
	Voltage	V		12
	amp draw @ x min			
count	1 min / 5min PSU	A		1.57 / 1.5
1	5	A		1.51
2	10	A		1.51
3	15	A		1.51
4	20	A		1.5
5	25	A		1.5
6	30	A		1.49
7	35	A		1.49
8	40	A		1.48
9	45	A		1.48
10	50	A		1.47
11	55	A		1.46
12	60	A		1.45
13	65	A		1.4
14	70	A		1.42
15	75	A		1.41
16	80	A		1.4
17	85	A		1.38
18	90	A		1.36
19	95	A		
20	100	A		
21	105	A		
22	110	A		
23	115	A		
24	120	A		
25	125	A		
26	130	A		
27	135	A		
28	140	A		
29	145	A		
30	150	A		
31	155	A		

Output			
Battery			LA1 (FLA/24Ah)
Battery voltage @ rest before start	V		12.52
Battery target voltage = stop test voltage	V		14.3
Battery voltage after 1h of rest	V		12.82
Stop time CBA	min		93
	-		1H 33min
Stop time CBA (clock)	-		10.47
Amp draw @+/-60% (=rough av. Amp draw)	A		1.46
Rough Ah to charge to target voltage	Ah		2.26
Rough COP (Ah)	-		**0.44**
Amp average calculated	A		**1.46**
Ah to charge to target voltage	Ah		2.26
Rough COP (Ah)	-		0.44
Comments			Freq. to 110Hz (iso 100Hz), measurements with DMM (iso PSU). Red marked readings are PSU.