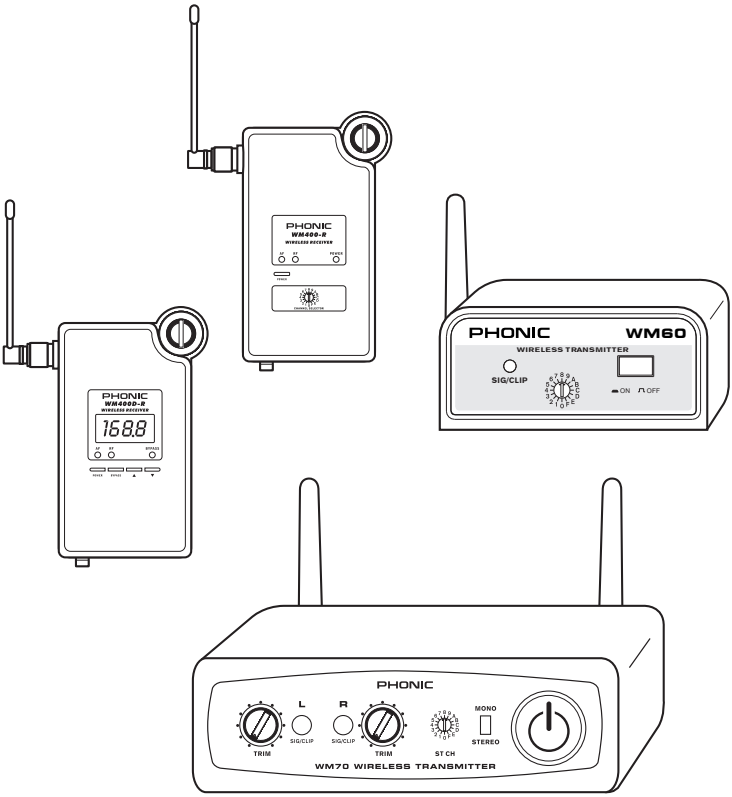
PHONIC

WM-SYS3/WM-SYS3D/WM-SYS4/WM-SYS4D

Wireless Kit For Active Speakers



ENGLISH

User's Manual

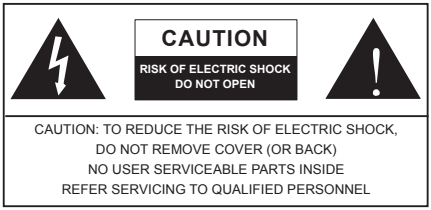
IMPORTANT SAFETY INSTRUCTIONS

The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus. The MAINS plug is used as the disconnect device, the disconnect device shall remain readily operable.

Warning: the user shall not place this apparatus in the confined area during the operation so that the mains switch can be easily accessible.

1. Read these instructions before operating this apparatus.
2. Keep these instructions for future reference.
3. Heed all warnings to ensure safe operation.
4. Follow all instructions provided in this document.
5. Do not use this apparatus near water or in locations where condensation may occur.
6. Clean only with dry cloth. Do not use aerosol or liquid cleaners. Unplug this apparatus before cleaning.
7. Do not block any of the 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 replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plug, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with a 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 from tip-over.

13. Unplug this apparatus during lighting 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.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

CAUTION: Use of controls or adjustments or performance of procedures other than those specified may result in hazardous radiation exposure.

WM-SYS3/WM-SYS3D/WM-SYS4/WM-SYS4D

Wireless Kit For Active Speakers

USER'S MANUAL

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V1.1 AUG 16, 2006

INTRODUCTION

Congratulations on your purchase of the WM series of wireless kit for use with active speakers. With either the stereo or mono WM kits, you are now fast on your way to becoming completely wireless in your audio set up. The WM modules are not only fantastic in style and convenience, however; they are incredibly easy to use, as this manual will no doubt prove.

Please have a thorough read of this user's manual before operating the WM modules. Inside this guide you will find information on the ease of your wireless set up, as well as some great trouble-shooting tips and a complete run-down on your modules' features. After reading, place the manual in an easy to remember place so that you can come back to it in future if ever necessary.

SYSTEM COMPONENTS

WM-SYS3(D) includes :
1x WM60 single channel transmitter
1x WM400(D)-L receiver
2x power supplies for WM60 and WM400(D)-L
M6, M8, M10 screws
Velcro strip

WM-SYS4(D) includes :
1x WM70 dual channel transmitter
1x WM400(D)-L left channel receiver
1x WM400(D)-R right channel receiver
3x power supplies for WM70, WM400(D)-L and WM400(D)-R
M6, M8, M10 screws
Velcro strip

FEATURES

- Wireless system for saving the audio cables between your mixer and active speakers
- Stand-alone UHF wireless receiver, working with any active speakers
- 12VDC external power supply (country dependent)
- 16 user-selectable frequencies
- RF carrier frequency range :
  614.175~804.800 MHz (FCC)
  614.175-864.800 MHz (CE)
- Operating range: 210 ft. (70m, environment dependent)
- Indicators for power on, AF and RF
- Antenna: external, threaded connector
- Audio output connectors: XLR out
- Internal squelch and mute circuit mode can resist extraneous noise
- M6, M8, M10 screws and Velcro strip included for attaching receiver unit to any active speakers

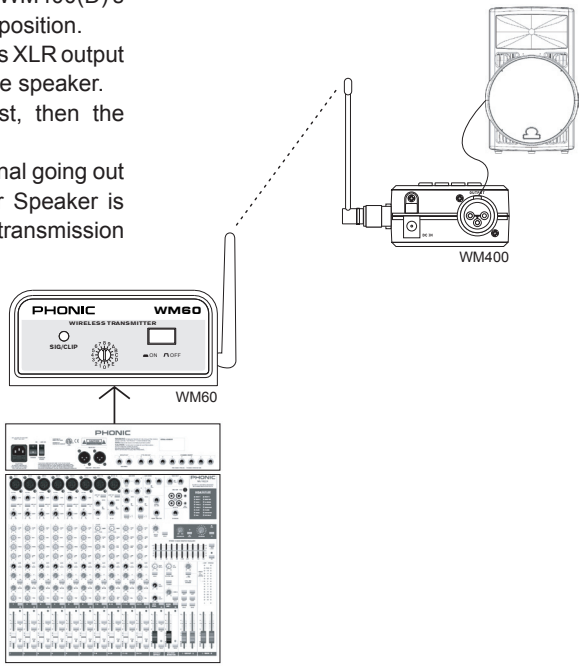
"D" Systems plus:
- 300 ms digital delay processor for compensation of different distance speakers
- 0.1 millisecond to 300.0 millisecond delay range, delay adjustment may be made with 0.1 millisecond precision
- 30 preset EQ curves and variable high cut and low cut filters
- 4-digit display to indicate frequency channel and delay, plus AF, RF and delay bypass indicators

QUICK SETUP

Single Channel Setup

With any one active speaker, users are able to wirelessly send a monaural signal through the **WM60** transmitter and **WM400(D)** receiver.

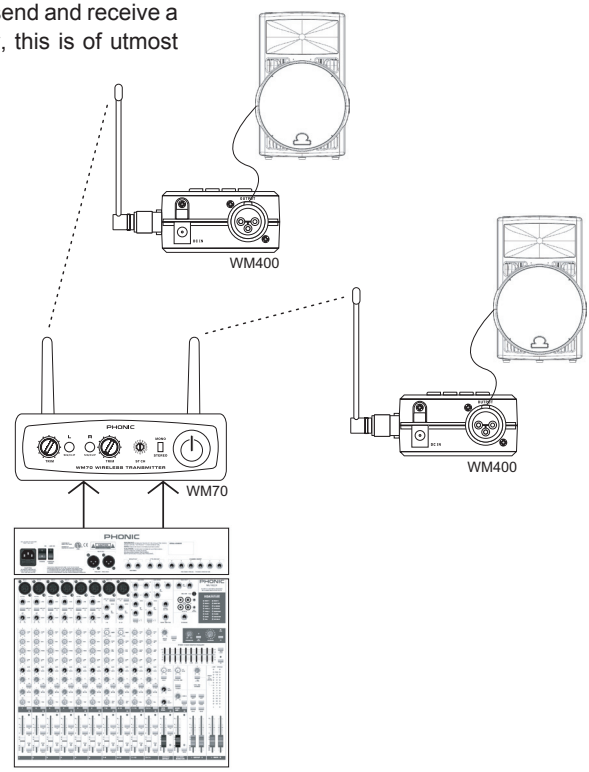
1. Plug the mixer's main output (with a line-level signal) to either the XLR or 1/4" input of the WM60 transmitter.
2. Connect the provided DC power supply to the WM60's and WM400(D)'s power input and an appropriate AC power source.
3. Adjust the channel on both the WM60 and WM400(D) so they are identical. If you wish to send and receive a signal successfully, this is of utmost importance!
4. Adjust the WM60's and WM400(D)'s antennas into a vertical position.
5. Connect the WM400(D)'s XLR output to the input of your active speaker.
6. Turn the WM60 on first, then the WM400(D).
7. Provided you have a signal going out of your mixer, and your Speaker is turned on, the wireless transmission should be working.



Dual Channel Setup

With any active speakers, users are able to wirelessly send stereo signals through the **WM70** transmitter and **WM400(D)-L / WM400(D)-R** receivers.

1. Plug the mixer's main stereo output (with a line-level signal) to the left and right inputs (both XLR and 1/4" inputs can be connected to the combo-jacks) of the WM70 transmitter.
2. Connect the provided DC power supply to the WM70's and WM400(D)'s power inputs and an appropriate AC power source.
3. Adjust the channel on the WM70 and both WM400(D)'s so they are identical. If you wish to send and receive a signal successfully, this is of utmost importance!
4. Make sure the WM70 is switched to "stereo" mode.Turn the left and right level controls to around the 3 o'clock position.
5. Connect appropriate audio cables to the WM400(D)s' XLR outputs and your speakers' inputs.
6. Turn the WM70 on first, then the WM400(D)s.
7. Provided you have a signal going out of your mixer, and your Speaker is turned on, the wireless transmission should be working.



TROUBLESHOOTING

No signal?

- Ensure both transmitter and receiver are set to the same channel.
- Check the power lights on both receiver and transmitter. If one of them is off, check the device's power supply is connected correctly.
- Make sure the "wireless" volume control on the Performer speakers is turned up.

Weak signal?

- Try maintaining a better line-of-site connection between the transmitter and receiver.
- Change both transmitter and receiver to a new frequency.

Poor quality signal?

- It is important to remember that no other devices should be sending signals on the same frequency channel that you are using.
- If another device is found on the same frequency channel, find another suitable channel.

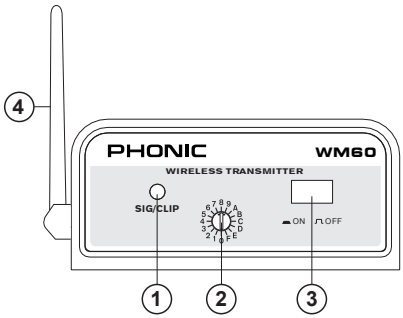
WM60 TRANSMITTER

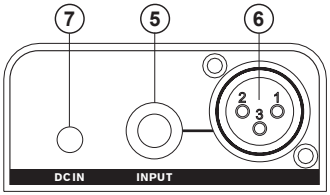
Front Panel

1. **Sig/Clip Indicator–** the LED indicator will light up green when a signal is being received by the WM60 transmitter. It will turn red when the signal level becomes excessive, just 4dB before clipping.
2. **Channel Selector–** adjusting this dial to one of the preset channels allows the WM60 to know which frequency to send the wireless information at. The wireless receiver should be set to the identical channel if transmission is to occur successfully.
3. **On/Off Button–** this button turns the WM60 on and off.
4. **Antenna–** this is the WM60's antenna. Adjust it so it sits in a vertical position when the device is in use (change the position if the wireless signal quality is poor). Push the antenna in to release it before adjusting its position.

Rear Panel

5. **1/4" Input–** this jack accepts balanced and unbalanced 1/4" inputs from line-level sources.
6. **XLR Input–** this jack accepts balanced XLR inputs from line-level sources. Both the 1/4" jack and the XLR jack run in parallel.
7. **DC In–** plug DC end of the supplied DC power adaptor into this jack, and the other end into a suitable AC power source to allow the WM60 to be powered. Please ensure you use the DC power supply (12V, 750mA) provided with this unit, as using another power supply could cause damage.





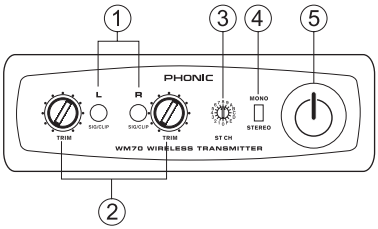
WM70 TRANSMITTER

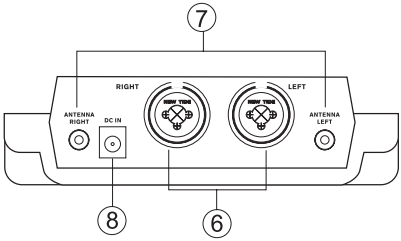
Front Panel

1. **Left and Right Sig/Clip Indicators –** the LED indicator will light up green when a signal is being received by the WM70 transmitter. It will change to red when the signal level becomes excessive, just 4dB before clipping.
2. **Trim Control –** these controls adjust the level of the signal received via the Combo inputs on the rear that will be sent wirelessly.
3. **Channel Selector –** adjusting this dial to one of the preset channels allows the WM70 to know which frequency to send the wireless information at. Each preset channel will transmit both the left and right signals, so that the WM400(D)-L and WM400(D)-R wireless receivers (if set to the identical channel) will receive the signal successfully.
4. **Stereo/Mono Selector –** This will allow users to change the wireless signal sent from the WM70 to be alternated between a mono and stereo signal.
5. **On/Off Button –** this button turns the WM70 on and off. An LED will illuminate under this button when it is on.

Rear Panel

6. **Left and Right Combo Input –** this jack accepts both balanced and unbalanced 1/4" and XLR inputs from line-level sources (such as the main output of a mixer).
7. **Left and Right Antennas –** this for the insertion of the WM70's left and right antennas. Insert the antennas and adjust them to sit in a vertical position when the device is in use. Screw the antenna in to lock it into place.
8. **DC In –** plug DC end of the supplied DC power adaptor into this jack, and the other end into a suitable AC power source to allow the WM70 to be powered. Please ensure you use the DC power supply (12V, 750mA) provided with this unit, as using another power supply could cause damage.





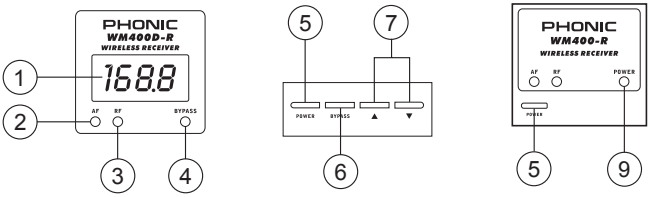
WM400(D) RECEIVERS

These wireless receivers can be used in conjunction with any active speaker. The receiver can be attached to the speaker by screwing it into the stand's screw socket.

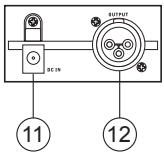
1. **4 Digit Display** (WM400D-L and WM400D-R only) – This display will allow users to see the properties that are currently in use by the WM400D, whether you are adjusting the receiver channel (indicated by CH), the EQ settings (indicated by EQ), the delay time (indicated by only the delay time in milliseconds) or the high and low pass filters (indicated by a H or L, respectively). This display will light up when the device is turned on.
2. **AF Indicators** – When this LED is illuminated, it indicates that there is an audio signal being received by the WM400(D) receiver.
3. **RF Indicators** – When the RF indicator illuminates, it shows that the transmitter's signal is being received successfully. If for some reason this LED does not turn on, check your DC power input and pre-set channel configuration and try again.
4. **Bypass** (WM400D-L and WM400D-R only)– this LED will light up when the digital processing feature of the WM400D receiver is off.
5. **Power Button** – hold this button down for 2 seconds to power up the unit.
6. **Bypass Button** (WM400D-L and WM400D-R only) – push this button to turn the digital processing feature on and off.
7. **Up and Down Buttons** (WM400D-L and WM400D-R only) – these buttons are used to adjust the properties of various features built-into the WM400D's. Pushing up or down will initially simply allow users to adjust the channel that the transmitter is using. If you push both of these buttons at the same time, it will jump to the next setting that can be edited. You can then adjust the properties by pushing the up and down buttons. These settings will come in the following order:

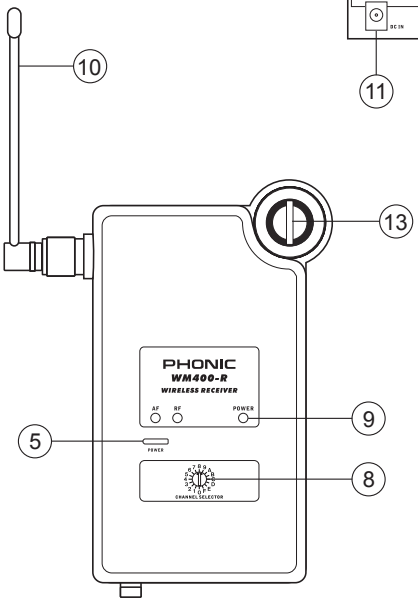
   Channel Settings :
   CH 0 – CH 9, CH A – CH F
   Delay Settings :
   0.0 – 300.0 milliseconds
   EQ Mode :
   P1 – P30 (see the EQ table for a full rundown on EQ presets)
   Low Cut Filter :
   L 20 (Hz) – L 12 (kHz)
   High Cut Filter :
   H 20 (kHz) – H 60 (Hz)

(High and low cut filters are adjusted in 1 Hz increments; 10Hz increments above 1kHz)



8. **Channel Selector** (WM400-L and WM400-R only) – adjusting this dial to one of the preset channels allows the WM400 to know which pre-set frequency to look for the wireless information. The wireless transmitter should be set to the identical channel if transmission is to occur successfully.
9. **Power Indicator** (WM400-L and WM400-R only) – this LED indicator illuminates when the WM400 receiver is powered.
10. **Antenna** – this is the WM400(D)'s antenna. Adjust it so it sits in a vertical position when the device is in use (change the position if the wireless signal quality is poor). Push the antenna in to release it before adjusting its position.
11. **DC In and clip** – plug DC end of the supplied DC power adaptor (12V DC, 200mA) into this jack, and the other end into a suitable AC power source to allow the WM400(D) to be powered. The accompanying clip ensures the DC head of the power supply is kept securely in place.
12. **XLR Output** – this jack accepts XLR connectors to feed the signal from the Wireless Receiver to the Speaker.
13. **Fixing** – Use this hole to secure the WM400(D) receiver into the mounting socket of your speaker by using accompanying M6, M8 or M10 screws.





THE WM400D'S DIGITAL FEATURES

Channel Mode

The channel number of the WM400D will be displayed in the 4 digit display, unless adjustments are being made to other feature's properties. The channel number set should match that of the WM60 or WM70 transmitter to allow the wireless system to work successfully.

Delay Mode

Changing the delay allows audio engineers to compensate for the distance between speakers on stage and audience members at the rear of the venue. Using the delay effect on a speaker at the rear will ensure the audio from the stage reaches audience members at the rear at approximately the same time as the audio from the rear-speaker. The delay time is adjusted in 0.1 millisecond increments, between 0 and 300 milliseconds (holding the up or down button down speeds up the adjustment time)

EQ Mode

The different EQ modes allow users to adjust various frequencies of audio to enhance certain instruments, remove sibilance, feedback and other undesirable noises, and improve the overall fidelity of sounds. There are 30 presets to choose from (check EQ Preset page for more information), the titles of which describe what the effect does to your audio. The default setting, P0, is completely flat.

Low Cut Filter

A low cut filter allows users to cut low frequency sounds, ensuring stage rumble and other unwanted low-frequency sounds are removed from your audio. This can also help adjust the frequency to be more suitable for use with tweeters. The low cut filter's cut off frequency is adjusted in 1 Hz increments (10 Hz increments over 1kHz) between 10 Hz and 12 kHz. The default setting is 20 Hz.

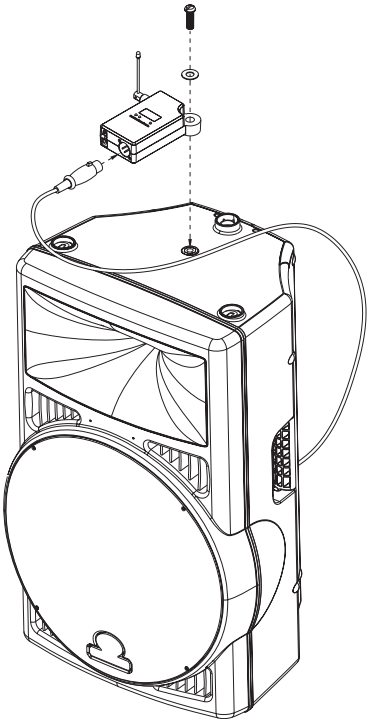
High Cut Filter

The high cut filter allows users to remove unwanted high-frequency sounds, which can help to remove high frequency hiss and feedback, as well as make the audio signal more suitable for use with subwoofer speakers. The high cut filter's cut off frequency is adjusted in 1 Hz increments (10 Hz increments over 1kHz) between 20 kHz and 60 Hz. The default setting is 20 kHz.

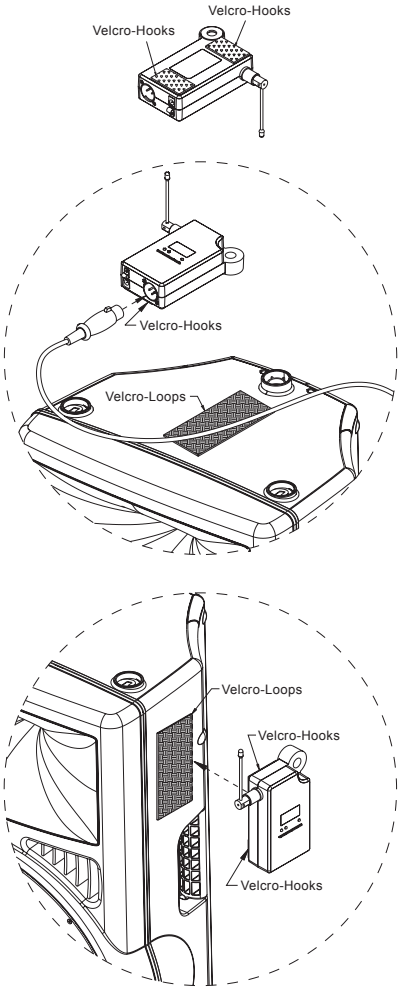
CONNECTING THE WM400 TO A SPEAKER

Users can connect the WM400(D) Receiver modules to an active speaker using a mounting point or the included velcro strips, as indicated.

Mounting Point



Velcro Strip



SPECIFICATIONS

WM60

Type : Single Channel Transmitter
RF Frequency : 614.175~804.800 MHz (FCC)
614.175-864.800 MHz (CE)
Oscillation Type : PLL
Preset Channels : 16 Channels
Frequency Response : 50 Hz ~ 18 kHz ±3dB
Bandwidth : 24 MHz
Stability : ± 0.005%
Frequency Deviation : ± 40 kHz
LED Indicators : Power On/Off, Sig/Clip
Power : External Adaptor, 12 VDC
Output Power : <50 mW
Dimensions : 98x35x126 mm
(2.83" x 1.38" x 4.96")
Net Weight : 350 g (0.77 lbs)

WM70

Type : Dual Channel Transmitter
RF Frequency : 614.175~804.800 MHz (FCC)
614.175-864.800 MHz (CE)
Oscillation Type : PLL
Preset Channels : 16 Channels (stereo)
Frequency Response : 50 Hz ~ 18 kHz ±3dB
Bandwidth : 24 MHz
Stability : ± 0.005%
Frequency Deviation : ± 40 kHz
LED Indicators : Power On/Off, Sig/Clip
Power : External Adaptor, 12 VDC
Output Power : <50 mW
Dimensions : 140 x 43.5 x 179 mm
(5.5" x 1.7" x 7")
Net Weight : 325 g (0.72 lbs)

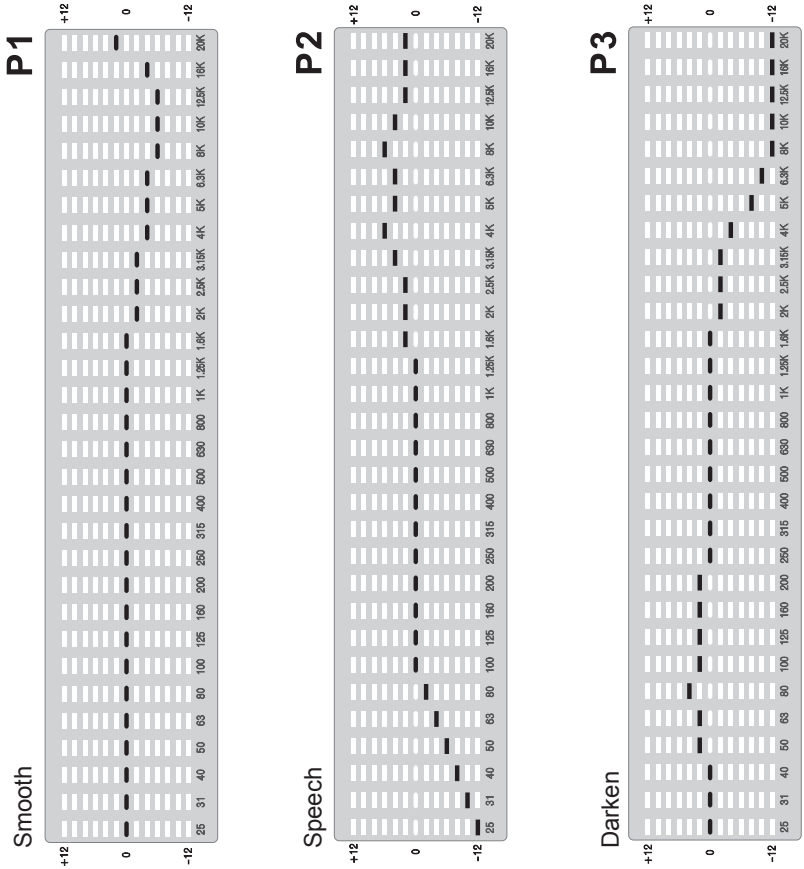
WM400

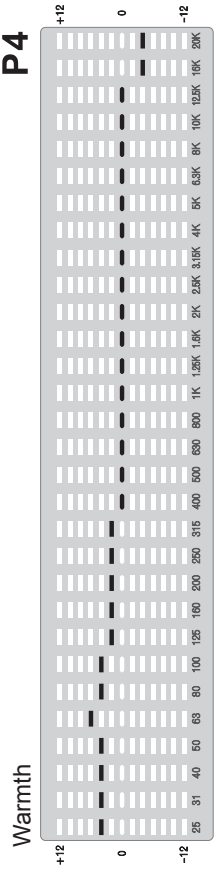
RF Sensitivity : -100 dBm
Image Rejection : 75dB
T.H.D. : <0.5% @ 1KHz
LED indicator : Power On, RF, AF
Squelch : Pilot Tone & Noise Mute
Audio Output Connector : XLR
Output Impedance : 200Ω
Power Requirement : 12VDC, 200mA external power supply (country dependent)
Dimensions : 88.5 x 133 x 36.7 mm
(3.5" x 5.2" x 1.4")
Net Weight : 145 g (0.32 lbs)

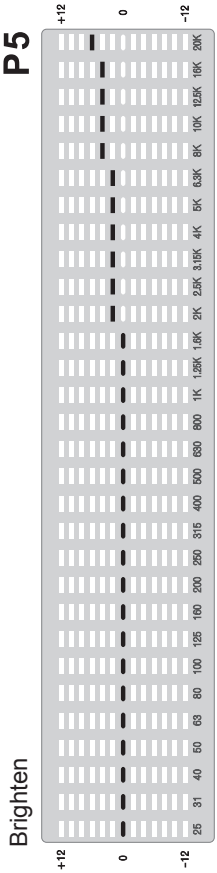
WM400D plus:

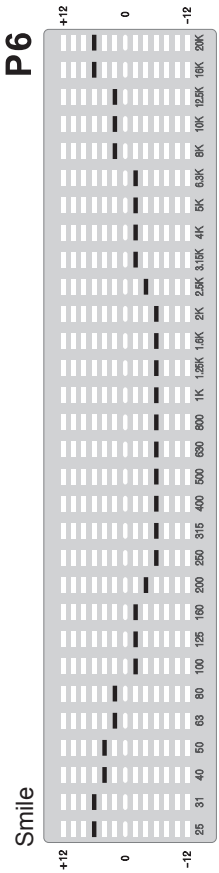
Digital Delay : 0.1 millisecond to 300.0 millisecond delay range, delay adjustment may be made with 0.1 millisecond precision
Extra features : 30 preset EQ, Low-cut and High-cut filter
Display : 4-digit display for delay time, frequency channel, EQ mode and Hi-cut/Lo-cut modes
Controls : power on/off, bypass, up and down

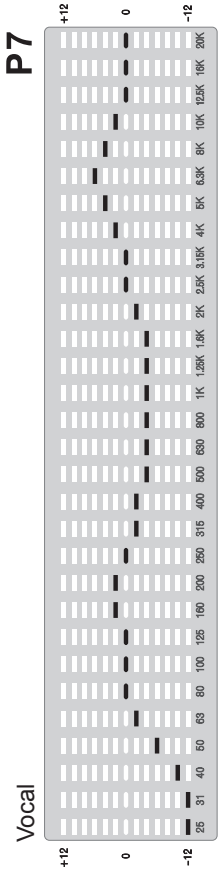
EQ PRESETS


P1
Smooth
P2
Speech
P3
Darken
+12
0
-12
25 31 40 50 63 80 100 125 160 200 250 315 400 500 630 800 1K 1.25K 1.6K 2K 2.5K 3.15K 4K 5K 6.3K 8K 10K 12.5K 16K 20K


P4
Warmth
+12
0
-12
25 31 40 50 63 80 100 125 160 200 250 315 400 500 630 800 1K 1.25K 1.6K 2K 2.5K 3.15K 4K 5K 6.3K 8K 10K 12.5K 16K 20K


P5
Brighten
+12
0
-12
25 31 40 50 63 80 100 125 160 200 250 315 400 500 630 800 1K 1.25K 1.6K 2K 2.5K 3.15K 4K 5K 6.3K 8K 10K 12.5K 16K 20K


P6
Smile
+12
0
-12
25 31 40 50 63 80 100 125 160 200 250 315 400 500 630 800 1K 1.25K 1.6K 2K 2.5K 3.15K 4K 5K 6.3K 8K 10K 12.5K 16K 20K


P7
Vocal
+12
0
-12
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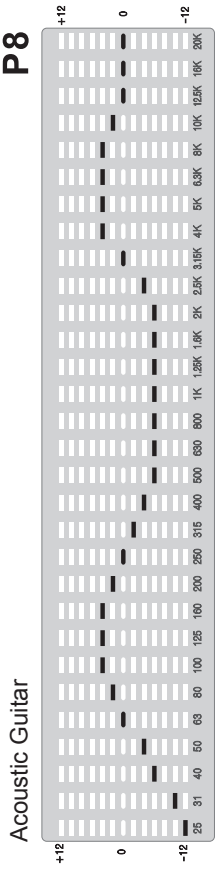
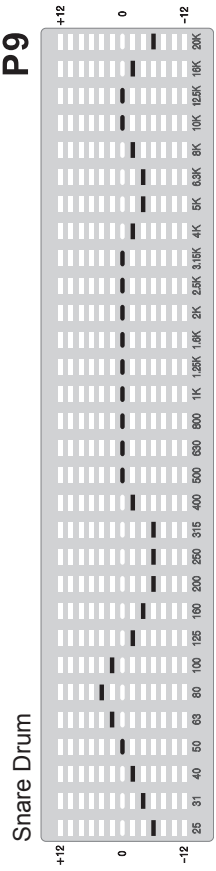
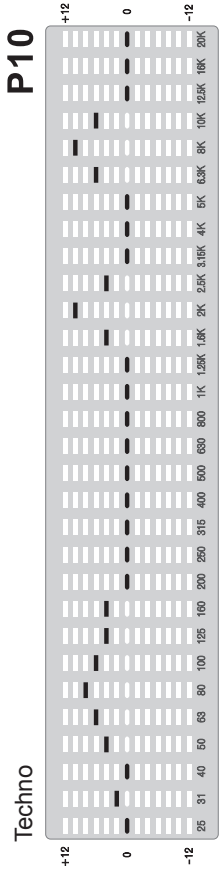

P8
Acoustic Guitar
+12
0
-12
25 31 40 50 63 80 100 125 160 200 250 315 400 500 630 800 1K 1.25K 1.6K 2K 2.5K 3.15K 4K 5K 6.3K 8K 10K 12.5K 16K 20K


P9
Snare Drum
+12
0
-12
25 31 40 50 63 80 100 125 160 200 250 315 400 500 630 800 1K 1.25K 1.6K 2K 2.5K 3.15K 4K 5K 6.3K 8K 10K 12.5K 16K 20K

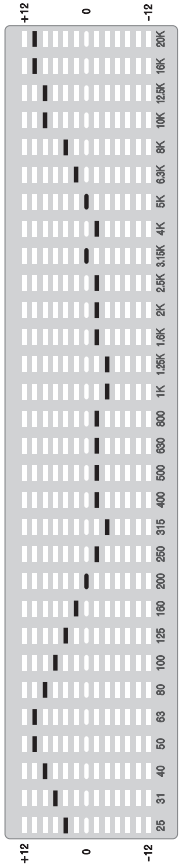
P10

Techno



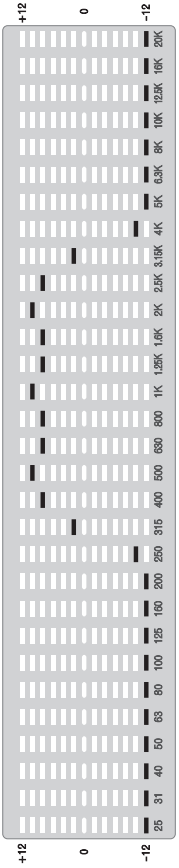
P11

Loud



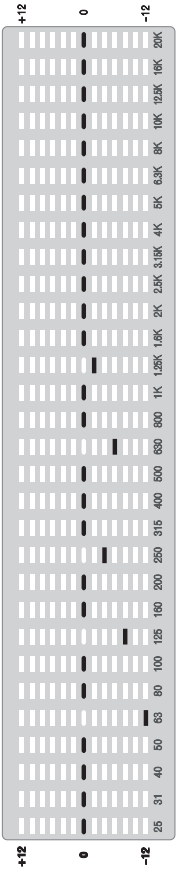
P12

Telephone



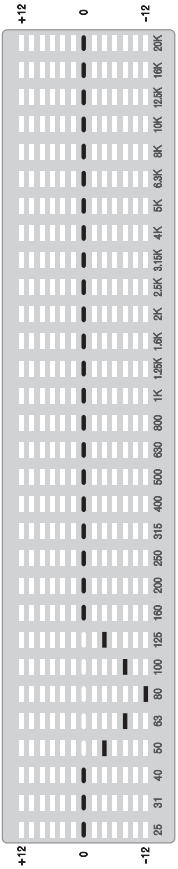
P13

Hum Reduction



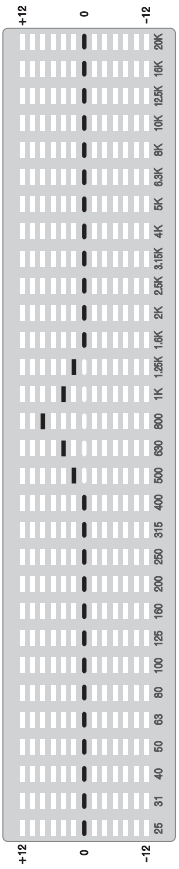
P14

Narrow Cut (80 Hz)



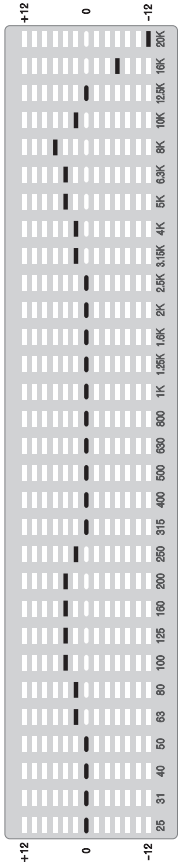
P15

Narrow Boost (800 Hz)



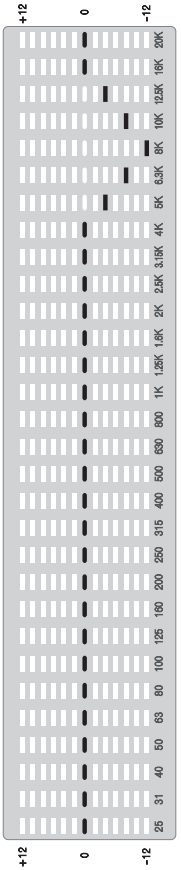
P16

Vinyl Warmth



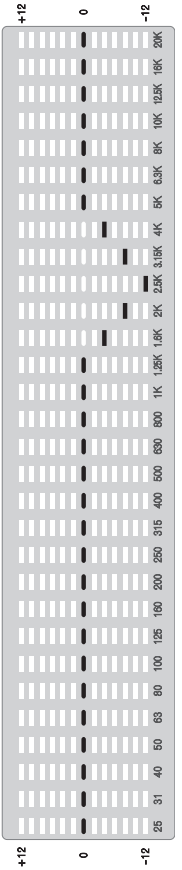
P17

Narrow Cut (8 kHz)



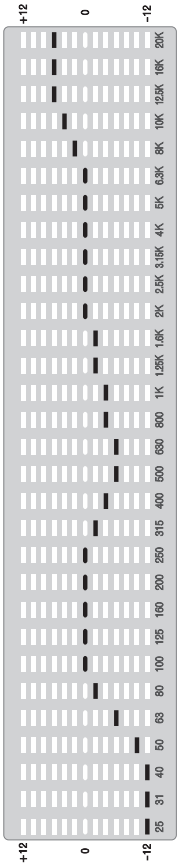
P18

Narrow Cut (2.5 kHz)



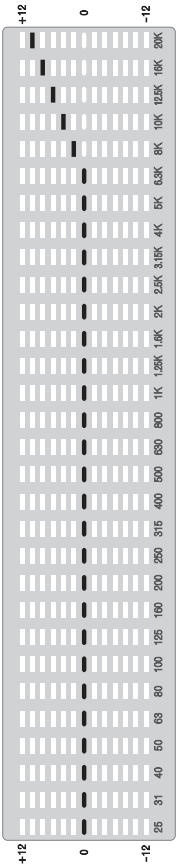
P19

Acoustic Guitar Air



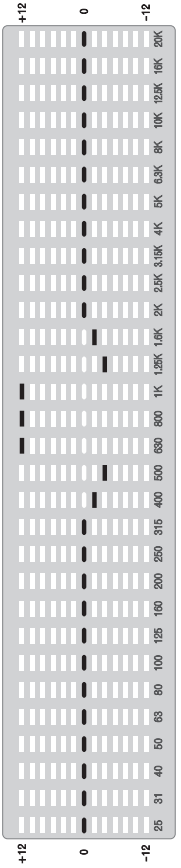
P20

Air Boost



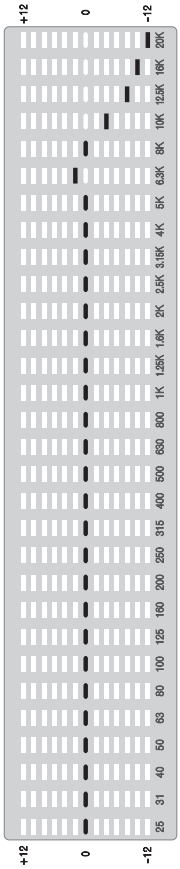
P21

Mini-TV



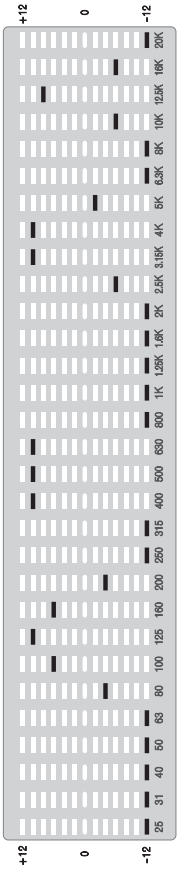
P22

Tape Hiss Reduction



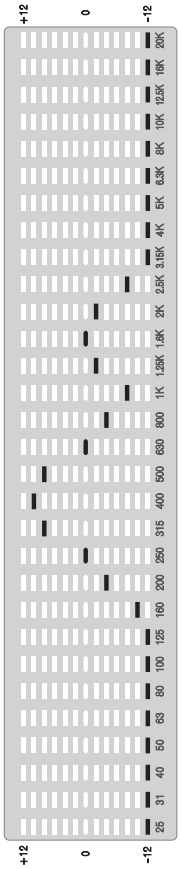
P23

Bathtub

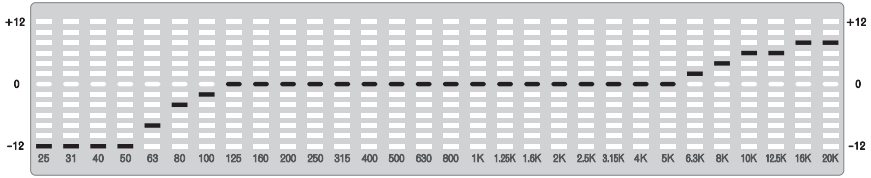


P24

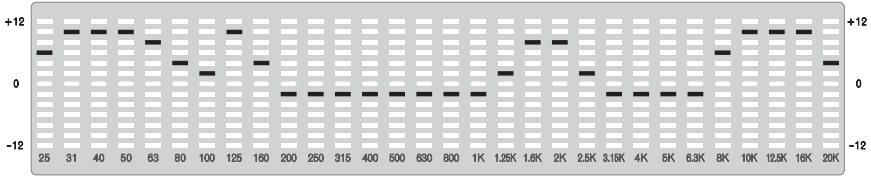
Cardboard Tube



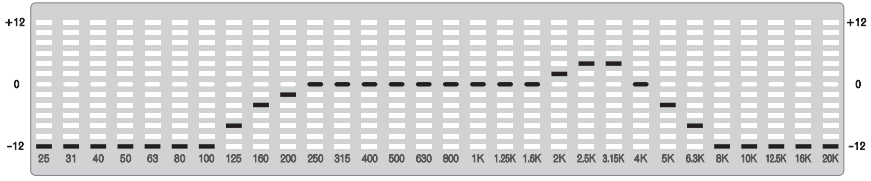
Sizezie Cymbals **P25**



Rap Drums Hype **P26**



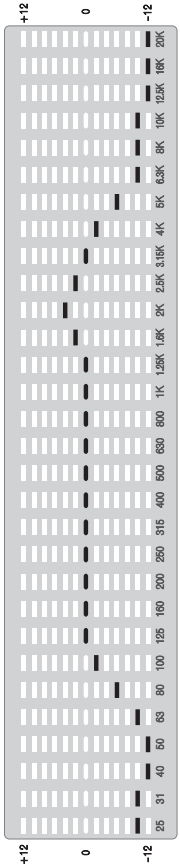
Electric Guitar Bandlimit **P27**



PHONIC

P28

Nasal



P29

Next-Door Neighbor

P30

Distant

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Phonic America Corporation
5411 Johns Road, #605
Tampa, FL 33634
(813) 890-8872
support@phonic.com
http://www.phonic.com

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