



# Clock Tuner for Ryzen™ 2.0 – INTRO

- **I want to remind you that early access is a premium opportunity to try the product much earlier than others without limitation. It also means that the product may contain bugs.**
- **CTR has two levels of protection, which will not allow the processor to perform dangerous actions.**
- **RC2 is not the final version, which will be available at the time of release. Patches and significant refinements are planned.**
- **Windows Defender sometimes sees a trojan program, this is a false positive.**
- **FACEIT Client Anti-cheat can block inpoutx64.dll library. This library is used for monitoring. You will have to add it to an exception.**
- **Also remember to read the manual to the end.**



# Clock Tuner for Ryzen™ 2.0 – INTRO

## System requirements:

- .NET Framework 4.7.2
- BIOS for Zen 3 with AGESA 1.1.0.0 path B or newer
- BIOS for Zen 2 with AGESA (any)
- BIOS for APU with AGESA 1.1.8.0 or newer
- Windows 10 x64 (with all updates)
- BIOS settings without manual CPU OC, without PBO (Fmax too) and without Performance Enhancer (or other similar technologies)
- Stable DRAM overclocking

## Supported CPU:

- Zen 3: Ryzen 9 5950X, Ryzen 9 5900X, Ryzen 7 5800X, Ryzen 5 5600X
- Zen 2: Threadripper 3970X, Threadripper 3960X, Ryzen 9 3950X, Ryzen 9 3900X, Ryzen 9 3900XT, Ryzen 9 3900, Ryzen 7 3800XT, Ryzen 7 3800X, Ryzen 7 3700X, Ryzen 5 3600XT , Ryzen 5 3600X, Ryzen 5 3600, Ryzen 5 3500X, Ryzen 5 3500, **Ryzen 3 3300X, Ryzen 3 3100**
- APU: Ryzen 7 PRO 4750G , Ryzen 7 PRO 4650G, Ryzen 3 PRO 4350G



# Clock Tuner for Ryzen™ 2.0 – FIRST STEPS

1. Download **Cinebench R20** and put the archive contents into the "**CB20**" folder. "**CB20**" is in the "**CTR Early Access**" folder.
2. Go to the "**CB20**" folder and run **Cinebench.exe**. Accept the license agreement and close **Cinebench R20**.
3. You can now launch the application.



# Clock Tuner for Ryzen™ 2.0 – DIAGNOSTIC

1. Run **CTR 2.0.exe** and go to "**TUNER**" tab.
2. Press "**DIAGNOSTIC**" button. The diagnosis will begin. Be patient, CTR will automatically test the different parameters, this may take some time. And the better your processor is, the longer it will take. If a BSOD occurs or if the computer reboots, CTR will automatically restore itself. Timeout is **90 seconds** after Windows starts.

The screenshot displays the CTR 2.0 beta 1 interface. The left sidebar contains navigation options: HOMEPAGE, TUNER (highlighted with a red box), BENCHMARK, ABOUT & HELP, SCREENSHOT, DONATE, MINIMIZE, and EXIT. The main area is divided into several sections:

- Temperature Monitoring:** A grid showing temperatures for eight CCX units (CCX1 to CCX8) and their respective cores (C01 to C24). Each CCX unit shows a temperature (e.g., CCX1: 42.3°) and a list of core temperatures.
- System Metrics:** A row of metrics including CPU usage (100%), CPU TEL (V) (1.138), CPU VID (V) (1.163), CPU TEL (A) (89.4), CPU TDC (A) (91.3), CPU TEL (W) (101.7), CPU PPT (W) (179.9), and CPU EDC (A) (238.7).
- Settings mode:** A section with a dropdown menu set to "Advanced" and a "RESET SETTINGS" button. It contains various adjustable parameters such as Testing mode (AVX Light), Cycle time (360s), CCX delta (75MHz), Polling period (500ms), Reference voltage (1225mV), Reference frequency (4075MHz), Max frequency (4675MHz), Diagnostic voltage (1181mV), Max PPT (340W), Max EDC (360A), Max TDC (250A), Max temperature (88°C), CPU usage trigger (70%), CCX usage max (70%), CCX usage min (30%), and Holding time (4000ms).
- Log & System Information:** A section displaying system details like "AMD Ryzen Threadripper 3960X 24-Core Processor" and "ASUS ROG ZENITH II EXTREME". It also shows a list of coefficients for each CCX and a log of manual overlocking mode results.
- Control Buttons:** A row of buttons at the bottom: DIAGNOSTIC (highlighted with a red box), TUNE, STOP, CHECK STABILITY, PROFILE MANAGEMENT, and a refresh icon.

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# Clock Tuner for Ryzen™ 2.0 – DIAGNOSTIC

3. Make a screenshot or write down the results of the diagnostics. You will need them to create profiles (**P1** and **P2**).

**CTR 2.0 beta 1**  
Optimization for ZEN2+ CPUs

CCX	Temp	C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11	C12	C13	C14	C15	C16	C17	C18	C19	C20	C21	C22	C23	C24
CCX1	31°	557	145	-	110	134	-	683	123	-	1256	120	-	895	120	-	572	171	-	521	167	-	592	156	
CCX2	31°	534	142	-	503	131	-	1156	120	-	1035	120	-	966	120	-	1665	174	-	97	163	-	101	152	
CCX3	32.3°	106	138	-	482	127	-	1023	120	-	947	120	-	876	120	-	694	174	-	602	160	-	106	149	
CCX4	32.7°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CCX5	36.9°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CCX6	37.3°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CCX7	32.6°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CCX8	32.3°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

CPU usage (%)	2.3	CPU TEL (V)	1.36	CPU VID (V)	1.363	CPU TEL (A)	19.9	CPU TDC (A)	17.2	CPU TEL (W)	27.9	CPU PPT (W)	84.4	CPU EDC (A)	260.6
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**Settings mode** Advanced RESET SETTINGS

Testing mode	AVX Light	Reference voltage (mV)	1225	Max PPT (W)	340	CPU usage trigger (%)	70
Cycle time (s)	360	Reference frequency (MHz)	4200	Max EDC (A)	360	CCX usage max (%)	70
CCX delta (MHz)	75	Max frequency (MHz)	4675	Max TDC (A)	250	CCX usage min (%)	30
Polling period (ms)	500	Diagnostic voltage (mV)	1181	Max temperature (°C)	88	Holding time (ms)	4000

IFSO 1.0 / IFSO 2.0  Enhance accuracy  CB20 testing  CTR HYBRID OC

Autoload profile with OS  To tray  Autoshare stats

**DIAGNOSTIC** **TUNE** **STOP** **CHECK STABILITY** **PROFILE MANAGEMENT**

**Log & System Information**

AMD Ryzen Threadripper 3960X 24-Core Processor  
ASUS ROG ZENITH II EXTREME

18:54:40: Step# 10. Diagnostic VID: 1127 mV  
18:54:40: Stress test 1 started...  
18:55:16: Stress test stopped.  
18:55:17: Stress test 2 started...  
Thread# 49 fall down, usage 93.9%  
18:55:30: Stress test stopped.  
18:55:31: Step# 11. Diagnostic VID: 1133 mV

**Diagnostic results**  
Max temperature: 47.5°  
Energy efficient: 3.57  
AMD Ryzen Threadripper 3960X 24-Core Processor  
Your CPU is SILVER SAMPLE  
Recommended values for Overclocking (P1 profile):  
Reference frequency: 4200 MHz  
Reference voltage: 1225 mV  
Recommended values for Overclocking (P2 profile):  
Reference frequency: 4325 MHz  
Reference voltage: 1325 mV  
Recommended values for Undervolt:  
Reference frequency: 4050 MHz  
Reference voltage: 1150 mV

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# Clock Tuner for Ryzen™ 2.0 – TUNE

1. After completing the diagnostics, CTR itself will offer you the recommended settings, some fields will be changed automatically. Press the **"TUNE"** button and wait until the work is finished. If a BSOD occurs or the computer reboots, CTR will automatically recover and continue to perform the required operations. The recovery time is 90 seconds after starting Windows.

**CTR 2.0 beta 1**  
Optimization for ZEN2+ CPUs

- HOMEPAGE
- TUNER
- BENCHMARK
- ABOUT & HELP
- SCREENSHOT
- DONATE
- MINIMIZE
- EXIT

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CCX1 31.2°			CCX2 31°			CCX3 32.1°			CCX4 32.9°			CCX5 36.9°			CCX6 36.9°			CCX7 32.5°			CCX8 32.6°		
C01	636	145	C04	780	134	C07	775	123	C10	1599	120	C13	1291	120	C16	760	171	C19	710	167	C22	789	156
C02	646	142	C05	664	131	C08	1222	120	C11	1332	120	C14	1255	120	C17	1766	174	C20	700	163	C23	604	152
C03	677	138	C06	641	127	C09	1237	120	C12	1268	120	C15	1335	120	C18	1270	174	C21	783	160	C24	572	149
-			-			-			-			-			-			-			-		

CPU usage (%)	2	CPU TEL (V)	1.375	CPU VID (V)	1.38	CPU TEL (A)	24.8	CPU TDC (A)	22	CPU TEL (W)	34.7	CPU PPT (W)	91.4	CPU EDC (A)	270.4
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**Settings mode** Advanced RESET SETTINGS

Testing mode	AVX Light	Reference voltage (mV)	1225	Max PPT (W)	340	CPU usage trigger (%)	70
Cycle time (s)	360	Reference frequency (MHz)	4200	Max EDC (A)	360	CCX usage max (%)	70
CCX delta (MHz)	75	Max frequency (MHz)	4675	Max TDC (A)	250	CCX usage min (%)	30
Polling period (ms)	500	Diagnostic voltage (mV)	1181	Max temperature (°C)	88	Holding time (ms)	4000

IFSO 1.0 / IFSO 2.0

Autoload profile with OS

Enhance accuracy

To tray

CB20 testing

Autoshare stats

CTR HYBRID OC

DIAGNOSTIC
TUNE
STOP
CHECK STABILITY
PROFILE MANAGEMENT

**Log & System Information**

AMD Ryzen Threadripper 3960X 24-Core Processor  
ASUS ROG ZENITH II EXTREME

```

19:51:02: Stress test stopped.
19:51:03: Stress test #2 started...
19:51:08: CPU Vdroop: 2.2 % temperature: 46.9°
19:52:41: Stress test stopped.
19:52:42: Stress test #3 started...
19:52:47: CPU Vdroop: 2.2 % temperature: 47.3°
19:54:20: Stress test stopped.
19:54:20: Stress test #4 started...
19:54:25: CPU Vdroop: 2.2 % temperature: 47.4°
19:55:59: Stress test stopped.
Calculation of penalties for the final profile:
19:55:59: CCX1 (138): 4200 MHz, 1225 mV OC+
19:55:59: CCX2 (127): 4200 MHz, 1225 mV OC+
19:55:59: CCX3 (120): 4150 MHz, 1225 mV OC=
19:55:59: CCX4 (120): 4150 MHz, 1225 mV OC=
19:55:59: CCX5 (120): 4225 MHz, 1225 mV OC+
19:55:59: CCX6 (171): 4225 MHz, 1225 mV OC+
19:55:59: CCX7 (160): 4175 MHz, 1225 mV OC=
19:55:59: CCX8 (149): 4150 MHz, 1225 mV OC=
Cinebench 20 started
Cinebench 20 finished with result: 13730
Voltage: 1.225 V PPT: 255.2 W Temperature: 60.2°

```



# Clock Tuner for Ryzen™ 2.0 – SAVE PROFILE

1. After finishing the tuning, the user will have to save the profile. In order to transfer the data to the profile press "**FILL P1 PROFILE**" (this and other profiles management buttons are in "**PROFILE MANAGEMENT**"). Then you can save the profile or activate (apply) it without saving. Be careful, if you close the program without saving your profile, you will lose it. I also want to point out that all the basic CTR settings will be saved when you click "**EXIT**" button.

The screenshot displays the 'CTR 2.0 beta 1' application interface. The top-left corner shows the title 'CTR 2.0 beta 1' and the subtitle 'Optimization for ZEN2+ CPUs'. A vertical sidebar on the left contains navigation icons and labels: HOME PAGE, TUNER, BENCHMARK, ABOUT & HELP, SCREENSHOT, DONATE, MINIMIZE, and EXIT. The main content area is divided into two sections for profile management, P1 and P2.

**Profile P1 Settings:**

VID	CCX1	CCX2	CCX3	CCX4	CCX5	CCX6	CCX7	CCX8
1225	4200	4200	4150	4150	4225	4225	4175	4150

Buttons for P1 profile management: **FILL P1 PROFILE** (highlighted with a red box), **APPLY P1 PROFILE**, **SAVE P1 PROFILE**, and **CLEAR P1 PROFILE**. A status bar on the right indicates: **Status: profile P1 filled!**

**Profile P2 Settings:**

VID	CCX1	CCX2	CCX3	CCX4	CCX5	CCX6	CCX7	CCX8
0	0	0	0	0	0	0	0	0

Buttons for P2 profile management: **FILL P2 PROFILE**, **APPLY P2 PROFILE**, **SAVE P2 PROFILE**, and **CLEAR P2 PROFILE**. A status bar on the right indicates: **Status : Ready**

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# Clock Tuner for Ryzen™ 2.0 – HYBRID OC

1. "**HYBRID OC**" mode requires only 1 (minimum) profile **P1** or **P2**. To activate HYBRID OC mode you must have a saved profile (**P1** or **P2**), activate "**Autoload profile with OS**" and "**CTR HYBRID OC**".
2. Go to the "**PROFILE MANAGEMENT**" tab and activate one of the saved profiles. If you have both profiles (**P1** and **P2**) filled (and saved) "**HYBRID OC**" will automatically use 2 profiles and default boost.

The screenshot displays the CTR 2.0 beta 1 interface. The top left shows the version and optimization target. The main area is divided into several sections:

- CCX Data:** A grid showing core temperatures and voltage/frequency settings for CCX1 through CCX8.
- System Metrics:** CPU usage (1.3%), CPU TEL (V) (1.366), CPU VID (V) (1.371), CPU TEL (A) (23.9), CPU TDC (A) (20.2), CPU TEL (W) (33.4), CPU PPT (W) (88.4), and CPU EDC (A) (265.9).
- Settings mode:** Set to "Advanced". Includes a "RESET SETTINGS" button.
- Testing mode:** Set to "AVX Light".
- Reference voltage (mV):** 1225
- Max PPT (W):** 340
- CPU usage trigger (%):** 70
- Reference frequency (MHz):** 4200
- Max EDC (A):** 360
- CCX usage max (%):** 70
- Max frequency (MHz):** 4675
- Max TDC (A):** 250
- CCX usage min (%):** 30
- Diagnostic voltage (mV):** 1181
- Max temperature (°C):** 88
- Holding time (ms):** 4000
- IFSO 1.0 / IFSO 2.0:**
- Enhance accuracy:**
- CB20 testing:**
- CTR HYBRID OC:**  (highlighted with a red box)
- Autoload profile with OS:**  (highlighted with a red box)
- To tray:**
- Autoshare stats:**

At the bottom, there are buttons for "DIAGNOSTIC", "TUNE", "STOP", "CHECK STABILITY", and "PROFILE MANAGEMENT" (highlighted with a red box). A "Log & System Information" panel on the right shows system details and a log of events, including "Profile P1 successfully filled!" and "Hybrid boost enabled" (both highlighted with red boxes).





# Clock Tuner for Ryzen™ 2.0 – HYBRID OC

- If **CPU usage** exceeds **70%**, **P1** profile will be activated. If the load is less than 70% - profile **P2** will be active (in case it was saved beforehand). If only **P1** profile is present in CTR, below 70% the standard boost will be activated.
- **P2** profile is controlled by the range "**CCX usage max (%)** - **CCX usage min (%)**".
- The user can use individual settings.

The screenshot displays the Clock Tuner for Ryzen 2.0 software interface. The top section shows a grid of CCX (Core Complex) settings for 8 cores (CCX1 to CCX8), including core IDs (C01-C24), frequencies, and voltages. Below this is a row of system metrics: CPU usage (1.2%), CPU TEL (V) (1.387), CPU VID (V) (1.393), CPU TEL (A) (25.7), CPU TDC (A) (21.9), CPU TEL (W) (36.2), CPU PPT (W) (90.8), and CPU EDC (A) (276.1).

The main settings area is titled "Settings mode" and is set to "Advanced". It includes a "RESET SETTINGS" button and several adjustable parameters:

- Testing mode: AVX Light
- Cycle time (s): 360
- CCX delta (MHz): 75
- Polling period (ms): 500
- Reference voltage (mV): 1225
- Reference frequency (MHz): 4200
- Max frequency (MHz): 4675
- Diagnostic voltage (mV): 1181
- Max PPT (W): 340
- Max EDC (A): 360
- Max TDC (A): 250
- Max temperature (°C): 88
- CPU usage trigger (%): 70 (highlighted with a red box)
- CCX usage max (%): 70
- CCX usage min (%): 30
- Holding time (ms): 4000

At the bottom, there are several toggle switches: IFSO 1.0 / IFSO 2.0, Enhance accuracy, CB20 testing, CTR HYBRID OC, Autoload profile with OS, To tray, and Autosshare stats. Below these are buttons for "DIAGNOSTIC", "TUNE", "STOP", "CHECK STABILITY", and "PROFILE MANAGEMENT".

The "Log & System Information" section on the right shows system details: AMD Ryzen Threadripper 3960X 24-Core Processor, ASUS ROG ZENITH II EXTREME. The log contains several entries, including stress test results and Cinebench 20 performance metrics.

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# Clock Tuner for Ryzen™ 2.0 – HYBRID OC

- "**Holding time (ms)**" - is the time for keeping one of the profiles active. If CPU usage is less than 70% for 4 seconds (4000 ms) - profile **P1** will be deactivated.
- Profile **P1** always has priority, it is able to interrupt the "hold" caused by profile **P2**.
- If the processor temperature exceeds the "**Max temperature**" value, both profiles will be deactivated.

The screenshot displays the Clock Tuner for Ryzen 2.0 software interface. The top section shows a grid of CCX (Core Complex) data for 8 cores (CCX1 to CCX8), including core IDs (C01-C24) and their respective frequencies and voltages. Below this, a row of system metrics is shown, such as CPU usage (1.9%), CPU TEL (V) (1.376), CPU VID (V) (1.381), CPU TEL (A) (25.3), CPU TDC (A) (21.6), CPU TEL (W) (35.4), CPU PPT (W) (90.7), and CPU EDC (A) (270.6).

The main settings area is titled "Settings mode" and is set to "Advanced". It includes a "RESET SETTINGS" button. The settings are organized into two columns:

Setting	Value	Setting	Value	Setting	Value
Testing mode	AVX Light	Reference voltage (mV)	1225	Max PPT (W)	340
Cycle time (s)	360	Reference frequency (MHz)	4200	Max EDC (A)	360
CCX delta (MHz)	75	Max frequency (MHz)	4675	Max TDC (A)	250
Polling period (ms)	500	Diagnostic voltage (mV)	1181	Max temperature (°C)	88
				Holding time (ms)	4000

Below the settings, there are several toggle switches for features like "IFSO 1.0 / IFSO 2.0", "Enhance accuracy", "CB20 testing", "CTR HYBRID OC", "Autoload profile with OS", "To tray", and "Autoshare stats". At the bottom, there are buttons for "DIAGNOSTIC", "TUNE", "STOP", "CHECK STABILITY", "PROFILE MANAGEMENT", and a refresh icon.

The right side of the interface shows "Log & System Information". The system information includes "AMD Ryzen Threadripper 3960X 24-Core Processor" and "ASUS ROG ZENITH II EXTREME". The log contains a series of timestamps and events, including stress test results and profile management actions. The "Max temperature (°C)" and "Holding time (ms)" values from the settings are highlighted in red in the original image.

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# Clock Tuner for Ryzen™ 2.0 – P2 PROFILE

1. To create a **P2** profile, you will need to manually fill in the "**Reference voltage**" and "**Reference frequency**" data that can be found after diagnostics.
2. Run "**TUNE**" again. When the tuning process is finished, save the new profile in slot **P2**.

**CTR 2.0 beta 1**  
Optimization for ZEN2+ CPUs

CCX1	31.9°	CCX2	30.8°	CCX3	31.7°	CCX4	31.5°	CCX5	36.3°	CCX6	36.3°	CCX7	32.3°	CCX8	32.3°								
C01	1594	145	C04	640	134	C07	875	123	C10	1123	120	C13	1155	120	C16	833	171	C19	731	167	C22	905	156
C02	678	142	C05	653	131	C08	1541	120	C11	1315	120	C14	1416	120	C17	1825	174	C20	725	163	C23	711	152
C03	683	138	C06	648	127	C09	1150	120	C12	1194	120	C15	1266	120	C18	1209	174	C21	905	160	C24	711	149
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CPU usage (%) 2   CPU TEL (V) 1.386   CPU VID (V) 1.392   CPU TEL (A) 26.3   CPU TDC (A) 22.3   CPU TEL (W) 36.9   CPU PPT (W) 91.5   CPU EDC (A) 273.8

**Settings mode** Advanced

Testing mode	AVX Light	Reference voltage (mV)	1225	Max PPT (W)	340	CPU usage trigger (%)	70
Cycle time (s)	360	Reference frequency (MHz)	4200	Max EDC (A)	360	CCX usage max (%)	70
CCX delta (MHz)	75	Max frequency (MHz)	4675	Max TDC (A)	250	CCX usage min (%)	30
Polling period (ms)	500	Diagnostic voltage (mV)	1144	Max temperature (°C)	88	Holding time (ms)	4000

IFSO 1.0 / IFSO 2.0    Enhance accuracy    CB20 testing    CTR HYBRID OC   
Autoload profile with OS    To tray    Autoshare stats

**DIAGNOSTIC**   **TUNE**   **STOP**   **CHECK STABILITY**   **PROFILE MANAGEMENT**  

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**Log & System Information**

AMD Ryzen Threadripper 3960X 24-Core Processor  
ASUS ROG ZENITH II EXTREME

21:40:24: Stress test 2 started...  
21:41:00: Stress test stopped.  
21:41:01: Step# 4. Diagnostic VID: 1126 mV  
21:41:01: Stress test 1 started...  
Thread# 49 fall down, usage 85.7%  
21:41:25: Stress test stopped.  
21:41:26: Step# 5. Diagnostic VID: 1132 mV

Diagnostic results  
Max temperature: 45.5°  
Energy efficient 3.58  
AMD Ryzen Threadripper 3960X 24-Core Processor  
Your CPU is SILVER SAMPLE  
Recommended values for Overclocking (P1 profile):  
Reference frequency: 4200 MHz  
Reference voltage: 1225 mV  
**Recommended values for Overclocking (P2 profile):**  
Reference frequency: 4325 MHz  
Reference voltage: 1325 mV  
Recommended values for Undervolt:  
Reference frequency: 4050 MHz  
Reference voltage: 1150 mV



# Clock Tuner for Ryzen™ 2.0 – CONFIG FILE

- If you **can't start** the application or some functions don't work, delete the configuration files.

The screenshot shows a Windows File Explorer window with the address bar path: This PC > Local Disk (C:) > Users > 1usmus > AppData > Local. The main pane displays a list of folders. Two folders are highlighted with red boxes: 'A' and 'Nemesis\_Ulv2'. A red 'DELETE' button is visible in the bottom right corner of the window.

Name	Date modified	Type	Size
.IdentityService	10/17/2020 6:27 PM	File folder	
1usmus	8/30/2020 9:50 PM	File folder	
<b>A</b>	10/17/2020 12:49 AM	File folder	
AcSdkInsLog	9/21/2020 12:31 PM	File folder	
Adobe	8/21/2020 1:38 PM	File folder	
AMD	8/17/2020 11:18 AM	File folder	
ArmouryLiveUpdate	9/21/2020 12:32 PM	File folder	
Ashampoo	8/17/2020 11:42 AM	File folder	
ASUS	8/17/2020 11:04 AM	File folder	
BitTorrentHelper	8/20/2020 11:06 PM	File folder	
cache	8/17/2020 11:02 AM	File folder	
Capture_One	8/17/2020 11:28 AM	File folder	
CaptureOne	10/10/2020 6:28 PM	File folder	
CEF	8/21/2020 1:35 PM	File folder	
Comms	8/17/2020 11:00 AM	File folder	
ConnectedDevicesPlatform	8/17/2020 10:48 AM	File folder	
D3DSCache	8/21/2020 1:36 PM	File folder	
Discord	10/2/2020 9:18 AM	File folder	
Downloaded Installations	8/17/2020 12:08 PM	File folder	
DxO	8/23/2020 1:56 PM	File folder	
GitHubVisualStudio	10/5/2020 5:14 PM	File folder	
Google	9/4/2020 5:14 PM	File folder	
HQTswskRka2416pPaC	10/15/2020 6:33 PM	File folder	
IsolatedStorage	8/17/2020 11:46 AM	File folder	
JetBrains	10/15/2020 6:30 PM	File folder	
Just Color Picker	8/24/2020 12:04 AM	File folder	
Microsoft	8/27/2020 8:47 AM	File folder	
MicrosoftEdge	9/2/2020 8:18 PM	File folder	
<b>Nemesis_Ulv2</b>	10/17/2020 12:27 AM	File folder	



# Clock Tuner for Ryzen™ 2.0 – AUTORUN

- Some versions of operating systems Windows 10 have incompatible or corrupted autorun functions. If the application doesn't start - it means that Windows for some reason can't or doesn't want to run CTR.
- You can check the status of the autorun in the "**Task Scheduler**".

The screenshot shows the Windows Task Scheduler application. The main pane displays a list of tasks. The task 'CTR 2.0 beta 1' is selected and highlighted in blue. A red box highlights this task. Below the list, the 'Triggers' tab is active, showing a table with the following data:

Trigger	Details	Status
At log on	At log on of any user	Enabled



# Clock Tuner for Ryzen™ 2.0 – SMU PROBLEMS

- Missing frequency and temperature - incompatible BIOS. There are many reasons, up to the motherboard manufacturer's error. The solution is to install another version of the BIOS. The problem may also be due to running third-party monitoring software.

	CCX1	0°		CCX1	0°
C01	0	143	C05	0	127
C02	0	150	C06	0	139
C03	0	131	C07	0	135
C04	0	146	C08	0	150

- **CMD\_REJECTED\_PREREQUISITE** or **FAILED** - incompatible BIOS. There are many reasons, up to the motherboard manufacturer's error. The solution is to install another version of the BIOS. The problem may also be due to running third-party monitoring software.

```
Manual overclocking mode enabled
CMD_REJECTED_PREREQUISITE 93
CMD_REJECTED_PREREQUISITE 93
CMD_REJECTED_PREREQUISITE 93
CMD_REJECTED_PREREQUISITE 93
CMD_REJECTED_PREREQUISITE 93
CMD_REJECTED_PREREQUISITE 93
CMD_REJECTED_PREREQUISITE 93
CMD_REJECTED_PREREQUISITE 93
18:05:40: CCX1 (127): 4400 MHz, 1175 mV
18:05:40: Step# 1. Diagnostic VID: 1175 mV
```