

BATAK Pro

Hardware Operation

PRELIMINARY

Users Manual

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THE CONCEPT

BATAK Pro is a new innovative equipment for the 21st Century. It is played on a purpose built high polish stainless steel framework with bright white electronically activated Targets and is scored automatically by striking the illuminated Targets by hand.

BATAK Pro is simple to use, with the minimum of equipment, by one or more participants - for fun, competitively or for calculable exercise/keep-fit programs that don't get boring.

BATAK Pro requires only a fraction of the space normally required for Court and Racquet Sports - yet still creates the same excitement, skill, fun and speed that make them so popular.

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

1.1 THE EQUIPMENT

BATAK Pro comprises **12** Polycarbonate translucent **LED Targets** carefully arranged in a 'maximum stretch' type pattern and fixed to a strong high polish stainless steel tubular framework. The framework is either **Free Standing** or fixed to a an **MDF** back-board for **Wall Mounting**

Each Target houses a bright Solid State **LED** light cluster and a special electronic switch connected to the control Computer. 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 central **LCD** or upper **LED Displays**.

Electronic sampled speech guides the player through specific routines as required and the inclusion of an **Infra-red invisible light beam** aimed at the player midriff level allows **BATAK Pro** to sense (or otherwise) the 'presence' of a participating player.

1.2 BENEFITS

- New, competitive and exciting workouts to improve Hand and Eye co-ordination
- Minimum space requirements for maximum play/exercise potential.
- Single or multiple player participation (e.g. Team Relays)
- Variable speed accommodates players of all ages and sexes.
- No special kit required.
- Provides excellent facility for non-boring exercise as well as competitive sport.
- Simple rules
- Foolproof electronic scoring throughout play.

1.3 THE ROUTINES

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

3.1 CAUTIONS WHEN INSTALLING :

The **BATAK Pro** machine is designed for indoor use only. It should not be used outdoors or under the following conditions:-

- a. In areas directly exposed to sunlight, high humidity, direct water contact, dust high heat or extreme cold.
- b. In locations that would present an obstacle in the case of an emergency, i.e. near fire equipment or emergency exits.
- c. Fixed to a Wall with an adjacent unsuitable floor surface.

3.2 CAUTIONS WHEN HANDLING:

- a. AC power must always be turned off, and the machine disconnected, before replacing any internal parts.
When disconnecting the Power Jack plug from the machine, **remember to push in the RED Locking Tab before attempting to pull the Jack plug out.** Failure to do so may result in damage to the equipment.
- b. When unplugging the machine from an electrical outlet, always grasp the plug, not the mains lead.
- c. If any internal adjustments are required take special care when removing the front plate not to drop it or damage the machine when replacing.
- d. Care must be taken at all times to avoid electric shock when inspecting or otherwise adjusting the machine.

3.3 WHEN TRANSPORTING:

- a. Ideally the **BATAK Pro** framework should be moved by two people to avoid accident.
- b. Before moving the equipment the mains lead **must be** disconnected.

4. INSTALLATION :

4.1 To a wall via 4 **suitable** bolts through the 4 triangular bolt plates provided.

4.2 Free standing by affixing legs via the **4 M10 bolts** and wing-nuts provided.

ADJUSTMENTS

5.1 EXTERNAL CONTROLS:

Three controls located on each arm of the steel framework

5.1.1 Machine **POWER JACK PLUG** - *on the rear of the Front Faceplate*

5.1.2 Machine **RESET** - *via push button switch on the rear of the Front Faceplate*

5.1.3 Machine **SERIAL INPUTS (various)** - *via DIN sockets under each upright*

5.1.4 Machine **AUXILLARY INPUT (optional)** - *via DIN on the middle upright*

5.2 INTERNAL CONSOLE CONTROLS AND FEATURES – *on the Main Logic Board*

5.2.1 Machine Power Supply

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

5.2.2 **Sound Volume Control** - *via Blue Preset Volume control potentiometer*

5.2.3 Machine Reset

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

5.2.4 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 (see section **6.3**)*

STARTING A ROUTINE -After a reset

Press the Target number corresponding to the required routine or workout which will 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 an **error** is made on the program selection then press the lower **Hash Target (#)** and re-enter or press the Reset
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 an error is made or **the wrong routine started** then press the **RESET** button on the rear of the Front Faceplate and start again.

**** Most of the routines may be replayed by simply striking (E) again.
This does not work for programs 9,11,23,28,29,30 or 31. Striking (E) in this case simply reverts to normal program selection.**

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

STANDARD ROUTINES ver.3a

*PLEASE NOTE THAT IN ALL JUNIOR PROGRAMS TARGETS 8 AND 9 ARE NOT IN PLAY.
THE ROUTINES DISCUSSED BELOW ARE THOSE ASSOCIATED WITH THE SOFTWARE
VERSION NUMBER DISPLAYED AFTER A RESET ON THE LCD DISPLAY*

1 ACCUMULATOR - Senior

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) - Senior

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. This routine is ideal for aerobic exercise

3 50 TARGET RACE - Senior

The user must strike out 50 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 -100 Targets - Senior

In this program 100 Corner only Targets illuminate at random and remain on for 1 second. The 'TIME' LED display counting the Targets down from 100 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 EVASION -1 Second Targets - Senior

In this program 100 timed Targets illuminate at random the 'TIME' LED display counting the Targets down from 100 to zero and the 'SCORE' LED display showing each successful strike. The Targets remain on for a one second strike opportunity. If the wrong Target is struck or hit 'out of time' then the whole routine speeds up!

During the course of this routine when the player sees a **flashing Target**- simulating a foul shot in real sport - then this **must** be left. Hitting this Target will result in a verbal '**foul**' and the loss of 5 points on the score. Similarly if all the central Targets illuminate at once then **BATAK Pro** is making an **Infra red Beam Strike**. You **must** take evasive action or **lose 5 more points** - you have **1 second** to dodge the Beam.

6 BATAK TEST - Senior

This test is based on the '**BLEEP TEST**' commonly used to measure total fitness in athletes. The test has ten levels (30 Targets per level) with Target times from 1.4 seconds at level 1 down to 0.5 seconds at level ten. The increasing levels are shown on the 'TIME' LED display and points scored on the 'SCORE' LED display. The **BATAK TEST** is similar to the '**BEEP TEST**' used in training athletes in that the user is timed out if he or she fails to strike 3 correct Targets in succession. If one Target is missed then **one warning beep** is given. Likewise if two successive Targets are missed then **two warning beeps** are given. If one or two Targets are missed followed by a good strike then any previous warnings are cancelled thus allowing for recovery. The user needs to pace themselves during this exercise as the speed of the Targets gradually increase.

N.B. The only sound in this exercise is via the warning beeps.

7 50 TIMED TARGETS - 1 second Targets - Senior

In this program 50 timed Targets illuminate in succession and at random the 'TIME' LED display counting them down from 50 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!

8 RELAY 4 players (120 seconds total time) - Senior

A four player relay (30 seconds each). The 'TIME' LED display counts up to 120 seconds whilst the 'SCORE' LED display shows each successful strike.

This routine is ideal for Team Events

9 REACTION MATH ADDITION

After selecting this program and pressing (E) **BATAK Pro** 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.

10 COACHING PROGRAM

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 Pro** 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.

11 SPEED MULTIPLICATION TABLES (2 - 9)

After selecting program 11 **BATAK Pro** 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!

12 4 CORNER STRETCH -25 Targets

In this program 25 Corner only Targets illuminate at random and remain on for 1 second. The 'TIME' LED display counting the Targets down from 25 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!

13 4 CORNER STRETCH -50 Targets

In this program 50 Corner only Targets illuminate at random and remain on for 1 second. The 'TIME' LED display counting the Targets down from 100 to zero and the 'SCORE' LED display showing successful strikes. The strike opportunity time is 1 second. If the wrong Target is struck or hit 'out of time' then the whole routine speeds up!

14 25 TIMED TARGETS - 1 second Targets - Junior

In this program 25 timed Targets illuminate in succession and at random the 'TIME' LED display counting them down from 50 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!

15 50 TIMED TARGETS - 1 second Targets- Junior

In this program 50 timed Targets illuminate in succession and at random the 'TIME' LED display counting them down from 50 to zero and the 'SCORE' LED display showing each successful strike. If you strike the wrong Target or strike one 'out of time' then the routine speeds up!

16 ACCUMULATOR- Junior

This program consists of random Targets lasting for 30 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.

17 ACCUMULATOR- Junior – as 16 above but for 60 seconds

18 25 TARGET RACE - Junior

The user must strike out 25 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.

19 50 TARGET RACE-Junior

The user must strike out 50 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.

20 BATAKATHON (3 Minutes)-Junior

This program consists of random Targets lasting for 180 seconds (3 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. This routine is ideal for aerobic exercise.

21 SPRINT MATS - Junior

This program consists of 100 random Targets. The Targets remain on until struck out the user setting the pace to slow or fast or speedup. When a mat command is required

(black/white etc.) then **any unlit Target should be struck**. When the player returns from the sprint to mat(s) then the routine continues. The mats should be placed at least 2 metres away from the machine. The final score is shown on both the 'SCORE' LED displays.

22 SPRINT MATS - Senior

This program consists of 100 random Targets. The Targets remain on until struck out the user setting the pace to slow or fast or speedup. When a mat command is required (black/white etc.) then **any unlit Target should be struck**. The mats should be placed at least 2 metres away from the machine. When the player returns from the sprint to mat(s) then the routine continues. The final score is shown on both the 'SCORE' LED displays.

23 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.

24 BATAK MIRROR RACE – Senior – 50 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.

25 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 develops a fault and does not illuminate during normal play.

Select program 25 then Enter. 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 will 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.

26 ACCUMULATOR – Senior – 30 seconds – One Button Start

This program consists of random Targets lasting for 30 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. After the first game all subsequent games need only a single button 'E' press for a new game to start. To return to normal selection a machine **‘Reset’** is necessary.

27 ACCUMULATOR- Infant

This program consists of random Targets lasting for 30 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. The **four Targets 6,7,8,9** are not in play.

28 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 9 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.

29 ANTI FLASH PROGRAM – Remember the 6 unlit Targets!

This Program illuminates 6 Random Targets for a user selected display time of from 1 to 8 seconds. The player needs to correctly strike the Targets that have not illuminated (in any order) after the "double beep" prompt sounds. There are five Target Frames in this program. For each correct frame one point is scored and shown (out of a possible 5 maximum) on 'SCORE A' LED display at the end.

30 SNAP REACTION – 10 FRAMES

This Program measures pure reaction time. The user starts by striking the '#' Target and then selecting 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' LED display.

31 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 **23** 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 illumined 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

6.1 No response whatsoever when the machine is switched on.

Firstly remove the Front Plate from **BATAK Pro**. 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 is **permanently on** then **goto** section **6.3**

6.1.1 The machine suddenly goes into test mode

This indicates a **stuck switch** which will remain lit and flashing. Press the **reset button** and look at the LCD Display to confirm.

6.2 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.

6.3 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 CANNOT BE STRUCK OUT... 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**'.

6.4 Replacing a faulty Target switch

- Unplug the mains power
- Take out the two M6 Button Head screws from the Plastic Target Shade thus freeing the main Shade from the Framework.
- Pull off the green, yellow, red and blue wiring crimps. Unscrew the old switch and fit a new one.
- 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. World Wide power supply 90-240 Volts A.C. or Direct 12V Battery Input with a special Adaptor.
2. The play interface operates at 12 volt DC for total player safety.
3. The **BATAK Pro** frame is manufactured from strong tubular steel sections and finished either in a spray paint or high polish stainless steel..
4. Either Wall mounted or Free Standing.
5. The approximate overall space requirements (in millimetres) are:
 - a) Wall Mount - 1650 (w) x 100 (d) x 2000 (h)
 - b) Free Standing - 2100 (w) x 950 (d) x 2000 (h)
 - c) Main Frame size for transport purposes - 1650(w) x 1650(h)

Allow a minimum playing space of 1 metre in front of the machine (add to d dimension)

6. **BATAK Pro** weighs less than 45kg including its free standing feet.
7. **12** Polycarbonate high impact resistant and high intensity **LED Targets**.
8. Central LCD Display plus two 3 digit high intensity LED Score and Time Displays.
9. A totally dedicated **Microcomputer** and digital sampled real speech and sound effects guide the player through each session.
10. **Thirty one** workout routines (see **Routines ver3.a software**) are supplied as standard and many more exciting software programs are currently being developed.
11. An **Infra Red Strike Back Beam (SBB)** allows **BATAK Pro** to 'strike back' and sense the presence of a participating player.

NOTES:

WARRANTY TERMS

Quotronics Ltd warrants its products to be free of defects in material and workmanship under normal use and service for a period of 1 year from the date of purchase. Quotronic's sole obligation with respect to claims of non-conformance made within the one (1) year warranty period described above shall be, at its option, to repair or replace any item of Equipment that Quotronics Ltd, in its sole discretion, determines to be defective. The Customer shall obtain a Return Merchandise Authorization (RMA) number from Quotronics Ltd prior to returning any Equipment to Quotronics Ltd under this warranty by contacting Technical Support at Quotronics Ltd (Tel. 01293 431065). The Customer shall prepay shipping charges for Equipment returned to Quotronics Ltd for warranty service, and Quotronics Ltd shall pay freight charges for the return of the Equipment to the Customer, excluding customs duties or taxes, if any, up to a maximum of £50 GBP. Any extra incurred charges being borne by the Customer. All returns require a dated proof of purchase and a letter explaining the problem. Quotronics Ltd will not be responsible for items returned without an RMA or improperly packaged. Replacement Equipment shall be new or like new in performance and shall be warranted for the remaining duration of the warranty term of the non-conforming Equipment. All replaced Equipment shall become the property of Quotronics Ltd. Any claims of defects not made within such one (1) year period shall be deemed waived by the Customer.

Quotronic's warranty obligations hereunder are expressly conditioned upon (i.) the Products being properly installed, used and maintained at all times by Customer; (ii.) The Products not being subject to unusual mechanical stress or unusual electrical or environmental conditions or other acts of God; (iii.) the Products not being subjected to misuse, accident or any unauthorized installation/deinstallation by Customer or other third party; (iv.) the Products not being altered or modified in an unauthorized manner, unless approved in writing or otherwise performed by Quotronics Ltd and (v.) Customer promptly installing all Product revisions that have been released for such Products by Quotronics Ltd throughout the warranty term. Quotronics Ltd does not warrant that the Products will operate in any specific combination that may be selected for use by Customer or that the operation of the Products will be uninterrupted or error free, or that all non-conformance or defects will be remedied. Additionally, Quotronics Ltd shall have no warranty obligations for any failure of the Products to conform to the applicable product specifications resulting from the combination of any Product(s) with hardware and/or software not supplied by Quotronics Ltd. If it is determined that any Product(s) reported as defective or non-conforming by Customer during the warranty period is not defective or non-conforming, Quotronics Ltd, may, at its option, charge Customer for any labour provided and expenses incurred by Quotronics Ltd in connection with such determination, at Quotronic's then current rates. **THE WARRANTIES OF QUOTRONICS LTD AND REMEDIES OF CUSTOMER SET FORTH IN THIS SECTION ARE EXCLUSIVE AND ARE GIVEN BY QUOTRONICS LTD AND ACCEPTED BY CUSTOMER IN LIEU OF ANY AND ALL OTHER WARRANTIES, WHETHER EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION, ALL WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ALL SUCH OTHER WARRANTIES BEING HEREBY EXPRESSLY AND UNEQUIVOCALLY DISCLAIMED BY QUOTRONICS LTD AND WAIVED BY CUSTOMER.**