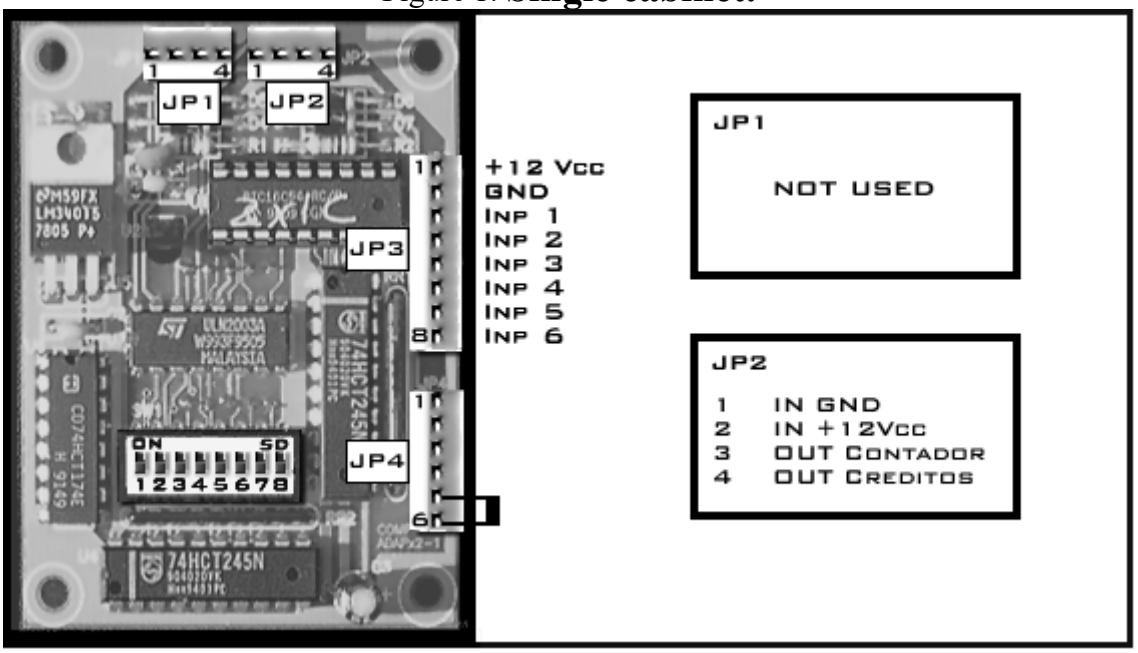
Speed Up

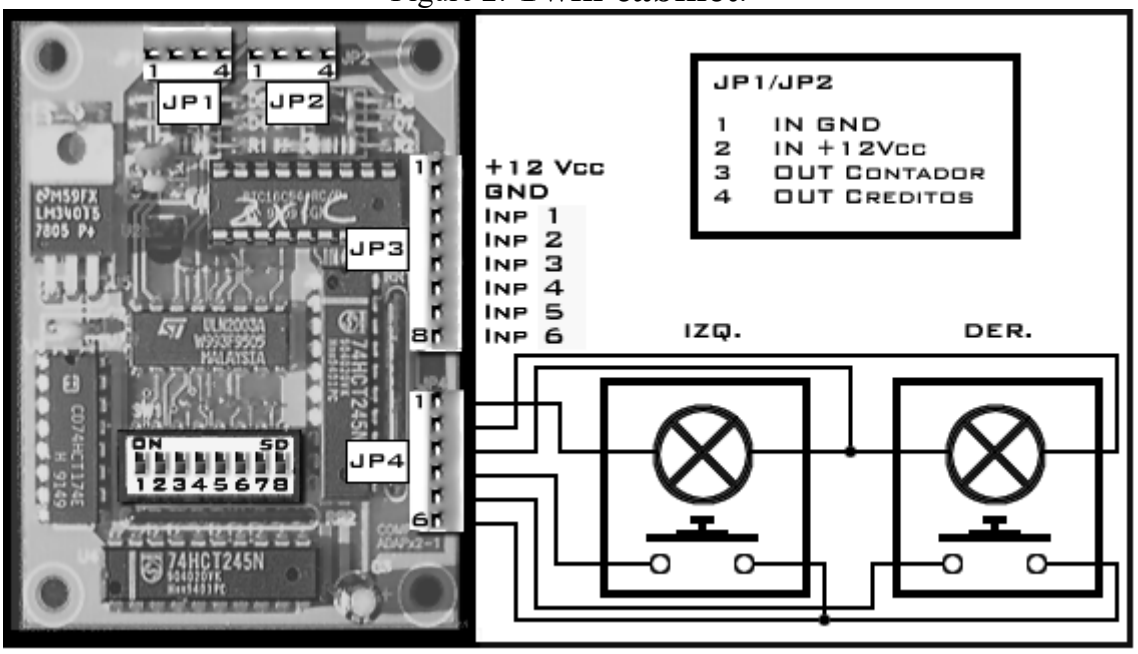
CREDIT DISTRIBUTOR(2) SETUP

Figure 1: **Single cabinet.**



JP1: Not used.
JP2: Cabinet.
JP3: Coin controller.
JP4: Jumper (5-6).

Figure 2: **Twin cabinet**.



JP1: Cabinet 1 (Left player).
JP2: Cabinet 2 (Right player).
JP3: Coin controller.
JP4: Credits distribution controls.

CONNECTORS LAYOUT

Connectors JP1/JP2 (single mode):
JP1 is NOT USED.
The connector JP2 should be connected to SPEED UP PCB:

JP2	Description:	Values:	Source/Destination:
Pin 1	Input GND.	GND.	GND power supply.
Pin 2	Input Vcc.	+12 Vdc	DC power supply.
Pin 3	Counter output.	0/+5/+12 V	Coin counter
Pin 4	Credits output.	+5/0 V.	Credits for CPU.

Connectors JP1/JP2 (twin mode):
The connectors JP1 and JP2 should be connected to SPEED UP PCB No.1 and SPEED UP PCB No.2 respectively:

JP1	Description:	Values:	Source/Destination:
Pin 1	Input GND.	GND.	GND power supply.
Pin 2	Input Vcc.	+12 Vdc	DC power supply.
Pin 3	Reserved.	- - - -	
Pin 4	Credits output.	+5/0 V.	Credits for CPU.

JP2	Description:	Values:	Source/Destination:
Pin 1	Input GND.	GND.	GND power supply.
Pin 2	Input Vcc.	+12 Vdc	DC power supply.
Pin 3	Counter output.	0/+5/+12 V	Coin counter
Pin 4	Credits output.	+5/0 V.	Credits for CPU.

Connector JP3 (Serial or mechanic coin controller):
Input connector of electronic coin controller, programmable per channels.

Distributor connector :

	PIN	Signal	Active	Link
1	1	Vcc	+12Vdc	=>blue(2)
2	2	GND	0V	=>black(1)
3	3	Inp. 1	0V	<=green(7)
4	4	Inp. 2	0V	<=red(8)
5	5	Inp. 3	0V	<=grey(9)
6	6	Inp. 4	0V	<=white(10)
7	7	Inp. 5	0V	<=orange(3)
8	8	Inp. 6	0V	<=yellow(4)

Coin controller connector :

PIN	Signal	Active
1	0V	0V
2	+12Vdc	+12Vdc
3	Outp. 5	0V
4	Outp. 6	0V
5	- - -	
6	Lock	High
7	Outp. 1	0V
8	Outp. 2	0V
9	Outp. 3	0V
10	Outp. 4	0V

1	2
3	4
5	6
7	8
9	10

***** Connectors layout for **COMPONENTS** SIDE *****

Connector JP3 (Parallel electronic coin controller):
Input connector of electronic coin controller, programmable per coin.

Distributor connector :

	PIN	Signal	Active	Link
1	1	Vcc	+12Vdc	=>blue(Vcc)
2	2	GND	0V	=>black(Gnd)
3	3	Inp. 1	0V	<=pink(Acc.1)
4	4	Inp. 2	0V	<=yellow(Acc.2)
5	5	Inp. 3	0V	<=white/orange(Acc.3)
6	6	Inp. 4	0V	<=orange(Acc.4)
7	7	Inp. 5	0V	<=Not used.
8	8	Inp. 6	0V	<=Not used.

Coin controller connector :

Vcc (9)
Gnd (10)
Acc.1 (2)
Acc.2 (4)
Acc.3 (5)
Acc.4 (7)

Connector JP4:
This connector should not be manipulated except in the case of malfunction.

PIN	Description:	Values:	Source/Destination:
Pin 1	Not used.	- - -	
Pin 2	Not used.	- - -	
Pin 3	Not used.	- - -	
Pin 4	Not used.	- - -	
Pin 5	Connected to 6	0 V	
Pin 6	Connected to 5	GND	GND

PROGRAMMING OF COIN CONTROLLERS

SERIAL Controllers supported:

COIN CONTROL	C-120
NRI	G-136000
MARS	CASHFLOW,330

MARS 330/S 212	OPA	OPB	OPC	OPD	OPE	OPF
NRI G-13600	Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6
Coin Control C 120	Coin 1	Coin 2	Coin 3	Coin 4	Coin 5	Coin 6
PIN Controler:	7	8	9	10	3	4
Germany	= =	= =	5 Dm	= =	2 Dm	1 Dm
Switzerland	= =	= =	5 Fs	= =	2 Fs	1 Fs
France	20 Ff	10 Ff	5 Ff	= =	2 Ff	1 Ff
Italy	= =	= =	500 L	= =	200 L	100 L
USA	= =	= =	= =	1 $	50 Ct	25 Ct
Great Britain	= =	1 Lb	50 Pe	= =	20 Pe	10 Pe
Spain	= =	= =	500 Pt	= =	200 Pt	100 Pt
Spain II	500Pt	= =	200 Pt	100 Pt	50 Pt	25 Pt

PARALLEL controllers supported: COIN CONTROL C230/5

Coin Control Acc. 1 , 2 , 3	Coin 1	Coin 2	Coin 3	Coin 4	Coin 5	Coin 6	Coin 7	Coin 8
Controller Pins 2.4.5 (*)	000	100	010	110	001	101	011	111
Germany	5 Dm	= =	2 Dm	1 Dm	= =	= =	= =	= =
Switzerland	5 Fs	= =	2 Fs	1 Fs	= =	= =	= =	= =
France	= =	10 Ff	= =	5 Ff	= =	2 Ff	= =	1 Ff
Italy	500 L	200 L	= =	100 L	= =	= =	= =	= =
USA	= =	= =	= =	1 $	50 Ct	= =	= =	25 Ct
Great Britain	= =	1 Lb	= =	50 Pe	20 Pe	= =	10 Pe	= =
Spain	500 Pt	= =	200 Pt	100 Pt	= =	50 Pt	= =	25 Pt

(*) The **pin 7 of the controller** (Acc.4)
should be connected to the **pin 6 of coin distributor** (Inp.4)

SWITCH SETUP

SW1= OFF SERIAL Input:

Used for **mechanic** o electronic coin controllers that provide **serial** output or **channel** output.

Each input pulse is multiplied by a value (or "weight") depending of the input used according to the following table:

SW1= OFF: SERIAL INPUT (sw2= off)(*)

Connector (input)	Pin3 (i 1)	Pin4 (i 2)	Pin5 (i 3)	Pin6 (i 4)	Pin7 (i 5)	Pin8 (i 6)
VALUE:	x 20	x 10	x 5	x 4	x 2	x 1

(*) Europe except Spain: sw2= off.

SW1= OFF: SERIAL INPUT(sw2= on)(**)

Connector (input)	Pin3 (i 1)	Pin4 (i 2)	Pin5 (i 3)	Pin6 (i 4)	Pin7 (i 5)	Pin8 (i 6)
VALUE:	x 20	x 10	x 8	x 4	x 2	x 1

(**) USA and Spain: sw2= on.

SW2 coin multiplication factor:

SW2= OFF (Europe except Spain)	Channel:	1	2	3	4	5	6
	Value:	x 20	x 10	x 5	x 4	x 2	x 1
SW2= ON (Spain and USA)	Channel:	1	2	3	4	5	6
	Value:	x 20	x 10	x 8	x 4	x 2	x 1

SW3= XX Not used if SW1=OFF

SW1= ON PARALLEL Input:

Used for electronic coin controllers that provide **three-bit coin code**.

SW1= ON: PARALLEL INPUT (SW2= off)(*)

SW3= off: REDUCED table			**SW3**= on: EXTENDED table		
Coin 1	x5	5Dm,5Fs,500Lr	Coin 1	x20	
Coin 2	x2	2Dm,2Fs,200Lr	Coin 2	x10	10Ff, 1Lb
Coin 3	--		Coin 3	x8	
Coin 4	x1	1Dm,1Fs,100Lr	Coin 4	x5	5Ff,50Pn
Coin 5	--		Coin 5	x2	---,20Pn
Coin 6	--		Coin 6	x2	2Ff, ---
Coin 7	--		Coin 7	x1	---,10Pn
Coin 8	--		Coin 8	x1	---, ---

(*) Europe except Spain: sw2= off.

SW1= ON: PARALLEL INPUT (SW2= on)(**)

SW3= off: REDUCED table			**SW3**= on: EXTENDED table		
Coin 1	x5	500Pt	Coin 1	x20	500Pt, ---
Coin 2	--		Coin 2	x10	
Coin 3	x2	200Pt	Coin 3	x8	200Pt, ---
Coin 4	x1	100Pt	Coin 4	x4	100Pt, 1$
Coin 5	--		Coin 5	x2	--- ,50Ct
Coin 6	--		Coin 6	x2	50Pt, ---
Coin 7	--		Coin 7	x1	
Coin 8	--		Coin 8	x1	25Pt,25Ct

(**) USA and Spain: sw2= on.

SW2: coin multiplication factor:

SW2= OFF	Coin:	1	2	3	4	5	6	7	8
(Europe except Spain)	Value:	x 20	x 10	x 8	x 5	x 2	x 2	x 1	x 1
SW2= ON	Coin:	1	3	3	4	5	6	7	8
(Spain and USA)	Value:	x 20	x 10	x 8	x 4	x 2	x 2	x 1	x 1

SW4-SW5 EXTRA credits bonus.

Define one EXTRA CREDIT bonus according to the BONUS table joined with Credits table.

SW6-SW7-SW8 CREDITS table

The following table indicate **pulses per credit**:

CREDITS table				BONUS table(**SW4/SW5**)			
SW6	**SW7**	**SW8**	Val/Cr	off/off	on/off	off/on	on/on
off	off	off	1	0	5	4	2
on	off	off	2	0	5	4	2
off	on	off	3	0	*5	3	6
on	on	off	4	0	20	16	8
off	off	on	5	0	25	20	10
on	off	on	8	0	20	16	8
off	on	on	10	0	25	20	10
on	on	on	12	0	20	16	24

(*)Adds another credit for the second lap.

APPLICATION EXAMPLES

Spain(1):	SW1=	off	SERIAL input. (25 Pt via PIN 8)=(Channel 6)
	SW2=	on	Input values x1 x2 x4 x8 x20
	SW3=		Not used.
	SW4=	on	EXTRA credit for 500pts.
	SW5=	off	
25 Pts = 1 pulse	SW6=	on	8 pulses / 1 credit.
	SW7=	off	
	SW8=	on	
RESULT:	200 Pts /1 credit; 500 Pts / 3 credits;		

Spain(2):	SW1=	on	PARALLEL input. (Coin 8 = 25 Pts)
	SW2=	on	Input values x4 y x20
	SW3=	on	Extended table x1 x2 x4 x8 x10 y x20.
	SW4=	on	EXTRA credit for 500pts.
	SW5=	off	
25 Pts = 1 pulse	SW6=	on	4 pulses / 1 credit.
	SW7=	on	
	SW8=	off	
RESULT:	100 Pts /1 credit; 500 Pts / 6 credits;		

Germany:	SW1=	off	SERIAL input. (1 Dm via PIN 8)=(Channel 6)
	SW2=	off	Input values x1 x2 -- x5
	SW3=		Not used.
	SW4=	on	EXTRA credit on the 5th Pulse (=5 Dm).
	SW5=	off	
1 Dm = 1 pulse	SW6=	off	1 pulse / 1 credit.
	SW7=	off	
	SW8=	off	
RESULT:	1 dm /1 credit; 5 dm / 6 credits;		

France(1):	SW1=	off	SERIAL input. (5 Ff via PIN 5)=(Channel 3)
	SW2=	off	Input values x1 x2 -- x5
	SW3=		Not used
	SW4=	off	EXTRA credit on the 20th Pulse (=20 ff).
	SW5=	on	
5 Ff = 5 pulses	SW6=	off	5 pulses / 1 credit.
	SW7=	off	
	SW8=	on	
RESULT:	5 ff /1 credit; 20 ff / 5 credits;		

France(2):	SW1=	off	SERIAL input. (5 Ff via PIN 5)=(Channel 3)
	SW2=	off	Input values x1 x2 -- x5
	SW3=		Not used
	SW4=	off	EXTRA credit on the 20th Pulse (=20 ff).
	SW5=	on	
5 Ff = 5 pulses	SW6=	off	10 pulses / 1 credit.
	SW7=	on	
	SW8=	on	
RESULT:	10 ff /1 credit; 20 ff / 3 credits;		

Great Britain :	SW1=	off	SERIAL input. (10 Pen via PIN 8)=(Channel 6)
	SW2=	off	Input values x1 x2 -- x5
	SW3=		Not used.
	SW4=	on	EXTRA credits on the 5th Pulse (=50 Pn)
	SW5=	off	and 10th Pulse (=1 £).
10 Pen= 1 pulse	SW6=	off	3 pulses / 1 credit.
	SW7=	on	
	SW8=	off	
RESULT:	30 Pn /1 cred.; 50 Pn /2 cred.; 1 £ / 5 cred.		

END