

# ZMF-II CHESS CLOCKS

ZMARTFUN ELECTRONICS, INC.



Manual version v2.2, 02-03-2020



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# **1. PRODUCT DESCRIPTION**

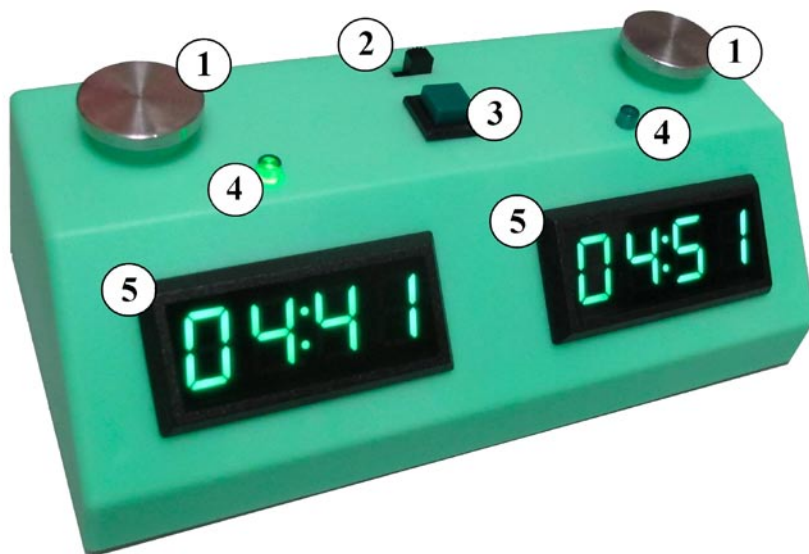
These are the coolest chess clocks in the market. They are very easy to program and easy to use. Our clocks use modern LED technology with eye-catching colors. These clocks were designed and engineered by avid chess players in the USA. The clocks can be used for nearly every competitive two-player board game. Some of the main features of these clocks are

- **DESIGNED AND ASSEMBLED IN THE USA!**
- Stainless steel touch sensing buttons.
- Very easy to program menus.
- Delay, Increment, Hour-glass, Scrabble programmable between 1 and 40 minutes (New Feature), and Byo-yomi timing modes.
- Delay can be displayed in three different modes (New Feature)!
- Programmable tournament modes with and without move counter. Three time controls available.
- Double click option prevents clock to be reset when it is paused (New Feature).
- Three different preset settings/modes can be kept in memory at all times.
- Highly accurate clock (New electronics added).
- Sound and LED indicators can be turned off.
- Clock can be used for nearly every competitive two-player board game like Scrabble, Shogi, and Go.
- Low power consumption. Batteries should provide power for more than 1600 hours of use under normal conditions (compare to 600 hours of use that other clocks offer).
- Very strong plastic enclosure to protect your clock
- Transparent windows for the displays are made of high impact-resistance polycarbonate (this is the same material used in the thick barriers of transparent plastic used in teller's windows in banks).
- Affordable price.

- 4 C batteries not included.
- Patent#: USD700848 S1.

The main features of these clocks are

- 1) Touch sensing player buttons.
- 2) On/Off slide switch.
- 3) Button use to stop/reset game, enter menu options, and accept settings.
- 4) LED player indicators.
- 5) Main displays.



## 2. MENU OPTIONS

To enter the menu options

1. Press the menu button to stop the game (assuming a game is in progress).

2. Double click the menu button to reset the timer to its preset setting/mode.
3. Press and hold for 5 seconds the menu button.
4. Use any of the player's touch buttons to navigate through the menu options.

## 2.1 Quick Time Change



1. Press the menu button to stop the game.
2. Double click the menu button to reset the timer to its preset setting/mode.
3. Press and hold for 5 seconds the menu button to enter the menu options. If a regular time setting was preset (ex: **MM:SS MM:SS**, or **HH:MM HH:MM**) then a flashing time display will be seen (ex: flashing **05:00 05:00**).
4. Press the menu button one more time to enter "Quick Time Change" mode or press any of the player buttons to enter the menu options. If in "Quick Time Change" mode, make changes using the player buttons and the menu button until time is set.

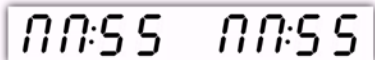
Note: A quick touch of any of the players' buttons is required to increment or decrement the time by one unit. If the finger/hand is left touching the button the time will keep changing. This feature was intentionally included in the clock design to facilitate setting up the time in the unit.

## 2.2 Set Time in Hours and Minutes

A digital display showing two instances of "HH:MM" side-by-side. The digits are in a standard seven-segment font.


1. Press the menu button to enter this mode when a flashing "**HH:MM HH:MM**" is displayed. Time can be set in hours and minutes (HH:MM).
2. Use any of the player buttons to change the time and accept the settings using the menu button.

## 2.3 Set Time in Minutes and Seconds

A digital display showing two instances of "MM:SS" side-by-side. The digits are in a standard seven-segment font.

1. Press the menu button to enter this mode when a flashing "**MM:SS MM:SS**" is displayed. Time can be set in minutes and seconds (MM:SS).
2. Use any of the player buttons to change the time and accept the settings using the menu button.

## 2.4 Set Delay

A digital display showing "DEL F 00" side-by-side. The digits are in a standard seven-segment font.

1. Press the menu button to enter this mode when a flashing "**DEL F 00**" is displayed. A flashing "F" will be displayed ("F" is the default setting).
2. Use any of the players touch buttons to set the delay mode.
  - **F - Flashing:** The display flashes back and forth between the delay seconds and the actual clock time. This is the default setting from factory.

- **C** - Countdown: Only shows the delay seconds counting down.
  - **t** - Time only: Only shows the actual clock time.
3. Use any of the player buttons to set the number of seconds for the delay. A maximum of 60 seconds can be programmed for this function.
  4. Press the menu button to accept the settings.
  5. Go to "**PLAY - - - -**" and press the menu button to start a new game.

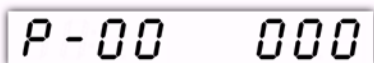
## 2.5 Set Increment



A digital display showing the text "INC 00". The "INC" is on the left and "00" is on the right, both in a monospace font.

1. Press the menu button to enter this mode when a flashing "**INC - 00**" is displayed. A flashing "00" will be displayed.
2. Use any of the player buttons to set the number of seconds for the increment. A maximum of 60 seconds can be programmed for this function.
3. Press the menu button to accept the settings.
4. Go to "**PLAY - - - -**" and press the menu button to start a new game.

## 2.6 Set Tournament Modes



A digital display showing the text "P-00 000". "P-00" is on the left and "000" is on the right, both in a monospace font.

1. Press the menu button to enter this mode when a flashing "**P-00 000**" is displayed.
2. Enter the number of moves that you want for the first time control. Choose **2t** or **3t** for two or three time controls respectively with the move counter off (New Feature). Press the menu button



3. Enter the number of minutes that you want for the first time control, and then press the menu button. Skip to step 5 if the move counter is off (options **2t** or **3t**).
4. If only two time controls are required press the menu button (ex: **-ALL 000** with a flashing **000**). If three time controls are required then use any of the player's buttons to set the number of moves for the second time control and press the menu button (ex: **2-20 000** with a flashing **000**).
5. Enter the number of minutes that you want for the second time control and then press the menu button.
6. If three time controls were selected from step 4 or option **3t** was selected, then enter the number of minutes for the third time control and press the menu button.
7. Go to "**PLAY - - - -**" and press the menu button to start a new game.

**Example 1:** The following settings "**1-40 60**" and "**-ALL 30**" correspond to 40 moves in 60 minutes and 30 minutes will be added to the clocks after the first time control to finish the game.

**Example 2:** The following settings "**1-40 60**", "**2-20 30**", and "**3 -- 30**" correspond to 40 moves in 60 minutes for the first time control, then 20 moves in 30 minutes for the second time control, and 30 minutes to finish the game for the third time control.

**Example 3:** The following settings "**1-2t 60**" and "**-ALL 30**" correspond to two time controls of 60 and then 30 minutes with the move counter off.

**Note:** The number of moves that have been made by each player is displayed for approximately 0.5 seconds after each player makes his move. If the move counter is off (options **2t** and **3t**) the current time control will be displayed instead. The unit starts counting moves right after the player with white pieces makes his first move. Black should start the clock.

## 2.7 Set Hourglass Mode

A digital display showing the text "HOGL 000" in a monospaced font. The text is displayed in two lines: "HOGL" on the top line and "000" on the bottom line.

When playing in this mode, the time that each player uses to think is subtracted from his clock and added to his opponent's clock. A player loses when his time reaches zero. For example, if both players start with 30 seconds and the first player to act spends 5 seconds to make his first move then his time will be 25 seconds and his opponent's time will be 35 seconds.

1. Press the menu button when a flashing "**HOGL 000**" is displayed.
2. Set the desired time by pressing any of the player's buttons. A maximum of 3 minutes and a minimum of 5 seconds can be set in this mode.
3. Press the menu button to accept your settings.

## 2.8 Set Byo-yomi Mode

A digital display showing the text "BYO YOMI" in a monospaced font. The text is displayed in two lines: "BYO" on the top line and "YOMI" on the bottom line.

1. Press the menu button when a flashing "**BYO YOMI**" is displayed. The next display will be shown "**BYO- 00**" with a flashing **00**.
2. Set the number of minutes for the game before any Byo-yomi periods.
3. Press the menu button. The next display will be shown if Byo-yomi hasn't been set yet "**b-01 05**" with a flashing **01**, where **01** represents the number of Byo-yomi periods and **05** represents the number of seconds per period.
4. Set the number of Byo-yomi periods and press the menu button.

5. Set the number of seconds per Byo-yomi period and press the menu button.

## 2.9 Set Scrabble Mode

The image shows a rectangular LCD display with a white background and a thin black border. The text "SCRA OFF" is displayed in a black, monospaced, all-caps font. "SCRA" is on the left and "OFF" is on the right, with a small gap between them.

In Scrabble mode both timers can be programmed from 1 to 40 minutes. When any of the timers reaches zero, it will count up until negative 10 minutes is reached.

1. Press the menu button when a flashing "SCRA OFF" is displayed. The next display will be shown "SCRA OFF" with a flashing "OFF".
2. Use any of the touch sensor buttons to set the starting time from 1 to 40 minutes for each player.
3. Use any of the touch sensor buttons to go to "PLAY - - - -" and press the menu button.

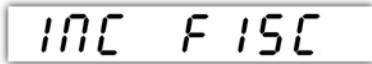
## 2.10 Set FIDE Mode

The image shows a rectangular LCD display with a white background and a thin black border. The text "FIDE OFF" is displayed in a black, monospaced, all-caps font. "FIDE" is on the left and "OFF" is on the right, with a small gap between them.

In this mode the clock stops working when one of the timers goes to **00:00**. A flag will indicate what timer ran out of time first and the other player's timer will stop working. **Use this setting only for FIDE competitions unless indicated otherwise.**

1. Press the menu button when a flashing "FIDE OFF" is displayed. The next display will be shown "FIDE ON".
2. Use any of the touch sensor buttons to go to "PLAY - - - -" and press the menu button.

## 2.11 Set Increment Mode

A rectangular LCD display showing the text "INC FISC" in a monospaced font. The "INC" is on the left and "FISC" is on the right, with a space between them.

Set the increment mode to either Fisher or Bronstein. The default increment mode is the Fischer setting.

## 2.12 Set LED Indicators to On/Off

A rectangular LCD display showing the text "LED ON" in a monospaced font. "LED" is on the left and "ON" is on the right, with a space between them.

This setting turns on or off the LED light indicators. These LEDs are used to indicate whose turn it is to move.

1. Press the menu button when a flashing "**LED ON**" or "**LED OFF**" is displayed. This will toggle the LED indicators between the on/off options.

## 2.13 Set Sound to On/Off

A rectangular LCD display showing the text "SOUN ON" in a monospaced font. "SOUN" is on the left and "ON" is on the right, with a space between them.

This setting turns on or off the sound in your unit.

1. Press the menu button when a flashing "**SOUN ON**" or "**SOUN OFF**" is displayed. This will toggle the sound between the on/off options.

## 2.14 Exit Menu



PLAY - - - -

Press the menu button when a flashing "**PLAY - - - -**" is displayed to accept all your setting and start a new game. All settings are automatically stored in memory.

## 3. PENALTY TIME CHANGES

Use this procedure in the event that the arbiter needs to increase or reduce a player's remaining time. Also, the number of moves can be adjusted if the clock is in tournament mode.

1. Press the menu button once to stop the timers (assuming the game is in progress).
2. Press and hold the menu button for five seconds.
3. Use the touch sensors and the menu button to make any necessary changes. If in tournament mode the number of moves can be changed also.

## 4. REPLACING BATTERIES

Batteries should be replaced when the displays are starting to look dim. Use 4 C batteries. Refer to the technical specifications below for more details.

1. Turn off the unit.
2. Place your clock on a table with the display facing down. Care should be taken as not to scratch the display.
3. Remove the battery compartment cover.

4. Replace the 4 C batteries. There are some marks in the batteries holder that indicate the proper battery polarity direction.
5. Replace the battery compartment cover.

## **5. RETURNS**

Our clock units come with a **one year warranty** against manufacturing defects. Read the troubleshooting section in your manual. A proof of purchase with the purchase date on it will be required for any returns.

## **6. TECHNICAL SPECIFICATIONS**

- When not in use, power should be turned off to maximize batteries lifetime.
- Requires 4 C batteries. Use alkaline batteries only (recommended). Do not mix old or rechargeable batteries with new ones. Do not use batteries with a voltage higher than 1.5V like the Oxyride batteries; doing so might permanently damage the circuitry in your unit.
- Batteries should provide power for more than 1600 hours of use under normal conditions (compare to 600 hours of use that other clocks offer).
- < 20 mA consumption.
- Maximum Input Voltage: 6.5V
- High display brightness.
- 1/2" display digit size.
- Operating temperature: -30 °C to 80 °C.
- Chess clocks are intended for indoor use only. These LED displays and some types of color LCD displays are hard to read when exposed to bright sunlight. However, no harm is done to the unit by using it outdoors.

## 7. TROUBLESHOOTING

<p><b><u>Problem:</u></b> The display in my clock is not bright anymore and the clock sometimes behaves erratically changing turns by itself.</p>	<p><b><u>Solution:</u></b> This is an indication that the batteries need to be replaced. The touch sensing circuitry needed for the touch buttons is very sensitive to small changes in the supply voltage. When the batteries are drained or near drained, the clock might behave erratically from time to time changing turns by itself, and also the display will not be as bright as before. Replacing the batteries will return your unit to normal operation.</p>
<p><b><u>Problem:</u></b> I replaced the batteries but the clock is not working. The clock was working before the batteries replacement.</p>	<p><b><u>Solution:</u></b> Make sure that the batteries are installed in the proper polarity direction. There are some marks in the batteries holder that indicate the proper battery direction. Check the on/off slide switch.</p>
<p><b><u>Problem:</u></b> When playing a game the timing in the clock would not behave as expected.</p>	<p><b><u>Solution:</u></b> Make sure that the menu options for delay "DEL 00", increment "INC 00", hourglass "HOGL 000", Scrabble "SCRA ON", byoyomi "BYO YOMI", and tournament modes "P-00 000" are all set to zero or off.</p>
<p><b><u>Problem:</u></b> There is no beeping sound coming out of the clock.</p>	<p><b><u>Solution:</u></b> Set the menu option for the sound from off "SOUN OFF" to on "SOUN ON". Refer to the "Set Sound to On/Off" procedure in your clock manual.</p>
<p><b><u>Problem:</u></b> The LED light indicators do not work.</p>	<p><b><u>Solution:</u></b> Set the menu option for the led indicators from off "LED OFF" to on "LED ON". Refer to the "Set LED Indicators to On/Off" procedure in your clock manual.</p>

