EURO REGEL SPAIN S.A. Manufactured in Madrid FLIP

ALTER-RAM PROGRAM Version Ø1

AIMS This memory contains a special program which makes it possible to alter any of the data in the CMOS memory of the machine. Therefore, it is possible to re-record the model, serial number or any other data which might require to be changed for various reasons.

FORM OF USE The Ø1 version has been programmed to carry out two different functions :

a) To record the entire RAM-CMOS memory with the standard data (in a single operation). These data are the Reset for all the totalizers: 1Ø51 for the model register; 1.000.000 for the handicaps; 19 as the credit limit and adjustment data, corresponding to model 1Ø51. This function is carried out in the following way :

1. Insert the memory in the socket corresponding to the game memory (24 pin socket in the Master Unit).
2. Switch on the machine and wait until it has finished the Self-Check routine.
3. Manually work the micro of any coin rejector to obtain one play.
4. Close the door of the machine and press the start button.
5. Open and close the door three times.

b) To record or alter any data or series of data, such as credit limit, serial number or any other register position.

In order to alter any isolated data, it is necessary to know the location of this within the memory, and therefore you should consult the RAM memory organization or "map", which is enclosed with this information.

The data address is formed by the line code in which it is to be found, followed by the column code; in the case of the credit limit (for example), this will be "20", as can be seen from the table. The enclosed RAM organization or "map" has been produced with the standard values mentioned under paragraph a) of this information.

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The recording or alteration operation is carried out following the processes which are detailed below, and for greater understanding, these can be taken as a sample operation :

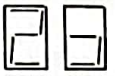
1. Once the ALTER-RAM has been placed in the relevant socket and the machine has been switched on, this will carry out the Self-Check routine.

2. After completing the Self-Check routine and with the door open, use the start button to find representation area 6 (HANDICAP), which is where we are going to work.

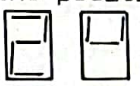
   Let us suppose that we wish to alter the serial number on line 2 (according to the RAM map) and we want to record 4853. The contacts required to record this are two buttons situated on the top left hand side of the inside of the door. One of these buttons alters the first Display (left hand side) and the other changes the second Display of the Credit indicator. The switch with code 68 carries out the recording process.

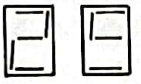
3. Let us now proceed to record the first number on the right hand side, namely "3"; we place this in the first display of the credit indicator and on the right of this we write the number of times that this number (3) is going to be repeated (in this particular case, 0 times).

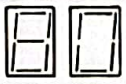
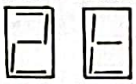
4. Afterwards we press the start button and we find that what was shown on the credit indicator now appears on the extra ball/extra play indicator and vice-versa.

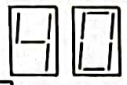
5. Then we write on the credit indicator the first memory location or position that we are going to alter; in this particular case, it would be "28" and therefore the credit indicator must show 

   There is a contact selected for recording the data provided for in the desired position; it is the "68" code switch (in the model POKER PLUS this corresponds to the LEFT HAND KICKER).

6. We press this contact just once and we shall see that the extra ball/extra play indicator now shows the code for the position following that last one altered. In this example = 

7. We now return to the credit indicator to record the next number "5" on the left hand display. The right hand display has automatically been returned to Ø (if it was not already at Ø) = 
   Then we press the "68" switch and we shall find that the extra ball/extra play displays read = 
   (following position to be altered).

8. To record the following number "8", proceed in the same way as above to obtain  followed by a pulse on the left hand kicker switch and thereafter moving on to  on the top display indicator.

9. Finally to record the last number "4", repeat the process to obtain  on the credit indicator, followed by a pulse on the left hand kicker switch, moving on to  on the top display indicator.

10. The new data are now within the RAM working memory and we can check this visually on the displays in the relevant area.

In order to transfer these data to the CMOS memory, we have to carry out the following step :

11. Close the door (which has been left open all the time we have been carrying out the previous steps), as many times as necessary until such time as we hear two different sound tones. Switch off the machine and change the ALTER-RAM for the GAME memory.

TAKE CARE with the correct positioning of the memories that we change in their sockets.

In order to ALTER the information in any other representation area, it is only necessary to write the area we wish to alter in step (5) of the above procedure.

RAM MEMORY ORGANIZATION

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	
0				WORK REGISTER													0
1	PLAYFIELD					⑥	Ⓔ	Ⓕ	WK	WK	※1	Ø Ø Ø Ø Ø SERIAL Nº OF PRINTER					1
2	※1 CREDIT LIMIT	WK	WK	※F MODEL					WK	WK	※3	Ø Ø Ø Ø Ø PRODUCTION Nº					2
3	Ø Ø Ø Ø TIME AT GAME OVER								Ø	Ø	Ø TIME	Ø Ø Ø Ø Ø IN PLAY					3
4	③ FREE PLAY	④ EX.BALL	SL HP ⑧ UP 10⁶	Ø Ø Ø Ø Ø PLAYER Nº 1					STATE ⓪ TILT PLAY	MATCH NUMBER	SL HP ⑨ UP 10⁶	Ø Ø Ø Ø Ø PLAYER Nº 2					4
5	CREDIT ②		SL HP ⑧ UP 10⁶	Ø Ø Ø Ø Ø PLAYER Nº 4					Nº OF PULSES	FIGURE Ⓓ	SL HP Ⓐ UP 10⁶	Ø Ø Ø Ø Ø PLAYER Nº 3					5
6	※6 1°FREE	※5 PLAY	※C	Ø Ø Ø Ø Ø 1st HANDICAP					EX BALL REG.	EX. PLAY REG.	※C	Ø Ø Ø Ø Ø 2nd HANDICAP					6
7	※8 2°FREE	※2 PLAY	※C	Ø Ø Ø Ø Ø 4th HANDICAP					PLAY M. REG.	TRANSFER AREA	※C	Ø Ø Ø Ø Ø 3rd HANDICAP					7
8	※4 EXTRA	※4 BALL	※Ø	Ø Ø Ø Ø Ø 1st COIN REJECTOR					WK	T I M E R	※1	Ø Ø Ø Ø Ø 2nd COIN REJECTOR					8
9	※3 ADJ.	※F PLAY	※Ø	Ø Ø Ø Ø Ø DATE OF LAST RETURNS					WK		※Ø	Ø Ø Ø Ø Ø 3rd COIN REJECTOR					9
A	C1+1 2C COIN	C2+2 BON 2S	※Ø	Ø Ø Ø Ø Ø TOTAL OF EXTRA BALL					WK		※2	Ø Ø Ø Ø Ø TOTAL FREE PLAY					A
B	3rd REJECTOR	E. BALL MOD. 3 BALLS 5 REP. PL	※Ø	Ø Ø Ø Ø Ø PLAY TOTALIZER						Ⓒ	※Ø	Ø Ø Ø Ø Ø SERVICE TOTAL					B
C			1st CONTACT READING								※3	Ø Ø Ø Ø Ø TOTAL RESERVE 1					C
D		COINCIDENCES									※4	Ø Ø Ø Ø Ø TOTAL RESERVE 2					D
E	BH ⑦	STATE OF CONTACTS							G.O. C3 C2 C1	TILT ① START S1 S2	※2	Ø Ø Ø Ø Ø TOTAL RESERVE 3					E
F	※A	※A PRESET	※A	※A CONTACT	※A	※A	※C TIME	※C	※3	※Ø	※1	Ø Ø Ø Ø Ø TOTAL RESERVE 4					F
READING ON	Ø EX.PLAY	1 EX.BALL CREDIT	2 LEDS	3 4 5 6 7 DISPLAYS 1st AND 4th PLAYERS					8 BALL-TILT GAME OVER	9 MATCH NUMBER	A LEDS	B C D E F DISPLAYS 2nd AND 3rd PLAYERS					