Getting to know your Cronus device

1. **INPUT** (USB Receptacle Type A)
   Connector for wired game controllers or wireless receivers.

2. **OUTPUT** (USB Plug Type A)
   To connect the Cronus device on game consoles or PC.

3. **DISPLAY**
   Displays the current state of the Cronus device such as the running Profile and errors.

4. **PROFILE SWITCH**
   Use this button to switch between Profiles stored in the Cronus flash memory. The counter resets to zero when it reaches the end of the Profile list. Hold the button for 2 seconds to unload the current Profile.
   The Profile button can be emulated on your game controller. Check the "Device Options" on CronusCFG manual for more details.
   In Programming Mode the Profile switch makes the Cronus return to Normal Mode.

5. **PC PROG** (Mini-B USB Receptacle)
6. RESET BUTTON

The Reset button is hidden on the back of the Cronus device and needs to be pressed with a pin or paperclip. This will force the Cronus to enter Programming Mode.

In cases where the Cronus was unable to complete a firmware update (i.e. power loss or other reasons) the Cronus device will not work properly. In these situations, with the Cronus device connected to the computer through the PC PROG port, press the reset button on the back of the device with a paperclip to force the Cronus to enter programming mode. This will allow you to redo the firmware update.

Connecting a wired game controller

The Cronus device supports original wired controllers (PS3, XBox 360, Wiimote+extensions) and some third-party controllers. Wireless controllers require an additional adapter. Controllers designed for a particular console can be used on other consoles.
The bottom-right red dot
Dot ON means there is no USB device plugged into the input port.
Dot OFF means that a supported controller is plugged in and working.

Blinking 'E'
Plugged in USB device not supported or not recognized.

Limitations

Although the Cronus device can do almost anything, it does have the following limitations:

1. Unable to power on the console using Cronus due to inability to perform this operation via USB port. You will need to use the switch on the console to turn it on.
2. The chatpad and wired headset for XBox360 Controller are not supported.

Using the DS3/SixAxis/Navigation controllers in wireless mode

In order to use your DualShock3/SixAxis/Navigation controller in wireless mode you will need to use a compatible Bluetooth adapter and pair the controller with the Cronus device. Once the pairing has been done it is remembered by the devices so they can connect to each other without user intervention.

The Cronus device will automatically pair a DualShock3/SixAxis/Navigation controller when the controller is connected to the Cronus with a USB cable. This pairing procedure works the same way it would on a PS3 console. You can disable the automatic pairing in the options configurations of your Cronus device. In this case you will need to pair your controller manually. Please refer to the CronusCFG software manual for more details about manual pairing. Disabling automatic pairing is useful when you wish to use your controller with the Cronus device via a USB cable but keep your controller working wirelessly with a PS3.

Compatibility with Bluetooth Adapters

The DualShock3/SixAxis/Navigation and Wiimote controllers utilize Bluetooth 2.0+EDR (Enhanced Data Rate) for wireless communications. Bluetooth technology is a global short-range wireless standard that allows a broad range of electronic devices to connect and communicate with each other. Bluetooth technology is essentially a cable-replacement technology.

To add Bluetooth capability to the Cronus device you will need a Bluetooth USB Adapter compliant with
2.0+EDR standard. PS3 controllers need the EDR features to work properly. If you are looking for a Bluetooth adapter compatible with the Cronus device be sure to check if the model has at least the following specs:
- 2.0+ (or greater)
- EDR
The included Bluetooth USB adapter is compliant with all of these specs.

Using XBox 360 wireless controllers

While PS3 and Wii wireless controllers use Bluetooth for connectivity, the Xbox 360 wireless controller communicates over a proprietary 2.4 GHz protocol. In order to use a wireless Xbox 360 controller with the Cronus device you will need a Xbox 360 Wireless Gaming Receiver for Windows.

Official (Upper logo: Microsoft) Xbox 360 Wireless Gaming Receiver

Third-party (Upper logo: XBOX 360) Xbox 360 Wireless Gaming Receiver

The Cronus device supports both official and third-party receivers.

Microsoft has stopped producing the stand-alone official receiver and it is increasingly difficult to find in stores or online. An option may be the "Wireless Controller for Windows" bundle which includes a controller and the receiver. The third-party model of the Xbox 360 Wireless Gaming Receiver is easily found in online stores. The operation of both receivers is exactly the same. There is no difference in using one or the other. The choice of which receiver to use is completely personal.

Using XBox 360 Wireless Controller - Step by Step
1. Connect the Wireless Gaming Receiver on the INPUT port of the Cronus device. A green light will appear on the receiver indicating that the unit is working.

2. On the front of the controller, firmly press the large X button in the center. The controller will turn on and the X will light up with green lights flashing around it.

3. Press the connect button on the Wireless Gaming Receiver. The light will flash green. On the controller, press the connect button. This button is located on the back of the controller roughly in the middle between the two shoulder triggers.

4. The lights on the controller will flash and revolve to show it is searching for the Receiver. To indicate pairing has completed, the lights will stop flashing and remain lit in one of the four sections around the X button (player 1 to 4 lights).

How to use the Wiimote and its extensions with Cronus

Nintendo’s Wii controller is an interesting piece of technology. The main feature of the Wiimote is its motion sensing capability which allows the user to interact with games via gesture recognition and pointing through the use of the accelerometer and optical sensor technology.

One of the great things about this controller is that it uses Bluetooth for data exchange, which means you can use a Wiimote +(Nunchuk, Classic Controller [Pro]) with Cronus to play on PS3 or XBox 360. Optionally you can use the Nunchuk, Classic Controller or Classic Controller Pro attached to the Wiimote. Other extensions, such as MotionPlus, are not supported.

Before proceeding, make sure you have your Cronus device configured to search for Wiimote controllers. To do this, connect your Cronus (via PCPROG) to the PC, open the program CronusCFg.exe and access the "Cronus device options...". Enable the option "Enable Wiimote bluetooth searching".

☑ Enable Wiimote Bluetooth searching
If you want to speed up the DS3/SixAxis wireless syncing, leave this option disabled.
How to use the old Wiimote with Cronus - Step by Step

1. Enable the option "Enable Wiimote bluetooth searching".

2. Connect a compatible Bluetooth adapter to the Cronus device.

3. Hold down the 1 and 2 buttons on the Wiimote at the same time. All the blue lights on the bottom should start to blink.

4. Wait until only one LED stays lit. If the controller turns off, go back to step 3.

How to use the Wiimote with integrated Motion Sensor with Cronus - Step by Step

1. Enable the option "Enable Wiimote bluetooth searching".

2. Connect a compatible Bluetooth adapter to the Cronus device.

3. Push down the SYNC button on the back of the Wiimote. All the blue lights on the bottom should start to blink.

4. Wait until only one LED stays lit. If the controller turns off, go back to step 3.

Congratulations! At this point your Wiimote is connected and ready to use. You can now start to setup the remaps and play any game on PS3 or XBox 360 with the Wiimote controller.

Connecting the Cronus device on consoles and PC

The Cronus device is compatible with Playstation™ 3, XBox 360™ * and Windows® PC (*XBox 360 System requires an Official Licenced WIRED XBox 360 controller to authenticate). The Cronus can automatically recognize which console is in use in order to select the right output protocol. You can configure this feature in the "Cronus device options..." menu of the CronusCFG software.
In order to use the Cronus device on XBox 360 Systems a wired XBox 360 controller is needed. To use Cronus on Windows PC you will need to install the official MS driver for the Xbox 360 wired Controller.

**Display:** Output port state information

- The top-left dot
  Dot stays ON when the Cronus is not plugged into a console
  The dot is OFF when Cronus is connected.

- Showing 'AU'
  Connect a wired XBox 360 controller for authentication procedure.

Using Cronus on XBox 360 Console (Authentication procedure)

The XBox 360 system will only accept accessories after an authentication sequence which is performed by a security chip provided exclusively by Microsoft. This is why there are only a few third-party accessories for Xbox 360. The PS3 System does NOT require any authentication procedure so there are hundreds of third-party accessories designed for PS3 which you can now use on your XBox 360 through
the Cronus device.

In order to get Cronus working on XBox 360 you will need the help of a wired XBox 360 Controller for the authentication procedure. Once authenticated you can replace the XBox 360 Controller with any other controller you want. Note that using a wireless Xbox 360 controller with the Play-and-Charge USB cable for authentication will NOT work. This cable is for recharging only and does not transmit any data over the wire.

Any licensed XBox 360 wired controller should work for authentication. For best results we recommend using a Genuine Microsoft XBox 360 Wired Controller.

The wired XBox 360 Controller used during the authentication procedure will become useless on that particular console as long as the Cronus is plugged in. The controller will return to normal if you unplug the Cronus. This is because the Cronus device borrows the signature/ID# from the controller for itself and the XBox 360 does not allow two devices with identical IDs to operate at the same time.

Using Cronus on XBox 360 - Step by Step

1. Plug the Cronus into your XBox 360. The Cronus display will start to show AU meaning you need to connect a wired XBox 360 controller for the authentication procedure.

2. Plug your wired XBox 360 Controller into the Cronus device. Once you complete this step the Cronus should show the number 0 indicating the authentication procedure was successfully performed and the Cronus device is now operating normally. At this point you can already use the console with the Cronus device as well as run any Profile. If you want use another controller go to the next step.

3. Unplug the XBox 360 Controller. The Cronus device should display an animation indicating it is waiting for you to connect a controller to the input port.

4. Plug your preferred controller into the Cronus device. The cronus device should show the number 0, indicating it is operating normally and ready to run your Profile.
The PC PROG Interface

Interface for programming Profiles, monitoring, testing and running firmware update. Real-time I/O data monitor, state information and I/O data plot. Stores up to 9 user Profiles in the flash memory.

Display: PC PROG state information

Two Horizontal Bars
A script was loaded from PC PROG (Build and Run command) direct into RAM.

Three Horizontal Bars
The Cronus device is in capture mode, a plugin is running.

Cronus Display: State and Information

The 7-Seg Display shows the current state of the Cronus device.

1. Normal Operation Mode
No Profile is running, the input data (from controller) is being directed to the output (to console) without change.

A Profile, indicated by numerical index, was loaded from flash memory into RAM and is running. The input data (from controller) is being manipulated by the Profile.

A Profile was loaded from PC PROG (Test Profile command) into RAM and is running. The input data (from controller) is being manipulated by the Profile.

The Cronus device is in capture mode and the application is running. The I/O data is being handled by the application.

The top-left dot stays ON when the Cronus is not plugged into a console. The animation means it is waiting for a device to be plugged in.

The bottom-right dot stays ON when there is no USB device plugged into the input port. The animation means it is waiting for a game controller.

You are using the Cronus device on a XBox 360 system. You need to connect a wired XBox 360 controller to complete the authentication procedure.

The USB device attached via the INPUT port is not supported or is not recognized.
E1, E2, ... are error codes for security or hardware problems. Please contact our tech support.

2. Programming Mode

The Cronus device is in programming mode for firmware upgrade or for storage of user scripts into flash memory.

The blinking dot indicates that write operations into flash memory are being performed. DO NOT REMOVE THE DEVICE.

A solid E (with/without dots) means an error on security check or a hardware problem. Please contact our tech support.

CronusCFG Software Manual

The application CronusCFG allows users to create customized Profiles, which includes total remapping of the buttons and sensitivity adjustment of all the inputs on the controller. The CronusCFG is also used to adjust various settings of the Cronus device and to perform firmware updates.
Profiles: Remapping and Sensitivity Adjustments

Profile is a specific set of remaps and sensitivity adjustments. The CronusCFG application allows you to create and maintain an unlimited number of Profiles. The Profiles management menu can be accessed via the small arrow next to the first icon on the toolbar. You can share or backup your Profiles via the Export/Import operations.
The first step in setting up a new Profile is to select the type of controller that will be used (INPUT) and the console it will be used on (OUTPUT). The controller will determine the possible values in the combo-boxes and the console will determine the central image which corresponds to the controller for that console. The value selected in a combo-box corresponds to the input button on the controller that will activate a particular output entry. For example, assume you have selected DualShock3 as INPUT and XBox 360 as the OUTPUT. If the combo-box associated with the "A" button is showing the "TRIANGLE" this means that the action of pressing the "TRIANGLE" button on your DualShock3 will be converted to the action of pressing the "A" button.

The CronusCFG allows you to perform any kind of remapping, without exceptions. For example, it is possible to remap the entries of the motion sensors or the infrared sensors (Wiimote) to the analog sticks, or even to remap a single entry for multiple outputs. This makes it possible to play racing games with the motion sensor, play bowling games with the Wiimote, and play FPS games with the Wiimote "Point and Shoot" feature. The remapping procedure is very simple and intuitive. Just select the desired input value in the combo-boxes for each output button, analog stick, or sensor, as illustrated below.

At any time you can test your profile by clicking the "Test Profile" button. This button is enabled when the Cronus device is properly connected to your computer via the mini-USB port.
The entries that represent variation of value according to the pressure applied on the button allow the adjustment of sensitivity. The sensitivity adjustment is performed by a percentage factor. For example, a factor of 50% means that the output value will be 50% of the input value. A factor of 200% means that the output value will be 200% of the input value. The default value is 100% meaning that no adjustment on sensitivity is being applied. In some situations it may be desirable to always have the maximum value in a given output, independently of the input value. This behavior can be selected in the sensitivity settings by activating the option "Set 100% for any input value".

The sensitivity adjustment on the analog sticks are a special case. The adjustment is made on the pair (X, Y) in order to allow a more advanced configuration. This makes it possible to have a more precise control of the values translation from other sources such as motion sensors, IR sensors, or the FragFX mouse controller for the analog stick.

**Mid-Point:** With this setting you can change the midpoint value of an entry. The default midpoint value is 50%. By setting this parameter to 35 you are setting up two sensitivity ranges, as shown in the figure below:
Sensitivity: This value adjusts the value of the output. For example, if you enter 100% this means your output will be equal to your input for that button or thumbstick. Entering 143% means your output will be equal to 143% of the input value (greater than). Entering 72% means your output will be equal to 72% of the input value (less than).

DeadZone: Adjust the deadzone for the specific analog stick. The default deadzone shape is SQUARE but it can be changed to a CIRCLE shape. In this case the radius value of the CIRCLE deadzone is set in the Y field.

Invert: Invert the direction of the analog stick axis. If activated, pushing the stick UP will result in a DOWN value. The same applies to the X axis. If invert is activated, pushing the stick LEFT will result in a RIGHT value.

Stickize: Transforms the values of the mouse (or Wiimote IR) to analog stick. Please note: Very few games need this setting (i.e. Bad Company 1).

The stickize value corresponds to the radius of the circle, as shown in the picture above. Allowed values range from 100% to 141%. We suggest using 1295 when Cronus is being used on PS3 or 135% when used on Xbox 360. A value of 142% means this setup is not being applied.

Store your Profiles on Cronus

You can choose up to 9 Profiles to be stored in the Cronus flash memory using the CronusCFG application (see image below). Your Profiles are listed in the box on the left. To insert a particular Profile into a slot just drag-and-drop it from the Profile list to one of the Slots. To remove a Profile from the Slot drag it back to the Profile list.
After selecting the Profiles click "Store Profiles" to start the wizard that will help you finish this procedure.
Cronus Device Monitor and Configurations

Store Profiles on Cronus
Profiles bytecode summary

Total 2: 57 bytes
slot 1: 37 bytes
slot 2: 20 bytes

This operation will overwrite all Profile data on the Cronus device.

OK Cancel

Storing Profiles into Cronus
Cronus H1 Flash Programmer

Checking Data... 57 bytes OK
3 pages to be written
Entering Programming Mode....... OK
DO NOT REMOVE Cronus DEVICE
Writing... DONE
Rebooting

Finish Cancel
This set of operations will be enabled only when the Cronus device is connected to the computer via the mini-USB port. The icon on the toolbar will launch the Cronus Monitor and the little arrow is used to access the other operations.

The 'Cronus Monitor' window shows the states and parameters that are exchanged between the controller and the console. All values are normalized to percentage form meaning the state of a button can vary from 0%, when it is not being pressed, up to 100% when it is fully pressed. Some entries, such as analog stick, can range from -100% to 100%, where 0% is the resting position. The normalization aims to make the values more intuitive and easy to read.

The information is grouped into four distinct areas: (1) input - the data from the controller, (2) output - the processed data that is sent to the console, (3) additional information and command buttons, and (4) the plot area. The naming of the input buttons is determined by the controller model being used (SixAxis / DualShock3, XBox360 Controller or Wiimote). Likewise, the naming of the output buttons is determined by the console which the Cronus device is connected to (PS3 or Xbox360).
**Input Data:** The states and values of the controller buttons and sensors are reported in the leftmost frame of the Cronus Monitor window. Any user operation on the controller is reproduced in these data fields. If there is no controller connected to the Cronus device, this frame shows a message prompting you to connect a controller. It is possible to track the value of any of the fields in the plot area.

**Output Data:** The Cronus device reads the input data, processes this data according to the Profile which is running and then sends the result to the console. This result is the output data that is displayed in the central frame. It can also have its value tracked in the plot area. If Cronus is not connected to a console the user can choose the output format (PS3 or XBox360), as explained in the next topic.

**Additional Information and Command Buttons:** The current state of each controller LED is shown in the rightmost column of the Cronus Monitor. In total there are 4 states that an LED can take: off, on, blink and blink slow. Next, we have the current rotation values of the strong engine (Rumble A) and weak engine (Rumble B). The battery status parameter is not applicable to the controller in use. This field is
The CPU load basically indicates whether there are delays in sending data to the console. Any value below 80% is acceptable. It means the processor is able to perform all its tasks on time. The next value informs the index of the Profile that is running exactly as shown on the display of the Cronus device. The number 10 represents a Profile that was loaded by the command 'Test Profile'. The button 'Profile' is used to switch between Profiles and the button 'Unload' does what the name implies; it unloads the Profile.

The controller and the console that are connected to the device are indicated in the Input and Output fields. You can turn off wireless controllers via the button 'Turn Off Controller'.

**Plot Area:** Plots play an important role in data analysis and for Profile checking. Any data field of the input and/or output can be selected to have its value tracked. Simply click the area of the field you wish to track. Click the field again to turn off the tracking. You can select up to four data fields simultaneously. It is possible to pause the plotting to closely examine a particular sequence of data.

**Configurations**

**Manual DS3/SixAxis pairing:** The manual pairing procedure is quite simple. First, connect your Cronus device to your PC through the PCPROG port using a mini-USB cable. For more details on this procedure please see the device manua above. The next step is to discover the Bluetooth address (ID) of the dongle. Do this by following the instructions in the wizard window. Next, you will need inform the PS3 controller of the address of the Bluetooth dongle. To do this, remove the dongle from the Cronus and connect the controller to the Cronus via a USB cable. In this step the wizard will display the dongle address for you to check and confirm. Click "Next" one more time to complete the pairing. The controller is now configured to connect to the address of your bluetooth dongle. Complete the final steps of the wizard to start using your controller in wireless mode. To restore the factory settings connect the controller through USB to the PS3 and turn the PS3 on (if it isn't already on). All 4 lights should blink slowly on the controller. Now press the PS button. The Player 1 LED should now light up and the controller is now paired with the PS3 system again.

**Device Options:** When Cronus is being used on a PS3 system it must present itself as a DualShock3 controller and if it is being used on an XBox 360 it must identify itself as an XBox controller. This output format of data is called Output Protocol. The Cronus is compatible with the two protocols cited (PS3 and Xbox360) so you must choose the correct protocol for the system on which you want to use the controller. There is an option in which the selection of the protocol is performed automatically. The Cronus will detect the type of console and select the correct protocol. On PS3 systems the automatic detection procedure (briefly) triggers the message "Unknown USB device".
If you do not intend to use Wiimote with Cronus you can disable the option "Wiimote Bluetooth searching" to accelerate the Bluetooth sync with DualShock3 controllers.

**Software and Firmware Update**

The Update Wizard is a tool used to download and install the latest software and firmware versions for the Cronus device. An update usually brings new features, improvements, and bug fixes. The update procedure is not performed automatically. The user must trigger the update check via the menu, as shown in the following picture.

The software and the firmware update procedures are very similar. However, for the firmware update you first need to connect the Cronus device to your PC through the PCPROG port using a USB cable. The update wizard will search the Internet for the latest version of the software/firmware and will compare them to the versions in use.