ZACCARIA®

MANUALE D'ISTRUZIONI

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INDICE

INHALTSVERZEICHNIS

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CONNECTOR CARD FOR **ZANKOR**

INSTALLATION

ASSEMBLING

Assembling should be done as follows:

1. Bolt legs to the cabinet (use special bolts in coin box).
2. Gently extract electric cable and place in the proper cavity, checking that non-skid knot is there.
3. Remove the elastic strip that secures the light board and lift it to a vertical position. During this operation make sure that the cable is not crushed between the parts. The light board has an automatic coupling that keeps it in a vertical position, to ease the fitting of the 4 bolts with the relevant washers, that can be found in the coin box too.

VISUAL INSPECTIONS

On all games there are certain points that should be always checked after transport.
Same are visual inspections which may be helpful to avoid some time consuming service work later.
Minor damages caused by rough handling during the transport are practically unavoidable.
Cable connectors may be loosened, switches (especially tilt switches) may loose their proper adjustment.
Especially the plumb bob tilt switch should always be adjusted after game is set on location.

1. Check whether cabinet cable is connected to the light board cable.
2. Check for any wires that may have become disconnected.
3. Make sure that the cables do not obstacle the moving parts.
4. Check that all fuses are making good contact.
5. Check whether the transformer is connected for the proper main voltage.
6. Check and adjust the sensitivity of tilt contacts as follows.
   A. Plumb bob tilt switch.
   Adjust the plumb bob tilt length according to the required sensitivity.
   B. Rail tilt and ball.
   Put the ball into the rail and check whether it moves properly and closes the contact when the cabinet is raised.
   C. Shockproof tilt
   There are two:
   The first one near plumb bob tilt, the second one near coin chutes. Adjust contact distance to desired sensitivity.

GENERAL GAME OPERATION

1. Put one the ball into the bottom hole
   Connect voltage and start the game.
2. The «GAME OVER» lamp is lit
3. Check whether the machine accepts properly the coins and increments the relevant credits. Please keep in mind that the machine shall not accept any coins when turned off or if the number of credits has reached the max. programmed amount.
4. If after having started the game the GAME OVER lamp is lit, it is necessary to carry out some control functions, because the data stored in the battery memory, are not valid anymore. If the game has been disconnected for many weeks, this is very likely to happen.
   If on the other hand the machine has been recently used, and the GAME OVER lamp blinks, it is possible that the battery or its reloading circuit are out of order.
   In any case, before starting the machine it is advisable to reprogram it.
5. Act on credit push-button. The «GAME OVER» lamp shall extinguish.
   A. First player lamp shall be lit.
   B. The credits are decreased by one.
   C. «BALLS TO PLAY» lamp shall be lit.
   D. The playfield is ready and the ball is ejected from the hole.
6. Each time the credit push-button is operated, the number of credits is decreased by one and the number of players is updated.
7. The max. number of credits available is four.

The purpose of this chapter is to give a general line to follow, so as to maintain the machine in proper operation. The operations shown have to be carried out each time one operates on the machine, even when on power-up.

1. Carefully check that securing screws of electronic boards do not work loose as well as all connectors of the plate.
   — Check and if necessary tighten the screws of the rubber post.
   — Check the conditions of the rubber rings and if necessary change them (remember to check the adjustment of contacts each time the rubber rings are replaced).
   — Carefully clean playfield. Do not use highly caustic cleaners.
2. Playfield (lower part).
   — Check flipper assembly (tie rod, pin joints and contacts).
   — Check bumpers.
   — Check contact adjustments.
   — Check wiring harness to avoid stresses on the wires and obstacles to the moving parts.
3. Check and adjust tilt sensitivity.
   Remember: an efficient periodic maintenance greatly improves the pintable lifetime and avoids the possibility of damages.

NOTE

Games are factory programmed, according to the special requirements of their designation. The main programming elements may be changed, however, by following procedures below.
We remind you that these procedures shall be performed EXCLUSIVELY by skilled technicians, because wrong programming could cause malfunctions.

GENERAL TECHNICAL INFORMATION

To avoid that any cause (battery discharged or others) causes the loss of the data stored in RAM C-MOS, and thus the failure of the pintable, the basic program contains some typical programmings (to replace the switches that had been used with the precedent series).
When the microcomputer notes that the programming data of RAM C-MOS do not apply anymore, recall one of the 8 lists of typical programming (see table I).
For the CHOICE OF THE TYPICAL LIST, that will be called in case of necessity, the DIP SWS. 1, 2 and 3 are used, that are mounted on the C.P.U. board (see figure 1).
On the sound board there are 2 trimmers provided for the separate tuning of the max. volume of sounds and talking.
For the final tuning of the loud-speaker volume, both for sound and for talk, there is a potentiometer provided, that is located inside the cabinet on the right side of the door.

To operate on the «TESTS» with the pintable in GAME OVER position, on the door there is an «ADVANCE-RETURN» switch with central rest position (or 2 push-buttons, of which one «ADVANCE» and the other one «RETURN»). By acting on «ADVANCE» at each control the tests progress 1 by 1 from 0 through 37 and then again 0, 1, 2 etc. When pushing again «RETURN», each time the test number is decreased by one (contrary to what happens with «ADVANCE»).
The test number is indicated on the 2 figures of the «BALLS TO PLAY» display (see fig. 2). To leave the test, and return thus to GAME OVER, it is sufficient to stop and then start again the game, or to push ADVANCE or RETURN until the display shows 00.
To clear the «accounting» tests or in any case to amend the programming tests, it is necessary that SW n. 4 on the C.P.U.-board (see fig. 1) points to ON (PROGRAM), and then call the test to be changed, and act on the «CREDIT» push-button. After having cleared or programmed the test, to return in GAME OVER condition and thus to be able to play, call test 00 and then put SW n. 4 in OGG (GAME) position.
If the SW n. 4 has not been reset, and you are still in ON (PROGRAM) condition with the 00 (GAME OVER) test, there will be a buzzing sound and the TILT lamp will be blinking, to inform on the anomalous condition that doesn't allow to use the game.

IMPORTANT:

Please be advised that, as from our pinball mod. PINBALL CHAMP '82 onwards, few instructions must be observed when-ever the battery or RAM 6514 or RAM 5514 are replaced, or if changes to the program written in RAM (coin mechanism programming, ball programming) are made. This is to make sure that the machine accepts the programming:

1) **Switch the machine off; remove RAM 6514 or 5514 in position IC 4 from its socket (under the battery on the left).**
2) **Insert RAM 6514 again; switch the machine on. Whatever programmed on RAM has been completely cancelled through operations 1. and 2.**
3) **Start programming by setting switch N. 4 in ON position.**
4) **Set tests N. 6-7-8-9 to zero with START button.**
5) **All the other tests (from N. 10 to N. 37) must be programmed again completely, although the test concerned is already in position. As an example: when reached position 11, 01 (which corresponds to the programming required) appears. In spite of this, go on with tests 02-03 ect., until coming back to position 01.**
6) **When the programming is completed, set switch N. 4 in OFF position again.**
7) **Switch off and on the machine: if GAME OVER lamp is lit everything is OK; if it is flashing repairing is required.**

Now we are going to analyse the technical performances in a detailed manner, starting with the self-test function, followed by the accounting functions and eventually the various programming functions.

SELF TEST

DISPLAY (Test n1). By this we check optically the proper operation of the display (5 groups of 8 figures each covering a total of 40 figures). The 5 groups are the the following: **1st player display; 2nd player display; 3rd player display; 4th player display; HIGHEST SCORE TO DATE display or DISPLAY CREDIT, TIME BONUS and BALLS TO PLAY.** When this test is entered, all the figures show the same numbers, starting, with «0» that immediately becomes «1» then «2» and so on until «9»; then they restart at «0» and so on.
By acting on CREDIT push-button the 8 figures of each display indicate 8 numbers in continuous succession.
Example: 7 6 5 4 3 2 1 0
8 7 6 5 4 3 2 1

CONTACTS: (Test n. 2). By this test function it is possible to check the proper operation of the 64 INPUT contacts numbered from 00 through 64. When this test is entered, on the 2 figures of the CREDIT display appears the "closed" contact highest in number, and after having opened it, follows the number of the closed contact next in order. If none of the 64 contacts is "closed" no number is indicated. Under these circumstances it is possible to check whether all the contacts work properly, by closing them one by one and making sure that each time the corresponding number appears on the special display provided.
For the numbering of contacts see fig. 4.

LAMPS (Test n. 3). All the «piloted» lamps, that have been divided into two groups, are lit and extinguished alternatively at regular intervals. Check whether there are any lamps that are not operative.

SOLENOIDS (Test n. 4). All the solenoids (coils) are energized in sequence from 1 through 24. The number of the energized solenoid appears on the CREDIT display in that very moment.
NOTE THAT EACH SINGLE PINTABLE MODEL MAY USE ONLY PART OF THE 24 AVAILABLE SOLENOIDS.
In the test all the solenoids are treated in the same way (either used or not), and thus on the CREDIT display the numbers of all the 24 possible solenoids are indicated. Those that are not operative and are missing do not cause any effect (mechanical noise).
The number of employed solenoids is indicated on fig. 6.

SOUND AND TALKING (Test n. 5). This test serves to hear the various sounds and phrases programmed for the model and to check whether they are correct; in the same time on the CREDIT display appears the number of the sound or of the phrase being executed.

ACCOUNTING FUNCTIONS

TIME (Test n. 6). Same contains the accounting data relevant to the time (minutes) of pintable operation (1st player display), to the actual duration of the game (minutes) 2nd player display), the total number of TILT (3rd player display) and to the average duration of games (4th player display). The average duration of games is expressed in minutes, and is determined by the ratio between the play time and the number of games that have been played.
The above accounting functions can be cleared simultaneously, by keeping pressed the CREDIT push-button for about 5 seconds, provided SW 4 n. 4 on the C.P.U. boards is on ON (PROGRAM).

TAKINGS (Test n. 7). The number of coins collected by the first coin chute (on the left side) is indicated on the 1st player display. The number of coins collected by the second coin chute (on the right side) is shown on 2nd player display. The 3rd player display accounts for the number of coins introduced into the third coin chute (the central one). On the 4th player display the number of «service» games is reported, that is those games obtained by pressing the «SERVICE» push-button that is located inside the door on the left side.
NOTE THAT THE «SERVICE» PUSH-BUTTON DOES NOT CHANGE THE NUMBER OF CREDITS, BECAUSE IT ENTERS DIRECTLY FROM 1 THROUGH 4 GAMES, AND ALSO THE ELECTROMECHANICAL COIN COUNTE IS NOT AFFECTED.
To clear it, SW n. 4 on the C.P.U. board (see figure 1) shall be in position ON (PROGRAM), and then act on the CREDIT push-button for about 5 seconds.

WINNINGS (Test n. 8 and 9). Test n. 8 indicates the winnings listed per types, that is: on the 1st player is indicated the overall quantity of games that have been played (the addition of the paid games, the won ones and the SERVICE games).
On the 2nd player display appear the won games.
On the 3rd player display one can see the number of won balls. Finally the 4th player display shows the quantity of awarded SUPERBONUSES.
— The test n. 9 shows how the winnings have been obtained.
The 1st player display indicates how many times the HIGHEST SCORE has been exceeded (NORMAL if test 18 is programmed with 00, RANDOM if test 18 is programmed with 01).
The 2nd player display shows the number of winnings obtained with winning scores.
The 3rd player display shows the number of winnings obtained with SPECIAL 1. Finally, on the 4th player display appears the number of winnings obtained with SPECIAL 2.
To clear the winnings, SW n. 4 shall be in position ON (PROGRAM); then enter test n. 8 and act on the CREDIT push-button for about 5 seconds; then enter test n. 9 and again press the CREDIT push-button for about 5 seconds.

SERVICE (Test. n. 10) Test 10 indicates:
- Total number of tilt n. 2 on 1st player display (play tilt)
- Total number of credits cancelled by tilt n. 2, on 2nd player display.

COINS (Tests n. 11, 12, 13, 14, 15, 16). To meet the requirements due to the various types and values of coins used in the different countries, a highly sophisticated method for programming the cost of one «credit» (one game) has been adopted. The main features of this method are:

a) the possibility of giving one credit with several coins,

b) same number of allowances if the value of the introduced coins is the same, regardless of their number and type,

c) the possibility of establishing a cost per credit that differs from the value of the various coins.

To achieve proper programming of the cost of one credit, when allowances shall be granted, it is necessary to keep in mind that the cost ratio between the more expensive credit and the less expensive one shall be less than «2».
The tests 11, 13 and 15 shall be given the unit «value» of the coins that can be introduced respectively into coin chute n. 1 (on the left side), coin chute n. 2 (on the right side) and coin chute n. 3 (in the middle).
Do not forget that the coins shall be introduced into the 3 coin chutes in GROWING ORDER. The coin with the lowest value shall be introduced into the first coin chute, to the second coin chute can be assigned a coin of the same or higher value than the first one.
The third coin chute shall receive the coin that has or higher or at least the same value as the coin introduced into the second coin chute.
The tests, 12, 14 and 16 shall be programmed with the number of credits to be given to each coin introduced respectively into coin chutes 1, 2 and 3.
If several coins are needed to get one credit, it is necessary to program 00.
The coin attributed to the third coin chute, shall have the same or higher value than the cost of one credit. (The figure to be programmed on test n. 16 shall be equal to or higher than 1).
THE UNIT VALUE OF COINS IS THE FIGURE OBTAINED BY DIVIDING THE ACTUAL VALUE OF THE COINS BY THE MAX. COMMON DIVISOR.

Example: 10 p; 50 p;: 10 = 1 + 5
100 L.; 200 L.; 500 L.: = 1 + 2 + 5

As a further guidance for the operators on Table II some actual coin chute programming examples are reported, that are used for some European countries.

HIGH SCORE (Test n. 17, 18 and 25). There exists the possibility to choose among 2 different types of H.S.: NORMAL (Test 18 = 00) and RANDOM (Test 18 = 01). NORMAL H.S. represents the max. score value achieved by one player. When this score is exceeded by one or more players, it is replaced by the score obtained by the player who has totalled the highest score. The players that follow shall exceed the new H.S. value to have their winning score recorded.
RANDOM H.S. on the contrary consists of a casual score, ranging within an area of 12.000.000 points, that is set forth at the beginning of each game.
The minimun value is given by the figure programmed with test 17, and that can range from 00.000.000 through 99.900.000
The same test is used to program a NORMAL H.S. at the beginning, when the pintable is installed, or in any case to clear or change the existing H.S. value. To do so, press several times the CREDIT push-button, if slow progressing is required, otherwise keep it pressed for fast progress. To change the initial value of Random H.S. it is necessary that SW4 on the C.P.U. board is in ON (PROGRAM) position, while it may be both on ON (PROGRAM) or OFF (GAME) to change the initial value of NORMAL H.S.
The player who exceeds the NORMAL or RANDOM H.S. wins the prize established by the programming of test n. 25, with the following possibilities:

Test 25 = 00 = no win
01 = 1 replay
02 = 2 replays
03 = 3 replays
04 = 1 superbonus

Both test 18 and test 25 require SW n. 4 to be in ON (PROGRAM) position to change their programming, and then it is necessary to press the CREDIT push-button.

FOR NORMAL H.S., THE WIN IS AWARDED ONLY TO THE PLAYER WHO OBTAINS THE HIGHEST SCORE, EVEN WHEN THE PLAYERS EXCEEDING THE PRESET HIGHEST SCORE VALUE ARE MORE THAN ONE.
IN THE CASE OF RANDOM H.S. THE WIN IS GIVEN TO ALL THE PLAYERS WHO EXCEED THE PRESET H.S. VALUE.

MAX CREDIT (Test n. 19). Same represents the max. number of credits that can be recorded before the coin chute locking mechanism is released, thus preventing further introduction of coins. Same represents also the figure beyond which the credits are not icreased anymore because of any won games. It is programmable from 10 through 30 by acting on the CREDIT push-button, provided SW4 is set on ON (RANDOM).

BALLS (Test n. 20). Same represents the number of balls that are available during each game. It can be programmed from 01 through 02 by acting on the CREDIT push-button while SW4 shall be on ON.

MATCH (Test n. 20). Match is the possibility to award one replay to the player or to the players, who have managed to get a score on their display the two right end figures correspond to those of MATCH (see figure 2). If it is programmed with 00, it is excluded, while if the programmed figure is 01, it is connected. To change the programming act on the CREDIT push-button. SW n.4 shall be set ON (PROGRAM).

WINNING SCORES (Test n . 22, 23, 24 and 26). There are three scores, that can be programmed within a range from 0.00 through 99.900.000, respectively with tests 22, 23 and 24. The player or the players who exceed one or more (max. 3) winning scores, are awarded a prize as determined on test n. 26, for each exceeded winning score.
The scores programmed with 0,0 to are not enabled (they do not award any, win even when test 26 is programmed for wins). The test n. 26 determines the type of win at each winning score limit, that can be chosen among:

Test 26 = 00 = non win
01 = 1 bonus ball
02 = 1 replay
03 = 1 superbonus
04 = 2.000.000 points

For the programming of these tests it is necessary that SW n.4 is on ON (PROGRAM), and then act on CREDIT push-button.
For the scores (test 22, 23, 24) push repeatedly the CREDIT push-button to progress 1 by 1 (corresponding each to 100.000 points). When the button is kept pressed, the progress is fast.

this way the number of the functions necessary to light one or more lamps of the special.

TEST. 33
00 = Hit the Red Special target 9 times
01 = Hit the Red Special target 6 times
02 = Hit the Red Special target 5 times
03 = Hit the Red Special target 3 times

Push CREDIT button - provided that SW. 4 is in ON (Program) - to program and change.

Test 27 determines the type of win to be awarded when the Special target is hit while corresponding lamp is lit.

00 = no win
01 = 1 bonus ball
02 = 1 replay
03 = 1 superbonus
04 = 4.500.000 points

For adjustment or changes, act on CREDIT button when SW 4 is ON (PROGRAM).

SPECIAL 2 ORANGE SPECIAL (Test 28, 34). Difficulty can be adjusted for lighting the "orange special" lamp by modifying test n. 34.

00 = Hit the targets bank 5 times
01 = Hit the targets bank 4 times
02 = Hit the targets bank 3 times
03 = Hit the targets bank 2 times

Test n. 28 determines the type of win to be awarded when the orange Special target is hit while the corresponding lamps is lit.

00 = no win
01 = 1 bonus ball
02 = 1 replay
03 = 1 superbonus
04 = 1.000.000 points

For adjustment or changes, act on CREDIT button when SW 4 is ON (PROGRAM)

BACKGROUND SOUND AND ATTRACTION SOUNDS (Test 29). Background sound is to be adjusted when on play, attraction sounds when ir GAME OVER.

00 = Sound disconnected, attractions connected
01 = Sound connected, attractions connected
02 = Sound disconnected, attractions disconnected
03 = Sound connected, attractions disconnected

COIN METER (Test n. 30). Same is an electromechanical impulse meter, to be connected with the circular 8-way connector located ir the cabinet and that the «UNIT VALUE» of the coins introduced into 3 coin chutes.
It is never modified by the wins or the service games (obtained throught the SERVICE push-button). The game can be played regularly both with connected and cut-off coin meter, if the test it programmed with 00. Note that the impulse meter is programmed with 00. Note that the impulse meter is always operatin regardless of the type of programming used for test 30.
To program or to change, act on CREDIT push-button, provided SW 4 is in ON (PROGRAM) position.
The impulse meter and relevant wiring are available upon request.

GAME TIME BONUS (Test n. 31). After having used the available balls (see test 20 + possible winned balls), it is possible to get a game time extention that may range from a minimum of 10 seconds to a maximum of 99 seconds, determined by the play of the last normal ball. This time is indicated by 2 digits in the center of the HIGHEST SCORE TO DATE display (see figure 2). Upon play time ezpiry, all the controls are stopped, and thus the ball to play runs straight to the hole.
If the test has been programmed 00, the game is terminated normally (game time bonus excluded), while with 01 programming game time bonus is connected. To program or change, act on CREDIT push-button, provided SW 4 is in ON (PROGRAM) position.

BONUS BALL NUMBER VARIATION (Test 32). Maximum number of possible bonus balls, while one ball on play, is determined.

00 = 1 bonus ball
01 = 3 bonus ball
02 = 3 bonus ball
03 = 3 bonus ball

To program or change, act on CREDIT push-button, provided SW 4 is set on ON (PROGRAM).

PAY OUT On request, a token payout with cup may be connected with the machine (KE 0037 optional).
The pay out operates when scoring SUPER BONUS programmed in the relevant win tests.

N. TEST	FUNCTION	N. FUNCTION IN TEST	DESCRIPTION
01	Test Display	/	1° All the displays show equal figures that follow each other 0,1,2,....9,0 and so on. 2° By keeping the «CREDIT» push-button pressed, the displays show numbers in sucession.
02	Contact test	88	Number of closed contact
03	Lamp test	/	All the piloted lamps are continuously lit and extinguished.
04	Solenoid test	88	The solenoids (from 1 through 24) are energized one after another. The figure indicates the energized solenoid. When it is operative it must be perceived.
05	Sound and talking test	88	Sounds and works are repeated one after another. The figure indicates the sound and the phrase being executed.

ACCOUNTING

N. TEST	FUNCTION	DESCRIPTION	HOW TO CLEAR
06	Duration	Player 1 display = Time of pintable operation (minutes) Player 2 display = Game time (minutes) Player 3 display = Total number of tilt Player 4 display = Average game duration expressed in minutes	With SW4 on ON (PRO GRAM) push-button about 5 sec.
07	Takings	Player 1 display = Coins in coin chute 1 Player 2 display = Coins in coin chute 2 Player 3 display = Coins in coin chute 3 Player 4 display = SERVICE games	With SW4 ON act on CREDIT push-button abt. 5 sec.
08	Wins	Player 1 display = Games played in total Player 2 display = Won games Player 3 display = Won balls Player 4 display = Won superbonus	With SW4 ON act on CREDIT push-button for abt. 5 sec.
09	Wins	Player 1 display = H.S. is exceeded Player 2 display = Winning scores are exceeded Player 3 display = Special 1 Player 4 display = Special 2	With SW4 in ON act for about 5 seconds on CREDIT button.
10	Service	Player 1 Display = Total number of Tilt 2 Player 2 Display = Credit number cancelled by Tilt 2	With SW4 in ON act for about 5 seconds on CREDIT button.

PROGRAMMING

N. TEST	FUNCTION	PROGRAMMED VALUE	DESCRIPTION	DATA FOR THE PROGRAMMER
11	Coin value 1st coin chute.	from 01 to 10	Value of the coins for the 1 st coin chute (at the left side close to the hinge).	Whit SW4 on ON act on CREDIT-push-button.
12	Coin credits 1st coin chute.	from 00 to 15	Credits per each single coin introduced into the first coin chute.	
13	Coin value 2nd coin chute.	from 01 to 10	Value of the coins for the 2nd coin chute (at the right side, close to the key).	
14	Coin credits 2nd coin chute	from 00 to 15	Credits per each single coin introduced into the second coin chute.	
15	Coin value 3rd coin chute	from 01 to 10	Value of the coin for the 3rd coin chute (in the center).	
16	Coins credit 3rd coin chute	from 00 to 15	Credits per each single coin introduced into the third coin chute	
17	High-Score initial value	from 00.0 to 99.9	When test 18 is programmed with 00, initial NORMAL H.S. is programmed. If test 18 is programmed 01, the min. RANDOM H.S. is programmed.	NORMAL H.S. can be preset also in Game-over (SW4 in OFF), RANDOM H.S. can be preset only in PROGRAM SW4 in ON). Push CREDIT keep pushed for fast progress.

N. TEST	FUNCTION	VALUE PROGRAMMED	DESCRIPTION	DATA FOR THE PROGRAMMER
18	High Score types	00 01	NORMAL H.S. or max. scores achieved by one player. RANDOM H.S. or casual scores that may change at the beginning of each game.	With SW4 on ON act on CREDIT-push-button.
19	Max credits	from 10 to 30	Max number of credits beyond which coin chutes are locked, and no won games are attributed anymore	Act on CREDIT pusch-button with SW4 on ON
20	Balls	from 01 to 07	Balls per play	Act on CREDIT pusch button with SW 4 on ON
21	MATCH	00 01	Match exluded (no wins) Match connected (1 Replay)	Act on CREDIT pusch-button with SW4 on ON
22	1st winning scores	from 00.0 to 99.9	1st winning score, which awards the win programmed on test n.26 when exceeded. 00,0 = no win	With SW4 on ON act stepwise on CREDIT push-button for slow progress. For fast progress keep it pressed
23	2nd winning scores	from 00.0 to 99.9	2nd winning score wich awards the win programmed on test n. 26 when exceeded. 00.0 = no win	
24	3rd winning scores	from 00.0 to 99.9	3rd winning score which awards the win programmed on test n.26 when exceeded, 00.0 = no win.	
25	Wins with HIGH SCORE	00 01 02 03 04	No win 1 Replay 2 Replay 3 Replay 1 Superbonus	With SW4 on ON act on CREDIT push-button
26	Wins with scores (see test 22, 23, 24)	00 01 02 03 04	No win 1 Bonus Ball 1 Replay 1 Superbonus 2.000.000 points	With SW4 on ON act on CREDIT push-button
27	Wins with Special 1 "Red Special"	00 01 02 03 04	No win 1 Bonus Ball 1 Replay 1 Superbonus 4.500.000 points	With SW4 on ON act on CREDIT push-button
28	Wins with Special 2 "Orange Special"	00 01 02 03 04	No win 1 Bonus Ball 1 Replay 1 Superbonus 1.000.000 points	With SW4 on ON act on CREDIT push-button
29	Background sound and attraction sounds	00 01 02 03	Sound disconnected, attractions connected Sound connected, attractions connected Sound disconnected, attractions disconnected Sound connected, attractions disconnected	With SW 4 on ON act on CREDIT push-button
30	Coin meter	00 01	Normal operation both with excluded and with connected Impulse meter When impulse meter is disconnected the pin table cannot be used	With SW4 on ON act on CREDIT push-button
31	Game Time Bonus	00 01	«Game time bonus» disconnected Count down connected	With SW4 on ON act on CREDIT push-button
32	Bonus Ball number variation	00 01 02 03	1 bonus ball 3 Bonus Balls 3 Bonus Balls 3 Bonus Balls	Press CREDIT button when SW4 is ON
33	Red Special	00 01 02 03	Hit the Red Special target 9 times Hit the Red Special target 6 times Hit the Red Special target 5 times Hit the Red Special target 3 times	Press CREDIT button when SW4 is ON
34	Special 2 ORANGE	00 01 02 03	Hit the targets bank 5 times Hit the targets bank 4 times Hit the targets bank 3 times Hit the targets bank 2 times	Press CREDIT button when SW4 is ON
35	NOT USED			
36	NOT USED			
37	NOT USED			

IMPORTANT: With SW4 in ON (PROGRAM) position, the pintable cannot enter a game, even though there may be credits available, and the machine is in GAME OVER condition. A buzzer and the blinking of the TILT lamp indicate anomalous condition.

CONDITION	CAUSE	REMEDY	NOTES
The game cannot be started	— No voltage available	—	
	— Plug is off	Plug in	
	— The 3-way connector (CN-«line») of the feeder rack is not connected	Connect	
	— Mains fuse burned	Replace	If they burn again, this means that there is a short circuit
	— The 9-way connector (CN «Ja») on the feeder rack disconnected	Replace	
	— Mains switch open	Close	
	— Connetor (CN 1) on feeder and connectors (CN «J1»-«J2»-«J3») on feeder rack disconnected	Connect	
	— Voltage change over not or insufficiently connected	Correct	The voltage change over unit contains also the mains fuse
All stationary lamps are not lit	— Fuse F2 on the feeder rack thrown out.	Replace	Shall not be more than 20A; if it is thrown out again there is a short-circuit
	— CN J1-J2-J3 connector not connected	Plug in	
	— Electric wire disconnected	Connect	
All the piloted lamps are not operating	— 5 VRM is not available	Fuse F3 (15A) on Power-board is burned	Test carefully with tester
	— The connector between C.P.U. and the interface is disconnected	Tighten the loose connectors	
	— Interface (CN 16) feeding connector is not plugged in		
	— The connectors of the lamps on Interface (CN 18-19-20-21-22) are not connected		
	— The connectors at the feeder board output are disconnected (CN 2-3-4)		
	— At the C.P.U. input and at the Interface 5,6 V d.c. are missing	Fuse F2 (5A) is burned and shall therefore be replaced. If it is thrown out again, there is a short circuit. Replace feeder board.	
	— C.P.U. is always cleared	Replace feeder and then replace C.P.U.	
	— Others	Replace interface	
All displays are extinguished.	— + 170 V d.c. is missing because fuse F1 (1A) is burned. Or high voltage regulator is damaged. Or high voltage regulator safety circuit is actuated.	Replace the fuse. Check with the tester whether the high-voltage feeder operates. When safety device is actuated, try to disconnect the displays. If the feeder operates at 170 V this means that on the displays there exists a short circuit. To restore +170 V it is necessary to stop the pintable and then to start it again	
	— At C.P.U. —input +5,6 V is missing	Check and if necessary replace the F2 (5A) fuse on the feeder board	
	— CN 14 or all connectors of displays are disconnected	Plug in connectors	
	— Display damaged		
	— C.P.U. damaged		
On all the displays wrong figures are appearing	— Cable damaged	Replace the cable	
	— C.P.U. damaged	Replace C.P.U.	
One or more figures on one or more displays are wrong.	— Display damaged		
	— Cabel damaged		
All figures are too bright	— +170 V feeder damaged	Replace the feeder board	
All the solenoids do not work	— 39 VRM input is missing	Reset the fuse . If it is thrown out again there is a short circuit.	
	— CN 17 connector is not plugged in	Plug in the connector	
	— Interface damaged	Replace the Interface	
	— C.P.U. damaged	Replace the C.P.U.	
One or more solenoids do not work	— Coils burned	Replace coil and the relevant Darlington	
	— Darlington burned	Replace the Darlington and check the diode on the coil.	
	— Electric wires loose	Connect the loose wires	
	— The fuses under the playfield have been thrown out	Reset the burned out fuses	
One or more solenoids are always energized	— Interface-board damaged	Replace the interface-board	
	— C.P.U. damaged	Replace the C.P.U. board	
	— Short circuit		
All the contacts remain inactive	— CN 10-11 connectors are loose	Plug in	
	— C.P.U. is damaged	Replace C.P.U.-board	

CONDITION	CAUSE	REMEDY	NOTES
One or more contacts do not work	— Loose wires — Interrupted or loose — Contact oxydized	Connect all the loose wires Reset the diode Clean the contact	
One or more contacts are wrongly read	— The contact wires are short circuited and also with respect to the lamp and solenoid wires — Diode contacts are short circuited — C.P.U. is damaged	Eliminate the short circuit Replace the short circuited diode Replace C.P.U.	
All sounds and words are missing	— The loudspeaker is not connected or damaged — Loudspeaker potentiometer cut off — CN 6 connector (Sound board) disconnected — 5 V d.c. feeding voltage is missing — +12 V d.c. feeding voltage missing — +5 V d.c. feeding voltage missing — Sound and talk board damaged	Connect, if necessary replace Replace another one having similar features Plug in the connector Replace fuse F4 (1A) on the feed board, if burned Replace fuse F2 (5A) on the feed board, if burned If +5 V d.c. are missing, but +12 V d.c. are available, replace the regulator 78H05 Replace the sound and talk board	

VERY IMPORTANT. Never connect or disconnected the connectors while the game is running

The game is supplied with a special plug to connect a print-out unit that is very useful to print on paper all the most important accounting functions, as well as the serial number of the game.
Hereafter a fac-simile print out.
The same plug is to be used also for the coin meter.

ZANKOR
SERIAL N 1532
WINNED G 000000
PLAYED G 000003
COINS # 1 000003
COINS # 2 000003
COINS # 3 000003
****

CONNECTOR CARD FOR ZANKOR

INPUT/OUTPUT POSITION ON THE CONNECTOR

FEEDER BOARD

CONNECTOR	PIN	WIRE COLOUR	SIGNAL
		POWER Board	
CN1	→	□	—
»	1	Red	165 Vac 0,3 A
»	2	Red	165 Vac 0,3 A
»	3	Brown	10 Vac 0,5 A
»	4	Brown	10 Vac 0,5 A
»	5	Yellow	10,5 Vac 6 A
»	6	Yellow	10,5 Vac 6 A
»	7	Blue	43 Vac 5 A
»	8	Blue	43 Vac 5 A
»	9	White	6,5 Vac 15 A
»	10	White	6,5 Vac 15 A
»	11	Green	6,5 Vac 15 A
»	12	Green	6,5 Vac 15 A
CN2	→	□	—
»	1	—	—
»	2	Black	GND
»	3	—	—
»	4	Violet	+39 Vrm common for al the solenoid in the cabinet
»	5	Pink	Cabinet - Playfield interconnections
»	6	White	For flipper control
CN3	→	□	—
»	1	White	Cabinet - Playfield interconnections
»	2	Pink	For flipper control
»	3	Brown	+5Vrm common all controlled playfield lamps
»	4	Brown	+5 Vrm common all controlled playfield lamps
»	5	Violet	+39 Vrm common for playfield solenoids
»	6	—	—
CN4	→	□	—
»	1	—	—
»	2	Brown	+5 Vrm common light board controlled lamps
»	3	Violet	+ 39 Vrm common for head solenoids
»	4	—	—
CN5	→	□	—
»	1	Orange	Flipper Relay
»	2	Black	GND
»	3	Black	GND
»	4	Red	+ 5,6 Vdc
»	5	Red	+ 5,6 Vdc
»	6	White	Power Failure
»	7	Black	GND
»	8	Yellow	170 Vcc
»	9	Black	GND
»	10	Green	— 5 Vdc
»	11	Red	+ 5,6 Vdc
»	12	Blue	+ 12 Vdc
		SOUND Board	
CN6-T	→	□	—
»	1	Black	GND
»	2	Green	— 5 Vdc
»	3	Red	+ 5,6 Vdc
»	4	Blue	+ 12 Vdc
CN6-C	5	Yellow-grey	Output Sound e Speech
»	6	Violet-White	Output Sound e Speech
		C.P.U. board	
CN9	→	—	—
»	1	Yellow	170 VCC
»	2	Black	GND
»	3	White	Power Faillure
»	4	Red	+ 5,6 VDC
CN10	1	Orange-Yellow	Printer -RX +
»	2	Yellow-Grey	Printer -RX-
»	3	White-Pink	Printer -TX-
»	4	Black-Pink	Printer -TX +
»	5	—	—
»	6	White	Contacts-row Ø
»	7	Grey	Contacts-row 1

CONNECTOR	PIN	WIRE COLOUR	SIGNAL
CN10	8	—	—
»	9	—	—
»	10	Grey-white	Contacts - column Ø
»	11	Black-white	Contacts - column 1
»	12	Red-green	Contacts - column 2
»	13	Black-yellow	Contacts - column 3
»	14	Black-orange	Contacts - column 4
»	15	Red-yellow	Contacts - column 5
»	16	—	—
»	17	Brown-violet	Contacts - column 6
»	18	Yellow-violet	Contacts - column 7
»	19	—	—
»	20	—	—
CN11	1	—	—
»	2	—	—
»	3	Red	Contacts - row 2
»	4	Yellow	Contacts - row 3
»	5	Black	Contacts - row 4
»	6	Green	Contacts - row 5
»	7	Blue	Contacts - row 6
»	8	—	—
»	9	—	—
»	10	Grey-white	Contacts - column Ø
»	11	Black-white	Contacts - column 1
»	12	Red-green	Contacts - column 2
»	13	Black-yellow	Contacts - column 3
»	14	Black-orange	Contacts - column 4
»	15	Red-yellow	Contacts - column 5
»	16	Brown-violet	Contacts - column 6
»	17	Yellow-violet	Contacts - column 7
»	18	—	—
»	19	—	—
»	20	—	—

INTERFACE Board

CN16	—	—	—
"	1	Black	Gnd
"	2	Red	+ 5,6 Vdc
"	3	Black	GND
"	4	Orange	Flipper Relay
CN17-C	—	—	—
"	1	White-Pink	Knocker
"	2	Red-White	Coin mechanism coil
"	3	Yellow Pink	Token dispenser
CN17-P1	4	Violet White	Moving ramp
"	5	Yellow-White	Right pop
"	6	Brown-White	Out hole
"	7	Blue-White	Right flap
"	8	Green-White	Left-flap
"	9	Brown-Green	Central bank
"	10	Red-Green	Top flipper
"	11	Orange-Yellow	Red special target
"	12	Orange-White	Left kicker
"	13	Brown-Yellow	Left pop
"	14	Grey-White	Right kicker
"	15	Black-White	Plexigias lamps
"	16	—	—
"	17	—	—
"	18	—	—
"	19	—	—
"	20	—	—
"	21	—	—
"	22	—	—
"	23	—	—
"	24	—	—
CN18	1	Yellow-white	100.000 PTS spinning target
"	2	Light blue	Right pop
"	3	Yellow-Blue	6TH red special
"	4	Green-Grey	5TH red special
"	5	Pink	Super score
"	6	Brown-Pink	Red special
"	7	Orange-Grey	Left pop
"	8	Green-Violet	300.000 PTS spinning target
"	9	Orange-Yellow	X 60
"	10	Green-White	50.000 PTS spinning target
"	11	Red-White	7TH red special
"	12	Orange-Green	Left top canal
"	13	White	2ND red special
"	14	Brown	4TH red special
"	15	Red-Blue	1ST orange special
"	16	Orange-Violet	Side exit canals
"	17	Blue-Grey	Adv. multiplier left button
"	18	Black-Red	50.000 PTS left button
"	19	Orange-Blue	1ST red special
"	20	Blue-White	3RD red special

CONNECTOR	PIN	WIRE COLOUR	SIGNAL
CN19	1	Pink	50.000 PTS when climbing the plexiglas
"	2	Orange-White	100.000 PTS when climbing the plexiglas
"	3	Brown-Light green	Adv. red special when climbing the plexiglas
"	4	Red-Violet	Orange special
"	5	Violet-Orange	Central top canal
"	6	Brown	30.000 PTS left button
"	7	Brown-Orange	30.000 PTS right button
"	8	Violet-Pink	2ND orange special
"	9	Yellow-Grey	Advance multiplier right button
"	10	Green-Blue	Bonus ball 1
"	11	Brown-Yellow	3RD orange special
"	12	Violet	Bonus 2
"	13	Blue-Violet	50.000 PTS right button
"	14	Black-Grey	Bonus 8
"	15	Black-Blue	Bonus 4
"	16	Blue-Pink	Bonus 3
"	17	Red-Grey	Right top canal
"	18	Yellow-Pink	Bonus 1
"	19	Black-Pink	Bonus 5
"	20	White-Green	Bonus 9
CN20	1	Yellow-White	X 40
"	2	Light blue	X 80
"	3	Brown-Blue	Bonus 10.000 PTS
"	4	Green-Grey	Bonus 10
"	5	Pink	Bonus 7
"	6	Brown-Pink	Bonus 6
"	7	Orange-Grey	1ST top left target
"	8	Green Violet	2ND top left target
"	9	Orange-Yellow	Left rollover 2ND target
"	10	Green-White	Left rollover 1ST target
"	11	Black-Violet	X 20
"	12	Brown-White	3RD top right target
"	13	Black-Green	Spinning target super score flash
"	14	Yellow-Blue	2ND top right target
"	15	Red-Blue	1ST top right target
"	16	Green-Blue	Spinning target lights exit canals
"	17	Blue-Grey	Spinning target adv. multiplier
"	18	Black-Red	Right rollover 1ST target
"	19	Orange-Blue	Right rollover 2ND target
"	20	—	—
CN21	1	—	—
"	2	—	—
"	3	—	—
"	4	—	—
"	5	—	—
"	6	—	—
"	7	—	—
"	8	—	—
"	9	—	—
"	10	—	—
"	11	—	—
"	12	—	—
"	13	—	—
"	14	—	—
"	15	—	—
"	16	—	—
"	17	—	—
"	18	—	—
"	19	—	—
"	20	—	—
CN22	1	—	—
"	2	Blue-White	Bonus ball 2
"	3	Brown-Violet	Up game time bonus
"	4	Black-Orange	Balls to play
"	5	Red-Yellow	Credit
"	6	Black-Yellow	Match
"	7	—	—
"	8	Green	Can play 1
"	9	Violet-Pink	Bonus ball 3
"	10	Black-White	Tilt
"	11	—	—
"	12	Yellow	Can play 2
"	13	Black	Can play 4
"	14	Yellow-Violet	Down game time bonus
"	15	Grey-White	Game over
"	16	Red-green	Super bonus
"	17	Red	Can play 3
"	18	Blue	Highest score
"	19	Green-Blue	Bonus ball 1
"	20	Green-White	—

CABINET

Printer service optional	A	Red	43 Vac
»	B	Black	43 Vac
»	C	Yellow-violet	Column 7
»	D	Grey	Row 1
»	E	Orange-Yellow	Printer RX +
»	F	Yellow-grey	Printer RX—
»	G	White-pink	Printer TX—
»	H	Black-pink	Printer TX +
J4	1	Brown	Electric wier
»	2	Yellow	Service socket
»	3	Red	Service socket
»	4	Yellow-green	Electric wier
»	5	Red	43 Vac
»	6	Black	Electric filter
»	7	Light blue	Electric wier
»	8	Black	43 Vac
»	9	Blue	Electric filter

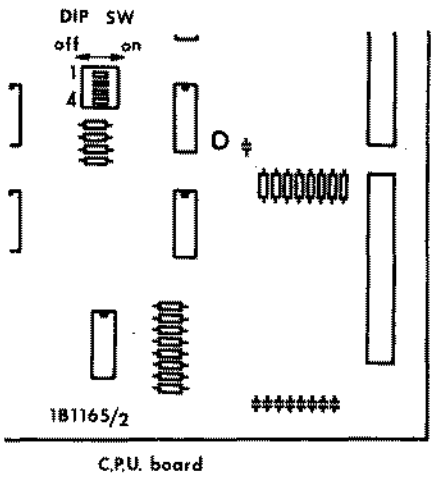
TAV. I

Programmi base - Basic programs - Programmes de base - Grundprogramme

N° test	ITALIA 1			ITALIA			GREAT BRITAIN			FRANCE			DEUTSCH.			BELGIQUE			JUGOSLA.			U.S. A.		
	SW			SW			SW			SW			SW			SW			SW			SW		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
	on	on	on	off	on	on	on	off	on	off	off	on	on	on	off	off	on	off	on	off	off	off	off	off
	—			—			—			—			—			—			—			—		
11	01			02			01			01			01			01			01			01		
12	00			01			00			00			01			00			01			01		
13	02			05			02			05			02			04			02			01		
14	01			03			01			03			03			02			02			01		
15	02			05			5			10			05			04			02			01		
16	01			03			3			07			07			02			02			01		
17	500			750			750			750			750			750			750			750		
18 High score	0			1			0			0			0			0			0			0		
19	15			15			15			15			15			15			15			15		
20	03			03			03			03			03			03			03			03		
21	1			1			1			1			1			1			1			1		
22	150			300			300			300			300			300			300			300		
23	400			600			600			600			600			600			600			600		
24	000			000			000			000			000			000			000			000		
25	1			1			1			1			1			1			1			1		
26	1			2			2			2			2			2			2			2		
27	2			2			2			2			2			2			2			2		
28	1			1			1			1			1			1			1			1		
29	1			1			1			1			1			1			1			1		
30	0			0			0			0			0			0			0			0		
31	1			1			1			1			1			1			1			1		
32	1			1			1			1			1			1			1			1		
33	1			1			1			1			1			1			1			1		
34	1			1			1			1			1			1			1			1		
35	1			1			1			1			1			1			1			1		
36	—			—			—			—			—			—			—			—		
37	—			—			—			—			—			—			—			—		

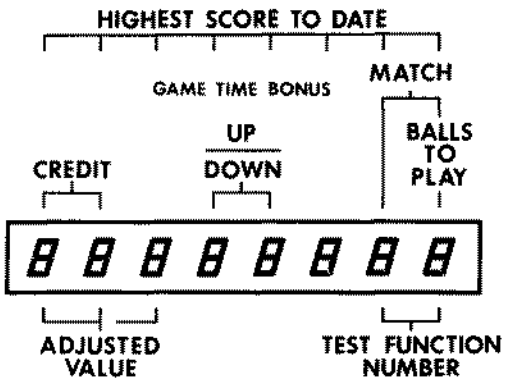
NATION	EMPLOYED COINS	COST OF CREDITS	FIRST COIN		SECOND COIN		THIRD COIN		Multiplication factor imp. count. (coin count.)
			Value Test 11	Credits Test 12	Value Test 13	Credits Test 14	Value Test 15	Credits Test 16	
ITALY	1 coin m. = 100 £	2x100 = 1 Pl.	01	00	01	00	02	01	x 100 £
	2 coin m. = 100 £	3x100 £ = 1 Pl.	01	00	01	00	03	01	
	1 coin m. = 100 £ 2 coin m. = 200 £	2x100 £ = 1 Pl. 1x200 £ = 1 Pl.	01	00	02	01	02	01	x 100 £
		3x100 £ = 1 Pl. 1x200 £ = 1 Pl. +1x100 £ =	01	00	02	00	03	01	x 100 £
	1 coin m. = 200 £	1x200 £ = 1 Pl.	01	01	01	01	01	01	x 200 £
	2 coin m. = 200 £	3x200 £ = 2 Pl.	02	00	02	00	03	01	x 200 £
ENGLAND	1 coin m. = 10 p 2 coin m. = 50 p	1x10 p = 1 Pl. 1x50 p = 6 Pl.	01	01	05	06	05	00	x 10 p
		2x10 p = 1 Pl. 1x50 p = 3 Pl.	01	00	05	03	05	03	x 10 p
BELGIUM (AUSTRIA) (HUNGARY)	1 coin m. = 5 FRS 2 coin m. = 10 FRS	2x5 FRS = 1 Pl. 1x10 FRS = 1 Pl.	01	00	02	01	02	01	x 5 FRS
		3x5 FRS = 1 Pl. 1x10 FRS = 1 Pl. +1x5 FRS	01	00	02	00	03	01	X 5 FRS
FRANCE (DANM.) (SWEDEN)	1 coin m. = 1 FR 2 coin m. = 5 FR 3 coin m. = 10 FR	2x1 FR = 1 Pl. 1x5 FR = 3 Pl. 1x10 FR = 7 Pl.	01	00	05	03	10	07	x 1 FR
WEST. GERM. (SWITZERL.)	1 coin m. = 1 DM 2 coin m. = 2 DM 3 coin m. = 5 DM	1x1 DM = 2 Pl. 1x2 DM = 5 Pl. 1x5 DM = 14 Pl.	01	02	02	05	05	14	x 1 DM (FS)
		1x1 DM = 1 Pl. 1x2 DM = 3 Pl. 1x5 DM = 7 Pl.	01	01	02	03	05	07	x 1 DM (FS)
YUGOS.	1 coin m. = 5 DIN 2 coin m. = 10 DIN	1x5 DIN = 1 Pl. 1x10 DIN = 2 Pl.	01	01	02	02	02	02	x 5 DIN
		2x5 DIN = 1 Pl. 1x10 DIN = 1 Pl.	01	00	02	01	02	01	x 5 DIN
SWITZERL.	1 coin m. = 1 FS 2 coin m. = 2 FS	1x1 FS = 2 Pl. 1x2 FS = 5 Pl. 5 FS = 14 Pl.	01	02	02	05	05	14	x 1 FS
		1x1 FS = 1 Pl. 1x2 FS = 3 Pl. 5 FS = 7 Pl.	01	01	02	03	05	07	X 1 FS

FIG. 1

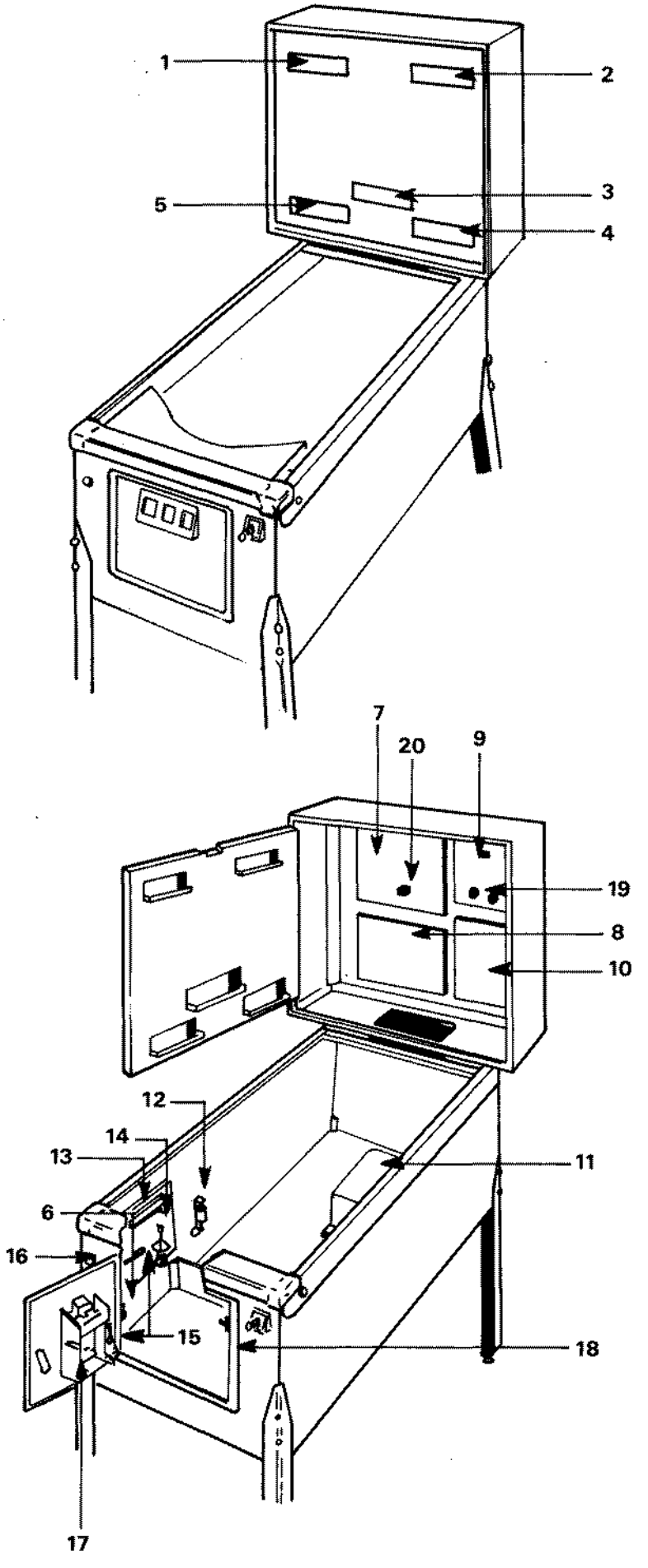


C.P.U. board

FIG. 2



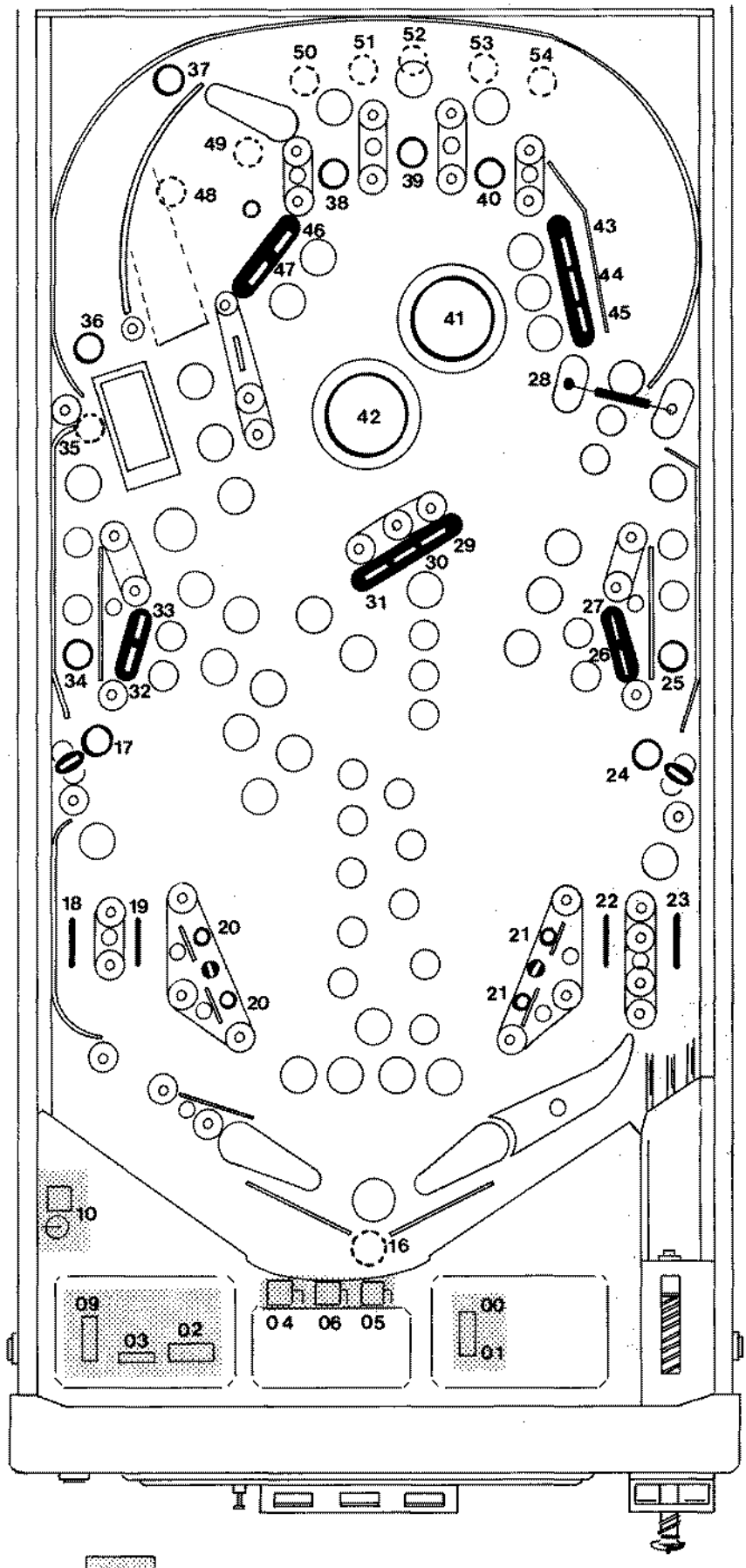
ASSEMBLY DRAWING



1. 1st player display
2. 2nd player display
3. Credit display
   Display ball to play
   Match
   Game time bonus
   Highest score display
4. 4th players display
5. 3rd players display
6. Service button
7. C.P.U. board
8. Interface board
9. Sound board
10. Power board
11. Transformer
12. Knocker
13. Roll ball tilt
14. Bob tilt
15. Antichoc tilt
16. Credit button
17. Advance & return test
18. General vol.
19. Maximum sound vol.
20. Dip switch

FIG. 4

Contact arrangement

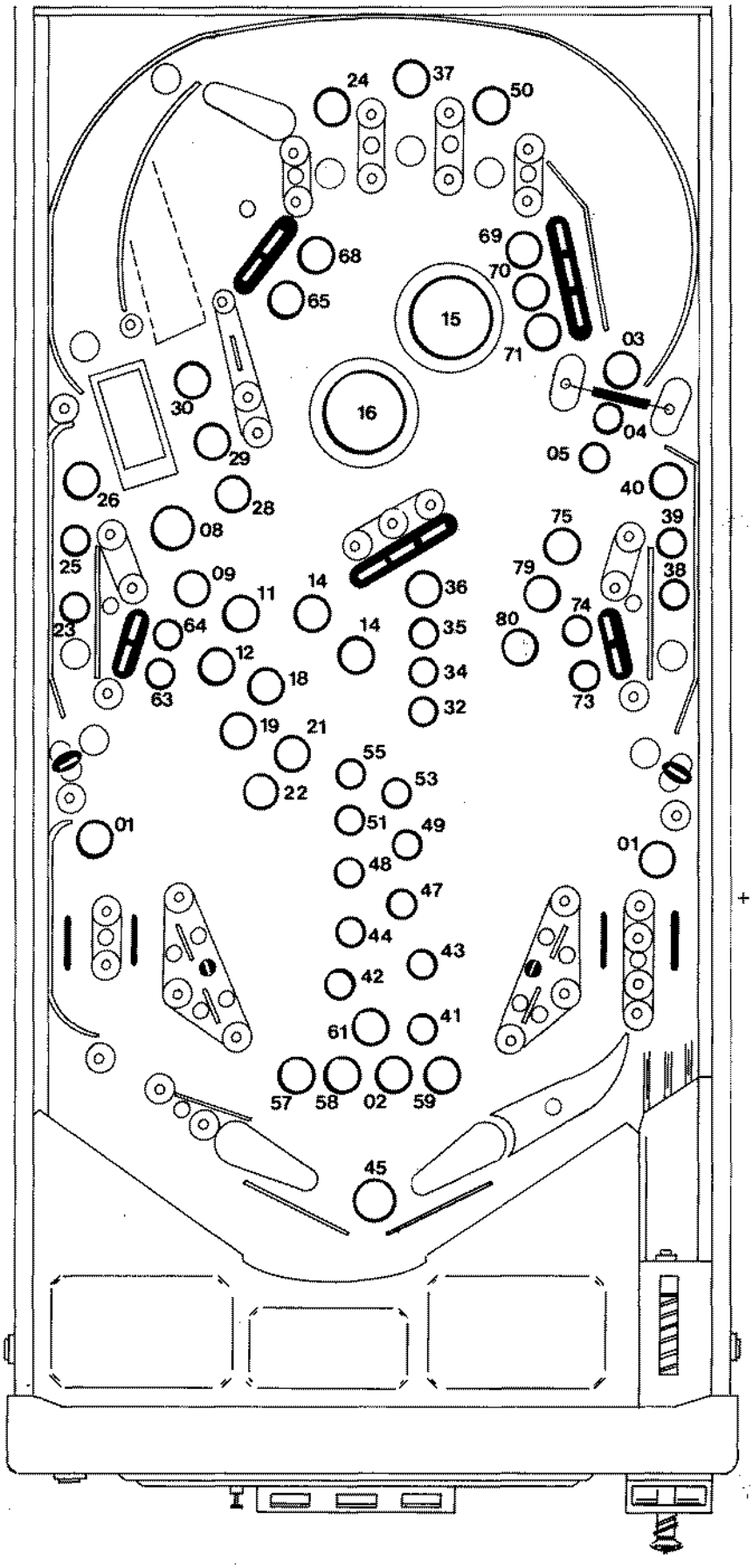


inside the cabinet contacts

Contact Number	Description
00	Advancement test
01	Return test
02	Tilt 2
03	Credit Service
04	Coin Switch 1
05	Coin Switch 2
06	Coin Switch 3
07	—
08	—
09	Credit
10	Tilt
11	Factory burn test
12	—
13	—
14	—
15	—
16	Out hole
17	Top left flap
18	Left exit canal
19	Left inner canal
20	Left flap
21	Right flap
22	Right inner canal
23	Right exit canal
24	Top right flap
25	Right button
26	Right rollover 1ST target
27	Right rollover 2ND target
28	Spinning target
29	Central bank 1ST moving target
30	Central bank 2ND moving target
31	Central bank 3RD moving target
32	Left rollover 1ST target
33	Left rollover 2ND target
34	Left button
35	Red special
36	1ST button left canal
37	2ND button left canal
38	Top left canal
39	Top central canal
40	Top right canal
41	Right pop
42	Left pop
43	1ST top right target
44	2ND top right target
45	3RD top right target
46	2ND top left target
47	1ST top left target
48	Climb the plexiglas
49	1ST button on the plexiglas
50	2ND button on the plexiglas
51	3RD button on the plexiglas
52	4TH button on the plexiglas
53	5TH button on the plexiglas
54	6TH button on the plexiglas

Lamp arrangement

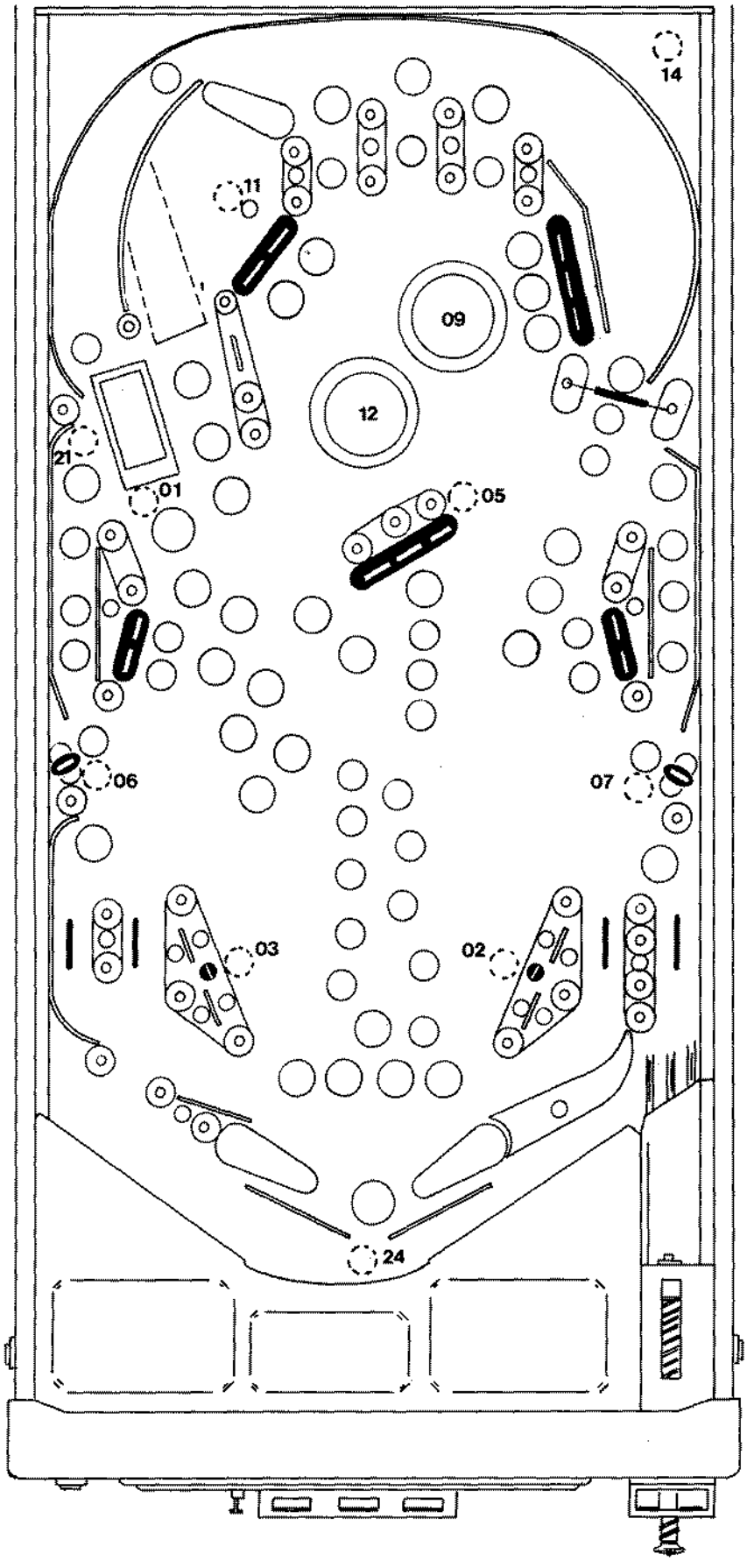
FIG. 5



Lamp	Description	Drive n° SCR
01	Side exit canals	80
02	X 60	66
03	300.000 PTS spinning target	67
04	100.000 PTS spinning target	78
05	50.000 PTS spinning target	70
+ 06	Game over	68
+ 07	Tilt	65
08	Red special	72
09	7TH red special	71
10	—	76
11	6TH red special	77
12	5TH red special	75
+ 13	Match	74
14	Super score	73
15	Right pop	79
16	Left pop	69
+ 17	Ball to play	8
18	4TH red special	45
19	3RD red special	35
+ 20	Flipper relay	64
21	2ND red special	54
22	1ST red special	44
23	30.000 PTS left button	26
24	Left top canal	63
25	50.000 PTS left button	18
26	Adv. multiplier left button	27
+ 27	Credit	9
28	50.000 PTS when climbing the plexiglas	53
29	100.000 PTS when climbing the plexiglas	17
30	Adv. red special when climbing the plexiglas	62
+ 31	Up game time bonus	7
32	1ST orange special	36
33	—	43
34	2ND orange special	61
35	3RD orange special	15
36	Orange special	16
+ 37	Central top canal	25
38	50.000 PTS right button	33
39	50.000 PTS right button	34
40	Adv. multiplier right button	52
41	Bonus 1	23
42	Bonus 2	24
43	Bonus 3	5
44	Bonus 4	51
+ + 45	Bonus ball 1	6
46	—	41
47	Bonus 5	59
48	Bonus 6	13
49	Bonus 7	31
+ 50	Right top canal	14
51	Bonus 8	60
52	—	42
53	Bonus 9	32
54	—	50
55	Bonus 10	49
+ 56	Super Bonus	3
57	X 20	21
58	X 40	4
59	X 80	40
+ 60	Can play 1	22
61	Bonus 10.000 PTS	58
+ 62	Can play 2	12
63	Left rollover 1ST target	30
64	Left rollover 2ND target	39
65	1ST top left target	57
+ 66	Can play 3	2
+ 67	Can play 4	11
68	2ND top left target	48
69	1ST top right target	20
70	2ND top right target	38
71	3RD top right target	56
+ 72	Down game time bonus	10
73	Right rollover 1ST target	37
74	Right rollover 2ND target	29
75	Spinning target super score flash	47
+ 76	Bonus ball 2	28
+ 77	Highest score	1
+ 78	Bonus ball 3	19
79	Spinning target adv. multiplier	46
80	Spinning target lights exit canals	55

+ : head lamps
+ + : head and playfield lamps

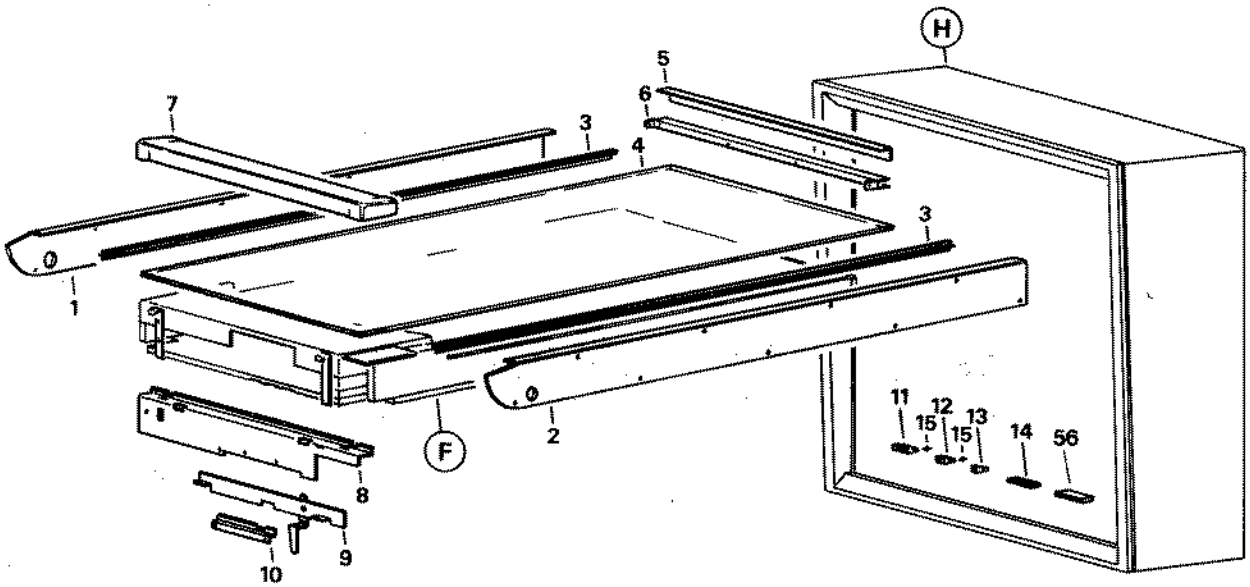
Solenoid arrangemnt FIG. 6

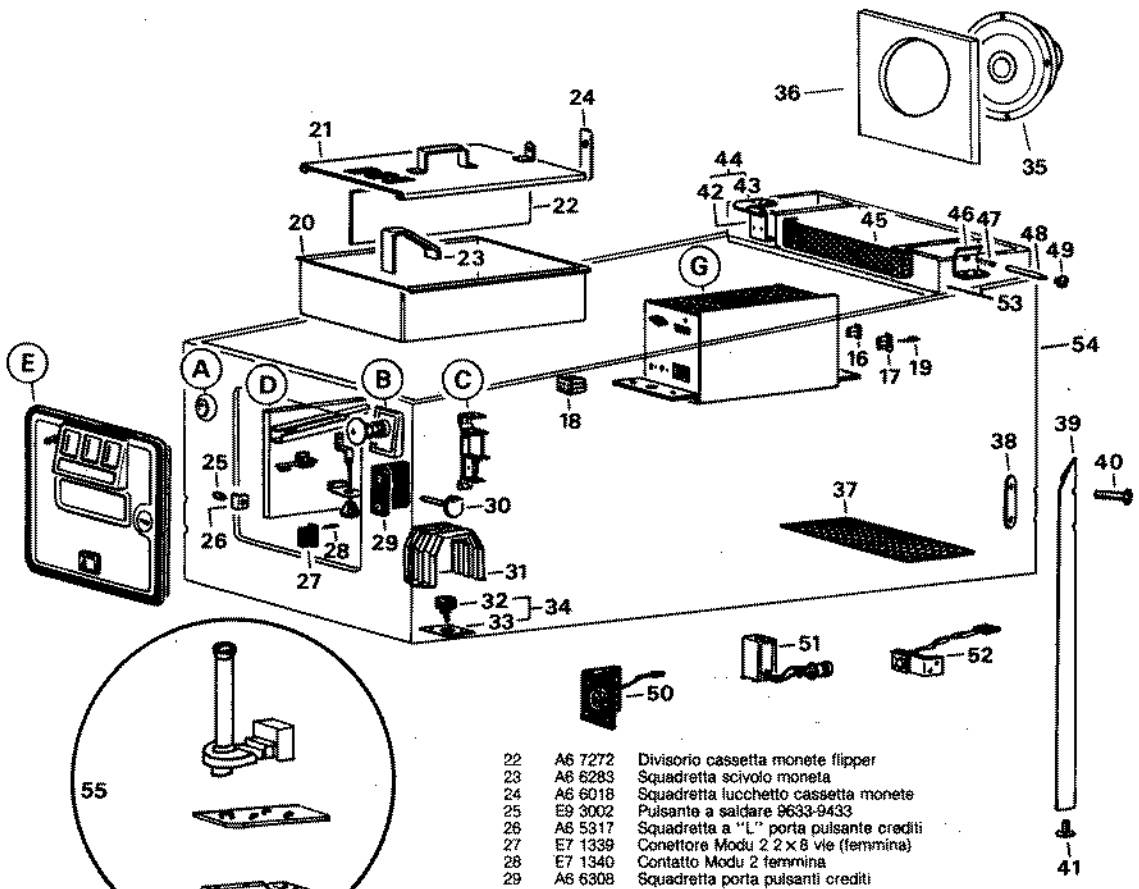


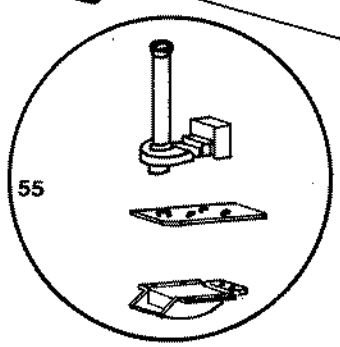
Sol n°	Description	Drive (darlington
01	Moving ramp	5
02	Right flap	14
03	Left flap	9
04	Knocker	20
05	Central bank	4
06	Left kicker	13
07	Right kicker	3
08	Coin mechanism coil	15
09	Right pop	19
10	—	7
11	Top flipper	18
12	Left pop	8
13	—	6
14	Plexiglass	17
15	—	12
16	—	2
17	Head effect lamps	1
18	—	22
19	—	21
20	—	11
21	Red special target	23
22	Token dispenser	10
23	—	16
24	Out hole	24

MECCANICA

TAV. I

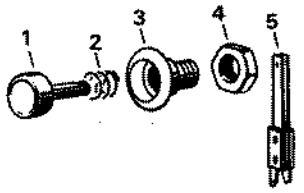






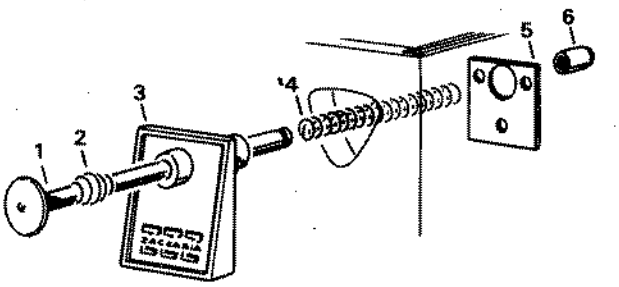
1	A6 7219	Sponda sinistra flipper
2	A6 7218	Sponda destra flipper
3	VB 5127	Guida vetro in PVC per flipper
4	VS 6013	Vetro con marchio serigrafato per piano di gioco flipper
5	A6 7073	Angolare incastro vetro
6	A6 7074	Colletto cassone metallo
7	C2 0022	Telaio poggiamano completo
8	C2 0021	Aggancio poggiamano completo
9	B2 7044	Leva aggancio poggiamano completo
10	A6 7099	Squadretta fissaggio leva
11	E7 1986	Connettore MTA 7 vie arancio (femmina)
12	E7 1989	Connettore MTA 3 vie giallo (femmina)
13	E7 1988	Connettore MTA 2 vie giallo (femmina)
14	E7 1984	Connettore MTAS 20 vie nero (femmina)
15	E7 1993	Chiave di polarizzazione 640630-1
16	E7 1808	Connettore MTLK 2 vie volante
17	E7 1764	Connettore MTLK 3 vie volante
18	E7 1765	Connettore MTLK 9 vie volante
19	E7 1966	Contatto MTLK maschio
20	B2 7216	Cassetta monete flipper
21	B2 7217	Coperchio cassetta monete flipper
22	A6 7272	Divisorio cassetta monete flipper
23	A6 6283	Squadretta scivolo moneta
24	A6 6018	Squadretta lucchetto cassetta monete
25	E9 3002	Pulsante a saldare 9633-9433
26	A6 5817	Squadretta a "L" porta pulsante crediti
27	E7 1339	Conettore Modu 2 2×8 vie (femmina)
28	E7 1340	Contatto Modu 2 femmina
29	A6 6308	Squadretta porta pulsanti crediti
30	E3 1753	Potenziometro 100 ohm
31	VB 5104	Protezione interruttore manuale fondo flipper
32	E9 4003	Interruttore doppio
33	A6 5112	Piastrina porta interruttore
34	EMB 018	Interruttore montato
35	E2 2018	Altoparlante 7W 4 ohm Ciare
36	VA 4284	Pannello per fissaggio altoparlante
37	A6 7398	Lamiera forata protezione presa d'aria 320×160 mm.
38	A6 6106	Piastrina filettata per bulloni gambe
39	A6 1048	Gamba flipper
40	A2 7047	Bullone gamba flipper - filetto 3/8"W h. testa = 9 mm. L = 69 mm.
41	B2 7045	Piedini del flipper
42	B2 7140	Cerniera maschio con perno
43	A6 7155	Cerniera corta
44	C2 0018	Completo cerniera testata flipper
45	A6 1236	Particolare in rete stirata per colletto cassone
46	A6 6256	Squadretta guida asta per aggancio automatico
47	A8 6258	Molla aggancio per asta Ø i 8 mm. Ø filo 1 mm. L = 45
48	A4 6257	Asta aggancio automatico
49	A2 6220	Manopola zigrinata serraggio M5
50	EB 1069	Staffa supp. in ABS con jack montato (optional)
51	EB 0145	Contatore "Valore" delle monete (optional)
52	EMB 007	Connettore per stampante montato e cablato (optional)
53	VD 4022	Colletto cassone verniciato Zankor
54	VS 4104	Mobile cassone serigrafato Zankor
55	KE 0037	Pagatore a gettoni con vaschetta di recupero (optional)
56	E7 1423	Connettore Modu2 2×4 vie portafemmine

A -KE 0025- PULSANTE



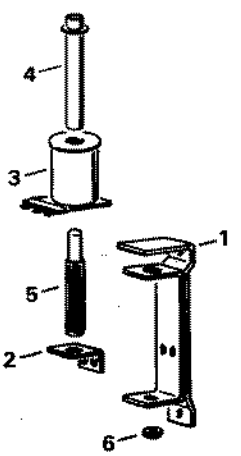
1	VB 5069	Pulsante colore rosso
2	A8 4272	Molla richiamo pulsante flipper
3	VB 5066	Corpo pulsante bianco
4	A2 5214	Dado esagonale M16 UNI 5589 (basso)
5	EMC 019	Pacco lamellare (penne)
	EMC 031	Pacco lamellare (credit)

B -KE 0026-LANCIA BIGLIA



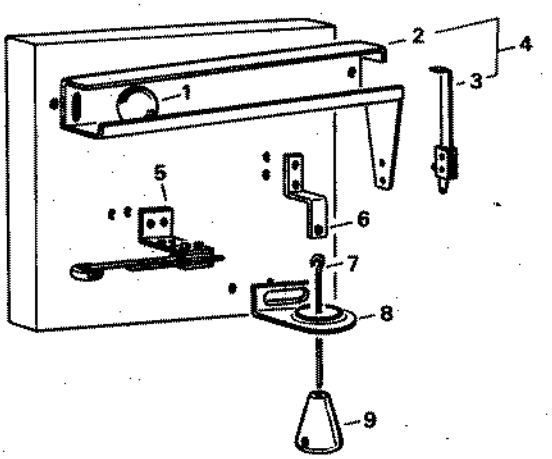
1	B2 7183	Lancia biglia tipo nuovo con pomello in plastica
2	A8 6102	Molla corta lancia biglia
3	B2 0118	Frontalino lancia biglia in lega
4	A8 7070	Molla lunga lancia biglia
5	A6 6101	Piastrina fissaggio frontalino lancia biglia
6	VA 5006	Puntale lancia biglia

C -SD 0029- STAFFA TIC TAC



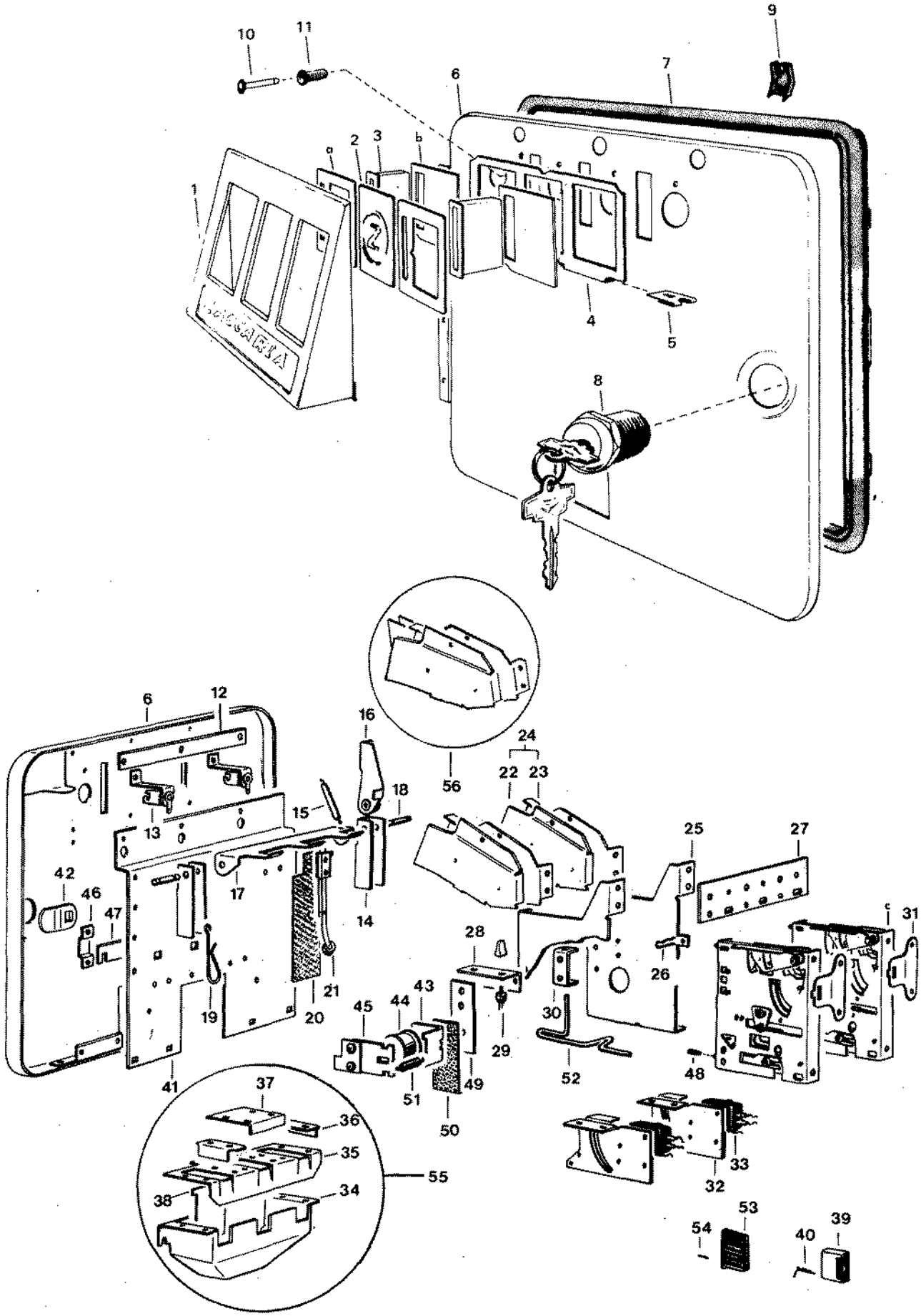
1	B2 7043	Telaio tic tac
2	A6 4310	Squadretta stretta foro grande tic tac
3	EMC 015	Bobina D 40 - S. 1200 con diodo
4	VA 5135	Canotto per bobina tic tac
5	SC 0036	Pistoncino con puntale
6	VA 5020	Gommino ÷ i 5,5 ÷ e 10 h=6 mm.

D SE 0001-TAVOLETTA TILT



1	A2 4185	Sfera per scatola tilt ÷ 23,8
2	A6 7046	Scatola tilt
3	EMC 014	Pacco lamellare tilt
4	EMC 009	Scatola tilt montata
5	EMD 010	Pacco lamellare tilt con squadretta
6	A6 6105	Squadretta sostegno asta tilt
7	A8 5033	Astina sostegno pendolino tilt
8	A6 6103	Anello del tilt
9	A4 6104	Pendolino tilt

SF 0037 - SPORTELLO PORTA GETTONIERE



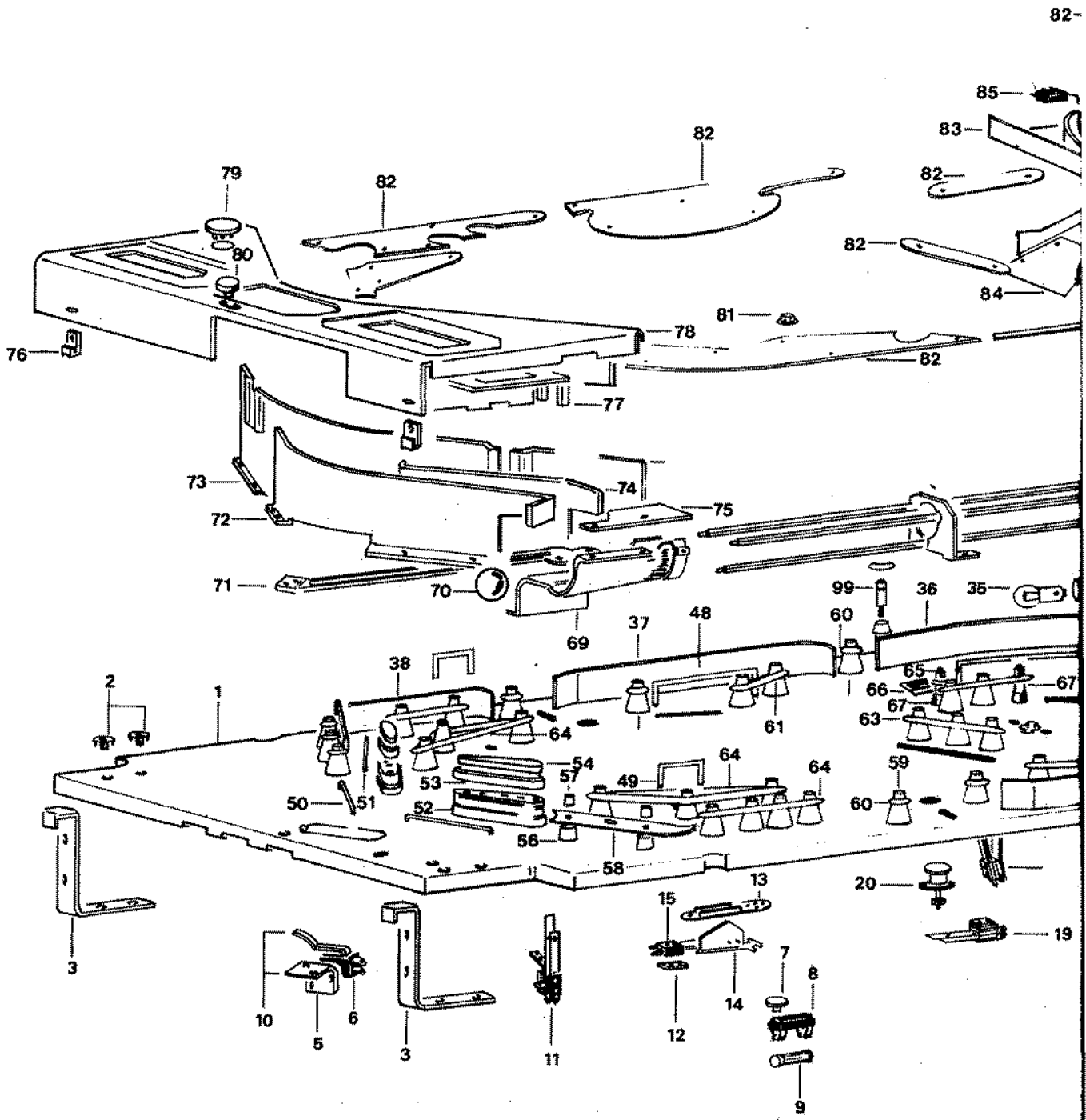
1	SC 0048	Frontalino sportello con cerniera
2	A6 5009	Piastrina con marchio
3	VB 5084	Guida monete in plastica
4	A6 7005	Componente fissaggio accessori
5	A2 4383	Piastrina semidoppia
6	B2 7184	Portiera anteriore con cerniera
7	A4 8004	Cornice sportello senza linguetta
8	B2 7153	Serratura sportello senza linguetta
9	A6 4460	Staffa fissaggio cornice
10	A4 4031	Pulsante scarto moneta
11	A4 4032	Componente per pulsante scarto moneta
12	A6 5006	Asta a 3 fori per frontalino zincato
13	E8 4010	Portalampada alto per sportello
14	A6 6001	Cavalletto sportello zincato
15	A8 5201	Molla richiamo leva di scarto
16	B2 6001	Leva per boccola
17	A6 6002	Leva di scarto gettoniera
18	A4 4005	Perno per cavalletto sportello zincato
19	A8 5021	Ferretto in acciaio inox porta chiave
20	VB 7065	Cartocino isolatore per sportello
21	EMC 004	Pacco lamellare tilt
22	A6 7009	Scorrimoneta maschio
23	A6 7008	Scorrimoneta femmina
24	B2 6076	Scorrimoneta assemblato
25	A6 7007	Supporto gettoniera zincato
26	A8 5252	Forcellina fissaggio sportello gettoniera
27	A6 5014	Piastrina accoppiamento supporto gettoniera
28	A6 5206	Squadretta porta pulsanti sportello
29	E9 3085	Deviatore con ritorno
30	A6 5015	Componente per asta arresto monete
31	A6 5114	Piastrina fissaggio gettoniera
32	B2 6109	Piastra porta micro assemblata
33	E9 4011	Micro switch bianco
	E9 4012	Micro switch nero
	E9 4013	Micro switch rosso
34	A4 8005	Raccoglitore moneta di recupero
35	A6 6009	Copertura per raccoglitore monete
36	A6 7279	Squadretta unidirezionale antitrode
37	A6 5010	Squadretta a 4 fori
38	A6 5011	Cancelletto
39	E7 1338	Connettore maschio 2 × 8 vie Modu 2
40	E7 1348	Contatto maschio Modu 2
41	A6 7002	Piastra supporto zincata
42	A6 4328	Leva per serratura sport. ant.
43	B2 7143	Alloggiamento bobina sportello
44	EMD 016	Bobina D12 S6000 con nucleo e diodo
45	B2 7144	Piastrina con componente
46	A6 5002	Fermo barra arresto monete
47	A6 5001	Barra arresto monete zn.
48	S.C.	Perno fissaggio gettoniera
49	A6 6173	Piastrina fissaggio alloggiamento bobina blocco gett.
50	VB 7067	Cartoncino isolatore bobina sportello
51	A8 5239	Molla ritorno piastrina
52	A8 5208	Ferretto arresto moneta sportello
53	E7 1550	Connettore porta femmina Modu 2 15 vie (solo video)
54	E7 1485	Contatto Modu 2 femmina (solo video)
55	B2 6069	Raccogli monete assemblato
56	C2 0035	Scorrimoneta con prolunga per moneta "1 sterlina"

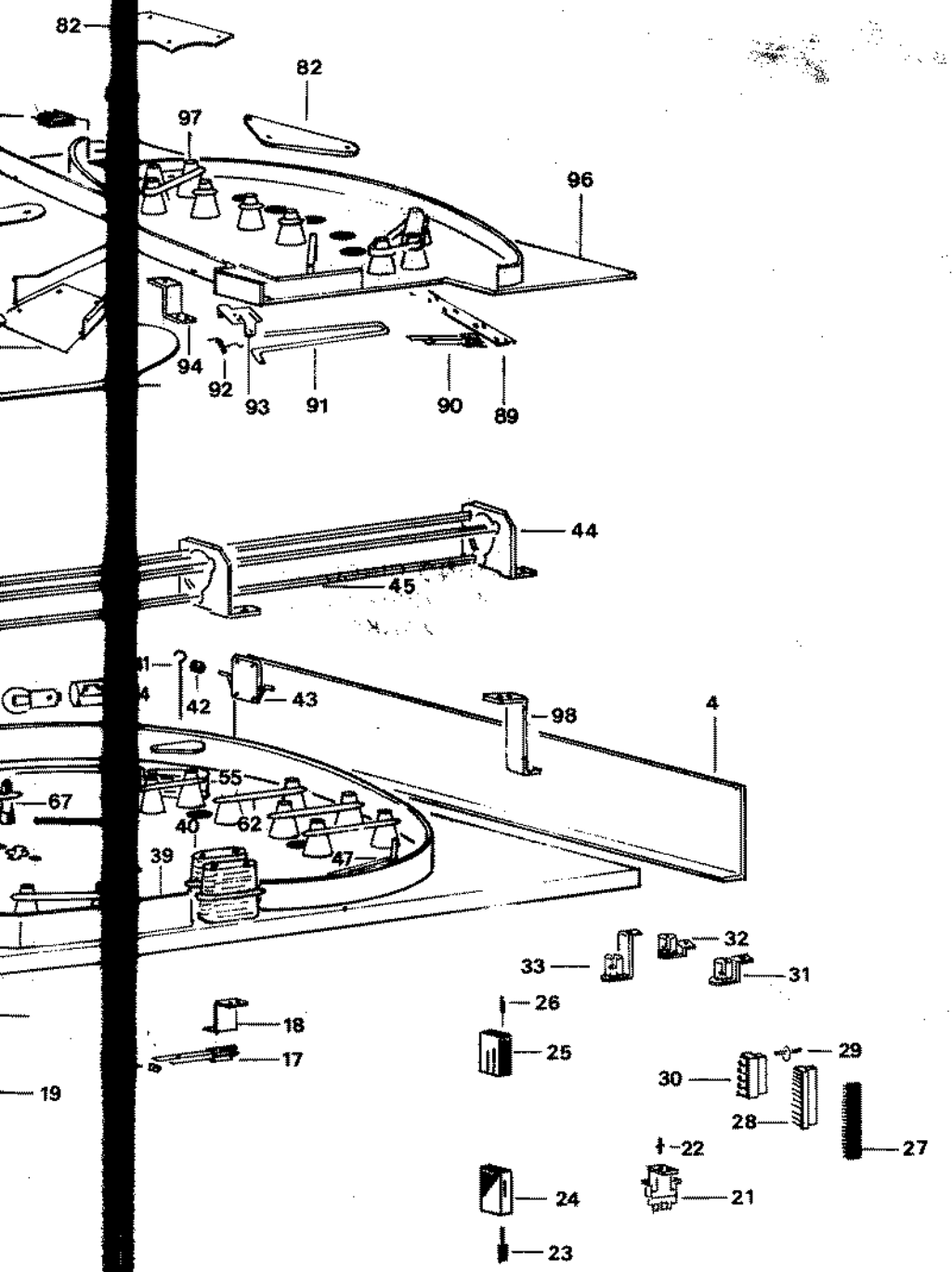
*a. Introduzione monete
*b. Piastrina serigrafata
*c. Gettoniera

*NOTA: Per ordinare "a", "b", o "c", specificare il paese.

"SD 0049 Frontalino sportello assemblato" (SC 0048/A6 5009/VB 5084/A6 7005/A2 4383).

SH 0011- PIANO DI GIOCO ASS. «ZANKOR»

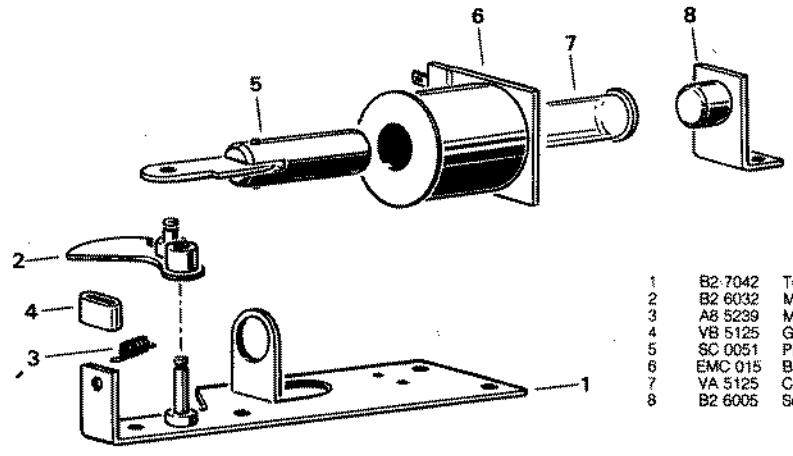




1	VS 4103	Piano di gioco serigrafato Zankor
2	A2 4386	Dado tondo filettato con punte 4M (sicurt)
3	A6 7364	Supporto alto per piano di gioco
4	A6 7480	Angolare rinforzo piano di gioco
5	A6 5298	Supporto micro interuttore buca flipper
6	E9 4007	Micro interruttore a leva lunga AH.71534
7	VA 5007	Minipost in gomma
8	E8 4009	Porta fusibile
9	E8 1755	Fusibile 3,15 A
10	EB 1092	Micro buca bassa assiemato
11	EMD 008	Pacco lamellare flap sx. ass.
12	A6 6020	Piastrina copri pacco lamellare
13	VA 5114	Basetta in plastica passaggi grandi
14	VA 5115	Passaggio grande
15	EMC 051	Pacco lamellare passaggi
16	A2 4455	Morsetto per biella
17	EMC 020	Pacco lamellare bersaglio rotante
18	EMD 021	Pacco lammellare bersaglio rotante ass.
19	EMC 012	Pacco lamellare per pulsante a stella
20	SD 0035	Pulsante a stella giallo P.G. ass.
21	E7 1808	Connettore 2 vie MTLK volante
22	E7 1768	Contatto MTLK maschio
23	E7 1340	Contatto MODU2 femmina
24	E7 1423	Connettore MODU 2 2×4 vie femmina
25	E7 1424	Connettore MODU 2 2×4 vie maschio
26	E7 1348	Contatto MODU2 maschio
27	E7 1984	Connettore 20 vie MTAS
28	E7 1990	Connettore 12 vie MTA giallo
29	E7 1993	Chiave di polarizzazione
30	E7 1986	Connettore 7 vie MTA arancio
31	E7 4014	Porta lampada medio
32	E7 4013	Porta lampada basso
33	E7 4015	Porta lampada alto
34	E8 4020	Porta lampada BA 15S con piede
35	E8 4032	Lampada 12V 10W BA 15S
36	B2 0131	Guida pallina canale alto Zankor
37	B2 0128	Guida pallina rilancio sx Zankor
38	B2 0126	Guida pallina canale basso Zankor
39	B2 0127	Guida pallina rilancio dx Zankor
40	VB 5101	Colonnetta porta farfalla rotante rossa
41	A8 4452	Tirantino pacco lamellare farfalla rot.
42	VB 5127	Camma per farfalla rotante comando biella
43	SC 0103	Bersaglio rotante assiemato Zankor
44	A6 6269	Supporto rotaia a tre fori piegato
45	VA 7550	Trafila lancio mm 747
46	A8 4395	Ferretto interasse mm. 185 Ø 3 alto
47	A8 4394	Ferretto interasse mm. 145 Ø 3 alto
48	A8 4396	Ferretto interasse mm 104 Ø 3 alto
49	A8 4629	Ferretto interasse mm. 30 Ø 3
50	A8 4368	Ferretto basso mm. 80
51	A8 4235	Ferretto interasse mm. 60 Ø 3 alto
52	VA 5143	Corpo penna smontabile rosso
53	VA 5009	Anello in gomma per penna flipper
54	VA 5114	Coperchio penna rosso smontabile
55	VA 5235	Corpo penna larga destra rossa
56	VB 5128	Colonnetta spaccata a base rossa
57	VB 5129	Colonnetta spaccata coperchio rosso
58	A6 6274	Piastra sagomata recupero pallina sx
59	VB 5085	Colonnetta nuovo tipo colore rosso
60	VA 5010	Gommino N° 0
61	VA 5012	Gommino N° 1
62	VA 5013	Gommino N°2
63	VA 5015	Gommino N°4
64	VA 5017	Gommino N°6
65	A4 4534	Minipost con filetto e foro filettato
66	VA 5035	Gommino per minipost
67	A4 4533	Componente conico minipost
68	A4 4570	Minipost con filetto M4 L. 51
69	B2 7293	Staffa raccoglitore pallina alza biglia
70	A2 4186	Sfera piano di gioco Ø 27 mm
71	A6 7363	Binario pallina alto
72	A6 7359	Guida pallina lunga alta
73	A6 7371	Angolare rialzo carter
74	A6 7360	Guida pallina corta alta
75	A6 6319	Copertura lancia biglia
76	A2 4343	Piastrina semidoppia fissaggio carter
77	VS 9027	Graduatore serigrafato Zankor
78	VS 9026	Carter serigrafato Zankor
79	VB 5026	Spie rossa carter
80	VA 5083	Gommino ammortizzatore
81	VB 5023	Coperchiotto isole
82	VD 5010	Serie isole piane Zankor
83	VS 5194	Bandella in lexan piegata e serigrafata Zankor
84	SD 0129	Rampa + molla per risalita piano rialzato Zankor
85	E9 4009	Micro switch E 51 60 B
86	VB 5200	Fioretto corto rosso
87	B2 0124	Guida pallina bordo piano rialzato Zankor
88	B2 0125	Guida pallina piano superiore Zankor
89	A6 1264	Bandella fissaggio pacchi lamellari piano sup. Zankor
90	EMC 065	Pacco lamellare fioretto corto
91	A8 4562	Ferretto discesa pallina
92	A8 4564	Molla richiamo fioretto discesa pallina
93	A6 4723	Supporto ferretto discesa pallina pieg. 90°
94	A6 4574	Staffa a "Z" supporto piano isole
95	A4 1081	Vite in ottone per regolazione fioretto corto
96	VS 5193	Piano rialzato in plexiglass ser. Zankor
97	A4 4622	Minopost filetto M4 corto
98	A6 4565	Staffa a "Z" mm. 50 supp. piano risalita
99	A8 7063	Vite porta isole M4 × 40
	A2 7055	Vite porta isole filetto legno

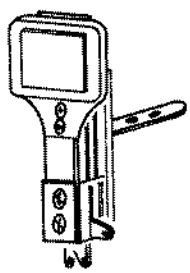
TAV. V

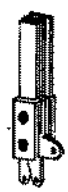
Fa **SD 0062 - ALZA BIGLIA**



1	B2 7042	Telaio alza biglia
2	B2 6032	Martelletto alza biglia
3	A8 5239	Molla richiamo piastrina
4	VB 5125	Gommino ammortizzatore alza biglia
5	SC 0051	Pistoncino alza biglia con tirantino
6	EMC 015	Bobina D.40.S 1200 con diodo
7	VA 5125	Canotto per bobina mm. 44
8	B2 6005	Squadretta stretta con pastiglia

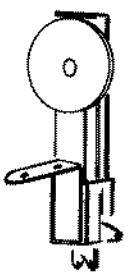
Fb **SD 0121 - CENTRINO TRASPARENTE SERIGRAFATO ZANKOR ASS.**



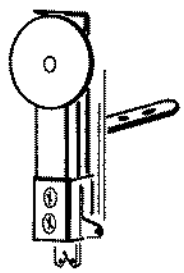


EMC 018 PACCO LAMELLARE CENTRINO FISSO

Fc **SD 0122 - CENTRINO CIRCOLARE VERDE INCISO CERCHI ASS. SX ZANKOR**

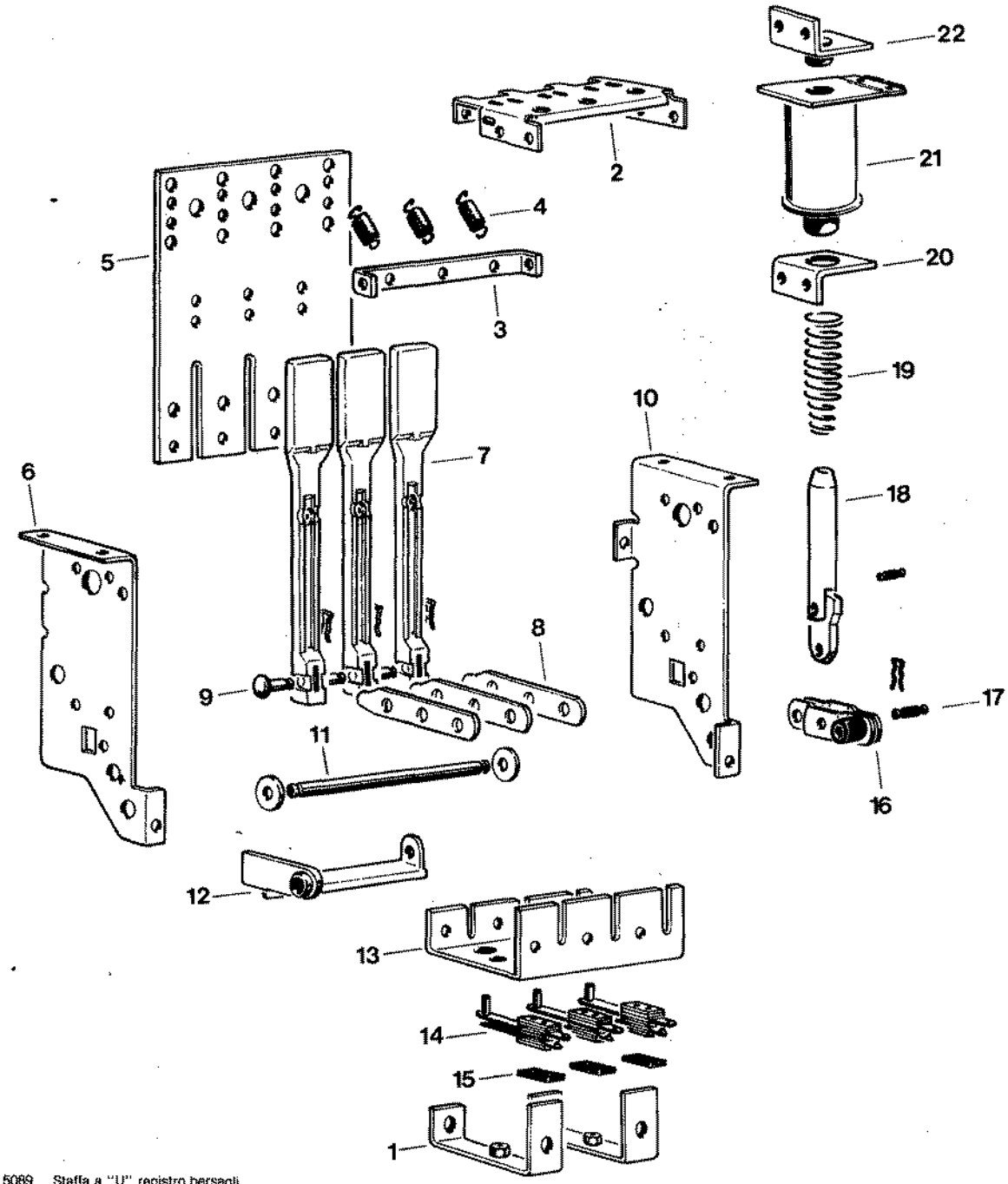


Fd **SD 0123 - CENTRINO CIRCOLARE VERDE INCISO CERCHI ASS. DX ZANKOR**



Fe

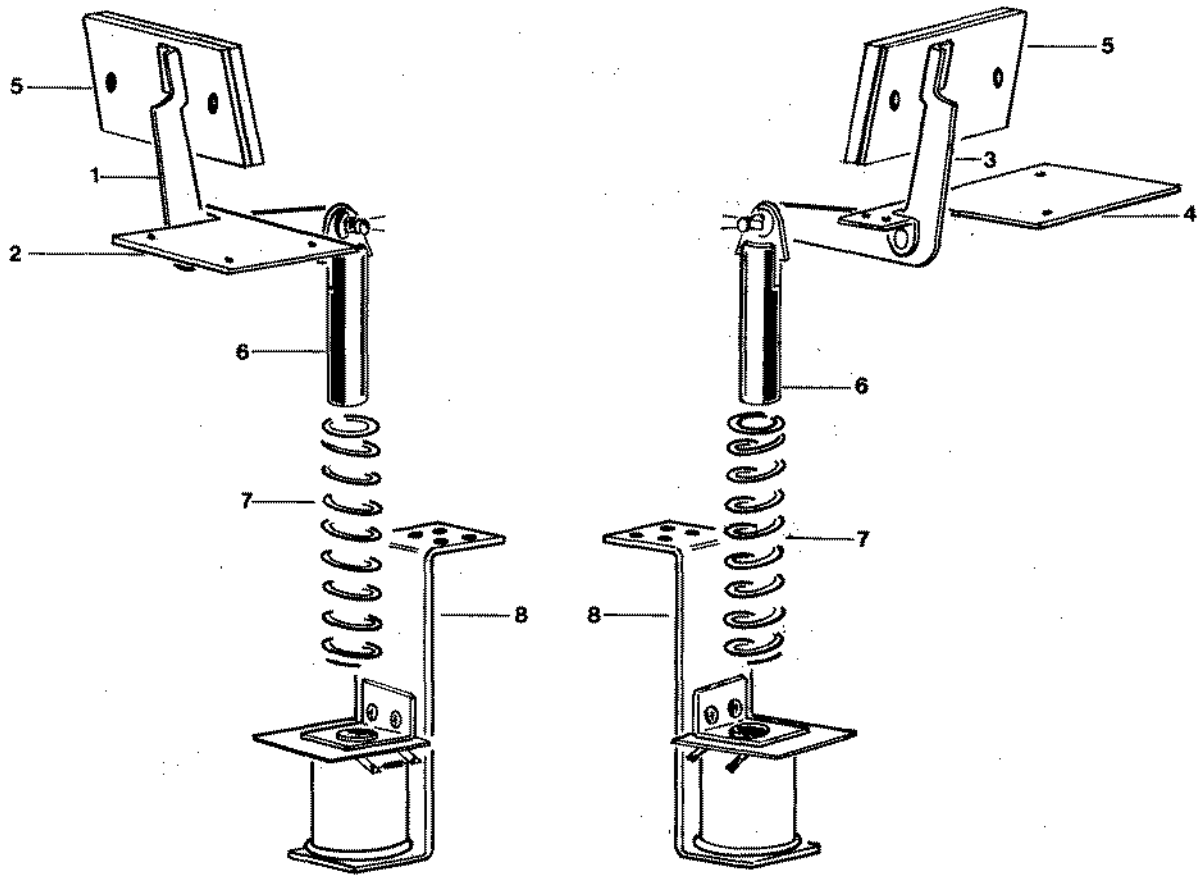
SF 0085 - BANCO BERSAGLI A 3 POSIZIONI DX ASS. ZANKOR

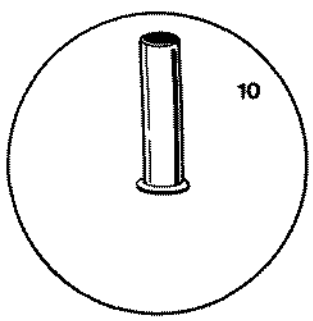


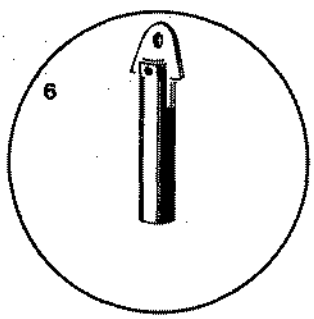
1	B2 5089	Staffa a "U" registro bersagli
2	A6 1019	Staffa ancoraggio B.B.
3	A6 1171	Trave per ancoraggio molle
4	A8 62[illegible]	Molla a trazione B.B.
5	A6 1172	Piastra guida leve a 3 posizioni
6	A6 6177	Staffa laterale sinistra
7	VS 5198	Bersaglio B.B. incisione ascia
8	A6 1127	Leva comando bersagli
9	A4 6185	Perno fissaggio leva
10	A6 6178	Staffa laterale destra
11	A4 1042	Alberino fulcro leve
12	B2 0088	Trave di collegamento leve dx.
13	A6 1102	Staffa fine corsa
14	EMC 017	Pacco lamellare per B.B.
15	A6 6020	Piastrina copri pacco lamellare
16	B2 6123	Piastrina con boccola
17	A4 6187	Perno per leva laterale
18	SB 0014	Pistoncino B.B. con tirantino
19	A8 6110	Molla richiamo
20	A6 6179	Squadretta fissaggio bobina
21	EMC 041	Bobina D 50 S 1600 + diodo
22	B2 6121	Squadretta con pastiglia

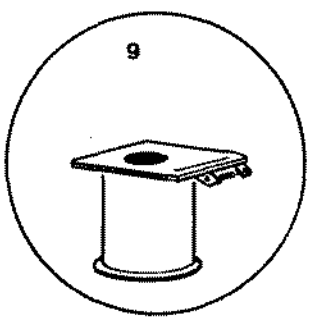
Ff-g

SF 0086 - RESPINGENTE RILANCIO FLAP SX ASS.
SF 0087 - RESPINGENTE RILANCIO FLAP DX ASS.





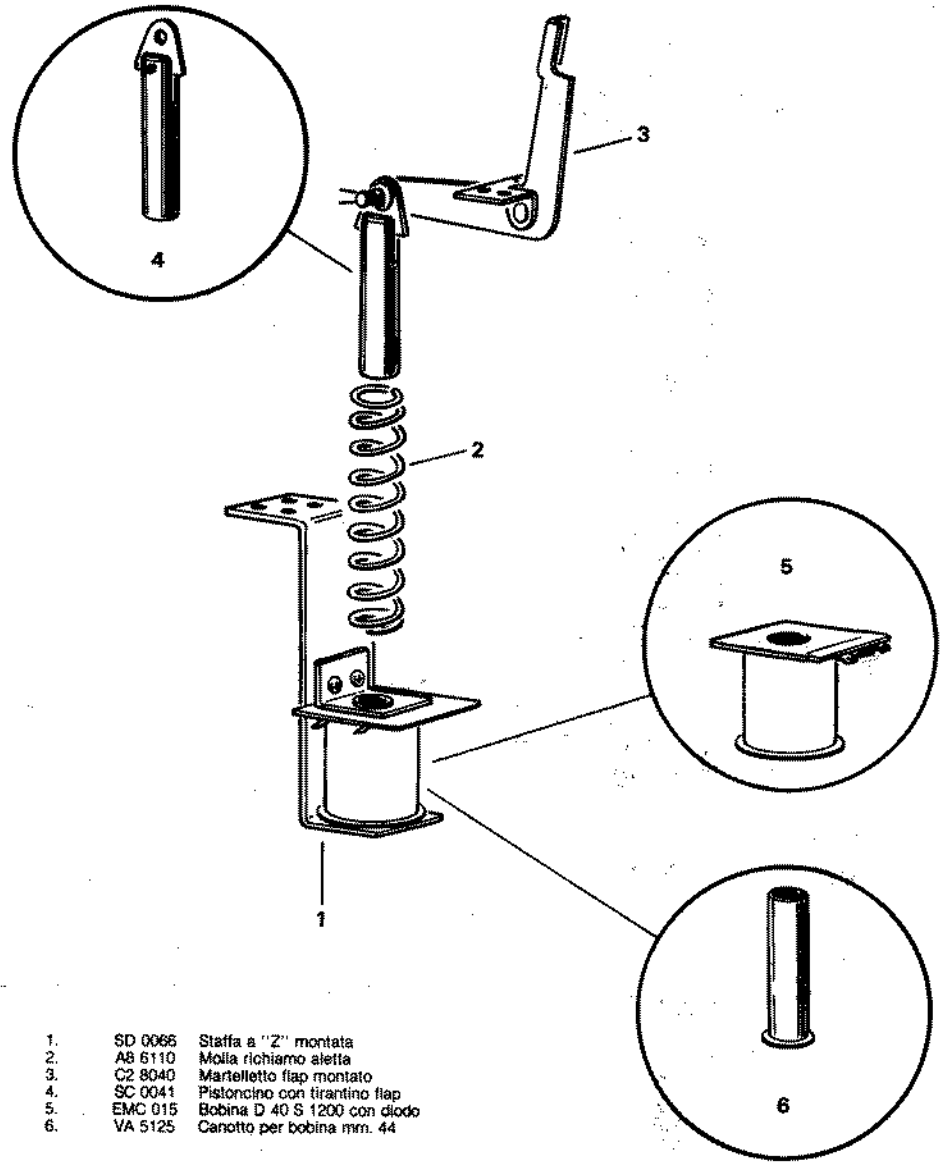




1	SD 0128	Martelletto rilancio dx flap ass.
2	SC 0100	Squadretta fulcro rilancio dx. flap. ass.
3	SD 0127	Martelletto rilancio sx flap ass.
4	SC 0099	Squadretta fulcro rilancio sx flap ass.
5	VB 5204	Piastrino in makrolon per rilancio flap
6	SC 0041	Pistoncino più tirantino
7	A8 6110	Molla richiamo aletta
8	SD 0066	Staffa a "Z" montata
9	EMC 015	Bobina D 40 S 1200 con diodo
10	VA 5125	Canotto per bobina mm. 44

Fh

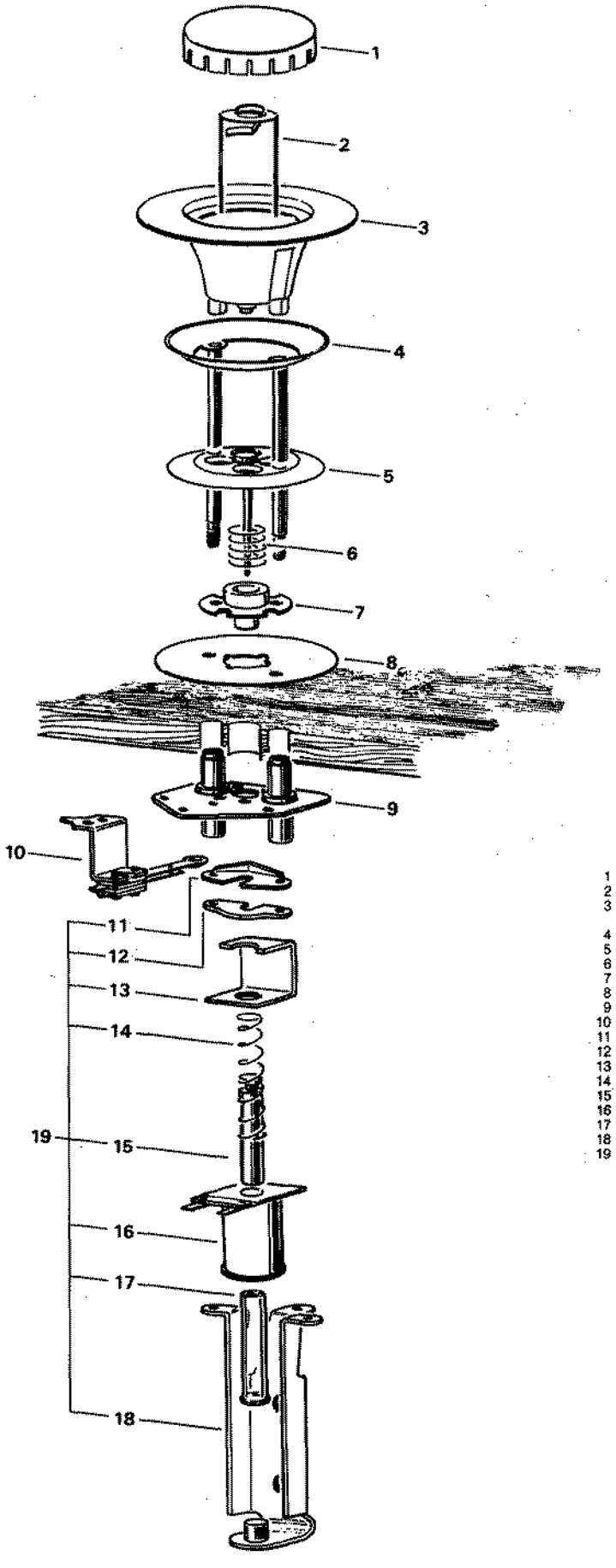
KE 0031 - FLAP



1.	SD 0066	Staffa a "Z" montata
2.	A8 6110	Molla richiamo aletta
3.	C2 8040	Martelletto flap montato
4.	SC 0041	Pistoncino con tirantino flap
5.	EMC 015	Bobina D 40 S 1200 con diodo
6.	VA 5125	Canotto per bobina mm. 44

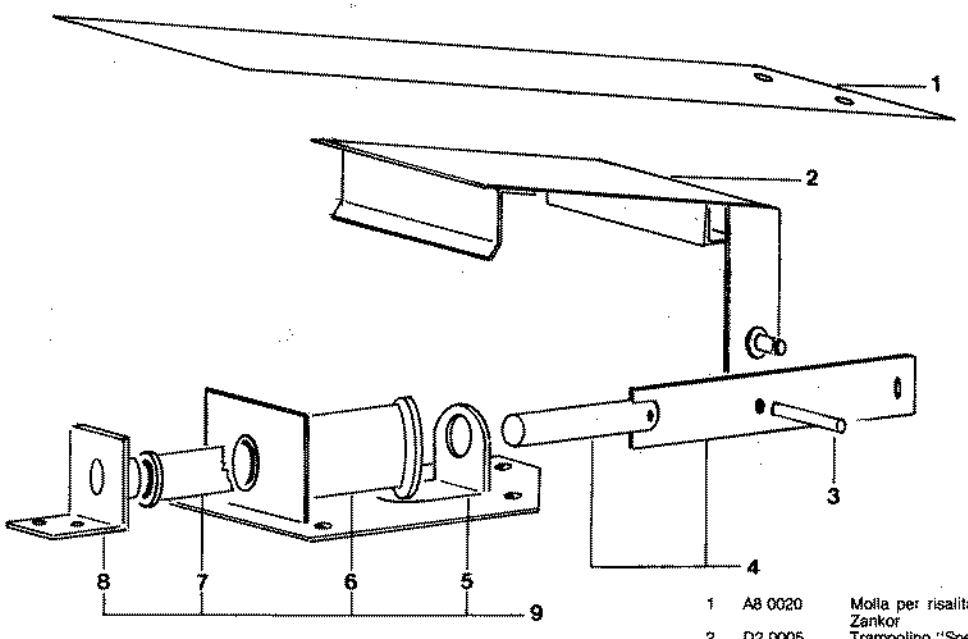
Fi

KE 0071- KIT POP ASS. ZANKOR



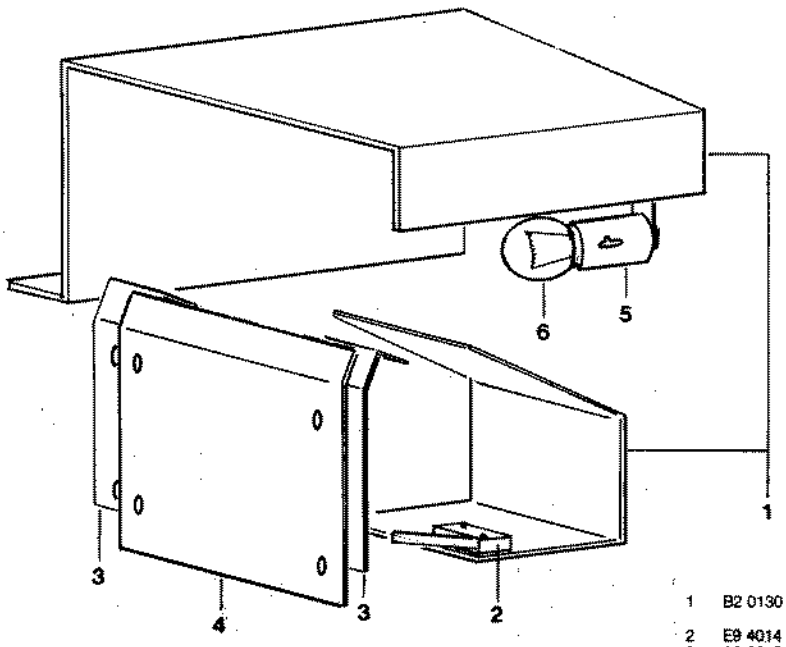
1	VS 5197	Coperchiotto serigrafato per flipper Zankor
2	E8 4034	Porta lampada pop
3	VS 5201	Corpo pop serigrafato per flipper Zankor
4	B2 7052	Anello pop
5	VA 5138	Ombrellino pop rosso
6	A8 4263	Molla richiamo ombrellino pop
7	VB 5044	Basetta pop
8	VB 5022	Sotto pop nylon
9	SC 0040	Piastra montaggio pop con boccole
10	EMD 019	Cucchiaino montato
11	A6 6070	Gioco pop in metallo
12	VB 5085	Gioco pop in bachilite
13	A6 7028	Alloggiamento nucleo pop
14	A8 6073	Molla pop
15	A4 6071	Pistoncino pop
16	EMC 037	Bobina D.45 - S.1000 con diodo
17	A2 0076	Canotto pop in ottone ribattuto
18	B2 7160	Staffa con pastiglia
19	SD 0067	Staffa pop montata con bobina D45 S1000

Fk SF 0089 - TRAMPOLINO ALZA RAMPA ASS.



1	A8 0020	Molla per risalita pallina trampolino "Special" Zankor
2	D2 0005	Trampolino "Special" Zankor + perno
3	VB 5021	Tubino distanziale 4,8 X 14
4	SC 0102	Tirantino trampolino + pistoncino
5	A6 1234	Supporto per bobina
6	EMC 068	Bobina D 355 S 1000 D 224 S 2500
7	VA 5125	Canotto in plastica mm. 44
8	B2 6005	Squadretta + pastiglia
9	SD 0115	Supporto bobina bersaglio porta

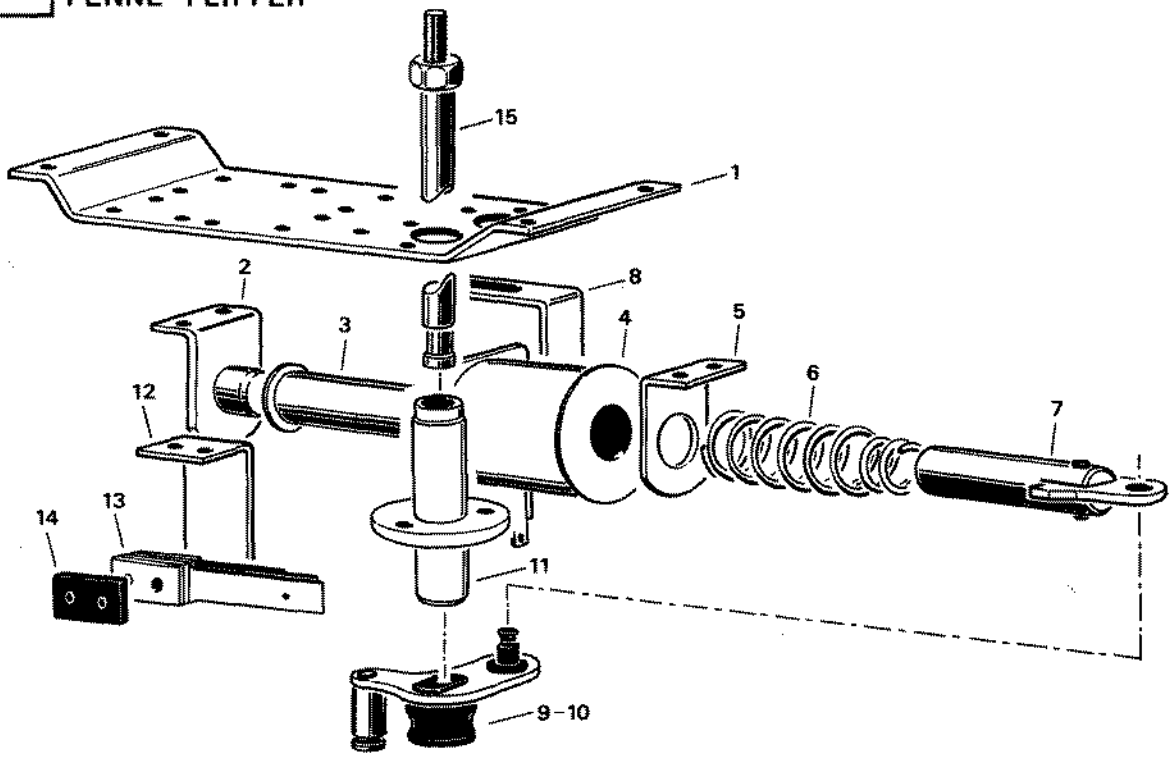
Fj SD 0130 - TELAIO SUPPORTO SPECIAL ASS. ZANKOR



1	B2 0130	Telaio supporto "Special" assiemato Flipper Zankor
2	E9 4014	Micro switc E 61 20H LV
3	A8 0019	Molla contrasto bersaglio mobile
4	VS 5195	Lastra in lexan forata serigrafata e piegata per "Special" filipper Zankor
5	E8 4020	Porta lampada BA 15 S con piede
6	E8 4032	Lampada 12V 10W BA 15S

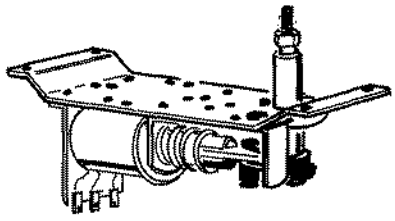
TAV. XI

Flmn PENNE FLIPPER



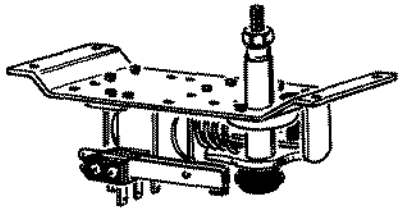
1	A6 7491	Staffa supporto gruppo penna flipper
2	B2 6100	Squadretta larga con pastiglia rinforzata
3	VA 5125	Canotto per bobina mm. 44
4	EMC 038	Bobina D.50 - S.1600 - D 14 S.5000
5	A6 5071	Squadretta larga foro grande
6	A8 6110	Molla richiamo aletta flipper
7	SC 0050	Tirantino con pistoncino ass. flipper
8	A6 6336	Squadretta arresto aletta flipper
9	C2 0019	Componente aletta flipper ass. dx.
10	C2 0020	Componente aletta flipper ass. sx.
11	VA 5140	Boccola per flipper
12	A6 4338	Squadretta porta pacchi lamellari
13	EMC 029	Pacco lamellare distacco flipper
14	A6 6020	Piastrina copri pacco lamellare
15	A4 6337	Perno penna flipper smontabile L = mm. 77

Fl SD 0126 - GRUPPO FLIPPER DX.
BOB. EMC 063
D 355 S1000 D224 S2500



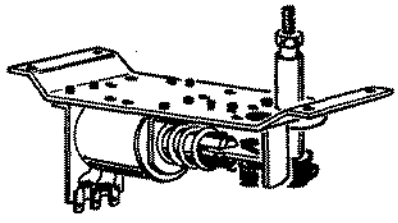
EMC 029 - Pacco lamellare

Fm SD 0055 - GRUPPO FLIPPER SX.
BOB. EMC 038 -
D50 S600 D14 S5000



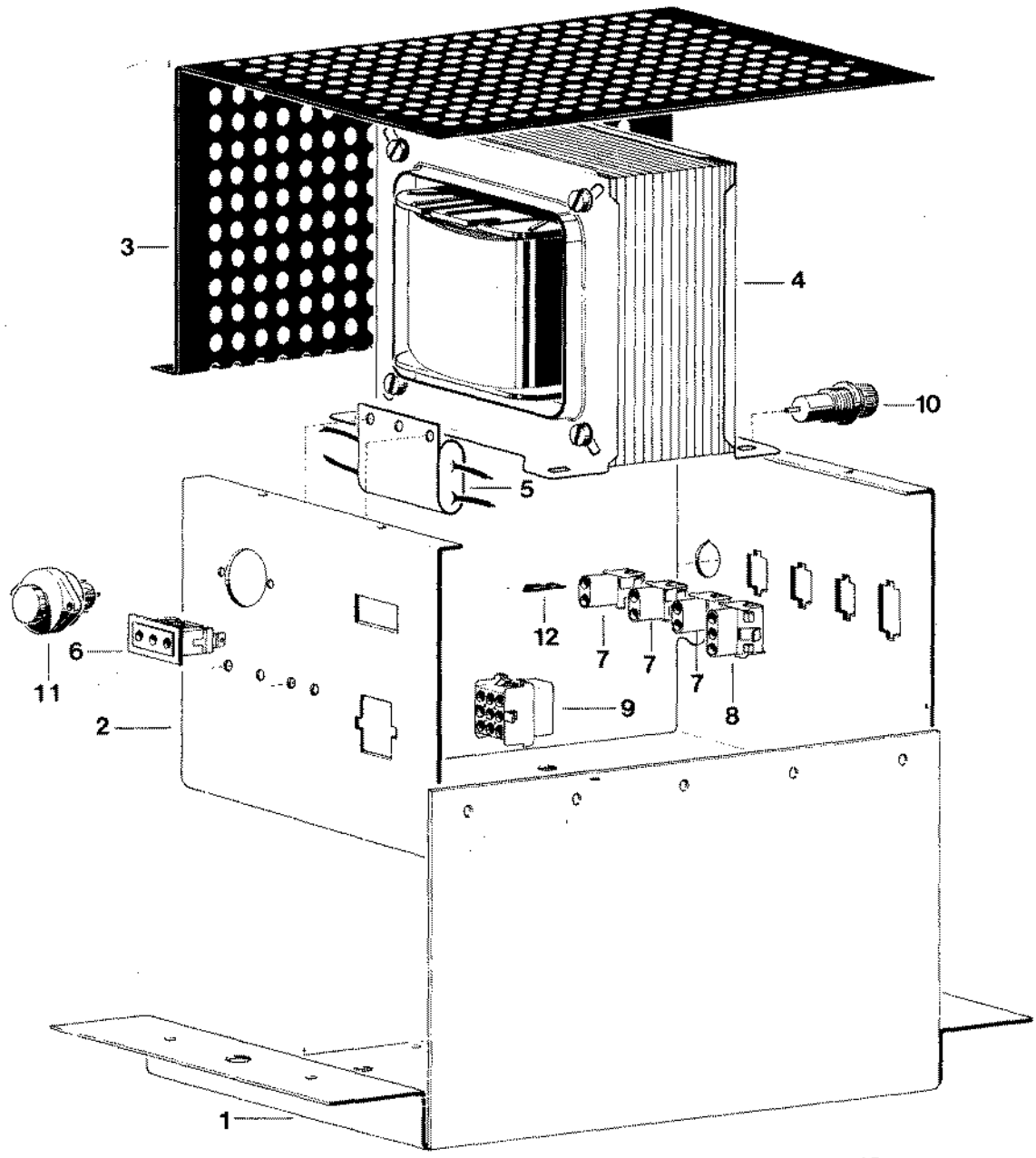
EMC 029 - Pacco lamellare

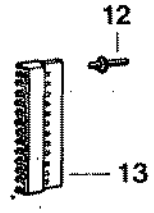
Fn SD 0056 - GRUPPO FLIPPER DX.
BOB. EMC 038 -
D50 S600 D14 S5000



EMC 029 - Pacco lamellare

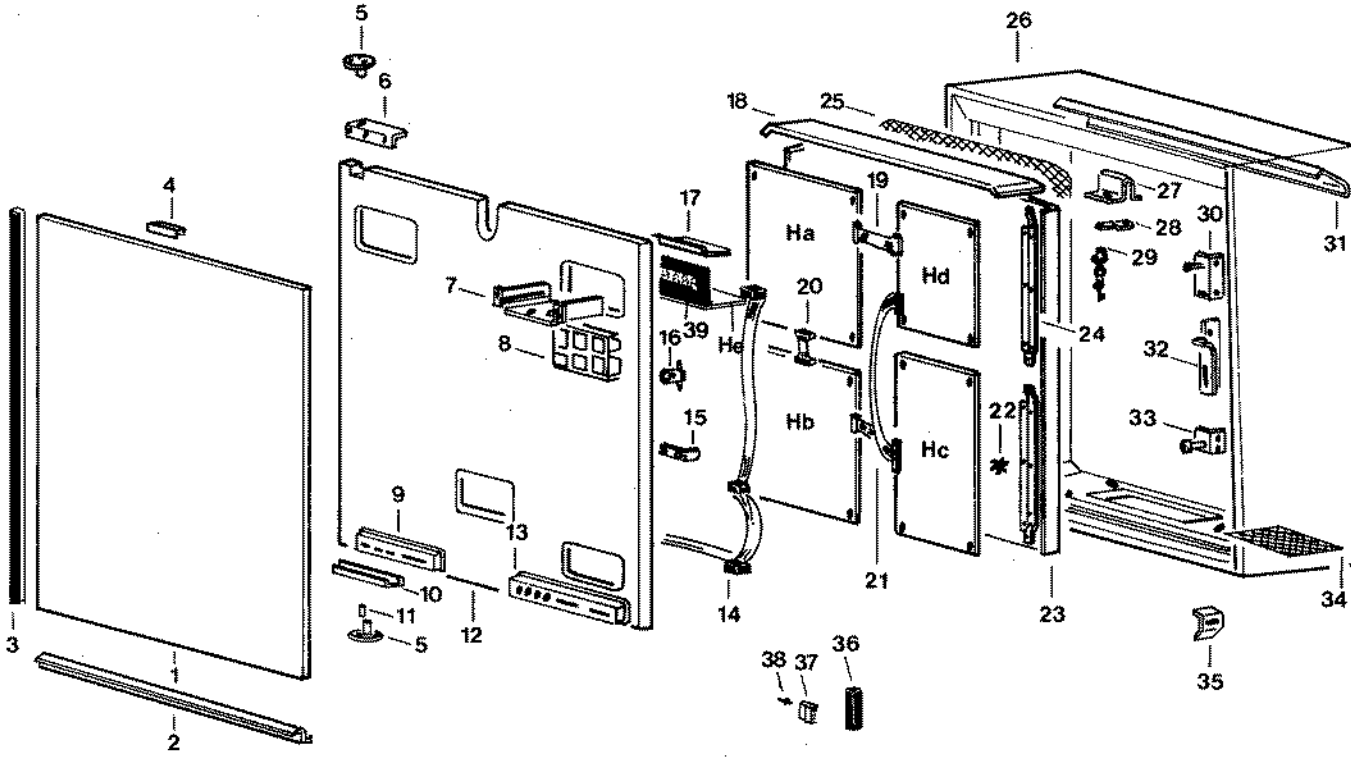
TAV. XII





1	A6 7396	Staffa rinforzo telaio
2	A6 7395	Telaio alimentazione
3	A6 7397	Lamiera forata prot. telaio
4	EM 0012	Trasf. 2C 1019
5	E8 1018	Filtro di rete 5A con contatti
6	E7 4045	Presa bipolare con massa
7	E7 1809	Connettore MTLK 2 vie da pannello
8	E7 1706	Connettore MTLK 3 vie da pannello
9	E7 1744	Connettore MTLK 9 vie da pannello
10	E8 1758	Portafusibili da pannello
11	E8 1763	Cambio tensioni
12	E7 1993	Chiave di polarizzazione
13	E7 1985	Connettore MTA 13 vie arancio 18 AWG
14	E7 1767	Contatto MTLK femmina

SG 0039 - MOBILE TESTATA ASS. ZANKOR

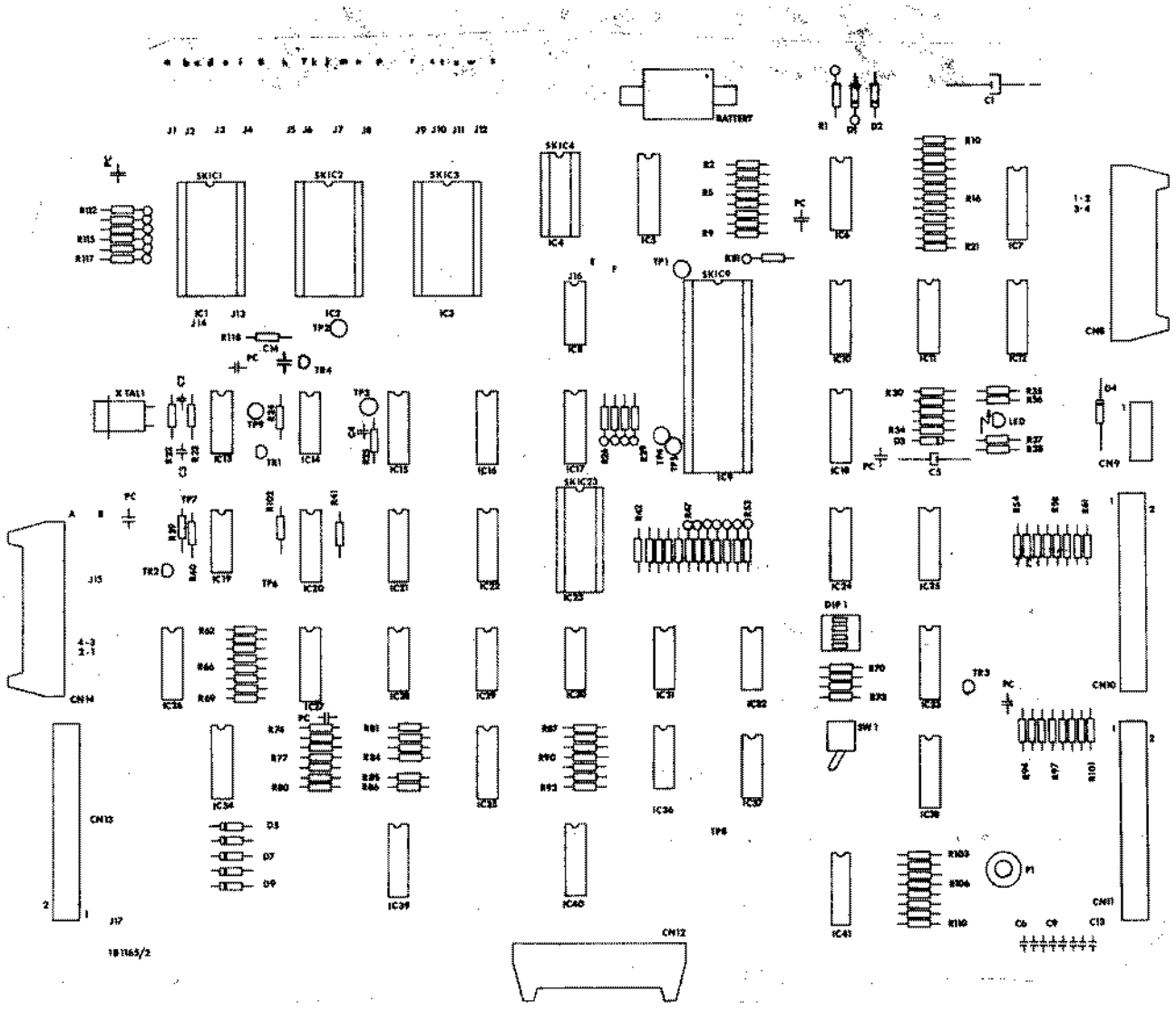


1	VS 6023	Vetro serigrafato mod. Zankor
2	A6 7205	Asta sostegno vetro mm. 695
3	VA 5023	Guarnitura in platisca per vetro
4	A6 4703	Profilato ad "U" L. = 70 mm.
5	B2 6186	Piastrina fulcro testina con perno
6	A6 6261	Rinforzo ad "L" testata inferiore
7	SC 0020	Supporto fissaggio display con guida
8	VT 5047	Alveare divisorio lampade credit D.R.
9	VT 5055	Alveare divisorio lampade Super Bonus h = 20
10	A6 6252	Rinforzo ad "U" testata inferiore
11	A4 4568	Distanziale in metallo Ø4,8 × Ø8 L = 14mm.
12	VC 4040	Pannello frontale forato con puntale per flipper
13	VT 5054	Alveare divisorio lampade Tilt Game over h = 20
14	EB 1168	Flat cable a 6 connettori 20 vie femmina M. 86
15	A6 7173	Piastrina fissaggio bobina
16	E8 4005	Porta lampada testina
17	VA 7022	Tettoia protezione display in cartoncino
18	A6 7207	Piastra parte superiore 95 × 600mm.
19	EB 0141	Flat cable a 2 connettori a 20 vie CPU-SOUND
20	EB 0006	Flat cable a 2 connettori a 20 vie CPU-INTERFACCIA
21	EB 0196	Cablaggio alimentazione schede
22	VA 5032	Supporto per CS-DCL-BS-3M
23	A6 7322	Lamiera schermo testata flipper
24	A6 7399	Staffa supporto schede
25	A6 7401	Lamiera forata protezione aereazione testata 700 × 600
26	VS 4105	Mobile testata serigrafato Zankor
27	A6 6253	Riscontro porta serraggio
28	A6 4320	Linguetta aggancio serratura
29	B2 7151	Serratura fort lock art. 3078
30	A6 6282	Squadretta grande riscontro catenaccio testata vetro
31	A6 7400	Bandella protezione liquidi
32	A6 6342	Staffa asole lunghezza 97 mm.
33	A6 6255	Squadretta riscontro catenaccio testata vetro
34	A6 7220	Protezione in lamiera stirata mm. 110 × 130
35	A6 6259	Squadretta aggancio poggiamano automatico
36	E7 1984	Connettore MTAS 20 vie nero femmina
37	E7 1987	Connettore MTA 5 vie arancio femmina
38	E7 1993	Chiave di polarizzazone
39	VB 7168	Guarnitura adesiva per display

ELETTRONICA

Ha

EB 0222 - SCHEDA C.P.U. ASS. SENZA MEMORIE
EC 1062 - SCHEDA C.P.U. ASS. PER PARLATO «ZANKOR»

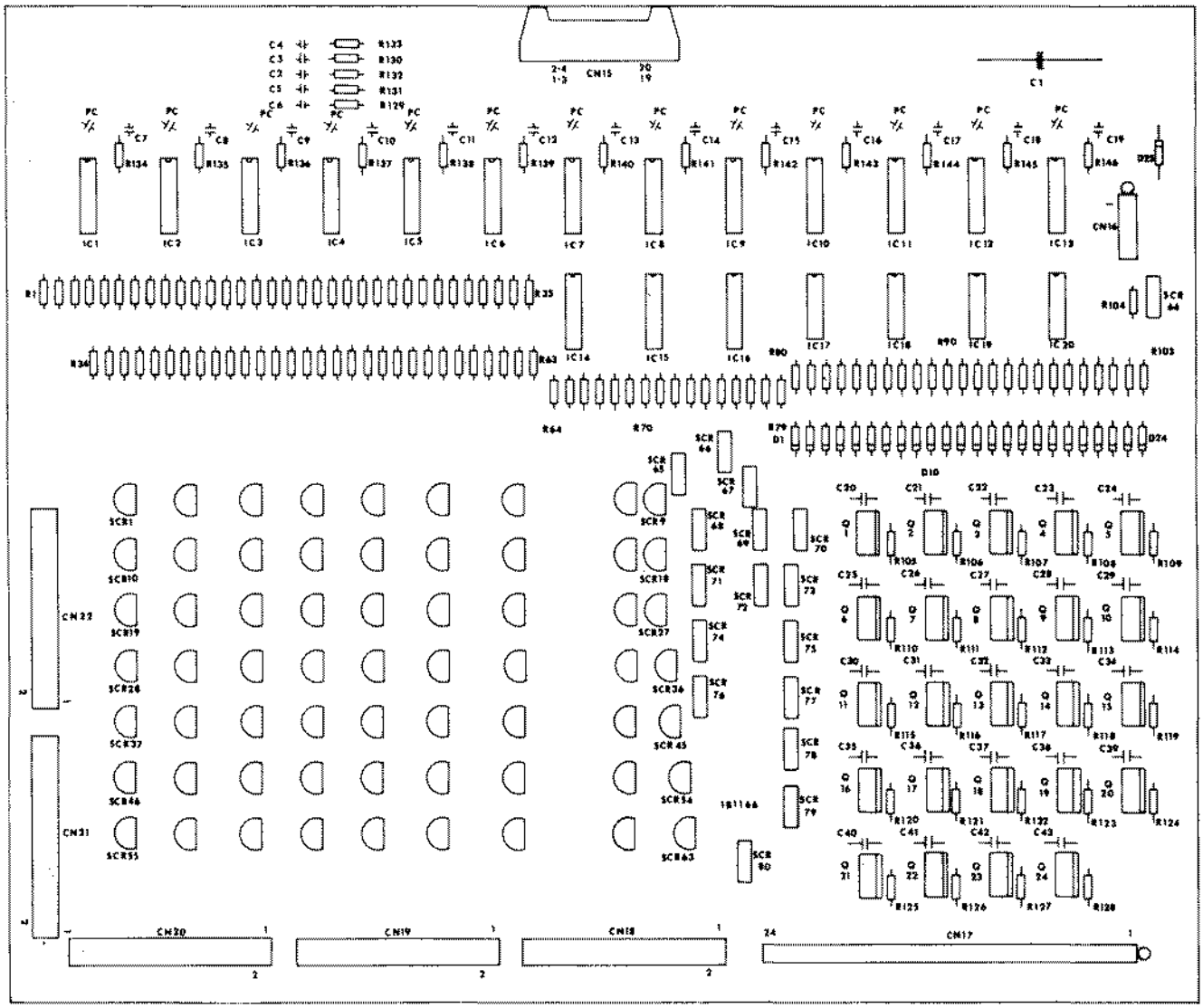


N°	RIFERIMENTO	CODICE	DESCRIZIONE
1	PC 1B 11 65/2	E1 2155	Scheda circuito stampato 1B 1165/2
2	CN9	E7 1980	CNN 4 vie MTA maschio 640 383-4
3	CN10 CN11	E7 1981	CNN 20 vie MTAS 4-826379-0 maschio
4	CN8 CN12 CN14	E7 1351	CNN 20 vie flat cable maschio
5	IC9	E6 1668	C.I. 2650 A-1 MOS 8 bit M. Proc.
6	IC23	E6 1227	C.I. 2101 AL-4 MOS 256 x 4 RAM
7	IC5	E6 1910	C.I. 2114 L MOS 1K x 4 RAM

N°	RIFERIMENTO	CODICE	DESCRIZIONE
8	IC4	E6 3378	C.I. 5114 C MOS RAM
9	IC19	E6 1014	C.I. 4001 BP CMOS quad nor gate
10	IC26	E6 1394	C.I. 4002 BP dual 4-in nor gate
11	IC37	E6 1016	C.I. 4011 BP CMOS quad 2-in nand gate
12	IC31	E6 1228	C.I. 4012 BP CMOS dual 4-in nand gate
13	IC27 IC35 IC36 IC41	E6 1230	C.I. 4028 BP CMOS 10f10 decoder
14	IC6 IC10 IC11 IC33	E6 1231	C.I. 4042 BP CMOS quad D latch
15	IC15 IC21	E6 1995	C.I. 4040 BP CMOS 12 stage binary count
16	IC29 IC30	E6 1015	C.I. 4069 BP CMOS hey inverter
17	IC32	E6 1883	C.I. 4556 CMOS Ic dual 10f4 decoder
18	IC18 IC24 IC25	E6 1055	C.I. 40097 BP CMOS 3 stage non inverter buffer
19	IC8	E6 3365	C.I. 74HC00 TTL MOS quad 2-in nand gate or
		E6 1134	C.I. 74LS00 TTL quad 2-in nand gate
20	IC13	E6 1177	C.I. 74LS14 TTL hey Schmmit trigger
21	IC 17	E6 1432	C.I. 74LS156 TTL dual 10f4 decoder
22	IC16 IC22	E6 1433	C.I. 74LS157 TTL quad 2-in MPX
23	IC20	E6 1131	C.I. 74LS161 TTL sync. binary count.
24	IC14	E6 1788	C.I. 74LS393 TTL dual 4 bit binary count
25	IC7 IC12 IC26 IC34 IC38 IC39 IC40	E6 1225	Seven transistor array C.E. TDA 3081
26	TR1 TR2 TR3	E5 1438	Transitore silicio BC 548 NPN
27	TR4	E5 1290	Transitore silicio BC 337 NPN
28	D4	E5 1299	Diodo 1N 5400
29	D1 D2 D5 ÷ D9	E5 1009	Diodo 1N 4003
30	D3	E5 1011	Diodo 1N 4148
31	BATT	E1 1396	Batteria 3,6V 100mA
32	SKIC 9	E7 1245	Zoccolo 40 vie 540 AG 11D
33	SKIC1 SKIC2	E7 3236	Zoccolo 28 vie 528 AG11D
34	SKIC4	E7 3080	Zoccolo 18 vie 518 AG11D
35	C1	E4 1118	Cond. elettr. 100uF 16VL vert.
36	C5	E4 1100	Cond. elettr. 10uF 16VL orr.
37	PC	E4 1005	Cond. ceram. 0,1uF 25V
38	C4	E4 3095	Cond. ceram. 10KpF 50VL NPO
39	C6 ÷ C13	E4 1159	Cond. ceram. 1kpF
40	C2	E4 1513	Cond. ceram. 470pF 50VL
41	C14	E4 1831	Cond. ceram. 220pF
42	C3	E4 1906	Cond. 10pF ceram.
43	R2 ÷ R9-R25-R42 ÷ R53-R102-		
	R112 ÷ R117	E3 1171	Resist. 10K 1/4W 5% carbone
44	R10 ÷ R21 R24 R35 R39 R40		
	R54 ÷ R69 R74 ÷ R93 R103 ÷ R111	E3 1023	Resist. 5K6 1/4 W 5% carbone
45	R26 ÷ R34 R41	E3 1164	Resist. 2K2 1/4 W 5% carbone
46	R37 R70 ÷ R73 R94-R101	E3 1170	Resist. 1K 1/4W 5% carbone
47	R22 R23	E3 1392	Resist. 680 1/4W 5% carbone
48	R36	E3 1269	Resist. 390 1/4W 5% carbone
49	R1	E3 1409	Resist. 100 1/4W 5% carbone
50	R38	E3 3094	Resist. 22 1/2W 5% carbone
51	R118	E3 1194	Resist. 22K 1/4 W 5% carbone
52	XTAL 1	E1 1743	Quarzo 6MHZ HC 18/U
53	DIP 1	E9 1356	Dip switch 4 vie
54	LED 1	E5 1542	Led rosso FLV 110 (FLV 117)
55	IC2 - IC1	E6 3221	Memoria B 2764 MOS 8192 × 8 EPROM
56	IC 1 Programmata	EB 1193	Mem. prog. B 2764 CPU IC 1 Zankor
57	IC 2 Programmata	EB 1194	Mem. prog. B 2764 CPU IC 2 Zankor

TAV. XV

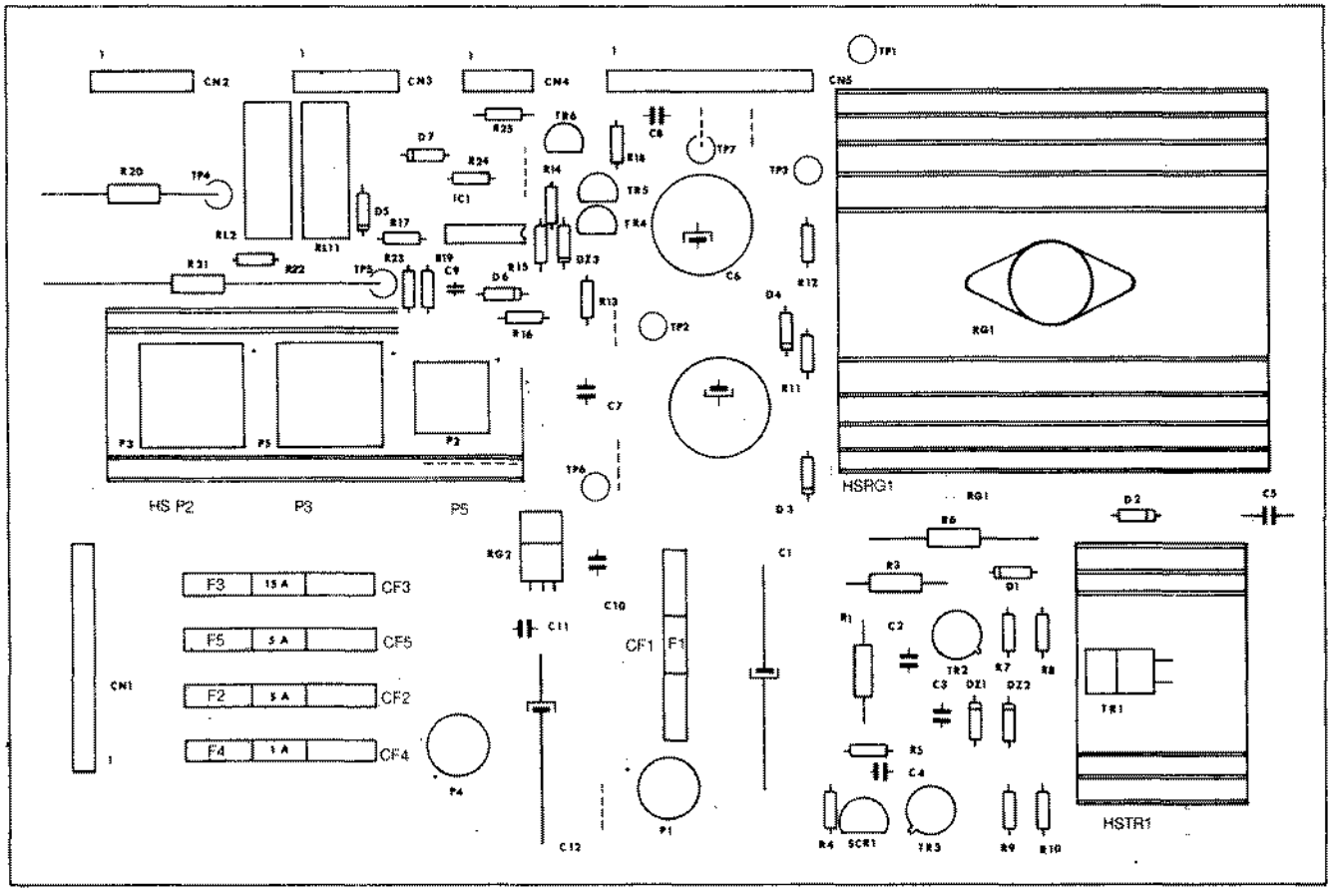
Hb EC 0181- SCHEDA INTERFACCIA ASS.



N°	RIFERIMENTO	CODICE	DESCRIZIONE
1	PC 1B 11 66	E1 2156	Scheda circuito stampato 1B 11 66
2	CN16	E7 1980	CNN 4 vie MTA maschio 640 383-4
3	CN17	E7 1982	CNN 12 vie MTA 640 383-12 maschio
4	CN18 ÷ CN22	E7 1981	CNN 20 vie MTIS 4-826379-0 maschio
5	CN15	E7 1351	CNN 20 vie Flat cable maschio
6	IC1 ÷ IC13	E6 1236	C.I. 4724 BC MOS 8 bit abb. latch
7	IC17 ÷ IC20	E6 1301	C.I. 7407 TTL hex buffer
8	IC14 IC15 IC16	E6 1215	C.I. 4050 BP CMOS hex
9	D1 ÷ D24	E5 1009	Diodo 1N 4004
10	D25	E5 1299	Diodo 1N 5400
11	SCR1 ÷ SCR63	E5 1249	SCR 2N 5060 PNPN 0,8A 30V
12	SCR64	E5 1217	SCR BF 422 NPNP
13	SCR65 ÷ SCR80	E5 1863	SCR C 106 Y1 PNPN 4A 200V
14	Q1 ÷ Q24	E5 1218	Transitore BD 649 NPN Darlinghton 10A 100V
15	PC	E4 1005	Cond. ceram. 0,1uF 25VL
16	C2 ÷ C19	E4 1159	Cond. ceram. 1KpF 50VL
17	C1	E4 1118	Cond. ceram. 100uF 50VL
18	C20 ÷ C43	E4 1260	Cond. pollest. 2,2KpF 100VL
19	R129 ÷ R146	E3 1170	Resist 1K 1/4W 5% carbone
20	R1 ÷ R79 R104	E3 1164	Resist. 2K2 1/4W 5% carbone
21	R80 ÷ R103	E3 1268	Resist 150 1/4W 5% carbone
22	R105 ÷ R128	E3 1269	Resist 390 1/4W 5% carbone

TAV. XVI

Hc **EC 0179 - SCHEDA ALIMENTATORE ASS.**

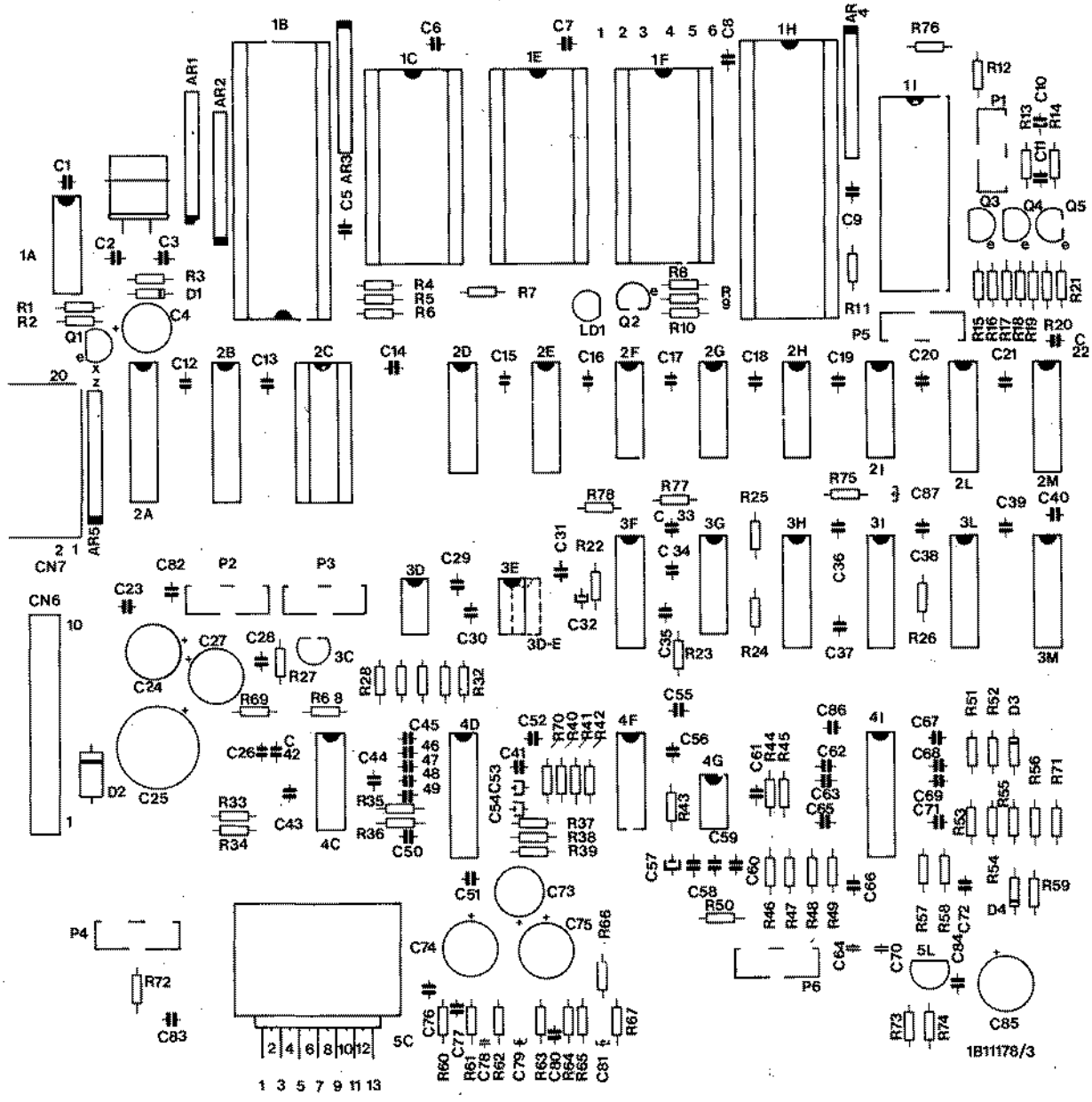


N°	RIFERIMENTO	CODICE	DESCRIZIONE
1	PC 1B 11 67/0	E1 2157	Scheda circuito stampato 1B 11 67/0
2	CN1 CN5	E7 1982	CNN 12 vie MTA1-640 383-2 maschio
3	CN3 CN2	E7 1983	CNN 6 vie MTA1-640 383-6 màschio
4	CN 4	E7 1980	CNN 4 vie MTA 1-640 383-4 maschio
5	RG1	E6 1238	Regolatore di tensione + 5V 5A 78H05KC
6	RG2	E6 1648	Regolatore di tensione - 5V 1A 7905UC
7	P1	E5 1274	Ponte rettificatore 400V 1A W04
8	P5	E5 1105	Ponte rettificatore 200V 10A KBPC 1002
9	P3	E5 1994	Ponte rettificatore 50V 25A KBPC 25005
10	P2	E5 1405	Ponte rettificatore 50V 10A KBPC 10005
11	P4	E5 1233	Ponte rettificatore 50V 1A W005
12	TR1	E5 1271	Transitore 2N 3585 NPN (2N 3584)
13	TR2-TR3	E5 1272	Transitore 2N 3439 NPN (2N 3440)
14	TR4-TR5-TR6	E5 1290	Transitore BC 337 NPN
15	D1-D2-D3	E5 1009	Diodo 1N 4004
16	D4-D5-D6-D7	E5 1539	Diodo 1N 4003
17	DZ1-DZ2	E5 1220	Diodo zener 75V 0,4W BZX 79c75
18	DZ3	E5 1996	Diodo zener 5,6V 0,4W BZX 79c5V6
19	IC1	E6 1803	C.I. LM 339 Linear quad comparator
20	SCR1	E5 3006	SCR MCR 100-5
21	C1	E4 1284	Cond. elettr. 100uF 350VL orr.
22	C2 C3	E4 1399	Cond. poliest. 10KpF 250V
23	C4 C8 C11	E4 1005	Cond. ceram. 0,1uF 50VL
24	C6 C6/	E4 1979	Cond. elettr. 10000uF 16VL orr.
25	C5 C7 C10	E4 3079	Cond. poliest. 0,33uF 50VL
26	C9	E4 1903	Cond. elettr. 1uF 16VL vert.
27	C12	E4 1026	Cond. elettr. 1000uF 25VL orr.
28	R1	E3 1282	Resist. 100K 1W 5% carbone
29	R3	E3 3072	Resist 22K 4W 5% carbone
30	R4	E3 1166	Resist. 220 1/4W 5% carbone
31	R5	E3 3038	Resist. 2,2, 1/4W 5% carbone
32	R5*	E3 3037	Resist. 1R 1/4W 5% carbone
33	R6 R20	E3 1659	Resist 47 3W 5% carbone
34	R7 R11 R14 R15 R16 R18 R23 R24	E3 1170	Resist. 1K 1/4W 5% carbone
35	R8 R19	E3 1171	Resist. 10K 1/4W 5% carbone
36	R9	E3 1165	Resist. 4K7 1/4W 5% carbone
37	R10	E3 1167	Resist. 100K 1/4W 5% carbone
38	R12	E3 1409	Resist. 100 1/4 W 5% carbone
39	R13 R22	E3 1267	Resist. 1,5K 1/4W 5% carbone
40	R.17	E3 1163	Resist. 470 1/4W 5% carbone
41	R.21	E3 1263	Resist. 680 10W 5% carbone
42	R 25	E3 3220	Resist. 2,2 1W 5% carbone
43	CF1 ÷ CF5	E8 1401	Clips per fusibile 6,3×32 C.S.
44	F1 F4	E8 1368	Fusibile 6,3×32 1A
45	F2 F5	E8 1439	Fusibile 6,3×32 5A
46	F3	E8 1441	Fusibile 6,3×32 20A
47	HSRG1	E9 1278	Dissipatore 41/100/B
48	HSTR1	E9 1279	Dissipatore 17/40/C
49	HTP2 HSP3 HSP5	E9 3316	Dissipatore 17/100/D
50	HS TR3	E9 1280	Dissipatore ML61 TO5
51	RL1-RL2	E9 0155	Relè V 23027 B 13 A101
52	R15	E3 1039	Resist. 560 1/4W 5%
			NOTA: R5 è in parallelo a R5*

TAV.XVII

Hd

EB 1153 - SCHEDA AUDIO ASS. SENZA MEMORIE
EC 1063 - SCHEDA AUDIO ASS. PARLATO ITALIANO ZANKOR
EC 1064 - SCHEDA AUDIO ASS. PARLATO INGLESE ZANKOR
EC 1065 - SCHEDA AUDIO ASS. PARLATO TEDESCO ZANKOR
EC 1066 - SCHEDA AUDIO ASS. PARLATO FRANCESE ZANKOR



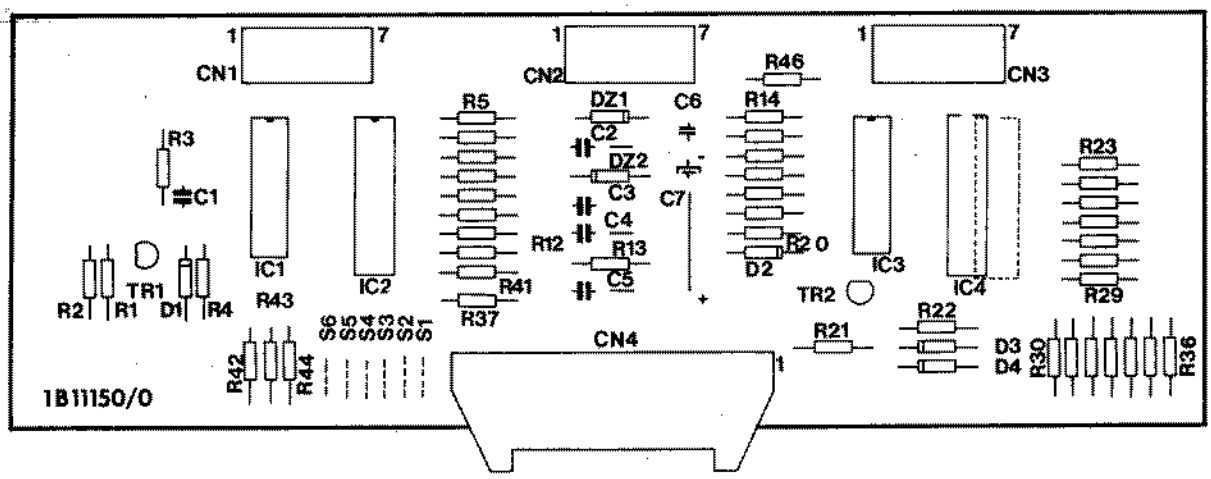
N°	RIFERIMENTO	CODICE	DESCRIZIONE
1	1B 11 178/3	E1 4014	Circuito stampato 1B 11 178/3
2	CN6	E7 1983	CNN 6 vie MTA maschio
3	CN7	E7 1351	CNN Flat cable 20 vie maschio
4	1F/1E/1C		Memorie programmate
5	1B	E6 1714	Microprocessore 6802
6	1H	E6 1715	PIA 6821
7	1 I	E6 3330	Speech generator 5220 (5200) TMS
8	2D	E6 1670	C.I. 74LS139
9	1A	E6 1177	C.I. 74LS14
10	2F	E6 1145	C.I. 74LS08
11	2L	E6 1995	C.I. 4040
12	2A	E6 1589	C.I. 74LS244
13	2E	E6 1144	C.I. 74LS138
14	2G	E6 1133	C.I. 74LS04
15	2I	E6 1147	C.I. 74LS32
16	3H/3I	E6 1867	C.I. 74LS259
17	2B	E6 1843	C.I. 74LS374
18	2C	E6 4002	C.I. DAC 1232 convertitore analog. dig.
19	3D/3E	E6 1792	C.I. TL081 (TL071)
20	3F	E6 1435	C.I. 4053
21	3G/4C	E6 3390	C.I. TL084
22	3L	E6 4019	C.I. 4051
23	3C	E6 4003	C.I. LM 336 Z 5V
24	4I	E6 3375	C.I. CEM 3374
25	4G	E6 1665	C.I. TL082
26	4D	E6 3374	C.I. CEM 3372
27	5C	E6 3045	C.I. TDA 1510
28	4F	E6 1684	C.I. 4016
29	5L	E6 4073	Regolatore di tensione 78L09
30	2H	E6 1138	C.I. 74LS21
31	SK1H	E7 1494	Zoccolo 40 vie doppia molla
32	SK1C/SK1E/SK1F/SK1I	E7 1978	Zoccolo 28 vie doppia molla
33	SK2C	E7 1934	Zoccolo 20 vie doppia molla
34	SK1B	E7 1245	Zoccolo 40 vie professionale
35	R1/R41//R50//R56/R23		
	R66/R67/R62/R64/R70/R71	E3 1167	Resistenza 100K 1/4W 5% carbone
36	R2/R53/R40	E3 1165	Resistenza 4K7 1/4W 5% carbone
37	R3/R77	E3 1408	Resistenza 27K 1/4W 5% carbone
38	R4/R5	E3 1024	Resistenza 3K3 1/4W 5% carbone
39	R6/R7/R11/R12/R18/R72/R75/R78	E3 1171	Resistenza 10K 1/4W 5% carbone
40	R10/R49/R58	E3 1163	Resistenza 470 1/4W 5% carbone
41	R13	E3 1200	Resistenza 68K 1/4W 5% carbone
42	R14/R15/R26	E3 1166	Resistenza 220 1/4W 5% carbone
43	R16/R17/R19/R20/R21/R27/R65	E3 1164	Resistenza 2K2 1/4W 5% carbone
44	R22/R43	E3 1044	Resistenza 180K 1/4W 5% carbone
45	R24/R28/R29	E3 1205	Resistenza 15,1K 1/4W 1% carbone
46	R25/R44/R45	E3 4045	Resistenza 5,1K 1/4W 1% carbone
47	R30	E3 4043	Resistenza 11K 1/4W 1% carbone
48	R31/R32	E3 1422	Resistenza 22,1K 1/4W 1% carbone
49	R33/R34/R42/R54	E3 1193	Resistenza 47K 1/4W 5% carbone
50	R35/R36/R39	E3 1170	Resistenza 1K 1/4W 5% carbone
51	R37/R38/R51/R59	E3 1194	Resistenza 22K 1/4W 5% carbone
52	R48	E3 4046	Resistenza 1M 1/4W 1% carbone
53	R46/R47/R69	E3 4044	Resistenza 100 1/4W 1% carbone
54	R60/R63	E3 1306	Resistenza 4,7 1/4W 5% carbone
55	R61	E3 1392	Resistenza 680 1/4W 5% carbone

N°	RIFERIMENTO	CODICE	DESCRIZIONE
56	AR1/AR3/AR4	E3 1936	Sip array 10K 8 + 1
57	AR2	E3 4006	Sip array 22K 8 + 1
58	AR5	E3 3031	Sip array 4K7 8 + 1
59	P1	E3 1558	Trimmer 47K lineare
60	P3/P4/P5	E3 1598	Trimmer 10K lineare
61	C1/C5/C6/C7/C8/C9/C11/C12/C13		
	C14/C15/C16/C17/C18/C19/C20		
	C21/C22/C23/C26/C28/C29/C31		
	C33/C36/C38/C39/C40/C41/C43		
	C56/C61/C67/C71/C65/C77/C80		
	C76/C52/C86/C83/C84	E4 1005	Condensatore 0,1uF ceramico 50V
62	C54/C79	E4 1375	Condensatore 4,7uF tantalio
63	C2/C3/C82	E4 1722	Condensatore 27pF ceramico
64	C10	E4 1298	Condensatore 22pF ceramico
65	C 30	E4 3184	Condensatore 68pF ceramico
66	C32/C57/C87	E4 1206	Condensatore 1uF tantalio
67	C70/C64	E4 4038	Condensatore 1nF poliestere 1%
68	C35/C37/C42/C44/C59/C60	E4 1569	Condensatore 2,2nF ceramico
69	C24/C27/C74/C75	E4 1118	Condensatore 100uF elettrolitico 25V vert.
70	C45/C78	E4 1473	Condensatore 330pF ceramico
71	C46/C47/C48	E4 1837	Condensatore 33nF poliestere
72	C49/C50/C51	E4 1469	Condensatore 4,7nF ceramico
73	C25	E4 1580	Condensatore 1.000uF elettrolitico 25V vert.
74	C53	E4 1189	Condensatore 2,2uF tantalio
75	C55/C58	E4 1721	Condensatore 47pF ceramico
76	C62/C68	E4 1257	Condensatore 100pF ceramico NPO
77	C63/C66/C69/C72	E4 3095	Condensatore 0,01uF ceramico NPO
78	C73/C4	E4 1610	Condensatore 47uF elettrolitico 25V vert.
79	C81	E4 1541	Condensatore 0,22uF tantalio
80	D1/D3/D4	E5 1011	Diodo 1N 4148
81	D2	E5 1299	Diodo 1N5400 o 1N 5403
82	Q1/Q2	E5 1438	Transistore BC 548
83	Q5	E5 1694	Transistore 2N 3904
84	Q3/Q4	E5 1814	Transistore BC 327
85	LD1	E5 1542	Led FLV 110
86	QZ	E1 3066	Quarzo oscillatore 3,579 MHZ
87		E9 3100	Dissipatore per TDA 1510 ML9/30
88		A2 4023	Viti M3 × 12 T.C.B. Tcr
89		A2 4408	Viti M3 × 5 T.C.
90		A2 4161	Rondella dentellata Øi 3,2mm
91	C 85	E4 1117	Condensatore elettrolitico 10uF 16V Vert.
92	R68	E3 4050	Resistenza 1K5 1/4W 1%
93	SK4I - SK4D	E7 1652	Zoccolo 18 vie doppia molla
94	IC 1F (programmata)	EB 1195	Memoria prog. B 27128 N° 3 Sound Mexico 86
95	R57	E3 1168	Resist. 910 K 1/4W 5%
96	P6	E3 1635	Trimmer 220K
97	IC 1E (programmata)	EB 1197	Memoria prog. B 2764 N° 2 Sound Zankor parlato ING.
98	IC 1E (programmata)	EB 1196	Memoria prog. B 2764 N° 2 Sound Zankor parlato ITA.
99	IC 1E (programmata)	EB 1199	Memoria prog. B 2764 N° 2 Sound Zankor parlato TED.
100	IC 1E (programmata)	EB 1173	Memoria prog. B 2764 N° 2 Sound Mexico 86 Parlato FRA.
101	R 76	E3 1173	Resist 1/4W 5% 2K7
102	C 44	E4 1052	Condensatore ceram. 47 Kpf 50 V
103		A2 4132	Dado M3

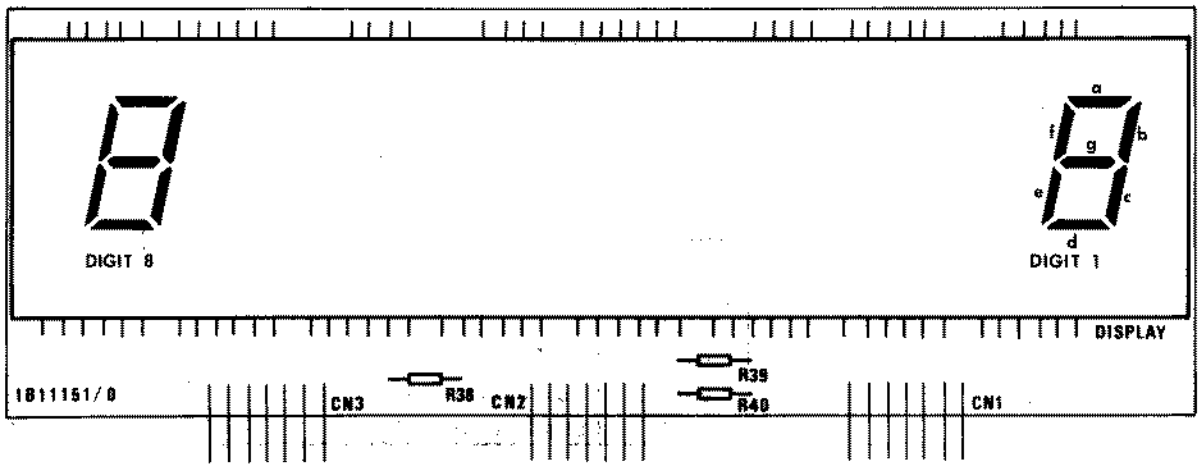
TAV. XVIII

EB 0330 - VISUALIZZATORE 8 CIFRE CON SCHEDA PILOTAGGIO

EB 0256 - SCHEDA PILOTAGGIO VISUALIZZATORE 8 CIFRE



EB 0257 - SCHEDA VISUALIZZATORE 8 CIFRE



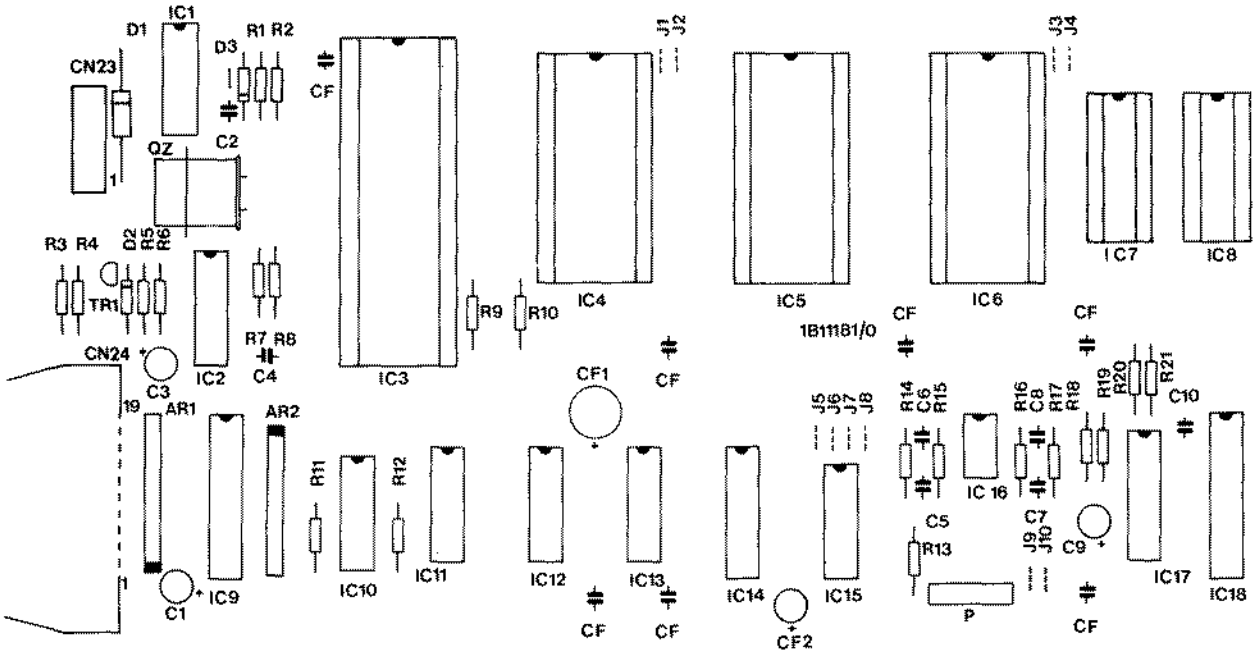
N°	RIFERIMENTO	CODICE	DESCRIZIONE
1	PC 1B 11 150/0	E1 2264	Scheda circuito stampato 1B 11 150/0
2	IC1	E6 1236	C.I. 4724
3	IC2	E6 3337	C.I. 6510
4	IC3	E6 1235	C.I. 4511
5	IC4	E6 3338	C.I. 2823 (2823 o MC3491)
6	R1	E3 1417	Resist. 3K9 1/4W 5% carbone
7	R2	E3 1195	Resist 15K 1/4W 5% carbone
8	R3	E3 1163	Resist 470 1/4W 5% carbone
9	R4/R14/R15/R16/R17/R18/R19/R21		
	R22/R42/R43/R44	E3 1171	Resist 10K 1/4W 5% carbone
10	R5/R6/R7/R8/9/R10/R11/R12/R30		
	R31/R32/R33/R34/R35/R36	E3 1447	Resist. 330K 1/4W 5% carbone
11	R13	E3 3301	Resist 27K 1/2W 5% carbone
12	R20	E3 1170	Resist. 1K 1/4W 5% carbone
13	R23/R24/R25/R26/R27/R28/R29	E3 1408	Resist. 27K 1/4W 5% carbone
14	R37	E3 1035	Resist. 56K 1/4W 5% carbone
15	R41	E3 1452	Resist. 150K 1/4W 5% carbone
16	D1/D2/D3	E5 1011	Diodo 1N 4148
17	D4	E5 1009	Diodo 1N 4004
18	DZ1	E5 1220	Diodo zener 75V
19	DZ2	E5 1219	Diodo zener 33V
20	TR1/TR2	E5 1438	Transistore BC 237 o 2N 3909 o BC 548
21	C1	E4 1257	Cond. ceram. 100pF
22	C2/C4	E4 1004	Cond. poliest. 0,1uF 250VL
23	C3/C6	E4 1005	Cond. ceram. 0,1uF 50VL
24	C5	E4 1399	Cond. poliest. 10nF 250VL
25	C7	E4 1903	Cond. elettr. 1uF 16VL
26	CN4	E7 1351	CNN 20 vie Flat cable maschio
27	CN1/CN2/CN3	E7 1377	CNN 7 vie CIS vert. 163680/5
28		A2 4467	Occhielli 22 × 40
29		A6 5323	Squadretta fissaggio visualizzatore
30		A2 5299	Vite M3 × 8
31		A2 4132	Dado M3
32		A2 4161	Rondella dentellata ∅3
33			Ponticello passo 7,5
34	R5 ÷ R12		Sostituibili con SIP 8 + 1 330K
35	R30 ÷ R36		Sostituibile con SIP 8 + 1 330K
36	R14 ÷ R19		Sostituibile con SIP 6 + 1 10K

N°	RIFERIMENTO	CODICE	DESCRIZIONE
1	P.C. 1B 11 151/0	E1 2265	Scheda circuito stampato 1B 11 151/0
2	R38/39/40	E3 1036	Resist. 1M 1/4W 5% carbone
3	DSP	E5 3333	Visualizzatore 8 cifre Philips monob.
4	CN1/CN2/CN3	E7 1347	Strip 7 vie CIS 163740/5

TAV. XIX

Hf

EB 1188-SCHEDA AUDIO A CAMPIONAMENTO SENZA MEMORIE
EC 1067-SCHEDA AUDIO A CAMPIONAMENTO CON MEMORIE ZANKOR



XIX .VAT

N°	RIFERIMENTO	CODICE	DESCRIZIONE
1	PC 1B1181/0	E1 4017	Circuito stampato
2	IC1	E6 1571	C.I. CT 430
3	IC2/IC12	E6 1133	C.I. 74 LS 04
4	IC3	E6 1887	Z 80 Microprocessore
5	IC4/IC5/IC6	E6 3329	Memoria 27128 non prog.
6	IC7/IC8	E6 1661	C.I. 2114
7	IC9	E6 1810	C.I. 74 LS 245
8	IC10	E6 1141	C.I. 74 LS 74
9	IC11	E6 1669	C.I. 74 LS 30
10	IC13	E6 1134	C.I. 74 LS 00
11	IC 14	E6 1670	C.I 76 LS 139
12	IC 15	E6 1145	C.I. 74 LS 08
13	IC 16	E6 1665	C.I. TL 082
14	IC17	E6 1730	C.I. AD 1408
15	IC 18	E6 1843	C.I. 74 LS 374
16	R1	E3 4039	Resist. 1/4W 5% 820K
17	R2	E3 1069	Resist. 1/4 5% 270
18	R3	E3 1167	Resist 1/4W 5% 100K
19	R4	E3 1165	Resist. 1/4W 5% 4K7
20	R5	E3 1408	Resist. 1/4W 5% 27K
21	R6/R20/R21	E3 1024	Resist. 1/4 5% 3K3.
22	R7/R8	E3 1163	Resist. 1/4W 5% 470
23	R9/R10/R11/R12	E3 1170	Resist. 1/4W 5% 1K
24	R13/R14/R15/R16/R17/R18	E3 1193	Resist 1/4W 5% 47K
25	R19	E3 1201	Resist 1/4W 5% 1K8
26	C1	E4 1206	Cond. TNT 1uF.
27	C2	E4 3095	Cond. cer. 10nF 50V NPO
28	C3	E4 1835	Cond. elt. 4,7uF 40V
29	C4/C5/C6/C7/C8	E4 1159	Cond. cer. 1nF 50V
30	C9	E4 1117	Cond. elt. 10uF 40V
31	C10	E4 1721	Cond. cer. 47pF
32	CF	E4 1005	Cond. cer. 0,1 uF
33	CF1	E4 1118	Cond. elt. 100uF 40V
34	CF2	E4 1610	Cond. elt. 47uF 35V Vert.
35	D2	E5 1539	Diodo 1N 4003
36	D3	E5 1011	Diodo in 4148
37	RD1	E3 3031	Rete resist. array 4K7 × 8
38	RD2	E3 4006	Rete resist. array 22K × 8
39	P1	E3 1598	Trimmer Vert. 10K PTIS
40	TR1	E5 1438	Trans. BC 54 (BC 239 - E5 3377)
41	Q2	E1 1907	Quarzo 4MHZ
42	CN23	E7 1980	Cnn MTA. 4 vie maschio
43	CN24	E7 1351	Cnn. Flat cable 20 vie maschio
44	IC4 prog.	EB 1189	Mem. prog. 27128 N° 1 Zankor
45	IC5 prog.	EB 1190	Mem. prog. 37128 N.° 2 Zankor
46	IC6 prog.	EB 1191	Mem. prog. 27128 N.° 3 Zankor