

Bricasti Design

M19

Reference SACD/CD Transport



User Guide

10/23

Unpacking and Inspection

After unpacking the M19 save all packing materials in the event you ever need to ship the unit. Thoroughly inspect the M19 and packing materials for any signs of damage in shipment. Report any damage to the carrier at once.

Precautions

The Bricasti Design M19 is a rugged device with extensive electrical protection. However, reasonable precautions applicable to any piece of audio equipment should be observed.

- Always use the correct AC line voltage as set by the manufacturer. Refer to the power requirements section of the manual and adhere to any power indications on the rear or bottom of the chassis. Using the incorrect AC line voltage can cause damage to your M19, so please check this carefully before applying power.
- Do not install the M19 in an unventilated rack or directly above any heat-producing equipment like power amps, tube preamps etc.
- To prevent fire or shock hazard, do not expose the M19 to rain or moisture.

Notices

In the interest of continued product development, Bricasti Design reserves the right to make improvements to this manual and the product it describes at any time and without notice.

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Conformity

EMC / EMI

This equipment has been tested and found to comply within 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 residential installations.

Canadian Customers

This Class B digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Certificate Of Conformity

Bricasti Design, 2 Shaker Rd, Shirley, USA, hereby declares on its own responsibility the following products:

M19 –Transport

-that is covered by this certificate and marked with the CE-label conforms to the following standards:

- | | |
|------------|---|
| EN 60065 | Safety requirements for mains operated electronic and related apparatus for household and general use |
| EN 55103-1 | Product family standard for audio, video, audiovisual and entertainment lighting control apparatus for professional use. Part 1: Emission |
| EN 55103-2 | Product family standard for audio, video, audiovisual and entertainment lighting control apparatus for professional use. Part 2: Immunity |

With reference to the regulations in the following directives:
73/23/EEC, 89/336/EEC

October 2023
Brian S Zolner
President

Introduction

This M19 user guide covers theory of design and setup and use.

Congratulations on the purchase of your new M19 SACD CD transport. We at Bricasti Design have set out to design the world's best of analog and digital and to offer the finest products made for the professional and consumer audio markets.

Product Overview

The M19 is a simple CD and SACD compatible disk player. It is a transport, meaning the M19 has no D/A converter and is designed to be used with an external DAC. As such, the M19 has AES and SPDIF outputs as well as a proprietary I2S output designed to interface to our line of DAC products. Care was taken to provide a very simple to use product for the task of playing your favorite disks.

Build Quality

The M19 is robustly constructed of milled and CNC machined aluminum sections, no typical bent metal chassis and top cover found on most products. All sections of the construction, the front and rear panels, the sides and even the bottom and top plates start out as solid blocks of aluminum which are precision machined to shape, with exact tolerances for a perfect fit. These parts are then anodized and the text and markings is laser etched for a clean and enduring look.

Important Safety Instructions:

Notice!

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow these instructions.
- Do not use this apparatus near water.
- Clean only with dry cloth.
- Do not block ventilation openings; install in accordance with manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers, pre amps) that produce heat.
- Do not defeat the safety purpose of the polarized or grounded type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade and prong are for your safety. If the provided plug does not fit in your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect power cord from being walked on or pinched.
- Use only attachments/accessories specified by the manufacturer.
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Service is required when the apparatus has been damaged in any way, such as by being dropped, exposed to rain, liquid being spilled on it, or otherwise does not operate normally.

Service

- There are no user serviceable parts inside.
- All service must be performed by qualified personnel.

Warning!

- To reduce the risk of fire or electrical shock do not expose this equipment to dripping or splashing water and ensure that no objects such as vases are placed on the equipment.
- This apparatus must be earthed.
- **This equipment requires the correct AC line voltage as set by the manufacture and is not auto sensing or scaling.**
- Use a three-wire grounding-type line cord like the one supplied with this product.
- Be aware that different operating voltages require the use of different types of line cords and attachment plugs.
- Check the voltage in your area and use the correct type. See table below:

Voltage	Line plug standard
110-125V	UL817 and CSA C22.2 no 42
220-230V	CEE 7 page VII, SR section 107-2-D1/IEC 83 pg C4
240V	BS 1363 of 1984 Specification for 13A fused plugs and switched and unswitched outlet plugs

- This equipment should be installed near the socket outlet and disconnection of the device should be easily accessible.
- To completely disconnect from AC mains, disconnect the power supply cord from the AC receptacle.
- Do not install in a confined space.
- Do not open the unit -risk of electrical shock inside.

Caution

- You are cautioned that any change or modification not expressly approved in this manual could void your authority to operate this equipment.

Design Overview

The M19 consists of 3 major components:

Power Supply Section:

The M19 chassis has 2 separate linear supplies, one is for powering the mechanism and control aspects and this is separate from the audio section. This part of the supply connects directly to the drive for control, and power aspects for drive the motor. A separate power supply is used for and data and digital power connected directly to the digital output section.

Digital Output Section:

In the rear of the chassis behind the mechanism is the digital output section, this provides the system clocking and creation of the AES and SPDIF outputs, the I2S is passed directly from the drive to the output connector. As an option for the SPDIF the M19 can be fitted with a true 75 ohm BNC connector.

Drive Mechanism Section:

On the right side of the chassis is the drive mechanism, this is shielded from the other components in the chassis by a milled aluminum cover to provide quiet operation. This device is a front loading type and has a proven record of reliability from its manufacturer.

Trigger Functions

On the rear panel the M19 has a stereo connector (Tip/Ring/Sleeve) for the trigger in or out functions. Tip is connected to chassis ground, the ring is +5v trigger. Trigger functions can be set in the status menu for trigger in trigger out or trigger remote for exclusive remote control from another device or system. Take note that this is a proprietary for use with other Bricasti products. Its pin out is not a normal standard and the M19 is supplied with an adaptor cable for use with other products that use the tip as the positive voltage.

Front Panel Overview

The front panel has a large, simple, easy to read graphic display, an encoder for changing tracks adjusting and selecting settings, There is an IR receiver built in to the left side center of the display for using the M19 remote controller.



Rear Panel Overview

Looking at the rear you will find on to the left in the picture, the trigger in and out jacks, AES, SPDIF, and RJ 45 network connector for I2S. There are no fuses in the M19 as safety is insured by the use of an internal circuit breaker.



Setup and Operation

AC power and the M19

The AC power is connected at the rear of the unit; the filtered AC inlet also has the main power on-off switch. Take note that the M19 utilizes linear power supplies so care should be taken to use only the power range indicated on the unit otherwise damage can occur to the power supplies and other circuits in the M19. Please note and adhere to any voltage indications on the outer box, rear panel or chassis all of which will indicate how the M19 is set at manufacture. There are no external fuses.

The main AC power switch is at the rear and the front panel switch is a low power consumption stand by switch. For complete power on of you must cut power with the rear panel switch or from an external AC power on off switch that may be used to power other devices in your setup.

Connecting the M19 and power up

When you power up the M19 it will power on and be ready to load and play a disk. All outputs are active all the time, so connect one or more of them to your dac and find what one best that matches your DAC's inputs. You can simply load a disk and play.

Operating the M19

The M19 is a pure transport with no DAC so the general operation is quite simple; there are 6 front panel keys from left to right:

- **Menu**

This will select settings for the M19. Press this to enter the listing, pressing the button again will step you through the sections, the knob can be used to change settings. Some of these setting are also on the front panel for direct access, and having them in this menu allows for access via the remote:

Layer:

When an SACD is loaded, this will appear as first item in the menu. This selects the playback from the SACD layer or the CD layer of the disk. If a CD is loaded this menu item will not appear.

Display:

This sets the brightness of the display.

Color:

This sets the color of the display text and background

Repeat mode:

Sets repeat to, current playing track, disk, or off.

Time:

Sets to elapsed time or time remaining of the playing track .

Trigger Out:

This sets the trigger out function to be 5V for triggering on another device like one of our DACs or control impulse data mode.

Trigger IN:

This sets the trigger in mode from 5V mode from one of our source products like the M20, or optional data use. NOTE that this is a proprietary interface, with the RING as the + voltage and TIP as ground return.

- **Repeat**

This is for setting current track or full disk repeat modes. This is duplicated in the setup menu.

- **Time**

This sets the display for time elapsed or time remaining. This is duplicated in the setup menu.

- **Play/Pause**

With a disk loaded, this will start play from stop mode. Pressing during playback will pause /resume play. When loading and playing disks like the SACD be aware that it might take time to spin up the disk and load the table of contents and be ready to and start play. Pressing play to load a disk will load the disk and immediately start play.

- **Stop**

This will fully stop play of the disk that is in playing and return to the start of the disk. This will unload its contents and may take a moment to restart play again.

- **Open/Close**

This will open or close the drawer to insert or remove a disk. Pressing this during play will stop play and open the drawer. Pressing play with the drawer open, will auto load the disk and start play back



The M19 display in playback mode: Top text left to right: track# : minutes, : seconds. Lower text left is disk type and right status of playing or paused. In stop, pause or play mode, the knob is used for track advance/retard.

SACD and DSD playback and the M19

When playing a SACD, when using the AES or SPDIF outputs the DSD playback with the M19 is done via DoP, , and Native via the I2S.. The M19 does not employ and sample rate conversion or up-sampling of the data streams and passes the original sample rate. The only processing done is for creating the DoP format for DSD out the AES and creating the serial data streams for AES and SPDIF.

The M19 maintains and preserves native formats on the disk; when playing a CD the output will be 44.1k 16bits, when playing an SACD the output can be DSD 64 or if the CD layer is selected it will be 44.1. These data streams are passed directly to the connected DAC for conversion.

I2S Output on the M19

The M19 has a proprietary implementation of I2S. There is no “standard” for the use of I2S outside the confines of a product as its intended use is for interconnecting of PCBs inside of a product. In our implantation, we use an RJ45 connector and it will mate to one of our DACs if it is fitted with the same RJ45 connector I2S option. It should be noted that this interface is intended for use with our products and is not meant for general use with other products; the AES and SPDIF are there to support other manufacturer’s products as they are defined standard and will work with any product that supports these standards.

The M19 Remote

The M19 has the option to be supplied with a dedicated IR (infrared) remote control. This is a simple remote and allows for most commonly used functions of the M19 to be controlled remotely from your listening position. This is an IR device so it is important that line of sight to the M19 front panel where the IR receiver is mounted is maintained. With any device like this there are distance and parallax limitations. For example if you are far off to one side, too high or low, or too far away then the remote may not work correctly and there will be errors in the light emitted pulses causing missed or wrong data. Be sure to be within reasonable distance, about 25' and within a + or - 45 degree angle from the front panel. Operation has the same paradigm as the front panel control, with all the same labeled functions for both.



Replacing the remote batteries

The remote comes complete with batteries installed but in the event you need to replace them here simply open the casing of the remote with a 5/64" hex key and remove and replace the batteries noting the polarity marking on the battery holders.



Inside the remote with one partially inserted battery showing correct polarity

Technical Specifications

Digital Outputs

Connectors:	XLR:	AES/EBU 24 bit Single Wire
	RCA or BNC option:	SPDIF
	RJ45:	I2S
Sample Rates AES, SPDIF:	44.1 kHz, or DSD 64fs as DoP	
Sample Rates I2S:	44.1 kHz, or DSD 64fs Native	

General Specifications

EMC

Complies with:	EN 55103-1 and EN 55103-2	FCC part 15, Class B
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RoHS

Complies with:	EU RoHS Directive 2002/95/EC
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Safety

Certified to:	IEC 60065, EN 55103-2
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Environment

Operating Temperature:	32 F to 105 F (0 C to 40 C)
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Storage Temperature:	-22 f to 167 F (-30 C to 70 C)
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General

Finish:	Anodized Aluminum
Dimensions:	14" x 11.25" x 2.5"
Weight:	15 lbs
Shipping Weight:	20 lbs
Shipping Dimensions:	20"x 14"x 5"
Mains Voltage:	100, 120, 220, 240 VAC, 50 Hz – 60 Hz factory set
Trigger in/out:	TRS connector for 5V external trigger on ring .
Power consumption:	15 Watts
Warranty parts and labor:	2 years non transferable

Bricasti Design

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