

Ampete

8FX

Owner's Manual

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We all...

... produce electronic waste! It's just a question of time!

We here at Ampete Engineering are not only consumers, like you yourselves, but also engineers of electronic products that we want to place into a modern world. Here it looks at first glance that everything has been invented already. But demands are getting more refined and specific by the day and as in the economics, the sports- or even spiritual world, performance, utility and consistency depend on small changes and nuances in improvements. In other words we are supposed to get better every day. This is not a one way street, it's a huge responsibility in the other hands!

For us it means more than wanting a slice of the pie. It means to review every single product we design for its added values, to anticipate the circumstance you put it into in order to ,simply' be able to maintain it everywhere it has been sold to.

Today our whole life is determined by electronics, at home, on the road, at work or vacation, in supermarkets, concert arenas or even in natural resorts.

Today in general electronics aren't built any longer to last! They're cheap.

For people from the 70ies like us it is a turning point. We grew up in a world where an electronic device is nothing short of a masterpiece. Today 90% of electronic applications are manufactured by using robots or exploitation in countries where 'global players' celebrate the abolition of workers protection and minimum salaries. But it doesn't end there.

After an expected life cycle, more or less short, the cheap electronic waste is gonna be ,disposed' of. Dispose might suggest that components like housing, metal and synthetics will be recycled to find their way back into a product. But of course often this is not how it is done!

If you ever heard of 'toxic city' (and I don't mean the fantastic album of a great band) you probably know what we are speaking of.

It might surprise you to read this in a manual for an electronic device.

We want to make sure you understand that by purchasing an Ampete Engineering Product you will get a device in which we put all our passion, belief and knowledge and that you get a product in the tradition of many great people before us, for whom electronics were and still are wonderful masterpieces.

But you also purchased a little piece of responsibility. Maintain your Ampete Engineering Product – we will be here to support you, we built this to survive... possibly even us.

In case you should be faced with any issue on any day at any place somewhere in the world, we are here as you would expect us to be.

This is not a promise, it is our view of life.

Thanks for letting us be a part in enabling your musical world.

Yours sincerely,

Ampete

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Introduction

If you got to this point you will probably already know that the 8FX is designed to add FX loops switching functionality to the 88S AMPLIFIER & CABINET SWITCHING SYSTEM.

If not, it's as simple as it sounds. If your setup includes more than four amps, you will rather choose an 88S(-STUDIO) over a 444 - but what about your effects rig, you might think?

Well, the 8FX is the solution!

It turns your 88S-STUDIO into a 444 for 8 amplifiers and 8 cabinets, an 888 if you like.

Features

- 8 switchable FX loops enhance an existing 88S or 88S-STUDIO system
- double RJ45 connector to easily integrate into an 88S or 88S-STUDIO system
- true bypass relay based switching through the complete signal chain
- midi program change or control change to switch your entire 88S / 88S-STUDIO system
- 99 midi pc presets
- ground lift switch
- no switching noises
- no switching latency
- expandable to easily grow together with your 88S / 88S-STUDIO system

Theory of operation

The initial idea of the 8FX goes back to the Ampete 444, which was the first of its kind to not only switch tube amplifiers and speaker cabinets but also include amp's effect loops into an entire switching process. Hereby the FX loops of the 8FX allow to assign an effect device (no matter if a pedal, a rack or even a complex effect rig) to any of the effect loops of the connected amplifiers. That way you can utilize THE SAME effect device(s) for each amplifier connected to the System.

Connect your effects or separate looper unit to the FX IN / FX OUT of the 8FX.

By pressing the FX LOOP ON/OFF button, the FX IN / FX OUT are automatically assigned to the amplifier's effect loop that is currently selected in your 88S system. When engaged, the first dot of the display will light up to show its active status. Be aware that there is no actual switching happening unless you have selected a cabinet and an amplifier on the 88S-STUDIO or 88R before.

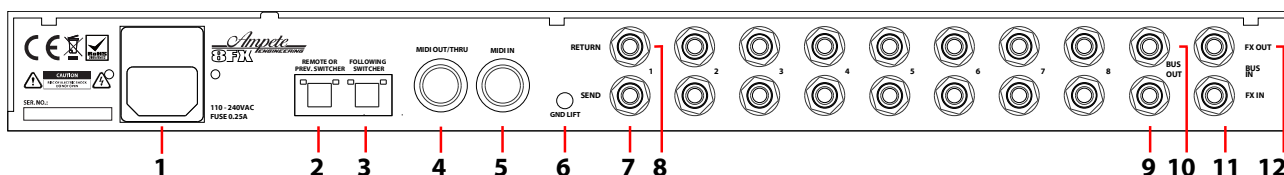
When switching between amplifiers, the 8FX assigns the FX IN / FX OUT to the selected amp's FX loop at the same time.

Front Panel



1. **FX LOOP ON/OFF:** assigns the FX loop of the currently selected amp to the 8FX's master loop (FX IN & OUT)
2. **SETUP:** press once to access the setup menu (see page 10)
3. **SAVE:** press to save a Midi PC preset (see page 11)
4. **DISPLAY:** The double 7-segment display shows the unit number, setup menu states, or midi pc numbers

Rear Panel

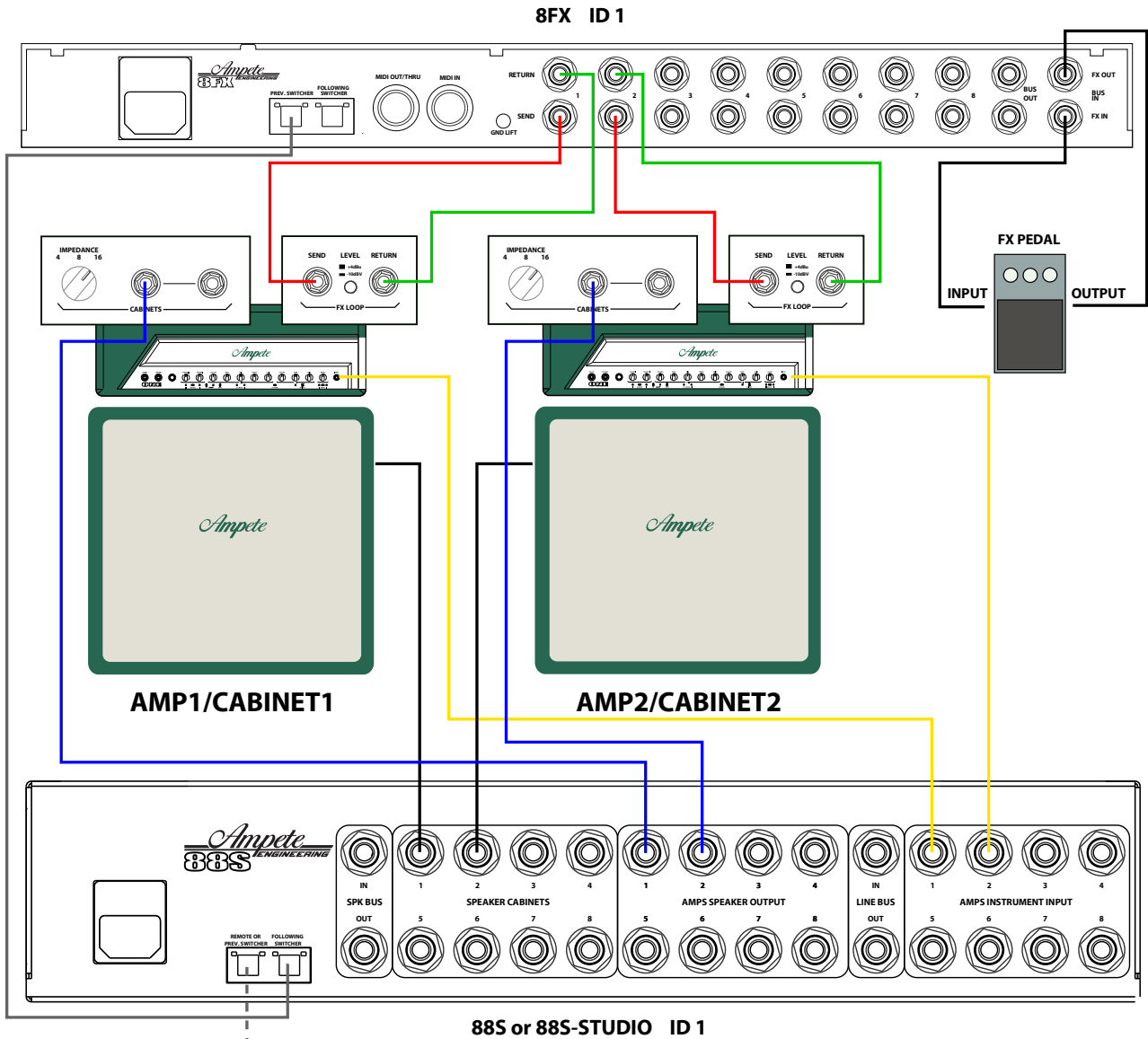


1. **AC JACK:** The 8FX can be supplied with voltages from 85VAC to 265VAC
2. **PREVIOUS SWITCHER:** Connect an 88S, 88S-STUDIO, or another 8FX via a standard Cat5e cable
3. **FOLLOWING SWITCHER:** Connect an 88S, 88S-STUDIO, or another 8FX via a standard Cat5e cable
4. **MIDI OUT/THRU:** If you have several MIDI devices in your setup, connect the MIDI Out/Thru with the MIDI In of the following device (Currently only Midi Thru functionality).
5. **MIDI IN:** Connect a MIDI pedal, or any other MIDI device, to control the 8FX via Program Change or Control Change messages.
6. **GROUND LIFT:** Controls whether the 8FX audio ground is connected to the earth conductor or not. The circuit is grounded when the switch is in the 'Out' position. If you experience hum noise using effects, switching the ground lift to the 'In' position will solve the issue in almost any case.
7. **SEND 1:** Connects the FX loop send/preamp out/line out of amplifier 1 to the SEND 1 jack of the 8FX. Please be aware that this is not an independent loop, but the corresponding FX loop of the amplifier you drive with the AMP INPUT 1 and AMP OUTPUT 1 jacks of the 88S or 88S-STUDIO!
8. **RETURN 1:** Connect the FX loop return/power amp in/line in of amplifier 1 to the RETURN 1 of the 8FX. Like mentioned before, this is not an independent loop, but the corresponding FX loop of the amplifier you drive with the AMP INPUT 1 and AMP OUTPUT 1 jacks of the 88S or 88S-STUDIO!

Just like the described procedure of connecting SEND 1 / RETURN 1 to AMP1s effect loop all other SEND and RETURN jacks (2 – 8) have to be connected to their respective amplifiers effect loops.

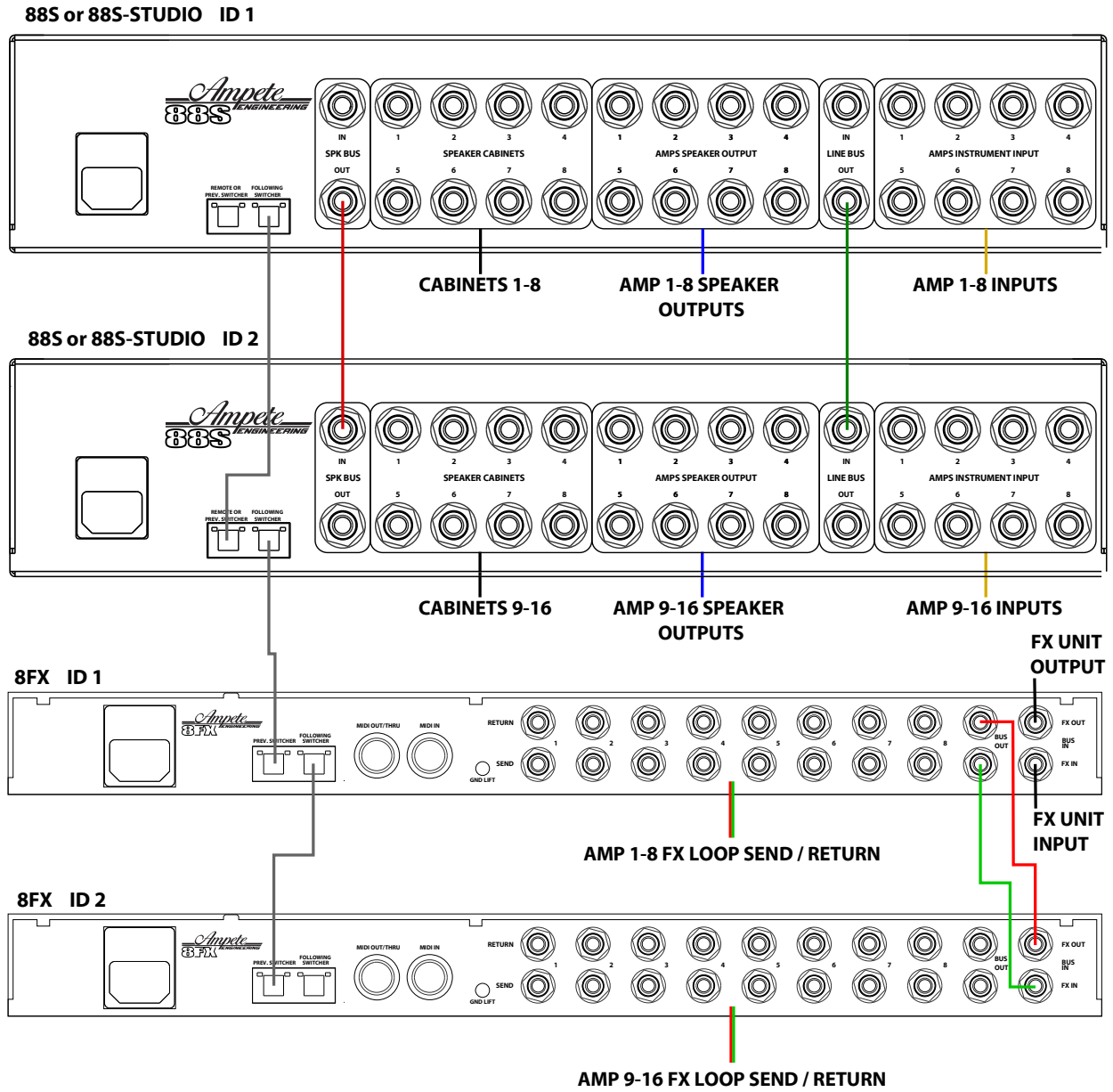
9. **BUS OUT SEND:** To daisy-chain several 8FX, connect the BUS OUT SEND to the following 8FX BUS IN SEND jack (11)
10. **BUS OUT RETURN:** To daisy-chain several 8FX, connect the BUS OUT RETURN to the following 8FX BUS IN RETURN jack (12)
11. **FX IN:** Connect this jack (in case of multiple 8FX in the system the first 8FX in the chain) to the effect device (pedal, rack or entire rig) input.
In a setup with more than one 8FX connect this jack to the previous 8FX BUS OUT SEND (9)
12. **FX OUT:** Connect this jack (in the case of multiple 8FX in the system the first 8FX in the chain) to the effect device (pedal, rack or entire rig) output.
In a setup with more than one 8FX connect this jack to the previous 8FX BUS OUT RETURN (10)

888 Setup Diagram



NOTE: If 88R is used set 8FX to Mode 1

Daisy-chain Setup Diagram



Note that the order of connecting the 88S / 88S-STUDIO / 8FX units to the control bus (Cat5e cable) is not necessarily to be like shown, as long as the 88S / 88S-STUDIO with ID 1 is the first in the chain.

Quick Start Check List

Once wired up there is a minimum amount of setup to do - if any

- **Unit ID:** If you have several 8FX in your system set the unit IDs correspondingly. ID 1 will switch the FX loops of amplifiers 1 to 8, ID 2 will switch the FX loops of amplifiers 9 - 16, ID 3 to 17 - 24 etc.
See page 10 on how to change the unit ID.
If you only have a single 8FX in your system, leave factory default at ID 1.
- **Mode:** Set the 8FX to Mode 1 if you are using a remote 88R in your system. If not leave the factory default at Mode 0
- **CC Mode:** if you are using Midi control change messages see page 11 to set the correct CC Mode
- **activate the FX Loop:** the 8FX starts up in the default state „FX Loop Off“. Hit FX LOOP ON/OFF to activate it

Setup Menu



To enter the setup menu press SETUP (2). The display will show „S.u.“ for Setup. Press a button 1, 2 or 3 to select the submenu (Note: You want to make your choice before the 8FX will automatically exit the setup after 2 seconds). Press one more time to see the current setting, and press repeatedly to set the desired value.

- Button 1, MIDI CH.: Press to set the channel where the 8FX receives Midi program change or control change messages. Note that 0 stands for „Omni“ (all channels)
- Button 2, CC MODE: Press to set the Midi CC Mode (see Chapter Controlling the 8FX via Midi on page 10).
- Button 3, MODE: Press to set the 8FX operating mode. Set to „1“ if an 88R is present in the system. Else leave at „0“

Setting the Unit ID

This following paragraph is ONLY applicable in a system with MORE THAN ONE 88S (-STUDIO).

Just like with the 88S or 88S-STUDIO the ID of each 8FX has to be determined in order to assign each 8FX loops to the corresponding amplifier. To do this, set the unit ID to „1“ for amplifier 1-8, „2“ for amplifier 9-16, and so on.

Press and hold „SETUP“ until the display shows „I.d“. Before the 8FX automatically leaves the setup page after 2 seconds, press SETUP again to see the current ID setting, and press repeatedly to set the unit ID.

Note that if the 8FX is set to an ID other than „1“ the front button controls as well as the Midi Input has no functionality.

Controlling the 8FX via MIDI

MIDI Program Change

The 8FX offers the possibility to save up to 99 presets of different amplifier / cabinets / FX loop On-Off combinations.

You can switch between presets by sending MIDI Program Change messages from your MIDI foot controller, or any other MIDI device connected to the 8FX's „MIDI IN“ connector.

To save a preset, send a MIDI Program Change message with the desired preset number. The preset number is shown in the front panel display together with a dot in the lower right corner to distinguish it from displaying the unit ID.

Note that the 8FX starts counting the presets at „1“, even though the MIDI standard internally starts at „0“. This is due to the fact that most MIDI devices sending MIDI preset changes start counting at „1“ as well.

If now the preset is changed on the 88S-STUDIO or 88R, the dot in the display starts flashing. Press SAVE to save the current status to the preset.

To protect your amps, a preset can not be activated if the cabinets saved with the preset are not connected to the system. In that case the display states the message (n.c.)!

MIDI Control Change

Additionally all switching commands can be remote controlled by MIDI Control Change (CC) messages. In contrast to recalling presets via MIDI Program Changes, every Control Change message switches only one function at a time. That's why it is also called „Direct Access“. For a more detailed description please refer to the section „Control Change messages table“.

MIDI Control Change modes

Even though Control Change messages only access one function at a time, some people prefer programming presets of several Control Change messages on their MIDI controller, instead of sending Program Change messages to access a preset stored in the 8FX.

Some MIDI controller such as the RJM Mastermind GT offer the possibility to send Control Change presets in an „intelligent“ way. That means CC messages are sent to switch the currently selected amp or cabinet off before switching another one „on“. This is important due to the 88S system's rules and orders for the switching process to protect your amps from damage (see „switching rules & protection in the 88S system manual“).

Choose the 8FXs Control Change mode '0' for operating with such midi controller pedals.

If you are using a MIDI controller pedal with a let's say more simple software structure – meaning the controller pedal does not „know“ which amp or cabinet is currently in use - or if the number of CC messages in a preset is limited, the 8FX's Control Change mode '1' might work better for you. With that mode the 8FX will process Control Change messages with value 127 („switch on“) only after switching „off“ the previously selected amp or cabinet.

If you are unsure about which CC Mode works best for you, start with Mode '0'. It is also the 8FXs factory default and covers almost any case, especially if you are sending single CC messages, and not presets of several CC messages.

When programming presets of CC messages on your MIDI controller, always keep in mind that the 88S system operates according to certain rules for the switching process mentioned before. I.e. if you program a preset that sends commands to switch on two amps at a time, the 8FX will give out an error status (Er) in the display.

MIDI Control Change messages table

CC Controller Number	Function	Value
0 ... 39	AMP 1 ... 40	0=off, 127=on
40 ... 79	CAB1 1 ... 40	0=off, 127=on
80 ... 119	CAB2 1 ... 40	0=off, 127=on
126	FX LOOP	0=off, 127=on
127	SAVE	127=save

Troubleshooting

Problem: No effect signal when switching FX loop.

Make sure the FX loop of the chosen amplifier is connected correctly to the 8FXs matching FX loop. For example, if AMP1 is chosen, the SEND 1 and RETURN 1 on unit ID 1 have to be connected to the same amplifier which is connected to AMP1 INPUT and AMP1 OUTPUT of the 88S / 88S-STUDIO!

Problem: drastic volume increase or decrease in reverb or delay spillovers when switching between amplifiers with FX loop option.

The send and return levels of the connected amplifiers have to be set equally. Most often the send level is controlled by the channel volumes, sometimes a separate send level is present.

Problem: Cracking noise when switching FX on and off.

No proper grounding at the FX loop circuit. Pushing the **GND LIFT** switch will solve the issue in almost any case.

Problem: erratic behaviour when switching via MIDI Control Changes.

Check if the correct CC Mode is set (see page 10)

Problem: No function when switching via MIDI.

Check if the correct MIDI channel has been set (see page 9)

Dimensions	Front Panel: width 438mm, height 44mm, depth 143mm)
	Front Panel: width 482mm (19")
Weight	2,3kg (5 lbs)
Power consumption	3W max.

Ampete Engineering reserves the right to change specifications, wether it's technical, dimensional or in the owner's manual.



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