

SOUTENANCE DE PROJET

Commande d'un robot de grande taille

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PRESENTATION DU PROJET

- ▶ **Dimensions** : 60*90*35 cm³
- ▶ **Motorisation** : 2 moteurs à courant continu, 24 VDC, 350 W
- ▶ **Capteurs** :
 - ▶ 4 IR à l'avant, 2 à l'arrière
 - ▶ Codeurs incrémentaux sur les roues.
- ▶ **Objectifs** :
 - ▶ Remettre le robot en état de fonctionnement
 - ▶ Commander le robot avec une manette filaire
 - ▶ Sécuriser le robot
 - ▶ Séparer l'étage puissance et l'étage commande



TESTS DU ROBOT

TEST VARIATEURS DE VITESSE

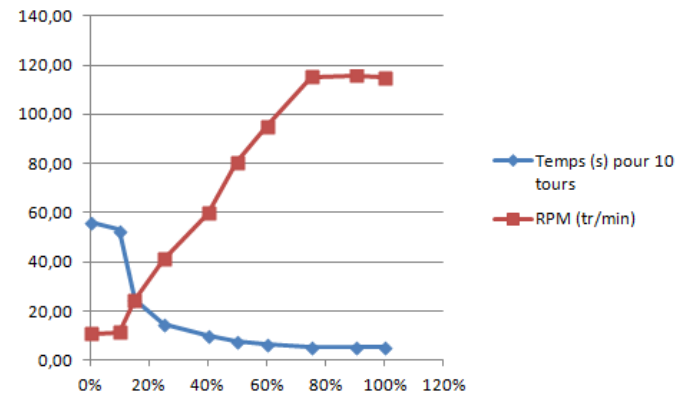
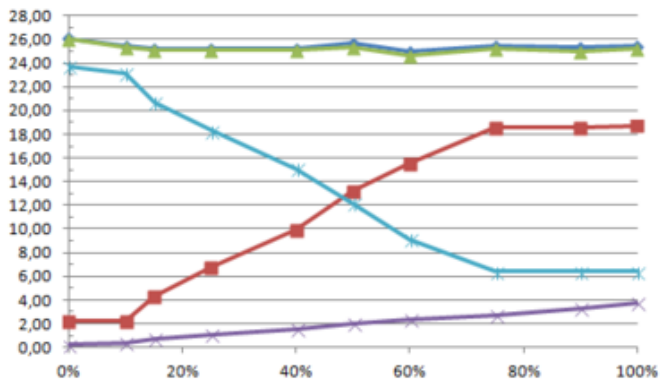
Tension de la batterie (V)

A vide	24,7
En charge	22,9

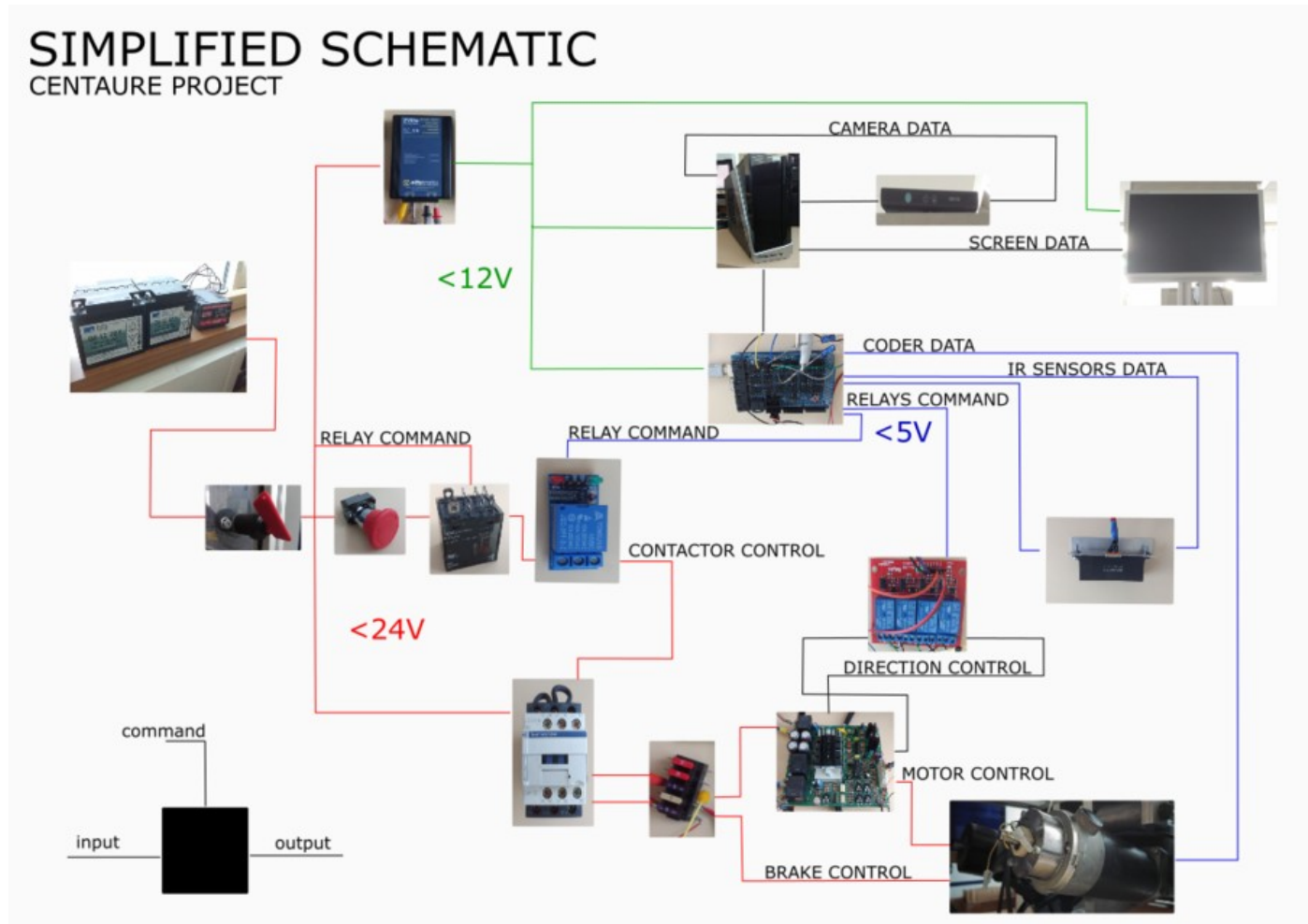
Ordre tests

0%->100%->50%->25%->75%->10%->15%->40%->60%->90%

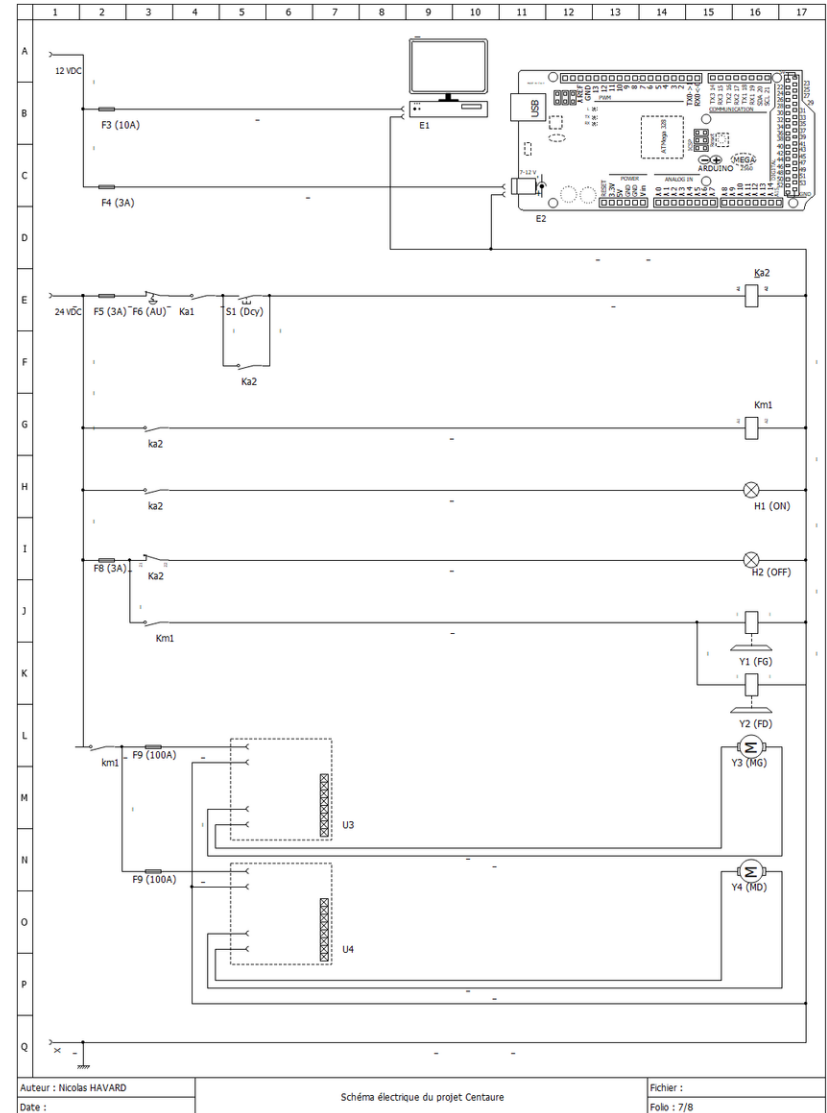
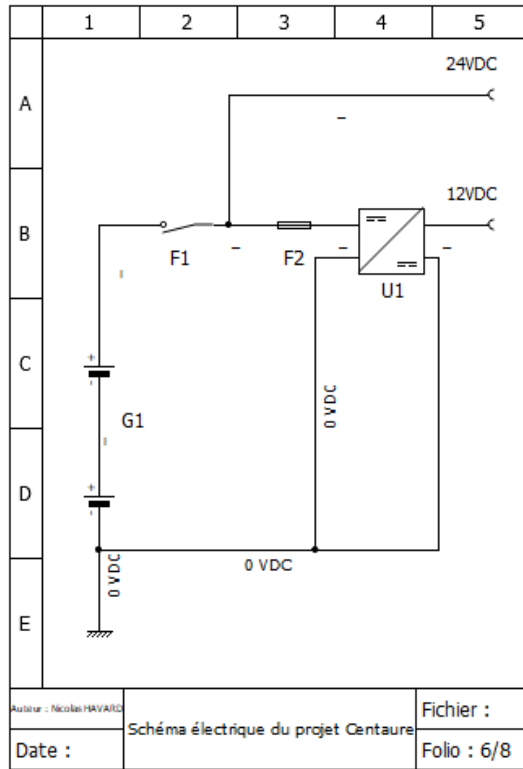
Valeur du potentiomètre 5K	Ubat (V)	Umot (V)	Umot+/bat- (V)	Umot-/bat- (V)	Upot/bat- (V)	Temps (s) pour 10 tours	Temps (s) pour 1 tour	RPM (tr/min)
STOP		0,00			0,17			0,00
0%	26,10	2,20	26,00	23,70	0,19	55,85	5,59	10,74
10%	25,50	2,20	25,40	23,10	0,33	52,91	5,29	11,34
15%	25,20	4,35	25,10	20,70	0,74	24,45	2,44	24,54
25%	25,20	6,81	25,10	18,30	1,08	14,57	1,46	41,19
40%	25,20	9,88	25,10	15,10	1,55	10,03	1,00	59,80
50%	25,70	13,24	25,40	12,20	2,02	7,44	0,74	80,65
60%	25,00	15,55	24,60	9,10	2,37	6,29	0,63	95,36
75%	25,50	18,60	25,20	6,40	2,70	5,21	0,52	115,27
90%	25,30	18,62	25,00	6,40	3,27	5,18	0,52	115,83
100%	25,50	18,74	25,20	6,40	3,72	5,22	0,52	114,92



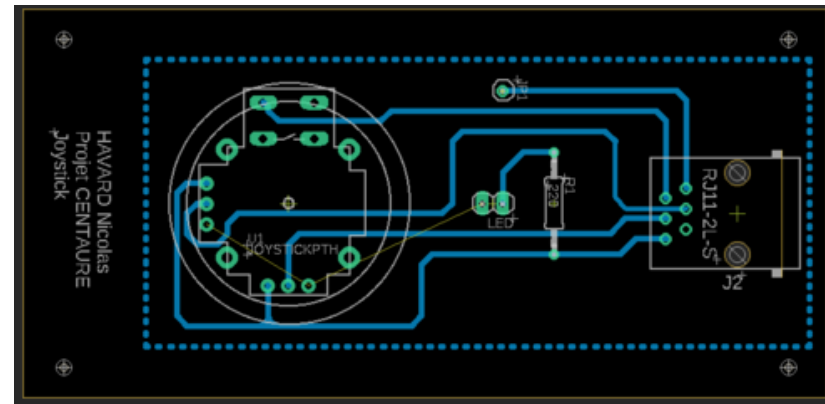
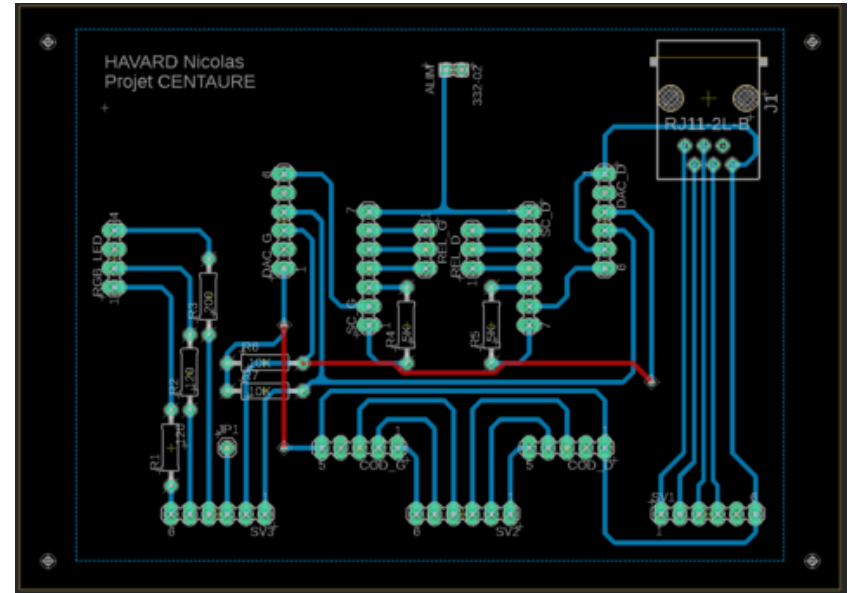
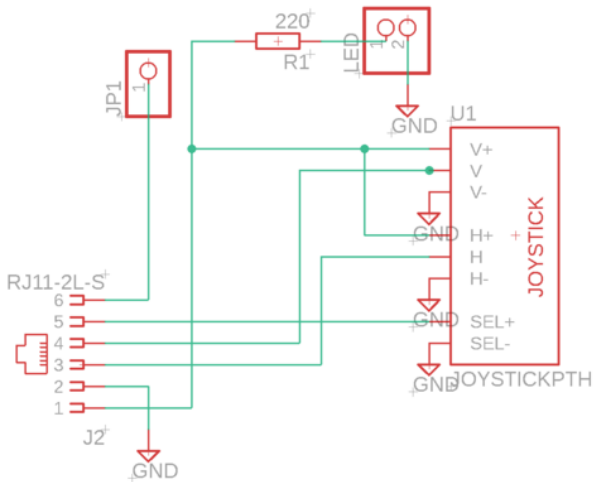
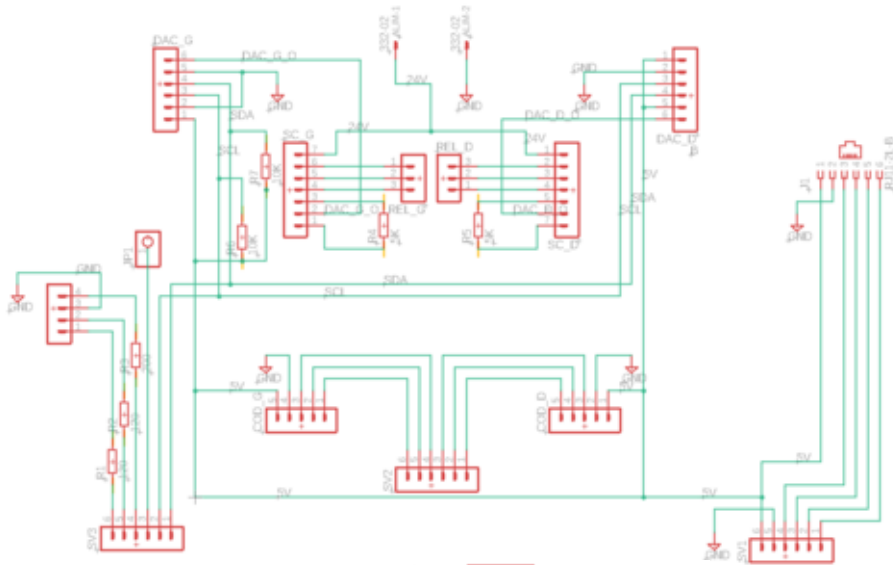
PLANS ELECTRIQUES



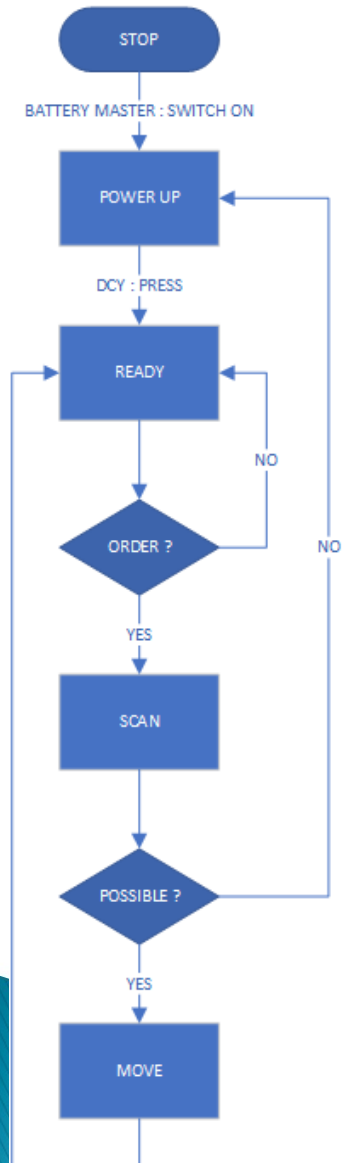
PLANS ELECTRIQUES



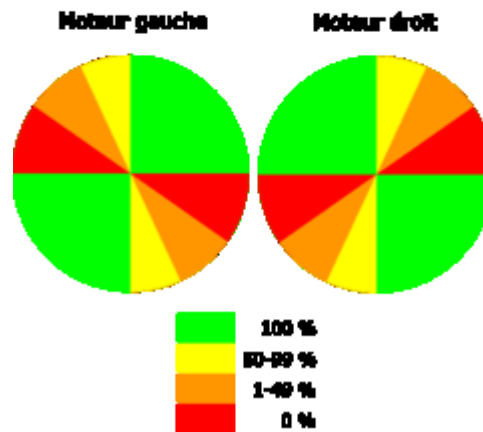
CONCEPTION DES CARTES ELECTRONIQUES



PROGRAMMATION

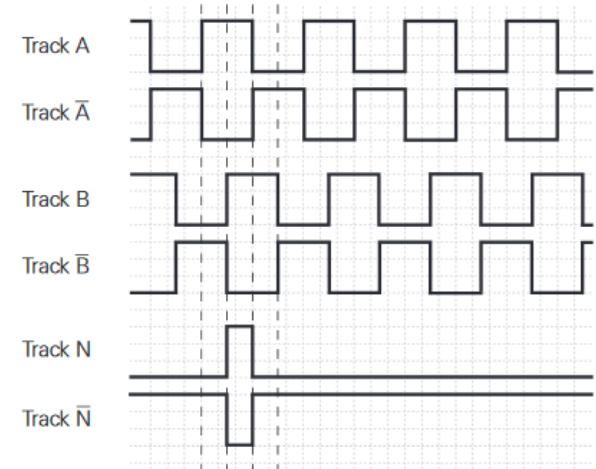
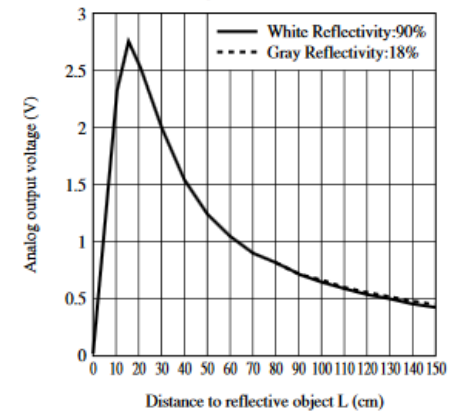


**CONSIGNE EN VITESSE
DES DEUX MOTEURS
EN FONCTION DE LA POSITION
DU JOYSTICK**



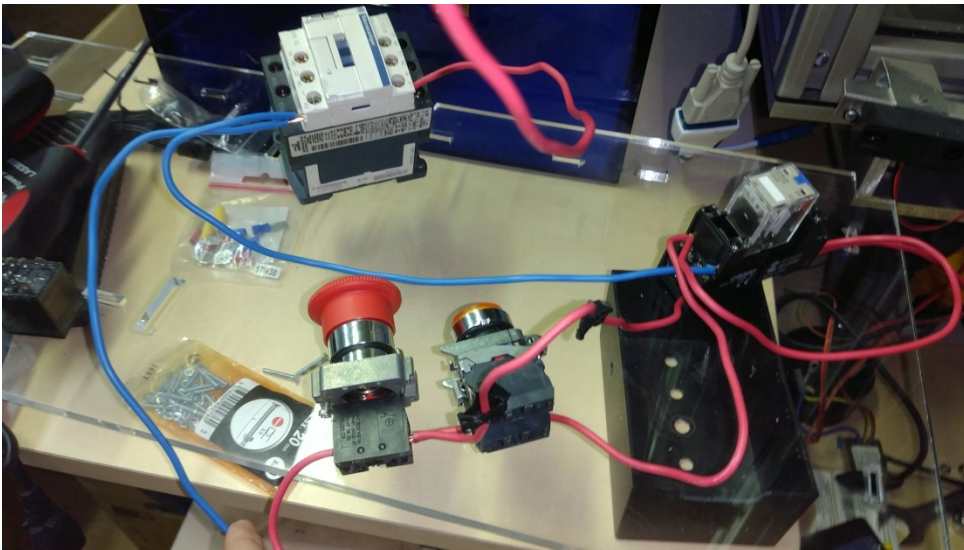
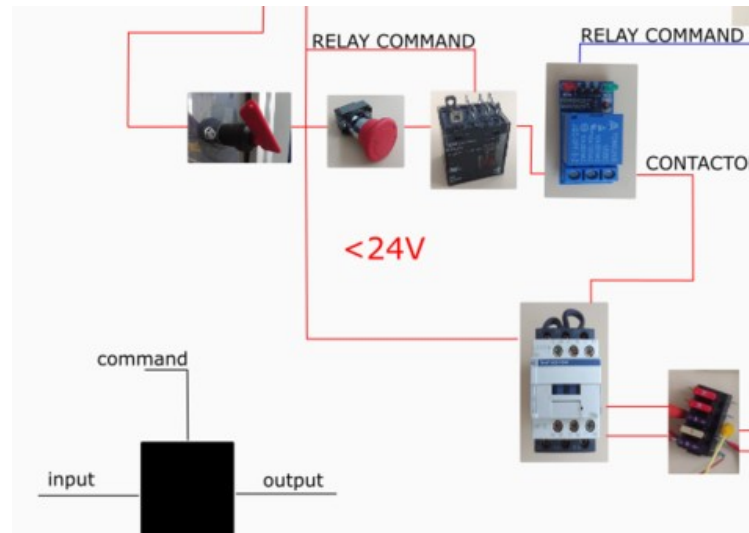
SHARP

Fig.3 Analog Output Voltage vs. Distance to Reflective Object

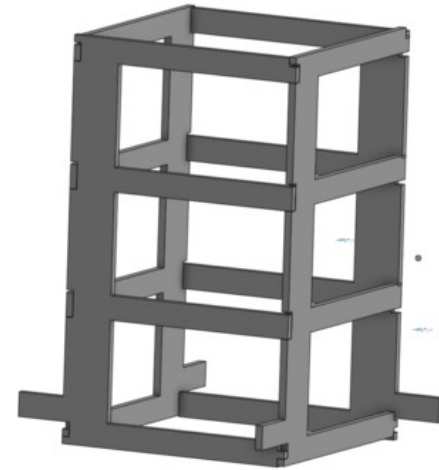
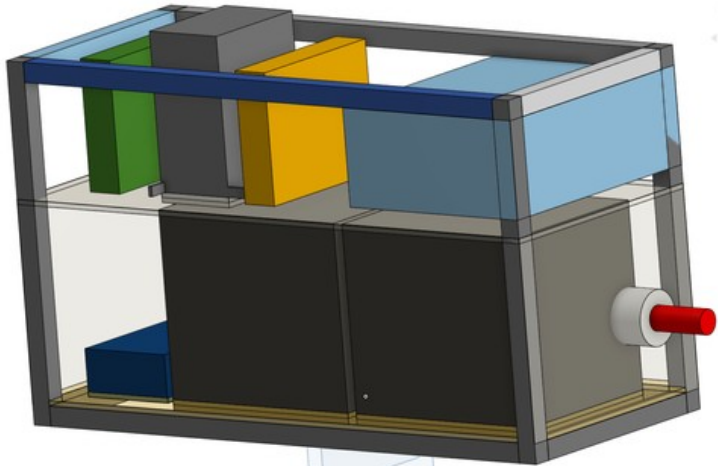


TESTS DE VERIFICATION

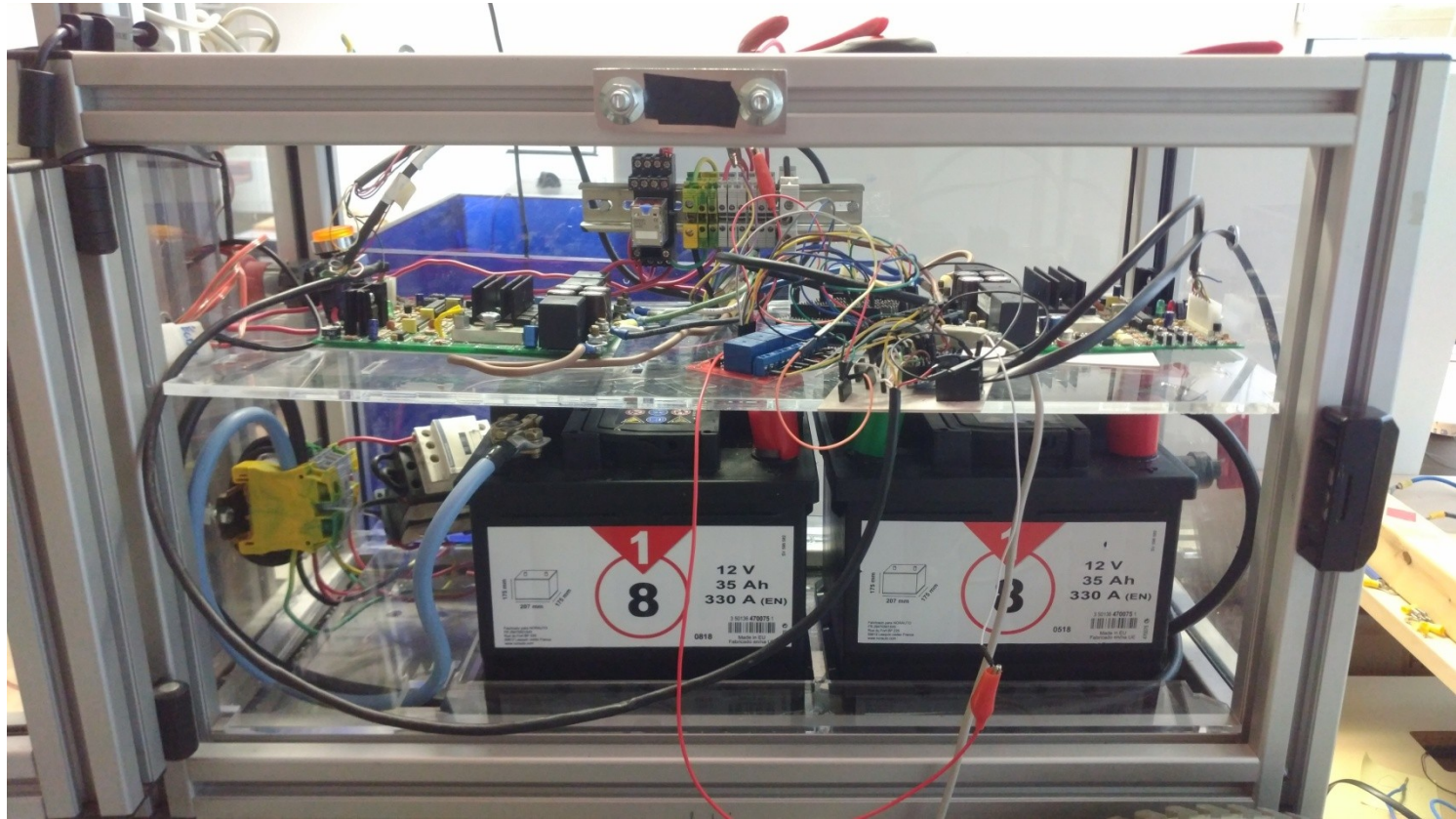
SECURITE



DESIGN



MONTAGE FINAL



CONCLUSION

**AVEZ-VOUS DES
QUESTIONS ?**