

ZMACS 4X4

Revision V2A



Impedance Matching Amp & Cab Selector

OWNERS MANUAL



www.fryette.com

Welcome to the family!

Congratulations and thank you for choosing the FRYETTE ZMACS!

You are constantly searching for new sounds and new ways to improve your existing sound. We understand the constantly evolving nature of artistic creativity and the search for the perfect sound to complement your ever-widening musical vision. Providing the tools to help you create your own sonic signature is our primary mission.

Today's players own and use all kinds of gear and expect maximum functionality and interconnectivity between seemingly incompatible bits and pieces. While there are plenty of products on the market that help make that possible, many novel interface possibilities are often overlooked or discarded in the name of convenience, cost, weight and size. Connecting multiple amplifiers, attenuators and speaker cabinets is a textbook example of this scenario.

Of critical importance in connecting amplifiers and speakers is impedance matching and cable integrity. Until now, no other company has adequately addressed these often-misunderstood issues. At Fryette, we not only recognize the problem, but we also fully understand the dynamics of the solution.

Enter ZMACS. The world's first Impedance Matching Amp & Cab Selector. ZMACS allows you to select and program the correct operating impedances between your amps and cabs while helping mitigate the negative effects of long speaker cable lengths.

Are you ready to take your multi amp and cab functionality to the next level? Alright. Let's go!

IMPORTANT SAFETY INSTRUCTIONS



This symbol warns the user of dangerous voltage levels localized within the enclosure.



This symbol advises the user to read all accompanying literature for safe operation of the unit.

- Read, retain, and follow all instructions. Heed all warnings.
- Only connect the power supply cord to an earth grounded AC receptacle in accordance with the voltage and frequency ratings listed under the AC input on the rear panel of this product.
- **WARNING:** To prevent damage, fire or shock hazard, do not expose this unit to rain or moisture.
- Unplug the power supply cord before cleaning the unit exterior (use a damp cloth only). Wait until the unit is completely dry before reconnecting it to power.
- This product should be located away from heat sources such as radiators, heat registers, or other products that produce heat.
- This product may be equipped with a polarized plug (one blade wider than the other). This is a safety feature. If you are unable to insert the plug into the outlet, contact an electrician to replace your obsolete outlet. Do not defeat the safety purpose of this plug.
- Protect the power supply cord from being pinched or abraded.
- The power supply cord of this product should be unplugged from the outlet when left unused for a long period of time, or during electrical storms.
- This product should be serviced by qualified service personnel when: the power supply cord or the plug has been damaged; or objects have fallen, or liquid has been spilled onto the product; or the product has been exposed to rain; or the product does not appear to operate normally or exhibits a marked change in performance; or the product has been dropped, or the enclosure damaged.
- Do not drip or splash liquids, nor place liquid filled containers on the unit.
- **CAUTION:** No user serviceable parts inside, refer servicing to qualified personnel only.
- ***THIS PRODUCT IS NOT INTENDED FOR USE WITH SOLID STATE AMPLIFIERS OPERATING IN BTL (BRIDGE-TIED-LOAD) CONFIGURATION WITH AN UNGROUNDED OUTPUT. USING THE POWER STATION WITH SUCH PRODUCTS MAY CAUSE OSCILLATION AND POTENTIAL DAMAGE TO THE AMPLIFIER AND TO THE ZMACS RELAYS.***
- FRYETTE® amplifiers and loudspeaker systems are capable of producing very high sound pressure levels which may cause temporary or permanent hearing damage. Use care when setting and adjusting volume levels during use.
- Hazardous voltages may be present within the chassis even with the power switch off and power cord connected. Therefore, disconnect the power cord from the rear panel power inlet before servicing. The power inlet must remain readily operable.



WE HEAR YOU!

Seriously! We hear frequently from Fryette users who want to connect multiple amplifiers and cabs to the Power Station and be able to determine which amps get attenuated and when. Of course, you can do that now with currently available offerings, but what about the impedance?

What most people know about amplifier and cab impedance is that they should more or less match, and that if you don't do this right there may be minor or major consequences. Doing it right usually involves getting behind your amp and switching a switch or jack to obtain the right match for every operating circumstance. That's not a terribly convenient solution when you are ready to play or have a setup that is difficult to see or access from the back.

A new problem arises in the form of signal loss when you have your amps and cabs spaced significantly far apart. Typically, using an amp switcher means you could possibly increase effective speaker cable length by as much as 300%. As you can see, it quickly gets a bit complicated when all you really wanted was something organized and functional.

The ZMACS is the complete solution in one convenient, easy to use accessory. Simply select an amp, its impedance, your desired cab and its impedance and you're ready to go. To store this selection to a MIDI patch, simply connect a MIDI controller and hit STORE.

What if I don't want to bother with MIDI? Simple: Just set the desired functions manually on the front panel. Or you can connect the available FC-3D footswitch to the QUICK-SWITCH jack and select between MIDI patch 1 or 2.

Now you're all set! Almost...

Last question: How do I make sure my amp is safe from accidentally assigning it to an unconnected speaker output? Each amp loop and speaker out has open load protection so your prized amps will never operate into an open load.

OK, NOW you're all set!

FRONT PANEL



LEFT TO RIGHT

1. **INPUT** - Buffered signal input. Connect your instrument or pedalboard output here.
2. **AMPLIFIER 1 thru 4** - Selects your desired amplifier and routes your instrument signal to its input jack.
***NOTE!** Press any active **AMPLIFIER** button to activate **MUTE** mode.*
3. **IMPEDANCE AMP** - Selects the required amplifier impedance.
4. **IMPEDANCE CAB** - Selects the required cabinet impedance.
5. **CABINET 1 thru 4** - Selects your desired cab and routes your amplifier output signal to its input jack.
6. **CONTROL**
 - A) **LOOP** - Activates the Switched Attenuator Loop.
 - B) **EXT 1** - Activates the control function on the TIP signal of the rear panel REMOTE jack.
 - C) **EXT 2** - Activates the control function on the RING signal of the rear panel REMOTE jack.
 - D) **STORE** - Press this button to store a MIDI patch. It will blink 3 times to indicate that the patch is stored when connected to a MIDI controller or the Quick-Switch accessory footswitch.

REAR PANEL



RIGHT TO LEFT

1. **LINK** - Links the incoming instrument or pedalboard signal to another amp switcher.
2. **ACTIVE** - Rear panel copy of the front panel buffered input. This active input overrides the front panel signal.
3. **PASSIVE** - Un-Buffered signal input. Connect your instrument here when no signal conditioning is needed or desired.
4. **TO AMP INPUT 1 thru 4** - Routes your instrument signal to the selected amp input jack.
5. **FROM AMP OUTPUT 1 thru 4** - Routes your selected amplifier output to the two Attenuator loops.
6. **AMP 1- 4 DIRECT** - Taps a padded direct out signal from the selected amplifier speaker output.
7. **ATTENUATOR LOOP NORMAL** - An Unswitched loop between the amplifier output matrix and the Switched loop.
 - A) **SEND** - Sends the selected amplifier output to the input of an external attenuator.
 - B) **RETURN** - Receives the attenuated output from an external attenuator.
8. **ATTENUATOR LOOP SWITCHED** – An additional **unswitched loop** between the NORMAL loop and the cab matrix that **controls the Fryette Power Station series products externally**.
 - A) **SEND** - Sends the selected amplifier output to the input of an external attenuator.
 - B) **RETURN** - Receives the attenuated output from an external attenuator and sends a bypass control signal to the Power Station PS-1, PS-2, PS-2A and PS-100 via a TRS speaker cable.
9. **GROUND LIFT** - Isolates signal ground from system ground to prevent ground loop hum and oscillation.
10. **TO SPEAKER CAB 1 thru 4** - Routes your amplifier output signal to the selected cab input jack.
11. **REMOTE** - TRS (Tip/Ring/Sleeve) ground isolated phone jack. Use this jack to control external devices remotely.
 - A) **TIP = EXT-1** - Relay controlled Normally Open Tip to Ground.
 - B) **RING = EXT-2** - Relay controlled Normally Open Ring to Ground.
12. **QUICK SWITCH** - Footswitch jack for use with FC-3D. Controls MIDI Patch 1& 2 and Loop/EXT-1EXT-2.
13. **MIDI IN** - Receives MIDI commands from external MIDI Controller.
14. **MIDI THRU** - Passes MIDI commands from external MIDI Controller to external MIDI devices.
15. **POWER INPUT** - Input for 12VDC Adapter.

THE SUPER NERDY STUFF

OPERATING IMPEDANCE

Choosing the correct operating impedance to match the selected amp to the destination cab or load ensures maximum tube life and transparent sound quality. For the most part, running a mis-match between an amplifier and cabinet is not inherently dangerous unless you are cranking the amp to maximum output or very nearly to it. However, there will be a noticeable tonal shift when, for example, running an 8-ohm amp into a 16-ohm cab. Many times, the player is not even aware of this shift until it is clearly demonstrated. This loss of transparency is easy to hear with the ZMACS since you can set it up for a matched and mis-matched setting and then AB between them. The loss of transparency you will clearly hear is exactly the condition we want to correct.

To correct this mis-match, simply set the AMP impedance selection to 8 OHMS and the CAB impedance selection to 16 OHMS. You can choose to run with that setting combination manually or store it as a MIDI or Quick-Switch preset.

On the other hand, there are times when we specifically want to use the mis-matched tonal shift to add color to the existing setup.

These scenarios can be managed using one of the two following proprietary ZMACS operating modes:

DEFAULT IMPEDANCE BYPASS MODE

When the ZMACS AMP and CAB impedance buttons are set the same, meaning, 4/4, 8/8 and 16/16, the internal matching transformer is bypassed. This is **DEFAULT IMPEDANCE BYPASS MODE**. The idea is we don't want anything in the signal path not needed for a given setup. When your amp and cab are the same impedance, 16 OHMS for example, no external correction is required, therefore setting the AMP and CAB buttons to 16 connects the 16 OHM amp directly to the 16 OHM cab. The same goes when both switches are set to 4 or 8 OHMS.

Now let's say you have an 8-ohm amp and a 16-ohm cabinet, and you like the sound of them together for certain applications. In this case, setting the AMP button to 8 and the CAB button to 16 will engage the impedance matching transformer. Now the amp will "see" an 8-ohm load and the cab will "see" a 16-ohm source, thereby correcting the impedance difference.

That's great! But what if you liked the sound of the mis-match and there are times you will want to achieve that? To do so, you simply set the AMP and CAB switches the same. Remember: Any two identical settings will activate **DEFAULT IMPEDANCE BYPASS MODE**. Now you are running your amp directly to your cab as you were previously before applying the impedance correction.

Any time you select different AMP and CAB impedance settings, the ZMACS matching transformer is automatically engaged. Likewise, when any two identical settings are selected, the transformer is automatically bypassed.

BYPASS OVERRIDE MODE

Now let's talk about a scenario where you have a rack of amps in one area and the cabinets placed in an area that is a significant distance away from the amps. Let's call that distance 30 feet. You now have roughly 30' of speaker cable between the amp and cab. If you are super sensitive about cable behavior, you will notice the change in behavior between the sound of your rig with a 3' cable and the sound using a 30' cable.

One way to mitigate this issue is to use a heavier gauge cable. Even so, with significant cable length, there will always be some noticeable difference in behavior because speaker cables have internal resistance which increases with length. This additional resistance together with some amount of cable capacitance will impact the interplay between your amp and cab. It would be great if there was a simple way to mitigate this effect. There is!

The ZMACS incorporates a specially designed impedance matching transformer that also acts something like a power transfer station. You can use this behavior to reduce the negative effects of long speaker cables.

This works by effectively cutting those cables in half. Instead of one 30' cable from your amp to your cab, connect a 15' cable between the amp output and the ZMACS AMP OUTPUT (1-4) jack. Do the same from the ZMACS speaker cab output jack to the cab. This is great for matching dissimilar impedance outputs and loads, but how does that work when the output and load are the same and the transformer is automatically bypassed? This is where **BYPASS OVERRIDE MODE** comes into play.

If you are using long cable lengths from the amp to the amp switcher and then to the cab when the impedances are the same, hold down both AMP and CAB impedance select switches for 1 second. Both LEDs will blink continuously. You have now engaged **BYPASS OVERRIDE MODE**. The matching transformer is now active and will perform the same power transfer correction for long cable lengths when the amp and cab are the same impedance.

ATTENUATOR IMPEDANCE COMPENSATION

When using an attenuator within the ZMACS loop function, it is logical to assume that the attenuator will defeat the impedance matching function of the internal transformer. However, the proprietary design of the ZMACS transformer helps mitigate the effect of an attenuator induced impedance mis-match. To take advantage of this feature, first set the AMP and CAB impedance to match the selected amps and cabs. Next, engage **BYPASS OVERRIDE MODE** ONLY IF THE SELECT HEAD AND CAB ARE THE SAME IMPEDANCE. If your attenuator has an impedance select function, set it to 8 ohms. If using a Power Station PSA-1, PS-2, PS-2A or PS-100, set both the AMP IN and SPEAKER OUT impedance switches to 8 OHMS. If you are not surprised by what you hear, well, sometimes it's OK to not be a total gear nerd.

EXTERNAL AMP SWITCHER IMPEDANCE MATCHING

Already own an amp switching solution and you just want to take advantage of the ZMACS impedance matching function? You can! There are two ways to do this.

1) If your current switching solution has an attenuator loop that you're not using, connect that unit's loop SEND to the FROM AMP OUTPUT1 jack on the ZMACS. Then connect the TO SPEAKER CAB 1 jack to the attenuator loop RETURN jack on YOUR EXISTING switcher. If your switcher has MIDI, you can connect the ZMACS to your MIDI cable chain and program the ZMACS to assign different amp and cab impedances to ZMACS Amp 1 and Cab 1 for every patch change which requires a match on demand. See Application Example 5 on Page 15.

2) If your current switcher does not have an attenuator loop, connect one of those cab SENDS to the ZMACS NORMAL Attenuator Loop Return. Then connect your cabs to any of the ZMACS Cab 1 thru 4 outputs.

MULTIPLE CABS

Any two cabs may be selected at once by simply pressing any two CABINET select buttons simultaneously. Once selected, the CAB impedance select button will default to the next lower impedance setting automatically. You may also choose an alternate impedance setting at your option.

FACTORY RESET

To restore the factory memory configuration (clearing the MIDI Preset Memory), first disconnect the power cable. Then press and hold the EXT-1 and STORE buttons while reconnecting power.

REAR PANEL FUNCTION DETAIL

LINK

The buffered and transformer isolated unity gain LINK output sends whatever signal is connected to the ZMACS front panel INPUT or rear panel ACTIVE input to another ZMACS or any other switching device you may already be using.

Under certain circumstances, a complex signal routing and switching system may require a transformer isolated instrument level output signal from the ZMACS. In this case, you may patch the LINK output to the destination device and then return the signal back from that device to the ZMACS rear panel PASSIVE INPUT.

AMP DIRECT 1- 4

This is a line level direct out that originates from whichever amplifier is selected via the front panel settings or as part of a MIDI patch. This can be sent to an IR loader, a DAW interface or to Front Of House (FOH) for further processing. This is not a ground isolated output and may require an external isolation transformer or direct box to avoid potential ground loop conditions.

ATTENUATOR LOOP NORMAL

Use this loop for an active or passive re-amp/attenuator device that has its own bypass function. The SEND jack is fed directly from the AMP select matrix.

- A) SEND** - Sends the selected amplifier output to the input of an external attenuator. Send impedance is determined by the amplifier selected by the front panel AMPLIFIER select buttons.
- B) RETURN** - Receives the attenuated output from an external attenuator. Return impedance is determined by the cabinet selected by the front panel CABINET select buttons.

ATTENUATOR LOOP SWITCHED

Use this loop for an active or passive re-amp/attenuator device that does or does not have its own bypass function. The SEND jack is fed directly from the NORMAL loop return. If the Normal loop is not in use, the SEND jack is fed from the AMP select matrix.

The Send and Return impedance of this loop is the same as the NORMAL loop. **In this V2 version, the Return jack receives the attenuated output from an external attenuator and sends a bypass control signal to the Power Station PS-1, PS-2, PS-2A and PS-100 via a TRS speaker cable.**

If your attenuator or re-amp device does not have a remote bypass function you will need a control device that will provide the remote bypass function controlled by the front panel REMOTE button to activate or bypass your attenuator either manually or as part of a MIDI patch.

GROUND LIFT

This switch is used to break a potential hum or oscillation inducing ground loop.

REMOTE

This TRS (Tip/Ring/Sleeve) jack connects to the Fryette FC-3D footswitch (optional). When using the Fryette PS-100, this jack is connected to the PS-100 rear panel footswitch jack. In this mode, EXT-1 controls the PS-100 channels and EXT-2 controls the PS-100 FX Loop. If your attenuator, re-amp system or one of your connected amplifiers has a remote bypass or other external footswitch function you can control that device using the REMOTE switching jack.

The REMOTE function can also be used to control any other external device that will accept an isolated TS or TRS latching relay.

QUICK SWITCH

There will be many occasions where you will wish to preview amplifier and cab combinations, perform AB listening tests, or just do a quick setup to simplify workflow. Often you will find that using MIDI for this purpose is inconvenient or not even possible if your MIDI controller is not immediately available. For this reason, and because some people just don't want to deal with MIDI, we created Quick-Switch.

Quick-Switch is a simple dual-function interface that provides access to MIDI Preset 1 and 2 (Preset 0 and 1 in MIDI parlance), and remote control of front panel functions LOOP, EXT-1 and EXT 2 using a simple latching control switch. It's just as easy to set up as it is to use Quick-Switch. All you need is a latching (not momentary) two button footswitch with LED indicators. Our FC-3D controller is tailor-made for this application.

On the external FC-3D footswitch, MIDI 1/2 LED OFF defaults to MIDI Preset 1. MIDI 1/2 LED ON defaults to MIDI Preset 2.

The REMOTE function is programmed according to your desired control requirements.

To program the switch functions:

- 1) Connect the footswitch to the Quick-Switch jack.
- 2) Press the REMOTE footswitch button to activate the REMOTE LED.
- 3) Press the front panel EXT-1. EXT-2 or LOOP button to light their indicator LEDs.
- 4) Press the front panel STORE button to save your selection to memory*.

*NOTE: If you are running the front panel functions manually and just want to use the footswitch to experiment with the LOOP, EXT-1 or EXT-2 settings, there is no need to store these settings. They will be available upon recall until you change them. That way, if you already have MIDI Presets stored in location 1 & 2, they will be preserved once you revert to using a MIDI controller.

Any combination of one, two or three of these functions can be controlled individually or simultaneously by the footswitch.

To change your selection, press the REMOTE footswitch button to activate the LED and turn EXT-1. EXT-2 or LOOP on or off. Then Press STORE to save the new combination. You can save two combinations. One for MIDI Preset 1 and one for MIDI Preset 2.

When using a MIDI controller together with the Quick-Switch pedal, the Quick-Switch REMOTE function will operate for any MIDI preset you program it to operate on.

MIDI

Any external MIDI controller will operate with ZMACS. You can power your MIDI controller with its recommended power supply or from the ZMACS power supply via the MIDI IN Phantom Power cable feature. This can be accomplished using most available 5 or 7 pin MIDI cables.

To program MIDI:

- 1) Connect your controller to the MIDI IN jack on the rear of the ZMACS.
- 2) Select a preset on your controller that you will use to store your new settings.
- 3) Select your desired Amp, Cab, Impedance and Control settings on the ZMACS front panel.
- 4) Press STORE to save your new preset.

ZMACS V2A MIDI UPDATE

Presets #1 and #2 now function as special global presets that store the complete state of the ZMACS, including all settings for all connected amps and cabinets, rather than just a single amp/cab assignment like the remaining presets.

This feature is primarily intended for users operating the ZMACS without a MIDI foot controller. Since Preset #1 is automatically recalled at power-up, users can configure all four amps and cabinets exactly as desired, then simply press the STORE button to save the entire system state to Preset #1 for instant restoration every time the unit is powered on. All other MIDI presets (#3 - #128) continue to behave as traditional presets that recall individual amp/cab switching combinations only. A common misconception is that different impedance values can be stored for the same cabinet depending on which amp is selected. This is intentionally prohibited, since a cabinet's impedance within the ZMACS system represents a fixed physical configuration and cannot safely change on the fly during operation.

A new **Settings Menu** has been added and can be accessed by holding the LOOP button while powering on the ZMACS. Once entered, the blinking STORE LED indicates that the unit is in configuration mode. From this menu, MIDI operation can be configured either for Omni mode or for a specific MIDI channel. Pressing the CAB impedance button enables Omni mode, indicated by the CAB 8 OHM LED. To assign a dedicated MIDI channel, use the CAB 1 - 4 buttons corresponding to MIDI Channels 1 – 16 as shown in the chart below. After selecting the desired mode or channel, press the STORE button to save the settings and reboot the unit with the new configuration active.

0000: MIDI CH1
0001: MIDI CH2
0010: MIDI CH3
0011: MIDI CH4
0100: MIDI CH5
0101: MIDI CH6
0110: MIDI CH7
0111: MIDI CH8
1000: MIDI CH9
1001: MIDI CH10
1010: MIDI CH11
1011: MIDI CH12
1100: MIDI CH13
1101: MIDI CH14
1110: MIDI CH15
1111: MIDI CH16

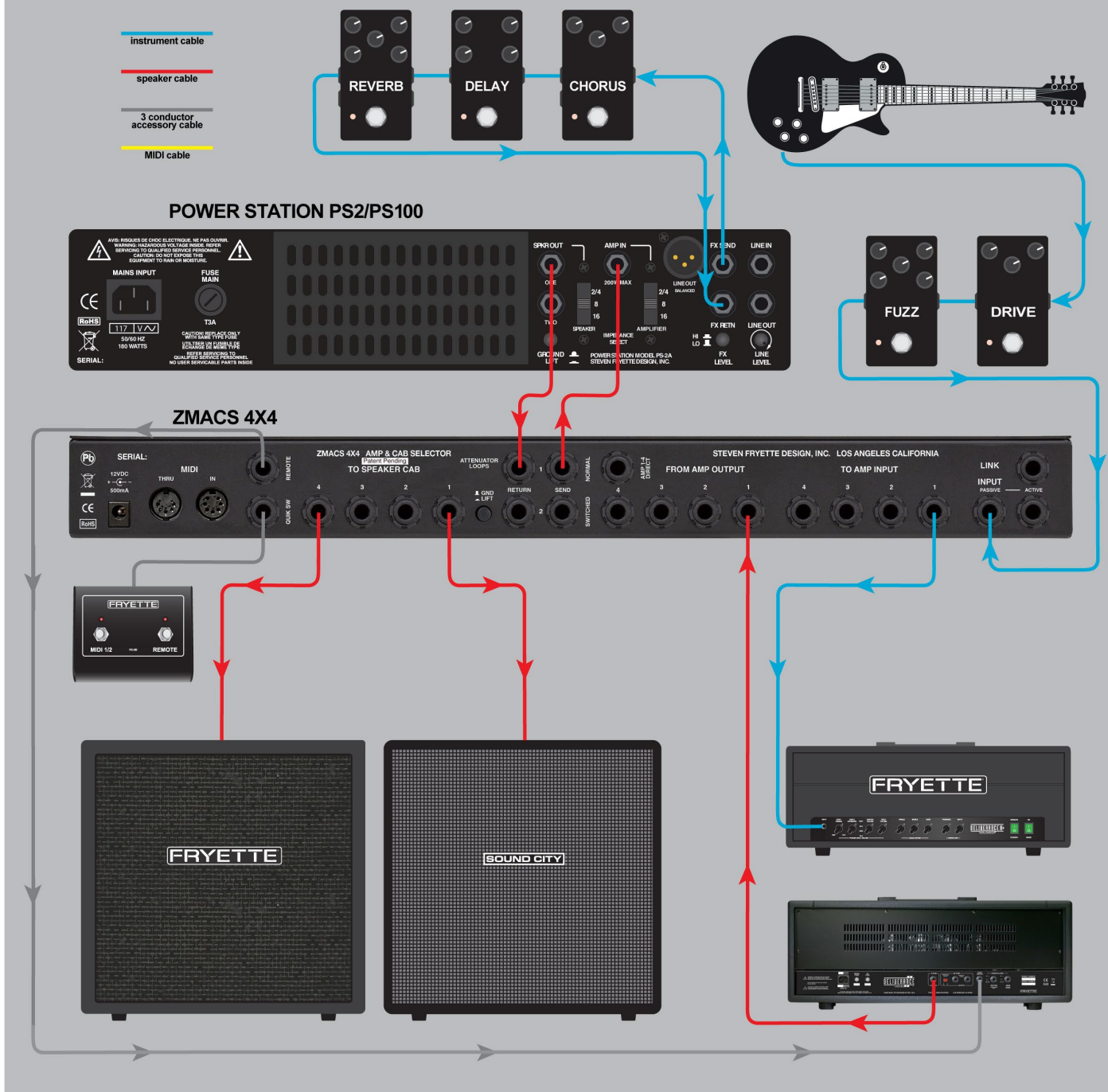
All ZMACS switching functions are now accessible through MIDI CC (Control Change) commands. Please refer to the MIDI implementation sheet below.

POWER INPUT

The ZMACS power requirement is 12VDC, 300mA. The supplied ZMACS AC adapter is 12VDC 2A. Therefore, you will have more than sufficient supply current available to power most available MIDI controllers.

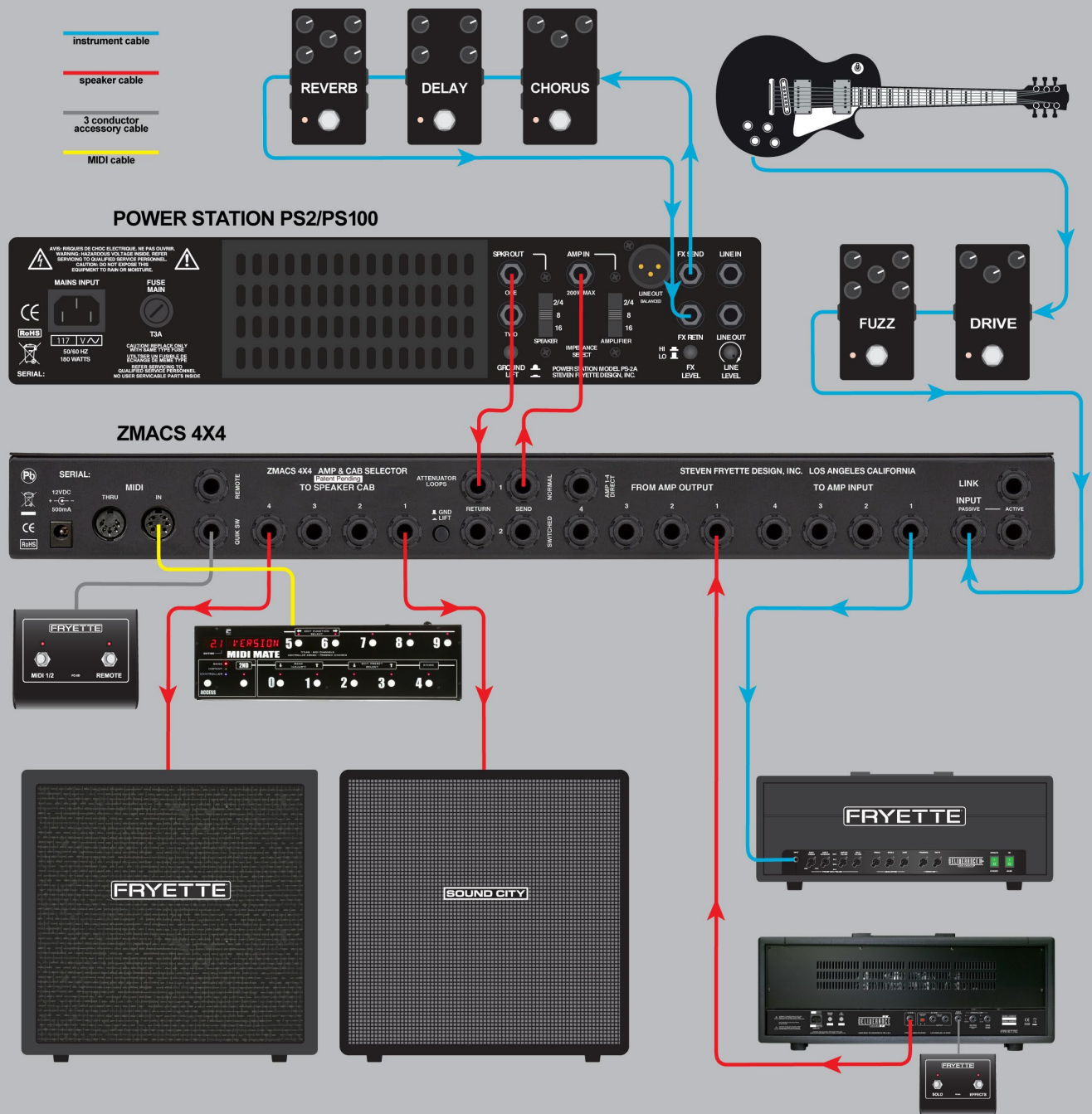
APPLICATION EXAMPLE 1

Connecting Amps & Cabs to ZMACS with Quick-Switch, Attenuation & Remote Amp Control.



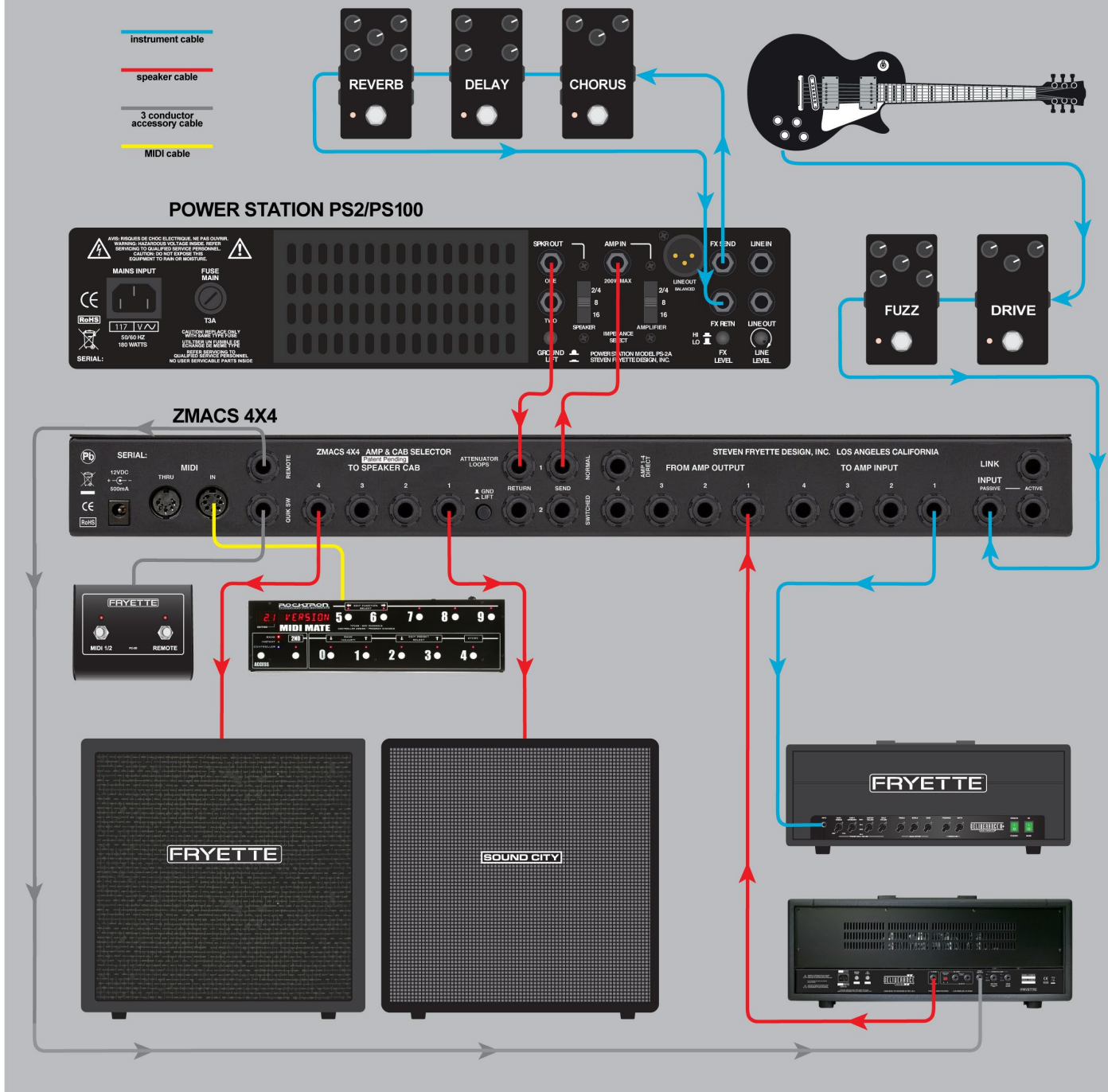
APPLICATION EXAMPLE 2

Connecting Amps & Cabs to ZMACS with MIDI, Quick-Switch, & Attenuation.



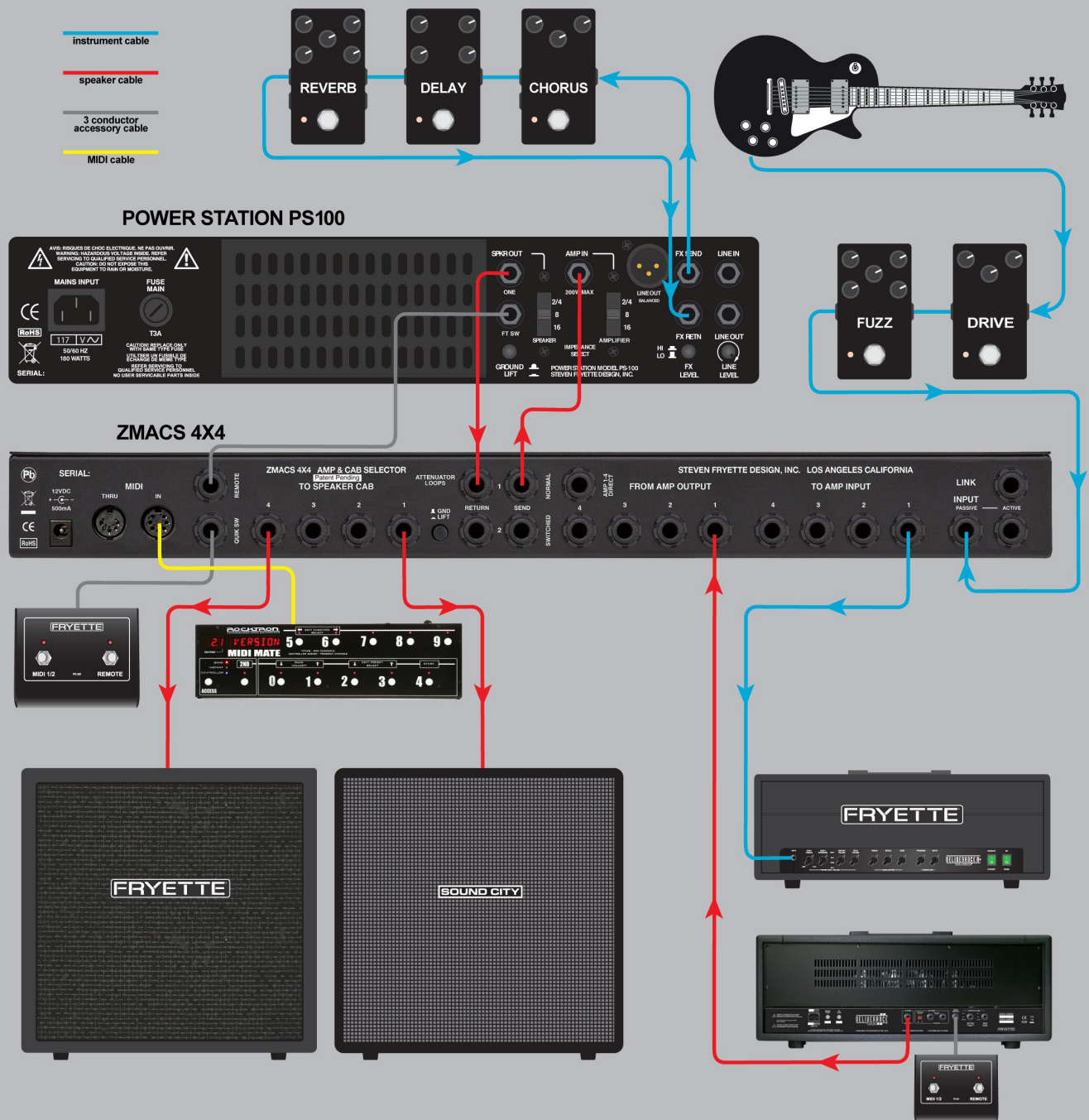
APPLICATION EXAMPLE 3

Connecting Amps & Cabs to ZMACS with MIDI, Quick-Switch, & Remote Amp Control.



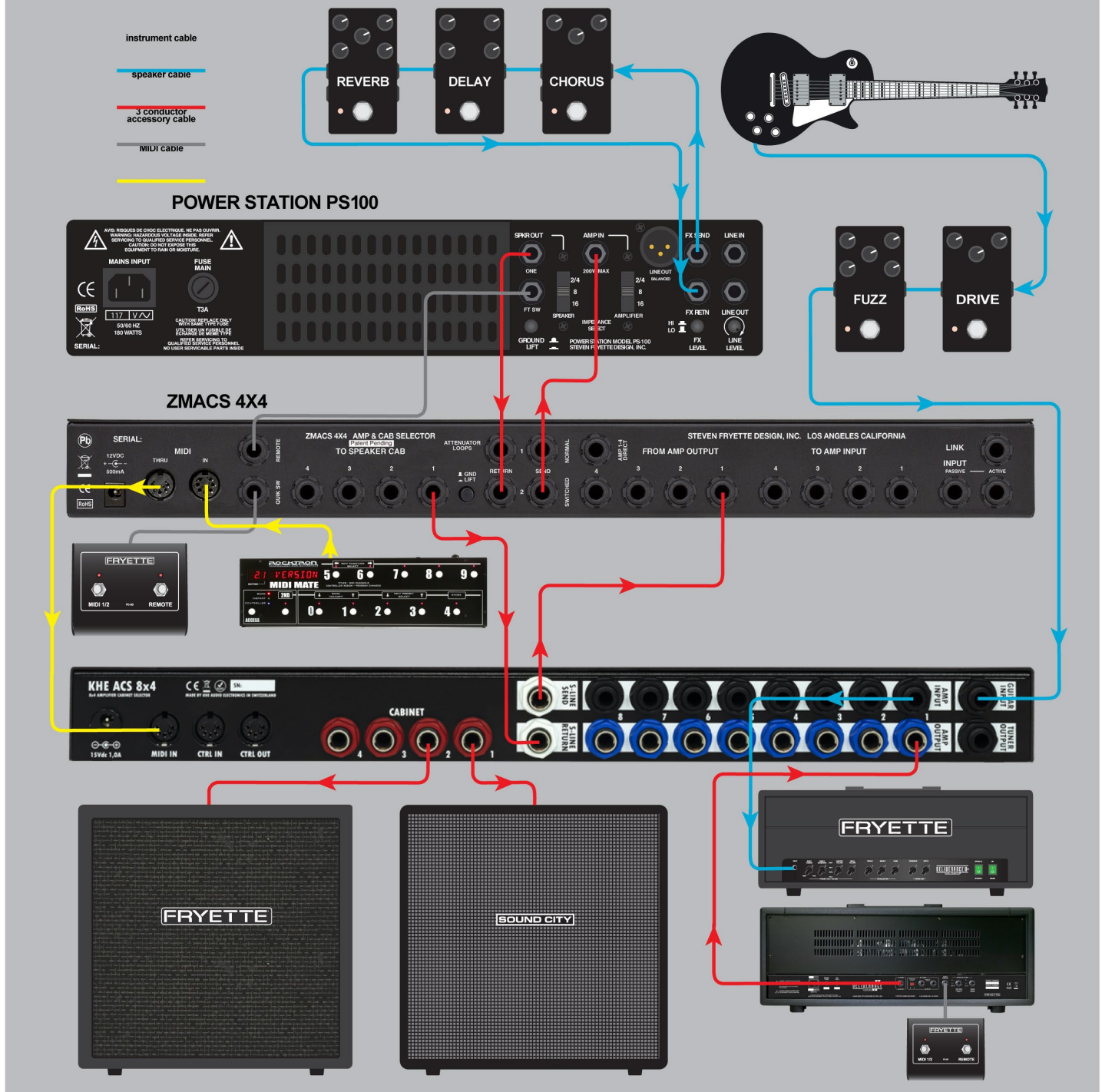
APPLICATION EXAMPLE 4

Connecting Amps & Cabs to ZMACS with MIDI, Quick-Switch, & Remote PS-100 Control.



APPLICATION EXAMPLE 5

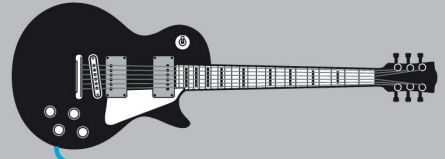
Using ZMACS for Impedance Matching with Other Amp Switchers.



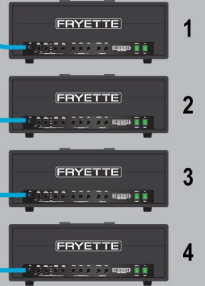
APPLICATION EXAMPLE 6

Linking Two ZMACS for 7 x 4 Operation.

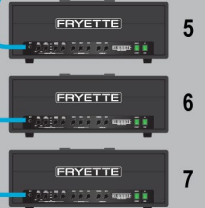
instrument cable
speaker cable
3 conductor accessory cable
MIDI cable



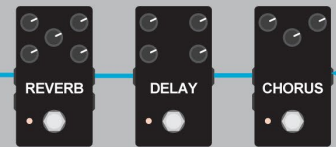
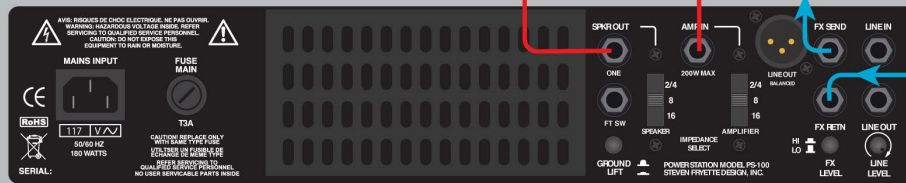
ZMACS 4X4



ZMACS 4X4



POWER STATION PS100



TROUBLESHOOTING GUIDE

WON'T TURN ON

1. Make sure AC adapter is securely connected at both ends.
2. Verify the power source with something you know works.

NO SOUND

1. Check input cables.
2. Check output cables

3. Make sure the preamp or source signal volume and/or gain controls are turned up.

DISTORTION

1. Check the amplifier level settings.
4. Check the signal level at other devices in the signal path.

SPECIFICATIONS

MODEL: ZMACS

MODEL NUMBER: 4X4

POWER REQUIREMENT: Regulated 12 Volts DC @ 300mA.

INSTRUMENT INPUT IMPEDANCE: 1 Megohm.

ACTIVE OUTPUT IMPEDANCE: 100 ohms.

DIMENSIONS:

HEIGHT: 1.75" (4.4 cm)

WIDTH: 17" (43.2 cm) 19" with rack ears

DEPTH: 9" (23 cm)

WEIGHT: 12 Lbs. (5.5 kg)

Product specifications are subject to change without notice.



Certificate of Compliance

Restriction of the use of Hazardous Substances (RoHS)

We certify that all of our products (exceptions see listed below) are compliant with the European Union Directive 2002/95/EC for the Restriction of the use of certain Hazardous Substances in Electrical and Electronic Equipment (RoHS).

No Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent Chromium (Cr+6), PBB or PBDE is intentionally added to these devices. Any trace impurities of these substances contained in the parts are below the RoHS specified threshold levels.

All information provided in this Certificate of Compliance is accurate to the best of our knowledge as of the date this Certification was issued.

Certificate of Compliance

Registration, Evaluation, Authorization and Restriction of chemicals (REACH)

We declare that all of our products are compliant with European Union Directive EC1907/206 for the Registration, Evaluation, Authorization and Restriction of chemicals (REACH), and contain none or less than 0.1% of the chemicals listed as hazardous chemicals in the REACH regulation. All information provided in this Certificate of Compliance is accurate to the best of our knowledge as of the date this Certification was issued.

Declaration of Conformity

EMC and Low Voltage Directive (CE)

Product Name: ZMACS
Model Number: 4X4

This is to certify that the product listed above complies with the following European Union Council Directives and Standards relating to electromagnetic compatibility (EMC Directive 89/336/EEC) and the low voltage Directive (73/23/EEC).

This declaration of conformity of the European Communities is the result of an examination carried out by Electromagnetic Engineering Services, Inc. in accordance with European Standards EN 50081-1, EN 50082-1 and EN 60065 for low voltage, as laid down in Article 10 of the EMC Directive.

Steven Fryette Design, Inc
9620 Topanga Canyon Place, Unit D
Chatsworth, CA 91311



LIMITED WARRANTY

Subject to the obligations and exclusions found below, this product is warranted by Steven Fryette Design, Inc., (herein SFD) against manufacturing defects in materials and workmanship for the period of Five (5) Years from the date of purchase, with the exception of the tubes, fuses and speakers where applicable, which carry a 90 day warranty.

The warranty period commences on the date of purchase by the original user. Performance under this warranty must be obtained at one of the following: an SFD Authorized Service Station, by returning the unit to the SFD factory with prior written authorization, or (in countries outside of the United States) by a representative SFD distributor.

Obligations

1. This warranty will be honored only on the presentation of the original proof of purchase.
2. Transportation of the product to and from an authorized SFD service outlet is the responsibility of the user. Units sent directly to the SFD factory for warranty repairs must be authorized by SFD and shipped prepaid.

Exclusions

1. This warranty shall not cover adjustment of consumer-operated controls as explained in the appropriate instruction manual, or products that have been altered or have missing, or defaced serial numbers.
2. This warranty shall not apply to the appearance of accessory items including but not limited to, cabinets, cabinet parts, or knobs.
3. This warranty does not apply to uncrating, setup, installation, or the removal and reinstallation of products for repair.
4. This warranty shall not apply to repair or replacements necessitated by any cause beyond the control of SFD including, but not limited to, any malfunction, defects, or failure caused by or resulting from unauthorized service or parts, damaged or broken tubes, incorrect line voltage, improper maintenance, modification or repair by the user, abuse misuse, neglect, accident, fire, flood, or other Acts of God.
5. Responsibility for the repair of any SFD product sold outside of U.S. boundaries is borne by the SFD representative in that particular country or territory. Also, the warranty term and conditions may be different from those stated above. Please contact the SFD distributor or dealer in your country for more information.

The foregoing is in lieu of all other expressed warranties, and SFD does not authorize any party to assume for it any other obligation or liability. In no event shall SFD be liable for special or consequential damages arising from the use of this product, or for any delay in the performance of this warranty due to causes beyond our control. Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of consequential damages, so the above limitations on implied warranty and consequential damages may not apply to you. This warranty gives you specific legal rights. You may have other rights that vary from state to state.

WARRANTY REGISTRATION

U.S. and Canadian residents: Please retain your purchase receipt as proof of purchase for warranty purposes. All other international residents please contact the authorized distributor your Fryette product was purchased from. For a list of international distributors please visit www.fryette.com/dealers.html

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