

# **BATAK MICRO**

Operation

**PRELIMINARY**

**Users Manual**

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Published by:

**QUOTRONICS LIMITED,**  
35 Lee Street,  
Horley,  
Surrey RH6 8ER,  
United Kingdom Tele / Fax : + 44 (0) 1293 431065  
Website: <http://www.batak.com>  
E-Mail : [quotronics@blueyonder.co.uk](mailto:quotronics@blueyonder.co.uk)

## THE CONCEPT

**BATAK MICRO** is a new innovative equipment for the 21st Century. It is played on a purpose built anodized Aluminium interface with bright white electronically activated **Targets** and is scored automatically by striking these illuminated **Targets** by hand.

**BATAK MICRO** is simple to use, for fun, competitively, or for calculable reaction programs that don't get boring.

A selection of different workouts programs and speed levels make this new equipment ideal for all ages, sexes and abilities.

### 1.1 THE EQUIPMENT

**BATAK MICRO** comprises **12** Polycarbonate translucent **LED Targets** carefully arranged in a 'maximum hand stretch' type pattern and incorporated into an anodized Aluminium framework. It comes complete with a strong Carry Case. The framework may be wall mounted or used on a desktop (Legs supplied) for customized use if necessary.

The unit is powered at **12 Volts DC** for maximum safety.

Each **Target** houses a bright Solid State **LED** light cluster and a special electronic switch connected to the control logic. A dedicated **Microcomputer** controls the sequence and speed of illumination, gives certain audio responses for 'strikes' and 'misses' and both times and scores the routines on either the lower **LCD** or upper **LED** Displays.

Electronic sampled speech guides the player through specific routines as required.

### 1.2 BENEFITS

- New, solo or competitive and exciting workouts to improve Hand and Eye co-ordination.
- Minimum space requirement.
- Variable speed accommodates users of **all ages and sexes**.
- No special kit required.
- Provides excellent facility for non-boring reaction type programs.
- Simple rules
- Foolproof electronic scoring.

### 1.3 THE ROUTINES

State of the art microcomputer based technology enables an infinite number of different routines to be developed at varying speed/skill levels according to age and fitness. Custom programs can be created for training, therapeutics and mind game purposes.

## ADJUSTMENTS

### 2.1 EXTERNAL CONTROLS:

**Controls located on lower right hand of the machine**

2.2 Machine POWER JACK PLUG and adjacent ON/OFF Switch

2.3 RESET PUSHBUTTON - RESETS the machine to cease play if pressed at any time

2.4 COMPUTER INPUT - **Optional**

enables user control over the machine and how it functions as well as providing printouts - subject to revision

2.5 VOLUME CONTROL - Clockwise rotation for a volume increase

2.6 PROGRAM SELECT (0 -7) - **Optional**

for specific user routines - subject to revision

### 3.1 INTERNAL CONSOLE CONTROLS AND FEATURES - on the Main Logic Board

3.2 Machine Power Supply

Green LED - illuminates to show that the Power Supply is functioning correctly

3.3 Blue DIL switch 1-4

Switch 1 reserved  
Switch 4 reserved  
Switch 2 and 3 No Connection  
Switch 3 Sound / on /off

3.4 Switch 2 - **Optional**

serial Input DTR RESET - subject to revision

3.5 Machine Reset

Green Pushbutton RESETS the machine to cease play if pressed at any time

3.6 Target strike light

This Red LED flashes **momentarily** as each Target is struck. If it **does not** illuminate or **remains illuminated** a stuck switch is often responsible

## STARTING A ROUTINE -After a reset

Press the Target number corresponding to the required routine or workout which will then be displayed on the central LCD. The Target will illuminate and a short **Beep** will be heard confirming the selection. Any special instructions or requirement for input parameters before a routine can be started are shown on the LCD. If a Program selection error is made then press the lower **Hash Target (#)** or the **RESET** button to quit and then re-enter another Program number. Pressing the **(E)** Target will now start play the chosen routine normally starting with the audio response '**Get Ready**'.

All scoring and timing information is displayed during the workout and any special verbal announcements (e.g. '**Timeout** or '**Now Rest**') are made as required. If the wrong routine started end play by pressing the **RESET** button on the side of unit and start again.

Some of the routines may be replayed by simply striking **(E)** again. This does not work for Programs **9, 11, 13, 14, 15, or 16**. Striking **(E)** in these cases simply reverts to the normal Program selection.

PLEASE REMEMBER THAT THE **BATAK MICRO** IS A REACTION, CO-ORDINATION AND STAMINA IMPROVEMENT MACHINE - **ONLY A MODEST TARGET STRIKE IS REQUIRED.**

## STANDARD ROUTINES ver1.0

THE ROUTINES DISCUSSED BELOW ARE THOSE ASSOCIATED WITH THE SOFTWARE VERSION NUMBER DISPLAYED AFTER A RESET ON THE LCD DISPLAY AND WILL BE ADDED TO IN FUTURE VERSIONS.

### 1 ACCUMULATOR – 60 seconds

This program consists of random **Targets** lasting for 60 seconds. The **Targets** remain on until struck out the user setting the pace to slow or fast or speedup. The final score is shown on the 'SCORE' LED display.

### 2 BATAKATHON (5 Minutes) -

This program consists of random **Targets** lasting for 300 seconds (5 minutes) The **Targets** remain on until struck out the user setting the pace - slow - or - fast - or - speedup. The cumulative score is shown on the 'SCORE' LED display.

### 3 60 TARGET RACE

The user must strike out 60 **Targets** at random as quickly as possible. The number of strikes is seen on the 'SCORE' LED display together with the time taken to one tenth of a second on the 'TIME' LED display. If more than 100 seconds is taken then the routine times out to finish.

#### 4 CORNER STRETCH -60 Targets

In this program 60 Corner only **Targets** illuminate at random and remain on for 1 second. The 'TIME' LED display counting the **Targets** down from 60 to zero and the 'SCORE' LED display showing successful strikes. If the wrong Target is struck or hit 'out of time' then the whole routine speeds up!

#### 5 60 TIMED TARGETS - 1 second Targets

In this program 60 timed **Targets** illuminate in succession and at random the 'TIME' LED display counting them down from 60 to zero and the 'SCORE' LED display showing each successful strike. The strike opportunity time is 1 second.

If you strike the wrong Target or strike one 'out of time' then the routine speeds up!

#### 6 REACTION MATH ADDITION - simple

After selecting this program and pressing (E) **BATAK MICRO** will request an unlit Target between 2 and 9 to be struck to give the **time in seconds** (2 to 9) to answer the sum. If you want 5 seconds then strike 5, etc. The player is verbally given **8** very simple addition sums, the upper scores showing the numbers involved. The player has the chosen time in seconds to strike the correct Target and get a point. If the wrong Target is struck or hit 'out of time' then a beep is given to show an **incorrect** answer. At the end, the total score (out of 8) is shown on the displays and if 8 out of 8 are correct then a verbal reward and clapping are heard.

**Hint: All even numbers are on the left of the machine and all odd numbers on the right.**

#### 7 COACHING PROGRAM - up to 100 Target selection

This program allows a Trainer or Coach to enter a Target sequence of up to 100 **Targets** in any order to workout different parts of a player's body (e.g. weak on the left side, etc). To set a strike pattern first hit the zero (0) Target. Now enter a sequence of Target strikes up to **100** in any order leaving about 1/2 second between selections. You must start the sequence with the (#) key and finish it with the (#) key so **this is not available** in the sequence. Note that as each Target is struck it will illuminate briefly and be counted on the 'SCORE' LED display. Finally, when the (#) key is struck the sequence is considered finished and **BATAK MICRO** returns to the main menu screen. The Target sequence entered will now be played back every time the Coaching program is used or until a new sequence is entered.

**N.B.**

**If a strike sequence has not been set then selecting program 10 will have no effect.**

#### 8 SPEED MULTIPLICATION TABLES ( 2 - 9 )

After selecting program 8 **BATAK MICRO** will wait until the table number required is struck before starting the test. If you want the 2 times table then strike 2, etc.

The machine then tests the user verbally for an answer (i.e. 2 times 2, 2 times 5, etc.) and waits for the correct **Targets** to be struck. In this version of the program the user can take as long as required to answer. At the end of the test (12 sums) the machine shows the total time taken and the number of correct answers on the upper displays. The

object of this exercise is to lower the time taken to complete a table on successive attempts. A score of 12 results in a verbal reward!

## 9 BATAK SIMPLE SIMON - Sequence of 20 - 17 Levels

This program is based on the well known Simon game so popular some years ago. The object of this game is to reproduce a sequence of Target Lamps after they have been given by the machine without making any mistakes. Four random **Targets** are initially illuminated and then spoken followed by two beeps. It is now the turn of the Player to repeat this sequence.

If successful the next level is given where the same **Targets** are illuminated plus one more (i.e. 5 in this case) again followed by a double beep for the Player's turn. This progression continues until a mistake is made or the sequence finished. The score and level are both shown on the 'SCORE' LED displays.

## 10 BATAK MIRROR RACE - 25 Targets

This program is unusual. The user must strike out 50 **Targets** at random as quickly as possible. The strikes, however, must be the *Mirror Image* of the one illuminated to be successful. The number of strikes is seen on the 'SCORE' LED display together with the time taken to one tenth of a second on the 'TIME' LED display. If more than 100 seconds is taken then the routine times out to finish.

## 11 TARGET LOCKOUT- Rejecting a specific Target from play

This program enables the user to set a Target so that it is **not selected** during play. It is useful if, for example, a Target does not illuminate during normal play.

Select program 11 then (E). The LCD Display will show 'Target Lockout'. Press 'Enter' The Display will show 'Enter Target Now'. Now strike the Target to be excluded (remember it may not light up!). The Display will show '(E) =accept (#) =cancel'. Press 'Enter' to lockout the Target. To bring the Target back into play you **must** repeat the process but when asked to (E) =accept (#) =cancel press the cancel (#) Target.

## 12 ACCUMULATOR - 30 seconds

As program number 1 above but for 30 seconds

## 13 FLASH PROGRAM

This Program illuminates a user selected number of Random **Targets** (up to 6) for a user selected display time of 0.5 to 5 seconds. The player needs to correctly strike the **Targets** that illuminated (in any order) after the "double beep" prompt sounds. There are five Target Frames in this program. The maximum score possible is shown on 'SCORE B' LED display and the one point scored for each correct strike shown on the 'SCORE A' LED display. There are ten Frames in this routine.

## 14 ANTI FLASH PROGRAM - Remember the 6 unlit Targets!

This Program illuminates 6 Random **Targets** for a user selected display time of from 0.5 to 5 seconds. The player needs to correctly strike the **Targets that have not illuminated** (in any order) after the "double beep" prompt sounds. There are six Target Frames in this program. For each correct frame one point is scored and shown (out of a possible 6 maximum) on 'SCORE A' LED display at the end.

## 15 SNAP REACTION - 10 FRAMES

This Program measures pure reaction time. The user starts by selecting the (#) the **Targets** which will be brought into play (up to 11) finishing with the (#) Target which is clearly not in play. The program now randomly illuminates one of the chosen **Targets** and starts the clock. The Target remains lit until struck out with the time taken being shown on the 'SCORE B' LED display. This repeats for ten frames shown on the 'SCORE A' display. The **AVERAGE REACTION TIME** for the 10 strikes is finally seen on 'SCORE B'.

## 16 TOTAL RECALL - 10 FRAMES

This program is also based on the well known Simon game as above. The object of this game is to reproduce a sequence of Target Lamps after they have been given by the machine without making any mistakes. This program is different from **9** above in that the user now selects the number of **Targets** 2 - 9 brought into play. Random Targets are initially illuminated and then spoken followed by two beeps. It is now the turn of the Player to repeat this sequence.

If successful the next level is given and in this program **different Targets are illuminated** again followed by a double beep for the Player's turn. This process continues for ten frames until a mistake is made or the frames finished. The score and level are both shown on the 'SCORE' LED displays.



## BASIC FAULT FINDING

**BATAK MICRO** performs a number of tests before and during play to help diagnose any possible problems.

On any machine **RESET** all the LEDs are checked and if any are found faulty these are displayed on the **LCD** display as needing replacing. To continue without doing so just strike any key.

If during play a **LED** fails (i.e. does not light up) then this Target will be **de-selected** and not be chosen during **active** game play. In this way a routine may be played even with a number of blown **LED's**.

If a **stuck switch** is found then this fact is shown both on the **LCD** display and visually by flashing the offending switch. **A stuck switch must be replaced to continue.**

If during play a **switch sticks** then the Game will freeze and leave the offending switch flashing.

### 4.1 No response whatsoever when the machine is switched on.

Firstly remove the Back Panel from **BATAK MICRO**. Turn the machine on and see if the green **5V LED** is illuminated on the **main Logic Board**. If it is then the correct power is getting to the machine. If not then the Power Supply is probably faulty. Contact **Quotronics Ltd.**

Check that the **red Target LED** is **off** and only **goes on when a Target lamp is struck**. If it **does not light up** then this indicates a **faulty switch**. If it is **permanently on** then this indicates a **stuck switch** (see earlier on how to find which).

### 4.2 Test Mode

To enter **test mode** depress the Hash Target (#) and hold it in for about two seconds. A short **beep** is heard as the machine enters **test mode**. **All the Targets** will illuminate in turn and stay on for about 5 seconds as a **TARGET LAMP** test facility and at this stage any faulty lamps may be identified and replaced.

Each Target is numbered from **0** to **9** with **Targets ( # )** and **( E )** being designated **10** and **11** respectively. Striking any **unlit Target** will cause it to first illuminate and then its corresponding number **spoken** to show correct operation. Any **Targets** which do not illuminate indicate a fault condition, possibly a damaged switch or **LED** cluster.

### 4.3 Target Lamp stays on and cannot be struck out

If during play **one lamp stays on** and all attempts to strike it out fail then this almost always indicates a stuck switch indicated by the **red LED** on the main Logic Board being **permanently alight**. **THE STUCK SWITCH IS NOT THE ONE WHICH IS ON-see below.**

To ascertain which switch is sticking (or stuck) press the machine **RESET button**. The Target lamp which is stuck will **flash** and the LCD Display will show '**Check Stuck Switch**'.

#### 4.4 Replacing a faulty Target switch or LED

- Unplug the mains power jack.
- Turn the machine over and remove the back cover to expose the switches.
- Pull off the green, yellow, red and blue wiring crimps from the white **LED** insert.
- Remove the insert and replace the **LED** if necessary
- Replace the wiring and reinstate the new Target.
- Turn on the machine and return to **test mode** to check the repair.

**Technical support is provided by sending a Fax or E-mail to the location seen at the front of this manual. Telephone support is available at all times.**

### **TECHNICAL SPECIFICATIONS**

1. The play interface operates at 12 volt DC for total player safety
2. The **BATAK MICRO** frame is manufactured from anodized Aluminium.
3. The approximate overall size (in millimetres) is 600(W) x 600(L) x 70(D)
4. **BATAK MICRO** weighs less than 8 kg
5. 12 Polycarbonate high impact resistant and high intensity **LED Targets**.
6. Lower **LCD** Display plus two 3 digit high intensity **LED** Score and Time Displays.
7. A totally dedicated **Microcomputer** and digital sampled real speech and sound Effects guide the player through each session.
8. 16 **BATAK MICRO** routines are supplied as standard (see Routines ver1.0 software) and many more exciting software Programs are currently being developed.
9. An input (0 -7) switch allows for custom user routines to be played by default.
10. A Computer Terminal input/output facility is provided (**subject to change** )

NOTES:

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