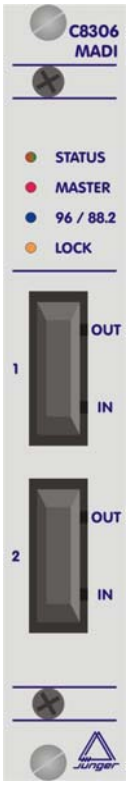
# 64ch redundant optical MADI I/O

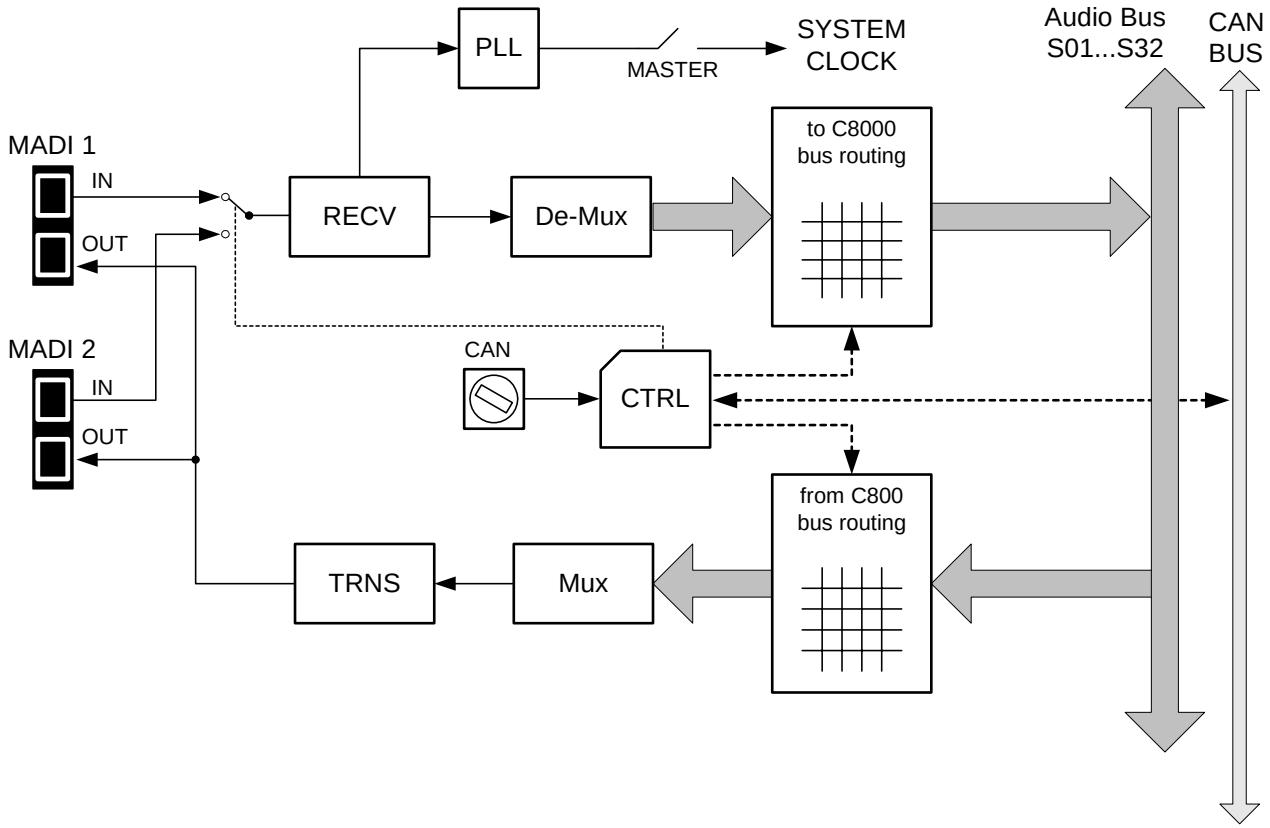
# C8306

## features




- Interface for MADI encoded digital audio signals
- Optical receiver and transmitter
- Redundant connections
- Word length 24bit
- Extended mode (64ch)
- High sampling mode (32 channels @ 96kHz)
- MASTER mode: C8000 frame maybe clocked via MADI input
- Automatic fail over switch from IN1 > IN 2

## block diagram




Jünger Audio-Studiotechnik GmbH
Justus-von-Liebig-Straße 7
D – 12489 Berlin
GERMANY

jünger audio
Studiotechnik GmbH

phone : +49-30-677721-0
fax : +49-30-677721-46
info@junger-audio.com
www.junger-audio.com

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## technical specifications

MADI interface:

| | |
|---|---|
| standard: | AES 10 (2003) |
| connection: | SC duplex |
| signal: | 1300nm multimode |
| data format: | 24bit<br>transparent for C- and U-bits according to AES3 |
| sample rate: | 48kHz (24bit = max. 64 channels)<br>96kHz (24bit = max. 32 channels) |
| Backplane connector: | ref. to DIN 41612, 64pin, a+b, male |
| Power supply: | +5V DC |
| Consumption: | approx. 360mA |
| Dimensions: | 3RU, 4HP, 160mmd deep (Euro Format) |
| Ambient: | 10ºC to 40ºC |
| Humidity: | 90%, non condensing |

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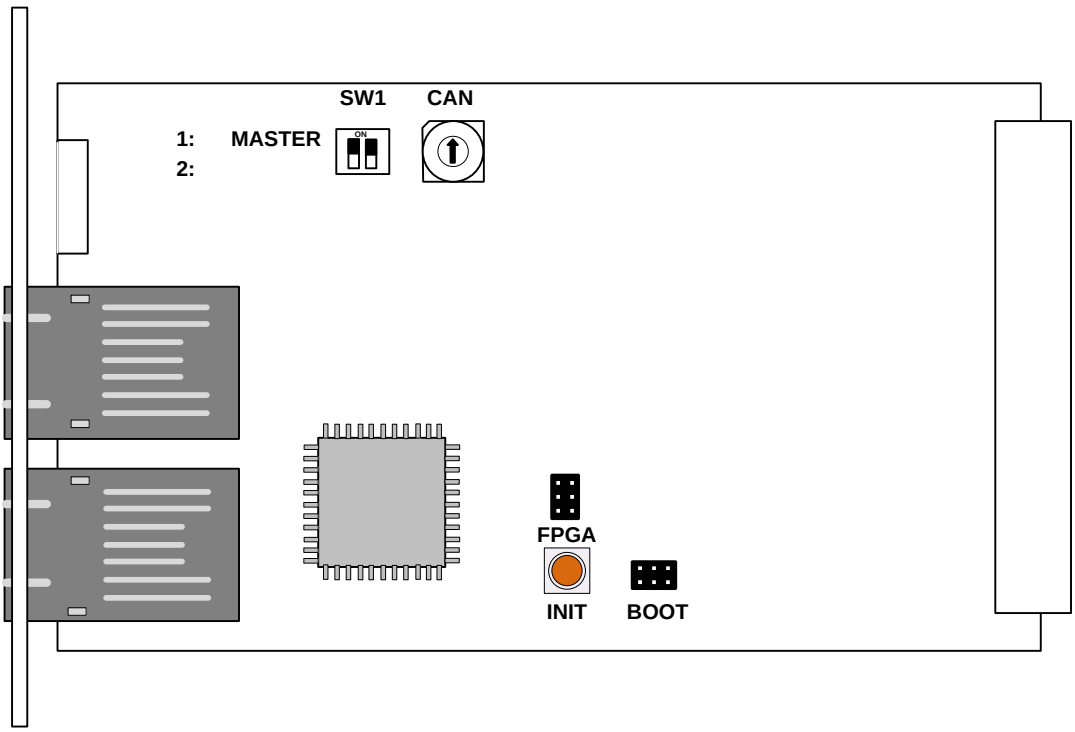
## installation




Set the **CAN** rotary encoder to an address, which is not in use by an other module of a C8000 frame (for details regarding CAN addressing, see C800 system manual).

**SW1 = Master** will put the C8305 into clock master mode for the whole C8000 frame.
**SW2** = **ON** enables the CAN **"+16"** address schema to handle up to 32 modules.

**Important Note! In case of MASTER mode, the C8305 must be installed into one of the red colored fitting rails at the rear of the frame.**

Pressing the **INIT** button during power up will initialize the module parameters to factory default values.

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## fields of application

Live recording (music, TV, radio)
- multiple C8234s mounted in stage boxes (i.e. short distance from mics)
- multi channel signal transmission of analog signals via C8306 optical or C8305 BNC MADI interface

Multi channel budget audio production
- multiple C8234 may replace cheap converters of budget digital mixing desks
- configurable converter design (mic, analog line, AES inputs to MADI and AES, analog out from MADI)

Multichannel HD recording
- multiple C8234 in user specific configured converter boxes as break out devices for multi channel HD recording systems
- multi channel signal transmission by use of C8306 optical MADI interface

Budget analog inputs for any kind of C8000 system designs
- mic inputs
- analog line inputs

Remote operation via web interface (IE 7, FF 2.0)

Customer designed, dedicated controls (e.g. of mixing consoles) via Junger HTTP based API (documentation on request)

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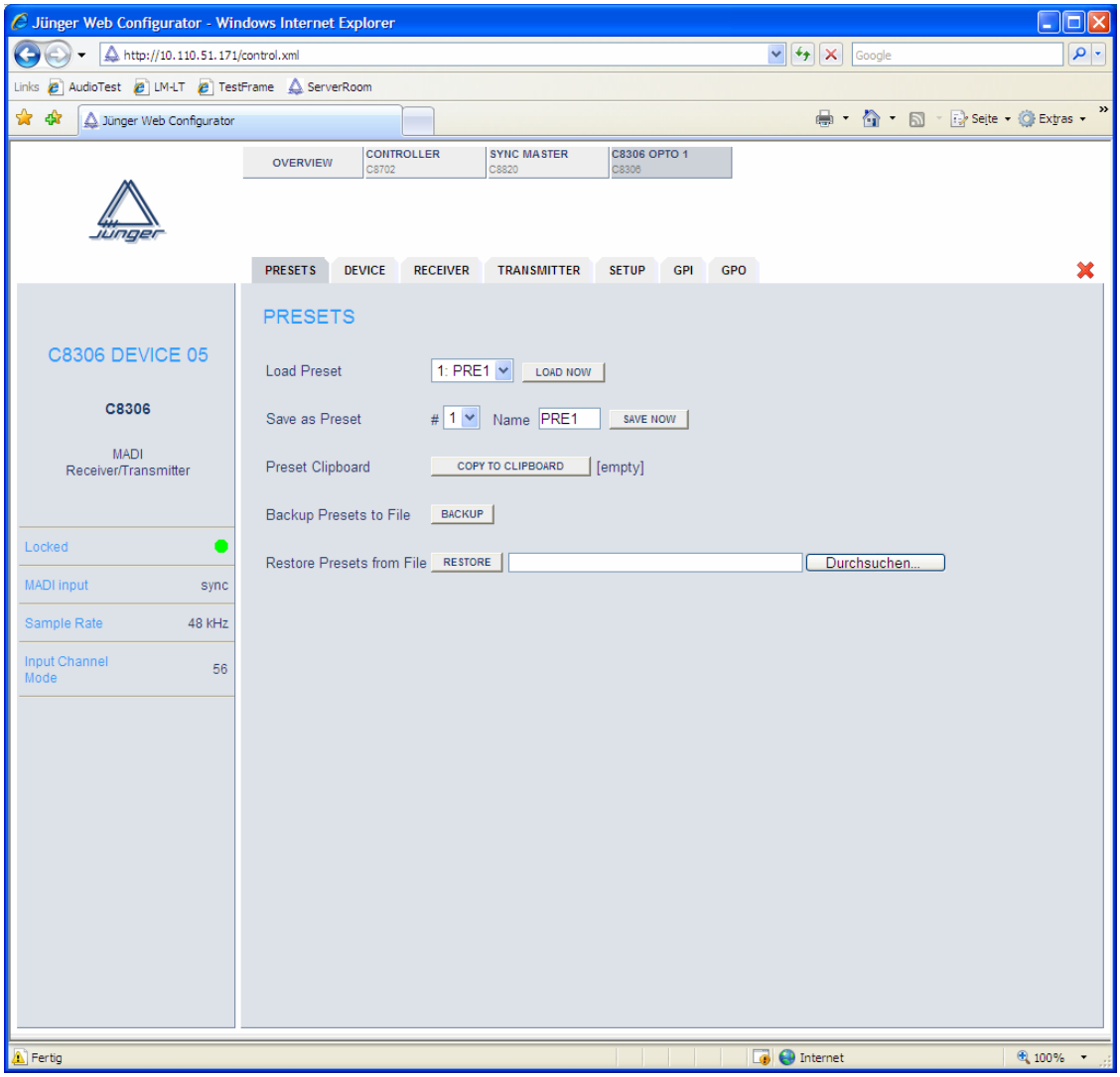
## remote configuration via web interface

***Set up of all configurations, parameters and functions via web browser.***
***See also C8702 frame controller manual and respective firmware release notes.***
***Layout and functionality are related to firmware version 1.1.x of the C8702.***

**PRESET:** Each Preset includes the parameters of the transmitter and the receiver.
There are 8 User-Presets available. They can be changed manually or by GPI.




Functions: Load, Save Presets (8 user presets)
Copy & Paste the active Preset via CLIPBOARD to other modules within a frame
Backup, Restore (all presets to / from file)

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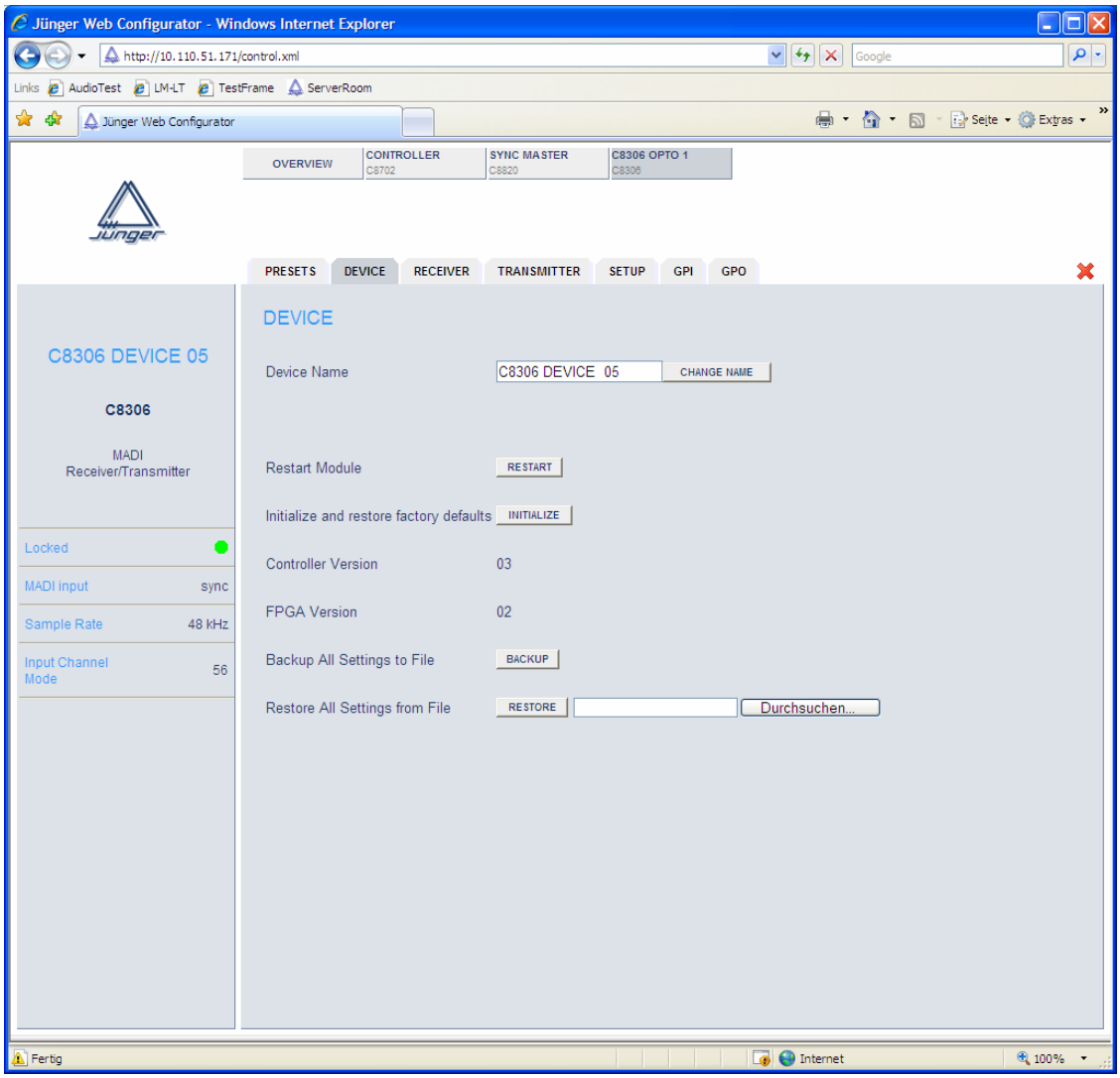
**DEVICE:** Display of device specific information




Functions: Set up of a device name
Restart module (warm start)
Initialize module (to factory default!)
Display of firmware versions
Backup and Restore (all settings to / from file)

# 64ch redundant optical MADI I/O

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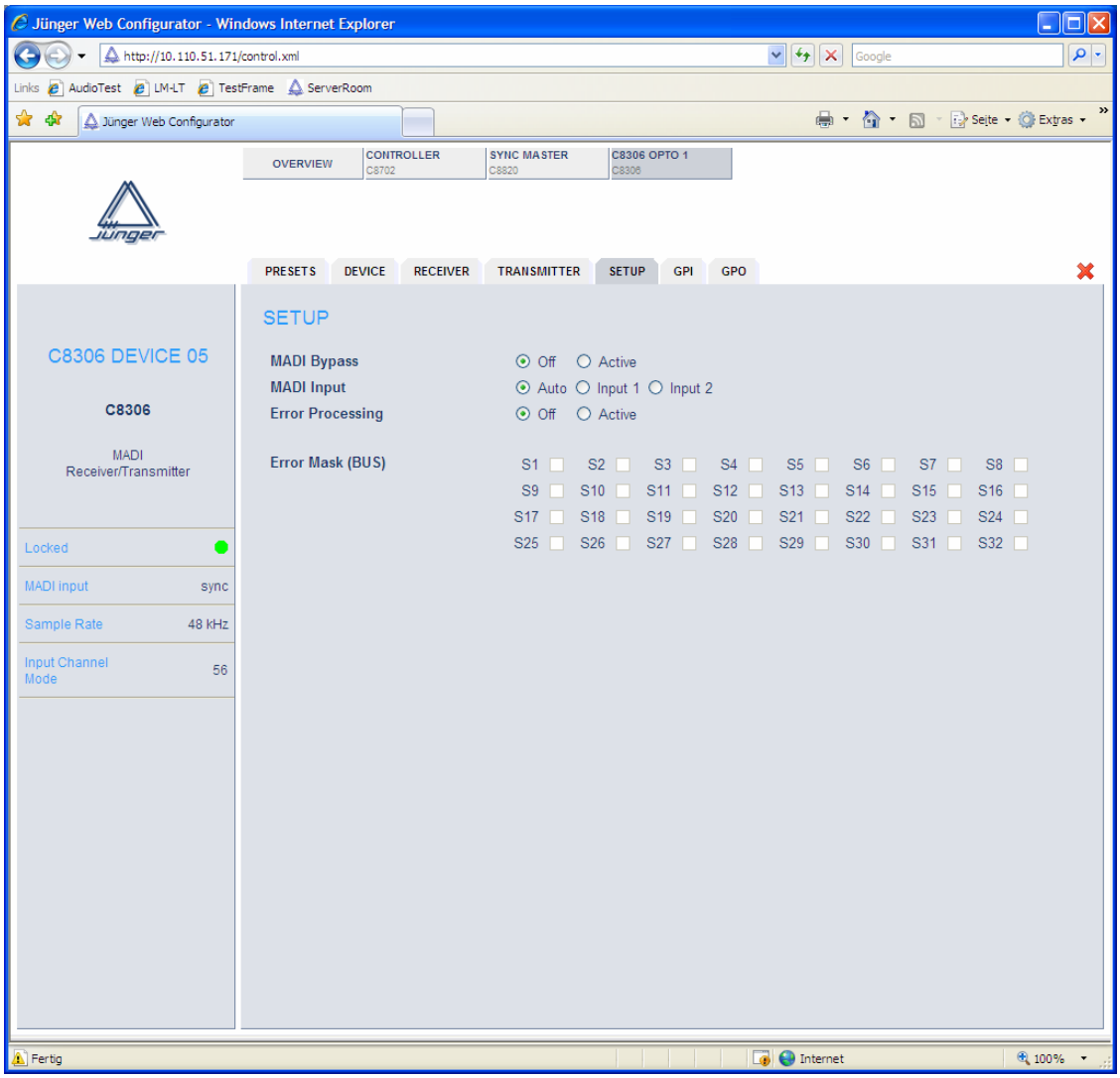
**SETUP:** Set up of device parameters




| | | |
|---|---|---|
| Function: | MADI Bypass | Off / Active<br>will bypass the MADI processing |
| | MADI Input | Auto / Input 1 / Input 2<br>will allow for automatic switch over from Input 1 to input 2 if Input 1 fails (no signal) |
| | Error Processing | Off / Active (used for remote system monitoring)<br>will turn on the bus error detection in general |
| | Error Mask | S01 to S32<br>will turn on error detection for individual busses |

**Important note!**
**You must turn off error detection for busses not in use, to prevent bad module status.**

## 64ch redundant optical MADI I/O

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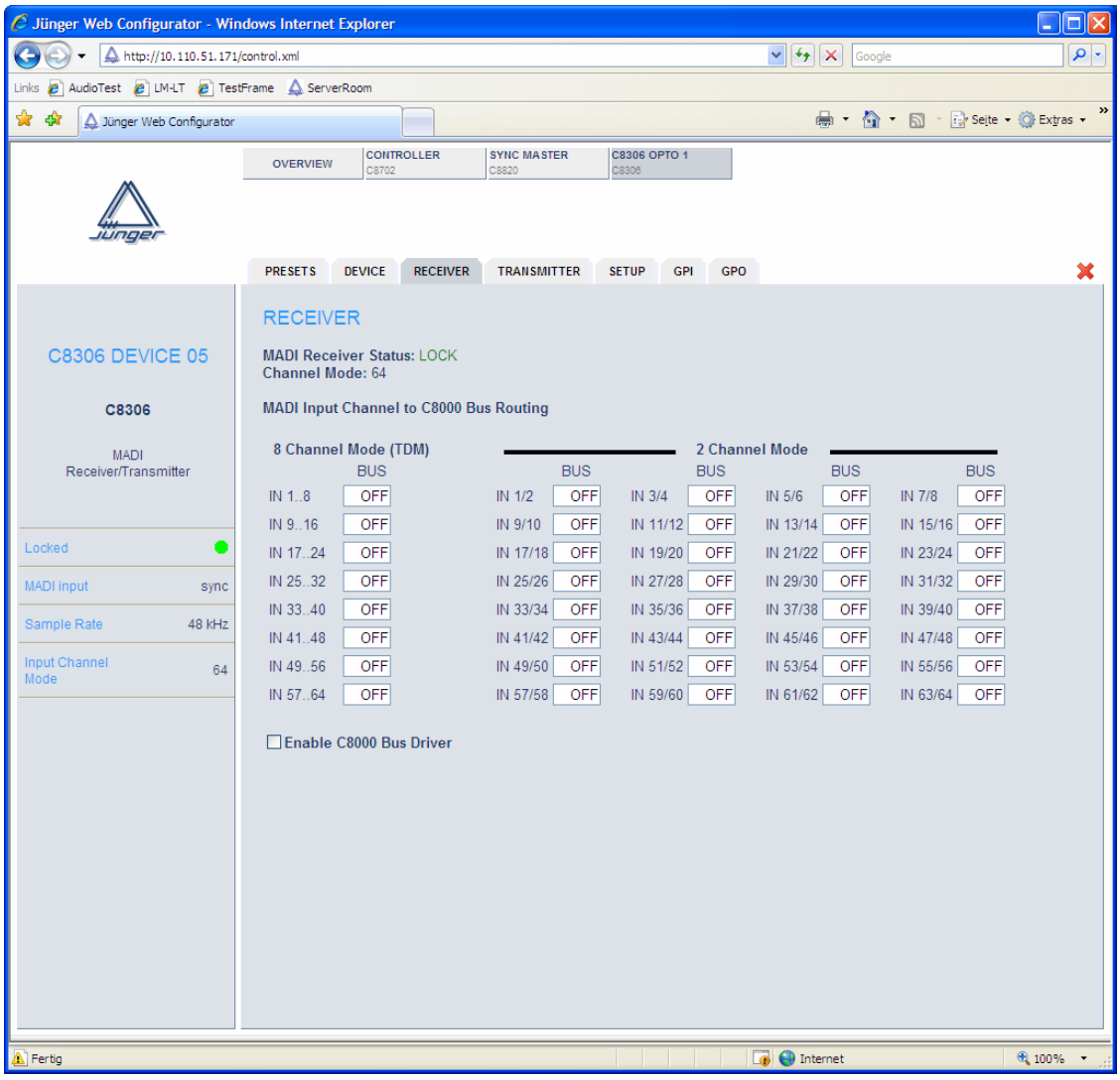
**RECEIVER:** Routing of MADI input signals to the C8000 audio buses



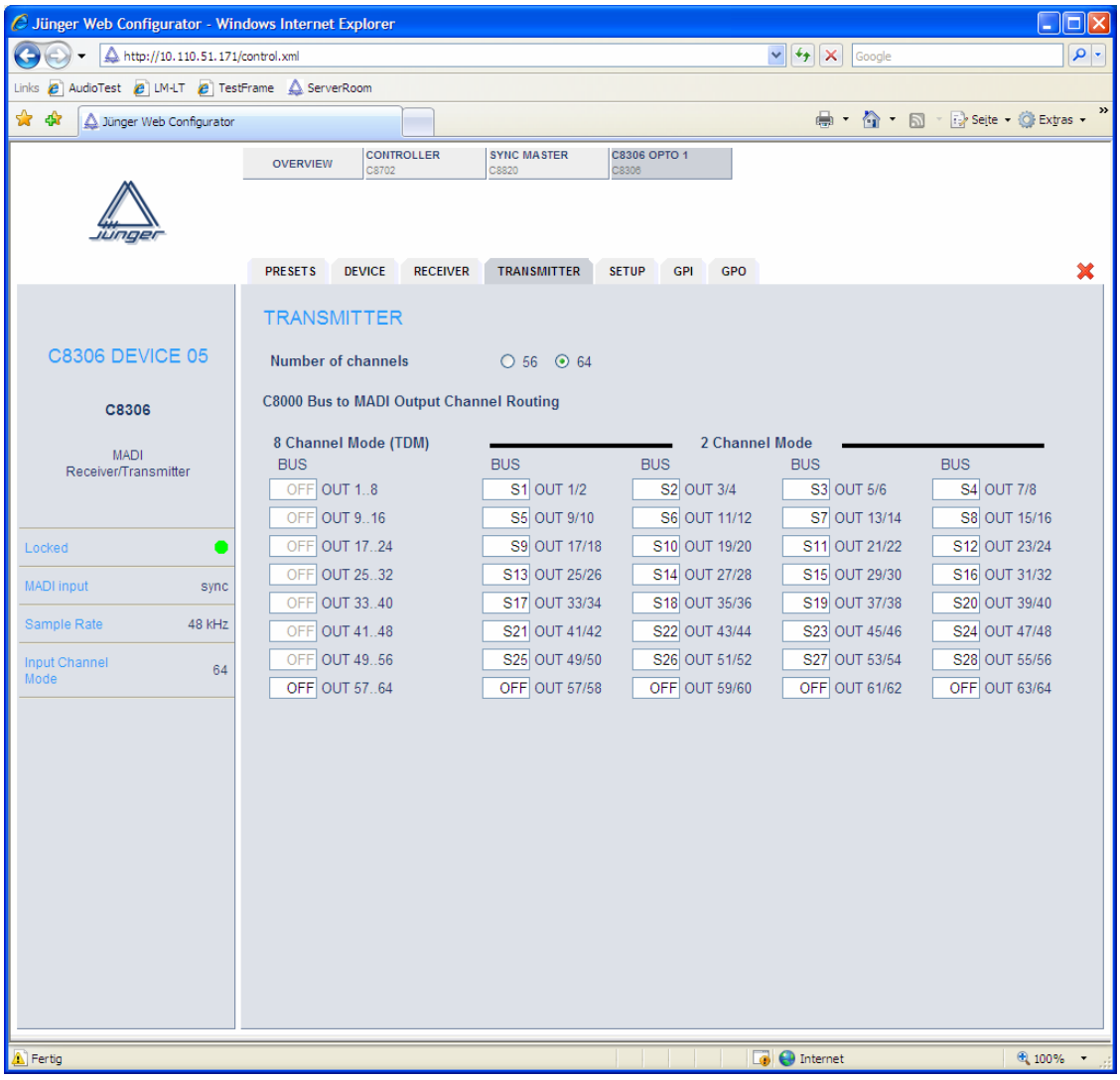

| | | |
|---|---|---|
| Function: | 8 Channel Mode | groups of 8 adjacent MADI channels may be multiplexed on one C800 audio bus from MADI reception |
| | 2 Channel Mode | pairs of 2 adjacent MADI channels may be multiplexed on one C8000 bus from MADI reception |
| | Enable C8000 Bus Driver | will enable all 32 the bus drivers. Make sure that there is no conflict with other modules occupying the same bus line. |

**Important note! Only one output is allowed for connection with one bus line.**
**Bus lines not in use should be set to OFF.**

# 64ch redundant optical MADI I/O

# C8306

**TRANSMITTER:** Routing of inputs to the C8000 audio buses




| | | |
|---|---|---|
| Function: | Number of channels | 56 / 64<br>Junger Audio MADI interfaces benefit from the extended MADI mode. It allows for transportation of 64 audio channels over a MADI interface |
| | 8 Channel Mode | groups of 8 adjacent audio channels may be taken from one bus line for MADI transmission |
| | 2 Channel Mode | pairs of 2 adjacent audio channels may be taken from one bus line for MADI transmission |

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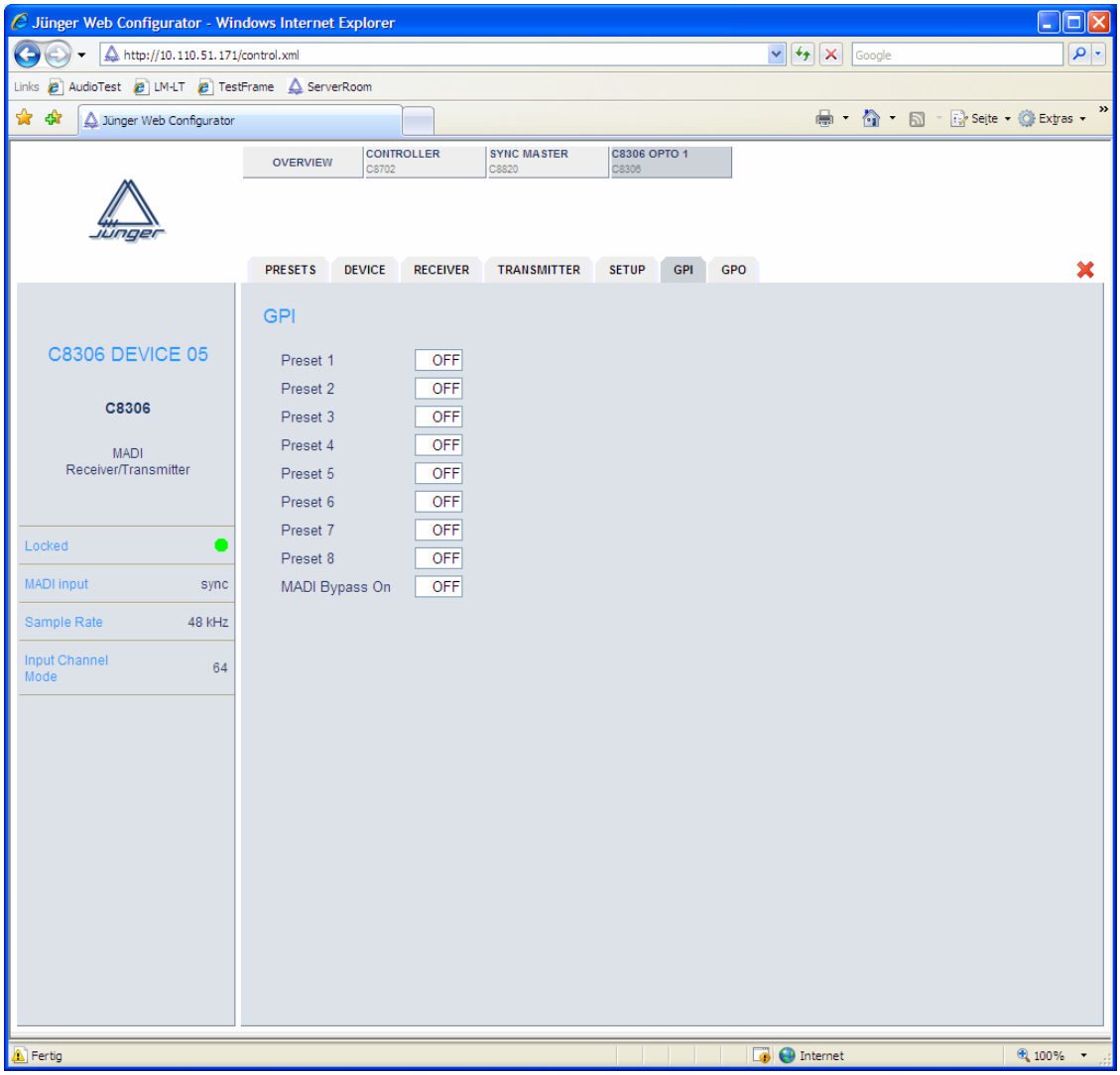
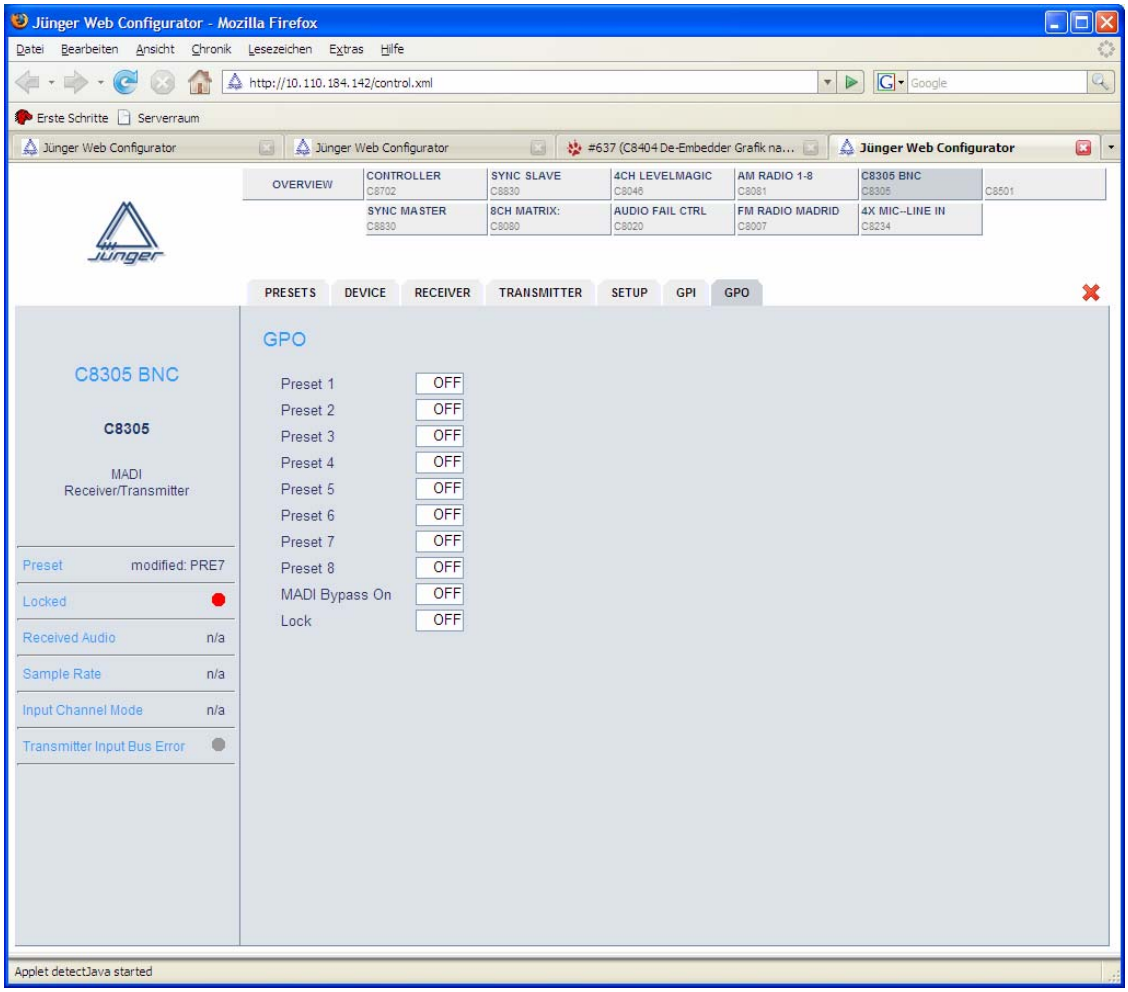
**GPI :** Set up of frame wide GPI numbers to trigger a dedicated module function.
If a GPI is detected by an GPI/O module C8802 (TTL I/O) or C8807 (opto/relay I/O), it will put an associated number on the CAN bus.
Each module in a frame is permanently listening for such numbers




**Great care must be taken to avoid same numbers assigned to different functions! Because it will activate multiple functions, causing great confusion in bigger installations, e.g. where Junger HW remote controller is in place or GPIs are connected with automation systems.**

**GPO** (Tally) : Set up of frame wide GPO numbers to trigger a dedicated GPO (Tally) of a GPI/O module C8802 (TTL I/O) or C8807 (opto/relay I/O) if the associated function is activated.




**Great care must be taken to avoid same numbers assigned to different functions! Because it will fire same GPO (Tally) by different functions, causing great confusion in bigger installations, e.g. where Junger HW remote controller is in place or GPOs are connected with other management systems. There is no mechanism implemented to check for doublets**