

USERS GUIDE

COVERING ALL CX1
AND CX2/CX2R GEN 2
POWER SUPPLIES



WWW.CRITICALTATTOO.COM

THANK YOU

Thank you for purchasing your tools from Critical Tattoo. Your support is greatly appreciated. We are continuously striving to improve the quality, usability, and reliability of our products. This manual was developed to cover our full range of Gen 2 power supplies. Please take a moment to scan through the manual and learn the functionality of your new tool. In the event that you have trouble with one of our products, please study the troubleshooting guide or contact Critical directly at (877) 271-1446 and we will gladly help solve your issue.

POWER

18-24vdc 36w



Critical's full line of power supplies use the same switching power adapter; 90-240AC 50/60hz worldwide input, 18v 36watt output with the center pin being positive. In the case of a lost power cord, the Mickey mouse plug shown below is a C5 type.



18vdc 36watt center pos.



90-240vac 50/60hz

All CX power supplies will power down automatically after sitting for 15 minutes with no activity. You can also shut them down by holding the left arrow button until the screen indicates "SLP" or "standby". Pressing the foot pedal or any button will wake up the power supply.

MOUNTING

After unpacking your power supply you will find that it requires the use of a supplied mount. We developed it this way so the unit can be easily bagged and provide the best possible defense against cross contamination. Our preferred configuration is on the side of a tool box or cabinet as this gets it off of your sterile work surface and allows for free motion of the cords.

MOUNTING OPTIONS



10-32 WING SCREW NOT TO EXCEED
3/4 INCH LONG OR MAY VOID
WARRANTY

THE STANDARD MAGNETIC MOUNT THAT IS SUPPLIED WITH YOUR POWER SUPPLY CAN BE ROTATED IN ANY OF 4 DIFFERENT POSITIONS FOR TOP, RIGHT, LEFT, AND BOTTOM MOUNTING. ALSO SHOWN BELOW ARE ADDITIONAL MOUNTING SOLUTIONS AVAILABLE FOR PURCHASE FROM CRITICAL.



CX1

POWER UP/ SHUT DOWN

HOLD



When you put power to your CX1, it will power up and be ready to go. The power supply will shut down automatically after 15 minutes with no activity or you can shut it down by pressing and holding the left arrow button.

ADJUSTING VOLTAGE



Pressing the up or down arrows will adjust the output voltage. The currently active preset will retain the new value as its preset value.

JUMPSTART



Press and hold the up and down arrows to enable **en** or disable **dis** Jump Start mode. (This feature is for hard starting rotary machines).

CHANGING VOLTAGE PRESETS



Pressing the right or left arrows will toggle between the voltage presets, there is only one preset per button on the CX1.

PEDAL OVERRIDE



Pressing the center button will turn the output to your machine on and off in a maintained fashion regardless of whether the power supply is in maintained or momentary pedal mode.

MAINTAINED PEDAL MODE

HOLD



Press and hold the center button to arm **TGL** or disarm **NDR** maintained pedal mode.

CODE VERSION AND SERIAL#

HOLD



Press and hold the right and left button until you see the code version and manufacturing date of unit for warranty purposes.

CX2, CX2R Operation

POWER UP/ SHUT DOWN

HOLD



When you put power to your CX2/R, it will power up and be ready to go. The power supply will shut down automatically after 15 minutes with no activity or you can shut it down by pressing and holding the left arrow button.

ADJUSTING VOLTAGE



Pressing the up or down arrows will adjust the output voltage. The currently active preset will retain the new value as its preset value.

CHANGING VOLTAGE PRESETS



Pressing the right or left arrows will toggle between the voltage presets. There are up to 3 presets per button. On CX2R, if both outputs are active, the active output will correspond to the preset button being pushed.

PEDAL OVERRIDE



Pressing the center button will turn the output on and off to your machine in a maintained fashion regardless of whether the power supply is in maintained or momentary pedal mode.

MAINTAINED PEDAL MODE

HOLD



Press and hold the center button to arm or disarm maintained pedal mode. When armed, you will see an “M” on the display.

CHANGING DISPLAY SCREENS

HOLD



Pressing and holding the right arrow will index through the different display screens.

STOP WATCH



Pressing the stop watch button will start, stop, and resume the session time/money meter count. Holding the button for a few seconds will reset the stopwatch count as well as the machine run time count.

CX2/CX2R CONFIGURATION

HOLD



To enter the configuration menu, Press and hold the right and left arrows. Once in the configuration menu, use the up or down arrow to scroll through the different settings. Use the right or left arrow to change a setting. Scroll down to “exit” and press the left arrow to save and exit or press the clock button to save and exit. Below are the explanations of the different settings.

---SETTINGS MENU---	Options
> CLOCK HOUR: 12AM	Set Hour
CLOCK MINUTE: 30	Set Minutes
PRESET COUNT: 2	2/4/6
OUTPUT: LEFT	Both, Left,Right
JUMPSTART: OFF	Off,Left,Right,Both
KEY CLICKS: ON	On/Off
METER: \$100/HR	\$0-\$995/hr
LOCALE: US	US, Euro
SYNC: CHANNEL = 1	Sync
^^^EXIT^^^	Exit
CX2B REV.K V1.0X	Software version
RUN TIME: 10 HRS	Machine Run Time

Clock Hour

Sets the hour portion of the time of day display

Clock Minutes

Sets the minutes portion of the time of day display

Preset Count

Establish the number of presets that are enabled for each arrow button. A setting of “2” will yeild 1 voltage preset for each of the right and left arrow buttons, A setting of “4” will yeild 2 voltage presets for each button and so on.

Output Config.

(CX2-R Only) Establishes the behavior of the out-put jacks. “Left” = all presets will control power at the left jack, “Right” = all presets will control power at the right jack. “Both” Left button presets go to left jack and right button presets go to right jack.

Jump Start

This feature is for some of the hard starting rotary machines on the market. It functions in the same manner as the above output config. associating the jumpstart function with the Left, Right, or Both preset buttons regardless of the output config setting. Using this feature along with a jumpstart cable may void warranty.

CX2/CX2R CONFIGURATION (continued)

Key Clicks

Enable/Disable Button click sound

Money Meter

Set your hourly rate in \$5 increments \$0-\$995/hr

Currency

Dollars.

Sets the displayed currency, Currently Euro's, US

Sync Pedal

(CX2-R Only) Pressing clock button while the cursor is on "Sync" will enter the sync screen as well as exit and save the other settings. While in the sync screen, you can change the wireless channel with the up/down arrows. Once you have selected the channel you want, press the pedal once and the pedal and power supply will bind. You may have to press the pedal a few times before they bind.

Exit

Press the left button to save and exit config menu

Version

Shows the Model, Hardware revision, and Software revision for warranty and update purposes.

Run Time

The run time is the total accumulated time that a machine has been run on the unit.



Pressing and holding the right arrow will index through 3 different selectable displays.



Tuning (Default)



Time 1



Basic

10.5V

Large volt readout showing the setpoint voltage for the currently active preset.

←1→ Currently active preset

Hz 143 hz (speed) readout

DUTY 50% Duty Cycle Readout

AMPS .54 Amp Readout

m Pedal Mode and Status. "m" indicates maintained mode. "" indicates wireless pedal transmit. "#" indicates wired pedal or pedal override active. "O" indicates that there is power at the output.

10:05am Time of Day

SESSION 10:05 Alternates every four seconds between session time and session dollars as calculated from the hourly rate set in the configuration menu.

RUN 10:05 Machine run time. Resets with session reset. This is the time that your machine draws current. The count does not pause when session time is paused.

HZ, STL, and DUTY explained



HZ

The “**CYCLE TIME**” is one full down/up cycle of the A-Bar; The quantity of full cycles that take place in one second makeup the machines speed in Hz (cycles per second).

STL

We start at point “**A**” where the front spring first touches the contact screw and begins to flow current (Amps). As you can see, for the duration of “**B**”, the front spring bounces on the contact screw causing the current to oscillate. This is what we call “Settle” or “**STL**” as it shows on the CX2 display. Settle is represented as a percentage of “**ON TIME**”, so if you are seeing an “**STL**” of 20%, it’s saying that the front spring is bouncing for 20% of the machines “**ON TIME**” before it settles in. Generally, the longer the front spring’s free length, the higher the settle will be. Although a high settle reading suggests a less efficient contact interface, a better indicator of a poorly tuned machine would be an erratic reading.

DUTY

In the CX-G2 power supplies, duty cycle is simply “**ON TIME**” as a percentage of “**CYCLE TIME**”. Rotary machines do NOT turn on and off so they are always running at 100% duty cycle. The G2 power supplies have a very fast processor and very precise current sensing hardware, so our measurements and math are extremely accurate. You may notice that the duty readings are higher than you have observed with other power supplies.

TROUBLESHOOTING

Below is a simple troubleshooting guide covering some possible situations. The green arrow equals yes and the red arrow equals no.



WARRANTY

Critical Tattoo warrants your product to be free from defects in material and workmanship for a period of 2 years from the original date of purchase. If you discover a defect in a product covered by this warranty, we will repair at our option using new or refurbished components, or if repair is not possible, replace the item. Repair work does not reset warranty. **EXCLUSIONS:** This warranty covers defects in manufacturing discovered while using the product as recommended by the manufacturer. The warranty does not cover loss or theft, nor does coverage extend to damage caused by misuse, abuse, unauthorized modification, improper storage conditions, lightning, or natural disasters. The warranty does not cover parts that are subject to normal wear and tear replacement requirements, such as power cords and power adapters. **LIMITS OF LIABILITY:** Should the product fail, your sole recourse shall be repair or replacement, as described in the preceding paragraphs. We will not be held liable to you or any other party for any damages that result from the failure of this product. Damages excluded include, but are not limited to, the following: lost profits, lost savings, lost data, damage to other equipment, and incidental or consequential damages arising from the use or inability to use this product. In no event will Critical Tattoo be liable for more than the amount of your purchase price, not to exceed the current list price of the product, excluding tax and shipping charges. Critical Tattoo disclaims any other warranties, expressed or implied. By installing or using this product, the user accepts all terms described herein. Return shipping costs are not included with the warranty. Please call for return shipping instructions.

**FOR REPAIRS, VISIT THE REPAIR REQUEST
TAB AT WWW.CRITICALTATTOO.COM
(PROOF OF PURCHASE REQUIRED)**

**FOR ADDITIONAL TECHNICAL SUPPORT,
VISIT THE TECH INFO SECTION OF OUR WEBSITE**

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