

The prototype PCB inputs/outputs addresses and Arduino Uno/Clone 644p-1284p pinout

The I/O table according to the electrical schematic (some parts in french sorry):

The PCB is made of only 12 digital inputs and 8 digital outputs and it is not enough to control the process which need 20 inputs and 12 outputs. In a next episod I will use an Arduino Mega board/Arduino clone644p-1284p on another PCB.

If you want to use an Arduino clone 328p the pins D0 and D1 are usable under LDmicro and unusable with the official Arduino Uno board.

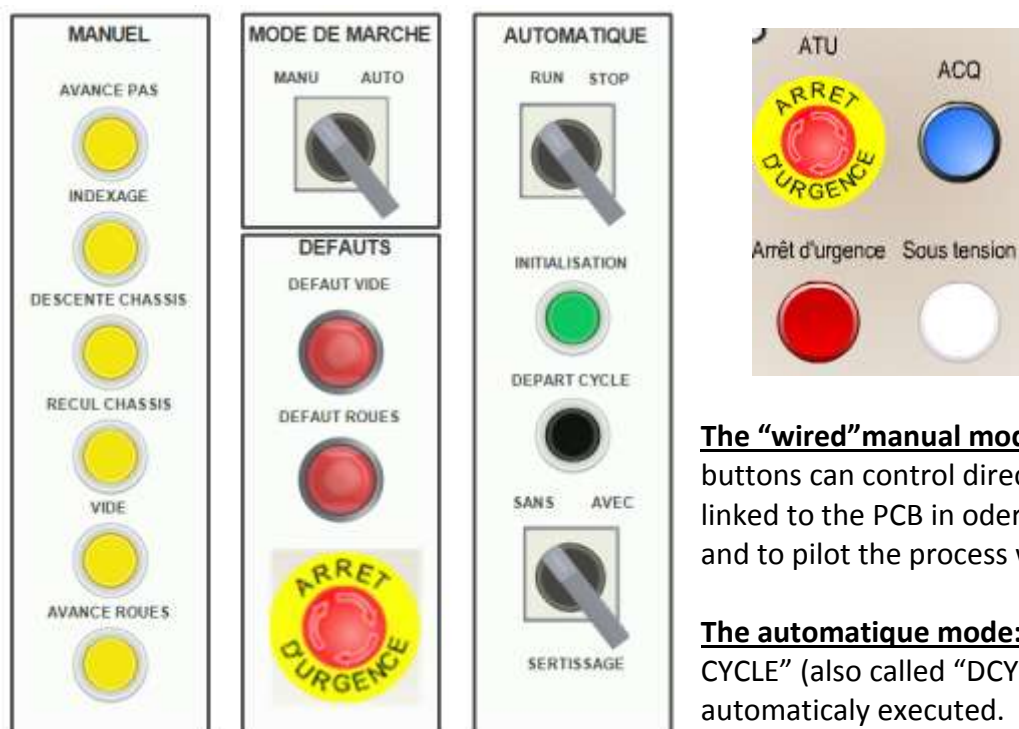
In yellow, these are the pins you can't use with an ethernet shield connected on the boards.

In grey, the pinout of the Arduino clone328p, see on the electronic schematic, not connected on the PCB.

Addresses on the PCB	Sensors/Buttons/Switches/Lights/Actuators names	Atmega328p pinout for LDmicro	Arduino UNO board pinout	Atmega 644p/1284p for LDmicro	Arduino clone644p/1284p
O6	R+ (déposer les roues)	PD0 (pin 2)	PD0 (unusable)	PD0(pin14)	PD8
O7	S+ (sertir la voiture)	PD1 (pin3)	PD1 (unusable)	PD1(pin15)	PD9
I0	Bouton INITIALISATION	PD2 (pin4)	PD2	PD2(pin16)	PD10
I1	Bouton DCY	PD3 (pin5)	PD3	PD3(pin17)	PD11
I2	Commutateur AUTO/MANU	PD4 (pin6)	PD4	PB0(pin1)	PD0
I3	Capteur t0 (T rentré)	PD5 (pin11)	PD5	PB1(pin2)	PD1
I4	Capteur t1 (Tsorti)	PD6 (pin12)	PD6	PB2(pin3)	PD2
I5	Capteur i1 (Indexage sorti)	PD7 (pin13)	PD7	PB3(pin4)	PD3
I6	Capteur p (Présence tapis)	PB0 (pin14)	PD8	PD6(pin20)	PD14
O4	Allumage voyant Défaut Roues	PB1 (pin15)	PD9	PD5(pin19)	PD13
O3	D+ (sortir tige du vérin D)	PB2 (pin16)	PD10	PB4(pin5)	PD4
O2	A+ (sortir tige du vérin A)	PB3 (pin17)	PD11	PB5(pin6)	PD5
O1	I+ (sortir tige du vérin I)	PB4 (pin18)	PD12	PB6(pin7)	PD6
O0	T+ (sortir tige vérin du vérin T)	PB5 (pin19)	PD13	PB7(pin8)	PD7
I7	Capteur d0 (Chassis en haut)	PC0 (pin23)	A0 (PD14)	PA1(pin39)	A0 (PD30)
I8	Capteur d1 (Chassis en bas)	PC1 (pin24)	A1 (PD15)	PA0(pin40)	A1 (PD31)
I9	Capteur a0 (Chassis reculé)	PC2 (pin25)	A2 (PD16)	PA7(pin33)	A2 (PD24)
I10	Capteur a1 (Chassis avancé)	PC3 (pin26)	A3 (PD17)	PA6(pin34)	A3 (PD25)
I11	Contact ATU (arrêt d'urgence)	PC4 (pin27)	A4 (PD18)	PA5(pin35)	A4 (PD26)
O5	Allumage voyant Vide	PC5 (pin28)	A5 (PD19)	PA4(pin36)	A5 (PD27)
		Sensors/Buttons/Switches/Lights/Actuators not reachable by the PCB			
	Commutateur RUN/STOP				
	Capteur v (Coque aspirée)				
	Capteur h (S sorti)				
	R+ (sortir tige du vérin R)				
	S+ (sortir tige du vérin S)				
	V+ (aspirer les coques)				
		Push buttons in manual mode (manual mode wired not programed)			
	Bouton poussoir BP transfert				

	Bouton poussoir BP indexage				
	Bouton poussoir BP recul chassis				
	Bouton poussoir BP descente chassis				
	Bouton poussoir BP vide				
	Bouton poussoir BP dépose essieux				
		Sensors/Buttons/Switches/Lights/Actuators for security and emergency			
	Bouton coup de poing ATU				
	Bouton ACQ (acquiescement défauts)				
	Bouton tournant à clef Sertissage				
	Bobine KAU (arrêt d'urgence)				
	Bobine SEC+ vanne d'arrêt)				
	Voyant Sous tension				
	Voyant Arrêt d'urgence				

Buttons and lights on the control desk :



The “wired” manual mode: used for tests. The push buttons can control directly each actuator and are not linked to the PCB in order to lower the number of inputs and to pilot the process without microcontroller.

The automatique mode: when you push “DEPART CYCLE” (also called “DCY”), the programmed sequence is automatically executed.