
KALKOMAT

BOXER 5

Punch-Force measuring machine

Technical Information



INDEX

1. Introduction.....	4
2. Technical Data	4
3. Assembly/Construction description.....	4
4. Transport.....	5
5. Installation	6
6. Usage instructions.....	6
7. Maintenance check list, problem prevention and day-to-day fixes	7
8. Potential problems and their resolution.	10
9. Main board layout and setting up the machine	12
MAINBOARD DISPLAY MENU - CHANGING SETTINGS	16
Mainboard display menu structure.....	16
Menu tree	16
COUNTERS	18
SHORT COUNTER:.....	18
LONG COUNTER:.....	18
FREE CREDITS:.....	18
CURRENT RECORD:.....	18
BREAK RECORD.....	18
CREDITS.....	19
RECORD→CREDITS	19
POINTS→CREDIT:	19
BONUS POINTS I and BONUS CREDITS I:	19
BONUS POINTS II and BONUS CREDITS II:.....	19
TICKET DISPENSER	19
TD. ON / OFF:.....	19
CREDIT→TICKETS:.....	20
RECORD→TICKETS:	20
BREAKING POINT:	20
FIRST TICKET:	20
TICKET RANGE:	20
NUMBER OF TICKET:	20
TICKETS COUNTER:	20
TD LOAD SERVICE:	20
WHEEL OF FORTUNE.....	22
PRIZE Nx100	22
Nx100→CREDITS	22
Nx100→TICKETS	22
Nx100→PRINTER	22
Nx100→BALL	22
PRIZE Nx111	22
Nx111→CREDITS	22
Nx111→TICKETS	23
Nx111→PRINTER	23
Nx111→BALL	23
LUCKY NUMBER	23

LUCKY1→CREDITS	23
LUCKY1→TICKETS	23
LUCKY1→PRINTER	23
LUCKY1→BALL	23
LUCKY2→CREDITS	24
LUCKY2→TICKETS	24
LUCKY2→PRINTER	24
LUCKY2→BALL	24
LUCKY NUMBER 1	24
LUCKY NUMBER 2	24
RECORD	24
RECORD→CREDITS	24
RECORD→TICKETS	24
RECORD→PRINTER	25
RECORD→BALL	25
UNAVAILAB. RECORD	25
NUMBER	25
NUMBER	25
NUMBER BALL	25
FACTORY SETTINGS	25
CRED.NATION.SET	25
VOICE.NATION.SET	25
SENSITIVITY	25
MACHINE TYPE	25
TIME VOICE RELAX	26
TIME DISPL RELAX	26
DIAGNOSTIC MODE	26
SENSOR TEST HI LO	26
10. Spare parts and equipment.....	26
11. Standard replacement parts.....	26
12. Set up and maintenance instructions.....	27
How to change the punching bag.....	27
How to release the punching bag manually	28
How to change the fuse in the main switch	29
How to change START button	29

1. Introduction

Main purpose of this Technical Information is to:

- familiarize user with machine construction,
- provide proper setup parameters, installation and power line hookup,
- familiarize user with proper and safe usage procedures, exploitation and conservation.

WARNING: USER MUST FOLLOW ALL GUIDELINES INCLUDED IN THIS DOCUMENT FOR SAFE AND LONG LASTING MACHINE USAGE.

2. Technical Data

Model		STRONG	DOG
Dimensions	Depth [cm]/[in]	125 / 49	128 / 50
	Width [cm]/[in]	70 / 28	87 / 34
	Height [cm]/[in]	223 / 88	239 / 94
Overall Mass [kg]/[Lb]		125 / 276	115 / 254
Power consumption [Wh]		200	200

3. Assembly/Construction description

Punch force-measuring machine "Boxer" is built out of three main components:

- base,
- middle assembly,
- top assembly.

The key component is a mother board (electronic board) placed inside boxer's body (block schematics drawing # 1) to which mechanical elements and user interface components are connected.

Electric /electronic part contains following:

- measuring mechanism – consists of sending and receiving diodes that measure blade fly speed thru assembly,
- verbal information mechanism – built using potentiometer and speaker, used to send voice messages,
- punching bag lowering mechanism – consists of 'START' button with backlight and electromagnets – actual lowering mechanism,
- visual information assembly – assembled out of diodes used for visual representation of punch force measurement, warning siren (informs player of breaking top record) also displays on electronic panel (shows measurement result, credit amount, top day record),
- coin acceptor – used to deposit coins (can be reprogrammed to tokens or other currencies),
- bill acceptor – used to deposit bills (option),
- mother board.

4. Transport

Machine should be transported in vertical position. Machines are shipped on a 34" x 50" wooden palette, and sides are covered with special (~3/8") thick 93" tall (from the bottom of the pallet) multi-layer cardboard. The total weight of the box is approx. 290 lbs.

After the machine is taken out of the box, it should be transported in horizontal position with the help of two wheels. Machine can, in special cases (exp. if it does not fit in doorway), be taken apart and then reassembled. This procedure should be done by a specialist or someone familiar with all technical information.

5. Installation

Machine after being taken out of the box should be placed in vertical position and base should be leveled. To level the machine appropriate tools should be used (exp. laser level or typical manual construction heavy duty level). Turning several screws under the base allows level adjustment. After plugging the machine to power outlet it should be ready to use.

Make sure that there is enough clearance on the sides and in the front of the machine, so the player will not hit any objects after punching the bag. The **installer** of the machine is responsible for defining the safe clearance.

6. Usage instructions

- a) Before pressing the “START” button player must stand in the front of the Boxer.
- b) After pressing the ”START” button player has to wait in front of the machine for the punching bag to be released from the upper position.
- c) After the punching bag is released, player should make a fist so the thumb would be on the outside of the pointing and the middle finger.
- d) The punch must be placed in the center of the punching bag.
- e) After the punch, a score would be displayed on the front panel.
- f) Follow the same instructions before the next game.

7. Maintenance check list, problem prevention and day-to-day fixes

Every two weeks (recommended):

- check the air pressure of the bag. It should be NO MORE than 2psi,
- check if the bag is not rotating about its own axis. If it is, see point d) in this section,
- check the position of the arm protector. See point h) in this section,
- check all of the connections on the main board,
- check the level/balance of the machine. If needed use adjusting legs under the machine to bring the machine to level,
- check if the usage instructions are readable.

Every month:

- check mounting cover screws/nuts,
- check the lubrication of the mechanism. For the instructions see point c) in this section,
- check the display lights,
- clean the coin/ bill acceptor.

a) Coin acceptor maintenance

Coin acceptor should be cleaned periodically (every 2000 - 3000 credits). Best way to clean it is by using simple cloth slightly soaked in distilled alcohol. Focus should be placed on cleaning the area where coins slide thru (make sure sliding part is in open position).

b) Sound volume regulation

Volume potentiometer (see Main Board Layout, back side) used to control volume is placed on the top right side of the electronic board. The volume adjustment can be done by rotating the potentiometer to the left or right.

c) Maintenance of mechanism and regulating spring

Periodically (once a month or more often, or if the lowering speed of punching bag is fairly low) all moving elements should be rubbed / sprayed with WD-40 or grease.

If punching bag lowers slowly or too fast one should check if spring is properly stretched. Spring can be adjusted with screw that is in the front / left side after taking the masking net.

In case of forced lowering mechanism replacement one should unscrew plastic casing, and then take off masking board (black from the bottom) and remember about the retro cop light.

d) Manual punching bag reposition

In case the punching bag is vibrating too much (or if it is rotating around its own axis), the top nut located on the punching bag screw should be tightened (loosen the lower nut first) until the bag is not rotating any more.

e) Replacement of inner punch bag bladder

To replace inner bladder of the punch bag one should untie rope, take out old insert and replace it with a new rubber bladder. A special attention must be given to the location of the bladder valve. The valve must be placed in the opening of the leather cover.

f) Bulb replacement, "START" button

In case of bulb failure in the "START" button one should take out micro-switch from the casing (by slight turn and then pull) and then proceed with bulb replacement [bulb spec: 12 Volt & 3 Watt]. Pay attention to

g) Fuse replacement

Machine is equipped with two long term fuses on the main electronic board [specs: 30 A (1 piece)]. In case of short circuit situation and / or insufficient power supplied to the electronic main board one should first check the fuses and if they are burned, proceed with replacement. Make sure fuses used to replace old ones have the same specifications.

h) Position of the arm protector.

The position of the arm protector should be like on the picture below:



**DO NOT PLAY THE
GAME WITHOUT
PROPERLY
PLACED ARM**

The following two pictures illustrate an improper setup of the punching bag. NEVER leave the machine in this state. The picture on the left shows the arm protector placed too high. The second picture shows a missing arm protector. Both of these cases may result in serious injury to the user.



8. Potential problems and their resolution.

Main board is not functioning:

- 1 Check connection between transformer and the main board.
- 2 Make sure that connectors are well seated.
- 3 If both “POWER” diodes are not lit up: check connection/ power between main board and transformer. If one “POWER” diode is lit up, main board is faulty.

Coin Acceptor is not functioning:

- 1 Check if it is not plugged up.
- 2 Check for dust and dirt.
- 3 Check strip connecting main board with the acceptor.

Mechanism is not functioning:

- 1 Using just power supply check if it is possible to lower punching bag (using BOXER TEST on the main board).
- 2 Check for burned fuse 30A.
- 3 Check button functionality and if they have proper connection.
- 4 Check for unhooked cable from power supply spools.
- 5 Check strip connecting main board with the power supply (transformer).

Sensor is not functioning:

1. Check sensors in diagnostic mode (go to menu to DIAGNOSTIC MODE then SENSOR TEST HI LO. Press START button to release the bag. If punching bag is moving up / down and on the small main board display (depending on bag position) BALL UP/ BALL DOWN shows this would indicate that the sensor is working.
2. Check if sensor cable is firmly connected to the main board.
3. Check all wires to / from sensor.

LED lights are not functioning:

- 1 Check power supply cable connection.
- 2 Check power supply wire integrity.
- 3 Check connector plug for loose bulb.
- 4 Check if LED is not burned by swapping it with a new one (12V 20W).

Button START is not functioning:

- 1 Check for main board cable connection.
- 2 Check switch/button cable connection.

Power supply is refusing to work:

- 2 Check if “car” fuse in main board (left bottom) is not burned (30 A, green).
- 3 Check if transformer cable is correctly hooked up to power supply socket.

Machine is not starting:

- 1 Check if filter is not damaged.

Bill Acceptor is not functioning:

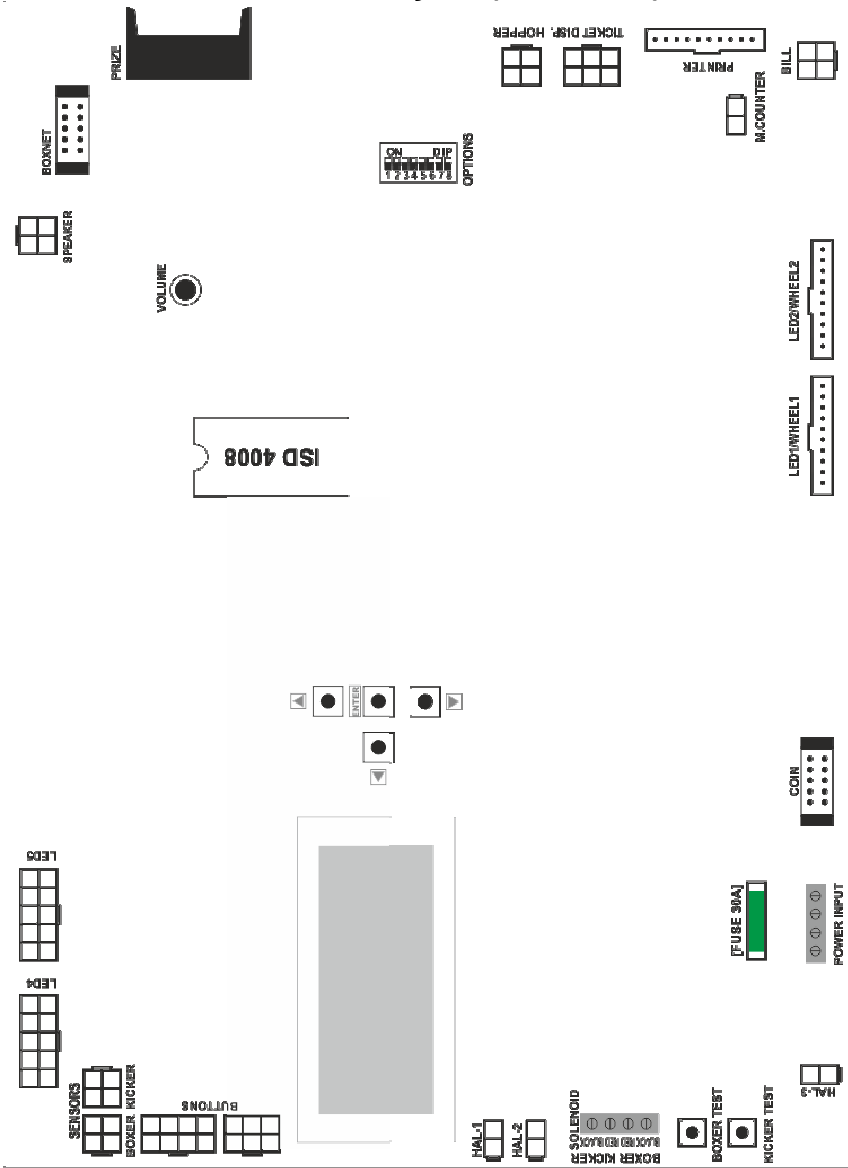
- 2 Check if power supply cable is hooked up to main board (BILL).
- 3 Check if cable from bill acceptor is correctly hooked up.
- 4 Check acceptor settings. For switches 1-8 set switch no 7 at ON, and for switches 1-4, set switches no 3 and 4 at ON.

Sound is not working:

- 1 Check if it is not at low volume or mute (Volume)
- 2 Check if cable is correctly connected to the main board.
- 3 Check if cable to speaker is correctly connected.

9. Main board layout and setting up the machine

Main Board Layout (Back Side)



COIN – connector for coin acceptor

BILL – connector for bill acceptor

LED 4, LED 5 – front panel backlight

POWER INPUT – connector for power

SENSORS (BOXER) – sensor connector for Boxer

SENSORS (KICKER) – sensor connector for Kicker

BUTTONS – connector for “START button

SPEAKER – connector for speaker

VOLUME – potentiometer for volume control

ISD4008 – speech synthesizer

SOLENOID BOXER - connector for Boxer solenoid

SOLENOID KICKER – connector for Kicker solenoid

LED1 – not used

LED2 – not used or connector for extension board (US)

OPTIONS – service settings switch board

BOXER TEST – for manual Boxer solenoid test

KICKER TEST – for manual Kicker solenoid test

HAL-1 – connector for Boxer halogens

HAL-2 – connector for Kicker halogens

HAL-3 – connector for showcase halogens

TICKET DISP. – not used

HOPPER – not used

PRINTER – not used

LCD – display showing changing of settings

BUTTONS board – set of menu buttons (up, down, back, enter)

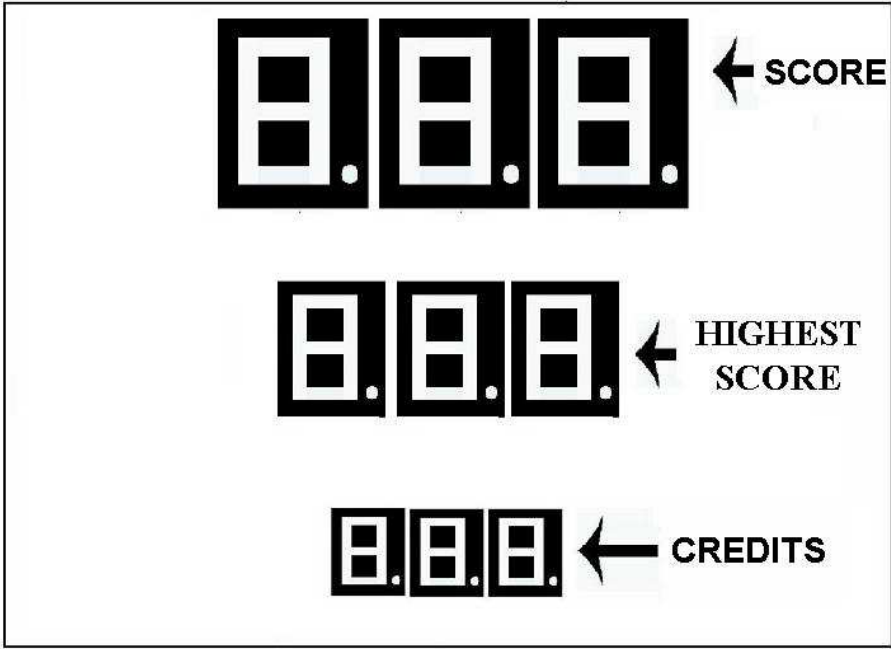
BOXNET – connector for BoxNet

PRIZE – connector for prize dispensers

FUSE 30A – solenoid circuit fuse

M.COUNTER – connector for mechanical counter

Main Board Layout (Front)

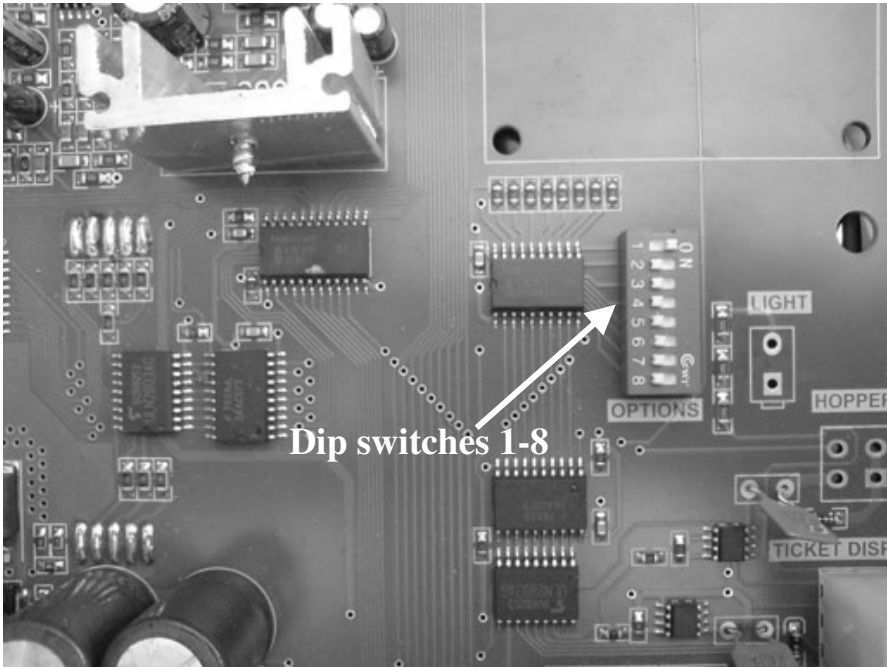


UPPER DISPLAY - shows player's current score.

MIDDLE DISPLAY - shows highest score.

BOTTOM DISPLAY - shows current number of credits.

Dip Switch 1-8 (S1)



Switch #1

Not used (diagnostic function only).

Switch #2

When “ON”, machine is set for free punch.

Switch #3

Not used

Switch #4

When “ON”, the highest score for each game will be reset after you push the “START” button. When “OFF”, the top scores will stay displayed.

Switch #5

Not used

Switch #6

Not used





Switch #7

Not used

Switch #8

Not used




MAINBOARD DISPLAY MENU - CHANGING SETTINGS






To change any settings and check counters, buttons (arrows)  (up) and ,  (left) and **ENTER** (center button) need to be used. All information will be shown on the LCD display. If the display is black, use left button  to lighten up the display.



Mainboard display menu structure

Main Menu - use  and  buttons to choose main menu function. To access its submenu press **ENTER**.

Submenu - use  and  buttons to choose submenu function. To access its setting mode press **ENTER**. To go back to main menu press .

Setting mode - use  and  buttons to adjust value. Then press  button to accept new setting and go back to submenu. Fast forward of value is done by keeping  or  button pressed.

Menu tree

Main menu	Submenu	Setting mode (range)	Default value	Page
COUNTERS	SHORT COUNTER	<i>counter, resettable to 0</i>	0	18
	LONG COUNTER	<i>counter</i>	0	18
	FREE CREDITS	<i>counter</i>	0	18
	CURRENT RECORD	<i>counter, resettable to 0</i>	0	18
	BREAK RECORD	<i>counter, resettable to 0</i>	0	18
CREDITS	RECORD→CREDITS	OFF, 1..20	1	19
	POINTS→CREDIT	1..10	*	19
	BONUS POINTS 1	0..250	0	19
	BONUS CREDITS 1	0..250	0	

	BONUS POINTS 2	0..250	0	19
	BONUS CREDITS 2	0..250	0	
TICKET DISPENSER	TD. ON / OFF	ON, OFF	OFF	19
	CREDIT→TICKETS	0..5	0	20
	RECORD→TICKETS	OFF, 1..20	OFF	20
	BREAKING POINT	0..990	0	20
	FIRST TICKET	0..20	0	20
	TICKET RANGE	10..100	40	20
	NUMBER OF TICKET	OFF, 1..5	OFF	20
	TICKETS COUNTER	counter	0	20
	TD LOAD SERVICE	-	-	20
WHEEL OF FORTUNE	Not used	-	-	22
PRIZE Nx100	Nx100→CREDITS	OFF, 1..20	OFF	22
	Nx100→TICKETS	OFF, 1..50	OFF	22
	Nx100→PRINTER	OFF, 1..4	OFF	22
	Nx100→BALL	OFF, 1..5	OFF	22
PRIZE Nx111	Nx111→CREDITS	OFF, 1..20	OFF	22
	Nx111→TICKETS	OFF, 1..50	OFF	23
	Nx111→PRINTER	OFF, 1..4	OFF	23
	Nx111→BALL	OFF, 1..5	OFF	23
LUCKY NUMBER	LUCKY1→CREDITS	OFF, 1..20	OFF	23
	LUCKY1→TICKETS	OFF, 1..50	OFF	23
	LUCKY1→PRINTER	OFF, 1..4	OFF	23
	LUCKY1→BALL	OFF, 1..5	OFF	23
	LUCKY2→CREDITS	OFF, 1..20	OFF	24
	LUCKY2→TICKETS	OFF, 1..50	OFF	24
	LUCKY2→PRINTER	OFF, 1..4	OFF	24
	LUCKY2→BALL	OFF, 1..5	OFF	24
	LUCKY NUMBER 1	0..999	0	24
	LUCKY NUMBER 2	0..999	0	24
RECORD	RECORD→CREDITS	OFF, 1..20	1	24
	RECORD→TICKETS	OFF, 1..50	OFF	24
	RECORD→PRINTER	OFF, 1..4	OFF	25
	RECORD→BALL	OFF, 1..5	OFF	25
	UNAVAILAB.RECORD	OFF, 1..999	OFF	25
NUMBER	NUMBER	0..999	0	25
	NUMBER BALL	OFF, 1..5	OFF	25
FACTORY SETTINGS	CRED.NATION.SET	UNITED STATES, CANADA, SPAIN, EUROPE, CROATIA, SWITZERLAND, GERMANY, RUSSIA, POLAND, LITHUANIA, ENGLAND, UKRAINE, CZECH REPUBLIC, ISRAEL, DENMARK, ROMANIA	UNITED STATES	25
	VOICE.NATION.SET	ENGLAND, GERMANY, RUSSIA, SPAIN, POLAND, RESERVED 1, RESERVED 2, RUSSIA II, FRANCE, RESERVED 3, RESERVED 4, ITALY, CZECH REPUBLIC ***	ENGLAND	25
	SENSITIVITY	0..9	5	25
	MACHINE TYPE	SPIDER, DOG	**	25
	TIME VOICE RELAX	OFF, 10s..3h	5m	26

	TIME DISPL RELAX	OFF, 10s..3h	2m	26
DIAGNOSTIC MODE	SENSOR TEST HI LO	BALL DOWN, BALL UP		26

*: It depends on the setting of the function: FACTORY SETTINGS/ CRED.NATION.SET

***: Do not change.

COUNTERS

SHORT COUNTER:

Temporary counter of points. **1 point = 0,25 \$.**

You can reset it to 0000 by pushing “ENTER”, then pushing ↑ “UP” button and pushing LEFT arrow (BACK) button – the counter will be reset.

LONG COUNTER:

Counter of points. This is life long - not erasable.

FREE CREDITS:

Counter of free punches which you can activate by setting dip switch # 2 at “ON” position.

CURRENT RECORD:

Method 1.

You can reset it to 650 (minimal value) by pushing “ENTER”, pushing ↑ “UP” button and pushing LEFT arrow (BACK) button – the record will be reset.

Method 2.

Set switch # 4 on dip switch S1 (see connectors on main board layout - back side) at “ON” position. The highest score can be reset by pressing “START” button for couple of seconds until the main display shows 650.

BREAK RECORD

This counter tells us how many times a record had been broken.

CREDITS

RECORD→CREDITS

Allows to set number of credits given for breaking a record.

POINTS→CREDIT:

How many credits are needed for one game (how much is a game worth).

Example:

1 game is worth 1 \$ (4 points), so the POINTS-> CREDITS will be set to 4.

BONUS POINTS I and BONUS CREDITS I:

You can set additional credits (bonus credits) when a set amount of money is inserted. Using the “ENTER” button you can adjust how many points (0.25 \$) received at one time will give the bonus. Using ↑ “UP” and ↓ “DOWN” buttons you will then assign number of credits for the received amount. To accept new settings use LEFT arrow (BACK) button.

Example: if you want to set 6 punches for 5 \$, you should set:

Bonus Points 1 : 20

Bonus Credits 1 : 6

BONUS POINTS II and BONUS CREDITS II:

Function of this setting is same as in BONUS POINTS 1 and BONUS CREDITS 1 but **always for bigger value** of the bill or coin **than in BONUS POINTS 1 and BONUS CREDITS 1.**

TICKET DISPENSER

TD. ON / OFF:

You can turn on and off the ticket dispenser.

If you want to turn the ticket dispenser on, set this option to 1.

If you want to turn the ticket dispenser off, set this option to 0.

CREDIT→TICKETS:

Sets how many tickets are given for 1 credit (range from 0-5).

RECORD→TICKETS:

Sets how many tickets are given for breaking the record (range from 0-20).

BREAKING POINT:

Setting this option would enable the ticket dispenser to start giving out tickets (range from 0-990). Factory setting is “0”.

FIRST TICKET:

Sets how many tickets will be given out after reaching the “breaking point” for the first time (range from 0-20). Factory setting is “0”.

TICKET RANGE:

Points increment, in another words what is the increment for the next ticket/s to be released (range from 10-100). Factory setting is “40”.

NUMBER OF TICKET:

Number of tickets given out after reaching another ticket range – set in ticket range. Factory setting is “0”.

TICKETS COUNTER:

Counter of released tickets.

TD LOAD SERVICE:

This function allows inserting tickets into ticket dispenser.

Press ‘ENTER’ button.

Use ‘UP’ ↑ button to set number 1.

Press ‘ENTER’ a couple of times and at the same time insert the ticket.

BELOW 2 EXAMPLES:

RESULT ON DISPLAY	TICKETS	RESULT ON DISPLAY	TICKETS
0	0	0	0
40	1	40	0
80	2	80	0
120	3	120	0
160	4	160	0
200	5	200	0
240	6	240	0
280	7	280	0
320	8	320	0
360	9	360	0
400	10	400	0
440	11	440	0
480	12	480	0
520	13	520	0
560	14	560	0
600	15	600	10
640	16	640	12
680	17	680	14
720	18	720	16
760	19	760	18
800	20	800	20
840	21	840	22
880	22	880	24
920	23	920	26
960	24	960	28
BREAKING POINT = 0		BREAKING POINT = 600	
FIRST TICKET = 0		FIRST TICKET = 10	
TICKET RANGE =40		TICKET RANGE = 40	
NUMBER OF TICKET = 1		NUMBER OF TICKET = 2	


WHEEL OF FORTUNE

Function unavailable.

PRIZE Nx100

Nx100→CREDITS

Sets bonus credits for a player gained after scoring multiples of 100, e.g. score is 200, 300, 800.

To turn this option off, while in setting mode, keep button  pressed until display shows OFF.

Nx100→TICKETS


Option. Sets number of tickets gained after scoring multiples of 100, e.g. score is 200, 300, 800.

Nx100→PRINTER

Option. Sets number printed on thermal printer after scoring multiples of 100, e.g. score is 200, 300, 800.

Nx100→BALL


Sets number of surprise balls gained after scoring multiples of 100, e.g. score is 200, 300, 800.

To turn this option off, while in setting mode, keep button  pressed until display shows OFF.

PRIZE Nx111

Nx111→CREDITS

Sets bonus credits for a player gained after scoring multiples of 111, e.g. score is 222, 333, 888.

To turn this option off, keep button  pressed until display shows OFF.

Nx111→TICKETS


Option. Sets number of tickets gained after scoring multiples of 111, e.g. score is 222, 333, 888.

Nx111→PRINTER

Option. Sets number printed on thermal printer after scoring multiples of 111, e.g. score is 222, 333, 888.

Nx111→BALL


Sets number of surprise balls gained after scoring multiples of 111, e.g. score is 222, 333, 888.

To turn this option off, while in setting mode, keep button  pressed until display shows OFF.

LUCKY NUMBER

LUCKY1→CREDITS

Sets bonus credits for a player gained after scoring value of LUCKY NUMBER 1.

To turn this option off, keep button  pressed until display shows OFF.

LUCKY1→TICKETS


Sets number of tickets a player gets after scoring LUCKY NUMBER 1.

LUCKY1→PRINTER

Sets number printed on thermal printer after scoring LUCKY NUMBER 1.


LUCKY1→BALL

Sets number of surprise balls gained after scoring value of LUCKY NUMBER 1.

To turn this option off, while in setting mode, keep button  pressed until display shows OFF.

LUCKY2→CREDITS

Sets bonus credits for a player gained after scoring value of LUCKY NUMBER 2.

To turn this option off, keep button  pressed until display shows OFF.

LUCKY2→TICKETS


Sets number of tickets a player gets after scoring LUCKY NUMBER 2.

LUCKY2→PRINTER

Sets number printed on thermal printer after scoring LUCKY NUMBER 2.

LUCKY2→BALL

Sets number of surprise balls gained after scoring value of LUCKY NUMBER 2.

To turn this option off, while in setting mode, keep button  pressed until display shows OFF.

LUCKY NUMBER 1

Sets the value of LUCKY NUMBER 1.

LUCKY NUMBER 2

Sets the value of LUCKY NUMBER 2.

RECORD

RECORD→CREDITS

Allows to set number of credits given for breaking a record.

RECORD→TICKETS

Allows to set number of tickets given for breaking a record.

RECORD→PRINTER

Allows to set prize number of a prize given for breaking a record (which will be printed on thermal printer).

RECORD→BALL

Allows to set number of balls given for breaking a record.

UNAVAILAB. RECORD

Sets record value that cannot be beaten.

NUMBER

NUMBER

Setting score value for ball give-out.

NUMBER BALL

Sets number of balls given out after scoring NUMBER or more.

FACTORY SETTINGS

CRED.NATION.SET

Parameter used by factory.

VOICE.NATION.SET

Parameter used by factory.

SENSITIVITY

The sensitivity can be changed by pressing ‘ENTER’, using ↑ “UP” and ↓ “DOWN” buttons to set the difficulty level (range 0 – 9) and pushing LEFT arrow (BACK) to accept the changes. Lower level numbers correspond to greater difficulty, i.e. 0 – hard, 9 – easy.

MACHINE TYPE

Allows to change the type of the machine. Used by manufacturer. **Do not change.**

TIME VOICE RELAX

Used by manufacturer.

TIME DISPL RELAX

Used by manufacturer.

DIAGNOSTIC MODE

SENSOR TEST HI LO

Testing of the sensor.

While the punching bag is in the vertical position - the display shows "BALL DOWN". While the punching bag is in the horizontal position - display shows "BALL UP". This option is used for diagnostic only.

10. Spare parts and equipment

- Leveling legs 4 pieces,
- Punching bag pump 1 piece,
- Bladder 1 piece,
- Machine Manual 1 piece.

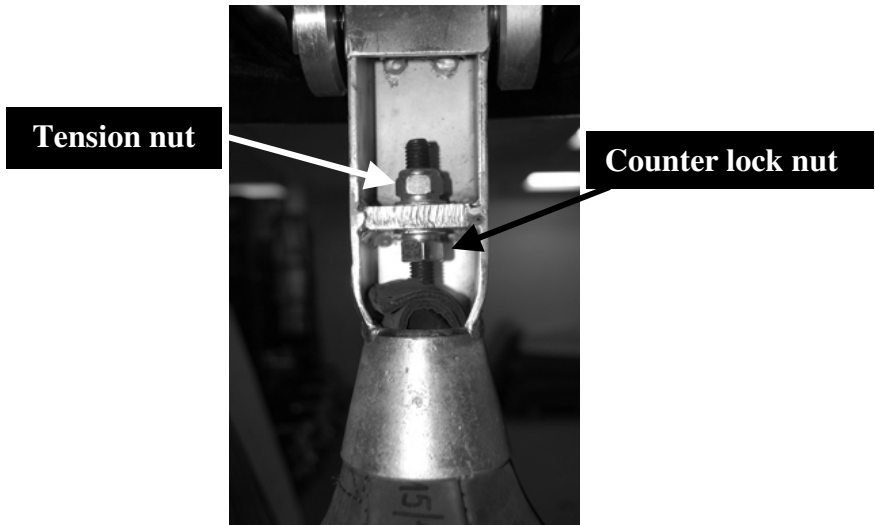
11. Standard replacement parts

- Front panel LED bulbs,
- 'START' button bulb,
- LED bulb (12V 20W, MR11/C (GU4) – 35 mm DIA),
- Bladder for punching bag.

12. Set up and maintenance instructions

How to change the punching bag

Changing the punching bag is required in some cases. Lower the bag arm as in the play mode. Take off the front protector and unscrew the top nut using 19 mm wrench (use wrench with a ratchet). This will release the bag assembly.



To install a new bag first make sure that the tension nut is taken off and the second nut is screwed all the way on the bolt. Otherwise the second bolt will prevent the bag from proper tightening of the assembly. Insert the bag in its place, replace the tension nut and tighten it until the bag cannot be twisted by manual tests. To test this, grab the bag in your arm and simply use your body's weight to try to twist the bag on the bolt's axis.



If it is secured tight enough, then finish by unscrewing the second nut until it tightens on the metal arm.

How to release the punching bag manually

Sometimes it is necessary to release the punching bag when the machine has no power. This can still be done manually. You must reach over the bag and find the mechanical hammer holding the entire arm in position.

FOR STRONG: Then using screwdriver press the hammer which is under compression by a spring behind it and the bag should be free to come down.

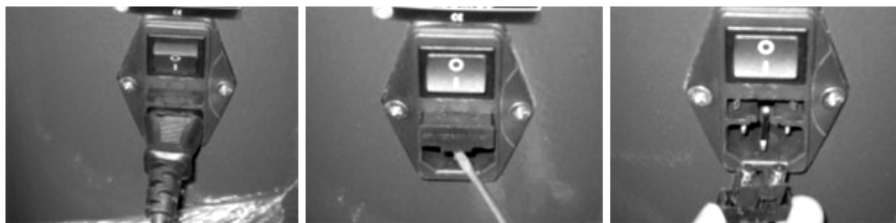
FOR DOG: Then using your thumb press the hammer which is under compression by a spring behind it and the bag should be free to come down.



(DOG)

How to change the fuse in the main switch

Locate the power cord connection on the back of the machine. The fuse can be found hidden between the power cord socket and the main ON/OFF switch. In order to replace it, use a flat screwdriver to pry open the fuse holder and pull it out.



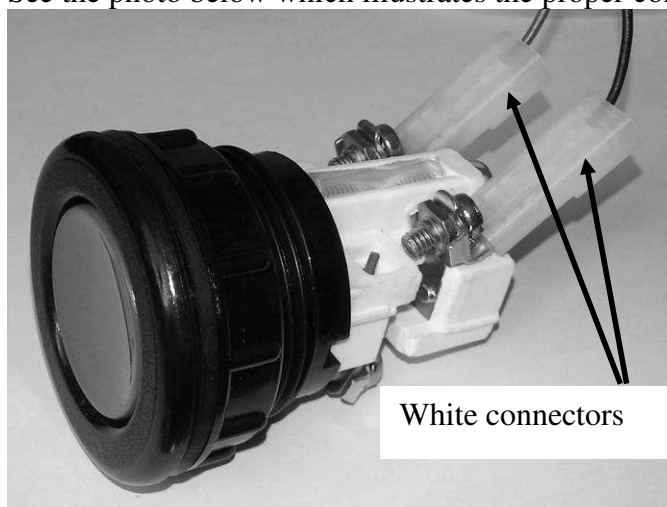
How to change START button

There are two types of START buttons: standard and illuminated. This short guide shows how to connect either type.

STANDARD START BUTTON

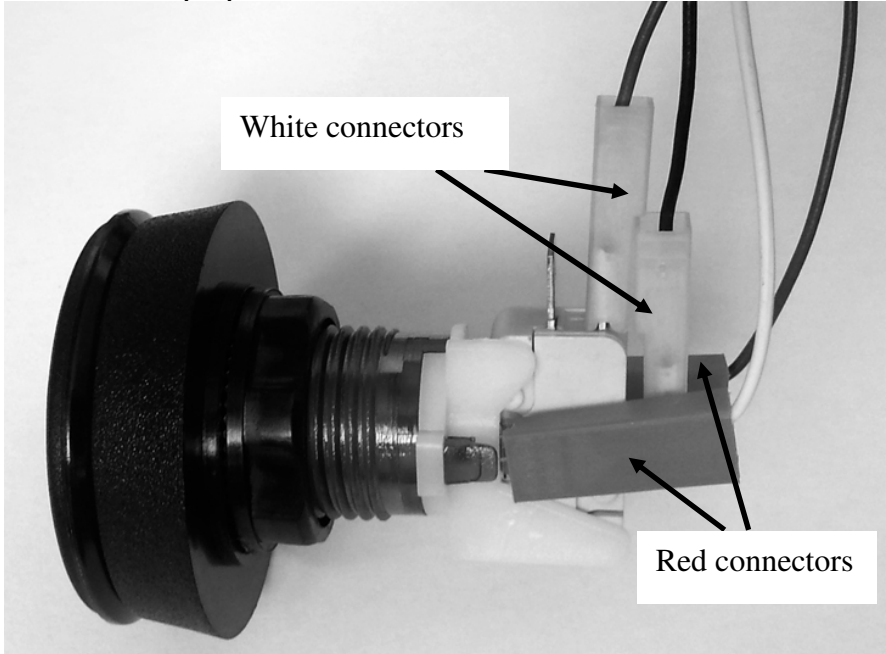
The standard button is connected only with the white connectors, the red ones are not used.

See the photo below which illustrates the proper connection.



ILLUMINATED START BUTTON

The illuminated START button is connected with both, the white and the red connectors. The red connectors are stick on the sides, while the whites are on the back and upper side of the button. See the photo below for the proper connection.



The red connectors are for the lights, the white connectors are for the button itself.

Replacement procedure.

Unscrew the button (its nut). Unlock the white part of the button (illuminated version only). Disconnect all wires. Pull out the button from the assembly hole. Replace with the new button using the above instructions.

									Date of Service	
									Punching bag condition	
									Punching bag pressure	
									Arm protector condition	
									Arm protector position	
									Legibility of disclaimer	
									Legibility of instruction	
									Level of machine	
									Grease on mechanism	
									Bulbs	
									Button	
									Bill and coin validators	
									Safe condition (Yes/No)	
									If not working or condition not safe for use what was replaced	
									Comments	
									Signature	

Serial #