

ChronoEXE Manual Supplement

11. Usage examples and practical tips

This supplement extends the main manual with practical workflows: background changes, CNV unit conversion, quick filtering, JPG report preparation, and safe use of dV/SYM/CMP modes.

11.1. Changing the background and appearance

The application appearance is mainly controlled by the program style and chart settings. The INI file contains the Style parameter. Its exact meaning depends on the styles included in a given application build.

```
[Settings]
Style=1
```

- Change Style, from 0 to 4 and save the INI file, and restart the program.
- Do not confuse the program background with the JPG export background: the IMG report is currently generated on a white background for printing readability.

11.2. Changing chart appearance

For quick chart presentation changes, use ChartType, ChartColor, ChartLineWidth, ChartMarkerSize, and ChartBarWidth.

```
[Settings]
ChartType=2
ChartColor=2
ChartLineWidth=1
ChartMarkerSize=5
ChartBarWidth=35
```

- ChartType=0: line with markers.
- ChartType=1: line with X markers.
- ChartType=2: bar chart.
- ChartColor=2 helps detect increases or decreases compared with the previous shot.
- Reduce ChartBarWidth if bars overlap with a small number of points.

11.3. CNV - practical unit converter

CNV controls unit conversion. The safest approach is to treat base data as precise data and units as display only. The base projectile mass is stored in MultiplierG, while Multiplier is used for displayed or edited mass depending on the mode.

```
[Settings]
CNV=1
useKmh=0
Multiplier=1.0
MultiplierG=1.0
```

- CNV=0: simpler mode without active unit conversion.
- CNV=1: conversion mode; the program keeps a more precise base value and converts the view.
- useKmh=0: typical m/s, ft/s, g, gr view.
- useKmh=1: additional km/h, mph, kg, lb view.
- useKmh=2: test variant similar to useKmh=1, but metric energy may be displayed in kJ.

11.4. Example: quick switch from m/s to km/h

Useful when data comes from a chronograph in m/s, but the report should be easier to read for someone expecting km/h.

```
[Settings]
CNV=1
useKmh=1
```

- Restart the program after editing the INI file.
- Load data or press R if the data is already in Memo1.
- Check projectile mass, because energy depends on mass and the current unit mode.
- Use IMG for the report; unit labels will follow the current view.

11.5. Example: energy and power factor without manual calculations

Enter projectile mass, load the series, and use the program statistics. This avoids manual calculation of energy, median, or CV%.

- After changing mass, make sure the mass unit matches the selected mode.
- Use ES/Energy for standard energy reporting.
- Use power factor mode for sporting ammunition comparison, if enabled in your version.
- IMG saves a report with Me and CV%, which is useful for archiving a series.

11.6. Filtering as a quick data sieve

The filter can work by SHOTS number, by Velocity, or by both conditions at once. For manual work, it is safest to leave Filter=0 and use CTRL+F only when you really want to filter the current Memo1.

```
[FILTER]
Filter=0
Shots=S(10~30)
Velocity=V(290~310)
```

- CTRL+F filters the current Memo1 regardless of Filter=0/1.
- LOAD filters automatically only when Filter=1.
- COM filters only when Filter=1 and the active filter has + at the end.

11.7. Outside-range filtering

A reversed range A<B selects values outside the middle. This is useful for finding extreme shots or outliers.

```
[FILTER]
Velocity=V(310~290)
Shots=S(40~10)
```

- Velocity=V(310~290) selects values above 310 or below 290, according to the brackets.
- The same logic applies to the SHOTS range.
- For COM filtering, use for example Velocity=V(290~310)+ and Filter=1.

11.8. A/B as a quick analysis magnifier

A/B allows statistics to be calculated from a chart fragment without permanently destroying the full series. It is the easiest way to check the middle of a series, the end of a series, or a section after a setting change.

- ALT+B displays A/B markers.
- Right-drag a marker to move A or B.
- Right-drag the gray area to move the whole mask.
- IMG with active A/B calculates Me and CV% from the selected analysis points.

11.9. dV, SYM, and CMP - safe result workflow

dV, SYM, and CMP show analysis results while the program keeps source data in a buffer. During a result mode, live input from COM/BLE is blocked so new measurements do not mix with the result.

- After analysis, press R to return to source data.
- Do not manually append data to Memo1 while viewing a dV/SYM/CMP result.
- Use IMG to report the result before returning with R.

11.10. Live autosave - two working styles

Autosave works only for live COM/BLE data. It does not increment after LOAD, manual paste, or R.

```
[AUTOSAVE]
AUT=10
Folder=./AUTOSAVE
FileName=Chrono_$
INDEX=001
```

- With \$ and INDEX, the program creates consecutive files: Chrono_001, Chrono_002, ...
- Without \$ or without INDEX, the program may overwrite one fixed file with the current data state.
- AUT=10 means saving after 10, 20, 30... new live measurements.

11.11. Automatic COM startup

If the program should open a port immediately after startup, enter the port and set OpenCom to a non-zero value.

```
[Settings]
ComPort=COM3
OpenCom=1
```

- OpenCom=0, missing, or empty means manual startup.
- After automatic opening, the OPEN/CLOSE button should show CLOSE.
- Before changing the port, close the program or close the connection with CLOSE.

11.12. BLEP - hiding the panel does not disable BLE

BLEP controls visibility of the lower BLE panel. It is not the main Bluetooth switch.

```
[BLE]
BLEP=0
```

- BLEP=0 hides the panel.
- If automatic BLE is enabled, the program may still try to connect.
- To prevent automatic connection, also disable auto BLE in the program/INI, if used.

11.13. Numeric label formats

LabelVi, LabelVG, and LabelE help fit numeric values into small labels on the form and in reports.

```
[Settings]
LabelVi=0#
LabelVG=0#
LabelE=00
```

- LabelVi: last velocity.
- LabelVG: velocity statistics.
- LabelE: energy.
- Too long a format can reduce readability in small labels.

11.14. TXT/CSV - quick mode switch

CTRL+T changes TXT/CSV mode only for the current session. This is useful when you want to quickly save or load data in another format without permanently changing the INI file.

- After restart, the program returns to the value stored in [Settings]/TXT.
- Before sending data to another program, check the separator and file extension.

11.15. FREQ/GATE/A - converting time to velocity

If the live source sends pulse count or time instead of ready velocity, FREQ, GATE, and A can be used. The program calculates velocity from live data when FREQ and GATE are positive.

```
[Settings]
FREQ=1MHz
GATE=10cm
A=0
```

- FREQ accepts Hz, kHz, or MHz.
- GATE accepts m, cm, or mm.
- A is a correction constant and can be positive or negative.
- Practical tip: first test several known measurements and compare them with a reference chronograph.

11.16. Simple reporting workflow

- 1. Receive data from COM/BLE or use LOAD.
- 2. Check CNV units and projectile mass.
- 3. If needed, select a section with A/B.
- 4. Use IMG for a report with Me and CV%.
- 5. Save TXT/CSV for the archive.

Note: The INI file is created during the first run and whenever it is deleted.

11.17. Activation of the logical filter for COM / BLE and LOAD -(configuration example)

- 1. Open the INI file and enter the numerical parameters into the filter as shown in the figure.
- 2. Close the application and open the INI file, enable the filter (Filter=1), and place a "+" sign after the bracket, which signifies the activation of the filter for COM and BLE.
- 3. Send the data from the file using the LOAD, COM, or BLE button, or enter it manually by placing numbers in the edit window and pressing R.

Note: The Parameter Filter=0 means that the filter is globally disabled. The green mask is a boundary line (if the interval is closed) and constitutes the active area. If the data was entered manually, press R on the form or use the CTRL+R keyboard shortcut to start the calculations. The filter mask on the chart is enabled when the S or V parameters contain parameters defining the filter's operating area.

