Mihalis Kaloumenos sent us a text regarding the handling of the electronic chess clock DGT XL

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We thank him for his contribution.

DIGITAL CLOCK DGT XL

Edited by
Michalis Kaloumenos, member of FIDE Qualification Commission

Most chess players are acquainted with DGT digital chess clocks. They are a necessary accessory of all international chess tournaments, because FIDE supports their use. Remaining time is displayed with big digits in hours and minutes when the remaining time is more than 20 minutes and in minutes and seconds if remaining time is under 20 minutes. Programming the clock requires some experience because most popular rates of play (as the ones accepted for tournaments offering title norms and are described in FIDE handbook – paragraph B.01.1.14) must be adjusted manually. This article includes necessary information to arbiters (also not arbiters) who contribute to the preparation of the tournament hall.

The first digital chess clock made by the Dutch firm was released in 1985. In 1994, the model DGT Fide clock was approved by FIDE and soon DGT became the major supplier of digital chess clocks for tournaments across the world. The model DGT XL (usually in beige color, equipped with 5 buttons under the LCD display) was introduced in 2003. It is one of the most widely used today although newer models are available in the market.

This presentation uses the following symbols for the five buttons under the LCD display, from left to right, in bold writing, within brackets:

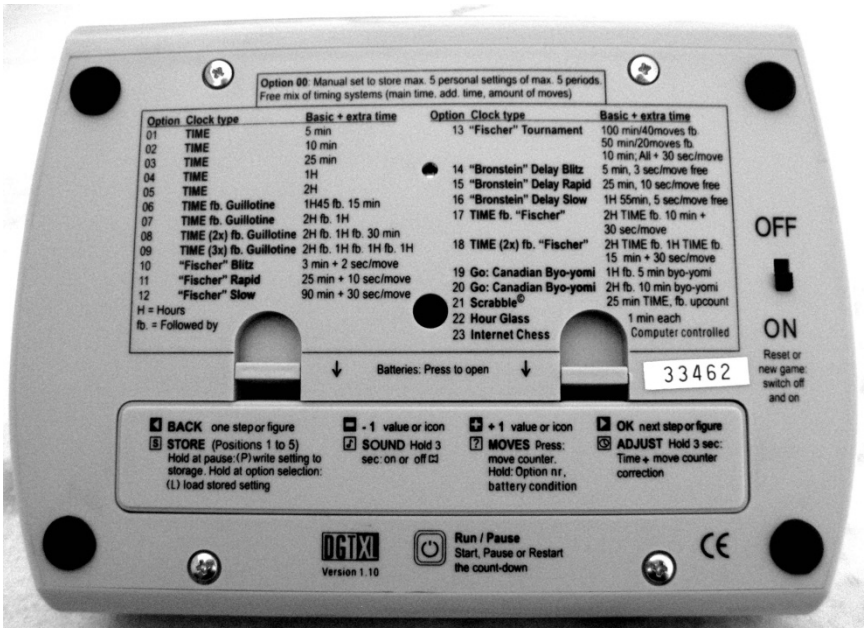
[<] [-] [Φ] [+] [>]

The visual cues on the LCD display are enclosed in parentheses, in bold writing. Flashing visual cues are underlined.

For example: **(00)** or **(TIME FISCH DELAY HGLASS UPCNT BYO END)**

ON/OFF switch can be found at the bottom of the clock. As soon as the clock is switched on, the user must choose the timing method. The last used option is blinking

on the display. It can be changed using the buttons **[-]** and **[+]** and the new selection must be entered with the button **[>]**. Then the arbiter must adjust the lever in the correct position so that the white player is the first to press the lever down. The visual cue ●○ or ○● can be compared to the colors on the board in order to avoid any mistake. This cue is always on display during the game. The game begins when the middle button **[Φ]** is pressed. The same button also stops the clock if this is necessary. It works as a STOP/GO button. If during the game the clock is switched off by mistake, then time adjustments have to be re-entered.



The clock includes 23 preset timing methods, the meaning of each one can be found at the bottom of the clock. Many of them can be used for blitz or rapid games (for example presets **01** and **05** respectively) but three (out of six) rates of play for standard chess which FIDE regulations require for tournaments offering title norms are not included. Presets **07**, **08** and **12** are FIDE accepted while preset **13** provides 10 minutes for game completion as third time control while FIDE relevant timing method requires 15 minutes. Therefore preset **13** is not a FIDE time format.

Although XL model can use 6 different methods of timing, in FIDE chess tournaments we are only interested in 'TIME' and 'Fischer' methods. 'TIME' method works in imitation of the traditional wooden clock. The remaining time of the following period is added to the display as soon as time of the previous period for the first player is reached; not when the predefined number of moves is played. A flag appears to the left of the appropriate player's remaining time indicating which player was the first to exhaust the available time of the period. The arbiter is responsible to confirm the number of moves played as soon as the timing period was completed. After completion of all time periods, the displayed flag flashes.

DGT XL clock does not include a preset program of two or more periods with time increment. In this case all adjustments must be manually made. In the following example the clock is programmed for 90 minutes for 40 moves plus 30 minutes with 30 seconds cumulative increment for each move starting from the first move. The

display drawings refer to the clock display as soon as the previously described commands are entered.

As soon as the clock is switched on, the program **00** must be selected. If the display shows a different number then it must be adjusted with the buttons **[-]** or **[+]** until the correct display **(00)** appears on the screen. The selection is then entered with the button **[>]**.

Number **(1)** to the left indicates that the first timing period is about to be programmed. With the buttons **[-]** or **[+]** we select 'Fischer'. The following indication flashes:

(TIME FISCH DELAY HGLASS UPCNT BYO END)

The selection is entered with the button **[>]**.

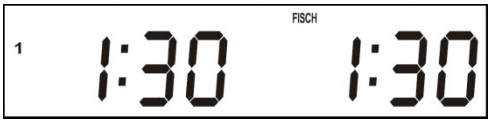
The time of the first period is set separately for each player. The desired value is selected with the buttons **[-]** and **[+]**. The value is entered with the button **[>]**.

First the time of the 'left' player is set. Flashing digits can be adjusted with the buttons **[-]** and **[+]**. The value is entered with the button **[>]**. Flashing digits indicate:

- Hours of thinking time for the 'left' player
- Tenths of minutes for the 'left' player
- Minutes for the 'left' player
- Tenths of seconds for the 'left' player
- Seconds for the 'left' player

Then the time for the 'right' player is set. Flashing digits indicate:

- Hours of thinking time for the 'right' player
- Tenths of minutes for the 'right' player
- Minutes for the 'right' player



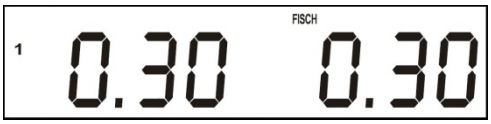
- Tenths of seconds for the 'right' player
- Seconds for the 'right' player

Then the time increment per move for the 'left' player must be set. Flashing digits indicate:

- Minutes of added time for the 'left' player
- Tenths of seconds for the 'left' player
- Seconds for the 'left' player

Then the time increment per move for the 'right' player must be set. Flashing digits indicate:

- Minutes of added time for the 'right' player
- Tenths of seconds for the 'right' player
- Seconds for the 'right' player



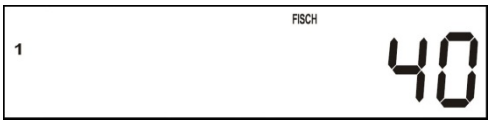
If the time period is not of ‘Fischer’ type, the time increment must be set to zero. In this case, after programming, the LCD should display:

(0.00 0.00)

Notice that a ‘Fischer’ type period with zero increment is exactly the same as a ‘TIME’ type period. However there is an important difference: Remaining time displayed is automatically updated as soon as the desired number of moves is played regardless of the total time remaining for each player. It is necessary that the players did not press the lever by mistake during their game, so that the moves recorded on the score sheet equal the moves recorded by the DGT clock. This information is available with the button **[+]** *pressed any time during the game, even if the clock is stopped. (Number of moves is not available in programming mode).*

The number of moves for the current period is the next adjustment. Flashing digits can be adjusted with the buttons **[-]** and **[+]**. The value is entered with the button **[>]**. Flashing digits indicate:

- Tenths of the number of moves
- Units of the number of moves

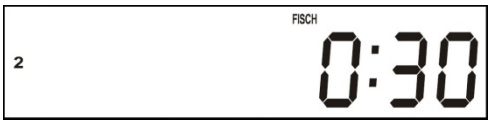


A time period may last from 1 to 99 moves. If there are more time periods to follow then the value set should not be **(00)**

When button **[>]** is pressed, number **(2)** appears at the left of the display. The second time period must be set. In contrast with the first period all following time periods must have a common time configuration for both players. As a result all values are set once for both players.

Flashing digits can be adjusted with the buttons **[-]** and **[+]**. The value is entered with the button **[>]**. Flashing digits indicate:

- Hours of thinking time for both players
- Tenths of minutes for both players
- Minutes for both players

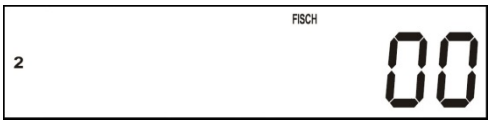


- Tenths of seconds for both players
- Seconds for both players

Time increment follows:

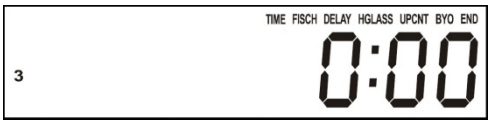
- Minutes of time added for both players
- Tenths of seconds for both players
- Seconds for both players

Finally the number of moves for the second time period must be set. The procedure described for the first period must be followed. The value set MUST be **(00)** if the time period being configured is the last one.

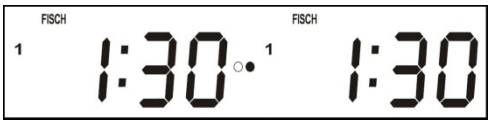


Following the same steps it is possible to set a third, fourth and a fifth time period. If this is not the case (as in this example) then the procedure for the following period must be stopped by selecting END.

(TIME FISCH DELAY HGLASS UPCNT BYO <u>END</u>)



Then the button **[>]** is pressed for the last time. The clock is ready for the game.



Storing manually configured rate of play is highly recommended, so that the clock needs not to be manually set once again for the tournament's next round. This can be done right after programming the clock by pressing the button **[<]** for a couple of seconds until the display **(P)** appears. There are five storage positions that can be selected with the buttons **[-]** or **[+]**. The selected number flashes. Pressing the button **[>]** confirms the selection. The following day as soon as the clock is switched on, the button **[<]** must be pressed for a couple of seconds until the display **(L)** appears. The position which contains the time control configured the previous day can be selected with the buttons **[-]** or **[+]**. The position to be selected is flashing. Pressing the button **[>]** confirms the selection. The selection has to be activated by pressing the button **[Φ]**. Now the clock is ready for the game. The countdown may begin by pressing again the button **[Φ]**.

Notice that during configuration all possible mistakes can be corrected by pressing the button **[<]** *as many times as required until the erratic value flashes on the display. After setting the END period and pressing the* **[>]** *button, no correction is possible.*

During the game it is often required to correct the display of the clock. This procedure must be done with some care. The clock must be stopped by pressing button **[Φ]** and then **[>]** for a couple of seconds until the digit on the left flashes. (This is also possible by pressing the lever when the clock is stopped. It is recommended to avoid this method because pressing the lever affects the number of played moves recorded by the clock.) Flashing digits can be adjusted with the buttons **[-]** and **[+]**. The value is entered with the button **[>]**. Flashing digits indicate:

- Hours of thinking time for the ‘left’ player
- Tenths of minutes for the ‘left’ player
- Minutes for the ‘left’ player
- Tenths of seconds for the ‘left’ player
- Seconds for the ‘left’ player

Correcting the time for the ‘right’ player comes next: Flashing digits indicate:

- Hours of thinking time for the ‘right’ player
- Tenths of minutes for the ‘right’ player
- Minutes for the ‘right’ player
- Tenths of seconds for the ‘right’ player
- Seconds for the ‘right’ player

The correction of the move counter follows. When the number of moves is changed for one player, the other player’s moves are automatically adjusted. This is also the right moment for changing the position of the lever. A change of the position of the lever may result in altering the number of moves for one of the players. So, it is better to place the lever to the correct position before changing manually the number of moves played.

The final correction regards the current timing period. Adjustments can be made with the buttons **[-]** and **[+]**. As soon as corrections are made the button **[>]** must be pressed until the display stops flashing. The clock may start again after pressing the button **[Φ]**.

When the players’ number of moves is corrected for ‘Fischer’ type time periods, the restarted clock follows the correct time period. However, the display of remaining time will not change until the next time period begins. Instead time manually corrected is displayed.

DGT provide manuals for all of their clocks in many different languages which can be downloaded in PDF from the following link:

http://digitalgametechnology.com/site/index.php/Manuals/View-category.html