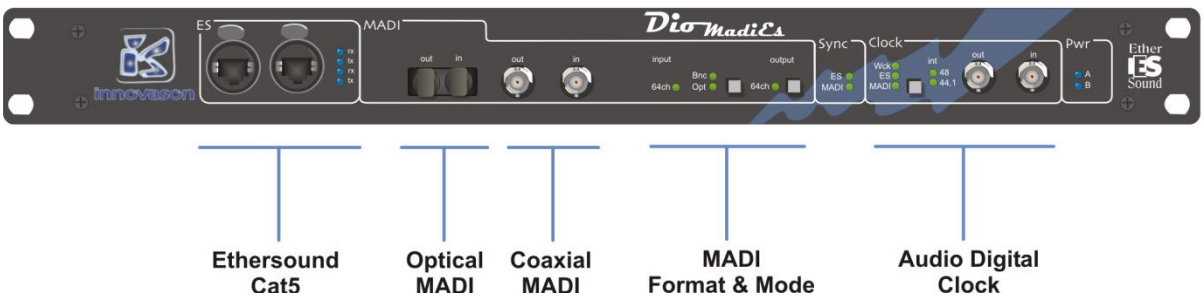
innovason

PUSH THE LIMITS.

EtherSound/MADI converter



DioMadiES

EtherSound/MADI converter

User Manual

Edition : 2012

Copyright

All rights reserved. Permission to reprint or electronically reproduce any document or graphic in whole or in part for any reason is expressly prohibited, unless prior written consent is obtained from Innovason.

All trademarks and registered trademarks belong to their respective owners. It cannot be guaranteed that all product names, products, trademarks, requisitions, regulations, guidelines, specifications and norms are free from trade mark rights of third parties.

All entries in this document have been thoroughly checked; however no guarantee for correctness can be given. Innovason cannot be held responsible for any misleading or incorrect information provided throughout this manual.

Innovason reserves the right to change specifications at any time without notice

© Innovason, 2012

Important Safety Information
read carefully before using this equipment!

Follow these instructions and keep them in a safe place! Keep in mind that damages due to failure to observe the instructions contained in this manual are not covered by warranty.

Instructions importantes de sécurité
lire soigneusement avant d'utiliser l'équipement!

Lisez et suivez ces instructions. Conservez les pour consultation ultérieure! Les dommages dus au non-respect des instructions contenues dans ce manuel ne sont pas couverts par la garantie.

Wichtige Sicherheitshinweise
vor Inbetriebnahme des Gerätes sorgfältig lesen!

Befolgen Sie die Anweisungen und bewahren Sie sie für spätere Fragen auf! Bei Schäden, die durch Nichtbeachten dieser Bedienungsanleitung verursacht werden, erlischt der Garantieanspruch!

Throughout this manual, the lightning bolt triangle is used to alert the user to the risk of electric shock.



The exclamation point triangle is used to alert the user to important operating or maintenance instructions.





Do Not Open the Cabinet

There are no user-serviceable components inside this product. Opening the cabinet may present a shock hazard, and any modification to the product will void your warranty. If it is necessary to open the device for maintenance or advanced configuration purposes, this is to be done by qualified personnel only after disconnecting the power cord and network cables!



Power supply

The device is to be connected only to a power supply as specified in this manual and marked on the equipment. **This equipment must be earthed!**

Do not block any of the ventilation openings!

Humidity

To reduce the risk of fire or shock, do not expose this device to rain or moisture. Do not place objects filled with liquid on this device.

Installation Location

To ensure proper operation and to avoid safety hazards, the device must be installed in a 19“ rack mount chassis. If this is not possible, place it on a firm and level surface. Avoid installation in extremely hot or cold locations, or in an area that is exposed to direct sunlight or heating equipment. Avoid moist or humid locations.

Cleaning

Clean only with a soft, dry cloth. If necessary, after disconnecting the unit’s cables, wipe it with a soft cloth dampened with mild soapy water, then with a fresh cloth with clean water. Wipe dry immediately with a dry cloth. NEVER use benzene, aerosol cleaners, thinner, alcohol or any other volatile cleaning agent. Do not use abrasive cleaners, which may damage the finish of metal or other parts.

Refer all servicing to qualified service personnel.

Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Moving the device

Before moving the unit, be certain to disconnect any cables that connect with other components.



Ne pas ouvrir l'appareil

L'ouverture du coffret peut produire un risque de choc électrique, et toute modification du produit annule votre garantie. S'il est nécessaire d'ouvrir l'appareil pour l'entretien ou la configuration avancée, cela doit être fait par du personnel qualifié, après avoir débranché le cordon d'alimentation et les câbles réseaux !



Alimentation

Il est primordial de connecter l'appareil à une alimentation électrique telle que spécifiée dans ce manuel d´utilisateur et sur le matériel même.

Cet équipement doit être raccordé à la terre !

N'obstruer aucune ouverture de ventilation !

Humidité

Afin de réduire les risques de feu ou de choc, n'exposez pas cet appareil à la pluie ou l'humidité. Ne placez pas d´objet contenant un liquide sur l'appareil.

Installation, mise en place

Afin d'assurer le fonctionnement correct et de minimiser les risques potentiels liés à la sécurité, l'appareil doit être installé dans une baie de montage de type 19 pouces. Si cela ne vous est pas possible, placez le sur une surface solide et plane.

Evitez une installation dans des endroits très chauds ou très froids ainsi que dans des lieux exposés directement au soleil. Evitez les lieux présentant un excès d'humidité.

Nettoyage

Nettoyez uniquement avec un chiffon doux et sec. Si nécessaire, après avoir débranché le cordon d´alimentation, essuyez-le avec un chiffon doux humidifié avec de l´eau savonneuse puis rincez le á l´aide d un chiffon propre et d´eau claire.

Séchez-le immédiatement avec un chiffon sec. N'utilisez JAMAIS d´essence, de nettoyants en aérosols, d´alcool ou tout autre agent nettoyant volatile. N'utilisez pas de produits nettoyants abrasifs qui pourraient endommager les finitions métalliques ou d´autres pièces.

Réparation

Lorsque l'appareil a été endommagé quelle qu'en soit la cause ou qu'il ne fonctionne pas normalement, toute réparation doit être effectuée par du personnel qualifié. Avant de transporter l´unité, assurez-vous d´avoir bien déconnecté le cordon d'alimentation ainsi que tous les câbles la reliant à d´autres appareils.



Gerät nicht öffnen

Öffnen des Geräts kann eine Gefährdung durch Stromschlag und Erlöschen der Garantie zur Folge haben. Reparaturarbeiten und Änderungen der Hardwarekonfiguration dürfen nur von qualifiziertem Personal nach entfernen der Strom- und Netzwerkkabel durchgeführt werden.



Stromversorgung

Das Gerät darf nur mit der in dieser Bedienungsanleitung und auf dem Gerät angegebenen Stromversorgung betrieben werden. **Erdung ist zu gewährleisten!**

Belüftungsschlitze nicht verdecken!

Wasser und Feuchtigkeit

Um Brand- oder Stromschlagrisiken zu vermeiden, darf das Gerät nicht mit Feuchtigkeit in Berührung kommen.

Aufbau des Geräts

Um den einwandfreien Betrieb zu gewährleisten und Sicherheitsrisiken zu vermeiden, muss das Gerät in einem 19-Zoll Baugruppenrahmen montiert werden. Nur wenn dies nicht möglich ist, stellen Sie das Gerät auf einen festen, waagerechten Untergrund. Meiden Sie Standorten in den Nähe von Wärme- oder Feuchtigkeitsquellen sowie direkte Sonneneinstrahlung.

Reinigen des Geräts

Säubern Sie das Gerät nur mit einem weichen, trockenen Tuch. Bei Bedarf verwenden Sie ein mit mildem Seifenwasser befeuchtetes Tuch, nachdem Sie die Netzanschlusskabel aus der Steckdose gezogen haben, anschliessend ein weiches, mit klarem Wasser befeuchtetes Tuch. Trocken Sie das Gerät sofort im Anschluss. Keinesfalls Benzol, Verdünner oder sonstige starke Lösungsmittel oder Scheuerreiniger verwenden, da hierdurch das Gehäuse beschädigt werden könnte.

Lassen Sie etwaige Reparaturen nur von qualifizierten Fachleuten durchführen!

Sollten das Netzkabel oder der Netzstecker beschädigt sein, oder sollte das Gerät selbst beschädigt worden sein (z. B. durch Eindringen von Feuchtigkeit durch Fall auf den Boden), oder sollte es nicht ordnungsgemäss funktionieren oder eine deutliche Funktionsabweichung aufweisen, so ist es von qualifizierten Fachleuten zu reparieren.

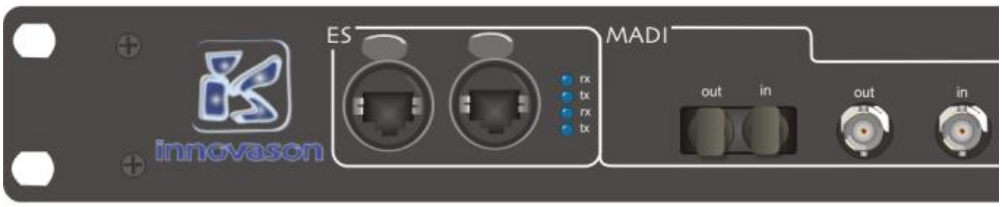
Table of Contents

DioMadiES Quick Guide *6*
Configuration of the rack *6*
MADI format & mode *6*
Synchro & Clocking *7*
Powering *7*
DioMadiES in an EtherSound Network … *8*
DioMadiES Specifications *12*

DioMadiES Quick Guide

CONFIGURATION OF THE RACK

Connexions

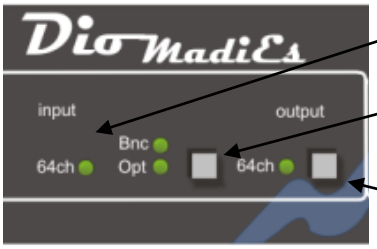


The converter can be inserted in an existing Ethersound network, or, alone as a simple media converter.

Use the Ethersound IN and OUT connector to insert the device in a daisy chained network.

The Madi is provided thru a pair of coaxial connectors as well as their optical equivalent.

MADI FORMAT & MODE



MADI Input section :

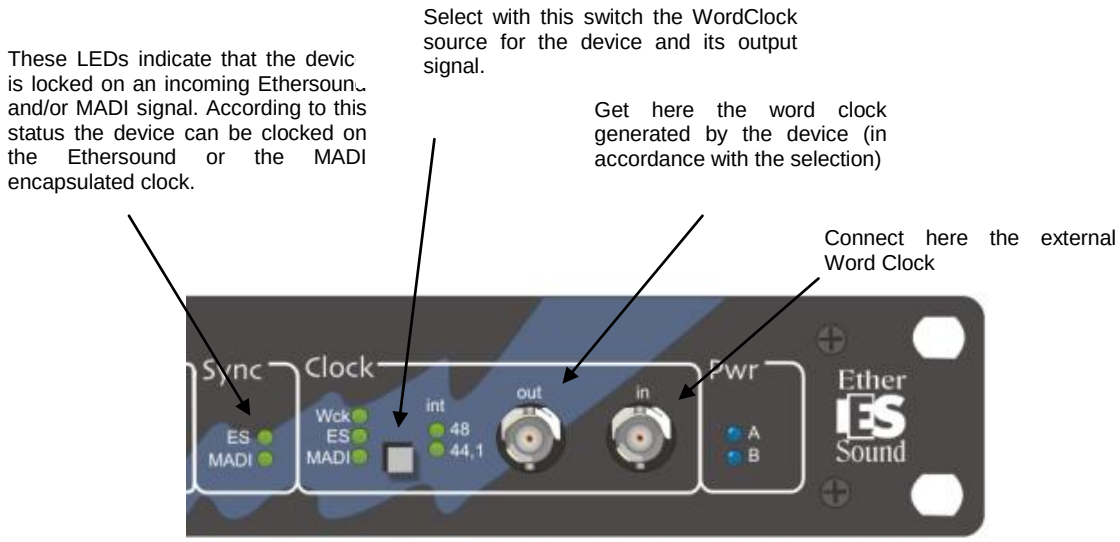
- A LED indicates if the incoming signal corresponds to MADI 56 (LED OFF) or MADI 64 (LED ON) format.
- The first switch allows to select the BNC or Optical MADI interface.

MADI Output section :

- The second switch configures if the device generates a MADI 56 or MADI 64 format.

SYNCHRO & CLOCKING

Ethersound and MADI are both “selfclocked” media. Thus, it is possible to determine if the device generates its output signal clocked on its internal clock, the incoming MADI, the incoming Ethersound or the incoming external Word clock.



POWERING

Two PSU are installed in the device for a secure auto redundancy powering. The redundancy is efficient only if both power cords are connected to the device. In a normal and safe use, both PWR LED A and B should be alight.

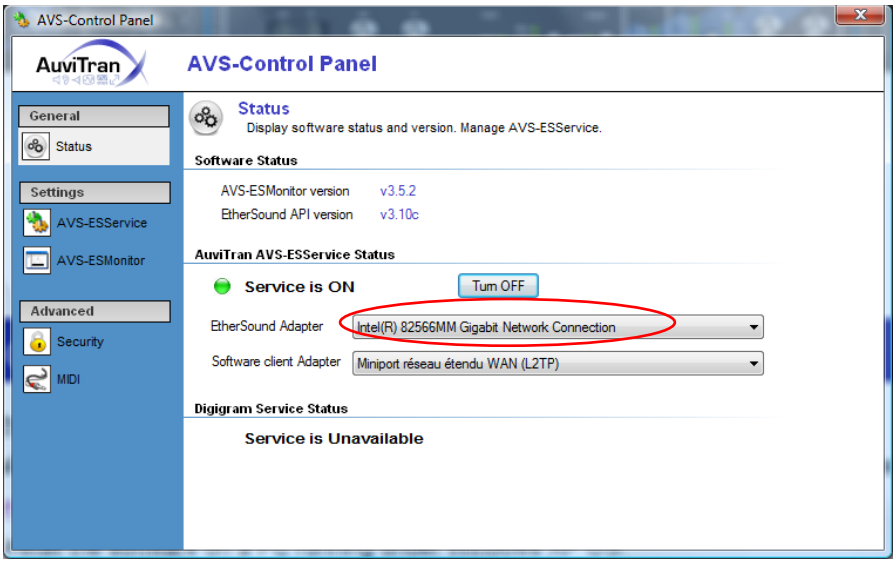
DioMadiES in an EtherSound Network …

1. Download the Auvitran ESmonitor software

This software allows to visualize and configure a complete Ethersound network.
It is a free software dowloadable here

http://www.auvitran.com/download/AVS- SMonitor%20SetUp%20v3.5.2.zip

- Download and install the software on a PC running under Windows XP OS.
- Launch, from the Auvitran folder, the ES-Control Panel software :



Verify that the network interface of your PC is correctly selected in the list. !
Take care with the Laptops, by default this is their Wireless network which is selected, please change to the Cat5 network. When done, please close the Control Panel.

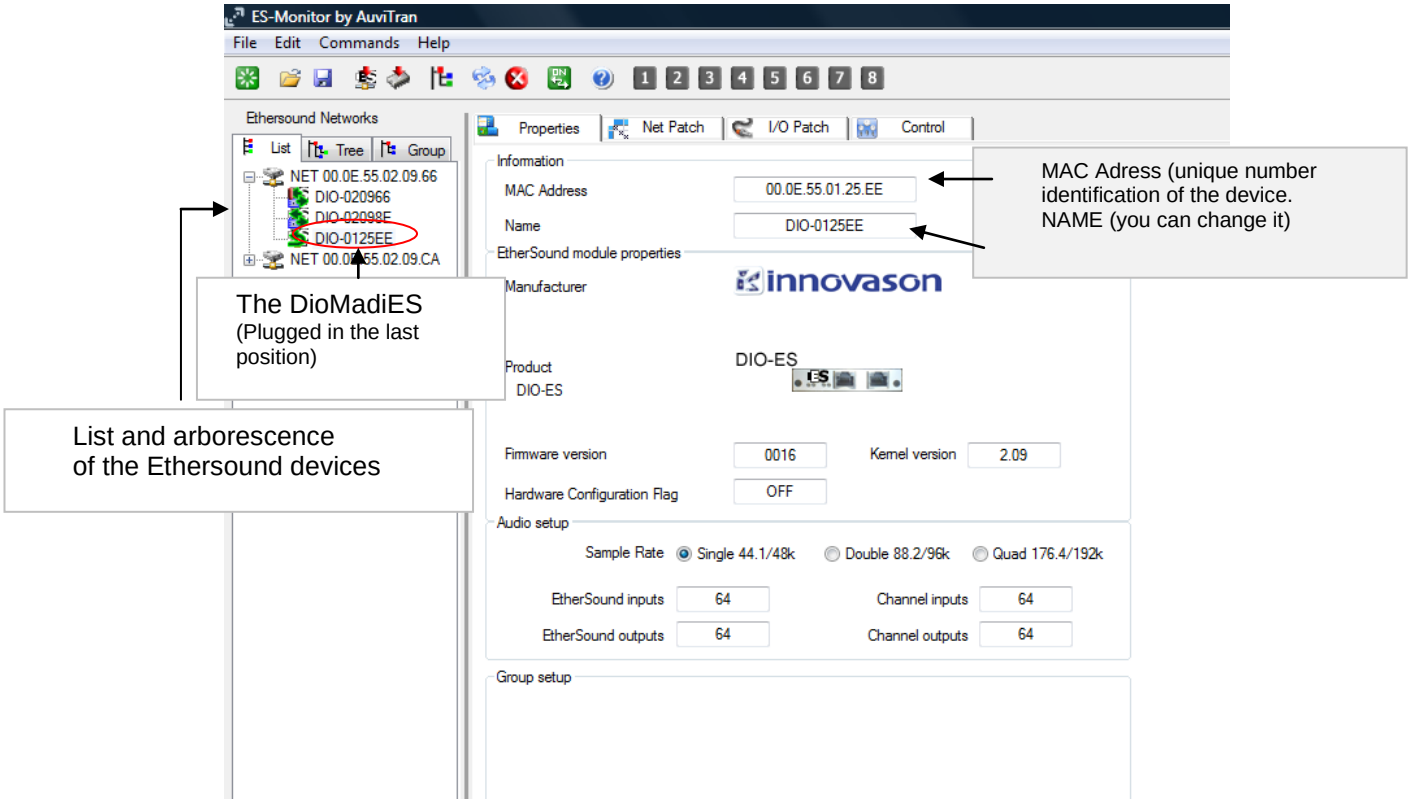
2. Connections

Connect the PC Network interface running the Auvitran ESmonitor to the Ethersound INPUT of the primary master device (the first device, so the only which has its “IN” connecteur free…) of your network.
! Use a crossed cat 5 cable for that !

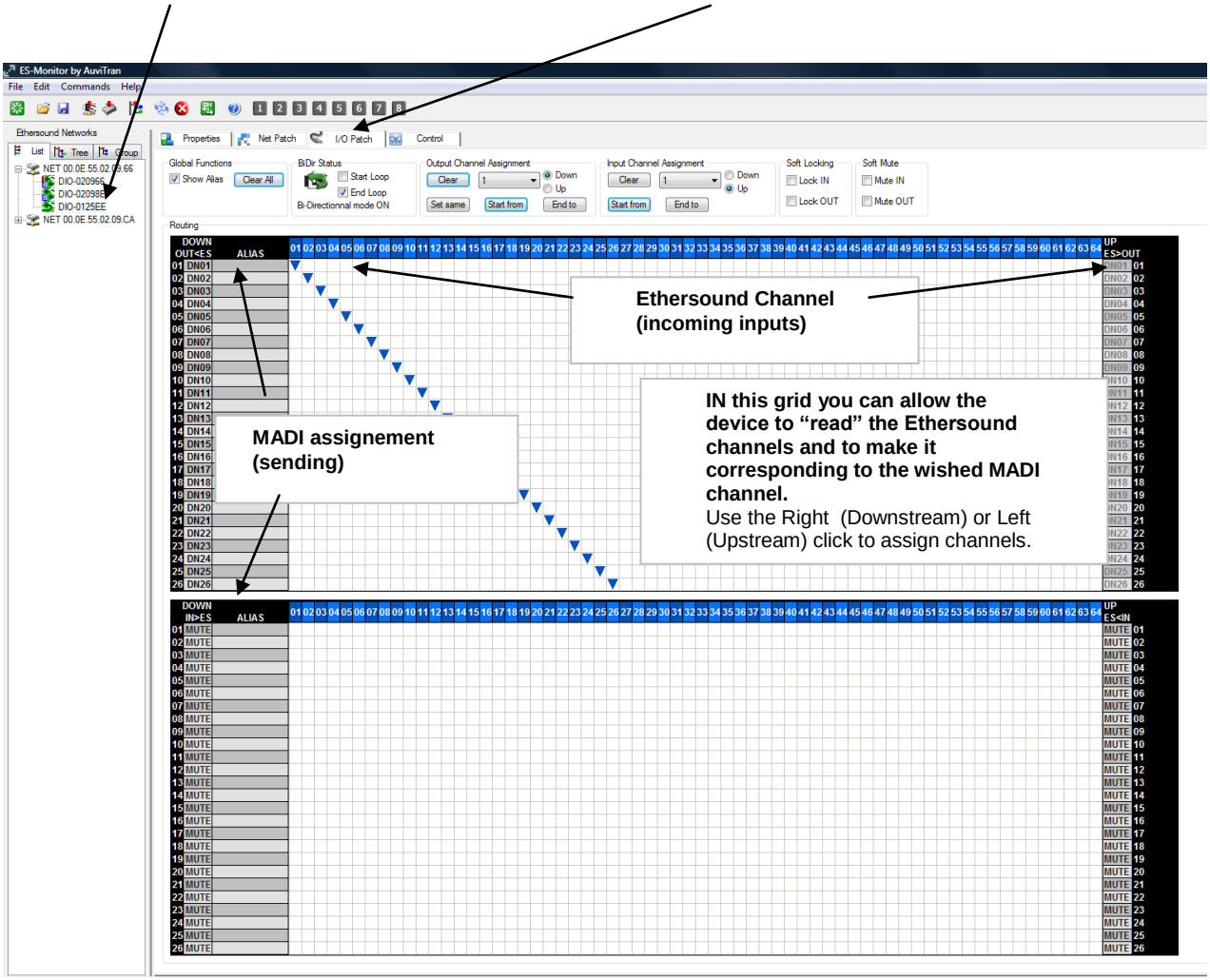
3. Network discovery and DioMadiES configuration

3.1 How to configure the DioMadiES as an Ethersound to MADI converter…

- Please launch the ES-monitor software (from the AUVITRAN folder of your programs).
- At its start, the software detect the Network and show you the list of the plugged devices :



- Select the DioMadiES device in the list and activate the “I/O Patch” Tab :

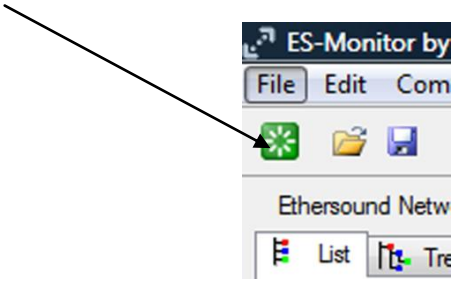


Patch the inputs of the DioMadiES to the incoming audio data from Ethersound. According to the channel assignment, the data will be immediately available on the Output of the MADI interface. In our example, as we have made a “diagonal patch, the Ethersound input one is available on the MADI output one, the Ethersound input two is available on the MADI output two, etc….

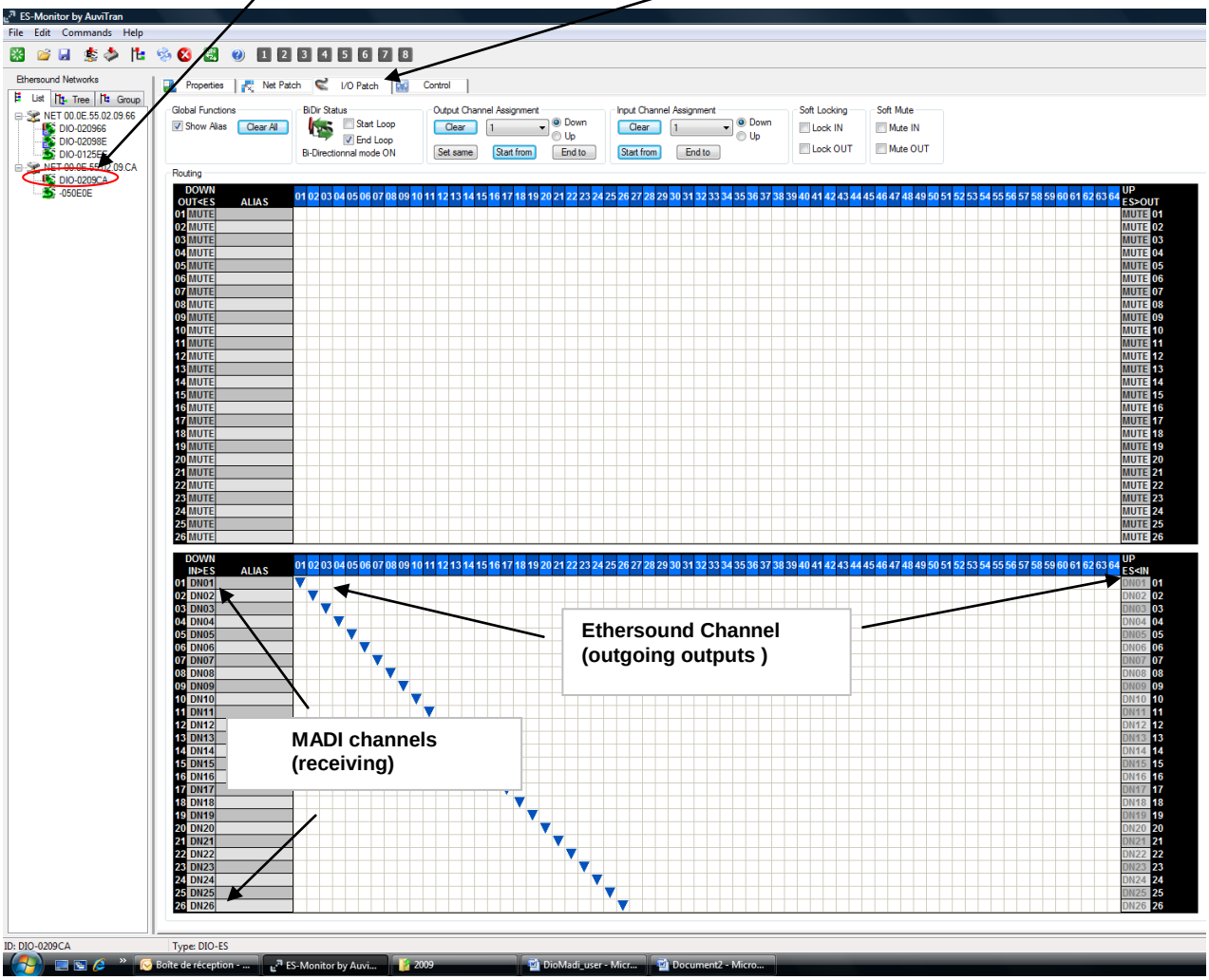
3-2 How to configure the DioMadiES as a Madi to Ethersound converter…

Like previously, please connect the PC running the Auvitran software to the primary master of the network where the DioMadiES is inserted (this can the DioMadiES itself if it is the first device of the network).
Remember that the primary master is the only device which as its Ethersound “IN” free….

Click on the “Network Reset” button in order to refresh the network discovery.



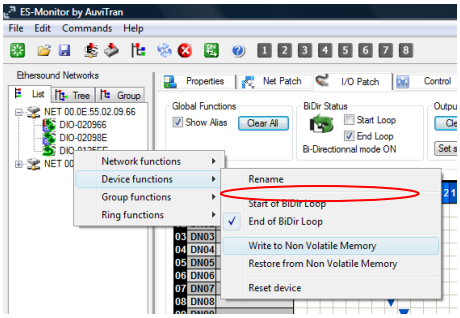
- Select the DioMadiES device in the list and activate the “I/O patch “ tab :



Use the bottom grid to patch the inputs of the MADI interface to the Ethersound channels. According to the channel assignment, the data will be immediately available on the Ethersound interface. In our example, as we have made a “diagonal patch, the MADI output one is available on the Ethersound channel one, the MADI output two is available on the Ethersound channel two, etc.…

4. Save the configuration in the devices themselves

You can save the device configuration in its “non volatile” internal memory. Thus, each time that you will swith on the device, this will be correctly configured. You will not need any more to connect a Lap Top and use the Auvitran software to configure the devices (except if you often change the configuration or if you want to constantly monitor the network).

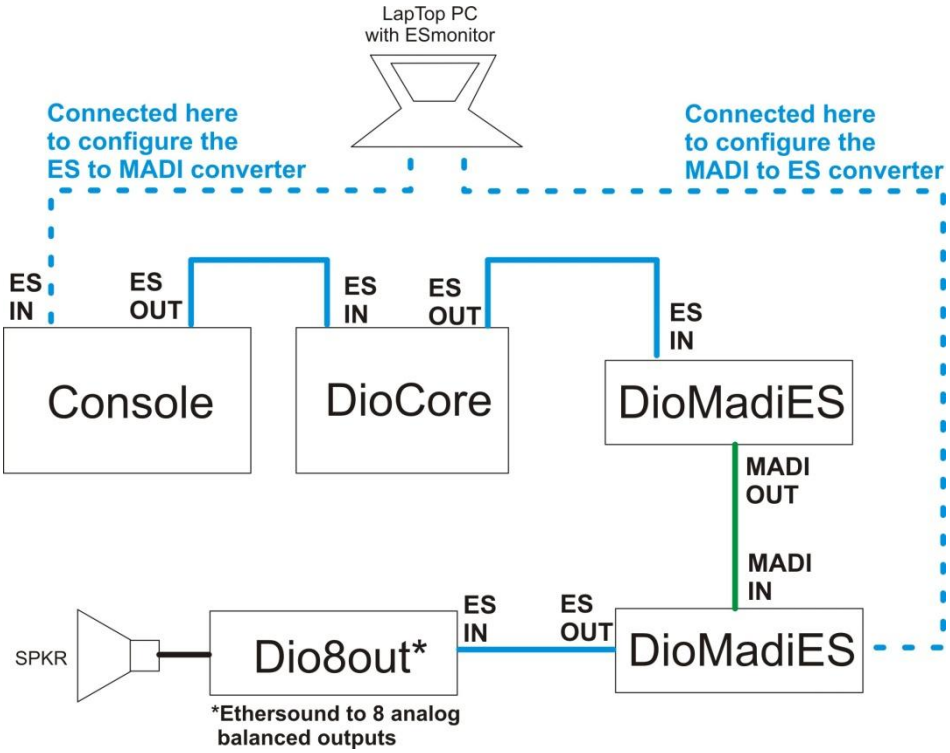


In the list, right click on the device and select « Device functions », « Write to non volatile Memory ».

A message appears in the right bottom of the software to indicate that the command has been properly executed.

You can do this operation to all the devices in one shot if you right click on the Network address (NET xx.xx.xx.xx.xx)…

5. **Diagram (cabling use to make this quick guide)**



DioMadiES Specifications

Madi :

	IN	OUT
Connexions	Coaxial via BNC, 75 Ohm, according to AES10-1991 High-sensitivity input stage (< 0.2 Vpp)	Coaxial via BNC, 75 Ohm, according to AES10-1991 Output voltage 600 mVpp / coaxial length up to 100m
	Optical via ST connector 62.5/125 and 50/125 compatible	Optical via ST connector 62.5/125 and 50/125 compatible Optical cable length > 500m
Format	Accepts 56 channel and 64 channel mode @ 24 bit / 48 kHz	Generates 56 and 64 channel mode @ 24 bits / 48KHz
Rate	Lock range: 43 kHz – 49 kHz	
Jitter	Jitter when synchronized to input signal: < 1 ns Jitter suppression: > 30 dB (2.4 kHz)	

Ethersound :

Connexions	Ethercon RJ45 connectors In and out for daisy chaining
Format	Bidirectionnal 2x64 channels
Control	Remote patch through Ethersound network manager

Word Clock :

	IN	OUT
Connexions	BNC	BNC Max. output voltage: 5 Vpp Output voltage @ 75 Ohm: 4.0 Vpp
Impedance	SteadyClock transformer coupled signal adaptation circuit	10 ohms
Frequency range	43-49Khz	43-49Khz

Internal Clock :

Frenquency	44.1kHz and 48 kHz
Precision	+- 30 ppm

Physical

Dimensions	1 Unit / 19"
Weight	4 Kg / 8,8 Lb

Power Supply :

Safety	2 PSU Auto redundant
Primary Voltage	90 to 240 Volts / 50 to 60 Hz
Power	15 Watts



Lawo AG, Am Oberwald 8, DE – 76437 Rastatt
Tel : +49 (0) 7222 1002 0 – Fax : +49 (0) 7222 1002 7101
info@innovason.com

Technical Service :
Tel.: +49 (0) 7222 1002 4900
service@innovason.com

www.innovason.com