

1 Introduction

The Yellowtec PUC² is a professional-quality USB soundcard for use with MAC or PC. It is compatible with MAC OS 9 or higher, Windows XP (with Service Pack 2) and Windows Vista (32 bit version).

With its Plug'n'Play operation PUC² is ready to go without installation of any drivers. PUC² is powered through the computer's USB port.

Several versions of PUC² are available, offering different audio input and output formats and connections. The AES-3 interface is common to all versions.

Yellowtec has a policy of continually improving and updating its products, and may from time to time make firmware upgrades or dedicated software for PUC² available on our website. Please visit Yellowtec's website www.yellowtec.com from time to time to benefit from new features and performance enhancements. Firmware upgrades will be free of charge.

PUC² is capable of recording high-resolution audio at up to 192 kHz sample rate and 24 bit word-lengths using its ASIO driver.

2 Ready, Set Up, Go

Your PUC² is designed so that you can start using it right away. If you have never used a PUC before, read this guide for help getting started.

If you are an experienced user, you may already know enough to get started. Make sure you make yourself familiar with Chapter 4 "Advanced Operation".

What's in the Box

Your PUC² comes with a USB Y-cord to interconnect with your MAC or PC.

Setting Up your PUC²

Step 1: Simply interconnect PUC² with your computer using the supplied USB Y-cord. Make sure you plug in both USB A-plugs (yellow and black) into two unused ports. The yellow connector carries no data but will be needed to secure sufficient power supply.

Step 2: The first time you interconnect your PUC² to a PC or a MAC a series of messages will appear on the computer monitor and report the automatic installation of a new USB device. The device will identify as YELLOWTEC PUC².

Step 3: You can now use PUC² in native mode.

Step 4: For using PUC² with high-res audio (192KHz sample rate) and enhanced features you may need to install our ASIO driver. Please visit our website for options.

3 PUC² Basics

RDY LED

GREEN indicates proper connection and working. A brief RED flash indicates the activation process when you connect PUC² to the computer.

AES-3 Input

The AES-3 input is the default audio input to the PUC². This input will override any other inputs (for example from the analogue inputs) when a digital input carrier is detected and locked, even if there is no active audio in the digital stream. The audio signal is converted into a USB format and available to any audio recording application on the computer.

AES-3 Input

The AES-3 output is always active at the sample rate selected by the application running on the computer.

ZLM LED

RED indicates "Zero Latency Monitoring". (See "Advanced Operations")

ZLM Jack

In order to route the input signal directly to the output you can apply an external contact closure. This bypasses the OS kernel for true Zero Latency Monitoring. (See "Advanced Operations")

AUX Output *

The Stereo 3.5mm jack supplies an analogue audio signal for monitoring. It can be used to drive a set of headphones, although there is no control of the AUX output level. Care should be taken to avoid hearing damage due to prolonged listening at high levels.

Analogue Balanced Input XLRs *

Description of audio port, level, headroom, no AD here, no advanced

Note: the analogue input signal will be disregarded when an AES-3 input signal is present and locked.

Analogue Balanced Output XLRs *

This output is always active. Confirm that the correct digital headroom values are being used (See "Advanced Operations").

4 Advanced Operation

Zero Latency Monitoring (ZLM)

PUC² has a special feature which allows the user to monitor its input signal directly at all of its outputs simultaneously. This bypasses the USB conversion and computer, offering very low input to output times, typically less than 5 ms, even at low sample rates. This can be turned on by closing the tip and sleeve (ground) contacts on the 3.5mm stereo ZLM switch jack on the unit. The USB sound output of the computer is mixed into the input signal, and by default, both signals are dimmed (reduced in level) by 6dB to avoid overloading the output stages. This automatic level adjustment can be over-ridden by connecting the ring and sleeve (ground) contacts on the ZLM switch jack, or by using a mono 3.5mm jack (or dummy plug) to switch on ZLM mode.

ZLM Jack Tip (ZLM enable)	ZLM Jack Ring (ZLM Level)	Audio Signal at all Outputs
O	O	Computer audio output from USB
G	O	Computer audio output from USB at -6dB and selected input signal at -6dB
G	G	Computer audio output from USB at 0dB and selected input signal at 0dB
O	G	Computer audio output from USB

"O" = open and "G" = closed (connected to sleeve or ground)

Bypasses Windows internal kernels offering lower latency (delay) and bit identical transfer between the software application and the sound card's audio converters.

* not available with all versions of PUC²