

## COPPERLAN MANAGER USERS MANUAL

### About

The **CopperLan Manager** is part of the **CopperLan Package** available cost free from the CopperLan website (<http://www.copperlan.org>).

This application provides different tools for the management of a CopperLan network:

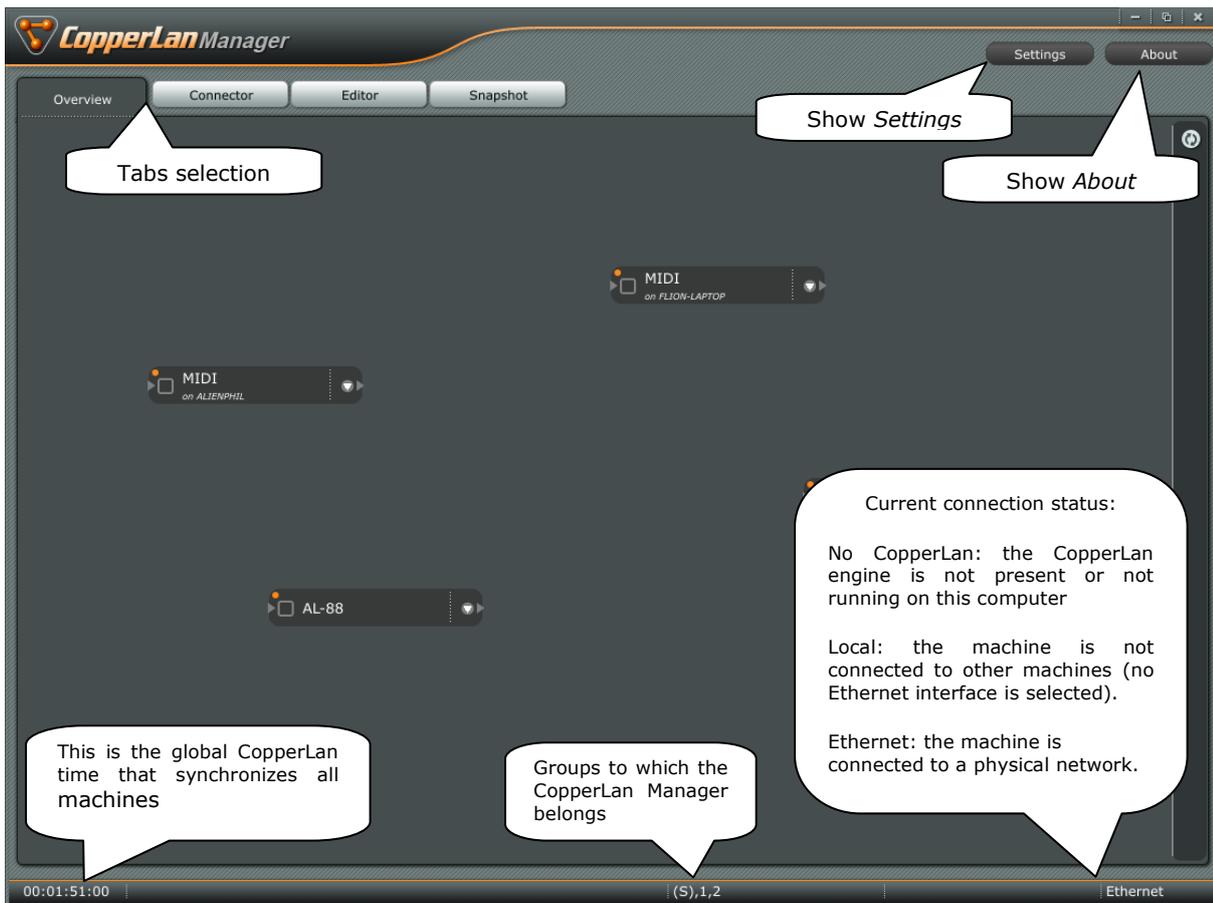
- An **Overview** of the network, displaying all *machines* and their current connections.
- A **Connector** tool to add/remove connections between *device's outputs* and *inputs*.
- An **Editor** tool providing a universal way to edit parameters.
- A **Snapshot** tool to store network configuration and settings.

#### DID YOU KNOW?

In CopperLan, a **machine** is any computer or embedded system running the CopperLan engine. Multiple machines are connected thanks to a standard Ethernet network.  
Conversely, a CopperLan USB device depends on a host machine (computer or embedded host).

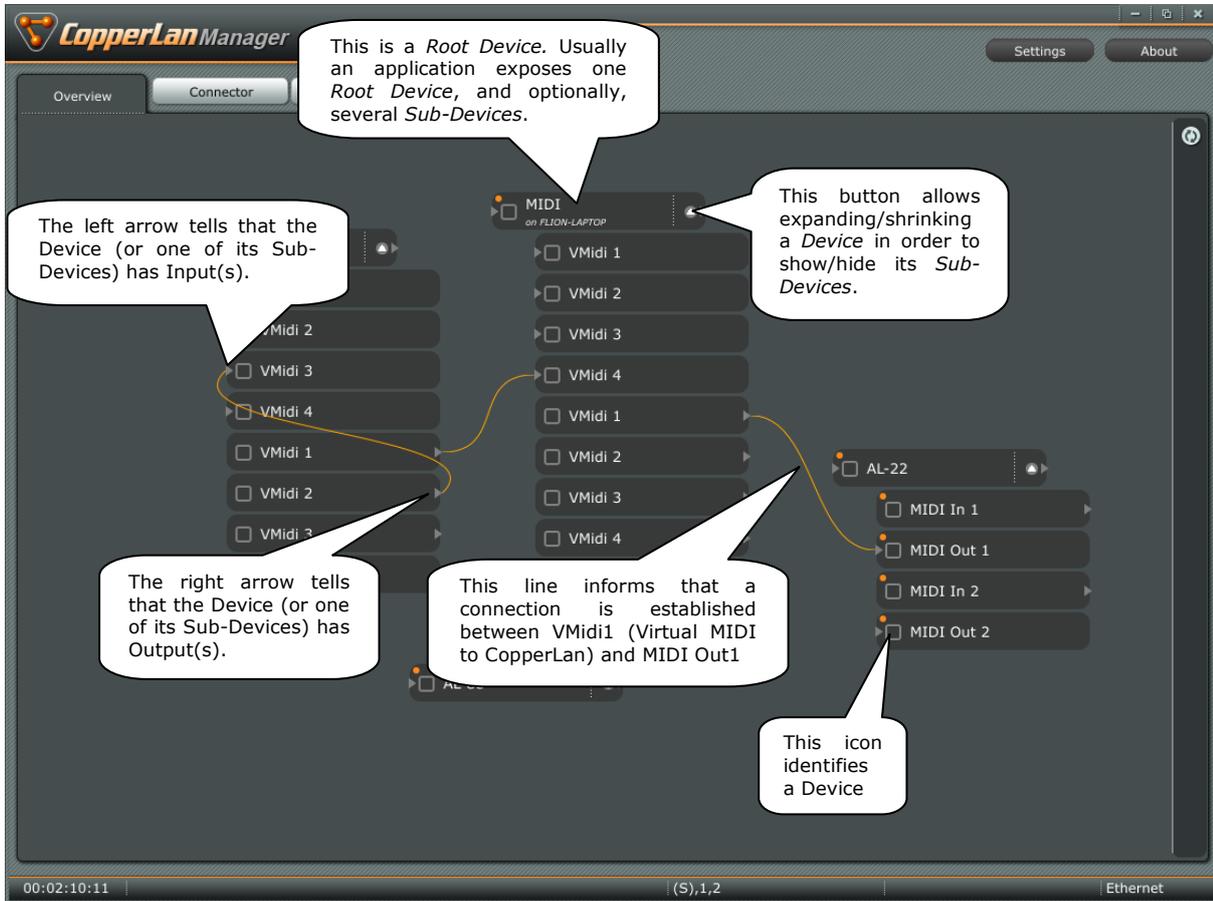
A **device** is an entity exposing some CopperLan functionality on the network. Devices can be freely connected to each other thanks to their outputs and inputs.

## Main window



## Overview tab

The Overview tab gives a global view of the CopperLan network. It shows every CopperLan *machine*, and a summarized view of the current connections. This tab also allows editing some system parameters on devices supporting that support it.





## Duplicates

The Duplicate information is related to the Device's identity on the CopperLan network. Each Device has its own and unique identity based on the brand ID and Model number. The Duplicate information allows multiple instances of the same Device to be present on the network. By default, this information is handled automatically by the CopperLan Engine. But in some cases, the user may want to impose a specific value, or to use the fixed duplicate mode. A duplicate number is usually handled in hexadecimal (prefixed with '0x'), but it is allowed to type in a decimal value.

If a custom name is not defined, the default name is the Device model name followed by a dot and the duplicate value. Entering an empty name will bring back the default name.

## Groups

Group buttons can be used to assign a Device to one or more groups. By default, no group is specified so the Device is accessible from everywhere. When multiple groups are selected, the Device will be seen and could access only applications having at least one group in common.

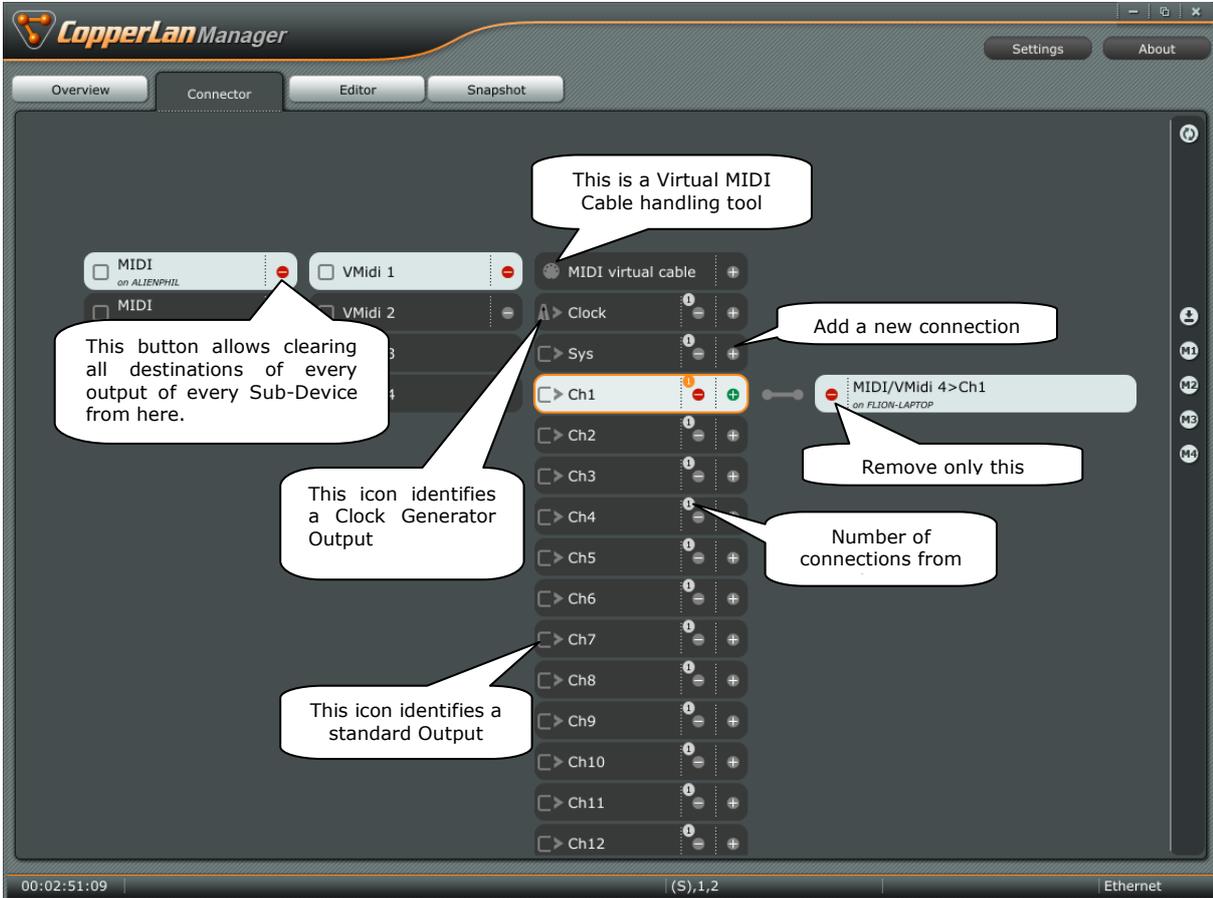
The SuperGroup (S) can see every Device, even those not sharing any group with it.

Beware that the Manager application can itself be assigned to groups, so that it will not see any application belonging to other groups.

## Connector tab

The Connector tab is used to establish connections between Outputs and Inputs. Exploration is done left to right, from the Root level (showing only Root Devices that have Outputs) down to the Destination.

The virtual link between Output and Input is figured by the grey link symbol.



Adding a destination can be done from each Output. MIDI to CopperLan Device expose 19 Outputs: one for each channel, one for Clock, one for other channel free messages (such as SYSEX), and a *helper* output handling virtual MIDI cables. So it is possible to patch MIDI all over the network in a channel basis, but if you prefer you can bind a virtual MIDI cable (automatically connect all the Outputs to the related Inputs on a CopperLan to MIDI Device).

The following picture demonstrates binding between an Output and a compatible Input.



## Editor tab

The Editor tab is a universal editor that can be used to update parameters from any CopperLan application on the network. Current value feedback is automatically synchronized from the remote device, so the parameter editing controls always reflect the current value, even another editor is used elsewhere on the network.

The screenshot shows the CopperLan Manager interface with the Editor tab selected. The interface is divided into several sections:

- Left Panel:** A list of device inputs including AL-22, AL-88, and Karnage.480d9ce7 (on ALJENPHIL). Below this is a tree view of parameters for the selected device, with 'LFO/Mod.Gen.(2)' highlighted.
- Right Panel:** A detailed view of the selected parameter, 'LFO/Mod.Gen.(2)', showing its current value (0.154) on a slider ranging from 0.005 to 1.000. Other parameters include LFO Wave (Sine), Source (Free/BPM), Choice (Off/Gate), and Ratio (1/1).

Callouts provide additional information:

- Top Left:** "This is the list of Device's Inputs" points to the left panel.
- Top Right:** "The current value is automatically synchronized from the remote device (it is possible to update the same parameter from different)" points to the slider.
- Bottom Right:** "Parameters can be presented as:" lists:
  - Slider for continuous value
  - Buttons for single action or dual choice
  - Dropdown list for selection in a list

The interface also includes a top navigation bar with 'Overview', 'Connector', 'Editor', and 'Snapshot' tabs, and a bottom status bar showing the time (00:04:11:08), session ID ((S),1,2), and network type (Ethernet).

## Snapshot tab

The Snapshot feature allows saving current connections and settings from the whole CopperLan network.



## Settings popup

The screenshot shows the 'Settings' popup in CopperLan Manager. The interface includes a top bar with 'Settings' and 'About' buttons, and a main area with several expandable sections: Network, Startup, Display, Connector tab, Editor tab, and Advanced. A 'Close' button is at the bottom right. Callouts provide the following information:

- Click on this button to show the Settings**: Points to the 'Settings' button in the top right.
- Select the network interface to use**: Points to the 'Ethernet interface' dropdown menu.
- The CopperLan Manager can check that a network interface is selected**: Points to the 'Generic Marvell Yukon 88E8055 PCI-E Gigabit Ethernet Controller' dropdown.
- Check for new version**: Points to the 'Check for new version' checkbox.
- This option allows the CopperLan Manager to check if a new version is**: Points to the 'Check for new version' checkbox.
- By default, MIDI outputs can only talk to MIDI inputs. Checking this option allows MIDI output to be connected to any kind of**: Points to the 'MIDI output can talk to any kind of input' checkbox.
- Enable or deactivate Duplicate editing. Uncheck this to hide Duplicate edition from the System Parameters Edition**: Points to the 'Enable Duplicate editing' checkbox.
- Enable or disable Group editing. Uncheck this to hide Group edition from the System**: Points to the 'Enable Group editing' checkbox.
- Select the Groups the CopperLan Manager**: Points to the 'Groups' section with a grid of numbered buttons (1-31).

At the bottom of the window, the status bar shows '00:04:50:43', '(S),1,2', and 'Ethernet'.

## About popup

The screenshot shows the 'About' popup in CopperLan Manager. The popup displays the following information:

- CopperLan Manager**
- Version RC3.0(13) CHAI: RC3.0(13) VNM: RC3.0(13)
- © 2000-2011 Klavis Technologies s.a. All rights reserved.
- The CopperLan Manager is provided COST FREE with the CopperLan Installation Package.
- Feel free to visit our web site for more information and latest downloads.
- [www.copperlan.org](http://www.copperlan.org)
- Credits: powered by ICT7 s.a.

Callouts include:

- Click on this button to show the About**: Points to the 'About' button in the top right.

The background shows the 'Overview' tab with a list of MIDI devices: 'MIDI on ALIENPHIL', 'Karnage.480d9ce7 on ALIENPHIL', and 'AL-22'. The status bar at the bottom shows '00:04:44:55', '(S),1,2', and 'Ethernet'.



## Advanced features

Activating the Developer Mode from the Settings popup makes the CopperLan Manager displaying additional item information. It is a convenient way for developers to check that their devices, inputs and outputs are correctly declared on the network.

The screenshot displays the CopperLan Manager interface, which is divided into several sections:

- Navigation Bar:** Includes tabs for Overview, Connector, Editor, Snapshot, and Monitor. There are also buttons for Settings and About.
- Left Panel (Device Configuration):** Shows three MIDI devices:
  - MIDI (ALIENPHIL):** DevID: [0x0001,0x0002,0x1749929f,0x0000] MAC: 0x000x030x250x590x7abx10. Lists capabilities like DC\_System, DC\_Performance, DC\_System, DC\_CP2MIDI, DC\_MIDI2CP, DC\_Explorable, DC\_InternalSetup, DC\_Parent, and various IOC\_\* capabilities.
  - MIDI (FLIOW-LAPTOP):** DevID: [0x0001,0x0002,0x00005e24,0x0000] MAC: 0x000x240x680x30x3b64. Lists capabilities like DC\_System, DC\_Performance, DC\_System, DC\_Explorable, DC\_Parent, and various IOC\_\* capabilities.
  - MIDI (PillMacBook):** DevID: [0x0001,0x0002,0xbd155354,0x0000] MAC: 0x100x9b0xd0d0x6e0x6e0x3c. Lists capabilities like DC\_System and DC\_Performance.
- Center Panel (VMidi):** Shows four VMidi devices (VMidi 1 to VMidi 4) with their respective DevID, MAC, and Group information. Each device has a list of capabilities similar to the MIDI devices.
- Right Panel (MIDI virtual cable):** Displays a network topology with a central 'Clock' node connected to a 'Sys' node, which is further connected to five channels (Ch1 to Ch5). Each channel has its own set of capabilities.
- Bottom Bar:** Shows a timestamp of 00:07:32:00, a status indicator (S), 1,2, and the network type 'Ethernet'.