

CHRONOEXE

R&D

Measurement interface for ballistic chronographs


Functions

- COM ☒ ← Select COM port
- OPEN ← Open / Close COM port
- LOAD ← Load data from a TXT or CSV file
- SAVE ← Save data to a TXT or CSV file
- CLEAR ← Clear data
- 0.54 g ← Projectile weight (g-grams, gr-grains)

- ☐ ☒ ← Chart : Automatic scrolling of SHOTS axis / dynamic scaling
- ☒ ☐ ← Mix units (J, m/s, grains), (ft-lb, ft/s, grams)
- ☒ ☐ ← Switch between Metric and Imperial units
- ☒ ☐ ← Auto, Auto50: Dynamic scaling of the VELOCITY axis

- X0 ← Jump to the start of the SHOTS axis
- XN ← Jump to the end of the SHOTS axis

- + - ← Zoom in / Zoom out on the SHOTS axis

-  ← Mouse Cursor on point
Point parameters are displayed above the chart

- 123.00 ← Mouse Cursor on the unit
Point parameters are displayed above the chart



Connect to BLE on app startup

- R ← Refresh screen or CTRL+R
- SYM ← Symmetry (chart)
- CMP ← Compare chart with file data
- dV ← Velocity deviations (chart)

- IMG ← Export chart and statistics to a JPG image

- SCAN ← Scan for Bluetooth LE devices
- CONNECT ← Connect to Bluetooth LE

- MYSZ ← LMB (Left Mouse Button) – Drag/pan the chart
- SCROLL: Zoom in / Zoom out of the VELOCITY axis
- RMB (Right-click) graph AB markers function

Form

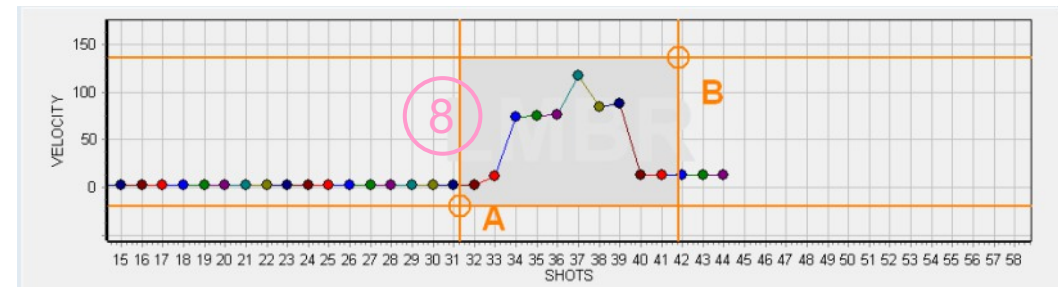
The screenshot shows the CHRONO software interface. Numbered callouts point to the following elements:

- 1: A vertical list on the left side of the interface.
- 2: A graph area labeled 'VELOCITY' and 'SHOTS' with a grid and a line plot.
- 3: A text input field for bullet mass, labeled 'g'.
- 4: A text input field for the Bluetooth LE name, labeled 'Bluetooth scanner'.
- 5: A 'SCAN' button next to the Bluetooth scanner input field.
- 6: A 'Port COM:' dropdown menu showing 'COM4'.
- 7: A 'CONNECT' button.
- 8: A 'CAN' button.

- 1 Window for editing and receiving data from a chronograph or a file. The "R" button or the CTRL + R keyboard shortcut triggers a calculation update.
- 2 Hovering the cursor over a chart data point displays the point's parameters above the chart.
- 3 Bullet mass in grams or grains.
- 4 Enter the Bluetooth LE name to establish a connection. Alternatively, enter the MAC address or name with the MAC address. The CONNECT button initiates pairing/connection.
- 5 CAN button: Bluetooth devices will be displayed in the following format: name, MAC address, received signal strength indicator (RSSI).
- 6 COM port selection for connecting the chronograph via USB cable, USB-COM, or Bluetooth Classic.
- 7 BLE module panel toggled via the INI file. BLEP=1 (panel visible), BLEP=0 (panel hidden).
- 8 The AB markers function (shortcut ALT + B; acts as a toggle) enables auto-centering and calculates statistics within the selected zone. Placing the cursor on the circle and using the Right Mouse Button (RMB) allows moving the marker.

Shortcuts

CTRL + R	Screen refreshing and calculation execution
CTRL + T	Changing file format for data import/export (csv, txt)
CTRL + F	Launching hybrid filter (data filtering within the form)
CTRL + P	Converting kinetic energy to IPSC Power Factor
CTRL + O	Converting kinetic energy to Power Factor in 0.0 format
ALT + B	Toggling AB markers and auto-centering on/off
ALT + A	Deleting chart data points outside the AB range
ALT + N	Deleting chart data points within the AB range
CTRL + ALT + A	Deleting chart data points outside the AB range and zero-padding
CTRL + ALT + N	Deleting chart data points within the AB range and zero-padding



Format INI file

During the first launch, a config file (*.ini) is created.
Below are the parameters available for user editing.

[Settings]

Style=1 ← 0,1,2,3,4 Style form
TXT=0 ← File form TXT=0, CSV=1
Multiplier=1
MultiplierG=1
CheckBoxScroll=1
ComPort=COM3
OpenCom= ← COM connection
 0 - manual, 1 - auto
CheckBoxAuto=0
CheckBoxAuto50=0
CNV=0 ← Conversion metric/imperial
 0 - disabled, 1 - enabled

ChartType=0 ← 0, 1, 2 Chart type
ChartColor=1 ← 0,1 Chart colour
ChartLineWidth=1 ← Line wide
ChartMarkerSize=5 ← Marker size
ChartBarWidth=35 ← % Bar width

CheckBoxBTAuto=0 ← BLE connection
 0 - manual, 1 - auto

FREQ=0
GATE=0 ← Data processing
A=0 ← from pulse counter

LabelVi=0# ← Vi digit format
LabelVG=0# ← Vmax, Vmin, dV, SV digit format
LabelE=00 ← Ei, EAVG digit format

BLEP=0 ← 1 or 0 Hide BLE panel

[BLE]

Last=
[FILTER] ← Logical filter
Filter=0
Shots=S(~)
Velocity=V(~)
[TXTCSV] ← Folder configuration
 for saving files
Folder=./MYSHOTS
FileName=Chrono_\$
INDEX=001
[IMG] ← Folder configuration
 for saving statistics
 in JPG format
Folder=./IMG
FileName=Stat%_\$
INDEX=001
[AUTOSAVE] ← Folder configuration
 for saving "backup"
 files
AUT=0
Folder=./AUTOSAVE
FileName=Chrono_\$
INDEX=001

useKmh=0 ← km/h or m/s range
 0, 1, or 2

Before use

- Please read the license terms in License.txt.
- Connect the chronograph to the PC via USB, a USB-COM cable, or Bluetooth.
- Turn on the chronograph and run the program (EXE file).
- Select the correct COM port and click OPEN to establish a connection via cable or Bluetooth Classic.
- Use SCAN to detect the device and CONNECT to the Bluetooth LE.
- Compatible with Windows 7 SP1, Windows 8, Windows 10, and Windows 11.
- Run as administrator or disable antivirus software (optional).