



CANCUN 222-Mic

CANCUN 442-Mic

Professional USB Audio Interface

Version v1.00



User manual



**For technical support,
please contact your supplier**

www.digigram.com

Digigram S.A.

Parc de Pré Milliet, 38330 Montbonnot - FRANCE

Tel: +33 (0)4 76 52 55 01 • Fax: +33 (0) 4 76 52 53 07 • E-mail: info@digigram.com

Digigram Asia Pte Ltd.

60 Albert Street - #19-11OG Albert Complex Singapore 189969, Singapore
Tel : +65 6291 2234 • Fax : +65 6291 3433 • E-mail : info_asia@digigram.com



[INFORMATION FOR THE USER](#)

[IMPORTANT NOTICE](#)

[FEATURES](#)

[Cancun 222-Mic and CANCUN 442-Mic main hardware features](#)

[CANCUN 222-Mic](#)

[CANCUN 442-Mic](#)

[Software features](#)

[HARDWARE REQUIREMENTS](#)

[SUPPORTED OPERATING SYSTEMS](#)

[HARDWARE INSTALLATION](#)

[SOFTWARE INSTALLATION OF CANCUN UNDER WINDOWS](#)

[FIRMWARE UPDATE](#)

[SETTING AND MONITORING CANCUN PARAMETERS FROM THE CONTROL PANEL](#)

[Starting the control panel](#)

[Configuration of Preferences](#)

[Adjusting the gains on the analog inputs and displaying vu-meters](#)

[Input pad and 48V phantom power](#)

[Displaying the signal level on the AES/EBU input\(s\)](#)

[Adjusting the gains on the analog outputs and displaying vu-meters](#)

[Displaying the signal level on the AES/EBU output\(s\)](#)

[Configuration of headphone output parameters](#)

[SETTING CANCUN PARAMETERS FROM THE CANCUN TOUCH PANEL](#)

[Input gains setting](#)

[Pad](#)

[Variable analog input gain](#)

[Output gains settings](#)

[48V phantom power](#)

[SPECIFICATIONS](#)

[Configuration](#)

[Audio specifications](#)

[Inputs](#)

[Outputs](#)

[Analog audio performances](#)

[External Connectors](#)

[Delivered Cables](#)

[Environments](#)

[CANCUN 222-Mic schematic diagram](#)

[CANCUN 222-Mic CABLE](#)

[CANCUN 222-Mic cable schematic](#)

[CANCUN 222-Mic Wiring diagram](#)

[CANCUN 222-Mic cable pinout](#)

[CANCUN 442-Mic CABLE](#)

[CANCUN 442-Mic cable schematic](#)

[CANCUN 442-Mic Wiring diagram](#)

[CANCUN 442-Mic cable pinout](#)



INFORMATION FOR THE USER

The user's manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment

This device complies with part 15 of FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a CLASS B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions contained in this data sheet, may cause harmful interference to radio and television communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- * reorient or relocate the receiving antenna
- * increase the separation between the equipment and the receiver
 - * connect the equipment into an outlet on a circuit different from that of the receiver
- * consult the dealer or an experienced audio television technician.

Note: *Connecting this device to peripheral devices that do not comply with CLASS B requirements or using an unshielded peripheral data cable could also result in harmful interference to radio or television reception. The user is cautioned that any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. To ensure that the use of this product does not contribute to interference, it is necessary to use shielded I/O cables.*

IMPORTANT NOTICE

This device has been tested and found to comply with the following standards:

- International: CISPR22 Class B
- Europe: EMC 89/336/CEE (1992) specifications.
- United States: FCC Rules-Part 15-Class B (digital device).

For best compliance with these standards, Digigram recommends to use audio shielded cables shorter than three meters.

FEATURES

CANCUN 222-Mic and CANCUN 442-Mic are professional audio interface for USB ports (compatible with USB 2.0 and USB 3.0 hosts).

They are powered via USB.



CANCUN devices are delivered with a 'Y' USB cable allowing powering the device from two USB ports. It is recommended to connect the two USB plugs so as to correctly power the CANCUN unit.

Cancun 222-Mic and CANCUN 442-Mic main hardware features

- Simultaneous analog & AES I/Os in a compact form factor
- A/D and D/A conversions 24-bit / frequency : 32 kHz, 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 192 kHz
- Excellent MIC preamp (55dB gain, from -60 dBu sensitivity, typical -105 dB THD+N, and -128 dB EIN)
- Switchable 48V phantom power (7 mA Max on each input)
- Adjustable analog input gain from 0 to 55 dB, by 1 dB steps
- Switchable -30 dB input signal Pad (level attenuator)
- Maximum analog input signal: +25 dBu
- Guaranteed low latency (<4 mS) on both Windows™ and Mac OSX™ platforms
- Ergonomically advanced user interface for quick setup and efficient monitoring on both Windows™ and Mac OSX™ platforms
- Innovative hardware controls with LED-lighted touch panel
- Neutrik™ XLR connectivity and break-out cable
- Input channel 1 duplicated on an XLR input on the CANCUN, and on the breakout cable.

CANCUN 222-Mic

- 2 balanced analog mono line/mic inputs, +25 dBu max signal level
- 2 balanced analog mono line outputs, +10 dBu max signal level
- 1 additional balanced stereo AES/EBU input
- 1 additional balanced stereo AES/EBU output
- 1 stereo headphone output on female 6.35mm jack



CANCUN 442-Mic

- 4 balanced analog mono line/mic inputs, +25 dBu max signal level
- 4 balanced analog mono line outputs, +10 dBu max signal level
- 2 additional balanced AES/EBU inputs
- 2 additional balanced AES/EBU outputs
- 1 stereo headphone output on female 6.35mm jack

Software features

- CANCUN 222-Mic and CANCUN 442-Mic comply with the USB Audio 2.0 specification
- Simultaneous record and playback on all the audio I/Os
- Supported formats: PCM 8, 16, 24 bits
- DirectSound devices
CANCUN 222-Mic: 2 stereo input devices (1 analog, 1 AES/EBU)
CANCUN 442-Mic: 4 stereo output devices (2 analog, 2 AES/EBU)
- ASIO devices
CANCUN 222-Mic: 4 mono input devices (2 analog, 2 AES/EBU)
CANCUN 442-Mic: 8 mono output devices (4 analog, 4 AES/EBU)
- Control Panel GUI for quick setup and efficient monitoring on both Windows™ and Mac OSX™(*) platforms
- Mixing of the inputs and playback outputs to the headphone output
- Host platform Control Panel synchronized with CANCUN touch panel

As Windows operating systems don't feature the USB Audio 2.0 compatibility, it is necessary to install a driver package. CANCUN devices are visible as DirectSound and ASIO devices. CANCUN is also compatible with Kernel Streaming applications.

HARDWARE REQUIREMENTS

- Computer with at least Pentium Core 2 Duo CPU or equivalent recommended
- Two USB port (standard 2.0 or higher)

SUPPORTED OPERATING SYSTEMS

- Windows XP, Windows Seven (32-bit and 64-bit)
- Mac OS X
- Linux(*)

* Not available yet. Will be available by software upgrade

HARDWARE INSTALLATION

Connect the mini-B USB connector of the provided USB cable to the mini-B USB port located underneath CANCUN.

Connect the 2 standard type A male USB connectors of the provided USB 'Y' cable to two USB ports (USB 2.0) or your computer.



It will then automatically be detected by the operating system.

Under Windows operating systems, it is necessary to install the driver package for Windows (because Windows OS don't support USB Audio 2.0).

Notes:


- It is recommended to plug the two USB connectors of the provided 'y' USB cable.
It is not recommended to power CANCEL from a USB power supply.
- If you have several USB peripherals connected to the same USB controller of your computer, they may consume more energy than the USB controller can provide. In this case, disconnect some of these peripherals.

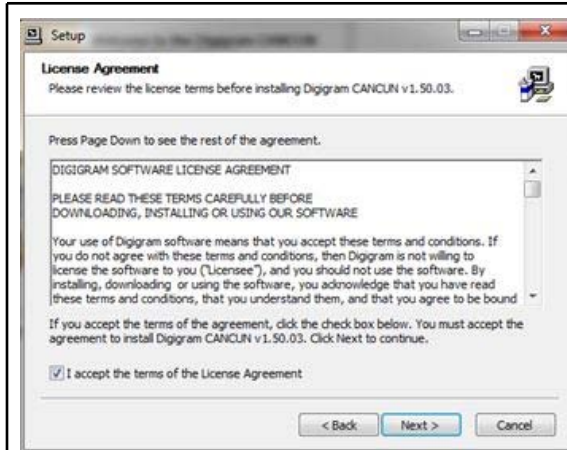
SOFTWARE INSTALLATION OF CANCEL UNDER WINDOWS

The first time you connect your Cancun device to your computer, it is necessary to install its driver, as USB Audio 2.0 is not supported yet by Windows operating systems

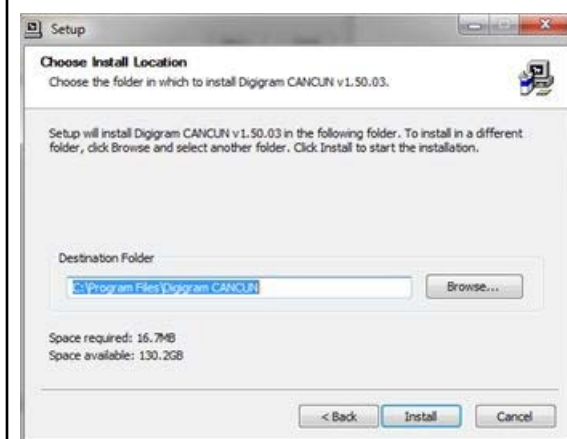
Connect your Cancun device to a free USB port of your computer.

Execute the driver installation package you have downloaded from Digigram WEB site, and proceed as follows.

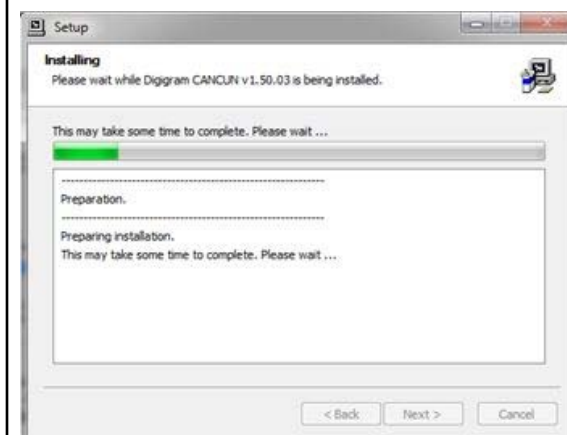
	<p>Click on Next.</p>
-------------------------------------------------------------------------------------	------------------------------



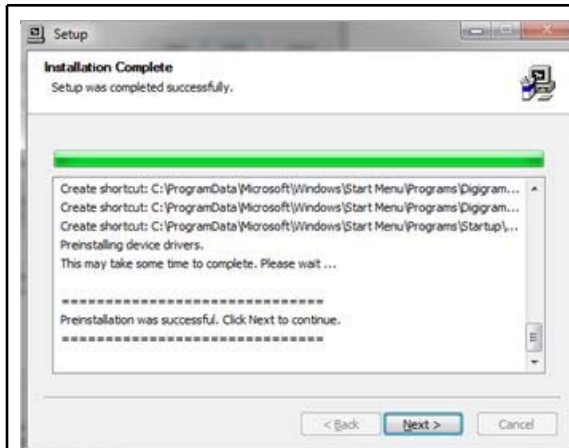
Accept the License Agreement, and click on **Next**.



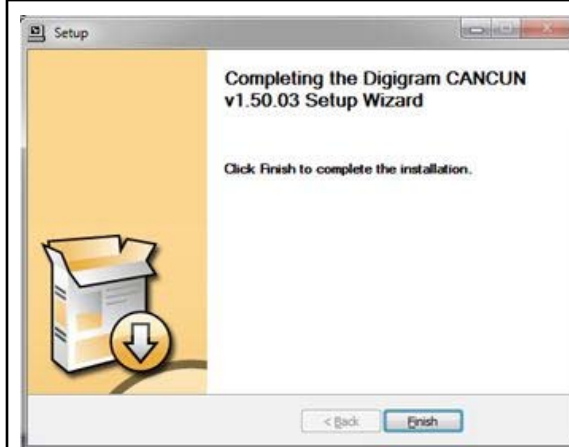
By default, driver files are installed in folder C:\Program Files\Digigram CANCUN. Select another folder if you want, and click on **Install**.



Wait during the installation of the driver.

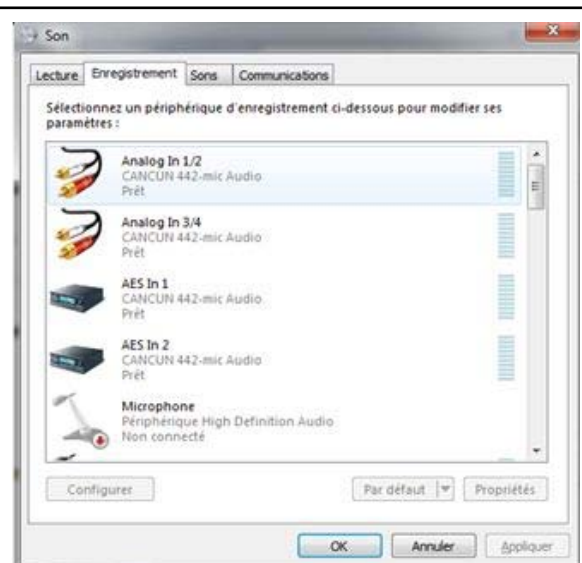
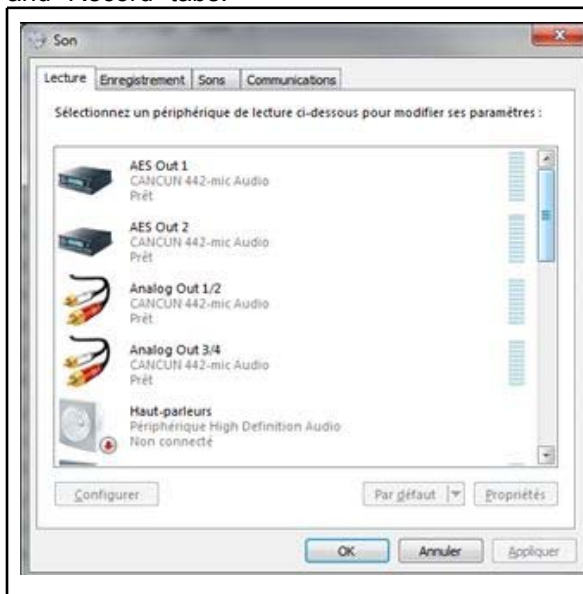


When the message **“Preinstallation was successful. Click Next to continue”** is displayed, click on Next.



Click on Finish to finish the installation procedure.

The Cancun DirectSound devices are now listed in the Windows “Sound” control panel, in “Playback” and “Record” tabs.



The ASIO devices can be selected from any ASIO application.


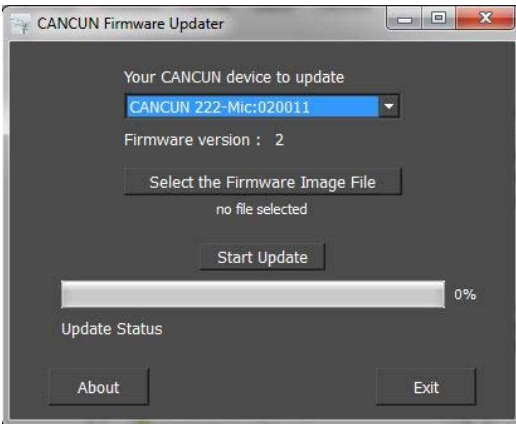
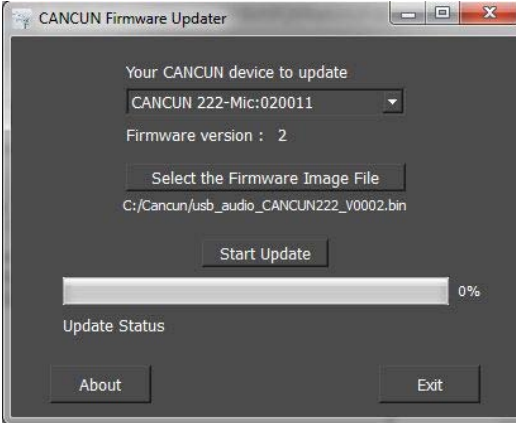
FIRMWARE UPDATE


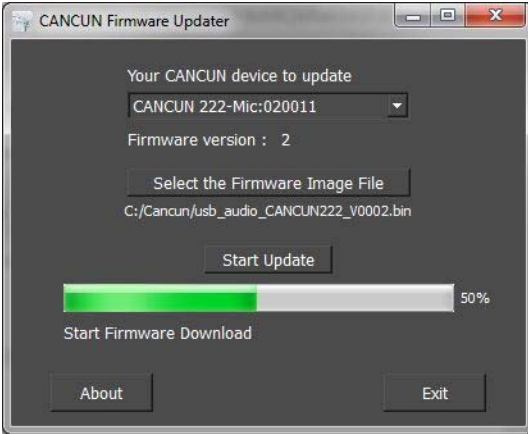
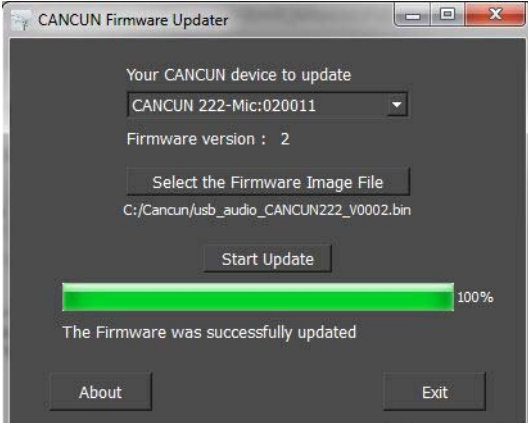
Your Cancun is delivered with a firmware version applied in factory. A more recent firmware version may have been released by Digigram since you purchased your CANCUN (a new firmware may include improvements and new features).

Please connect to the Support page of Digigram WEB site: www.digigram.com/drivers/index.php.

Select "Sound cards" in section "Product Technology", and then select "CANCUN 222-Mic or CANCUN 442-Mic" from section "Product type". Download the most recent firmware which has been release after you purchased your CANCUN.

Unzip the downloaded file.

	<p>From "Start" menu, "Programs", select "Digigram CANCUN", and "CANCUN Firmware Updater".</p>
	<p>Select the CANCUN device to be updated from the list box "Your CANCUN device to update". If you have one CANCUN connected, it is selected by default.</p> <p>The version of the firmware currently used on your CANCUN is displayed in "Firmware version".</p> <p>In case you have downloaded a more recent firmware, select it by clicking on "Select the Firmware image file". Select the .bin file (downloaded firmware file that you have unzipped).</p>
	<p>The selected firmware file (.bin) is displayed. Click on button "Start Update" to start the firmware update process.</p>


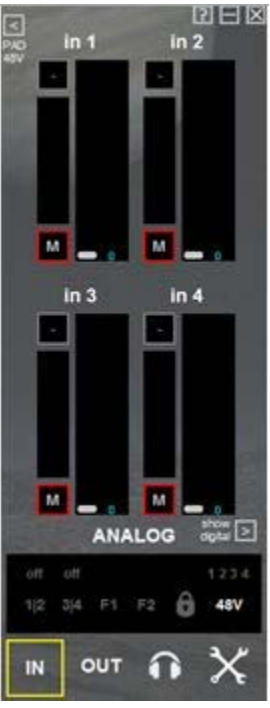
	<p>A confirmation window is displayed. Click on button “Yes” to confirm the firmware update.</p>
	<p>The displayed green bar indicates the firmware update progress.</p>
	<p>When the green progress bar has reached 100% and the message “The Firmware was successfully updated” is displayed, click on button “Exit” to quit the firmware updater application.</p> <p>You can now use your CANCEL which is running the new firmware.</p>

Notes:

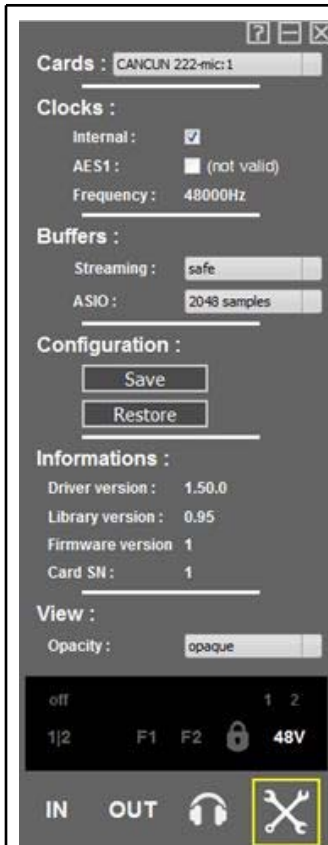
- If the USB cable is disconnected during the firmware update process, the firmware updater displays an error message. Re-connect the USB cable, and click again on button “Start Update”.
- In case the firmware update fails, CANCEL is set back to the firmware version applied in factory, even if you installed a more recent firmware version.

SETTING AND MONITORING CANCUN PARAMETERS FROM THE CONTROL PANEL

Starting the control panel

	<p>Cancun parameters can be set from its control panel. To open Cancun control panel, go in Start menu, Programs, Digigram CANCEL, and select Cancun Control Panel.</p> <p>Note that the Control Panel is automatically opened when connecting the CANCEL to the PC (provided that the driver has been installed under Windows).</p>
	<p>Four main groups of parameters are accessible from the Control Panel bottom bar:</p> <ul style="list-style-type: none"> • Preferences: Clock selection, buffer size (latency), opacity of the Control Panel display, presets. • Parameters for the audio inputs (adjustable gains, vu –meters, Mute, PAD, 48V phantom power) . • Parameters for the audio outputs (adjustable gains, vu –meters,) • Parameters for the headphone output (adjustable attenuation, Left/right balance, mix of input signals).

Configuration of Preferences



Click on  to set the global parameters of CANCEL.

Cards: allows select the CANCEL device to set its parameters.

Clocks: allows selecting the sampling clock:

- Internal: sampling clock is generated internally
- AES1: sampling clock is extracted from digital input AES1. Without digital signal connected to the input "AES 1", AES1 clock selection is displayed as "not valid".

Buffers: these parameters allow adjusting the latency of the CANCEL device.

- Streaming: this is the lowest level of buffering, which impacts the latency in DirectSound as well as in ASIO.

Possible selections are: min latency, low latency, standard, relax, safe, extra safe.

- ASIO: this is the buffering used by the ASIO driver, in samples. Possible values are: 64, 128, 256, 512, 1024, 2048, 4096, 8192 samples.

The minimum selectable value depends on the parameter "Streaming".

When "Streaming" is set to "low latency", all values are allowed.

When "Streaming" is set to "extra safe", values higher or equal to 2048 samples can be selected.

Note: minimum latency settings require good PC performances.

Configuration Save

Click on "Save" to save the current parameter configuration (settings are saved as an XML file).

Configuration Restore

Click on "Restore" to load presets (XML file).

Opacity: this parameter allows adjusting the transparency of the Control Panel GUI. Available choices are: opaque, 30%, 50%.

Note:

- This panel is opened when selecting the "ASIO configuration" from an ASIO software application.

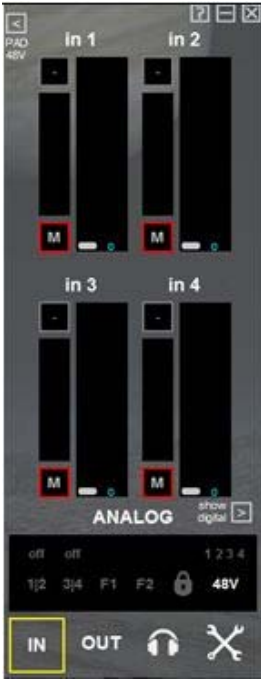
- Be aware that certain applications (e.g. Reaper) do not allow


direct editing of CANCEL  configuration menu; in this case, the CANCEL menu should be accessed through the application audio

configuration menu which in turn launches CANCEL  panel.

Configuration of audio inputs parameters

Adjusting the gains on the analog inputs and displaying vu-meters





Click on  to set the parameters of audio inputs.

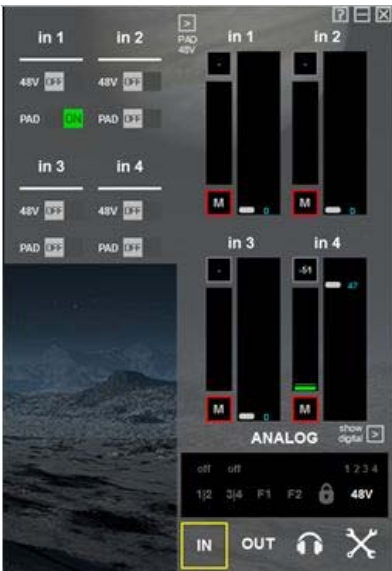
Each slider allows adjusting the analog gain for an analog input from 0dB to + 55 dB, by 1 dB steps.


It is possible to adjust the level of several inputs at the same time, by moving only one slider. To do so, press “Shift + Click” on each slider. The cursor of the slider becomes purple. When all the selected sliders are purple, just move one of them. All the sliders move at the same time



The vu-meters display the signal level after the analog to digital conversion. The peak-meter instantaneous value is displayed right above the vu-meter.

To mute an input, click on the corresponding Mute icon . Mute is ON when icon is red .

Input pad and 48V phantom power



Click on the icon  on the top left of the ANALOG panel to display the panel allowing to set Pad and 48V on the inputs. **Pad** is a fixed attenuator stage (-30 dB) available on each input, that can be enabled/disabled.

To enable the Pad on an input channel, click on the OFF button on the right of PAD  for the selected channel. When Pad is enabled on a channel, the button is displayed as follows: 



Audio alignment when Pad is OFF.
 Alignment when slider is set to 0 dB: -5.2 dBu -> 0dBfs
 Alignment when slider set to 55 dB: -60.2 dBu -> 0dBfs

Audio alignment when Pad is ON.
 Alignment when slider is set to 0 dB: +25.6 dBu -> 0dBfs
 Alignment when slider set to 55 dB: -29.4 dBu -> 0dBfs

Set Pad to OFF when using microphones.

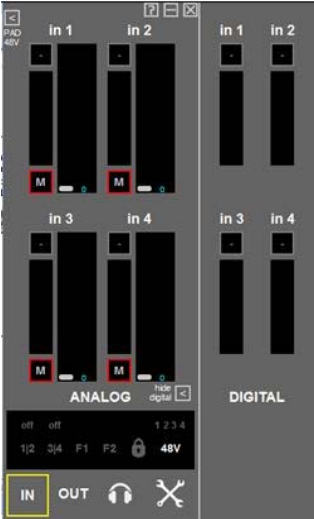
When using static microphones, it is necessary to enable the

48 V phantom power on the input the mic is connected to. To activate the 48V phantom power on an input, click on the OFF button on the right of 48V for the concerned input:


 . When 48V is enabled on an input, the button is displayed as follows: 


Note that any modification of the Pad from the software Control Panel is reflected on the touch pad of Cancun, and vice versa.

Displaying the signal level on the AES/EBU input(s)



The screenshot shows a control panel with four input channels (in 1 to in 4). Each channel has a vertical meter and a '48V' button. Below the meters, there are 'ANALOG' and 'DIGITAL' sections. A 'show digital' button is located at the bottom right of the 'ANALOG' section, and a 'hide digital' button is at the bottom right of the 'DIGITAL' section. The '48V' button is currently set to 'OFF'.

Click on the icon  , on the bottom right of the “ANALOG” window, to view the digital level on the inputs signals. A vumeter is displayed for each input channel, which gives the digital level of the signal on the digital input, expressed in dBfs (0dBfs is the maximum value of a digital sample).

To hide the digital levels panel, click on the icon  .

Adjusting the gains on the analog outputs and displaying vu-meters

Click on the icon to set the parameters for audio outputs.

For each output, the volume slider allows adjusting the analog attenuation, 0dB to -72 dB, by 1 dB steps.

It is possible to adjust the volume of several outputs at the same time, by moving only one slider. To do so, press “Shift + Click” on each slider. The cursor of the slider becomes purple. When all the selected sliders are purple, just move one of them. All the sliders move at the same time.

Output alignment is as follows:
 Slider set to 0 dB: 0 dBfs -> +10dBu
 Slider set to -72 dB: 0 dBfs -> -62dBu

The vu-meters display the signal level before the digital to analog conversion. The peak-meter instantaneous value is displayed right above the vu-meter.

To mute an output, click on the corresponding Mute icon .







Mute is ON when icon is red

Displaying the signal level on the AES/EBU output(s)


Click on the icon , on the bottom right of the “ANALOG” window, to view the digital level on the outputs signals. A vu-meter is displayed for each input channel, which gives the digital level of the signal on the digital output, expressed in dBfs (0dBfs is the maximum value of a digital sample).

To hide the digital levels panel, click on the icon .

Configuration of headphone output parameters

	<p>Click on the icon  to adjust the settings of the headphones output.</p> <p>The central fader allows adjusting the signal level on the headphones output.</p> <p>The horizontal cursor, in top of the main fader, allows adjusting the balance between left and right channels.</p> <p>The headphones output receives a mix composed of:</p> <ul style="list-style-type: none"> - all the inputs (analog and AES/EBU) - all the audio played on CANCUN output devices (playback from software applications). <p>The level of each signal on the input of the mixer can be adjusted from the left window, as well as the panoramic.</p> <p>ANALOG INPUT section</p> <p>This section allows adjusting the levels of the signals on the analog inputs right before the mixer. For each signal, the central fader controls the signal level, and the upper horizontal slider controls the panoramic between left and right output channels.</p> <p>The signal can be selected in solo , and can be muted .</p> <p>ANALOG OUTPUT section</p> <p>This section allows adjusting the levels of the signals played on the outputs from a software application. For each signal, the central fader controls the signal level, and the upper horizontal slider controls the panoramic between left and right output channels.</p> <p>The signal can be selected in solo , and can be muted .</p> <p>Click on the icon  on the top left of the central headphones window to access the levels adjustment for the digital signals of the AES/EBU inputs, from the section DIGITAL INPUT.</p>
--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

The screenshot displays the Digigram software interface. On the left, there are two sections: 'DIGITAL INPUT' and 'DIGITAL OUTPUT'. Each section contains four vertical faders, numbered 1 through 4, with 'L' and 'R' labels above them. Each fader has a green 'S' icon and a red 'M' icon. In the center, there is a large vertical fader with 'M' labels at the bottom and a headphones icon below it. At the bottom left, there is a 'show analog' button with a left arrow. At the bottom right, there is a 'show digital' button with a left arrow and the text 'show digital'. Below the central fader, there are several controls: 'off off 1 2 3 4', '1|2 3|4 F1 F2', a lock icon, and '48V'. At the very bottom, there are 'IN' and 'OUT' labels, a headphones icon (highlighted with a yellow box), and a wrench icon.

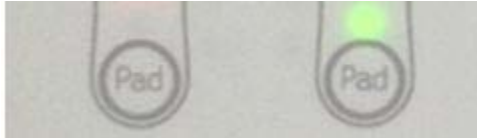
Click on the icon  on the bottom left of the central headphones window to access the DIGITAL OUTPUT section, for adjusting the levels of the signals played on the AES/EBU outputs from a software application.

SETTING CANCUN PARAMETERS FROM THE CANCUN TOUCH PANEL

Input gains setting


Pad

Press the **Pad** touch button to enable/disable the fixed attenuation on the desired. When PAD is ON, a green led appears. An attenuation of -30.0 dB is applied to the analog input signal. When PAD is OFF, the LED is turned off. No attenuation is applied.




Note that the Pad status is reflected in the software Control Panel.

Variable analog input gain

	<p>The analog input gain is adjustable with the upper rotary button when:</p> <ul style="list-style-type: none"> · the IN/OUT touch button on the right of the rotary button is in position IN (green led in front of IN) · and the touch button on the left of the rotary wheel is active (green led).
	<p>Pressing the button  several times allows selecting analog input 1, analog input 2, both inputs, or no input (LED turned off). The analog gain adjustment is then applied to the selected input(s).</p> <p>Note that moving the rotary button automatically updates the fader position in the software control panel for the concerned channels.</p>

Output gains settings

	<p>The analog output gain is adjustable with the upper rotary button when:</p> <ul style="list-style-type: none"> the IN/OUT touch button on the right of the rotary button is in position OUT (green led in front of OUT) and the touch button on the left of the rotary wheel is active (green led).
	<p>Pressing the button  several times allows selecting analog output 1, analog output 2, both outputs, or no output (LED turned off). The analog gain adjustment is then applied to the selected output(s).</p> <p>Note that moving the rotary button automatically updates the fader position in the software control panel for the concerned channels.</p>

48V phantom power

	<p>In case you are using a static microphone on an analog input, it is necessary to activate the 48V phantom power on this input. Press the “48v” touch button of the concerned input. 48v phantom power is enabled when a red LED appears. It is disabled otherwise.</p> <p>Note: in case several static microphones are used, it may be necessary to connect the Cancun to a second USB controller of the PC so as to get enough current (a single USB controller may not provide enough current).</p>
--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

@digigram



SPECIFICATIONS

Configuration

Bus Format	USB 2.0 / Compliant with the USB 2.0 Audio specification
Size	254 mm x 96 mm x 36 m
Operating : temp / Humidity	0°C to +50°C / 0 % to 90 % (non condensing)

Audio specifications

A/D and D/A converters resolution	24 bits
Sampling frequencies available	32 kHz, 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 192 kHz
Audio formats supported	PCM 8, 16, 20, and 24 bits
Latency	3.4 mS Analog-to-PC or PC-to-Analog (Windows 7 / 64 bits) 3.8 mS Analog-to-MAC or MAC-to-Analog (Mac OS X 10.6.8)
ADAT / S/PDIF	24-bit/192kHz ADAT *

* Not available yet. Will be available by software upgrade

Inputs

	CANCUN 222-Mic	CANCUN 442-Mic
Analog line inputs (mono)	2 balanced	4 balanced
Maximum input level/ impedance	Line: +25 dBu / >3.5 kOhms Mic: -5 dBu / >2 kOhms	Line: +25 dBu / >3.5 kOhms Mic: -5 dBu / >2 kOhms
Programmable input gain	From 0 to 55 dB by 1 dB steps	From 0 to 55 dB by 1 dB steps
Input Pad	- 30 dB switchable on each analog input	- 30 dB switchable on each analog input
Input sensitivity	Line (PAD On): 0 dBfs adjustable from -30 dBu to +25 dBu Mic (PAD Off): -60 dBu to -5 dBu	Line (PAD On): 0 dBfs adjustable from -30 dBu to +25 dBu Mic (PAD Off): -60 dBu to -5 dBu
Digital inputs (stereo)	1 AES/EBU (AES3-2003) compliant	2 AES/EBU (AES3-2003) compliant



AES11 synchronization	Yes, on AES 1 Input	Yes, on AES 1 Input
Other inputs	ADAT / S/PDIF*	ADAT / S/PDIF*

* Not implemented yet. This will be available by software upgrade.

Outputs

	CANCUN 222-Mic	CANCUN 442-Mic
Analog line outputs (mono)	2 balanced	4 balanced
Maximum output level/ impedance	+10 dBu / 2x33 Ohms	+10 dBu / 2x33 Ohms
Digital outputs (stereo)	1 AES/EBU	2 AES/EBU
Programmable output attenuation	From 0 to -72 dB by 1 dB steps	From 0 to -72 dB by 1 dB steps
Headphones output	Dedicated output stage, >10 mW from 32 to 600 Ohms Bandwidth: 10Hz-20 kHz +/-0.1 dB Dynamic range : 93 dB @32 Ohms, typical	Dedicated output stage, >10 mW from 32 to 600 Ohms Bandwidth: 10Hz-20 kHz +/-0.1 dB Dynamic range : 93 dB @32 Ohms, typical
Other outputs	ADAT / S/PDIF*	ADAT / S/PDIF*

* Not implemented yet. This will be available by software upgrade.

Analog audio performances

	Cancun 222-Mic and 442-Mic
Frequency response (A/D Input)	<ul style="list-style-type: none"> · 20 Hz–20 kHz +0/-0.5 dB @48 kHz · 20 Hz–40 kHz +0/-0.6 dB @96 kHz · 20 Hz–80 kHz +0/-2.0 dB @192 kHz
S/N (A/D Input)	· S/N: 111 dBA - 108 dB unweighted @48 kHz, typical
THD + noise, ref 1 kHz at -3 dBfs (A/D Input)	<ul style="list-style-type: none"> · -105 dB THD+N / 20 Hz-20 kHz @48 to 192 kHz, typical · -107 dBA THD+N / 20 Hz-20 kHz @48 kHz to 192 kHz, typical
Mic inputs E.I.N.	· -128 dB EIN / Zsource = 40 Ohms; Pad Off; gain 55 dB, typical
Frequency response (D/A Output)	<ul style="list-style-type: none"> · 10 Hz–20 kHz +0/-0.1 dB @48 kHz · 10 Hz–40 kHz +0/-0.3 dB @96 kHz · 10 Hz–80 kHz +0/-1.3 dB @192 kHz
S/N (D/A Output)	· S/N: -111 dB unweighted @48 kHz, typical
THD + noise, ref 1 kHz at -1 dBfs (D/A Output)	· -98 dB THD+N / 20 Hz-24 kHz @48 kHz to 192 kHz, typical



Channel phase difference (A/D Input and D/A Output)	· $\pm 0.2^\circ / 20 \text{ Hz-20 kHz}$
Jitter, jitter sensitivity and jitter suppression	· AES3 (AES3-2003) compliant
Latency	· 3.4 mS Analog-to-PC or PC-to-Analog (Windows 7 / 64 bits) · 3.8 mS Analog-to-MAC or MAC-to-Analog (Mac OS X 10.6.8)

External Connectors

	CANCUN 222-Mic	CANCUN 442-Mic
Analog and digital I/Os	25 pin Sub-D (compatible with DB25 YAMAHA DIGITAL) XLR female for analog input 1	44 pin Sub-D HD XLR female for analog input 1
Headphone output	6.35mm jack	6.35mm jack
ADAT / S-PDIF	Optical*	Optical*
USB	mini-B USB on card side Standard, includes two A-type on PC side, one	mini-B USB on card side Standard, includes two A-type on PC side, one

* Functionality not implemented yet. This will be available by software upgrade.

Delivered Cables

	CANCUN 222-Mic	CANCUN 442-Mic
Analog and digital I/Os	Breakout cable 25 pin Sub-D to 6 XLRs Neutrik (c)	Breakout cable 44 pin Sub-D HD to 12 XLRs Neutrik (c)
USB	'Y' cable composed of a mini-B USB on CANCUN side, and two A-type on PC side	'Y' cable composed of a mini-B USB on CANCUN side, and two A-type on PC side

Environments

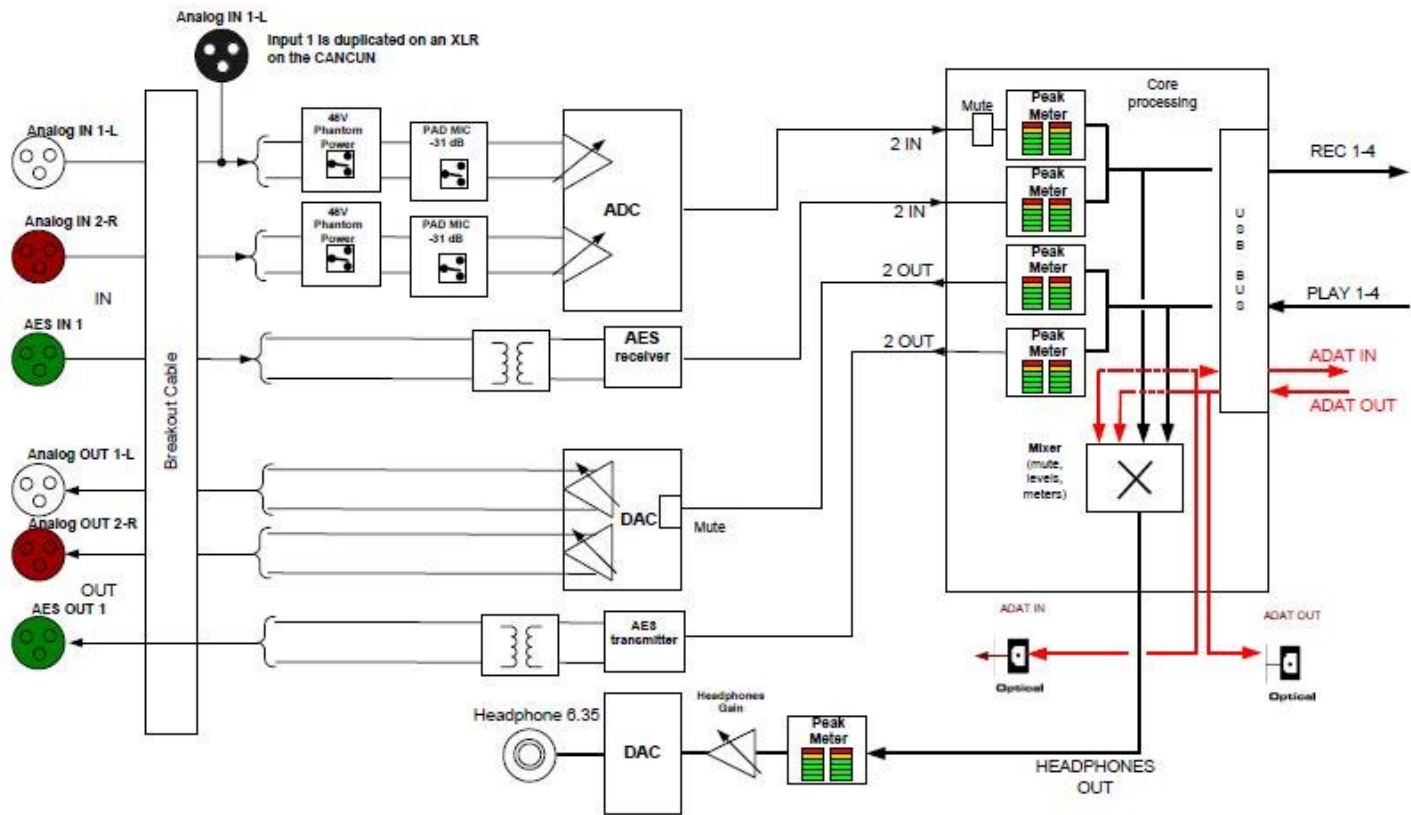
	CANCUN 222-Mic
Supported operating systems	Windows XP, Windows Seven 32 and 64 bits, Mac OS X, Linux



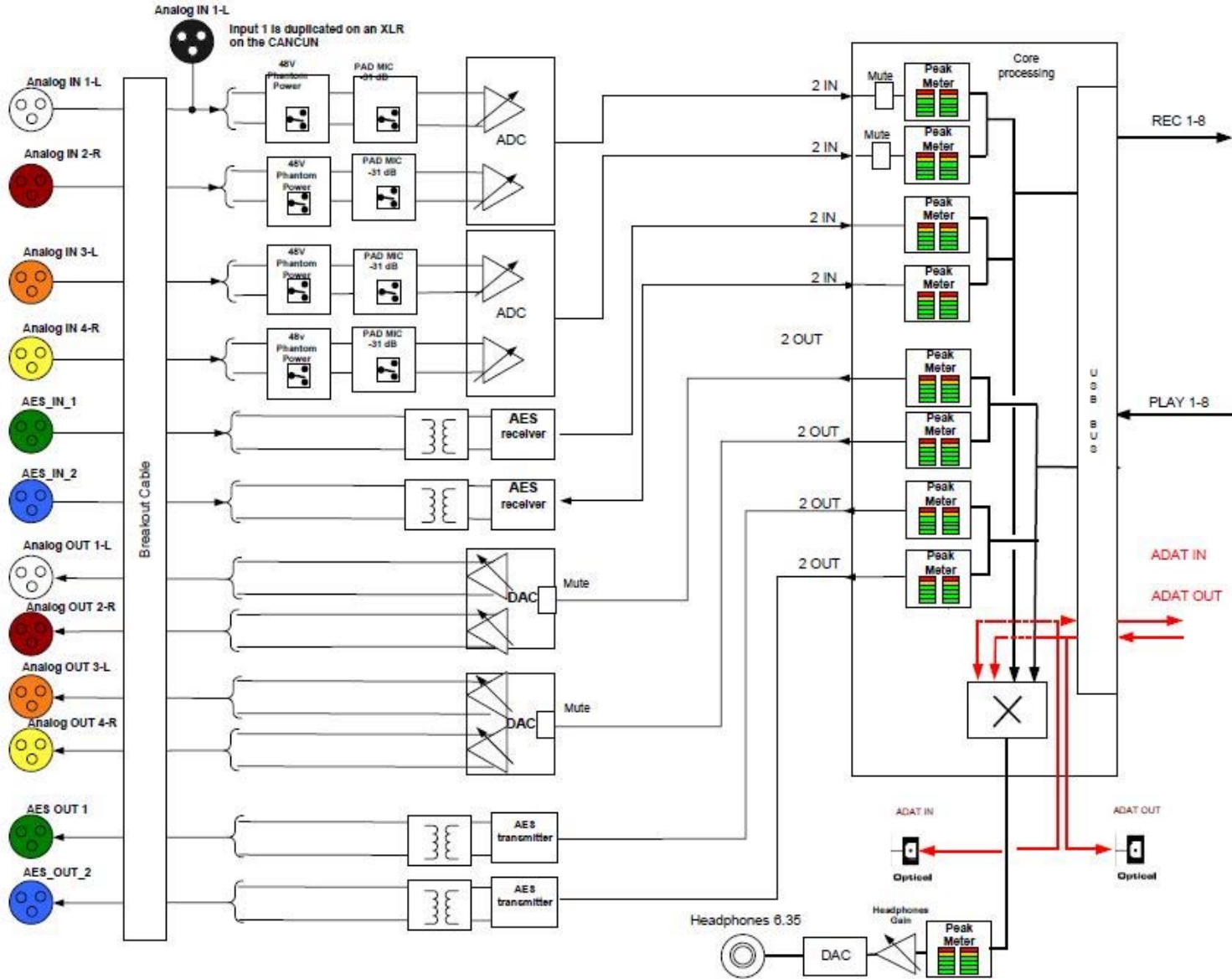
Management	Windows XP: DirectSound, ASIO, Digigram np SDK through Virtual PCX Windows Seven; DirectSound, ASIO, Core Audio, WASAPI, Digigram np SDK via Virtual PCX Mac OS X: CoreAudio Linux: Alsa*
------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

* Functionality not implemented yet. This will be available by software upgrade.

CANCUN 222-Mic schematic diagram

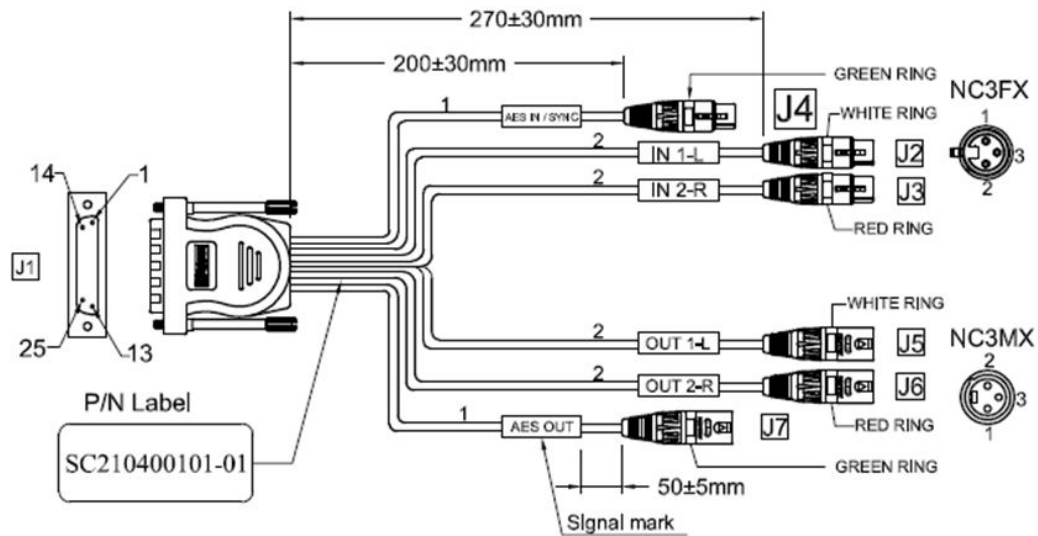


CANCUN 442-Mic schematic diagram

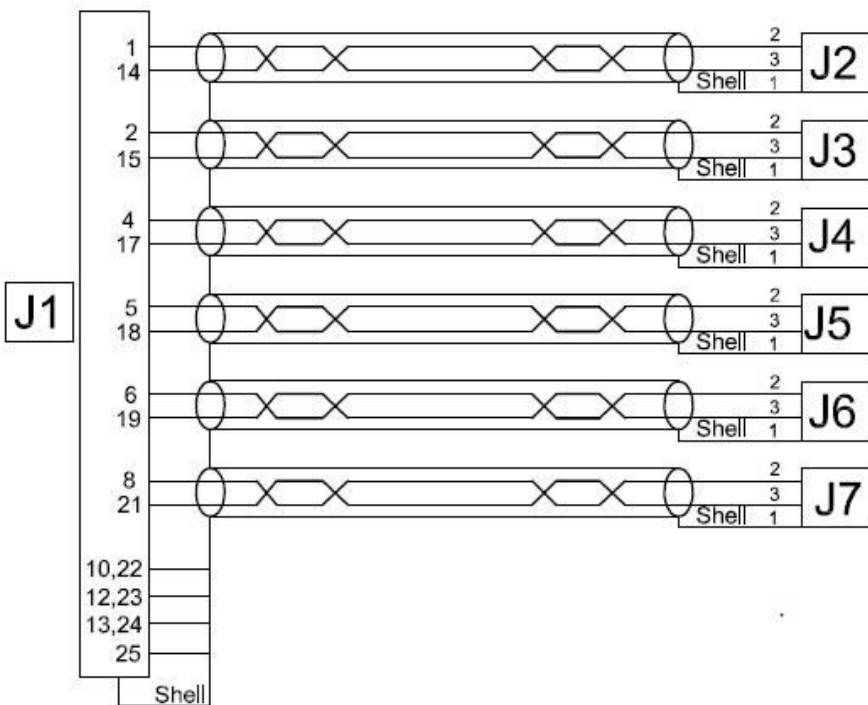


CANCUN 222-Mic CABLE

CANCUN 222-Mic cable schematic



CANCUN 222-Mic Wiring diagram

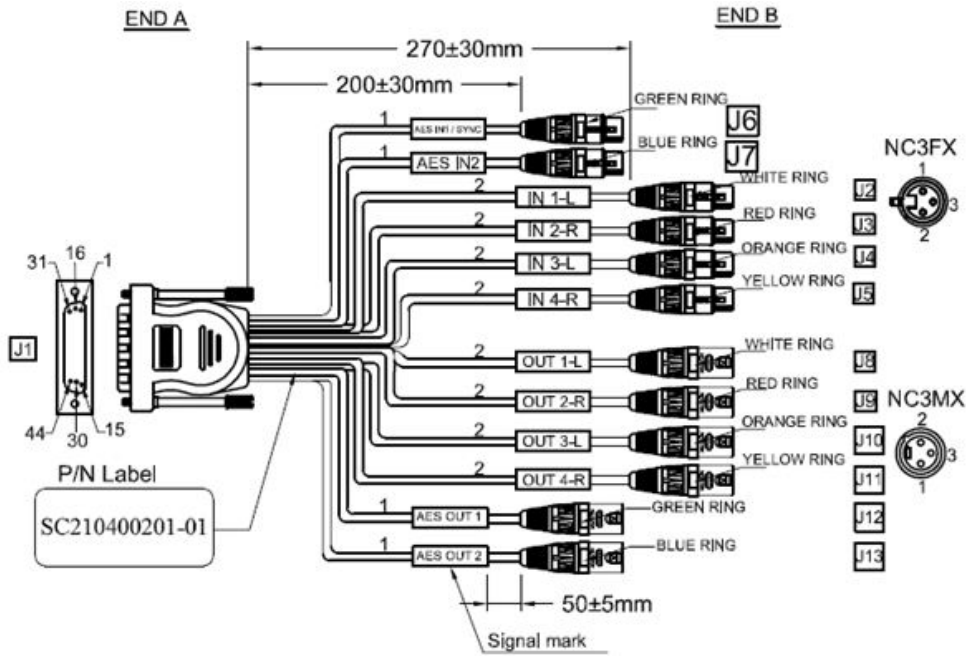


CANCUN 222-Mic cable pinout

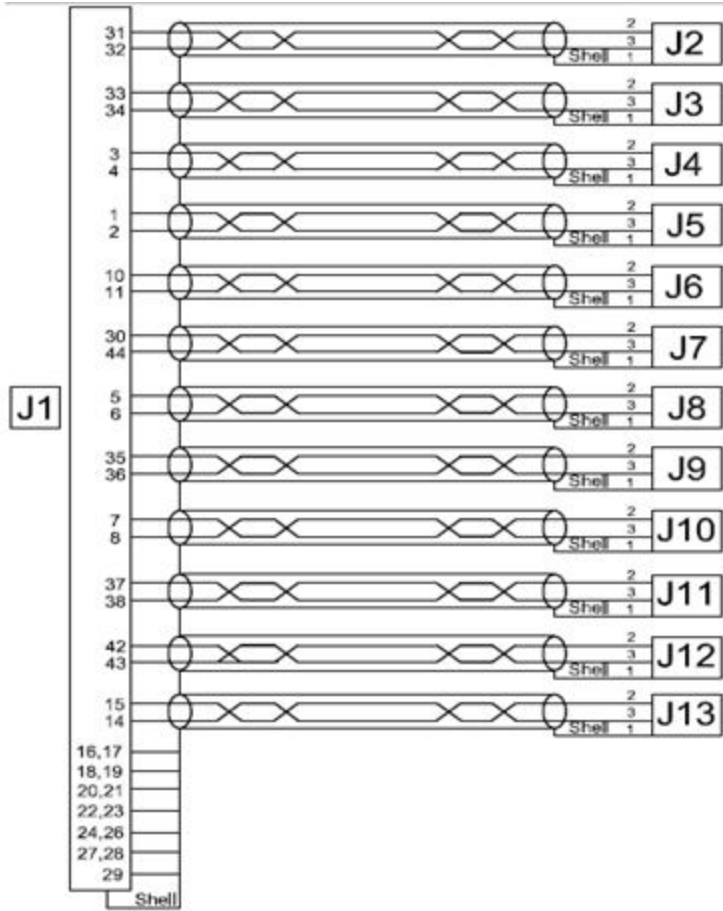
Pin#	Signal		Pin#	Signal
1	ANALOG IN1 Left +		14	ANALOG IN1 Left -
2	ANALOG IN2 Right +		15	ANALOG IN2 Right -
3	Not connected		16	Not connected
4	AES IN1 + (AES SYNCHRO)		17	AES IN1 - (AES SYNCHRO)
5	ANALOG OUT1 Left +		18	ANALOG OUT1 Left -
6	ANALOG OUT2 Right +		19	ANALOG OUT2 Right -
7	Not connected		20	Not connected
8	AES/EBU OUT +		21	AES/EBU OUT -
9	Not connected		22	GND
10	GND		23	GND
11	Not connected		24	GND
12	GND		25	GND
13	GND			

CANCUN 442-Mic CABLE

CANCUN 442-Mic cable schematic



CANCUN 442-Mic Wiring diagram



CACUN 442-Mic cable pinout

Pin#	Signal		Pin#	Signal
1	ANALOG IN4 Right +		23	GND
2	ANALOG IN4 Right -		24	GND
3	ANALOG IN3 Left +		25	Not connected
4	ANALOG IN3 Left -		26	GND
5	ANALOG OUT1 Left +		27	GND
6	ANALOG OUT1 Right +		28	GND
7	ANALOG OUT3 Left +		29	GND
8	ANALOG OUT3 Left -		30	AES/EBU IN2 +
9	Not connected		31	ANALOG IN1 Left +
10	AES/EBU IN1 + (AES Synchro)		32	ANALOG IN1 Left -
11	AES/EBU IN1 - (AES Synchro)		33	ANALOG IN2 Right +
12	GND		34	ANALOG IN2 Right -
13	GND		35	ANALOG OUT2 Right +
14	AES/EBU OUT2 -		36	ANALOG OUT2 Right -
15	AES/EBU OUT2 +		37	ANALOG OUT4 Right +
16	GND		38	ANALOG OUT4 Right -
17	GND		39	Not connected
18	GND		40	Not connected
19	GND		41	Not connected
20	GND		42	AES/EBU OUT1 +
21	GND		43	AES/EBU OUT1 -
22	GND		44	AES/EBU IN2 -

@digigram