LOCATION AND FUNCTION OF KEY PARTS & CONTROLS

Add pictures of the timer with names of features

In keeping with Competitive Edge Dynamics policy of continuous improvement and development, CED reserves the right to make any changes or modifications in the specifications deemed necessary, without prior notice. Therefore, the above photographs and descriptions may vary slightly in detail from the actual product.

INTRODUCTION

Congratulations on purchasing the **CED7000 Shot Activated Timer**, brought to you by Competitive Edge Dynamics and Double-Alpha Academy. The CED7000 Timer is the most technologically advanced timer in the world, yet as easy to use as a mobile phone. The CED7000 Timer features a complete custom backlit display, advanced programming, memory, and a range of features that make all other timers in its price range obsolete! The CED7000 is simply the SMALLEST, MOST COMPACT, LIGHTWEIGHT, and easy to use timer in the world today! 80 g (2.9 oz) (100 x 47 x 18.5 mm / 3.9" x 1.87" x 0.7"

New features / functions include:

- Memory storage / recall and unlimited shot record & review function
- Custom PAR allows single or multiple time settings with variable delay intervals to the 0.01 sec. level
- Dual forward / reverse REVIEW function
- Illuminated full function LCD display showing at a glance total time, splits, shot number, Par, & first shot time
- Month, Day, Date, & Time displayed in 12 or 24 hour clock selection
- Optional 50 yard RF remote capability for CED BigBoard and Time Keeper
- 999.99 second time record capacity
- Split and 1st shot times displayed on all shots fired
- Combined Comstock Function
- Repetitive Mode (Face / Edge Simulation)
- Instant, Fixed, Random or Custom Programmed Delays
- Digital sensitivity shot detector with adjustable software filter
- Auto-Start Function
- Silent Operation for visual starts
- Multi-Par Mode - for multiple Par settings from one timer activation
- Spy Mode - allows silent timer activation for monitoring others and visual starts
- Stop Watch Mode – use the timer as a stop watch to clock props, moving targets, and other shooters.
- Countdown Mode
- Alarm Clock
- Auto shut-off to conserve battery drain
- Aux. jack, for external loud horn, visual starts, or target turning related use
- Self-diagnostic test system
- Super Loud beep with volume control adjustment
- Rechargeable Battery with low battery LCD indicator
- Wrist & Neckband Lanyards included

A table of contents listing each of these features is indicated on the following pages for your easy reference.

Please read this operation manual completely to familiarize yourself with all the features of the CED7000 and to ensure reliable operation.

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PREPARATION

BATTERY:

The CED7000 functions on an internal rechargeable Lithium battery. The normal life cycle is 25 hours of use or 33 days of stand-by. This estimate is based on 40 activations per hour or 1000 activations per charge cycle and may vary with difference usage. The life of the battery should provide 500 to 1,000 re-charges. The full performance of a new battery is achieved only after two or three complete charge and discharge cycles. The battery can be charged and discharged hundreds of times but it will eventually wear out. When the usage times are noticeably shorter than normal, it is time to purchase a new battery. The CED7000 Timer is designed to use a specific rechargeable battery and charger. ONLY the specific battery and charger packaged with the CED7000 should be used with the timer. Return the timer to CED or Double-Alpha Academy for a battery replacement. Contact us for prices or visit our web sites for more details.

To charge the battery, connect the lead from the charger to the DC socket on the bottom of the timer. Connect the charger to an AC wall socket. If the battery is completely empty, it may take a few minutes before the charging indicator appears on the timer display. While the timer is charging, an escalating battery symbol will appear on the right side of the LCD display window. Charging time depends on the form of charging. Using the charger will take aprx. 2 hours. Using the Optional Battery Pack will take aprx. 2.5 hours if the timer is not used during this process. An optional Auto Charger is available which plugs into the vehicle cigarette lighter jack. Charging should take aprx. 2 hours by this method.

Unplug the charger from the electrical plug and the timer when not in use. Do not leave the timer connected to the charger. Overcharging may shorten its lifetime. If left unused, a fully charged battery will lose its charge over time. Temperature extremes can affect the ability of the battery to charge. Leaving the battery (timer) in hot or cold places, such as in a closed car in summer or winter conditions, will reduce the capacity and lifetime of the battery. Always try to keep the battery between 10 C and 32 C (50 F and 90 F). It is IMPORTANT to note that the performance of both battery and LCD display will be particularly limited in temperatures below freezing.

A "Battery Indicator" is constantly displayed on the timer's LCD screen. As the battery drains power, the symbol will turn from all black to clear displaying the amount of battery life remaining. The battery symbol has three levels of indication. Full, half, and empty. When the battery reaches a low charge level, the battery symbol will begin flashing indicating time to recharge the battery. This provides ample warning to charge the battery in order to prevent timer failure due to loss of battery power.

If the battery drains too low, a warning message (Low Battery shutting off timer) will appear on the LCD display and within 30 seconds of usage, the timer will shutdown. The retention of stored data in the CED7000 will remain intact as long as the battery has a minimum of 3.6V.

BATTERY: (Continued….)
The timer continues to consume a trickle amount of power, even when turned off in order to keep the internal clock (date / time) functioning and the memory storage intact. A newly charged battery will provide over 25 hours of normal use and up to 33 days in stand-by or stored capacity.

Optional Battery Pack:
An optional Battery Pack is available that will provide up to 25 hours of extended use for the CED7000 Timer. In addition to providing power to the timer, the battery pack actually charges the timer's internal battery at the same time. When the Battery Pack is connected to the base of the CED7000 Timer, the battery symbol located on the LCD display will show an escalating signal, which informs the user that the internal battery is charging. When the internal battery is fully charged, OR the "AAA" batteries inside the Battery Pack are depleted of their charge, OR the Battery Pack is disconnected from the timer, the battery symbol will stop its escalating motion and display a solid battery level instead. If the internal battery is not fully charged, replace the two "AAA" batteries inside the Battery Pack with fresh ones and re-connect it to the timer for continued charging use. When connected to the CED7000 Timer, the Battery Pack will fully deplete its charging capabilities within 2 hours. At such time, it is recommended to disconnect the Battery Pack from the timer. Not all Alkaline batteries have the same output. Therefore, depending on the brand and rating, two "AAA" batteries may provide from 50% to 80% of a complete charge to the timer's internal battery.

Example: Energizer X92 batteries provide 80% charge.

OPERATION
BASIC FUNCTIONS:
The CED7000 can be turned on or off by pressing (and holding) the "CLEAR" for a "one second" duration. It is recommended that the Timer be turned off when not in use to conserve battery power. **The CED7000 is designed to automatically shut-off after approximately fifteen minutes if no input is received.** The LCD will blank-out, but no loss of recorded input will occur. The user can re-activate the timer by pressing (and holding for one second) the "CLEAR" button.

The CED7000 is automatically set in "Comstock" Mode. The International IPSC Rule book describes this as: *9.2.2 "Comstock": Unlimited time stops on the last shot, unlimited number of shots to be fired, stipulated number of hits per target to count for score.*

To use the CED7000, simply turn on the Timer and press one of the two "START" buttons to activate it. A beep will sound, (after a three second fixed delay) while simultaneously starting the clock. (note – when in use, NO forward time is shown on the display until a shot is registered)

Each shot fired will register on the LCD display and continue to do so up to a maximum of 999.99 seconds. There are two START buttons on the CED7000. The first one is located on the top end of the timer, while the other is positioned on the front center console. Upon completion of shooting, the LCD display will indicate the (first) 1st shot recorded, the total shots fired / received and the cumulative time recorded. It will also display the Split time. The splay also provides the day, month, year, and time, unless this function is turned off.

BASIC FUNCTIONS: (Continued….)

To review the time each shot was fired, press either the "REVIEW" button located on the top end of the timer or the one on the front center console and the LCD display will return to the first shot and time recorded in the current string. This procedure can be continued throughout all shots recorded. The REVIEW function can be viewed in forward or reverse progression by using the UP/DOWN Directional keys. The memory stores ten strings with up to 39 shots per string at all times. If a string contains more than 39 shots, when stored to memory, the timer will retain the first 38 shots and then the 39th shot time will be the actual last shot fired in the string. (Example – If the string contains 44 shots ending at 21.23 seconds, when the string is stored into memory, shot 38 will appear as fired and shot 39 will appear as 21.23). By pressing the LEFT/RIGHT Directional keys (when in REVIEW function), the user can move from one string to another. There are always the most recent 10 strings maintained in memory.

In addition to the shot number and cumulative time, the split time (difference) between the most recently recorded shot and the preceding shot time will appear on the LCD display. The CED7000 has the capability to record unlimited shots fired. The memory will retain the first 99 times received, and then replace the 99th time with the last shot time received thereafter. When the "REVIEW" button is pressed the first shot / time will always appear. You can then review through each shot recorded by pressing one of the REVIEW buttons.

By pressing the "START" button again, the timer automatically stores in memory the previous data received and activates the buzzer/timer accordingly. However, **the CED7000 is designed to prevent accidental loss of results. In order to re-activate the "START" button, the "REVIEW" button must be pressed at least once. An exception to this rule is when the "Combined Comstock" mode is in use. Refer to "Combined Comstock" section for further details. The user can also override this function by selecting the "AUTO START – ON" feature from the Menu options**

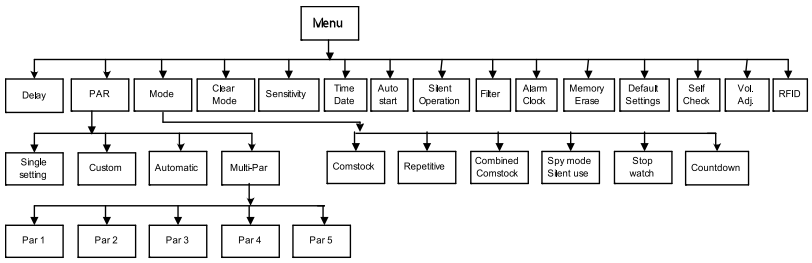
LCD DISPLAY:

The illuminated display provides review of the most recent cumulative time recorded, split-time, par-time, first (1st.) shot received, and the total number of shots fired. It also indicates which start delay mode the timer is set in, the current function mode (event in use) and has a "battery symbol" indicator which flashes when a battery charge is required.

The display will illuminate whenever input data is received or function buttons are pressed. This is ideal for "low light" or indoor shooting conditions.

MENU / MODES:

The CED7000 Timer has a complete menu of functions / features many of which offer custom programs, settings, and capabilities that no other timer on the market today provides. Below is a list of the Menu options:



PROGRAMMING THE TIMER:

Press the "MENU" button to display the full range of settings & features of the CED7000 Timer. In the center of the timer there are four directional keys with raised edges that provide directional movement within the Menu selection. In the center of these keys is the "ENTER" button, which is marked with an "E". The "UP & DOWN" keys allow the user to select a setting or function from the Menu, by moving the highlight up or down. The "LEFT & RIGHT" keys allow the user to select a setting or value within a given mode, or function. Each directional key moves the highlighted selector in the direction of the key pressed. When a value has been selected (highlighted), press the ENTER button to store (confirm) it. Example: Press MENU, press the DOWN key one time to highlight PAR, press ENTER. The display will show highlighted PAR. Press ENTER to confirm this. The display will then highlight the "0" in the left most column. To set 5.3 seconds PAR, continue pressing the RIGHT key one time till it highlights the "seconds" column. Press the UP key five times to display the number "5" . Then, press the RIGHT key again to highlight the 0.10 column and the UP key till the number "3" is displayed. Once you have the correct time selected, press ENTER to store the selected PAR.

Press ENTER to save data
Press CLEAR to exit without saving data

To clear an existing Par setting, select the Menu, and then scroll down to CLEAR MODE and press ENTER. This will clear any PAR settings, functions, or mode in current use and return the timer to Comstock ready mode.

DAY/DATE/TIME SETTING:

Select from the Menu "Time & Date", press ENTER and then select from the following options. "Set Time", "Set Date", or "Display Mode". Within "Display Mode", select one of the following time formats: Date & Time, Date Only, Time Only, or Hide All. If "Hide All" is selected, the date & time functions will not be displayed on the timer screen until the user returns to the function and selects one of the other options, such as "Time & Date".

DAY/DATE/TIME SETTING: : (Continued….)
The program allows the user to select time or date only, or to set both which in turn displays each on a 5 second rotational basis at the bottom of the LCD display window. In setting the time, the user is given options of either AM / PM and either 12 or 24 hour clock. When setting the date, the month will appear first, followed by the day, and then year. Selecting "Hide All" removes both date & time from the display screen, but both will remain actively set in the timer memory. To return the Time & Date to the display, the user must return to the function and selects one of the other options, such as "Time & Date".

If the battery charge is depleted, stored data in memory will be lost, and once the timer battery is charged again, the day, date, time must be reset.

MEMORY STORAGE:
The CED7000 Timer includes MEMORY STORAGE that allows previous times & splits, number of shots fired, and other displayed information to be recalled. The timer automatically stores each set of gathered shots & times in a STRING and saves it. Example: The Timer records 6 shots with a cumulative time of 3.58 seconds. When the timer is restarted by pressing the START button, the data from the previous set (6 shots with times and splits) is automatically saved as STRING 2. Each new String is stored in memory until it is full, at which point, the timer drops off the first string stored, moving each remaining string in memory up one position and continues to store into memory the latest string plus the previous nine ones before it. The timer has the capability of storing up to 10 strings in total, including the current one, with each string containing as many as 39 shots. The memory will store the first 38 shots received and then the LAST shot of the string if containing more than 38 shots. Therefore, if a string contains 48 shots, the memory stores the first 38 shots fired and then the 39^{th} shot will be actually the last shot recorded which in this example is #48. Shot 39,, will always be the last shot received in the string.

To review a previous STRING of shots recorded, press the REVIEW button, and then press either the right or left directional key to select the desired string from memory storage. Once the string is selected, the user can review shots within the string by pressing the up or down directional key. The most recently (current) recorded string will always be shown as Record #1. The previous strings will then be stored as Record 2 through Record 10. String 10 would then be the oldest string maintained in memory and the next string to be dropped from memory.

To remove (erase) the strings from the timer memory, select MEMORY STORAGE from the Menu and highlight ERASE and press the ENTER button. The timer will then ask you to confirm YES or NO. To erase ALL of the strings in memory, highlight YES and press ENTER again. This process will erase all memory stored in the timer. This feature is ideal when sharing the timer with someone else during practice as it allows each user to record into memory only their own shooting results.

CUSTOM PROGRAMMED FEATURES / FUNCTIONS:

The CED7000 Timer has a large range of custom programmable features and functions. The timer is designed to retain all customized settings even after being shut off. The user can reset the timer to the original default settings, by selecting from the menu “DEFAULT SETTINGS” and then selecting “YES”, which will return the timer to the original factory settings.

FIXED / RANDOM / INSTANT DELAY SELECTION:

The CED7000 provides four types of start delays. A "**Fixed**" (F) three-second delay from the time the START button is pressed to the activation of the buzzer and clock, provides sufficient time for preparation and standby. A "**Random**" (R) delay provides a randomly selected "two to five" second delay, designed to eliminate any anticipation during individual practice or competition use.

An “**Instant Go**” (I) enables total control for the user by activating the timer instantly upon pressing the START button. Additionally, the user can choose a custom delay, by selecting the “**Custom**” (C) setting in the preference menu and entering a specific delay up to 9.9 seconds.

To select a DELAY, press MENU and highlight DELAY and press ENTER. Scroll up or down to select the desired delay (FIXED, RANDOM, INSTANT, CUSTOM), highlight it, and press ENTER to confirm it. If a CUSTOM delay is selected, the display will then show the user two digits (0.0). Press the “right” key to highlight the first digit and then scroll up or down to select a value from 1 to 9 and then press the “right” key to highlight the second digit (.0) and select a value for it. Then confirm the time set by pressing ENTER.

AUTO-START:

The CED7000 Timer provides the ability for reactivating the timer without pressing the REVIEW button first. To disable this safety feature designed to prevent false starts or loss of data, scroll through the program menu highlighting the AUTO-START mode and press ENTER. Select “ON” and confirm it by pressing ENTER again. When AUTO-START is activated, the CED7000 timer will restart each and every time either START button is pressed. To deactivate AUTO-START, follow the above procedure selecting “OFF”.

SILENT OPERATION:

The CED7000 Timer can be used for Cowboy Fast Draw and other applications where a visual start instead of sound is required. In selecting this function, the CED7000 timer activates quietly but still produces a 3.7V output from its AUX jack allowing a visual start signal to be synchronized to the timer. All other functions remain as normal. Select Menu, scroll down to SILENT OPERATION and highlight ON or OFF. Then press ENTER to select the mode preferred.

PROGRAMMABLE PAR TIME SELECTION:

A single PAR time can be set allowing the user to create a fixed interval of time. Selection of a "Par time" from 0.60 to 999.99 seconds can be accomplished with the CED7000. (Note: Par time can be set to the 1/100th sec level) Since the START buzzer duration beeps for 0.50 seconds, the minimum PAR time accepted by the timer is 0.60 seconds. To select a PAR time, press MENU. Scroll down to select the "PAR" mode, highlight it, and press ENTER to confirm it. Select Par (for a single Par setting), Custom Par (for up to 11 Par times to be activated one after the next each timer the START is pressed), Auto Par (for up to 11 Par times and 11 delay times to be run automatically from one activation), or Multiple Par (to run up to 5 Par times from one single activation) and press ENTER again. Press the "right" key to highlight the first column and then scroll up or down to select a value from 0 to 9 and then press the "right" key to highlight the second column and select a value for it and so on until all five value columns are set. Once the desired Par time is displayed, then confirm the time set by pressing ENTER.

To activate the timer and the selected "Par time", simply press the START button. A second "stop" beep will occur at the selected "Par time". The timer will continue to record shots even after the selected Par time has elapsed. This allows accurate review of all late shots and their exact time fired. **When in PAR time mode, the second beep will sound at the exact pre-set time for a 0.30 second duration.**

(Example – If a 5.00 second PAR time is selected, the PAR time is counted from the instant the buzzer begins sounding (zero time) with the final 0.30 second beep sounding precisely at 5.00 seconds, ending at 5.30 seconds total time)

The CED7000 timer also features the ability to be programmed with up to eleven multiple PAR times as well as multiple delay intervals. Additionally, each PAR time and delay interval can be set to different time lengths. When programming strings in Custom or Automatic Par, the user can clear values for any string shown on the display by pressing the CLEAR button once. If the CLEAR button is pressed twice, it will erase all values set for the Par selection.

When in "Custom Par", only the Par times are set for the number of desired strings up to a maximum of eleven. The user then activates the timer by pressing the START button, which in turn runs each selected Par string individually. The user must re-press the START button to activate the next string, but the timer moves forward to the next programmed Par each time it is activated until it completes all strings programmed.

In AUTOMATIC setting, both PAR and DELAY times are selected for a number of strings up to a maximum of eleven. Once the START button is pressed and the timer activated, it will run ALL strings programmed automatically until completed.

Example:

String 1 PAR	3.00 sec.
Delay	2.00 sec.
String 2 PAR	5.00 sec.
Delay	3.00 sec.
String 3 PAR	6.50 sec.

PROGRAMMABLE PAR TIME SELECTION: (Continued….)
The example above shows that three Par strings were programmed to function consecutively, each with a different Par time and a different delay between each Par setting. The timer will begin after the preset delay, with the first Par time of 3.0 seconds, followed by a 2 second delay. Each new Par time string will begin with the buzzer and clock counting from ZERO and the buzzer resounding at the end of selected Par time, followed by the given delay (if any is set) and then the starting of the next Par string and so on until the last Par time string programmed has been completed. The user MUST select both a Par & Delay time before pressing the ENTER to store the data. **No Delay time should be set for the last Par time selected.**

PLEASE NOTE: A programmed function may be stopped (interrupted) at any time during the running of the program by pressing the REVIEW button. The timer then proceeds to the next string. If the user wishes to repeat the first string again, press CLEAR button twice, which returns the timer to the first string Par / delay. If the user then wants to move forward to the next string, without running the first string, press the START button, followed by the REVIEW button BEFORE the countdown delay reaches zero (this will not work in INSTANT delay). This will progress the timer forward through the automatic Par sequences one by one.

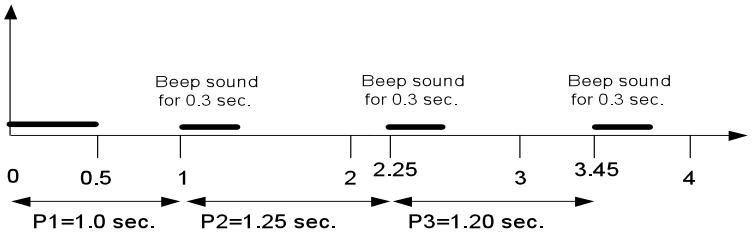
MULTI- PAR TIME SELECTION:

This innovative feature gives the user a string of up to five possible Par beeps based on one timer activation only. The user can set Par times to the hundredth of a second for precise practice use. This function is excellent for dry fire practice, draws, reloads, and transitional movement.

For use, select PAR and then scroll down and select "MULTI-PAR", highlight it, and press ENTER to confirm it. The user will see Multi-Par 1 with 00.00 to the right if it. Press the "right" key to highlight the desired column and then scroll up or down to select a value from 0 to 9 and then press "right" key to highlight the next column and select a value for it and so on until all four value columns are set. Press ENTER to confirm the setting and advance to the next Multi-Par setting to be selected. The timer allows up to five Par times to be selected and entered in Multi-Par. Once ALL of the desired Par times have been selected and entered, then confirm the times set by pressing ENTER again. Due to the duration of the START and PAR beeps, the first Par (in Multi-Par) can not be set for less than 0.60 sec., with each subsequent Par being not less than 0.40 seconds.

Example:	Minimum allowed setting due to beep duration
P1= 01.00	00.60
P2= 01.25	00.40
P3= 01.20	00.40

MULTI- PAR TIME SELECTION: (Continued….)



(The above example shows three Par times being activated by a single start beep. A total of four beeps will be emitted from the timer. One START beep and three PAR beeps at the intervals selected. Each PAR time entered will be based from the previous one. Therefore in the above example, from the timer activation (start beep), the next beep will begin at 1.0 second, followed by another beep starting at 2.25 seconds, with the final beep starting at 3.45 seconds.)

To activate the timer and the selected "Par times", simply press the START button. A second "stop" beep will occur at EACH of the selected "Par times". The timer will continue to record shots throughout the entire process, even after the selected Par times have elapsed. This allows accurate review of all shots and their exact times fired. This selected programming will remain active until cleared. This allows the user to practice a given selected drill over and over again.

PLEASE NOTE: When using Multi-Par, the timer display will indicate the multiple Par 1 value as the PAR time on the display and show the mode (MULTI-PAR1) in the lower display matrix area. Once the timer is activated and as each Multi-Par setting progress, the current value will appear on the display in an ongoing progression.

(When in a PAR time function, ALL (Par) beeps will sound at the exact pre-set time for a 0.30 second duration! Note, that when in Multi-Par, a maximum Par time of 99.99 seconds is allowed)

To clear an existing Par setting, select the Menu, and then scroll down to CLEAR MODE and press ENTER. This will clear any PAR settings, functions, or mode in current use and return the timer to Comstock ready mode.

REPETITIVE MODE:

This advanced feature of the CED7000 is ideal for PPC, UIT, Police, & Military qualification type courses where a series of simulated "exposures" at fixed intervals are required. This function simulates the effect of a turning target system where the "Face" and "Edge" times are selected by the user, as well as the desired number of times it is to be repeated.

REPETITIVE MODE: (Continued….)
Select MODE from the MENU and then the REPETITIVE Mode. The user then selects a given PAR time, followed by a specified EDGE time and then the number of times it is to be repeated. Use the right/left directional keys to move forward or backward and the up/down directional keys to select value for each setting. Keep in mind that the selected number of REPEATS is added to the first activation. Therefore, if 3 repeats are selected, the timer will run the first Par time and then repeat it three times, making a total of FOUR Par (Face) times.

The start of the selected "Face" period is indicated by the pressing of the "Start" button and the sounding of the buzzer. If the Auxiliary jack is in use, a 3.7 volt D.C. impulse will be emitted in direct synchronization with the buzzer, which allows the user to activate a real turning target replay if so desired. At the end of the set Par time, the buzzer (and 3.7 volt impulse if in use) will beep for 0.30 seconds indicating the end of the "Face" period, and the beginning of the "Edge" period. After the selected EDGE time expires, the sequence will start again, and continue doing so until it has completed the full amount of repeats that have been pre-set into the timer.
The “Repeats” will be displayed in the STRING column during the “Edge” time, which in turn will display as a countdown in the same fashion as a normal delay does. During the “Face” time, the timer will display shots received in the SHOT column.

*** A programmed function may be stopped (interrupted) at any time during the running of the program by pressing the REVIEW button. However, pressing the REVIEW button will return the program to the beginning.**

COMBINED COMSTOCK MODE:
The CED7000 features the ability of combining several “Comstock” scores cumulatively. Designed for situations where the user wants to add the time of two or more strings together, but require separate start beeps. When the Timer is set in this mode, it will restart from the exact time and number of shots last displayed on the timer prior to restarting it and will continue to accumulate both from that point onward. The user can re-start the timer as many times as desired, with each new start resulting in a continued cumulative shot and time recording. To re-start the timer from zero, press the “CLEAR” button TWICE. To end the “Combined Comstock” function, enter the preference MENU, select MODE, and then select “COMSTOCK” & press enter or select CLEAR MODE from the Menu and press ENTER. This will clear any setting, function, or mode in current use and return the timer to Comstock ready mode.

SPY MODE:
Designed to allow the user to SPY on and to learn from other shooters. When the “Spy Mode” is selected, the timer will switch automatically to “Instant Start” activation, and will turn up the sensitivity to level 7. Additionally, the buzzer will not sound when the timer is activated. When in this mode, the Par function is disabled since there is no beep sound, Pressing the START button will silently and instantly activate the timer, allowing the recording of shots fired in local proximity of the timer. The higher sensitivity level setting will enable the timer to pick up shots from a greater distance enabling the user to record (monitor) another shooter’s performance. If the user decides a greater or lesser level of sensitivity is needed, the setting can be manually changed by following the directions outlined in the “SHOT DETECTION MICROPHONE” section of this instruction manual.

SPY MODE: (Continued….)
This mode is also perfectly suited for a 2nd RO on the stage to create a backup time on his own timer.

PLEASE NOTE: In this mode, the timer may also pick up other interferences as well due to the heightened sensitivity setting level. In some cases where a stage of fire may involve long distances, the timer may fail to register all shots due to the distance and sensitivity limitations.

STOP WATCH MODE:

Many times a shooter wishes to measure on a stage of fire, the timing sequences and motion of targets, props, positions, as well as the transition times between various points of reference. Sometimes, it is simply clocking the times of other shooters being watched. The CED7000 provides this function with its built-in Stop Watch mode. When selected, the CED7000 timer acts as a Stop Watch. When in this mode, both the microphone and buzzer on the timer are disconnected and will not function. To activate the Stop Watch, once in the Stop Watch mode, simply press the START button. The clock will display its running time in the TIME area of the display window. To effect Laps, press the REVIEW button for each lap time desired. The Lap number will display in the SHOT area on the display window and the lap time in the SPLIT area.

To stop the time, press the START again. To then review the laps, press the REVIEW button, which displays each lap, its number and time. To clear all times and laps, press the CLEAR button once. If the START button is pressed a third time without clearing the data stored, the internal clock will continue running within the previous string displaying the current cumulative time from the original start point. All lap data will be retained as part of the previous / current string until cleared.

COUNTDOWN MODE:

In Countdown Mode, upon START activation, the CED7000 Timer will beep and begin counting down backward from any selected PAR time to zero at which point, it will beep again. To activate Countdown mode, press the MENU button, then MODE and ENTER. Scroll down and highlight COUNTDOWN, press ENTER again. Countdown Mode will function with any delay setting, however, a Par time MUST be entered to function.

PLEASE NOTE - The timer will NOT record shots or accept input data while operating in this mode.

(This function is ideally suited for the National Shooting Complex "Sportsman's Team Challenge National Championship" or similar types of events. Ideal for controlling time-restricted match stage walk through times)

ALARM CLOCK:

The CED7000 allows the user to program a set time to be awakened or notified at. No need to be late for a scheduled appointment, or in returning to a match stage after lunch. To program the ALARM CLOCK on the CED7000, the "DAY/DATE/TIME SETTING" must first be programmed and active. See that section of this instruction manual for details.

ALARM CLOCK: (Continued….)

Select MENU, and then scroll down to ALARM CLOCK and press ENTER. Four segments will appear "00.00" representing hour & minute. Press the right diagonal button moving the cursor to each segment. Press the up/down diagonal button to select a given time. Continue pressing the right directional button after the time has been set to advance to AM / PM. Highlight either AM or PM and press ENTER to set the time selected. If the time has been set in a 24-hour format, no AM/PM will appear. The user has the ability to turn on or off this function by then highlighting ON or OFF and pressing ENTER. The time selected will remain until changed allowing the user to activate the function numerous times without changing the time details. When the selected time is reached, the timer will produce short loud beeps until turned off. To "turn off" the Alarm Clock function once activated, simply press either START button, which in turn silences the timer and turns off the Alarm Clock function.

PLEASE NOTE: The Alarm Clock function operates on a 12 or 24 hour standard, based upon what has been preset in the timers "DAY/DATE/TIME SETTING". The AM/PM function only operates when the timer is set to a 12 hour standard. If 24 hour standard is in effect, the user MUST enter an appropriate time ranging from 1 to 24 hours.

SELF-CHECK DIAGNOSTIC TEST SYSTEM:

The CED7000 incorporates a self-check diagnostic test program enabling the user to check systematically if the timer is functioning properly. This provides additional quality control with fast, and easy self check capabilities in case the timer has been dropped or possibly damaged in some way. Select "Self- Check" from the program MENU and press ENTER. The program will then give the user instructions to be followed, which will in turn test each button, key, and the LCD display segments for possible damage. When completed, if all parts and functions are operational, the program will indicate that the diagnostics have been completed. If a button or key function is defective, the program will not continue indicating to the user that repair is required. If the LCD display is damaged, the user will be able to visually see broken segments during the diagnostics program.

AUXILIARY JACK (AUX.):

An auxiliary output jack is located on the bottom end of the CED7000. When a male jack plug is inserted (3.5mm mono plug), a 3.7 volt DC current is emitted in exact conjunction with the buzzer, matching the duration of the beep. When the PAR time setting is in use, the impulse emitted at the completion of Par matches that of the buzzer sound exactly. This feature can be utilized to operate a remote, self-powered buzzer, external horn (see the CED2000), light, loud-speaker, or a low-voltage relay for target turning applications.

SHOT DETECTION MICROPHONE:

A high sensitivity microphone is used in the CED7000 to insure accurate recording of shots. A digital "sensitivity adjustment" range setting allows for "fine tuning" of the timer to unusual environment conditions such as high berms & backstops, small indoor ranges, or dense fog conditions where gun fire can result in unusual amounts of echo's bouncing back at the timer.
The digital numbered settings (1 to 8), provide a flexible range of adjustment of the microphone when needed, depending on the shooting location and conditions. (1 = least sensitive / 8 = most sensitive). To adjust the sensitivity, select MENU, then SENSITIVITY, and then scroll up or down using the Directional buttons to select the desired sensitivity level.

SHOT DETECTION MICROPHONE: (Continued….)

The CED7000 shot-detecting microphone is software designed and factory preset at a mid level range (4) that provides accurate function under most normal types of outdoor conditions. However, due to various changes in range conditions, climates, and locations, it is strongly recommended to test your timer on the range it is to be used, prior to competition use, to insure it is properly set. This will eliminate any chance of recording errors!

Always hold the timer with the front panel facing the Shooter! The microphone is located on the upper front panel, positioned under the display screen and should have direct, clear line-of-sight to the Shooter. In cases where a person is shooting around walls, or other objects, the timer should be held in a manner that provides unobstructed view to the person shooting. The Range Official should be careful not to cover the microphone, or allow ejected cases to hit the timer during recording. Ideally, the timer should be within six feet of the person firing the shot to be recorded.

FILTER:

The CED7000 comes with a factory preset default software filter set at 8/100 of a second. Therefore, the timer will only record shots as fast as 9/100 of a second. This filter is designed to prevent unwanted echo sounds, which cause erroneous recordings on timers. However, the CED7000 allows the user to custom adjust the software filter from 9/100 down to 2/100 of a second or any level in between. Such adjustments modify the CED7000 allowing the timer to detect shots as fast as 33 shots per second or up to 1,980 shots per minute. To adjust the filter setting, select MENU, and then FILTER, and use the directional buttons to select the desired amount of time to be filtered.

BUZZER VOLUME:

The CED7000 is set with two volume levels for the buzzer beep. The normal one is a loud medium to high frequency beep in excess of 110db. Selecting the SOFT setting will lower the frequency and db level by aprx. 50%. This setting is perfect for home dry fire practice and other uses where a loud sounding beep is not desired.

RFID SETTING:

If this CED7000 Timer has been purchased with the optional RF capability function for use with the CED BigBoard or CED Timer Keeper, the following section will provide information for linking the timer to a specific CED BigBoard or CED Time Keeper.

The CED7000 Timer can be ordered with an optional RF wireless remote transmitter, which has an unobstructed broadcast range of up to 50 yards to either a CED BigBoard or CED Time Keeper.

To link a “CED7000RF” timer to one of these other CED products, press the Menu button and scroll down to RFID. Select a four-digit number of your choice and enter it into the timer. Then enter the same number into either the CED BigBoard or CED Time Keeper to be linked with. Once completed, the CED7000 timer will transmit recorded times instantly to the linked unit as they are recorded on the timer. The CED Timer Keeper will also display the number of shots and the split times as well.

FCC & R&TTE CERTIFICATION / INFORMATION:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

* Reorient or relocate the receiving device.
* Increase the separation between the equipment and receiver.
* Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. (if an outlet is used)
* Consult the dealer or an experienced radio/TV technician for help.

GUARANTEE

** 30 DAY MONEY BACK GUARANTEE **

The CED7000 was designed to provide the optimum Timer at an affordable price. We want you to be completely satisfied with our product. If you are not satisfied, simply return it to us with receipt of purchase, in undamaged condition within 30 days for a full refund.

WARRANTY

** TWO YEAR LIMITED WARRANTY **

If the CED7000 breaks due to defective parts or workmanship, we will replace it for you within the first two years. This warranty does not cover any failures attributable to abuse, mishandling, failing to follow operating instructions, alterations, or accident. If you accidentally break it, we will repair it at cost for you. All claims must be accompanied by the original sales receipt or written proof of purchase, and be returned in a properly packaged manner with shipping charges prepaid. We are proud of our product and we want you to be too.

WARRANTY: (Continued….)

Returns or warranty service should be directed through your purchase location or directly to Competitive Edge Dynamics in North America and Asia and to **Double-Alpha Academy** in Europe and Africa.. If you should encounter any problems or wish to correspond on any matter, please write or fax to one of the following locations with details of the problem and if needed, a return authorization will be provided.

In North America:
Competitive Edge Dynamics, USA
P.O. Box 486,
Orefield, PA 18069-0486
Phone: (610) 366-9752
Fax: (610) 366-9680
Email: info@CEDhk.com

In Asia
Competitive Edge Dynamics Ltd.
GPO Box 10590
Central, Hong Kong
Phone (852) 2866-6802
Fax: (852) 2866-6505

Visit CED Web Site at: www.cedhk.com

In Europe and Africa,
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Visit Double-Alpha Academy's website at: www.doublealpha.biz