

WORLD
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FAUT

ELAUT MICROPROCESSOR

General overview of the microprocessor

- 1/ The microprocessor consists of 3 main parts:
 - * the microprocessor itself, with the software
 - * the interface (or the connection) between the program and the mechanism
 - * the power supply

- 2/ The power supply:

The microprocessor needs a minimum input voltage of 100 V / 60 Hz or 200 V / 50 Hz.

If the crane produces false sounds or the movement is not as it should be, this indicates that the supply voltage is too low.

FEATURES OF THE MICROPROCESSOR

The following features are included in the standard crane mech.
(Note: for details of the set up please refer to next part)

- * Pushbuttons for forward and sideward movement.
The grab will be lowered automatically when the sideward movement has stopped.
- * The maximum playtime is setable from 10 to 50 seconds, with the possibility to switch the timer off.
- * Credit system with the possibility to choose between:
 - 4 coin acceptors, set for the selected coins
 - 1 electronic coin acceptor with 4 pre-programmed coin selections.
- * Speed of the motors is individually adjustable for those countries where this is not forbidden by law.
- * A sound will be heard on
 - each movement of the wagon
(different sounds per movement)
 - end of the game without winning a prize
 - the winning of a prizeAlso an attraction melody will be heard every 3 minutes.
The volume of this melody is adjustable.
- * Counters for the received money and for the prizes given away.
These counters can be reset at any time.

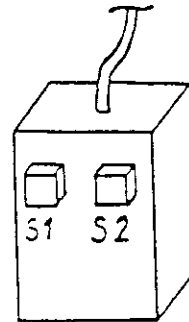
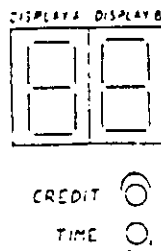
If desired following options are available:

- * Joystick for movement in 4 directions with FIRE button for the down movement.

Setting of the microprocessor

ENTERING THE SETUP MODE

A separate small box with 2 pushbuttons was included with your crane. With this the microprocessor may be programmed. To do so, insert the plug into the socket of the black box. (see drawing)



Then push the left button S1. The "CREDIT" lamp will go out on the display.
The first figure on the display is "1" (display A).
Now you have entered the setup mode and you are able to set the microprocessor as desired.

THE SETUP OF THE MICROPROCESSOR

The figure "1" on display A indicates the first setup feature of the microprocessor. The other figure, on display B, indicates the chosen setting for this feature.
If you would like to change this setting, push the righthand button S2 until the desired figure appears on display B.
Switching over to the next setup feature is done by pushing the lefthand button S1 until the desired feature number appears on the display A.
In total 16 different setup features are available.
An overview of these will be given on the next pages.
(note: for the features 10 to 16 the display A will show the figure 0 to 6, with both "TIME" and "CREDIT" lamps lit simultaneously.)

4. DISPLAY A = 1 VOLUME CONTROL
 DISPLAY A = 2 INACTIVE
 DISPLAY A = 3 STRENGTH OF GRAB
 DISPLAY A = 4 INACTIVE
 DISPLAY A = 5 INACTIVE
 DISPLAY A = 6 INACTIVE

A = 3 DISPLAY	B = 0 = 20%	
	B = 1 = 25%	
	B = 2 = 30%	
	B = 3 = 35%	
	B = 4 = 40%	GRAB STRENGTH
	B = 5 = 50%	
	B = 6 = 60%	
	B = 7 = 75%	
	B = 8 = 85%	
	B = 9 = 100%	

SEE SHEET 5

- FIG. 1 The jaws may also be bent (3) as illustrated by hand to enable more control on picking up different sizes of toys.
 See A, B and C.
- FIG. 2 More grab - undo the 2 Allen screws (4) and lower ring to tighten the grip on toys.
- FIG. 3 Less grab - undo the 2 Allen screws (4) and lift ring upwards to lessen the grip on toys.
- FIG. 4-5 Toy size - to allow jaws to open wider for larger toys undo screw on the bottom of the grab assembly and turn the star ring round (2) until the grab opens enough to cover the toys and then tighten the screw. Turn ring (2) the reverse way for smaller toys.

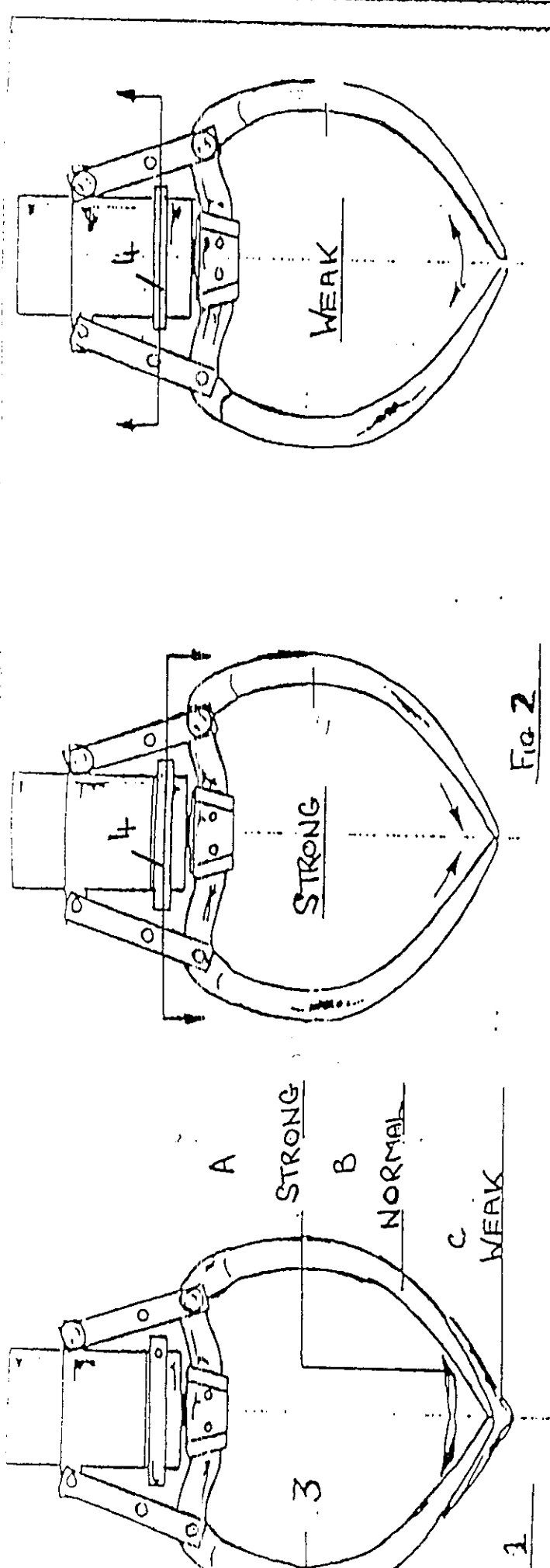
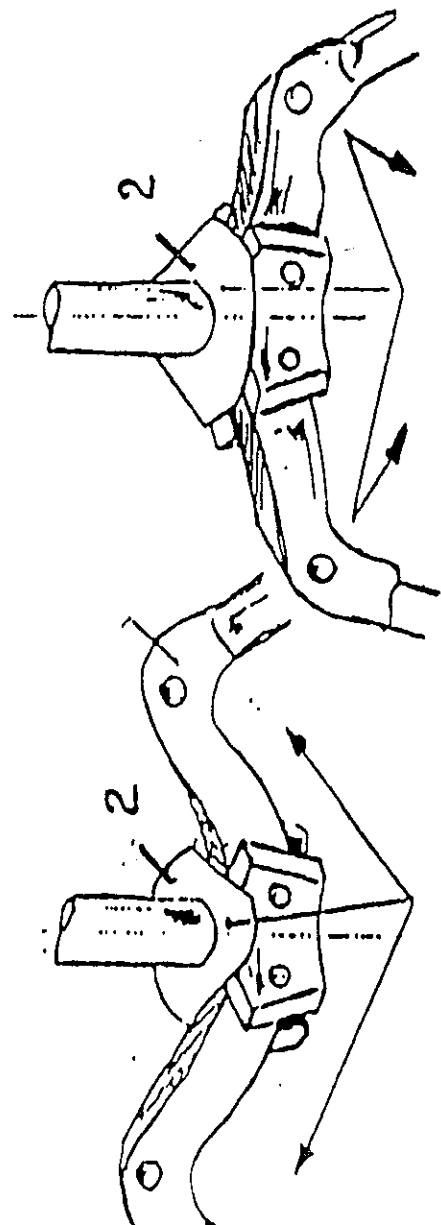


Fig. 2



BIG OBJECTS

SMALL OBJECTS

FIG 4

FIG 5

7/ Display A = 7

Price for 1 game	
Display B = 1	= 10 pence / game
2	= 20 pence / game
3	= 30 pence / game
4	= 40 pence / game
5	= 50 pence / game
6	= 60 pence / game
7	= 70 pence / game
8	= 80 pence / game
9	= 90 pence / game
0	= 1 pound / game

With this function you can select the price of 1 game.
So you may select 20 p/game.
If the player throws in 10 p, the credit-led will flash
indicating another 10 pence is needed to enable another
game.

8/ Display A = 8 not active

9/ Display A = 9 not active

10/ Display A = 0 not active
and 2 lights on

Speed motor forward	
Display A = 1 and 2 lights on	Display B = 0 = 10 ¢
	1 = 20 ¢
	2 = 30 ¢
	3 = 40 ¢
	4 = 50 ¢
	5 = 60 ¢
	6 = 70 ¢
	7 = 80 ¢
	8 = 90 ¢
	9 = 100 ¢

Speed motor sideways	
Display A = 2 and 2 lights on	Display B = 0 = 10 ¢
	1 = 20 ¢
	2 = 30 ¢
	3 = 40 ¢
	4 = 50 ¢
	5 = 60 ¢
	6 = 70 ¢
	7 = 80 ¢
	8 = 90 ¢
	9 = 100 ¢

Speed motor up/down	
Display A = 3 and 2 lights on	Display B = 0 = 10 ¢
	1 = 20 ¢
	2 = 30 ¢
	3 = 40 ¢
	4 = 50 ¢
	5 = 60 ¢
	6 = 70 ¢
	7 = 80 ¢
	8 = 90 ¢
	9 = 100 ¢

- 14/ Display A = 4 Maximum playtime
 and 2 lights on Display B = 0 = timer not active
 1 = 10 sec
 2 = 15 sec
 3 = 20 sec
 4 = 25 sec
 5 = 30 sec
 6 = 35 sec
 7 = 40 sec
 8 = 45 sec
 9 = 50 sec
- 15/ Display A = 5 Volume intermediate melody
 and 2 lights on Display B = 0 = no sound
 1 = 10 %
 2 = 20 %
 3 = 30 %
 4 = 40 %
 5 = 50 %
 6 = 60 %
 7 = 70 %
 8 = 80 %
 9 = 90 %
- 16/ Display A = 6 Reset credit and counters
 and 2 lights on Display B = 0 = no reset
 1 = no reset
 2 = no reset
 3 = no reset
 4 = no reset
 5 = credit and counters
 are resetted to zero,
 and the mechanism
 returns automatically
 to the play mode

LEAVING THE SETUP MODE

Once the desired settings have been changed, you may use the left hand button S1 to scroll through the program to setting 16.

When the left hand button S1 is pressed once more, you will leave the setup mode and the mechanism will return to the playmode.

(note: after resetting the counters (setting 16-5) the program will return automatically to the playmode.)

Displaying of the counters

Your crane includes 2 different counters:

- * money received
- * prizes out

Pushing the right hand button S2 once, the total money in is shown on the display in 3 stages of 2 flashing numbers.

e.g.: stage 1 stage 2 stage 3 = £ 58426.30 p
 58 42 63

2 successive clicks on button S2 give the total prizes out, this time in 2 stages.

e.g.: stage 1 stage 2 = 1874 prizes out
 18 74

General fault finding procedures

Fault description	What to do
When starting the crane, the mechanism does not come into rest position; there is no sound and the display does not light up.	Check the fuses and the supply voltages.
Display lights up and there is sound, however the grab does not return.	Check the plugs and connectors of the mechanism and on the black box.
Grab closes and moves upwards however then mechanism stops.	Check functioning of SW3 on the wagon. Check if the grab remained in the upper position and is not dropped.
After a period of intensive use, the grab does not close anymore.	PTC of the grab is overheated. Let it cool off; and if needed put a second PTC in parallel with it.
One or more motors turn too slow.	Check settings 11, 12 and 13.
Impossible to regulate speed of the motors.	Check transistors of the motor circuit (Q1, Q2, Q3).
Impossible to regulate force of the grab.	Check transistors of the grab circuit (Q4, Q5, Q6).
Grab remains lowered.	Check SW4 on the wagon.
Wagon moves sideways, but does not return to its home position.	Check SW2 on the wagon.
Wagon is in its home position, but the motor continues to turn and the grab stays closed.	Check SW1 on the wagon.

Wagon does not go forwards	SW3 is open since the grab is lowered.
Display light is dim.	Check the connector on the side of the black box.
Coin mech does not accept any coins.	Check the wiring, especially the -12 V.
Coin!; are accepted, sound is heard, but there are no credits registered.	Check settings 7, 8, 9 and 10
Loud or faulty sound.	Check connectors and contacts from power supply, as well as from the 12 V-fuse.
No sound and the amplifier is overheated.	Shortcircuit in the speaker.
Nothing is working normally anymore.	Check if the interface- and microprocessor-PCB are still well connected to each other.

