CLIFFHANGER

Hanging time measuring machine

Technical Information

Rev. 1.1, software ver. 8.013

Valid from serial number

Index

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		CLIFFHANGER
Dimensions	Depth [cm] / [in]	161 / 63.4
	Width [cm] / [in]	126 / 49.6
	Height [cm] / [in]	278 / 109.5
Bar height from bottom [cm] / [in]		230 / 90.55
Overall Mass [kg]/[Lb]		159 / 351
Power consumption [Wh]		200

Table 1 - technical data of Cliffhanger

3. Assembly/Construction description

Hanging time measuring machine Cliffhanger 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 sensor,
- verbal information mechanism – built using potentiometer and speaker, used to send voice messages,
- 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),
- banknote validator – 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. 370 lbs.

After the machine is taken out of the box, it should be transported in horizontal position with the help of two carriers. 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

1) Before pressing the "START" button player must stand in front of the machine.
2) Put coin/ coins of the required value into the coin acceptor.
3) After pressing the "START" button player has 10 seconds to hang on the bar before the play begins.
4) Hang on the bar for as long as you can.
5) Hanging time would be displayed on the front panel.
6) Follow the same instructions before the next game.

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

Every two weeks (recommended):
- 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 and disclaimers are readable.

Every month:
- check mounting cover screws/nuts,
- check the display lights,
- clean the coin acceptor and/or banknote validator.

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) 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].

8. Potential problems and their resolution

All the tests and repairs have to be done by service workers authorized by the manufacturer. Ask your supplier for assistance.

<u>**Main board is not functioning:**</u>
1   Check connection between transformer and the main board.
2   Make sure that connectors are well seated.

<u>**Coin Acceptor is not functioning:**</u>
1   Check if it is not plugged up.
2   Check for dust and dirt.
3   Check strip connecting main board with the acceptor.

<u>**Sensor is not functioning:**</u>
1   Check sensors in diagnostic mode. You will need someone to assist you. Go to menu to DIAGNOSTIC MODE then SENSOR TEST. Press ENTER. Display should read STANDBY. Ask your assistant to hang on the bar: once someone hangs, display should read PRESSED.
2   Check if sensor cable is firmly connected to the main board.
3   Check all wires to / from sensor.

<u>**LED spotlights are not functioning:**</u>
1   Check power supply cable connection.
2   Check power supply wire integrity.
3   Check connector plug for loose bulb.
4   Check if spotlight is faulty and if so swap it with a new one (12V 2.4W).

Button START is not functioning:
1   Check for main board cable connection.
2   Check switch/button cable connection.
3   Check if the button cables are not connected the other way round.

Power supply is refusing to work:
1   Check if "car" fuse in main board (left bottom) is not burned 30A (green).
2   Check if transformer cable is correctly hooked up to power supply socket.

Machine is not starting:
1   Check the two diodes on the main board under POWER section. If they lit up, the main board is correctly supplied with power. If not, contact your supplier.

Bill Acceptor is not functioning:
1   Check if power supply cable is hooked up to main board (BILL).
2   Check if cable from bill acceptor is correctly hooked up.
3   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.
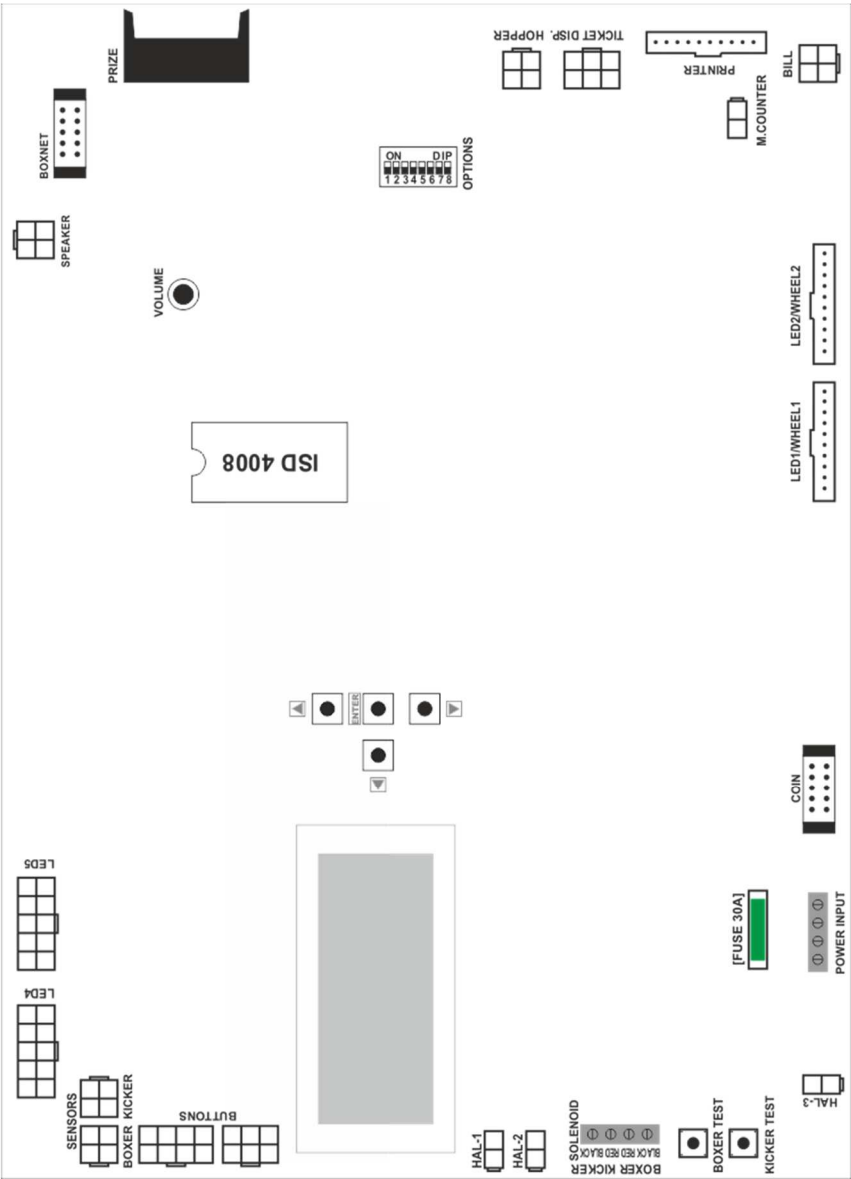
9. Board layouts

Main Board layout (back side)

Figure 1 - Main Board layout (back)

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

SENSORS (KICKER) – not used

BUTTONS – connector for "START button

SPEAKER – connector for speaker

VOLUME – potentiometer for volume control

ISD4008 – speech synthesizer

SOLENOID BOXER – not used

SOLENOID KICKER – not used

LED1 – not used

LED2 – connector for extension board

OPTIONS – service settings switch board

BOXER TEST – not used

KICKER TEST – not used

HAL-1 – not used

HAL-2 – not used

HAL-3 – not used

TICKET DISP. – not used

HOPPER – connector for extension board

PRINTER – not used

LCD – display showing changing of settings

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

BOXNET – connector for BoxNet

PRIZE – not used

FUSE 30A – not available

M.COUNTER – connector for mechanical counter

10. Machine setup

SWITCHES

Dip Switch 1-8 (S1 "OPTIONS")

Dip switches 1-8
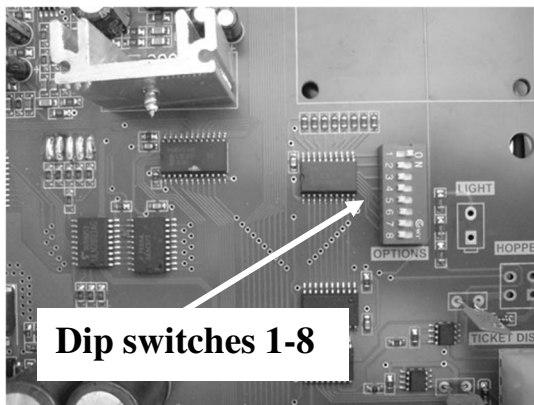
Switch #1

Not used.

Switch #2

When ON, machine is set for free game.

Switch #3

ON/OFF function for sound in Relax Mode. When ON, music autoplays after time set in function FACTORY SETTINGS/ TIME VOICE RELAX.

Switch #4

When ON, the highest score for each game will be reset to value set in DEFAULT RECORD (see Menu Tree for reference) after you push the START button for 10 seconds. When OFF, the top score 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 ▼ (down), ◀ (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	*counter, resettable to 0*	0	16
	LONG COUNTER	*counter*	0	16
	FREE CREDITS	*counter*	0	16
	BROKEN RECORDS	*counter, resettable to 0*	0	16
	CREDITS	*counter, resettable to 0*	0	16
CREDITS	RECORD→CREDITS	OFF, 1..20	1	16
	POINTS→CREDITS	1..10	*	17
	BONUS POINTS 1	0..250	0	17
	BONUS CREDITS 1	0..250	0	17
	BONUS POINTS 2	0..250	0	17
	BONUS CREDITS 2	0..250	0	17
	BONUS POINTS 3	0..250	0	17
	BONUS CREDITS 3	0..250	0	17
	BONUS POINTS 4	0..250	0	18
	BONUS CREDITS 4	0..250	0	18
	BONUS POINTS 5	0..250	0	18
	BONUS CREDITS 5	0..250	0	18
	BONUS POINTS 6	0..250	0	18
	BONUS CREDITS 6	0..250	0	18
RECORD	RECORD→CREDITS	OFF, 1..20	1	18
	CURRENT RECORD	*resettable to DEFAULT RECORD*		18
	DEFAULT RECORD	30..180	50	19
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	19
	VOICE.NATION.SET	ENGLAND, GERMANY, RUSSIA, SPAIN, POLAND, RESERVED 1, RESERVED 2, RUSSIA II, FRANCE, RESERVED 3, RESERVED 4, ITALY, CZECH REPUBLIC ***	ENGLAND	19
	SENSITIVITY	0..9	5	19
	TIME VOICE RELAX	OFF, 10s..3h	5m	19
	TIME DISPL RELAX	OFF, 10s..3h	2m	19
	BOXNET→T.PERIOD	OFF, 1m..12h	1h	19

	BOXNET→STARTUP	OFF,ON	ON	19
	BOXNET ID			20
	BONUS CRED.MODE	NORMAL, ADD.MODE	NORMAL	20
DIAGNOSTIC MODE	SENSOR TEST	STANDBY, PRESSED	STAND BY	20
	DISPLAYS TEST	*All displays→888*		20
	PROGRAM VER.	*Software version*		20
CAMERA	CHARG.CAM.TIME	0..1800 [s] (30 mins)	900s	20
	TIM→REC CAM.ON	0..50 [s]	20s	21
SIREN	TIME.RECORD	OFF, 0.1..10 [s]	2s	21
	TIME BEFORE.ALARM	OFF, 0.1..20 [s]	5s	21
	TIME.ALARM	OFF, 0.1..5 [s]	2s	21

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

COUNTERS

SHORT COUNTER

Temporary counter of points, e.g.US: 1 point = 0,25 USD, EU: 0,50 EUR (currency settings are available in FACTORY SETTINGS/ CRED.NATION.SET).
You can reset it to 0000 by pushing ENTER, then pushing ▲ or ▼ button and pushing ◀ button.

LONG COUNTER

Counter of points – counts all the points from the beginning of machine's work. This is life long - not erasable.

FREE CREDITS

Counter of free punches. Free punches (free game) is activated by setting dip switch # 2 at ON position.

BROKEN RECORDS

This counter tells us how many times a record had been broken. The counter can be reset by pressing ENTER, then ▲ or ▼ and next ◀ button.

CREDITS

Temporary counter of credits. Shows the current number of credits. Can be reset by pressing ENTER, then ▲ or ▼ and next ◀ button.

CREDITS

RECORD→CREDITS

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

POINTS→CREDITS

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

   Example:

For US - 1 game is worth $1 (which corresponds to 4 points), so POINTS→CREDITS will be set to 4.

BONUS POINTS 1 and BONUS CREDITS 1

You can set additional credits (bonus credits) when a set amount of money is inserted (BONUS POINTS 1 and BONUS CREDITS 1 are connected).

First go to BONUS POINTS 1 where you will assign number of points that have to be accumulated to gain bonus game. Second, go to BONUS CREDITS 1 and then assign number of bonus credits given to player.

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

Bonus Points 1 : 20

Bonus Credits 1 : 6

BONUS POINTS 2 and BONUS CREDITS 2

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

BONUS POINTS 3 and BONUS CREDITS 3

Function of this setting is same as in BONUS POINTS 1 and BONUS CREDITS 1 but **always for bigger value** than in BONUS POINTS 2 and BONUS CREDITS 2.

BONUS POINTS 4 and BONUS CREDITS 4

Function of this setting is same as in BONUS POINTS 1 and BONUS CREDITS 1 but **always for bigger value** than in BONUS POINTS 3 and BONUS CREDITS 3.

BONUS POINTS 5 and BONUS CREDITS 5

Function of this setting is same as in BONUS POINTS 1 and BONUS CREDITS 1 but **always for bigger value** than in BONUS POINTS 4 and BONUS CREDITS 4.

BONUS POINTS 6 and BONUS CREDITS 6

Function of this setting is same as in BONUS POINTS 1 and BONUS CREDITS 1 but **always for bigger value** than in BONUS POINTS 5 and BONUS CREDITS 5.

RECORD

RECORD→CREDITS

Allows to set number of bonus credits given to player for breaking a record.
To turn this option off, while in setting mode, keep button ▼ pressed until display shows OFF.

CURRENT RECORD

Method 1 – using service settings
You can reset it to DEFAULT RECORD by pushing ENTER, then ▲ and next ◄ button – the record will be reset.

Method 2 – without opening the machine
This method works when switch # 4 on dip switch S1 (see connectors on the main board layout - back side) is at ON position. Without opening

the machine's back, the highest score can be reset by pressing START (BOXER) button for 10 seconds (the main display shows record value set in DEFAULT RECORD).

DEFAULT RECORD

Allows to set default record value to which all the resets will be done.

FACTORY SETTINGS

CRED.NATION.SET

Parameter used by manufacturer.

VOICE.NATION.SET

Parameter used by manufacturer.

SENSITIVITY

Sets the difficulty level (range 0 – 9). Lower level numbers correspond to greater difficulty, i.e. 0 – hard, 9 – easy.

TIME VOICE RELAX

Sets time (counted from last game) after which music is activated.

TIME DISPL RELAX

Sets time (counted from last game) after which displays start flashing.

BOXNET→T.PERIOD

Defines how often BoxNet data is sent to server. Possible settings: OFF (no data is sent periodically). Available range (time period): 1m..12h.

BOXNET→STARTUP

This function sends BoxNet data at machine startup. When ON, data is sent at each machine startup with 3 minutes time delay. When OFF, no

data is sent on startup. Another package of data is sent according to settings in BOXNET→T.PERIOD.

BOXNET ID

Stores machine's BoxNet ID (read only).

BONUS CRED. MODE

Two possible settings: NORMAL MODE and ADD.MODE.
NORMAL MODE: bonus is calculated after each coin/bill input.
ADD.MODE: value of each inserted coin/bill is summed up and bonuses are calculated for the cumulated value. In this mode the main credits display blinks. Pressing START (Boxer or Kicker) ends the cycle of summing up values and calculating bonuses.

DIAGNOSTIC MODE

SENSOR TEST

Testing of the sensor.
Sensor is working correctly: while the punching bag is in the vertical position the display shows "LO" and while the punching bag is in the horizontal position the display shows "HI". Different behavior indicates improper sensor work. This option is used for diagnostic only.

DISPLAYS TEST

Testing of the displays.
All displays show "8"s.

PROGRAM VER.

Shows software version.

CAMERA

CHARGE.CAM.TIME

Video camera charging time.

TIM→REC CAM.ON

Video camera recording time before player's hanging time reaches CURRENT RECORD.

SIREN

(Settings apply to machines with siren module installed.)

TIME.RECORD

Sets how long the siren will be on after breaking record.

TIME BEFORE.ALARM

Time that has to pass before the siren goes off.

TIME.ALARM

Alarm time.

11. Standard replacement parts

- Front panel bulbs
- 'START' button bulb
- LED spotlight bulb (12 V 2.4 W, MR11/C (GU4) – 35mm DIA)

									MAINTENANCE LOG
									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 #