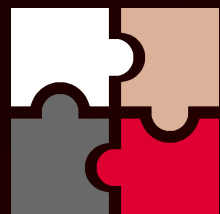


PROJECT HYDRA

OC-SANDBOX FOR ZEN3+ PROCESSORS

HYDRA 1.1E PRO IS ALREADY AVAILABLE FOR PATREON SUBSCRIBERS

1USMUS 2022



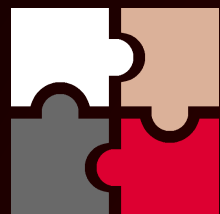
PROJECT HYDRA – AMD PBO2 GUIDE

STEP 1:

In **UEFI**, in the **AMD Overlocking** menu, set the maximum possible frequency for **Max CPU Boost Clock Override (+)**. In my case I know that I have a good CPU sample, good motherboard and cooling, so I chose **+200**. If you are not sure about something, start with **+100**.

I would also advise you not to use any other custom values in this menu as you will not get much performance.

The screenshot shows the MSI Click BIOS 5 interface. At the top, it displays 'msi CLICK BIOS 5' and 'EZ Mode (F7)'. The system information section shows: CPU Speed 3.40 GHz, DDR Speed 3800 MHz, CPU Core Temperature: 42°C, Motherboard Temperature: 39°C, VCore: 1.416V, DDR Voltage: 1.380V, BIOS Mode: CSM/UEFI, MB: MEG B550 UNIFY-X (MS-7D13), CPU: AMD Ryzen 9 5950X 16-Core Processor, Memory Size: 32768MB, BIOS Ver: E7D13AMS.A51, and BIOS Build Date: 03/21/2022. The 'GAME BOOST' section includes CPU, A-XMP Profile 1, and A-XMP Profile 2. The 'Boot Priority' section shows a sequence of boot devices including USB. The 'Overclocking\Advanced CPU Configuration\AMD Overlocking' menu is open, with 'Max CPU Boost Clock Override (+)' highlighted in a green box and set to '200 MHz'. Other settings include Precision Boost Overdrive [Advanced], PBO Limits [Auto], Precision Boost Overdrive Scalar [Auto], Platform Thermal Throttle Limit [Auto], Curve Optimizer, CPU CCD Control [Auto], CPU Core Control [Auto], SMT Control [Auto], LN2 Mode 2 [Auto], NUMA nodes per socket [Auto], LCLK DPM [Auto], and LCLK DPM Enhanced PCIe Detection [Auto]. A 'HELP' window on the right explains that this setting increases the maximum CPU frequency that may be automatically achieved by the Precision Boost 2 algorithm. The bottom of the screen shows navigation instructions: '↑ ↓ → ←: Move', 'Enter: Select', '+/-: Value', 'ESC: Exit', and 'F1: General Help'.



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STEP 2:

Start **HYDRA** and go to **AMD PBO2** menu.

GET CO is that automatic diagnostic which will allow to find CO (Curve Optimizer) values for each of the cores without visiting UEFI.

By default, everything is set automatically, the user does not need to make changes to any parameters.

Powerful customization is available for advanced users, and if any parameter is unclear, you just have to hover over it.

When you're ready press **LET'S GO!** .

NOTE: diagnostic process can take several hours. No need to worry.

HYDRA 1.1E PRO
OC-SANDBOX FOR ZEN3

AMD Ryzen 9 5950X 16-Core Processor Stepping 0
MSI MEG B550 UNIFY-X (MS-7D13) BIOS ver. A.51 SMU ver. 56.69.00
NVIDIA GeForce RTX 3070 Microsoft Windows NT 6.2.9200.0 03/31/2022 17:27:15

CCD1 27.8° CCD2 28.9° CCD3 --- CCD4 ---

CORE#	ON/OFF	CORE#	ON/OFF	TEST#	ON/OFF	FFT	TIME	AVX
C01	<input checked="" type="checkbox"/>	C09	<input checked="" type="checkbox"/>	1	<input checked="" type="checkbox"/>	4	30	<input type="checkbox"/>
C02	<input checked="" type="checkbox"/>	C10	<input checked="" type="checkbox"/>	2	<input checked="" type="checkbox"/>	16	30	<input type="checkbox"/>
C03	<input checked="" type="checkbox"/>	C11	<input checked="" type="checkbox"/>	3	<input checked="" type="checkbox"/>	84	30	<input type="checkbox"/>
C04	<input checked="" type="checkbox"/>	C12	<input checked="" type="checkbox"/>	4	<input checked="" type="checkbox"/>	1344	30	<input type="checkbox"/>
C05	<input checked="" type="checkbox"/>	C13	<input checked="" type="checkbox"/>	5	<input checked="" type="checkbox"/>	2048	30	<input type="checkbox"/>
C06	<input checked="" type="checkbox"/>	C14	<input checked="" type="checkbox"/>					
C07	<input checked="" type="checkbox"/>	C15	<input checked="" type="checkbox"/>					
C08	<input checked="" type="checkbox"/>	C16	<input checked="" type="checkbox"/>					

CCD#	BASE CO	CCD#	BASE CO	CCD#	BASE CO	CCD#	BASE CO
1	-5	2	-15	-	-	-	-

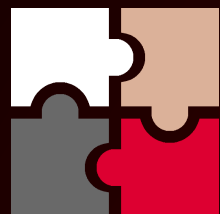
Check MT CO step 2
Compare CO Turn off PC

LET'S GO! CANCEL

Set TDC 95 Set EDC 140 Set PPT 142 Set FIT 1 Set Tj 95 Set Max FREQ 5250

RESET GET CO

HYBRID OC SETTINGS LOGGING DIAGNOSTIC BOOST TEST COMPARE AMD PBO2



PROJECT HYDRA – AMD PBO2 GUIDE

STEP 3:

At the end of the diagnosis **HYDRA** will display a message about the end of the diagnosis and the values obtained **will be automatically entered and saved** in the settings.

With each subsequent start of **HYDRA**, the AMD PBO2 settings will automatically be activated. The user also has the ability to manually enter CO values in UEFI.

HYDRA 1.1E PRO
OC-SANDBOX FOR ZEN3

AMD Ryzen 9 5950X 16-Core Processor Stepping 0
MSI MEG B550 UNIFY-X (MS-7D13) BIOS ver. A.51 SMU ver. 56.69.00
NVIDIA GeForce RTX 3070 Microsoft Windows NT 6.2.9200.0 03/31/2022 17:27:15

CCD1	CCD2	CCD3	CCD4
27.8°	28.9°	----	----
C01: 108, 220 C02: 117, 211 C03: 49, 206 C04: 67, 220	C09: 52, 173 C10: 72, 187 C11: 61, 178 C12: 625, 155	C13: 19, 164 C14: 38, 159 C15: 50, 169 C16: 43, 183	---

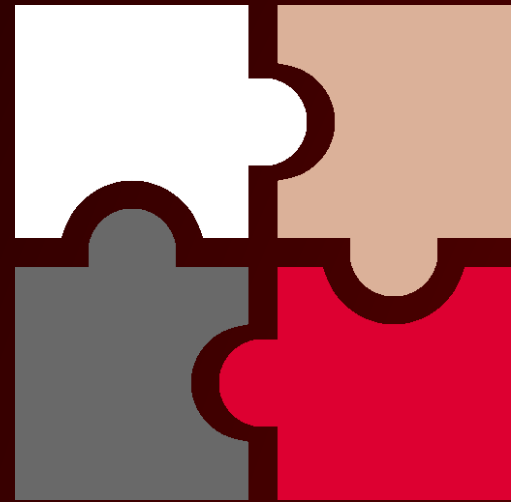
CPU (%) 0 Vdroop (%) 1 CPU TEL (V) 1.133 CPU VID (V) 1.144 CPU TDC (A) 14 CPU EDC (A) 139 CPU PPT (W) 51 EDC T (%) 3.4

CCD1 CURVE TUNER CCD2 CURVE TUNER CCD3 CURVE TUNER CCD4 CURVE TUNER

Set TDC 95 Set EDC 140 Set PPT 142 Set FIT 1 Set Tj 95 Set Max FREQ 5250

RESET GET CO

HYBRID OC SETTINGS LOGGING DIAGNOSTIC BOOST TEST COMPARE **AMD PBO2**



PROJECT HYDRA

OC-SANDBOX FOR ZEN3+ PROCESSORS

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