



CED7000 GEN-2

USER MANUAL



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INTRODUCTION

The CED7000 GEN-2 Shot Timer is the latest evolution of one of the most popular and trusted shot timers on the market, used by shooters and range officers around the world for over 15 years. Building on the proven performance of the original CED7000, the GEN-2 model brings a series of thoughtful upgrades to enhance durability, usability, and convenience.

Key improvements include new rubberized buttons for better tactile feedback and longevity, a more powerful battery offering 25% longer runtime, a scratch-resistant Gorilla Glass screen protector, and a modern USB-C charging port.

With eco-friendly packaging and full compatibility with existing CED7000 accessories, the GEN-2 continues the legacy of reliability while integrating modern enhancements to meet today's shooting needs.

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Battery & Charging

The CED7000 GEN-2 is powered by an upgraded 1200mAh internal rechargeable lithium battery—a 33% increase over the previous model's 900mAh capacity. This enhancement provides noticeably longer usage between charges. Full battery performance is achieved after 2–3 complete charge and discharge cycles.

Charging is done via the USB-C port using the included cable. When connected, a battery icon appears on the LCD display and shows charging progress. Charging typically takes around 3–4 hours. The battery icon displays three levels—full, half, and low—and will begin flashing to indicate when a recharge is needed. If battery voltage drops too low, a warning will appear and the unit will shut down within 30 seconds, though internal memory and settings remain safe as long as the voltage stays above 3.6V.

The timer draws a small amount of power even when turned off to maintain the internal clock and memory. To preserve battery life, disconnect the charger when not in use and avoid leaving the timer in extreme hot or cold environments.



Operation – Basic Functions

To power the CED7000 GEN-2 on or off, press and hold the **CLEAR** button for one second. The timer will automatically power down after 15 minutes of inactivity to conserve battery, but no data will be lost. Reactivate it by holding the **CLEAR** button again.

By default, the timer operates in **Comstock mode**, as defined by IPSC: unlimited time and shots, time stops on the last shot.

To start a session, power on the timer and press either **START** button (top or front). After a 3-second delay, a beep will sound and the timer begins. No time appears on the display until the first shot is registered.

The LCD will show the first shot time, total shots fired, split time, and total elapsed time (up to 999.99 seconds). Date and time are also displayed, unless disabled.

Press either **REVIEW** button (top or front) to view individual shot times. Use the **UP/DOWN** arrows to scroll through shots, and **LEFT/RIGHT** to switch between stored strings. The timer stores up to 10 strings, with 99 shots per string. If more than 39 shots are fired, the timer stores shots 1–38 and the last shot as shot 39.

Pressing **START** again stores the current string and begins a new one, but to avoid accidental overwriting, the **REVIEW** button must be pressed first (unless “AUTO START – ON” is enabled or in Combined Comstock mode).

LCD Display

The illuminated display shows the most recent cumulative time, split time, Par time, first shot, and total number of shots fired. It also indicates the selected start delay mode, current function or event mode, and includes a battery icon that flashes when charging is needed.

The display automatically lights up whenever a button is pressed or data is received—perfect for use in low-light or indoor conditions.

Menu

Press the MENU button to access the full range of settings and features on the CED7000 GEN-2. Use the four directional keys (with raised edges) to navigate the menu:

- **UP/DOWN**: Scroll through menu options
- **LEFT/RIGHT**: Adjust values or move between fields
- **ENTER** (“E” button): Confirm selections
- **CLEAR**: Exit without saving

Example – Setting a Par Time:

1. Press **MENU**, then press **DOWN** to highlight **PAR**, and press **ENTER**.
2. The leftmost digit will be highlighted. Use **RIGHT** to move between columns.
3. Use **UP/DOWN** to adjust values. For 5.3 seconds, set the seconds column to “5” and the 0.10s column to “3”.
4. Press **ENTER** to save the setting.

To clear a current **PAR** setting or active mode, go to **CLEAR MODE** in the menu and press **ENTER**. This resets the timer to default Comstock mode.

Setting Day, Date & Time

From the MENU, select Time & Date and press ENTER. You'll have the following options:

- **Set Time** – Choose between 12-hour (AM/PM) or 24-hour format.
- **Set Date** – Enter the date in Month/Day/Year format.
- **Display Mode** – Choose how (or if) the time/date appears on screen:
 - **Time & Date** (rotates every 5 seconds)
 - **Time Only**
 - **Date Only**
 - **Hide All** (removes both from display but retains them in memory)

If **Hide All** is selected, date and time will no longer appear on the screen, but remain stored in memory. To show them again, revisit **Display Mode** and choose a visible format.

Note: If the battery is fully depleted, date and time settings will be lost and must be reset once the timer is recharged.



Memory Storage

The CED7000 GEN-2 automatically stores each shooting session as a **String**, saving all shot times, splits, and total shots fired. For example, if you fire 6 shots in 3.58 seconds, that data is saved as **String 1**. When you press **START** again, the next session is stored as **String 2**, and so on.

The timer can hold up to **10 strings**, with each string storing up to **100 shots**. If more than 100 shots are recorded, the timer saves the first 99 and the last shot in the string. For instance, if you fire 102 shots, shots 1-99 and shot 102 will be saved.

To review stored strings:

- Press **REVIEW**, then use the **LEFT/RIGHT** keys to scroll through strings.
- Use **UP/DOWN** to review individual shots within a selected string.
- The most recent string is **Record #1**, and the oldest is **Record #10**, which is the first to be overwritten as new strings are added.

To erase memory:

- Go to **MEMORY STORAGE** in the menu, highlight **ERASE**, and press **ENTER**.
- Confirm by selecting **YES** to delete all stored data.
- This is especially useful when sharing the timer, allowing each user to start with a clean slate.

Custom Features

The CED7000 GEN-2 offers a wide range of customizable settings and functions, all of which are saved even when the timer is turned off. To restore factory defaults, go to the **Menu**, select **Default Settings**, choose **YES**, and the timer will reset to its original settings.

Start Delay Options

The CED7000 GEN-2 offers four start delay modes:

- **Fixed (F)**: A 3-second delay after pressing START—ideal for getting into position.
- **Random (R)**: A 2–5 second randomized delay to reduce anticipation during training or matches.
- **Instant (I)**: The timer starts immediately when START is pressed—perfect for full manual control.
- **Custom (C)**: Set your own delay, anywhere from 0.1 to 9.9 seconds.

To select a delay mode:

1. Press **MENU**, scroll to **DELAY**, and press **ENTER**.
2. Use **UP/DOWN** to choose between **Fixed**, **Random**, **Instant**, or **Custom**.
3. If **Custom** is selected, use the **RIGHT** key to highlight each digit and **UP/DOWN** to set your delay.
4. Press **ENTER** to confirm.

Auto-Start

The CED7000 GEN-2 includes an **Auto-Start** feature that allows the timer to restart immediately when either **START** button is pressed—no need to press REVIEW first. This bypasses the safety lock that prevents accidental overwriting of stored data.

To enable Auto-Start:

1. Go to **MENU**, select **AUTO-START**, and press **ENTER**.
2. Choose ON and press ENTER to confirm.

To turn it off, repeat the steps and select **OFF**.

Silent Operation

The CED7000 GEN-2 supports **Silent Operation** for use in Cowboy Fast Draw or other situations where a visual start is preferred over an audible beep. When enabled, the timer activates without sound but still outputs a 5.0V signal through the AUX jack to trigger external visual indicators. All other functions operate normally.

To enable or disable Silent Mode:

1. Go to **MENU**, scroll to **SILENT OPERATION**, and press **ENTER**.
2. Select **ON** or **OFF**, then press **ENTER** to confirm.

Setting Pars

The CED7000 GEN-2 allows users to program a single or multiple PAR times for timed drills and training. PAR times can be set from 0.60 to **999.99 seconds**, accurate to **1/100th of a second**. (Note: Minimum is 0.60 sec due to the 0.50 sec buzzer duration.)

Setting a PAR Time:

1. Go to **MENU > PAR**, press **ENTER**.
2. Choose one of the following modes:
 - **Par** – A single PAR time
 - **Custom Par** – Up to 11 PAR times, activated one-by-one with START
 - **Auto Par** – Up to 11 PAR and delay times, running automatically in sequence
 - **Multiple Par** – Up to 5 PAR times from a single activation
3. Use the **RIGHT** key to move across time columns and **UP/DOWN** to set values.
4. Press **ENTER** to confirm the time.

How It Works:

When you press **START**, the timer begins counting. A second beep will sound at the set PAR time (lasting 0.30 seconds). The timer continues tracking shots even after the beep, allowing for review of late shots.

Example: For a 5.00 sec PAR, the buzzer starts at 0.00 and the second beep sounds at exactly 5.00 sec, ending at 5.30 sec total time.

Multi-PAR Modes:

- **Custom Par:** Runs each of the programmed PAR times (up to 11). Press **START** to begin each string manually. The timer advances to the next programmed PAR after each activation.
- **Automatic:** Automatically runs up to 11 sequences of **PAR + DELAY** times. Once **START** is pressed, all programmed sequences run in order without further input.

Example:

String 1: PAR = 3.00s Delay = 2.00s

String 2: PAR = 5.00s Delay = 3.00s

String 3: PAR = 6.50s Delay = (none)

Each sequence starts with the delay (if set), followed by a buzzer and countdown. The cycle continues until the last programmed PAR is complete. Do not set a delay after the final PAR time.

Tips & Controls:

- Press **CLEAR** once to delete a specific string.
- Press **CLEAR** twice to erase all programmed PAR and delay values.
- To interrupt an active PAR sequence, press **REVIEW**. The timer moves to the next string.
- To restart from the first string, press **CLEAR** twice.
- To skip a string without running it, press **START**, then quickly press **REVIEW** before the delay counts down (not available in Instant Delay mode).



Multi-PAR Time Selection

The **Multi-PAR** feature allows you to set up to **five PAR beeps** from a single timer activation—perfect for dry fire drills, draws, reloads, and movement practice. Each PAR time can be set to the **hundredth of a second** for precise training.

How to Set Multi-PAR:

1. Go to **MENU > PAR**, scroll down, select **MULTI-PAR**, and press **ENTER**.
2. You'll see **Multi-Par 1** with a time value of **00.00**.
3. Use the **RIGHT** key to move between digits, and **UP/DOWN** to adjust values.
4. Press **ENTER** to save each PAR time and move to the next (up to 5 total).
5. After setting all desired times, press **ENTER** again to confirm.

Timing Restrictions:

- Multi-Par 1 must be at least **0.60 sec** due to the buzzer length.
- Each additional PAR must be **at least 0.40 sec** after the previous one.
- Max PAR time allowed: **99.99 sec**

Example:

Multi-Par 1: 01.00 sec

Multi-Par 2: 01.25 sec

Multi-Par 3: 01.20 sec

From the start signal, beeps will sound at:

- 1.00s
- 2.25s (1.00 + 1.25)
- 3.45s (2.25 + 1.20)

Each beep marks a PAR time. The timer continues recording shots throughout, even after the final PAR beep—allowing for review of all shots and their exact timing.

Display Behavior:

- During Multi-PAR use, the display shows the current PAR interval in real time.
- “**MULTI-PARI**” appears in the lower display area, indicating active mode.

Note: All PAR beeps are 0.30 seconds in duration.

Clearing Multi-PAR:

To clear any active PAR settings and return to default **Comstock mode**:

1. Go to **MENU** > **CLEAR MODE**
2. Press **ENTER** and confirm.

Repetitive Mode

The **Repetitive Mode** is ideal for PPC, UIT, law enforcement, and military qualification drills that require a series of timed “exposures” at fixed intervals. This feature simulates a turning target system by allowing the user to program:

- **Face time** – the duration the target is visible
- **Edge time** – the duration the target is hidden
- **Repetitions** – how many times the cycle repeats

This mode is perfect for simulating controlled, timed engagements during training.

To set up Repetitive Mode:

1. Go to **MENU** > **MODE**, select **REPETITIVE**, and press **ENTER**.
2. Set the **Face time** (Par), then the **Edge time**, followed by the number of **repeats**.
3. Use **LEFT/RIGHT** to navigate between fields and **UP/DOWN** to adjust values.

Note: The number of **Repeats** is in addition to the initial cycle. For example, selecting 3 repeats will run the sequence **four times total** (1 initial + 3 repeats).

Press **START** to begin. A buzzer marks the beginning of the **Face** period. If using the AUX jack, a 5.0V DC signal is also sent, which can trigger external turning target systems.

Each Face time ends with a 0.30-second buzzer and AUX pulse, signaling the start of the **Edge** time. Once the Edge time ends, the next cycle begins automatically until all repeats are completed.

- During **Edge time**, the display shows the remaining count of repetitions.
- During **Face time**, shot times are displayed and recorded normally.

Tip: Pressing **REVIEW** during the program will stop the sequence and reset it to the beginning.

Combined Comstock Mode

The **Combined Comstock** feature allows you to accumulate time and shot counts across multiple strings, each with its own start beep. This is ideal for scenarios where you want to combine times from separate runs into a single result.

When activated, the timer resumes from the last recorded time and shot count instead of resetting. Each new press of the **START** button continues from where the last string left off, allowing you to build a cumulative score over multiple activations.

- To reset the timer to zero, press the **CLEAR** button **twice**.
- To exit Combined Comstock mode, go to **MENU > MODE**, select **COMSTOCK**, or use **CLEAR MODE** to reset all functions.

Spy Mode

Spy Mode allows you to silently monitor and record another shooter's performance. When enabled, the timer automatically switches to **Instant Start**, increases **microphone sensitivity to level 7**, and **disables the buzzer**—ensuring completely silent operation.

Pressing the **START** button instantly activates the timer without any audible signal. It will begin recording nearby shots using the increased sensitivity, making it ideal for use as a secondary timer or for learning from other shooters during practice or competition.

You can manually adjust the sensitivity level if needed by following the instructions in the **Shot Detection Microphone** section.

Note: Spy Mode disables Par functions (due to the lack of a start beep) and may pick up unintended noise or miss distant shots, especially on larger stages.

Stopwatch Mode

The **Stopwatch Mode** on the CED7000 GEN-2 is perfect for timing target movements, transitions between positions, or simply tracking another shooter's run. When enabled, the timer functions purely as a stopwatch—**disabling the microphone and buzzer**.

How to Use:

- Enter **Stopwatch Mode** from the **MENU**.
- Press **START** to begin timing.
- Press **REVIEW** to record lap times.
 - **Lap number** appears in the **SHOT** area.
 - **Lap time** appears in the **SPLIT** area.
- Press **START** again to stop the timer.

To review recorded laps, press **REVIEW**.

To clear all lap and time data, press **CLEAR** once.

Note: If you press **START** again without clearing, the stopwatch will resume from the previously stopped time, and all lap data will continue from the same session.

Countdown Mode

In **Countdown Mode**, the CED7000 GEN-2 counts down from a user-selected **Par time** to zero. A beep sounds at the start and again at the end of the countdown.

How to Activate:

1. Press **MENU** > **MODE**, select **COUNTDOWN**, and press **ENTER**.
2. Set a **Par time** (required for countdown to function).
3. Any **Delay setting** can be used in this mode.

Note: While in Countdown Mode, the timer will **not record shots or register input**—it functions purely as a countdown timer.

Alarm Clock

The **CED7000 GEN-2** includes a built-in alarm clock—perfect for reminders during matches or scheduled wake-ups.

Note: The **Day/Date/Time** must be set first before using this feature. Refer to the Time & Date section for setup instructions.

How to Set the Alarm:

1. Go to **MENU** > **ALARM CLOCK** and press **ENTER**.
2. Use the **RIGHT** directional key to move between the hour and minute fields.
3. Use the **UP/DOWN** keys to set the desired time.
4. Continue to the **AM/PM** field (if using 12-hour format) and select accordingly.
5. Highlight **ON** to activate the alarm and press **ENTER**.

The alarm will remain set until changed, and can be reused without re-entering the time.

When triggered, the alarm sounds a series of short, loud beeps. To stop the alarm, press either **START** button.

Self-Check Diagnostic Test

The CED7000 GEN-2 features a built-in **self-check diagnostic** tool to ensure the timer is functioning correctly—especially useful after drops or potential damage.

How to Run the Test:

1. Go to **MENU** > **SELF-CHECK** and press **ENTER**.
2. Follow the on-screen instructions to test each button, key, and LCD display segment.

If all components are working, a message will confirm the test is complete.

If any button fails, the test will stop—indicating a possible issue that requires repair.

Damaged LCD segments will be visibly noticeable during the test.

This tool provides fast and simple quality control, giving you peace of mind before use.

Auxiliary Jack (AUX)

Located at the bottom of the CED7000 GEN-2, the **3.5mm mono AUX jack** provides a **5V DC output** that activates **in sync with the buzzer**. This signal matches the exact timing and duration of the audible beep, including during PAR time functions.

The AUX output can be used to trigger:

- Remote buzzers or horns (e.g., CED2000)
- Visual indicators (lights)
- Loudspeakers
- Low-voltage relays (e.g., for turning target systems)

This feature allows for expanded setup options in both training and competition environments.

Shot Detection Microphone

The CED7000 GEN-2 uses a **high-sensitivity microphone** to accurately detect and record shots. To accommodate various shooting environments—like indoor ranges, high berms, or foggy conditions—the timer features **8 digital sensitivity levels**:

- Level 1 = Least sensitive
- Level 8 = Most sensitive

To adjust:

Go to **MENU** > **SENSITIVITY**, then use the **UP/DOWN** buttons to select the desired level.

Factory Settings & Best Practices

- The timer comes factory-set to **Level 4**, ideal for most outdoor use.
- Always **test your timer** on the specific range you'll be using to ensure optimal performance and avoid missed shots due to echoes or obstructions.

Usage Tips

- **Always face the timer's front panel toward the shooter.**
- The microphone is located just below the display.
- Keep a **clear line of sight** to the shooter, especially if they're shooting around walls or barriers.
- Avoid blocking the microphone or allowing ejected brass to strike the timer.
- For best results, position the timer **within six feet** of the shooter.



Filter

The CED7000 GEN-2 includes a built-in **software filter**, factory-set to **0.08 seconds** (8/100). This means the timer will only register shots spaced at least 0.09 seconds apart—helping to prevent false readings caused by echoes or background noise.

For advanced users, the filter can be adjusted from **0.09 down to 0.02 seconds**, allowing the timer to detect extremely fast shot strings—up to 33 shots per second (1,980 rounds per minute).

How to Adjust:

Go to **MENU > FILTER** and use the **UP/DOWN** directional buttons to select your desired filter time.

Lower settings increase sensitivity to rapid fire but may risk detecting echo noise, so adjust based on your shooting environment.

Buzzer Volume

The CED7000 GEN-2 offers two buzzer volume settings:

- **Normal**: A loud, high-frequency beep around **110 dB**—ideal for outdoor use or noisy environments.
- **Soft**: Reduces volume and frequency by approximately **50%**, making it perfect for **dry fire practice at home** or situations where a quieter beep is preferred.

To switch between volume levels, go to **MENU > BUZZER VOLUME** and select **Normal** or **Soft** as needed.

RFID Setting

The CED7000 GEN-2 can be equipped with an optional **RF wireless transmitter (CED7000 GEN-2 RF)** that allows it to send shot data to a **CED BigBoard** display in real time. The RF signal has an effective range of 30 to 50 yards in open space.

How to Link:

1. Press **MENU** and scroll to **RFID**.
2. Choose and enter a **four-digit code** into the timer.
3. Enter the **same code** into the CED BigBoard to pair the devices.

Once linked, the CED7000 GEN-2 will automatically transmit shot times and data to the BigBoard as they are recorded—ideal for spectators, scorekeepers, or team training environments.

FCC Certification

This device complies with Part 15 of the FCC Rules. Operation is subject to the following conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Warning: Any changes or modifications not expressly approved by the manufacturer may void the user's authority to operate this equipment.

FCC Compliance Statement:

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 environment.

This device generates and uses radio frequency energy and, if not installed or used as instructed, may cause interference to radio or television reception. There is no guarantee that interference will not occur in a specific installation.