

Quick Guide

- BarnOne

- BarnStudio



Thank you for purchasing Barnfind Technologies products, we hope to provide you with many years of faithful service in operation.

Please follow the simple steps outlined herewith to ensure quick and trouble-free operation.

PACKAGING

The shipping carton and packaging materials provide protection for the module during transit. Please retain the shipping cartons in case subsequent shipping of the product becomes necessary. Please observe all ESD precautions when handling the BarnOne units and the electronics inside.

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What is in your Barnfind package?

Expect to find:

- Your BarnOne frame
- Your requested configuration including SFPs in a separate package box
- One Single Power Supply (standard or optional redundant if ordered)
- This Quick Guide including our standard catalog with reference for technical specifications or alternatively you can find them on our Web page.

Caution



- Use static precautions when handling the Barnfind products. Static discharge could result in serious damage to the products.

How to get started?

1. Install the Barnfind frame(s) in a standard 19" rack, not exposed to harsh environment.
2. You can alternatively turn brackets to the opposite way if you prefer connectors pointing backwards.
3. Install your Power Supply (single or redundant) to your electrical system (100-240VAC, 50/60Hz). **Note!** local power cords are not included.
4. Check if there are light in the front LED for PWR-1 (and PWR-2 if you are using redundant Power Supply). **Note!** it takes about 20 seconds before the led to illuminate (PWR-1, PWR-2, Alarm)
5. Connect to your local network.

Install BarnStudio on your computer

Download latest version of BarnStudio for free, directly from our website.

<http://www.barnfind.no/control/>

How to connect to BarnOne frames?

Connect to your local network using standard Ethernet cable CAT5 or better. Follow the instructions in 'How to operate BarnStudio' later in this manual in order to detect your device.

How to install SFPs?

Here is a sample on how you read the SFP labeling on your SFPs:

BTSFP-CWDM-10-3G47

BTSFP-CWDM-10[10 km]-3G[3G data rate]47[Wavelength=1470]

Laser Precautions:



- One should exercise the same kinds of safety precautions around lasers as with any other power tool or electrical device paying special attention to eye safety.

Important: Gently slide each SFP into the SFP cage. A click sound indicates that the SFP is correctly installed.

Caution

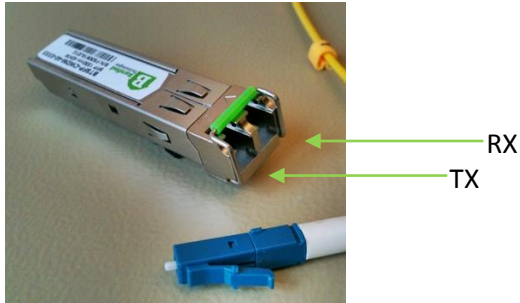


- Use static precautions when handling the Barnfind products. Static discharge could result in serious damage to the products.

Warning! Only Barnfind labeled SFPs gives full warranty. All Barnfind labeled SFPs are tested and fit perfect into our SFP+ cages. If you try a non-labeled Barnfind SFP that do not fit and that you by occasion happen to break the SFP+ cage you have no warranty. You will then have to pay Barnfind or the local partner for the maintenance or replacement to normal cost.

How to connect fiber cables?

Important: Gently insert the fiber LC connector into the corresponding SFP. A click sound indicates that the fiber cable is correctly installed.



Transceivers are equipped with input and output as described in picture on left side.

Some modules has labels with arrow indications, others has indications in the metal housing (see picture)

NOTE! A fiber connector should always be cleaned after being exposed to dusty/dirty air environment. Else you may risk reduced signal performance. Barnfind recommend using a fiber cleaner after reconnection.

See our: www.barnfind.no/accessories for our BarnClean fiber optical connector cleaner.



How to operate BarnStudio?



Install device:

- Choose where to search for device.
- Select device to configure/operate

Multicast search scope

Scope	Trådløs nettverkskobling 2	Trådløs nettverkskobling	Loopback Pseudo-Interface 1
IPv4 local	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
IPv4 site	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IPv4 org	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IPv6 local	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IPv6 site	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IPv6 org	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Static IP's to probe

IP addresses

Add a new row

Device	NetConf	SNMP
demo		
sandefjord		
stian		192.168.0.129
BarnOne-07		192.168.0.133

Detect your frame:

Basic information | Network | Matrix | Inputs | Outputs | SFPs | Firmware Upgrade



Verify that you see your installed frame in the Device List.

- View Model number
- View Serial number
- Edit Device name
- Edit Device location
- Edit Device contact person

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sysName: raspberrypi
This is the designated name of this device as it appears in the browser.

sysLocation: Unknown
This is the location of the device. Here you can type in the site where the device is located, or you can even include

sysContact: root
Who is the contact person responsible for this device?

Configure your network:

Basic information **Network** Matrix Inputs Outputs SFPs Firmware Upgrade



Next tab in our BarnStudio software is network. Default IP configuration appear.

You can continue if the IP default configuration is acceptable. In order to customize it to your IP range select Network Configuration button bellow.

- View current IPv4/IPv6 settings.
- Download current configuration
- Edit network configuration
- Upload new configuration

Matrix view:

Basic information Network **Matrix** Inputs Outputs SFPs Firmware Upgrade



Note! BNC ports have factory default as inputs and you MUST change the direction of the BNC port (inputs tab) if you would like to change the BNC to an output. Use the Matrix view to distribute, route and duplicate any input(s) to any output(s).

- Route
- Distribute
- Duplicate

Inputs:

Basic information | Network | Matrix | **Inputs** | Outputs | SFPs | Firmware Upgrade



The horizontal color lines indicate if the signal is present. If the colors are shown green it means that it is a valid input signal. A black default color means that it is no signal present. A red color indicate connected port, but no signal in.

SFP #	Output port	Matrix	Rate	Direction	Speed	HD
SFP #5	Output port 5	M2135x	Rate (Auto)	unlocked	None	
SFP #6	Output port 6	M2135x	Rate (Auto)	unlocked	None	
SFP #7	Output port 7	M2135x	Rate (Auto)	unlocked	None	
SFP #8	Output port 8	M2135x	Rate (Auto)	unlocked	None	
SFP #9	Output port 9	M2135x	Rate (Auto)	unlocked	None	
SFP #10	Output port 10	M2135x	Rate (Auto)	unlocked	None	
SFP #11	Output port 11	M2135x	Rate (Auto)	unlocked	None	
SFP #12	Output port 12	M2135x	Rate (Auto)	unlocked	None	
SFP #13	Output port 13	M2135x	Rate (Auto)	unlocked	None	
SFP #14	Output port 14	M2135x	Rate (Auto)	unlocked	None	
SFP #15	Output port 15	M2135x	Rate (Auto)	unlocked	None	
SFP #16	Output port 16	M2135x	Rate (Auto)	unlocked	None	
BNC #17	Output port 17	M2135x	Rate (Auto)	unlocked	LMH0387	
BNC #18	Output port 18	M2135x	Rate (Auto)	1.485 GHz	LMH0387	
BNC #19	Output port 19	M2135x	Rate (Auto)	unlocked	LMH0387	
BNC #20	Output port 20	M2135x	Rate (Auto)	unlocked	LMH0387	
BNC #21	Output port 21	M2135x	Rate (Auto)	unlocked	LMH0387	

- Rename input ports
- Set direction on BNC ports (in or out)
- Fine tuning of input signal

Outputs:

Basic information | Network | Matrix | Inputs | **Outputs** | SFPs | Firmware Upgrade



The horizontal color lines indicate if the signal is present. If the colors are shown green it means that it is a valid output signal. A black default color means that it is no signal routed to this port. A red color indicates connected port, but no signal in. Reclockers for each output can be set to the following data rates: SDI, HD-SDI and 3G, Bypassed, Power Down and Auto (always default). This number will indicate which Data Rate the reclockers are locked to.

SFP #13	Input port 13	None			
SFP #14	Input port 14	None			
SFP #15	Input port 15	None			
SFP #16	Input port 16	None			
BNC #17	Input port 17	LMH0387	Direction	Output	3G ext. reach <input type="checkbox"/> Coarse <input type="checkbox"/>
BNC #18	Input port 18	LMH0387	Direction	Output	3G ext. reach <input type="checkbox"/> Coarse <input type="checkbox"/>
BNC #19	Input port 19	LMH0387	Direction	Input	3G ext. reach <input type="checkbox"/> Coarse <input type="checkbox"/>
BNC #20	Input port 20	LMH0387	Direction	Input	3G ext. reach <input type="checkbox"/> Coarse <input type="checkbox"/>
BNC #21	Input port 21	LMH0387	Direction	Input	3G ext. reach <input type="checkbox"/> Coarse <input type="checkbox"/>

- Rename output ports
- Set direction on BNC ports (in or out)
- Force reclockers to lock to a specific data rate
- Read if/which data rate reclockers are locked to.
- Fine tune output signal




Select Reference Sync source:

- Select from external source (BNC on backside of the frame)
- Select from one of the input

SFP list:

Basic information Network Matrix Inputs Outputs **SFPs** Firmware Upgrade


 Each SFP inserted to a Barnfind frame will be listed in this view with Port Name, Vendor, Part Number, Serial Number, Production Date, Wave Length, Bit Rate and Connector Type. You can click on each SFP in the list in order to get more information like Temperature, Input Voltage etc. The information per SFP may vary from manufacturer to manufacturer.

PortName	Vendor	PartNumber	SerialNumber	Production Date	WaveLength	Bitrate	SM	OM1
SFP #1					0	N/A	0 m	0 m
SFP #2	EMBR	EB30HDRT	10026208	2013-2-20	AF	0	3 GH	0 m
SFP #3					0	N/A	0 m	0 m
SFP #4	OEM	CWDM-SFI	FS30518J03	2013-5-20	1430	2,5 G	0 m	0 m
SFP #5					0	N/A	0 m	0 m
SFP #6					0	N/A	0 m	0 m
SFP #7	OPTO	ESFP-LX-SI	1301250561	2013-1-26	1310	2,5 G	0 m	0 m
SFP #8					0	N/A	0 m	0 m

- View inserted SFP list
- View information about vendor, part number, wavelength, data rate etc.
- Configure intelligent SFPs

Name	Value
Temperature	46 C
Vcc	3.1643 V
TX Bias	0 mA
TX Power	0 mW
RX OMA Power	0 mW
RX LOS	<input checked="" type="checkbox"/>
TX Disable	<input type="checkbox"/>
TX Reclocker Rate	HD/3G
TX Reclocker bypass	<input type="checkbox"/>
TX Reclocker locked	<input type="checkbox"/>
RX Reclocker bypass	<input type="checkbox"/>
RX Reclocker locked	<input type="checkbox"/>
RX Equalizer Autosleep	<input type="checkbox"/>

Name	Value
Temperature	24.04296875 C
Vcc	3.2208 V
TX Bias	23.276 mA
TX Power	1.8390 mW
RX Power	0.0001 mW
RX LOS	<input checked="" type="checkbox"/>
TX Fault	<input type="checkbox"/>

 **NOTE!** The information stored inside the SFP may vary from one vendor to another

Firmware upgrade:

Basic information Network Matrix Inputs Outputs SFPs **Firmware Upgrade**



Barnfind frame will automatically connect to our Web server and the software check if your frame has the latest Firmware update. You may now choose to install updates to receive and install the latest version of the Firmware.

NOTE! The system may reboot after update and will be automatically shut down for 20 seconds. No set-up in matrix configuration will change.

- Check for updates
- Install updates

Basic information Network Matrix Inputs Outputs SFPs Firmware Upgrade

Status: Idle - Updates available for download and installation

LineNo	Text
1	Health check #1
2	Health check #2
3	Reading package lists...
4	Building dependency tree...

Diagnostics and alarms:

Basic information Network Matrix Inputs Outputs SFPs Firmware Upgrade **Diagnostics**



All BarnOne frames are equipped with a blue LED in the front panel. This will be illuminated as a warning to the operator in case of power supply failure, temperatures raise or if fan speeds are slowing down to critical. Select in the check box list to activate alarm detection.

- View fan speed
- View temperatures
- View PSU voltages
- Configure LED alarm settings

Name	Value	Send to frontpanel LED
Cabinet fan #1	7500 RPM	<input checked="" type="checkbox"/>
Cabinet fan #2	6956 RPM	<input checked="" type="checkbox"/>
Cabinet fan #3	7384 RPM	<input checked="" type="checkbox"/>
Cabinet fan #4	7272 RPM	<input checked="" type="checkbox"/>
Fan controller temperature #1	28 C	<input checked="" type="checkbox"/>
Fan controller temperature #2	27 C	<input checked="" type="checkbox"/>
MCU temperature	29 C	<input checked="" type="checkbox"/>
Power-1 input voltage	12 V	<input checked="" type="checkbox"/>
Power-2 input voltage	12.1 V	<input checked="" type="checkbox"/>



Technical Support

Address: Barnfind Technologies AS, Ranvik Brygge 7, 3212 Sandefjord, Norway

Support email: support@barnfind.no

Support Telephone: +47-468 41 376

See also our Web page: www.barnfind.no for your local Business Partners details that have the First Line Support and knowledge of our Barnfind products.

If you are experiencing problems, or have questions concerning your Barnfind products please contact your local Business Partner for assistance. Your local Business Partner is your fastest method for obtaining support and sales information.

We offer a fixed cost service exchange program for defective products out of Warranty. Please contact your local Business Partner or check our web site for details on this program.


WARRANTY

Barnfind warrants that the products, all hardware and software, will be free from defects in materials and workmanship for a period of 24 months from the date of shipment. If this product proves defective during the warranty period, Barnfind Technologies AS at its option will either repair the defective product without charge for parts and labor, or will provide a replacement in exchange for the defective product. The warrants of the products are to the Business Partner that again is responsible for its customers.

The Business Partner can also offer its clients a 60 months warranty where the Business Partner agrees to pay extra (non-discountable) Euro 400 (3000NOK, 550USD) per unit (BarnOne) by order date. Please contact Barnfind to agree upon such Arrangements.

This also includes any 3rd party products. Note that the warranty and guarantee handling is to be done via the Business Partner that are seen as Barnfind's local preferred partner. It is the Business Partner that is responsible for the first line service/support to the End Users in the Territory. Barnfind will act accordingly after first line is done by the Business Partner and the outcome is reported to Barnfind.

Barnfind will need the Business Partner to administer the warranty and support packages. This means in practice that the customer must forward defective equipment to the Business Partner. If the Business Partner cannot fix the problem the Business Partner forwards to Barnfind at its expense and Barnfind fixes the problem. Barnfind pays postage back to the Business Partner and the Business Partner forwards to its customer. This is a non-discountable service.





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The Warranty covers repairs and fixes due to equipment faults that have occurred attributable to Barnfind. Warranty issues not attributable to Barnfind are not covered by this 24+ Warranty Plan. Barnfind shall have full and final jurisdiction in assessing the nature of its liability with regards to Warranty return. All costs related to sending equipment to Barnfind (shipping charges, duties, taxes and any other charges) shall be borne by the Business Partner. All costs for sending equipment back to the Business Partner shall be borne by Barnfind.

Barnfind reserves the right to change its repair plan tariffs and terms at the end of each calendar year.


In order to obtain service under this warranty, customer must via the local Business Partner notify Barnfind Technologies of the defect before expiration of the warranty period (either 24 months or 60 months) and make suitable arrangements for the performance of service.

This warranty shall not apply to any defect, failure, or damage caused by improper use or improper or inadequate maintenance and care. Barnfind Technologies shall not be obligated to furnish service under this warranty a) to repair damage resulting from attempts by personnel other than Barnfind Technologies representatives to install, repair or service the product, exceptions are rights given in writing to the Business partner; b) to repair damage resulting from improper use or connection to incompatible equipment; c) to repair any damage or malfunction caused by the use of non Barnfind Technologies supplies; or d) to service a product which has been modified or integrated with other products when the effect of such modification or integration increases the time or difficulty servicing the product.

THIS WARRANTY IS GIVEN BY BARNFIND TECHNOLOGIES WITH RESPECT TO THIS PRODUCT IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED TO THE BUSINESS PARTNER. BARNFIND TECHNOLOGIES AND ITS VENDORS DISCLAIM ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. BARNFIND TECHNOLOGIES RESPONSIBILITY TO REPAIR AND REPLACE DEFECTIVE PRODUCTS IS THE SOLE AND EXCLUSIVE REMEDY PROVIDED TO THE BUSINESS PARTNER (SELLING TO HIS CUSTOMER) FOR BREACH OF THIS WARRANTY. BARNFIND TECHNOLOGIES AND ITS VENDORS WILL NOT BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES IRRESPECTIVE OF WHETHER BARNFIND TECHNOLOGIES OR THE VENDOR HAS ADVANCE NOTICE OF THE POSSIBILITY OF SUCH DAMAGES.

RECYCLING

Barnfind Technologies has the ambitions to be one of the greenest IT High Tech companies in the world. You can read about our E (Ecology) and EP (Environment Protection) statement and actions in our product catalogs.



EC Declaration of Conformity

MANUFACTURER Barnfind Technologies AS, Ranvik Brygge 7, 3212 Sandefjord, Norway

MODEL NUMBER(S) All Barnfind Technologies frames in the BarnOne series (19"-1RU) as well as the BarnTwo series (19"-2RU) as well as the BarnMini units.

DESCRIPTION BarnOne and BarnTwo frame versions with router and parts for any in or output or any signal format for Broadcast, Telco, Multimedia or Data and any SFP or CWDM/DWDM mux/demux.

HARMONISED STANDARDS EN 55103-1:1996; EN 55103-2:1996; EN 55103-1:2010; EN 55103-2:2010

TEST REPORTS ISSUES BY In progress XXXXXXXXXXXX

THE YEAR THE CE-MARK WAS AFFIXED WAS IN 2013

TEST AUTHORIZED SIGNATORY

MANUFACTURER	AUTHORIZED REPRESENTATIVE	Date of issue
	(Established within EEA)	2013-03-22
	Not applicable	Place of Issue
		Sandefjord, Norway



Name: Arild Skjeggerud

Position: CTO, Barnfind Technologies AS



US

FCC 47 Part 15

This device complies with part 15 of the 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.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to the part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.