

behringer  
behringer V  
3.0 Complete  
System 15  
Modular  
Synthesizer



# behringer V 3.0 Complete System 15 Modular Synthesizer User Guide

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behringer V 3.0 Complete System 15 Modular Synthesizer



### Product Specifications:

- Product Name: SYSTEM 15 Modular Synthesizer
- Model: Complete System 15
- Includes: 16 Modules, MIDI-to-CV Converter, EURORACK GO case
- Version: 3.0

### Product Usage Instructions

#### Safety Instructions:

It is important to follow these safety instructions to ensure safe operation of the SYSTEM 15 Modular Synthesizer:

- Be aware of dangerous voltage inside the enclosure that may pose a risk of shock.
- Do not remove the top cover or rear section as there are no user-serviceable parts inside.
- Avoid exposing the appliance to rain, moisture, or dripping liquids.
- Do not defeat the safety purpose of the plug and use caution during storms or extended periods of non-use.
- Only use recommended attachments and accessories.

#### Installation:

Before installing or operating the device, refer to the information on the exterior of the bottom enclosure for electrical and safety details.

#### Maintenance:

For any servicing needs, only qualified personnel should perform repairs or maintenance.

#### Power Cord Protection:

Protect the power cord from damage, especially at plugs and appliance sockets.

#### Operating Environment:

Avoid installing the synthesizer in confined spaces like bookcases and keep naked flame sources away from the apparatus.

### FAQ (Frequently Asked Questions):

#### • Q: Can I use any accessories with the SYSTEM 15 Modular Synthesizer?

A: It is recommended to use only attachments and accessories specified by the manufacturer to ensure optimal performance and safety.

#### • Q: What should I do if the provided plug does not fit my outlet?

A: If the plug does not fit, consult an electrician for replacement of the outlet to ensure proper electrical

connections and safety.

- **Q: How should I handle maintenance or repairs?**

A: Only qualified service personnel should perform any servicing beyond what is contained in the operation instructions to avoid risks of electric shock or damage.

## Important Safety Instructions

### CAUTION

- RISK OF ELECTRIC SHOCK!
- DO NOT OPEN



Terminals marked with this symbol carry electrical current of sufficient magnitude to constitute risk of electric shock.

Use only high-quality professional speaker cables with ¼" TS or twist-locking plugs pre-installed. All other installation or modification 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.

### Warning

Please refer to the information on the exterior of bottom enclosure for electrical and safety information before installing or operating the device.

1. Please read and follow all instructions and warnings.
2. Keep the apparatus away from water (except for outdoor products).
3. Clean only with dry cloth.
4. Do not block ventilation openings. Do not install in a confined space. Install only according to manufacturer's instructions.
5. Protect the power cord from damage, particularly at plugs and appliance socket.
6. Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat.
7. 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 (only for USA and Canada). A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
8. Protect the power cord from damage, particularly at plugs and appliance socket.
9. Use only attachments and accessories recommended by the manufacturer.
10. Use only specified carts, stands, tripods, brackets, or tables. Use caution to prevent tip-over when moving the



cart/apparatus combination.

11. Unplug during storms, or if not in use for a long period.
12. Only use qualified personnel for servicing, especially after damage.
13. The apparatus with protective earthing terminal shall be connected to a MAINS socket outlet with a protective earthing connection.
14. Where the MAINS plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.
15. Avoid installing in confined spaces like bookcases.
16. Do not place naked flame sources, such as lighted candles, on the apparatus.
17. Operating temperature range 5° to 45°C (41° to 113°F).

## LEGAL DISCLAIMER

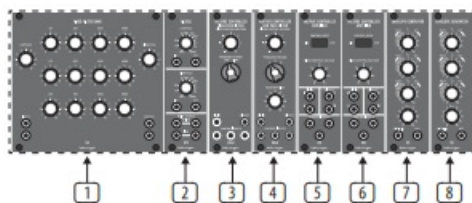
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## LIMITED WARRANTY

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/support](https://community.musictribe.com/support).

## Modules

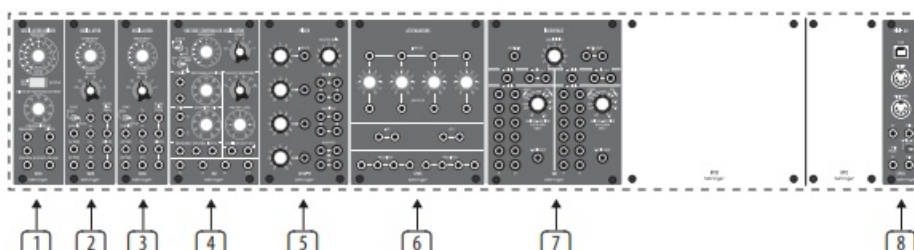
Your System 15 has two rows of modules



## Top Row

- 914 Fixed Filter Bank (FFB).
- 923 Filters and Noise Sources.
- 904B High Pass Filter (HPF).
- 904A Low Pass Filter (LPF).
- & (6) 902 Voltage Controlled Amplifiers (VCA).
- & (8) 911 Envelope Generators (EG).

## Bottom Row



- 921A Oscillator Driver.
- & (3) 921B Voltage Controlled Oscillators (VCO).
- 921 Voltage Controlled Oscillator (VCO/LFO).
- CP3A – M
- CP35 Attenuator / Voltage Source / Multiple.
- 961 Interface.
- CM1A – MIDI interface.

Further information on all modules can be found on their individual Quick Start Guides at [www.behringer.com/downloads.html](http://www.behringer.com/downloads.html)

## System 15 – Getting Started

### CONNECTION

To connect the System 15 to your system, please consult the connection guides in specific patches.

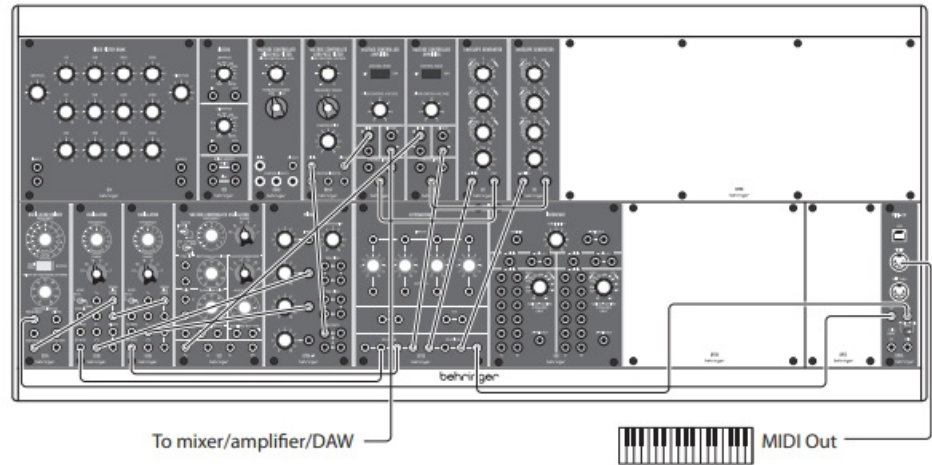
### HARDWARE SETUP

Make all the connections in your system. Keep the System 15 power turned off when making any connections.

### Ensure your sound system is turned down.

Turn on the System 15 before turning on any power amplifiers and turn it off last. This will help prevent any turn on or turn off “pops or thumps” in your speakers. **WARM UP TIME** We recommend leaving 30 minutes or more time for the System 15 to warm up before recording or live performance. (Longer if it has been brought in from the cold.) This will allow the precision circuits time to reach their normal operating temperature and tuned performance.

System 15 Patches Expressive Lead 1



Voltage Control (pitch)

Source	Destination
External MIDI Keyboard – MIDI Out	CM1A MIDI Interface MIDI In
CM1A CV Output	921A Frequency Input
921A Frequency Output	921B Frequency Link (in series)

Audio

921B Waveform outs (three of four)	CP3A-M Inputs
CP3A-M Output	904A Signal Input
904A Signal Output	902 Signal Input
902 Signal Output	Your mixer/amplifier/DAW

Voltage Control (amplitude)

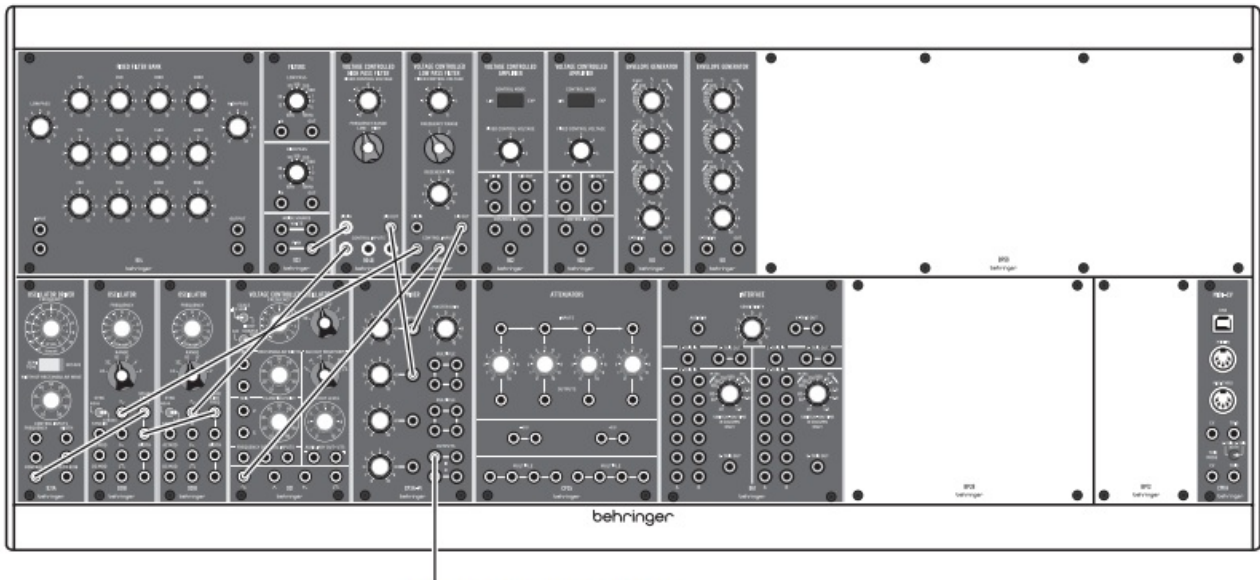
CM1A s-trigger Output	Multiple
Multiple Output (two of)	2 x 911 s-trigger Input
1st 911 Output	1st 902 Control Input

Voltage Control (modulation)

921 Aux Sine Output	2nd 902 Signal Input
2nd 902 Signal Output	921B DC Mod Inputs via Multiple
2nd 911 Output	2nd 902 Control Input

- This patch allows a delayed vibrato effect to fade in when a note is held.
- The external keyboard controls the pitch and triggering of notes via the CM1A MIDI Interface. As this can be switched between v-trigger and s-trigger then s-trigger should be selected and the 961 Interface need not be used.  
Pitch CV is fed to one of the 921As, which daisy chain to the 921B VCOs. The selected waveform from each oscillator is fed to the CP3A-M mixer; which then feeds the 904A LPF. S-triggers are fed to a multiple, and then to the 911s' s-trigger inputs
- The output of the 904A LPF is fed to one of the 902 VCAs, which feeds out to your mixer, amplifier or DAW. This VCA is controlled by the first 911 EG. The second 911 EG controls the second 902 VCA.
- The second 902 VCA signal input is fed from the 921 LFO. Its output is fed to one of the CP35 multiples, whose outputs feed the DC Modulation inputs of the 921B VCOs
- The second 911 should have a long attack time and full sustain.
- So long as the first 911 has a long sustain time, when a note is held a vibrato effect will fade in slowly. When notes are played legato there is little or no vibrato

## Space Rock



To mixer/amplifier/DAW

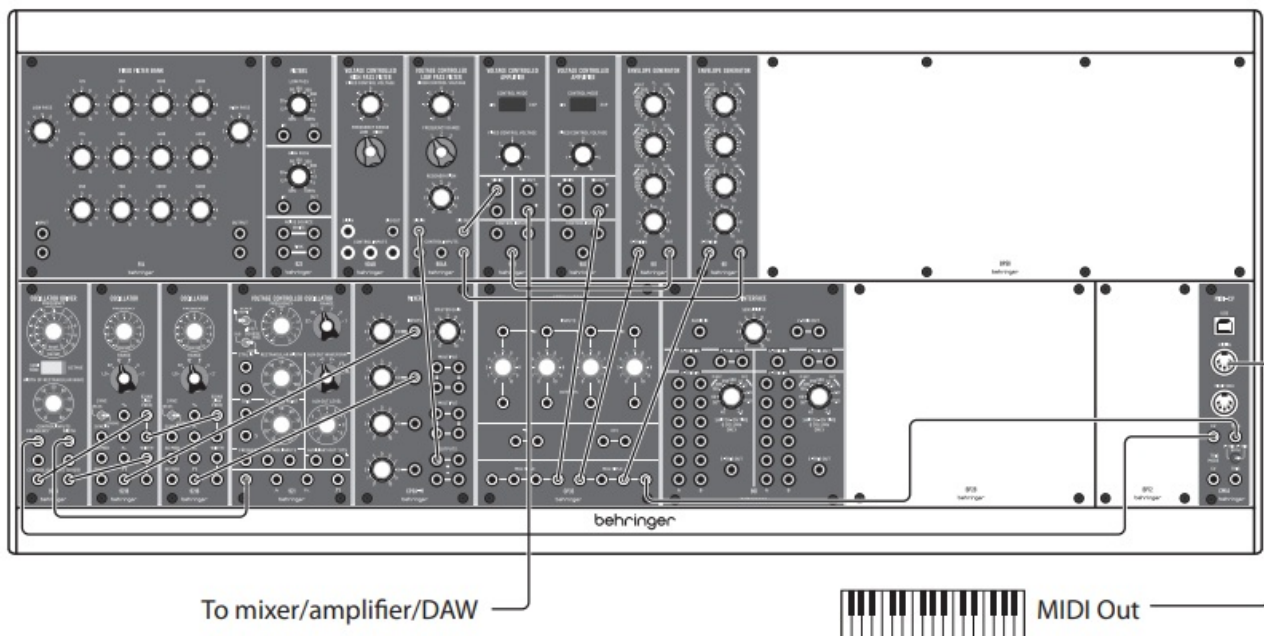
This patch creates two of the classic 'space rock' sounds, and allows them to be mixed together.

Source	Destination
921 Sine Wave Output	904A Control Input
921A Frequency Output	2 x 921B Frequency Link (in series)
1st 921B Sine Wave Output	904A Control Input
2nd 921B Sine Wave Output	904B Control Input
923 Pink Noise Output	904B Signal Input
904A Signal Output	CP3A-M Input 1
904B Signal Output	CP3A-M Input 2
CP3A-M Output	Your mixer, amplifier, DAW

- Control settings are very important for this patch.
- Regeneration on the 904A must be set to 9 or 10 to force the filter to self-oscillate. The 921A should have Octave selected and the frequency control set to -6.
- The 921Bs should be set to 'Lo' – these oscillators provide the sweep to the filters.
- The 921 should be set to 'Sub' – this is the main modulation for the self-oscillating filter, and manual alteration of the Frequency control helps to produce the classic sound.
- The pink noise feeding the 904B produces a swept wind effect, that can be altered with the Fixed Control Voltage.
- Altering the Fixed Control Voltage of the 904A also produces interesting effects.
- The CP3A-M balances the two signals, as an alternative feed the outputs of the two filters direct to two mixer or amplifier channels. Both sounds benefit from a lot of echo!

## Expressive Lead #2





This sound uses Pulse Width Modulation to a pair of oscillators, one of which should be slightly detuned to fatten the sound.

## Voltage Control (pitch)

Source	Destination
External MIDI Keyboard – MIDI Out	CM1A MIDI Interface MIDI In
921A Frequency Output	921B Oscillator Frequency Link (in series)
921A Width Output	921B Oscillator Width Link (in series)

### Audio

2 x 921B Square Wave Output	CP3A-M Inputs 1 & 2
CP3AM Output	904A Signal Input
904A Signal Output	902 Signal Input
902 Signal Output	Your Mixer/Amplifier/DAW

### Voltage Control (Amplitude)

CM1A s-trigger Output via Multiple	2 x 911 s-trigger Input
1st 911 Output	1st 902 Control Input

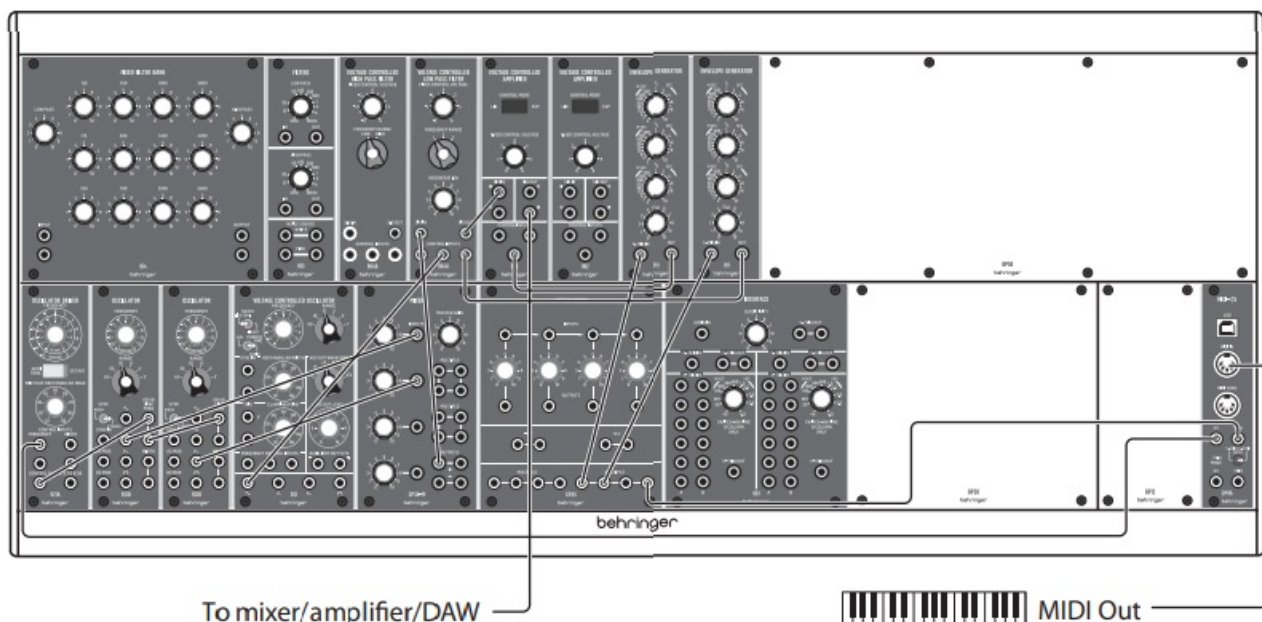
### Voltage Control (Modulation)

921 sine wave Output	921A Width Input
921A Width Link	2 x 921B Width Link (in series)
2nd 911	904A Control Input

The detuned 921B VCOs give a fat sound, whose timbre changes constantly at the speed of the 921 sine wave – the 921 should be in Sub mode, speed can be adjusted to suit. The sound comes from the 904A LPF, whose Fixed Control Voltage and Regeneration can be set to whatever suits your aim, plus modulation from the second 911 EG. EG settings can be adjusted to suit for the main part of the sound, although medium to high levels on T2 (decay), T3 (release) and E sus(tain) are recommended. The second EG should have a medium length T1 (attack), medium T2 (decay) and minimal T3 (release) and E sus(tain).

## Percussive Lead





A simple, two oscillator lead sound with a hard front end and timbral development which is also suitable for melodic sequencing Voltage Control (pitch)

Source	Destination
External MIDI Keyboard – MIDI Out	CM1A MIDI Interface MIDI In
CM1A CV Out via Multiple	921A Frequency Input
921A Frequency Output	921B Frequency Link (in series)

#### Audio

1st 921B Triangle wave Output	CP3A-M mixer Input 1
2nd 921B Sawtooth wave Output	CP3A-M mixer Input 2
CP3A-M Output	904A Signal Input
904A Signal Output	902 VCA
902 Signal Output	Your Mixer/Amplifier/DAW

#### Voltage Control (Amplitude)

CM1A s-trigger out via Multiple	2 x 911 s-trigger Input
1st 911 Output	902 Control Input

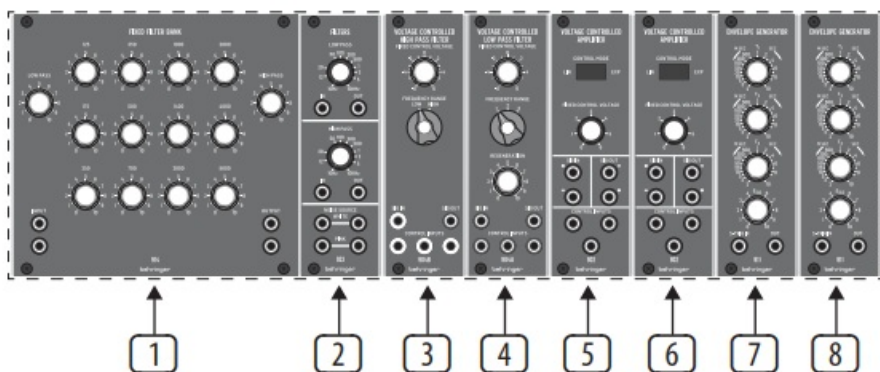
#### Voltage Control (Modulation)

921 Sine Wave Out	904A Control Input
2nd 911 Output	904A Control Input

This sound uses two 921B VCOs, with different waveforms, and sounds best if one is slightly detuned. They both feed the 904A LPF, and their relative levels can be adjusted with the CP3A-M mixer as required. The 904A's output is fed to a 902 VCA, whose amplitude is controlled by the 1st 911 EG. To obtain the percussive edge the 911's settings should be T1 (attack) 2ms, T2 (decay) 200ms, T3 (release) 200ms, E sus(tain) 4 seconds. The 904A is modulated by a slow sine wave from the 921 LFO and by the 2nd 911 EG, which should have settings around T1 (attack) 1 second, T2 (decay) 50ms, T3 (release) 4 seconds, E sus(tain) 9.

#### Modules

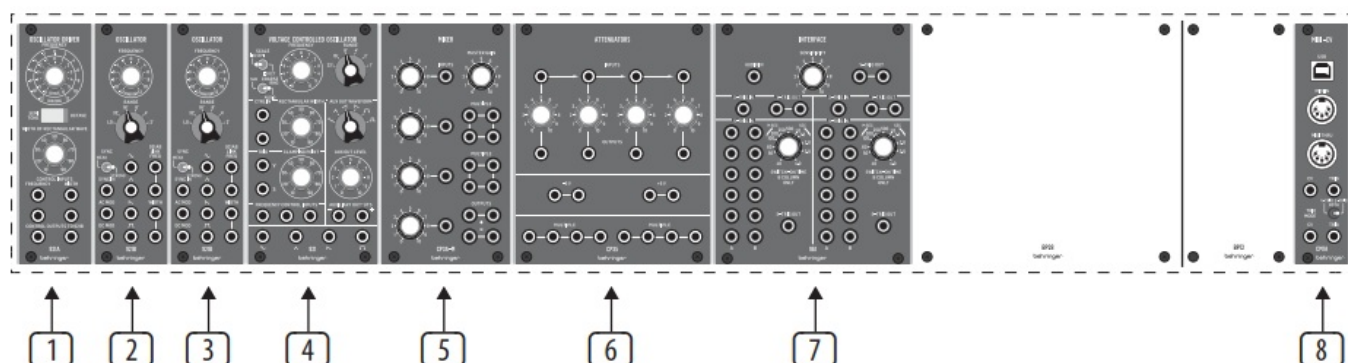
Your System 15 has two rows of modules



## Top Row

- (1) 914 Fixed Filter Bank (FFB).
- (2) 923 Filters and Noise Sources.
- (3) 904B High Pass Filter (HPF).
- (4) 904A Low Pass Filter (LPF).
- (5) & (6) 902 Voltage Controlled Amplifiers (VCA).
- (7) & (8) 911 Envelope Generators (EG).

## Bottom Row



- (1) 921A Oscillator Driver.
- (2) & (3) 921B Voltage Controlled Oscillators (VCO).
- (4) 921 Voltage Controlled Oscillator (VCO/LFO).
- (5) CP3A – M
- (6) CP35 Attenuator / Voltage Source / Multiple.
- (7) 961 Interface.
- (8) CM1A – MIDI interface.

Further information on all modules can be found on their individual Quick Start Guides at [www.behringer.com/downloads.html](http://www.behringer.com/downloads.html)

## Other important information

### Important information

1. Register online. Please register your new Music Tribe equipment right after you purchase it by visiting [musictribe.com](http://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](https://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](https://musictribe.com). Alternatively, please submit an online warranty claim at [musictribe.com](https://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.

## **FEDERAL COMMUNICATIONS COMMISSION COMPLIANCE INFORMATION**

**Behringer**

### **SYSTEM 15**

- 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](mailto:legal@musictribe.com)

### **SYSTEM 15**

## **FCC STATEMENT**

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 equipment 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.



Hereby, Music Tribe declares that this product is in compliance with Directive 2014/35/EU, Directive 2014/30/EU, Directive 2011/65/EU and Amendment 2015/863/EU, Directive 2012/19/EU, Regulation 519/2012 REACH SVHC and Directive 1907/2006/EC.

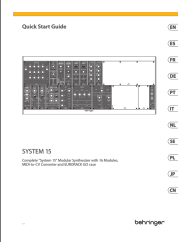
Full text of EU DoC is available at <https://community.musictribe.com/>

- EU Representative: Music Tribe Brands DK A/S
- Address: Gammel Strand 44, DK-1202 København K, Denmark
- UK Representative: Music Tribe Brands UK Ltd.
- Address: 8th Floor, 20 Farringdon Street London EC4A 4AB, United Kingdom








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.

## Documents / Resources

	<a href="#">behringer V 3.0 Complete System 15 Modular Synthesizer</a> [pdf] User Guide V 3.0 Complete System 15 Modular Synthesizer, V 3.0, Complete System 15 Modular Synthesizer, System 15 Modular Synthesizer, Modular Synthesizer, Synthesizer
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## References

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-  [Music Tribe](#)
- [User Manual](#)

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