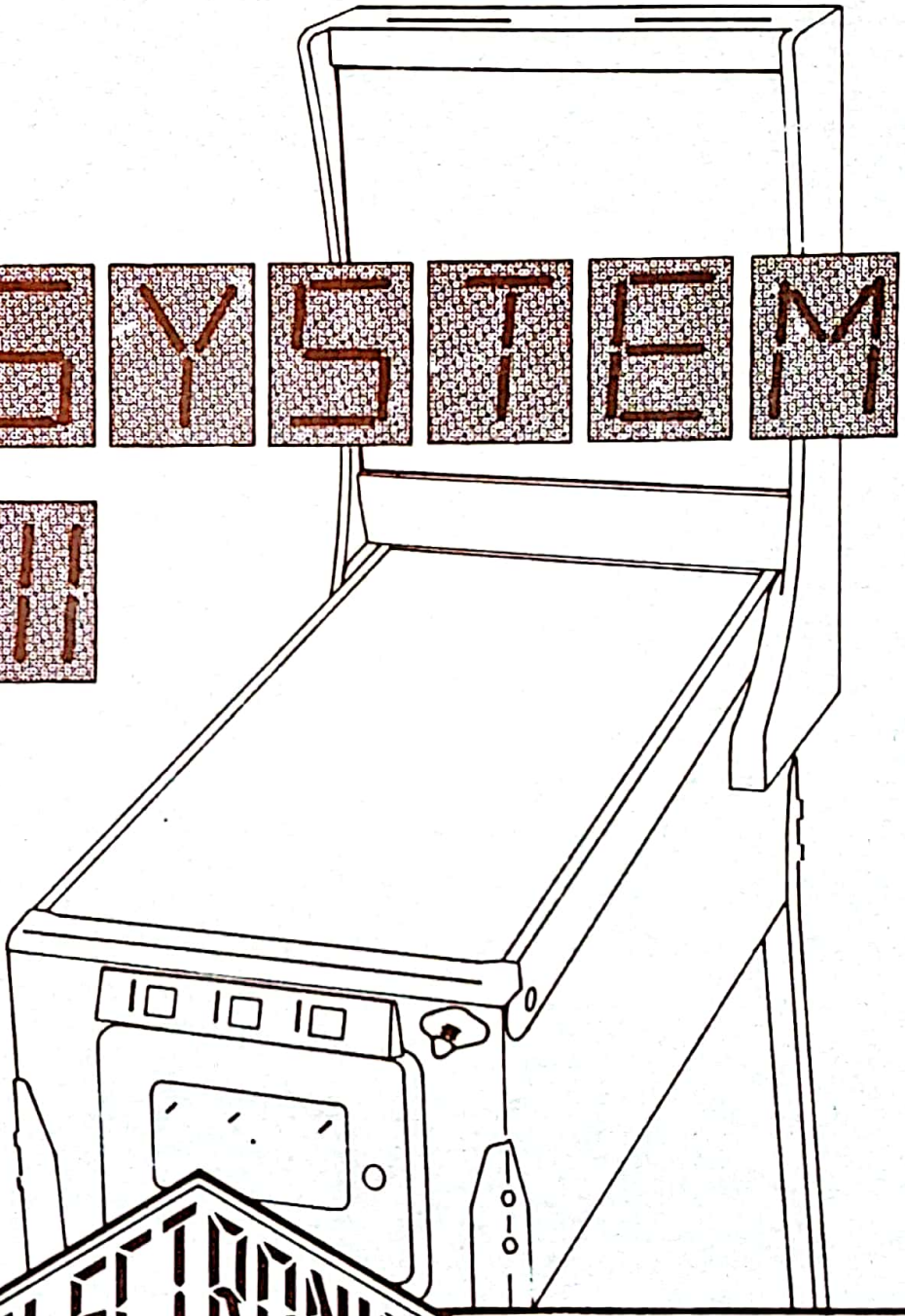
EURO

REGEL SPAIN S.A.
Manufactured in Madrid

FLIP

SYSTEM 11



ELECTRONIC SYSTEM

TECHNICAL BULLETIN

ELECTRONICS DIVISION

DOCUMENT NR Ø35-643

TROUBLE SHOOTING. 001

11/78

MODEL: POKER PLUS and FAIR FIGHT

SYMPTOMS: Occasionally after pressing the Start Button, the machine starts to make a high pitched noise and the ball is not kicked up to the plunger to start play.
The machine remains in this condition until you create "TILT", open the front door or switch on and off the machine.

SOLUTION: Change the game memory EPROM 1702A.

COMMENTS: This trouble is caused by double interruption of the actual function of the start button switch. This effect can result when this switch is not properly adjusted, or if there is a faulty contact due to unclean or uneven surfaces.
Quite independently of the state of this switch, we have recorded two new EPROM memories (1051-6 for POKER PLUS, and 1053-6 for FAIR FIGHT) which include provision for this possible interruption effect, and which prevent any action of the contact during the time it is carrying out its function. Therefore it is then impossible for this fault to recur, whatever the state of the contact.

TROUBLE SHOOTING. 002

11/78

MODEL: POKER PLUS and FAIR FIGHT

SYMPTOMS: Coil driver short-circuited and resistor or diode broken.

SOLUTION: Replace the driver, resistor and/or diode, applying a sealing coat of silicone (Orbasil or similar) which covers and anchors the resistor and diode on the inside of the terminal flap on the spool of the actual coil.

COMMENTS: On certain electro-mechanical assemblies, we have noticed that some of the protection elements have been broken (as a result of the vibrations to which they are submitted), thereby leaving the driver without protection against any self-induced surges or breakdowns which in turn causes the driver to be destroyed after a short period of operation. By applying silicone to the resistor and diode, we have completely eliminated this problem.

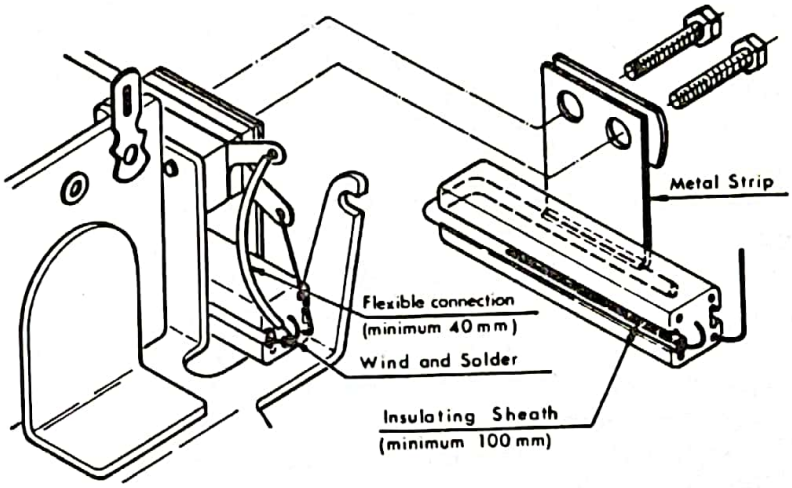
TROUBLE SHOOTING. 003

11/78

MODEL: FAIR FIGHT, MR EVIL and TORNEO

SYMPTOMS: The right or left hand flipper vibrates when activated, because the centre terminal of the relevant 22 ohm resistor has been broken off.

SOLUTION: Replace the resistor connecting it exactly as shown on the figure below.



COMMENTS: As a result of the logical vibration created by the flipper assembly, and together with the thermal dissipation produced in the resistor, one of the terminals (normally the centre one) is broken or becomes faulty in its internal contact, producing the trouble referred to above. By incorporating the metal strip as shown on the figure we can drastically reduce the vibrations on the resistor, and by joining up the centre terminal by means of a flexible connection, we have completely eliminated any possible recurrence of this problem.

TROUBLE SHOOTING. 004

11/78

MODEL: No specific model

SYMPTOMS: Occasionally the machine loses the correct values for the 3rd coin rejector and Mode of Play

SOLUTION: Change the memory Addressing BIC (provisionally you can solve this problem by changing the memory addressing BIC over to the data instruction output BIC and vice-versa).

COMMENTS: The BIC is an interface applicable to two different functions (MOS>TTL AND TTL>MOS) and therefore has independent internal circuits. For this reason, the problem can be solved by merely interchanging the two BICS of the same EPROM on the Master Unit.
The problem is caused by the internal opening of an "enabling" union on the MOS>TTL transfer function, and as a result of the high impedance on this opening, this union achieves or reaches the correct logic level only after a certain time (by virtue of the internal capacities and leaks). The "recovery" rate is greatly increased when impulses are received via line A12 of the Data Addressing BUS (moment when the EPROM program is started). This produces a false execution of the initial instructions coming from the EPROM memory and by coincidence these first instructions affect the positions in the RAM memory occupied by the 3rd coin rejector and Mode of Play adjustments.

TROUBLE SHOOTING. 005

11/78

MODEL:

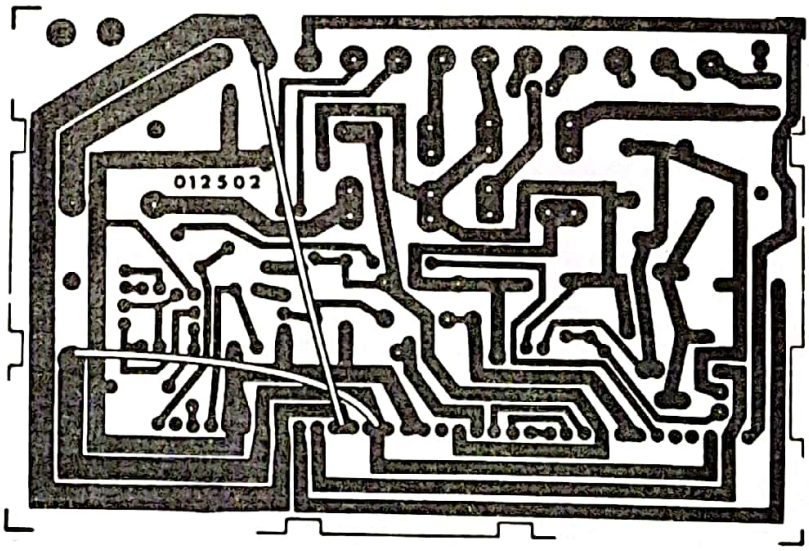
MR EVIL and TORNEO

SYMPTOMS:

The right hand side of the Power Supply printed circuit board, can become considerably over-heated and as a result you might experience a burning out of some contacts on the connector or the 6.3 volt tracks.

SOLUTION:

Take out the circuit board, replace where necessary the connector if it has been damaged, and cable up the bridges exactly as shown in the figure below, between the points indicated.



COMMENTS:

The stable illumination current (6.3 volts AC) heats the tracks by virtue of the Joule effect, and this heat is transferred to the pins on the connector, which deteriorates in turn the nylon supporting these pins.