behringer P16-M Digital Personal Mixer User Guide

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Home » Behringer » behringer P16-M Digital Personal Mixer User Guide

Quick Start Guide

POWERPLAY
P16-M
16-Channel Digital Personal Mixer
P16-I
16-Channel 19" Input Module with Analog and ADAT Optical Inputs
P16-D
16-Channel Digital ULTRANET Distributor
Important Safety Instructions

**CAUTION**

**RISK OF ELECTRIC SHOCK!**
DO NOT OPEN
ATTNTRNT

Terminals marked with this symbol carry an electrical current of sufficient magnitude to constitute a risk of electric shock. Use only high-quality professional speaker cables with ¼" TS or twist-locking plugs pre-installed. All other installation or modifications should be performed only by qualified personnel.

This symbol, wherever it appears, alerts you to the presence of uninsulated dangerous voltage inside the enclosure – voltage that may be sufficient to constitute a risk of shock.

This symbol, wherever it appears, alerts you to important operating and maintenance instructions in the accompanying literature. Please read the manual.

Caution
To reduce the risk of electric shock, do not remove the top cover (or the rear section). No user-serviceable parts inside. Refer servicing to qualified personnel.

Caution
To reduce the risk of fire or electric shock, do not expose this appliance to rain and moisture. The apparatus shall not be exposed to dripping or splashing liquids and no objects filled with liquids, such as vases, shall be placed on the apparatus.

Caution
These service instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operation instructions. Repairs have to be performed by qualified service personnel.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer’s instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-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 or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for the replacement of the obsolete outlet.
10. Unplug this apparatus during lightning storms or when unused for long periods of time.
11. 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 or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. 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 or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. The apparatus shall be connected to a MAINS socket outlet with a protective earthing connection.
16. Where the MAINS plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.

**Correct disposal of this product:** This symbol indicates that this product must not be disposed of with household waste, according to the WEEE Directive 2012/19/EU and your national law. This product should be taken to a collection center licensed for the recycling of waste electrical and electronic equipment (EEE).

The mishandling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous
substances that are generally associated with EEE. At the same time, your cooperation in the correct disposal of this product will contribute to the efficient use of natural resources. For more information about where you can take your waste equipment for recycling, please contact your local city office or your household waste collection service.

18. Do not install in a confined space, such as a bookcase or similar unit.
19. Do not place naked flame sources, such as lighted candles, on the apparatus.
20. Please keep the environmental aspects of battery disposal in mind. Batteries must be disposed of at a battery collection point.
21. This apparatus may be used in tropical and moderate climates up to 45°C.

LEGAL DISCLAIMER

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LIMITED WARRANTY

For the applicable warranty terms and conditions and additional information regarding Music Tribe’s Limited Warranty, please see complete details online at community.musictribe.com/pages/support#warranty.

POWERPLAY P16-M/P16-I/P16-D Hook-up

Step 1: Hook-Up

Extended hookup with P16-D and multiple P16-M mixers

POWERPLAY P16-M Controls

Step 2: Controls
POWERPLAY P16-M Controls

Step 2: Controls
POWERPLAY P16-I Controls

Step 2: Controls

1. Make sure the P16-I is switched off. The POWER LED should be unlit.
2. Run up to 16 audio cables with ¼” TRS plugs from line-level outputs on your mixer (e.g., AUX sends) to the line-level analog inputs on the back of the P16-I.
3. If your mixer has digital outputs, run digital audio cables from your mixer to the ADAT A/B connections on the back of the P16-I. The ADAT A/B LEDs will light to show which ADAT IN connections is active. You can combine 8 analog input signals with the 8-channel digital signal from the ADAT A input.
4. Run shielded CAT5 digital cables out from the ULTRANET OUTPUTS to external devices (any combination of P16-M or P16-D units). For best results, do not use CAT5 cables longer than 75 m (246 ft.).
5. Power up the P16-I by pressing the POWER switch. The POWER LED will light up.
6. To set levels, playback audio from your mixer to the P16-I’s analog inputs.
7. Watch the SIG LEDs on the front panel of the P16-I. The SIG LEDs will light up to confirm the analog inputs are receiving signals.
8. Watch the CLIP LEDs. If the CLIP LEDS light up continuously (or do not light up at all), adjust the INPUT SENSITIVITY switches until the CLIP LEDs light only occasionally.

P16-I Basic Setup

1. Make sure the ON/OFF button is set to the “OFF” position.
2. Turn the OUTPUT LEVEL knob all the way down to the fully counterclockwise position.
3. Connect the external power supply to the P16-M. (You may also bus-power the P16-M using the CAT5 digital connection from the P16-I or P16-D.)
4. Connect a shielded CAT5 cable from a P16-I, P16-D, or another P16-M to the ULTRANET IN connection on the P16-M.
5. If you plan to daisy-chain the P16-M with an additional P16-M or P16-D, run an additional CAT5 cable from the ULTRANET THRU connection to the devices further down the chain.
6. If using headphones, plug your headphones into the PHONES jack using a ¼” TRS plug.
7. If using external powered monitors, run audio cables with ¼” TS plugs from the LINE OUT outputs to the monitors.
8. Power up the P16-M by pressing the ON/OFF button into the “ON” position.

P16-M Basic Mix Setup

1. Turn the OUTPUT LEVEL knob all the way down to the fully counterclockwise position.
2. Turn the OUTPUT LIMITER knob all the way up to the fully clockwise position.
3. Confirm that the ULTRANET LED is lit.
4. Activate your audio channels by pressing each CHANNEL SELECT button until the LED lights up red. (Green LED flickering=audio signal activity; red LED constant=mono channel or stereo linked pair selected; red LED blinking=channel is part of a selected group, but the channel is currently not selected.)

POWERPLAY P16-D Controls

Step 2: Controls

POWERPLAY P16-M/P16-I/P16-D Getting started

Step 3: Getting started

P16-I Basic Setup

1. Make sure the P16-I is switched off. The POWER LED should be unlit.
2. Run up to 16 audio cables with ¼” TRS plugs from line-level outputs on your mixer (e.g., AUX sends) to the line-level analog inputs on the back of the P16-I.
3. If your mixer has digital outputs, run digital audio cables from your mixer to the ADAT A/B connections on the back of the P16-I. The ADAT A/B LEDs will light to show which ADAT IN connections is active. You can combine 8 analog input signals with the 8-channel digital signal from the ADAT A input.
4. Run shielded CAT5 digital cables out from the ULTRANET OUTPUTS to external devices (any combination of P16-M or P16-D units). For best results, do not use CAT5 cables longer than 75 m (246 ft.).
5. Power up the P16-I by pressing the POWER switch. The POWER LED will light up.
6. To set levels, playback audio from your mixer to the P16-I’s analog inputs.
7. Watch the SIG LEDs on the front panel of the P16-I. The SIG LEDs will light up to confirm the analog inputs are receiving signals.
8. Watch the CLIP LEDs. If the CLIP LEDS light up continuously (or do not light up at all), adjust the INPUT SENSITIVITY switches until the CLIP LEDs light only occasionally.

P16-I Basic Setup

1. Make sure the ON/OFF button is set to the “OFF” position.
2. Turn the OUTPUT LEVEL knob all the way down to the fully counterclockwise position.
3. Connect the external power supply to the P16-M. (You may also bus-power the P16-M using the CAT5 digital connection from the P16-I or P16-D.)
4. Connect a shielded CAT5 cable from a P16-I, P16-D, or another P16-M to the ULTRANET IN connection on the P16-M.
5. If you plan to daisy-chain the P16-M with an additional P16-M or P16-D, run an additional CAT5 cable from the ULTRANET THRU connection to the devices further down the chain.
6. If using headphones, plug your headphones into the PHONES jack using a ¼” TRS plug.
7. If using external powered monitors, run audio cables with ¼” TS plugs from the LINE OUT outputs to the monitors.
8. Power up the P16-M by pressing the ON/OFF button into the “ON” position.

P16-M Basic Mix Setup

1. Turn the OUTPUT LEVEL knob all the way down to the fully counterclockwise position.
2. Turn the OUTPUT LIMITER knob all the way up to the fully clockwise position.
3. Confirm that the ULTRANET LED is lit.
4. Activate your audio channels by pressing each CHANNEL SELECT button until the LED lights up red. (Green LED flickering=audio signal activity; red LED constant=mono channel or stereo linked pair selected; red LED blinking=channel is part of a selected group, but the channel is currently not selected.)
5. While playing audio, slowly turn the OUTPUT LEVEL knob clockwise until you have a comfortable basic monitoring level.
6. Slowly turn the OUTPUT LIMITER knob counter-clockwise to get the limiter working and find an acceptable balance between dynamics and control of volume peaks.
7. Create stereo channels by pressing the LINK button and then pressing any CHANNEL SELECT button. The related adjacent channel will get stereo-linked. Press the LINK button again to release the LINK menu.
8. To adjust any individual or stereo channel in the mix, press the channel's CHANNEL SELECT button until the button lights red.
9. Turn the VOLUME knob clockwise or counterclockwise to adjust the channel's position in the stereo field
10. Turn the VOLUME knob clockwise or counterclockwise to adjust the channel's relative level in the mix.
11. Adjust the channel's bass and treble frequencies using the BASS and TREBLE knobs.
12. Target a specific mid-range frequency for adjustment using the FREQ knob, and then adjust that frequency's level using the MID knob.
13. Adjust any other channels using the same procedure, as necessary.
14. To group several channels together, press the GROUP button (button will blink), and then press the desired CHANNEL SELECT buttons. The LEDs for the selected channels will blink. Press the GROUP button again to exit. The selected channels may then be adjusted as a group in the mix with a single level adjustment using the VOLUME knob.
15. Save your settings to a preset by holding the STORE button and then select the target preset by pressing any one of the 16 CHANNEL SELECT buttons. Press the same CHANNEL SELECT button again to confirm the STORE process.
16. Load a preset by holding the RECALL button and pressing the CHANNEL SELECT button containing the desired preset.

POWERPLAY P16-M/P16-I/P16-D Getting started

Step 3: Getting started

1. Make sure the P16-D is connected to a power outlet using the included IEC power cable. (To bus-power additional P16-M mixers from the P16-D, the P16-D must be connected to a power source.)
2. Make sure the unit is powered down. The ON LED should be unlit.
3. Connect a shielded CAT5 cable from a P16-I, P16-D, or another P16-M to the ULTRANET IN connection on the P16-D.
4. Run shielded CAT5 digital cables out from the ULTRANET OUTPUTS to external devices (any combination of P16-M or P16-D units). For best results, do not use CAT5 cables longer than 75 m (246 ft.).
5. Power up the P16-D by pressing the POWER switch. The ON LED will light up.
6. LEDs above the ULTRANET IN and ULTRANET OUTPUTS connections will light up to confirm the CAT5 cables are connected and active.

Specifications

P16-I/P16-M/P16-D

Ultranet Digital Network

Digital Processing

| A/D conversion | 24-bit, 44.1 / 48 kHz sample rate |
| Converter type | 24-bit, delta-sigma |

System

| Signal | 16 channels, plus bus-power for P16-M |
| Latency | <0.9 ms (from P16-I to P16-M) |
| Frequency response | 20 Hz to 20 kHz (+0 / -3 dB) |
| Dynamic range | typical 92 dB |

Cabling

| Connectors | RJ45 |
| Cables | Shielded CAT5 |
| Cable length | max. 246 ft / 75 m recommended |

P16-I Input Module
**Analog Inputs**

**Inputs**
16 x ¼" TRS, balanced, line-level

**Input level**
+4 dBu optimal, +22 dBu maximal

**Input gain**
-10 dBV / 0 dBu / +4 dBu / +22 dBu, adjustable

**Gain selector**
4-position switch (per channel)

**Digital Inputs**

**Optical inputs**
2 x optical connectors

**Input format**
ADAT, 16 / 20 / 24-bit, 44.1 / 48 kHz sample rate, 8 channels

**Synchronization**
From ADAT input A only (external clock)

**Indicators**
2 x LED’s

**Input selection**
Auto-select for channels 1-8 / 9-16

**Digital Outputs (Ultranet)**

**Connectors**
6 x RJ45

**Power Supply/Voltage (Fuses)**

USA/Canada
120 V~, 60 Hz (T 1 AH 250 V)

UK/Australia/ Europe
220-240 V~, 50/60 Hz (T 1 AH 250 V)

Korea/China
220-240 V~, 50/60 Hz (T 1 AH 250 V)

Japan
100 V~, 50/60 Hz (T 1 AH 250 V)

**Power consumption**
35 W

**Mains connection**
Standard IEC receptacle

**Dimensions/Weight**

**Dimensions (H x W x D)**
appr. 44 x 482 x 190 mm (1U) (appr. 1.7 x 19 x 7.5″)

**Weight**
2.1 kg (appr. 4.6 lbs)

**P16-M Digital Personal Mixer**

**Audio Connections**

**Phones**
¼" TRS, stereo

**Line out**
2 x ¼" TS, unbalanced

**Ultranet Thru/In**
2 x RJ45

**MIDI in**
5-pin MIDI connector

**Controls**

**Equalizer**

**Bass**
±12 dB @ 100 Hz, shelving

**Mid**
±12 dB, semi-parametric

**Frequency**
100 Hz to 10 kHz, adjustable

**Treble**
±12 dB @ 10 kHz

**Output**

**Limiter**
Ratio =: 1

**Level**
-20 to +15 dBu (Phones)

**Power Supply**

**Power consumption**
max. 5 W with included power supply adaptor

**Mains connection**
External power supply (included) or P16-I / P16-D

**P16-D Ultranet Distributor**
Digital Inputs/Outputs (Ultranet)

- Ultranet in: 1 x RJ45
- Remote outputs: 8 x RJ45

Power Supply/Voltage (Fuses)

- USA/Canada: 120 V~, 60 Hz (T 1 AH 250 V)
- UK/Australia/Europe: 220-240 V~, 50/60 Hz (T 1 A H250 V)
- Korea/China: 220-240 V~, 50/60 Hz (T 1 AH 250 V)
- Japan: 100 V~, 50/60 Hz (T 1 AH 250 V)

Power consumption: 40 W

Mains connection: Standard IEC receptacle

Dimensions/Weight

- Dimensions (H x W x D): appr. 44 x 254 x 160 mm (1U) (appr. 1.7 x 10 x 6.3“)
- Weight: 1.1 kg (appr. 2.4 lbs)

Important information

1. **Register online.**
   Please register your new Music Tribe equipment right after you purchase it by visiting musictribe.com. Registering your purchase using our simple online form helps us to process your repair claims more quickly and efficiently. Also, read the terms and conditions of our warranty, if applicable.

2. **Malfunction. Should your**
   Music Tribe Authorized Reseller not be located in your vicinity, you may contact the Music Tribe Authorized Fulfiller for your country listed under “Support” at musictribe.com. Should your country not be listed, please check if your problem can be dealt with by our “Online Support” which may also be found under “Support” at musictribe.com. Alternatively, please submit an online warranty claim at musictribe.com BEFORE returning the product.

3. **Power Connections.**
   Before plugging the unit into a power socket, please make sure you are using the correct mains voltage for your particular model. Faulty fuses must be replaced with fuses of the same type and rating without exception.

Other important information

FEDERAL COMMUNICATIONS COMMISSION COMPLIANCE INFORMATION

**Behringer**

POWERPLAY P16-M/P16-I/P16-D

Responsible Party Name: Music Tribe Commercial NV Inc.
Address: 122 E. 42nd St.1, 8th Floor NY, NY 10168, United States
Email Address: legal@musictribe.com

This equipment has been tested and found to comply with 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 a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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.

Important information:

Changes or modifications to the equipment not expressly approved by Music Tribe can void the user’s authority to use the equipment.


REACH SVHC and Directive 1907/2006/EC.

Full text of EU DoC is available at https://community.musictribe.com/

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We Hear You

Documents / Resources