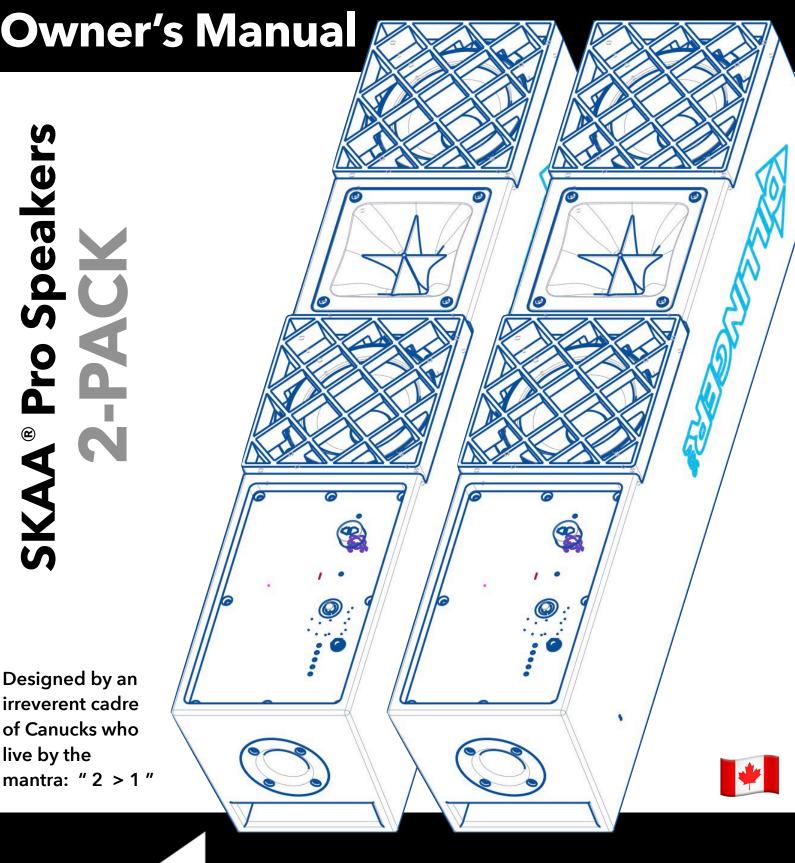
# **Death From Above**

# SKAA® Pro Speakers

Designed by an irreverent cadre of Canucks who live by the mantra: "2 > 1"





# Introduction

Thank you for choosing Death from Above ("DFA") by Dillinger Labs. DFA speakers are fully-compliant SKAA / SKAA Pro Receivers. Feed DFA from a Dani, Cassandra or any other SKAA or SKAA Pro Transmitter, or a SKAA / SKAA Pro Hub speaker like Wet Sounds Portable (WS-L), Soundboks 3, 4, Go or Electrotec Stage One. Or even from a SKAA Pro mixer such as those from Cerwin Vega. Check SKAAstore.com for more SKAA transmit options.

- Pro-grade SKAA wireless audio. 100% Bluetooth-free.
   100% WiFi free.
- Use up to 4 SKAA Receivers (any combination of Death from Above and any other SKAA Receivers) at the same time with any one SKAA Transmitter
- Remembers up to 10 of your favorite sources
- Low latency great for live performance
- Choose from 6 EQ presets
- Configure DFA's audio routing from the front panel.
   Select from LEFT, RIGHT or MONO MIX audio. Easily set up two DFAs as a stereo pair.
- DFA remembers your EQ and audio routing setups they'll be active until you change them again
- Pole mount your DFA on a DFB (Death from Below) subwoofer – they are made for each other
- Time Align function includes a selection of delays you can choose from
- Phase Flip function lets you invert the polarity of the driver to amp connection
- Tuned port extends DFA's bass response to 75 Hz
- Designed primarily to be used with subwoofers like DFB Mk2, DFA focuses on accurately reproducing 75 Hz to 20 kHz. DFA sounds fantastic, in part because it doesn't try to do what the subwoofer's good at.
- Dual crossover, true tri-amped 3-way speaker (ported with 3 separate acoustic chambers)
- Steel grilles shield radio frequencies and hence very significantly reduce the range of wireless speakers.
   And steel is heavy, too. DFA solves both of these problems by using glass fibre-reinforced PC grilles.
- Check out the Custom Shop at <u>SKAAstore.com</u> for alternative grille geometries plus white grilles you can paint and decal to make DFA uniquely your own

For the intrepid few who always wondered what this meant but were too busy kicking butt to ask ...



The SKAA® standard for wireless audio guarantees compatibility between all products bearing the SKAA Compatible Badge. It also guarantees product antenna performance by verifying reliable operating distance minimums have been met. SKAA Transmitters work with iOS & Android mobile devices, Mac & Windows computers, televisions and any product having a line output, S/PDIF output or a headphone jack.

SKAA semiconductor components enable SKAA to be embedded in consumer audio and pro audio products. Not based on Bluetooth or WiFI, SKAA is a global standard built from the ground up specifically for audio. Learn more at www.SKAA.com

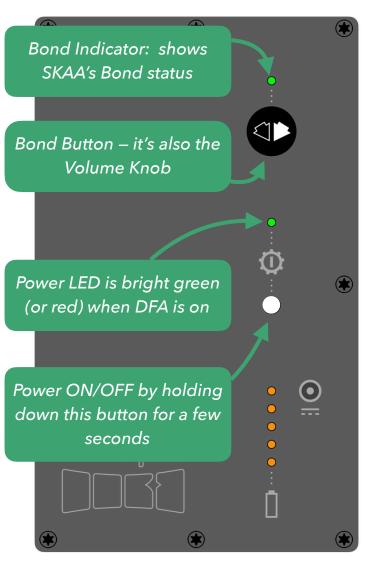
- DFA runs for 16 hours at full volume from a fully charged battery (or over 50 hours at normal listening level). Its internal battery charges in 2.5 hours (from empty); charging brick power supply included.
- Charge the internal battery while playing DFA at full volume
- Or, use the included Y cable and charge both your DFAs at the same time
- Battery fuel gauge LED stack displays battery life remaining
- A pair of DFAs pole mounted atop two DFB subwoofers is an ideal setup for the gigging mobile DJ
- Works with the (optional) SKAA cmd app

#### We like to make our products easy to use and DFA is no exception!

Yes, it's time to peel the paint. You're chomping at the bit to catalyze a visit from the local 5-0. Still, we recommend you read this Owner's Manual sometime soon. Its pages are brimming with invaluable insights, irreverent commentary, and other assorted nuggets of reality-warping revelation. We really put our foot in this one and hope you love your Death from Above SKAA Pro speaker as much as we do!

#### **QUICKSTART GUIDE**

- 1. Power ON your SKAA source. This can be your phone/tablet plus a SKAA Transmitter (such as Cassandra or Diz), or a SKAA pro Transmitter (such as Dani) plugged into a DJ deck, iPod or mixer, or a SKAA Hub like Soundboks (3, 4 or Go), Wetsounds Portable or Electrotec Stage One (in Hub mode).
- 2. Play some music through your SKAA source device and power ON your DFAs. If you don't hear your music playing through your DFAs, double click their Bond Buttons.
- 3. Turn up DFAs' volumes and check out the EQ options later in this manual
- 4. Have donuts ready for the cops



## **Getting Started**

- Power DFA ON/OFF by holding the power button down for a few seconds
- A bright Green Power LED means DFA is on
- A dim Green Power LED means DFA is sleeping
- A bright Red Power LED means DFA is on and Bonded to a SKAA Pro Transmitter
- DFA auto switches to SKAA or SKAA Pro mode, following the mode of the Transmitter DFA is Bonded to
- The Bond Button is used to connect to audio sources (SKAA Transmitters or SKAA Hub speakers) and it also doubles as the volume knob
- Turn the volume knob clockwise to increase the volume and counter clockwise to decrease it – 30 steps (clicks on the knob) will take you from zero volume to max
- Watch the Bond Indicator as you turn DFA's volume knob – it will flash once for every one of the 30 steps when it stops flashing, you've arrived at one extreme or the other
- Remember, the output level of DFA depends on both its Local Volume (DFA's volume knob) and the Global Volume set by the SKAA Transmitter (for example, Dani's volume knob)
- Global and Local volume example: say your SKAA Transmitter is set to 50% and DFA is set to 80% then the net output level will be  $0.5 \times 0.8 = 0.4 = 40\%$
- Bond Button: Triple click (click 3 times, fast) to mute DFA's output. Triple click again to unmute.
- Bond Button: Double click to search for a new Transmitter; one that's not on your DFA's Green List (favorites list). Once DFA has Bonded to a new Transmitter, its Bond Indicator will glow bright Amber.
- Bond Button: Press and hold the Bond Button for a few seconds to add an Amber-Bonded Transmitter to the Green List. The Bond Indicator will glow bright Green; DFA memorizes the Transmitter as a "favorite" and will look for it specifically the next time you power on.
- See the SKAA Receiver User's Guide later in this manual for more Bond Button / Bond Indicator functions
- Just add a Dillinger Labs Streetheart Receiver to any powered speaker (Mackie, QSC, EV, etc.) to make it SKAA and SKAA Pro compatible & add it to your setup
- DFA natively supports the professional Dani SKAA/ SKAA Pro Transmitter as well as all other SKAA and SKAA Pro wireless audio Transmitters and sources
- Check out **Sweet Hookups**; a collection of use case diagrams at the end of this manual. They're just the tip of the iceberg but we bet at least a few of them will inspire you to try some crazy-ass stuff with your DFAs.

# What if we ditched all the crap features you didn't want anyway?

My previous clothes washing machine had WiFi. Oh yeah, it had bags of features, but many of them felt contrived. It stopped washing clothes after less than 2 years due to mechanical failure. Sound familiar? Today I own a washer that's focused on getting clothes clean and staying reliable for 20 years. I'm happy; I smile every time I look at it. This is exactly the idea behind DFA.

# Spoiler ... we used the money we saved to build you a 2nd DFA speaker.

Ok, DFA is lean -so what's missing??

- Bluetooth. DFA is a SKAA speaker. Bluetooth audio is janky enough if you're running sound for a party and really freakin' janky if you're a pro DJ. So we disappeared it.
- Wired inputs and outputs. DFA has none. Audio inputs, for example, belong on your SKAA Transmitter or SKAA Hub speaker. There are lots of options for feeding audio to your DFA, including the Dani SKAA Pro Transmitter from Dillinger Labs plus Hub speakers from many brands.
- Battery Cartridge. Remember way back when mobile phones had swappable battery cartridges? But then battery life dramatically increased and swapping the battery was no longer needed. It's like that.

All will be immaterial when you set your DFAs up as a Left/Right STEREO PAIR and drop the needle. The stereo imaging will make the hairs stand up on your arms and like magic, the list of missing features will no longer matter.

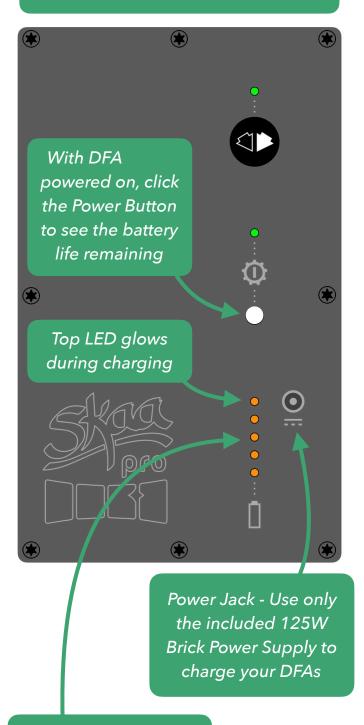
A huge THANK YOU for your purchase! Please contact us and let us know how we did! And send us a pic of you and your DFA and we'll post it on our SM. <u>dillingerlabs.com/contact</u>. XOXOXO

... the DFA dev team

- It's a 2-PACK; you can set them up as a stereo pair
- 50 hour battery life
- Stunning sound, stunning look
- 3-way acoustics, dual crossover in DSP & they're tri-amped
- Perfect top for your DFB subwoofer
- 1 knob operation
- SKAA and SKAA Pro wireless Receiver
- EQ, Phase and Time Align settings
- There's an app, but you won't need it
- Only 6.5 kg per speaker

#### You may either:

- Charge 2 DFAs at the same time (with neither playing) by using the included Y cable, or,
- 2. Charge 1 DFA and, at the same time, play that same DFA at max volume



This stylin' stack of orange LEDs is the Battery Fuel Gauge

# **Battery & Charging**

- Death From Above runs for up to 50 hours at normal listening levels, and up to 16 hours at max volume
- Some battery speakers from well-known brands waste up to 20% of their battery energy in a voltage conversion process – we think that's nuts, so we don't do it that way. We chose DFA's audio amplifiers specifically so wasteful boost conversion isn't needed.
- Use only the included Brick Power Supply for charging
- The battery will charge to full in about 2.5 hours (from fully depleted)
- You can use DFA (even at max volume) while charging. In this case make sure you are charging one speaker only.
- The Battery Fuel Gauge (LED stack) gives you a visual indication of the amount of energy remaining in the battery. When activated, it stays on for a few seconds and then automatically shuts off.
- To activate the Battery Fuel Gauge while DFA is powered on, click the power button once –this feature is disabled if external power is being supplied to DFA by the Brick Power Supply
- You will see the Battery Fuel Gauge activate whenever you power on DFA (so long as the Brick Power Supply is not connected)
- When about 3% battery capacity remains, the bottom LED in the Fuel Gauge stack will start to flash –no click on the power button is needed to get this "low battery" (flashing) alert
- DFA will power itself OFF when its battery is empty
- When DFA's battery is charging, the top LED in the stack (the one right beside the power jack) will glow, even if DFA is powered OFF
- Once charging has finished, the top LED in the stack will turn off, letting you know that DFA's battery is now fully charged
- If DFA remains not Bonded to a SKAA Transmitter for an extended period of time, it will enter a power saving sleep mode (DFA's power LED will be dim Green during sleep)
- If the Brick Power Supply is plugged in, DFA will stay in sleep perpetually until Bond is restored, but if the Brick Power Supply is NOT supplying external power, DFA will eventually automatically power itself OFF
- Keep in mind that DFA's cascade into sleep and possibly auto OFF is triggered solely by loss of Bond
- Years down the road, your DFA may benefit from a new battery pack. We'll have replacement packs available on <u>SKAAstore.com</u> along with a helpful video on how to swap them.

# The Details ... Sweated

3-Way & Tri-Amped

a 36W amp for the mid woofer

for the tweeter

a 72W amp for the bass woofer

> one-knob control

6 EQ presets



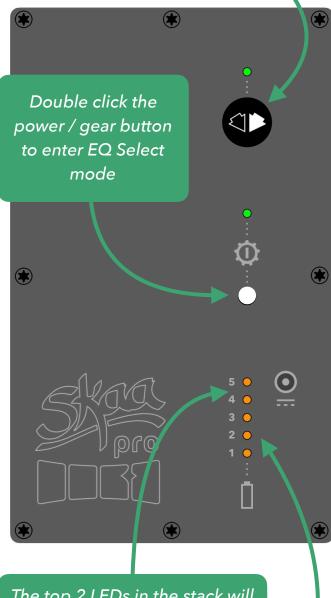




monkey grip handle auto switches between SKAA and SKAA P. downward firing bass reflexbort tripod morning for pole and

It's best to use these Power User Features while NOT charging; charging also uses the LED stack.

While in EQ Select mode, turn the volume knob to select one of six available EQ presets



The top 2 LEDs in the stack will flash to let you know you've successfully "2x clicked" and entered EQ Select mode

Watch the LED stack change as you turn the volume knob

#### **EQ** Select

- EQ Select mode lets you pick from 6 different filter and equalization presets so you can customize the crossover point with your subwoofer as well as sculpt the overall character of your DFA's sound
- Double click the Power/Gear button to enter EQ Select mode (press and release twice, quickly)
- The top 2 LEDs in the LED stack will flash to let you know that your 2x click command was recognized and you're now in EQ Select mode
- Turn the Volume Knob while watching the LED stack to rotate through DFA's six EQ presets

LED	EQ	DESCRIPTION
5	OUTSHINED	Like OUTSIDER, but with a brighter top end for huge, wide-open outdoor venues
4	OUTSIDER Great for most outdoor gigs.	
3	INSIDE SCOOP	Similar to INSIDER, but with some lower mids scooped out
2	This is DFA's factory default setting indoors when you want a flat res	
1	UNFATHOMABLE Similar to BOTTOMLESS, but with EQ applied to sculpt the bottom end	
OFF	BOTTOMLESS	For indoor use when you DON'T have a DFB (or other) subwoofer

- Each EQ preset also includes a high-pass filter; see the **Specifications** page for the filter details, including exact cutoff frequencies
- Experiment with all 6 EQ settings and trust your ears remember, if it sounds good, it **is** good
- If you're using DFA with a subwoofer such as DFB (recommended), be sure to use EQs 2 to 5 in order to help avoid comb filtering artifacts
- 10 seconds after you stop turning the volume knob, DFA will exit EQ Select mode and return to normal operation
- DFA will remember your chosen EQ preset.
   Even if you power your speaker off and on, your selected EQ preset will remain active until you use this function to select another one.
- New out of the box, your DFA is set to INSIDER (EQ 2)
- Doing a Factory Reset on your DFA (6x click on the Bond Button) will reset the EQ to its Factory Default (INSIDER = EQ 2)

It's best to use these Power User Features while NOT charging; charging also uses the LED stack.

While in Phase Flip mode, turn the volume knob to select one of two available settings



successfully "3x clicked" and

entered Phase Flip mode

Watch the LED stack change as you turn the volume knob

## **Phase Flip**

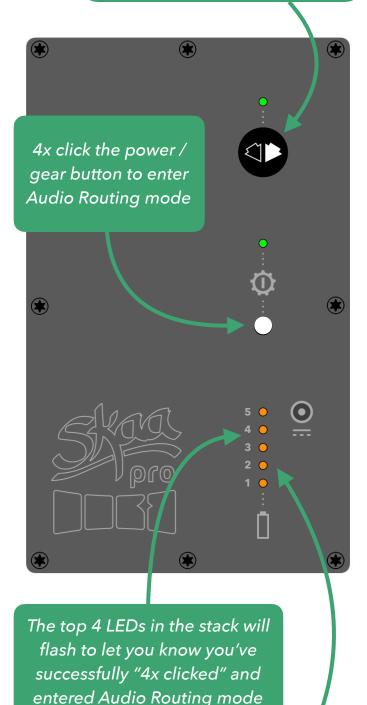
- Phase Flip mode lets you invert the polarity of DFA's output
- Set your desired EQ and Time Align first, then play music through all your DFAs and subwoofers and have a buddy stand in the typical listening area and give you feedback. Try both Phase Flip settings and ask your listener buddy which setting sounds "fuller".
- 3x click the Power/Gear button to enter Phase Flip mode (press & release 3 times, quickly)
- The top 3 LEDs in the LED stack will flash to confirm your 3x click command was recognized and you're now in Phase Flip mode
- Turn the Volume Knob while watching the orange LED stack to rotate through DFA's two Phase Flip options:

LED	Phase	DESCRIPTION	
5	•	NOT USED	
4	4 - NOT USED		
3	•	NOT USED	
2	- NOT USED		
1	FLIP	Invert Polarity 180°	
OFF	NO FLIP	Don't Invert Polarity	

- Normally, you'll want to keep your DFAs set to NO FLIP (all orange LEDs off)
- 10 seconds after you stop turning the volume knob, DFA will exit Phase Flip mode and return to normal operation
- DFA will remember your Phase Flip setting.
   Even if you power your speaker off and on, your selected Phase Flip setting will remain active until you change it by using this function again.
- New out of the box, your DFAs are set to NO FLIP.
- Doing a Factory Reset on your DFA (6x click on the Bond Button) will reset Phase Flip to its Factory Default setting (NO FLIP)

It's best to use these Power User Features while NOT charging; charging also uses the LED stack.

While in Audio Routing mode, turn the volume knob to select one of three available routings



Watch the LED stack change as you turn the volume knob

## **Audio Routing**

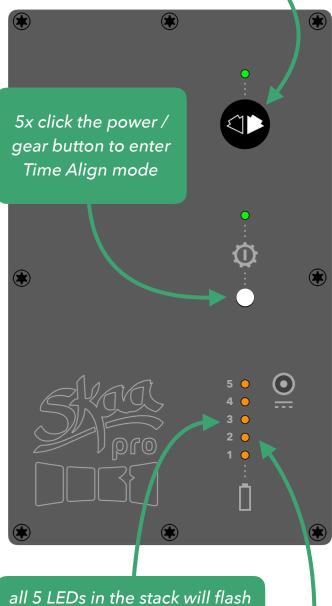
- Audio Routing mode lets you pick from 3 different Audio Routing options
- 4x click the Power/Gear button to enter Audio Routing mode (press & release 4 times, quickly)
- The top 4 LEDs in the LED stack will flash to confirm your 4x click command was recognized and you're now in Audio Routing mode
- Turn the Volume Knob while watching the orange LED stack to rotate through DFA's three Audio Routing options

LED	ROUTING	DESCRIPTION
5		NOT USED
4	LEFT	SKAA channel 1 (LEFT) is routed to DFA's amplifiers and output
3	RIGHT	SKAA channel 2 (RIGHT) is routed to DFA's amplifiers and output
2	MONO	SKAA channels 1 & 2 (L & R) are mixed together, sent to DFA's amps and output
1	-	NOT USED IN DFA. In stereo devices like Streetheart, the lowest LED means STEREO.

- Since DFAs come in a 2-pack, try setting up a stereo pair (set one of your DFA's Audio Routing to LEFT and set the other one to RIGHT).
- Try this with 2 towers (2x DFA pole mounted atop 2x DFBs, for example). And for fun, set the DFBs up as a stereo pair, too. Just be sure you have a clean pair of underwear handy.
- Another reason you may want to set your DFAs to LEFT and RIGHT is if you're transmitting 2 different audio programs on SKAA's 2 channels (for example, 2 different music playlists for 2 different rooms)
- 10 seconds after you stop turning the volume knob, DFA will exit Audio Routing mode and return to normal operation
- DFA will remember your Audio Routing setting. Even if you power your speaker off and on, your selected Audio Routing will remain active until you use this function to select another one.
- New out of the box, your DFA is set to MONO (indicated by LED 2 being on).
- Doing a Factory Reset on your DFA (6x click on the Bond Button) will reset Audio Routing to its Factory Default (MONO = LED 2)
- The SKAA cmd app can also set Audio Routing

It's best to use these Power User Features while NOT charging; charging also uses the LED stack.

while in Time Align mode, turn the volume knob to select one of six available settings



to let you know you've successfully "5x clicked" and entered Time Align mode

watch the LED stack change as you turn the knob

## **Time Align**

- Time Align mode lets you pick from 6 different delay settings, including OFF (no delay added)
- 5x click the Power/Gear button to enter Time Align mode (press & release 5 times, quickly)
- All 5 LEDs in the LED stack will flash to confirm your 5x click command was recognized and you're now in Time Align mode
- Turn the Volume Knob while watching the orange LED stack to rotate through DFA's six Time Align settings

LED	TIME ALIGN SETTING	
5	add 11 milliseconds delay	
4	add 7 milliseconds delay	
3	add 4 milliseconds delay	
2	add 2 milliseconds delay	
1	add 1 millisecond delay	
OFF	NO DELAY ADDED	

- Experiment with different settings to find what sounds good in your situation. Align with your other speakers bang on, or try DFA ahead or behind the others by a few ms for an epic "huge" sound. Trust your ears. As a general rule, top speakers like DFA should be ahead (delayed less) versus subwoofers.
- Generally, you'll want your 2 DFAs to have the same Time Align setting. Having said that, setting them a 1 or 2 ms apart can be used to create a Phased Array which can be used to "beam" audio in a particular direction. It's fairly easy to search for and find videos on the internet for how to do this.
- When you use DFA with a DFB sub, try setting DFA to time align 0 and DFB to preset 2, 3 or 4 to get the treble arriving just ahead of the bass
- When using DFA alongside Soundboks 3, 4 or Go, try setting DFA to Time Align 2, 3, 4 or 5. Use whichever setting sounds the most "sync'd up".
- 10 seconds after you stop turning the knob, DFA will exit Time Align mode and return to normal operation
- Even if you power your speaker OFF and ON, your selected Time Align setting will remain active until you use this function to select another one.
- New out of the box, your DFAs are set to NONE
- Doing a Factory Reset on your DFA (6x click on the Bond Button) will reset the Time Align setting to its Factory Default (OFF)

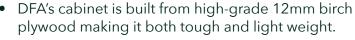
# **The Cabinet**

Dual woofers reproduce mid and bass bands separately

Dual
lightweight
speaker grilles,
shot in ultratough PC,
reinforced with
glass fibre

Downward firing bass reflex port tuned to 75 Hz





- 5 of 6 of DFA's walls are featureless and very resilient to impacts. DFA's front is protected by two robust grilles and an inset, 3mm thick aluminum user panel.
- Gorgeous and robust speckle-paint matte black finish – yes, the classy one – it's beautiful, tough and LIGHTWEIGHT
- DFA's large L-shaped rubber feet help protect it during transport and also provide an air gap for the port to be able to breathe, in a pinch, if you're playing DFA while it's sitting on the floor.
- But we really recommend using DFA on a pole, tripod or short stand to get the best sound. See <u>SKAAstore.com</u> for great options for getting your DFAs "up off the floor"



Monkey grip handles reduce weight

> 12 mm baltic birch plywood cabinet with gorgeous black speckle coat finish

1-3/8" (35mm) steel pole bushing

> 10 mm thick feet protect DFA and raise it up off the floor

- Pop DFA up on just about any industry-standard 1 3/8" (35mm) speaker tripod (not included) to get it up off the ground
- Or even better, use a speaker pole (available at most music shops and at <u>SKAAstore.com</u>) atop of DFB (or almost any subwoofer)
- Your DFAs' monkey grip handles enable serious manhandling while literally reducing DFA's weight at the same time – these handles are designed to let you easily carry 2 DFAs; one in each hand
- Weather resistant DFA is good to go, regardless of where and when your gig is happening – we put the port exit on the bottom for a reason!
- Gorgeous 3mm-thick anodized aluminum control panel. It's hefty to make DFA tough, and it doubles as a massive heat sink for DFA's multiple audio amplifiers. With a heat sink this big, DFA can actually deliver the full rated amplifier wattage to your cottage.

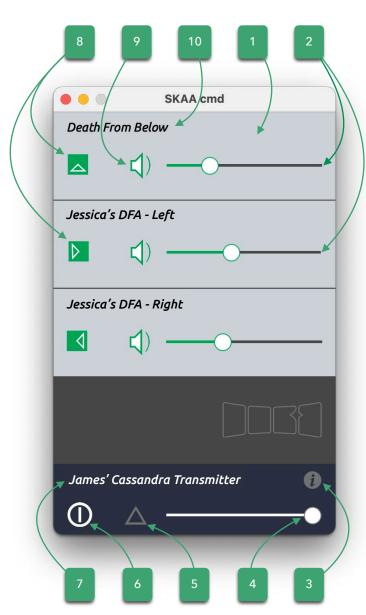
# SKAA cmd

SKAA cmd ("SKAA command") is <u>The App You Don't Really Need</u>. If you never download it, never install it, and never launch it, your DFA will still work just hunky dunky. But once you learn about what SKAA cmd can do, you might just *want* it...

SKAA cmd adds a long list of features to your SKAA setup. Use it with Cassandra, Diz and Ursula Transmitters. Add custom names to Receivers, easily mute any or all of your Receivers, adjust individual volumes, see which Receivers are Bonded to your Transmitter and more.

The SKAA cmd App is available for iOS, Android, Mac, and Windows. Download it from Apple's App Store, Google Play, and at **SKAA.com/TLC**.

Check out the SKAA cmd App User's Guide, also on



- 1. Each Transmitter has 4 bays you can Bond a single Receiver or a Cluster into each bay
- 2. Slide a fader to change the volume of a Receiver its volume is also affected by No. 4.
- 3. Click the "i" ball to see the SKAA cmd app version and the Transmitter firmware version
- 4. Global volume control. This fader affects volume on all Bonded Receivers.
- 5. Mute Macro: clicking this triangle is a quick way to mute all Bonded Receivers. Click each Receiver's speaker icon individually to unmute and get audio playing again.
- Transmitter Power Mode RED: Always ON GREY: Always OFF

WHITE: ON only when there is audio

- 7. Click to edit the name of your Transmitter
- 8. Audio Routing: The Green Bond Block lets you choose whether a Receiver is playing Left, Right, Mono Mix or Stereo audio. Since DFA is a single-channel device, the stereo option is hatched out (disabled in DFA). From the factory, DFA is configured for Mono Mix audio (that's the icon with a downward firing speaker). Make one DFA Left and another DFA Right if you want a stereo pair.
- 9. Click to mute this Receiver. Click again to unmute.
- 10. Click to edit the name of your Receiver

**Specifications** 

rameter	Conditions	Value
Cabinet Construction		12mm birch plywood, black speckle finish, candy apple red ABS grilles, large L-shaped rubber feet
General Topology	Crossover, all EQs and filters implemented in Analog Devices DSP	144W RMS, 3-way mono speaker, 3 acoustic chambers, ported, dual DSP crossover, tri-amp'd
Battery Capacity	Built-in battery pack, lifetime 750 charge/discharge cycles	Li-ION 6S 2P pack, 21.9VDC nominal LMC: 99.65 Wh
Run Time	Normal listening	Up to 50 hours
Run Time	Full Volume Up to 16 Hours	
Charge Time	From Empty	2.5 Hours
Amplifier Power	Bass channel (DFA is tri-amp'd)	72 W RMS (1 x 72W Infineon Amplifier)
Amplifier Power	Mid channel (DFA is tri-amp'd)	36 W RMS (1/2 x 72W Infineon Amplifier)
Amplifier Power	Horn channel (DFA is tri-amp'd)	36 W RMS (1/2 x 72W Infineon Amplifier)
Amplifier Type		3-channel, Multi-rail Class D, I2S input, I2C gain
Heat Sink	Direct connected by aluminum block	215 x 130 x 3 mm aluminum plate to amp heat sin
Bass Woofer		40W RMS 60W Peak, 4 $\Omega$ , 138mm, 55Hz to 2kHz
Mid Woofer		30W RMS 60W Peak, $4\Omega$ , 138mm, 200Hz to 4kHz
Horn Tweeter		20W RMS 60W Peak, $4\Omega$ , 25mm, 2 kHz to 20 kHz
Port		1 bass reflex port, downward firing, tuned to 75 Hz
Crossover	Implemented in Analog Devices DSP	500 Hz (bass / mid) and 4000 Hz (mid / treble). Linkwitz-Riley 24 dB/octave LPF and HPF filters
<b>Acoustic Max Output</b>	Music program at 1m, A-weighted	122 dB SPL
Frequency Response	EQ 2, Ref: 997Hz @ 1W, AES17 LPF	55 Hz - 20 kHz +/- 3dB
THD+N	55 Hz - 20 kHz	< 0.15%
SNR	A-weighted, Ref: 997Hz @ 1W	83 dB
<b>Digital Resolution</b>	Each of 2 available SKAA channels	48 kSamples/s, 16 bit
Antenna Type		FE Model B0
RF Power	Maximum	+18 dBm
Wireless Range	Actual range depends also on the antenna performance of Transmitter	Up to 50 meter reliable range
Inputs	SKAA OS 2.1 and later	Any SKAA or SKAA Pro wireless audio source
Standard Compatibility	SKAA OS 2.1 and later	Any SKAA or SKAA Pro Transmitter, any Nadja Hub
Transport Latency	I2S Digital to I2S Digital, SKAA	36.71ms +/- 1.5 samples
(cont.)	I2S Digital to I2S Digital, SKAA Pro	19.39ms +/- 1.5 samples
	Concurrent DFAs per Transmitter	4 (SKAA Transmitter) or 2 (SKAA Pro Transmitter)
Dimensions With Feet (H×W×D)	1 DFA speaker, including feet	685 x 149 x 158 mm
Dimensions W/O Feet (H×W×D)	1 DFA speaker, not including feet	675 x 149 x 158 mm
Mass	1 DFA speaker, no power supply	6.54 kg
Weight	1 DFA speaker, no power supply	14.4 lbs
Power Supply Rating	External floor brick type	Input: 100-240 VAC, 50/60Hz, Output: 26V 125W

# **Specifications (continued)**

EQ Preset	High-pass filter	Contour Shape Description
5 Outshined	90 Hz Chebyshev Type 1	Like Preset 4 but with boosted highs for very large wide-open spaces
4 Outsider	90 Hz Chebyshev Type 1	For outdoor use
3 Inside Scoop	70 Hz Chebyshev Type 1	Like Preset 2 but with EQ applied to carve out some midrange
2 Insider	70 Hz Chebyshev Type 1	DEFAULT setting – a flat, balanced response for indoor venues
1 Unfathomable	55 Hz Chebyshev Type 1	Like Preset 0 but with EQ applied to contour the bass
0 Bottomless	55 Hz Chebyshev Type 1	When you want to use your DFAs without a subwoofer

# **Power/Gear Button Function Summary**

User Action	Function	LED Stack Feedback upon Entering Mode	Turn Volume Knob to make Selection	Display
Hold	Power on/off	None	No	Power LED turns on/off
Click	Fuel Gauge	None	No	LED stack shows battery energy remaining User can also Click to exit below 4 modes (confirm selection and exit)
2x Click	EQ Select *	Top 2 LEDs flash twice	Yes	LED 5 = Outshined LED 4 = Outsider LED 3 = Inside Scoop LED 2 = Insider LED 1 = Unfathomable None = Bottomless
3x Click	Phase Flip *	Top 3 LEDs flash twice	Yes	LED 1 = Invert Output Polarity No LED = Don't Invert Output Polarity
4x Click	Audio Routing *	Top 4 LEDs flash twice	Yes	LED 4 = Left (output SKAA ch1 only) LED 3 = Right (output SKAA ch2 only) LED 2 = Mono (output sum ch1+ch2)
5x Click	Time Align *	All 5 LEDs flash twice	Yes	LED 5 = Add 11 ms Delay LED 4 = Add 7 ms Delay LED 3 = Add 4 ms Delay LED 2 = Add 2 ms Delay LED 1 = Add 1 ms Delay None = No Delay Added

<sup>\*</sup> See the associated **Power User** page earlier in this manual for detailed information about this function.

#### SKAA® RECEIVER USER'S GUIDE

Each SKAA receiver uses a *Green List* to remember your *favourite* audio sources (SKAA transmitters). A Green glowing Indicator on your receiver means you are listening to a favourite, or hunting for one. You can also *explore* to find new transmitters—an Amber Indicator means you are *exploring* for transmitters which are not on your Green List. The The Bond Button on your receiver lets you select which audio source (SKAA transmitter) you're listening to.

#### **Essentials**

Button	Command	Indicator
Hold a few seconds	Add / Delete Manually add / delete the current transmitter to / from your Green List	to = Added (flash) = Deleted
-	Auto Add SKAA will automatically add the current Amber transmitter to your Green List if you listen to it for 30 minutes	to = Added
1 Click	<u>Green Mode</u> Rotate through your list of favourite transmitters (Green List) — when a favourite transmitter is found, the search stops and audio plays from that transmitter	<pre>(dim) = Hunting (flash) = Next one (bright) = Bonded</pre>
2 Clicks	Amber Mode Explore for new, unknown transmitters (ones which are not already on your Green List)	(dim) = Hunting (bright) = Bonded

#### **More Commands**

	Command	Indicator
3 Clicks	Mute do again to Unmute; any Click command will first Unmute and then do its function	O, Or O = Muted (slow flash)
4 Clicks	Red Mode If you have 2 or more transmitters on your Green List, power on just the one you want to hear and it plays automatically.	(dim) = Hunting (bright) = Bonded
6 Clicks	Factory Reset Clear Green List. Start Over!	(flash) = Reset Done
Hold during power on	<ul> <li>Make a Cluster of Receivers:</li> <li>1. Power off all transmitters and receivers</li> <li>2. Power on the Master receiver while holding down its Bond Button—hold the button down until the Indicator begins to flash Red</li> <li>3. With the remaining receivers within 3 meters of the Master receiver, power on the first one, wait for its Indicator to flash Red and then power on the second one; continue until all of them are powered on</li> <li>4. Once all of the Indicators stop flashing (turn solid Red), power off all of the receivers</li> </ul>	<ul> <li>(flash) = Receiver has entered 'Cluster Up' mode</li> <li>(bright) = The Cluster has been successfully made</li> </ul>

#### **QUESTIONS AND ANSWERS**

Question	Answer
How does the Green List work?	You can store up to 10 SKAA transmitters on your Green List. These are your "favourite" audio sources. Every time you add a transmitter, it is assigned the first open spot on the Green List. When you single click the bond Button, the receiver hunts through the Green List much like a car radio hunts for radio stations when you press seek. If the Indicator is dim Green and flashes every few seconds, this tells you the receiver is hunting through the Green List. Say you have 5 transmitters on your Green List; your receiver will hunt through the list one by one: 1, 2, 3, 4, 5 and then back to 1 and so on. The dim Green Indicator flashes every time the receiver moves to the next spot on the list. This hunting goes on for up to 1 minute. If your receiver doesn't find any of your favourite transmitters, it stops hunting and just waits for the last bonded favourite. If your receiver does find one of your favourite transmitters, the hunting stops, the Indicator turns bright green, and your receiver starts playing audio from that favourite. A dim Green Indicator that is NOT flashing means the receiver is just sitting on one spot, waiting for a specific favourite transmitter to show up.
How do I bond with a specific Green transmitter?	Play audio from your source device and ensure it has a SKAA transmitter connected. Click the Sound Button on your receiver. The receiver hunts through the Green List, flashing the Indicator as it goes. Once your receiver finds one of your favourite transmitters, it bonds to it and plays audio from that transmitter. If that isn't the transmitter you wanted, click the Bond Button once more. Repeat until your receiver bonds with the transmitter you want and you're hearing the correct audio playing.
How do I select transmitters if I can't reach my Bond Button?	Say you want to put your receiver on a high shelf where you can't reach the Bond Button easily. First, set up your Green List: add all of the transmitters you'll want to use. Then 4-click the  Bond Button to enter Red Mode. Now put the receiver up on the high shelf. Power on just one of your transmitters and power off all others. The receiver automatically bonds to the transmitter that's on.
How do I delete a transmitter from my Green List?	Factory Reset (6 Clicks of the Bond Button) clears the Green List and lets you start over from scratch. If however, you'd like to delete just one transmitter from your Green List, first bond your receiver to the transmitter you wish to delete. See the section above: How do I bond with a specific Green transmitter? Once you are bonded to it, hold down the Dond Button for a few seconds until you see the Indicator flash Red –this Red flash means the transmitter has been deleted.
What is a Cluster?	Clusters are an optional convenience for "power users". A Cluster is several SKAA receivers behaving as one product. A left & right speaker pair, for example, or a sound bar and subwoofer.
What is the Master receiver?	In any Cluster, there is a single Master receiver, and all of the other receivers in the Cluster follow its behaviour. You can control the entire Cluster by operating the The Bond Button of the Master. A receiver must have a physical Bond Button in order to become the Master.
How do I "uncluster" several receivers?	Do the Make a Cluster of Receivers procedure once for each receiver, but omit Step 3. Do them one at a time. This gives each of the receivers a functioning () Bond Button, and each of them will thereafter operate independently.
What are some tips for making Clusters?	Each step in the Make a Cluster of Receivers procedure has a 10-second time limit. When you see the Master's Indicator start to flash Red, you have 10 seconds to power on the next receiver. When that receiver's Indicator starts to flash Red, you have 10 more seconds to power on the next one, and so on.
Why does only one of my Bond Buttons work?	When you make a Cluster from several receivers, the first one powered on in the Make a Cluster of Receivers procedure becomes the Master of the Cluster. Only the Master's Decause a Cluster uses just one Green List—the Master's Green List. The Bond Button of each of the other receivers will work only for the Mute / Unmute function (3-Click of the Bond Button).
Can any group of receivers be made into a Cluster?	No. The receivers must be members of the same product family. If they are not, the Make a Cluster of Receivers procedure won't work. This is because only receivers which were designed to work together (as a single product) can be made into a Cluster.

# **Important Information**

Read the following information carefully. Failure to follow these safety guidelines may result in personal injury or user dissatisfaction.

- 1. Use the monkey grip handles cut into the top/rear plywood wall to lift your DFA safely.
- 2. Do NOT poke the woofers. They don't like it.
- 3. Never place anything into DFA's tuned port.
- 4. Only use the provided Brick Power Supply for charging your DFAs. If you're charging both DFAs at the same time using the included Y cable, do so with the DFAs turned off (not playing audio).
- 5. Never store or operate DFAs near a heat source.
- 6. Do not charge DFAs during electrical storms.
- 7. If you're always using a DFA with its Brick Power Supply plugged in, make a point of running it on its battery at least once a month. Down to 3 LEDs on the fuel gauge is enough. This will extend battery life.
- 8. Listening to one or more DFAs at maximum volume may lead to hearing loss or partial hearing loss. We do not recommend listening with volume over 80% within 4 meters of your DFA(s).
- 9. Not for use by children under the age of 12.
- 10. Any disassembly of your Death from Above speaker will void y<mark>our warrant</mark>y.
- 11. When using DFA with poles and tripods, use only 1-3/8" steel poles from a brand you trust. Dillinger Labs has a really nice pole for a good price. See <u>SKAAstore.com</u> for details.

This Owner's Manual is being continuously improved with the most up-to-date and accurate information on DFA. Please check our **website** for the most recent version.

Have questions or comments about Dillinger Labs products? We want to hear from you! Reach out to us here.

Check out SKAA's YouTube channel for great how-to vids.

# Setting up a Soundboks Hub with DFA Satellites

# Hub speaker

Click the button to set Soundboks' mode to:

Host

In this mode the Soundboks will act as a SKAA Transmitter (what we call a Hub speaker) relaying its own audio to up to 4 additional Satellite Speakers (for a total of up to 5 speakers)

Double click the Bond Button on your DFA speakers to Bond them to the Soundboks Hub. The DFAs are now satellites to the Soundboks Hub.

# SKAA or SKAA Pro operation

- Use the Soundboks App on your phone to set your Hub speaker (Soundboks speaker in Host mode) to SKAA or SKAA Pro mode (all downstream Bonded speakers will automatically follow the mode of the Hub)
- SKAA mode Bond up to 4 more speakers at standard low latency (for a total of 5 speakers in the SKAA network)
- SKAA Pro mode Bond up to 2 more speakers at ultra-low latency (for a total of 3 speakers in the SKAA network)

# Soundboks speaker models

- The following Soundboks speakers will work for use cases detailed in "The Sweet Hookups" section of this manual with the exception of use cases which depend on K mode:
- Soundboks 3
- Soundboks 4
- Soundboks Go (will support all those use cases that do not depend on combo [XLR/TRS] jacks)

# Setting up a Wet Sounds Portable Hub (model WS-L) with DFA Satellites

## Hub speaker

Click the button on your WS-L to set its mode to Bluetooth Relay (WS-L has 3 modes, so this may take more than one click);

both the Bluetooth icon and the Relay icon must be lit up:



In this mode the WS-L acts as a SKAA Transmitter (what we call a Hub speaker) relaying its own audio to up to 4 additional Satellite Speakers (for a total of up to 5 speakers)

Double click the Bond Button on your DFA speakers to Bond them to the WS-L Hub. Your DFAs are now Satellites to the WS-L Hub.

## Supported Use Cases

- The Wet Sounds Portable model WS-L speaker supports all use cases shown in this manual which do not require wired audio input to the Hub speaker
- The Wet Sounds Portable model WS-L speaker supports all use cases which do not require the Hub speaker transmitting in SKAA Pro mode (note the WS-L does support SKAA Pro mode when it is operating as a SKAA Receiver)
- The Wet Sounds Portable model WS-L speaker supports all K-mode use cases

# Setting up an Electrotec Stage One with DFA Satellites

## Hub speaker

Click the power/gear button on your Electrotec Stage One speaker to set its mode to Bluetooth Relay or Aux Relay mode (Stage One has 4 operating modes so this may take more than one click):



The Relay icon to the left of the above LED indicators means that in these two modes, the Stage One speaker acts as a SKAA Transmitter (making the Stage One into what we call a Hub speaker) relaying its own audio to up to 4 additional Satellite Speakers (for a total of up to 5 speakers)

Double click the Bond Button on your DFA speakers to Bond them to the Stage One Hub. Your DFAs are now Satellites to the Stage One Hub.

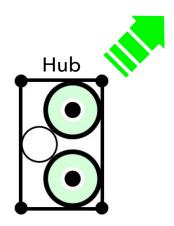
# SKAA or SKAA Pro operation

- Triple click the Power/Gear button on Stage One to change between SKAA (power LED = white) and SKAA Pro (power LED = red)
- SKAA mode Bond up to 4 more speakers at standard low latency (for a total of 5 speakers in the SKAA network)
- SKAA Pro mode Bond up to 2 more speakers at ultra-low latency (for a total of 3 speakers in the SKAA network)

## Supported Use Cases

 Stage One supports all use cases shown in "The Sweet Hookups" section of this manual

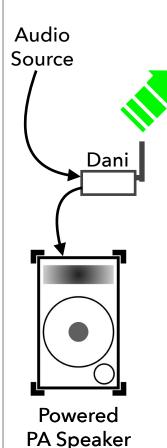
# Hub speakers have SKAA Transmitters built in



#### For example:

- Soundboks 3 (in Host mode)
- Soundboks 4 (in Host mode)
- Soundboks Go (in Host mode)
- Wet Sounds Portable (in Bluetooth Relay mode)
- Electrotec Stage One (in Bluetooth Relay mode)
- Electrotec Stage One (in Aux Relay mode)
- Plus others
- Check models to find out what inputs are supported

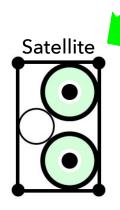
# and you can always cook your own Hub ...



#### The do-it-yourself Hub:

- Use any powered PA speaker (Mackie, EV, QSC, JBL, etc.)
- Add a Dani SKAA/SKAA Pro Transmitter
- Daisy chain your audio source into Dani's inputs and then out from Dani's thrus to the PA speaker (use TRS patch cables)
- Enables you to both hear the audio and transmit it to up to 4 Satellites
- Not as good as a speaker with SKAA Hub function built in (eg. Soundboks, Electrotec and Wet Sounds speakers) because:
  - i. Bluetooth input is not supported
  - ii. There's no latency compensation to exactly time align the wired speaker with the wireless ones

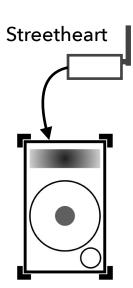
# Satellite speakers have SKAA Receivers built in



#### For example:

- Soundboks 3 (in Join mode)
- Soundboks 4 (in Join mode)
- Soundboks Go (in Join mode)
- DFA is a satellite speaker (always a SKAA Receiver)
- DFB is a satellite speaker (always a SKAA Receiver)
- Electrotec Stage One (in SKAA mode)
- Wet Sounds Portable (model WS-L in SKAA mode)
- And many others

# and you can always grow your own Satellite ...



**Powered** 

PA Speaker

The do-it-yourself Satellite:

- Use any powered PA speaker (Mackie, EV, QSC, JBL, etc.)
- Add a Streetheart SKAA/SKAA Pro Receiver
- Connect Streetheart's outputs to the PA speaker using 1 or 2 TRS patch cables
- Not quite as slick as a speaker with SKAA receive capability built in (Soundboks, Electrotec, Wet Sounds speakers all have SKAA receiver capability built in)

# **The Sweet Hookups**

- Here are a few ideas for how you can use your new DFAs and how they can network seamlessly with the rapidly growing ecosystem of SKAA-based products from Dillinger Labs, Soundboks, Wet Sounds, Electrotec, Cerwin Vega, Trulli and other great brands
- Think of each of these as an idea; some inspiration, or a starting point you can add to or subtract from as you wish







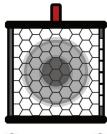




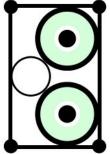
Mode	Receivers	Latency
SKAA	4	36 ms
SKAA Pro	2	19 ms

DFA: always a SKAA Receiver (ie. a Satellite)

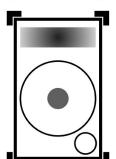




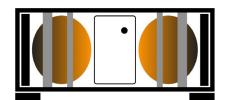
SKAA Speaker (Hub or Satellite)



SKAA Speaker (Hub or Satellite)



any powered speaker



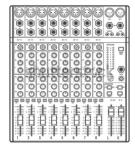
SKAA subwoofer (DFB or other)



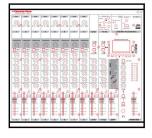
**SKAA Transmitter** 



SKAA Pro Transmitter or Receiver



any mixer

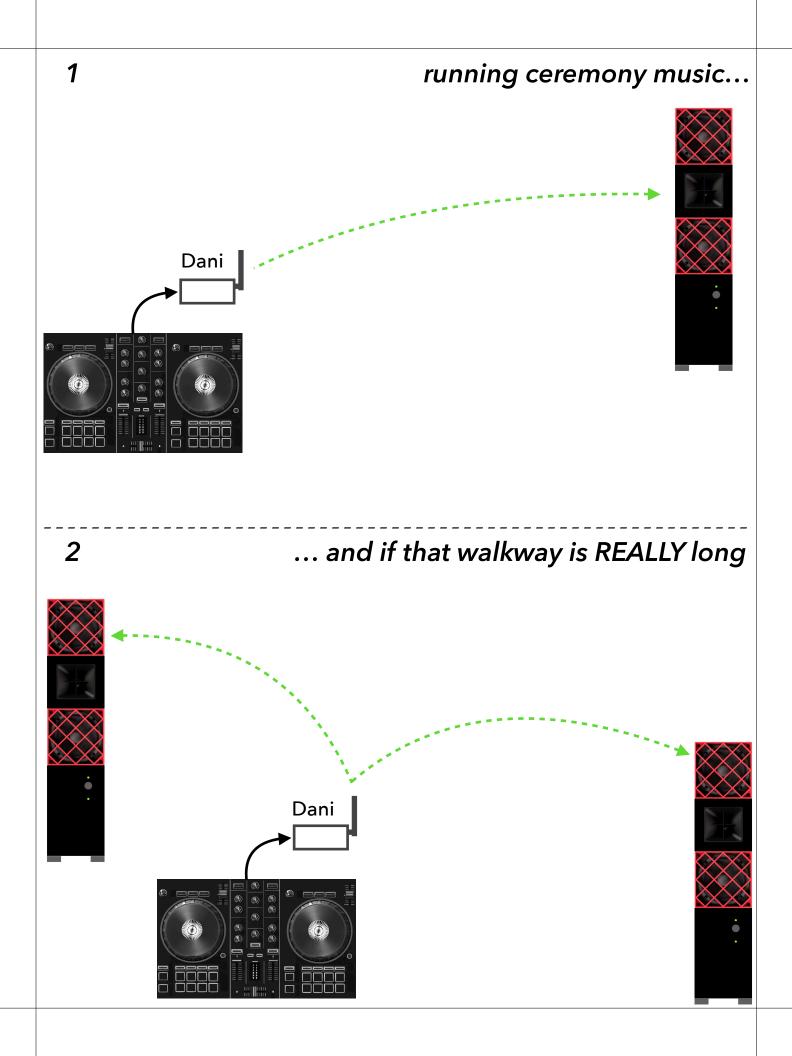


SKAA mixer

# **Sweet Hookups ... Contents**

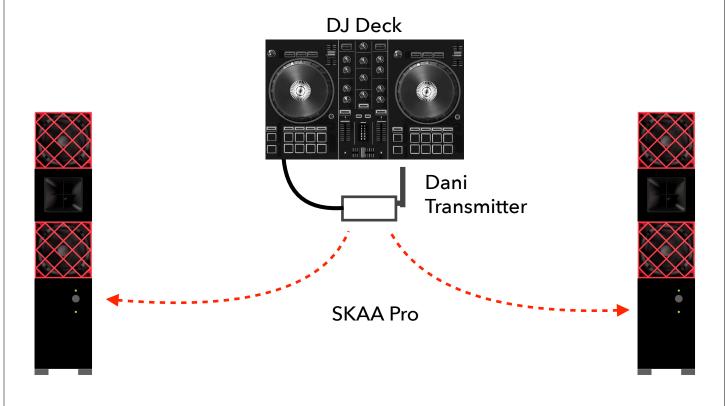
Hookups	Category	
1 - 26	Pro DJ	
27 - 48	Music & Party	
49 - 58	Deckless DJ	
59 - 72	Studio & Recording	
73 - 94	PA & Live Sound	
95 - 130	Movies, TV, Social Media & Games	
131 - 152	Talk and Sing with Mics	
153 - 190	Instruments & Jams	
191 - 200	Creator	
201 - 214	Yard & Pool	

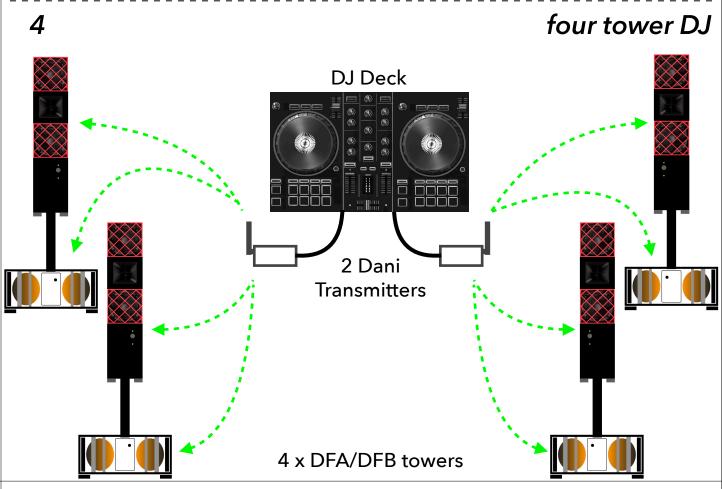
# Pro DJ

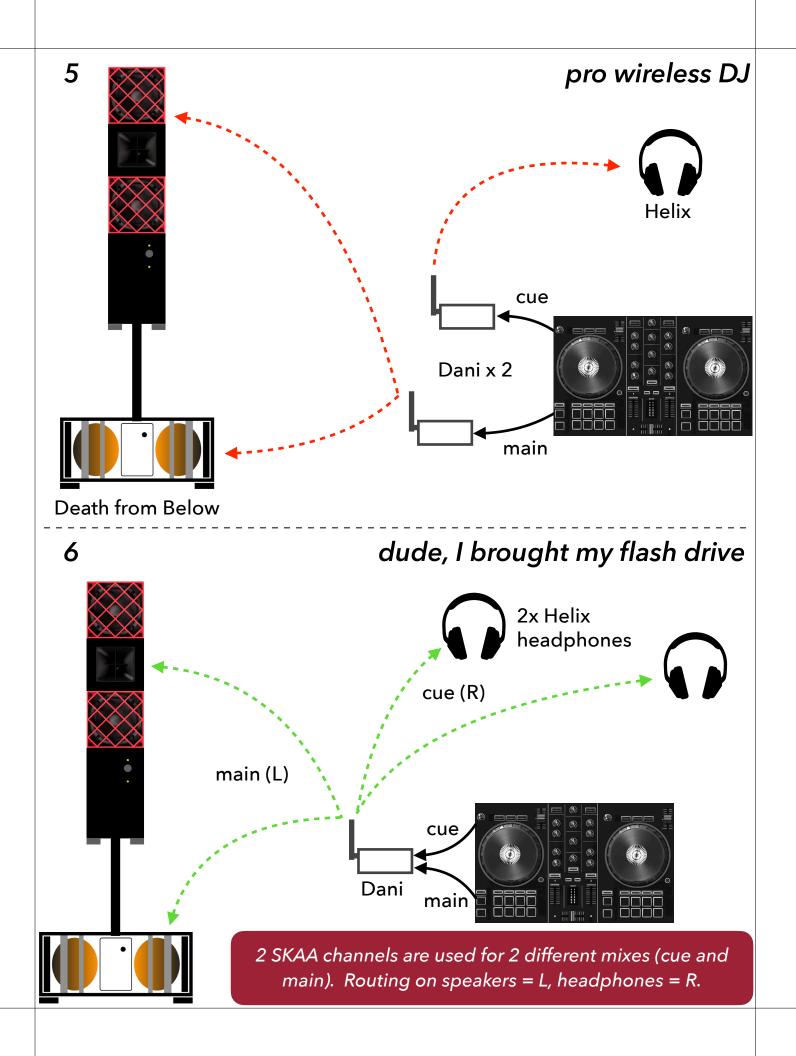


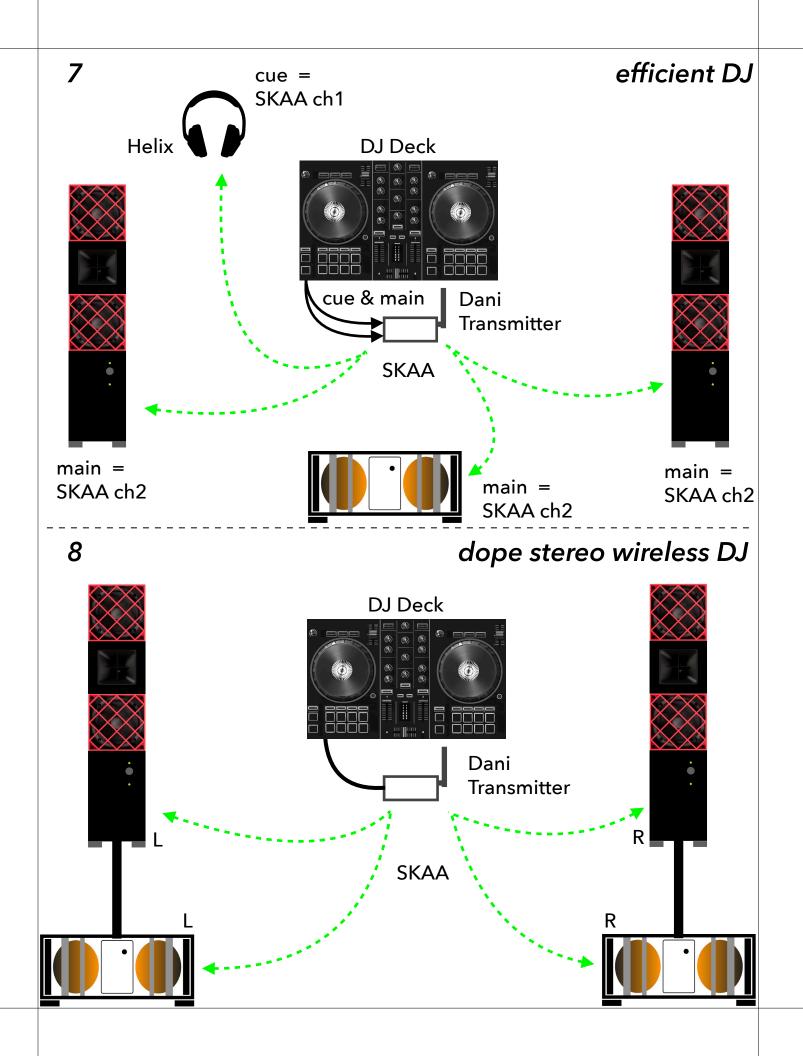
# ultra low latency DJ

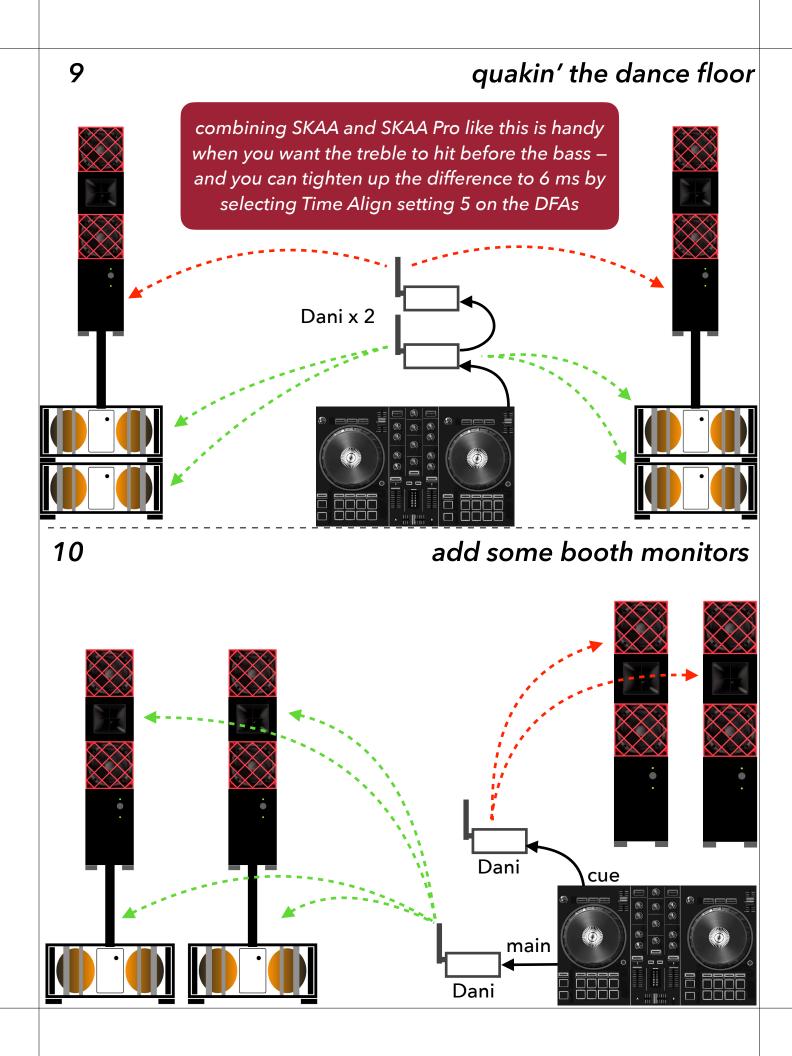
3

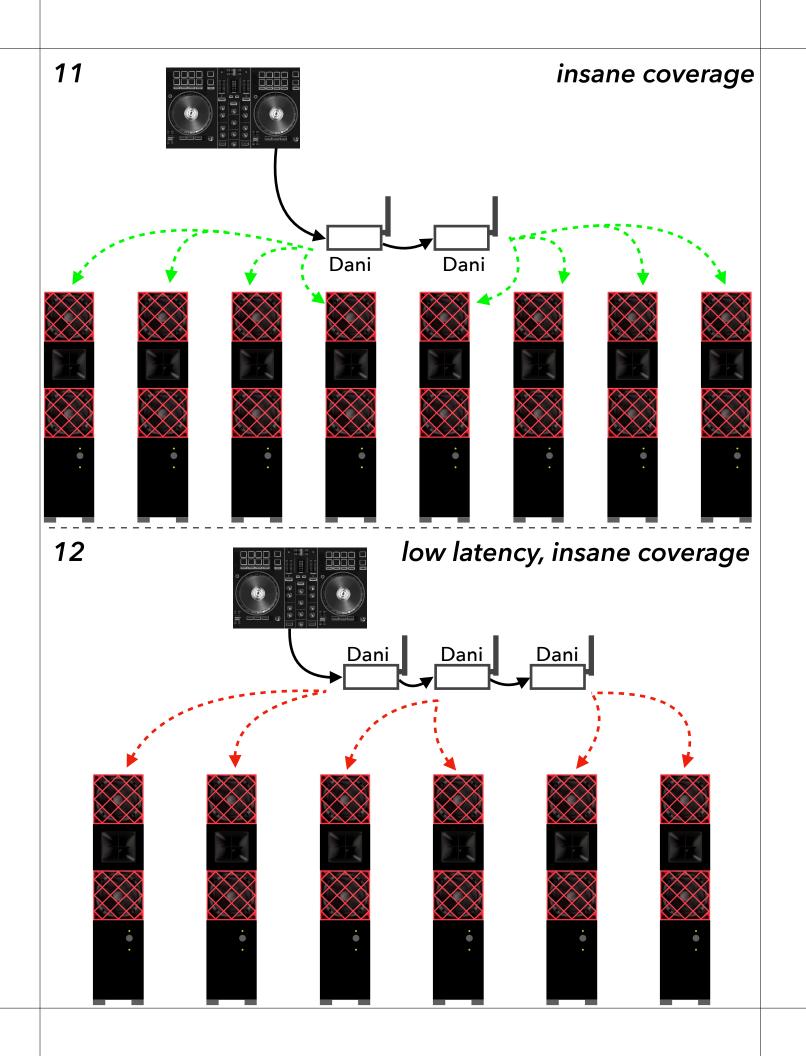


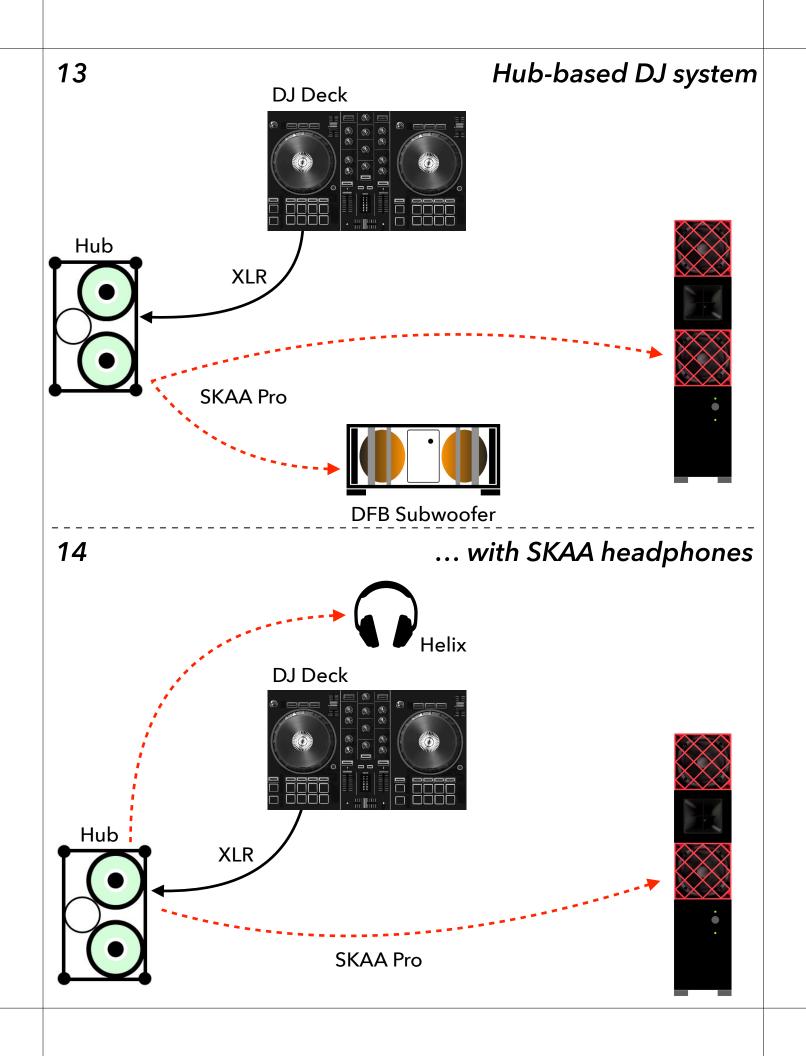


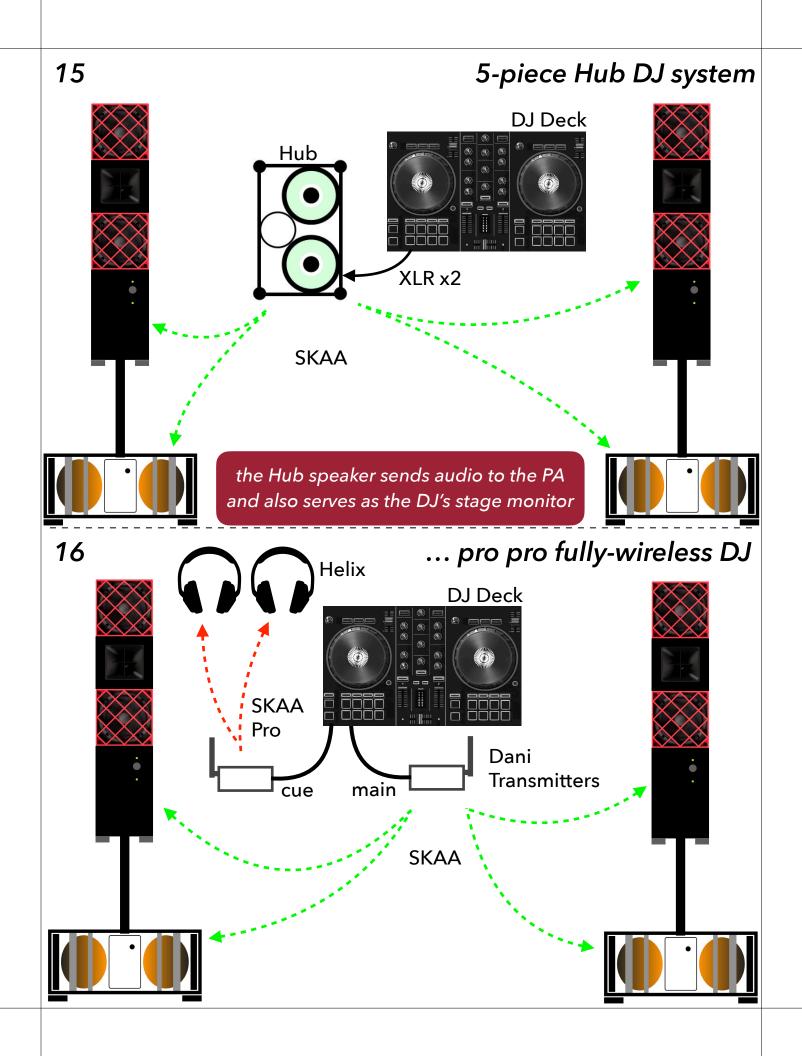


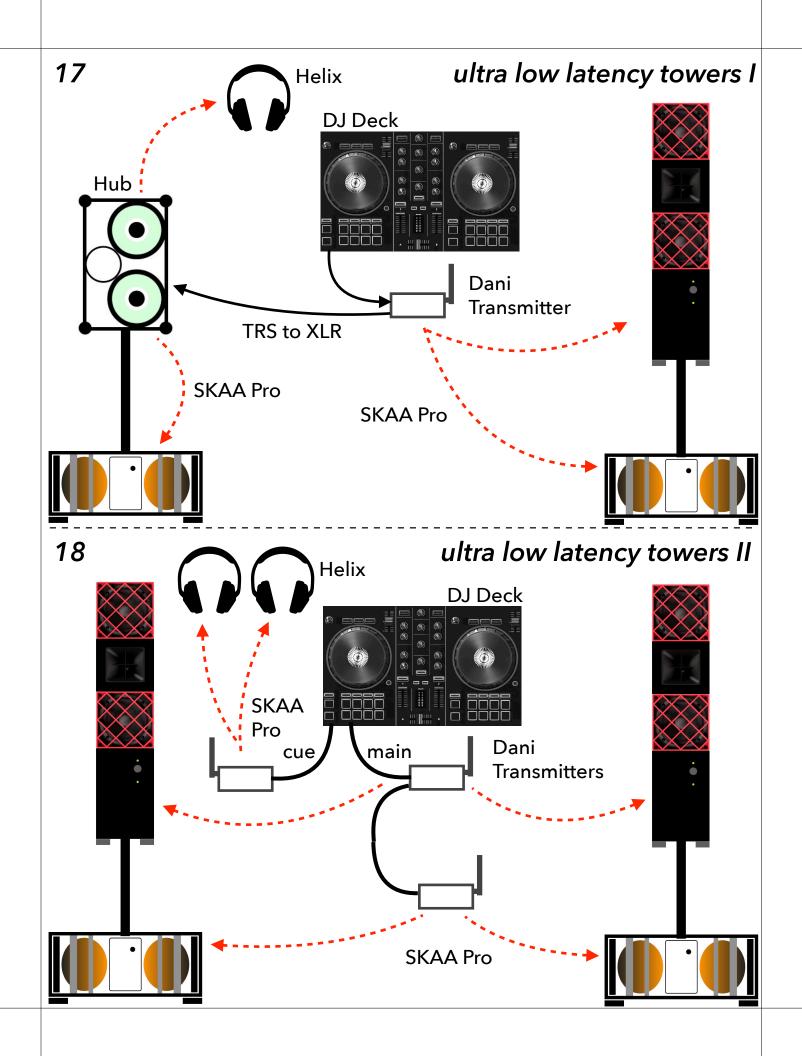


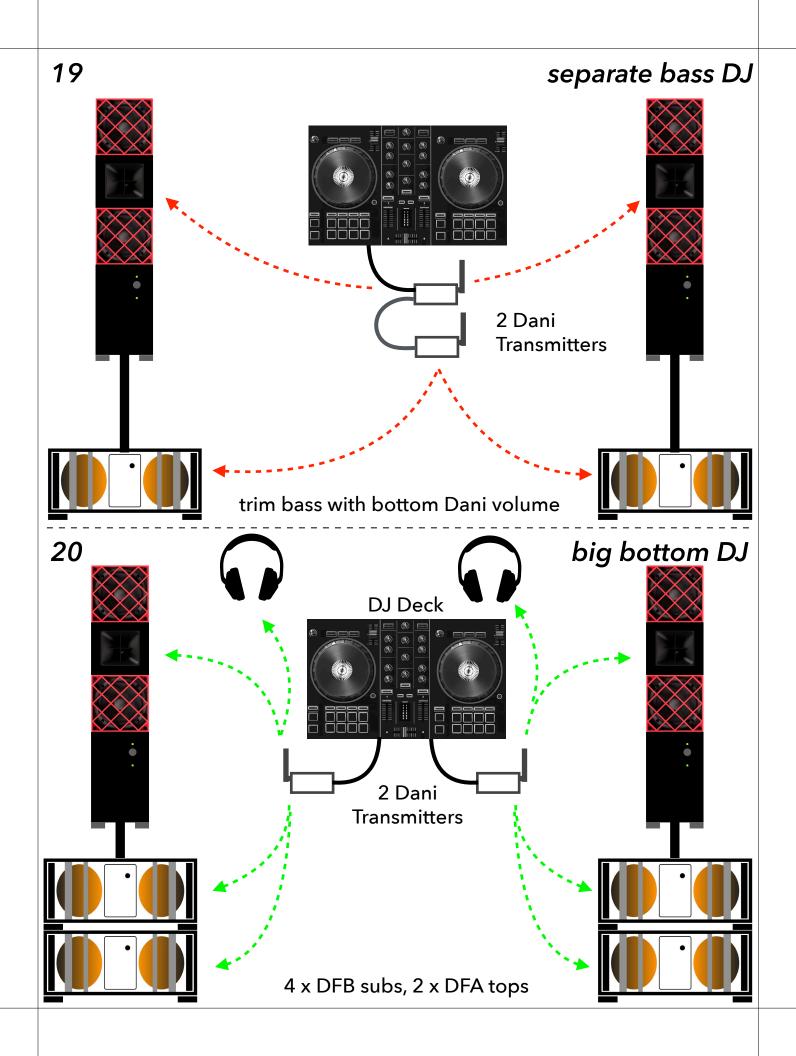


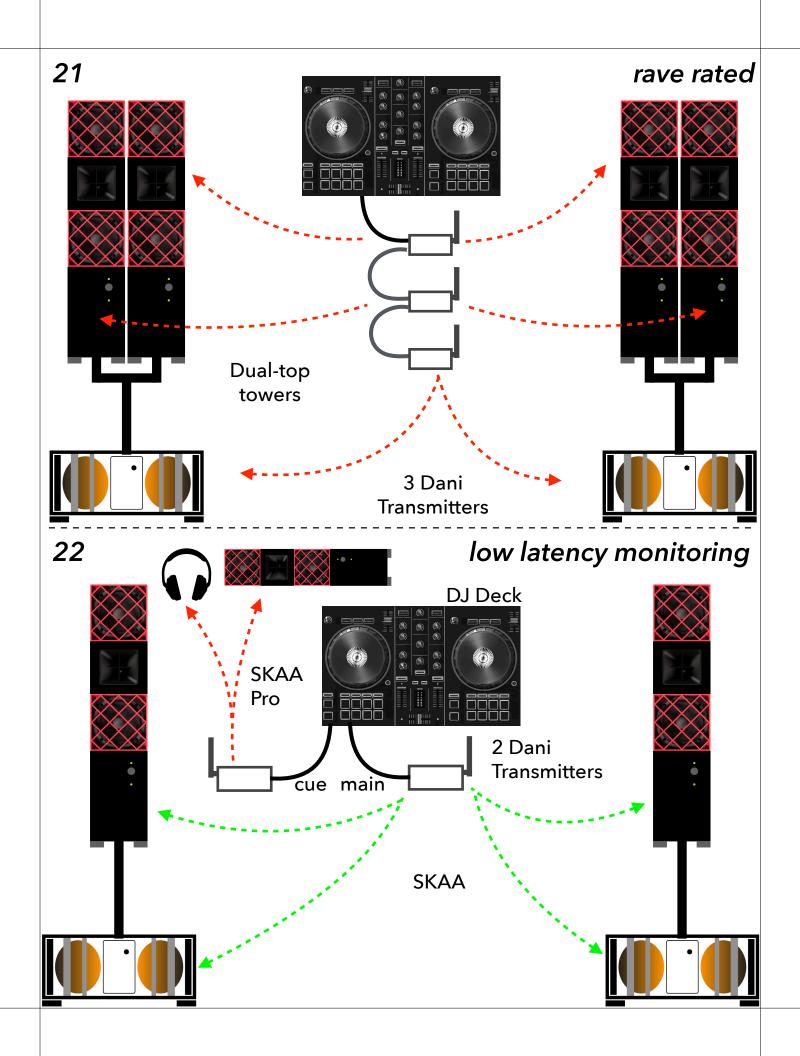


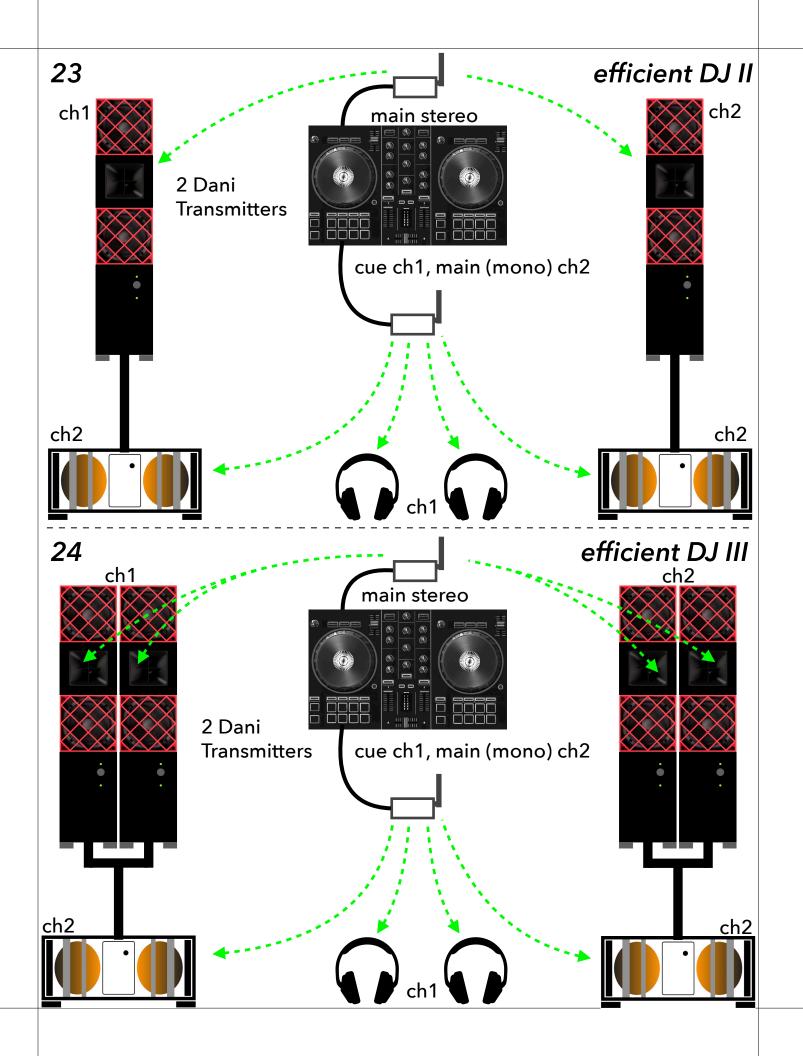


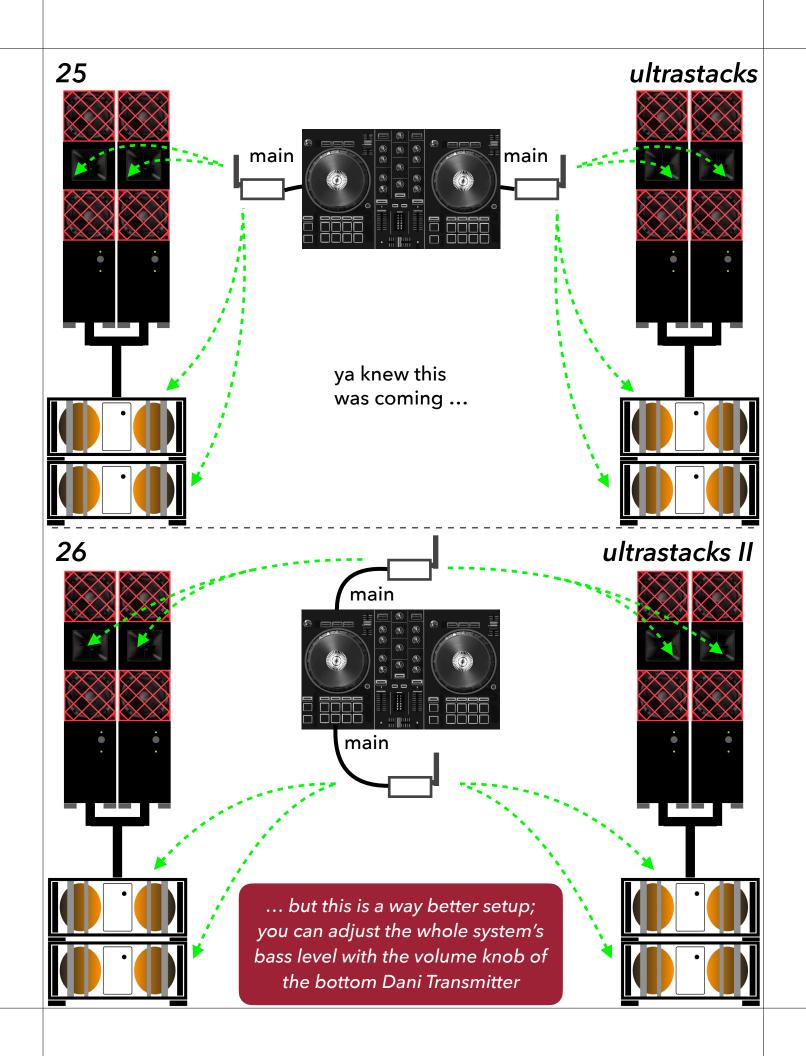






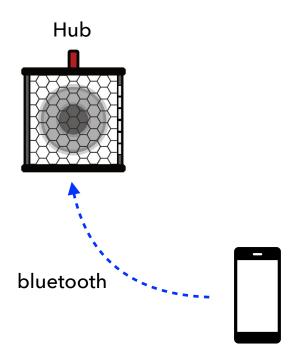




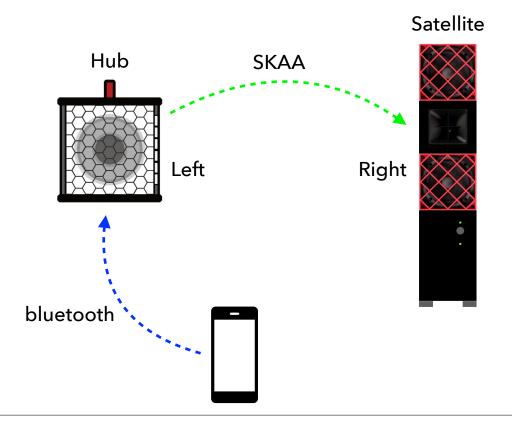


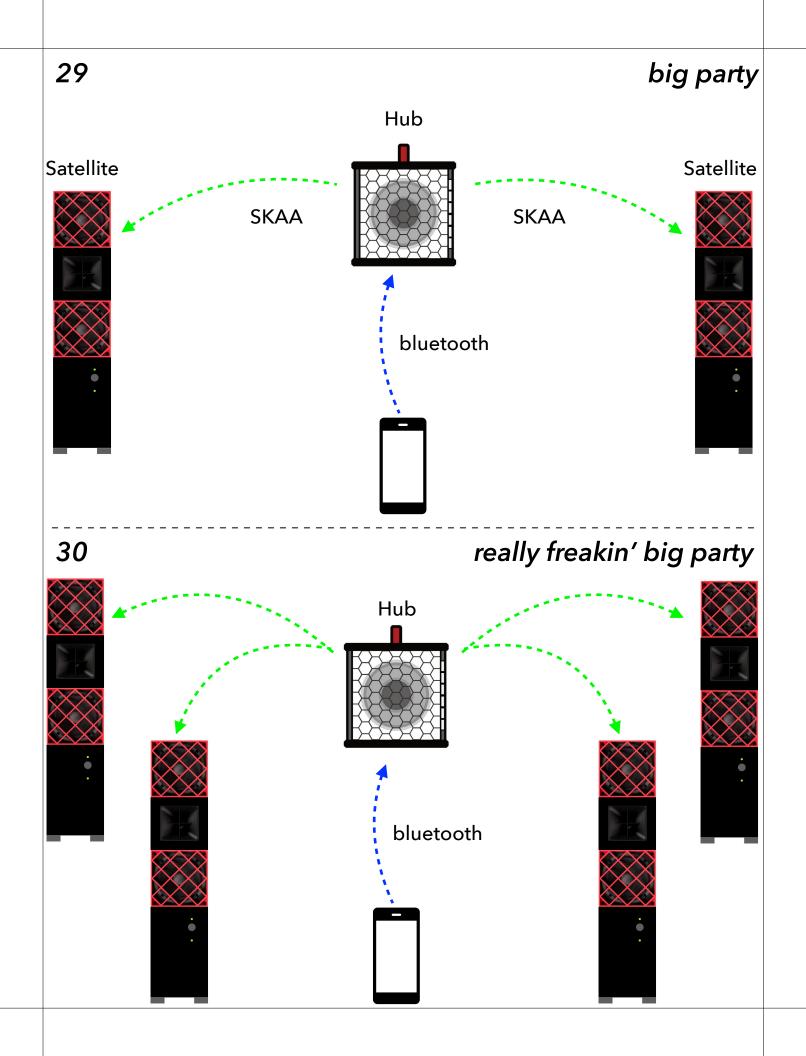
# Music & Party

### if you've got a SKAA Hub, you do this every day

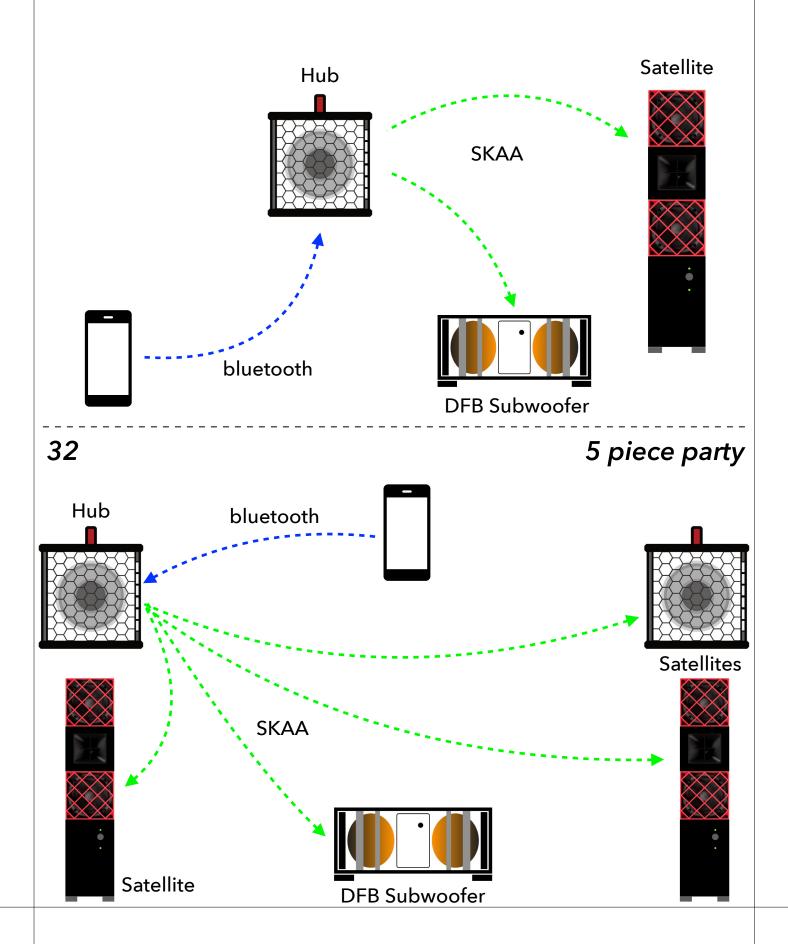


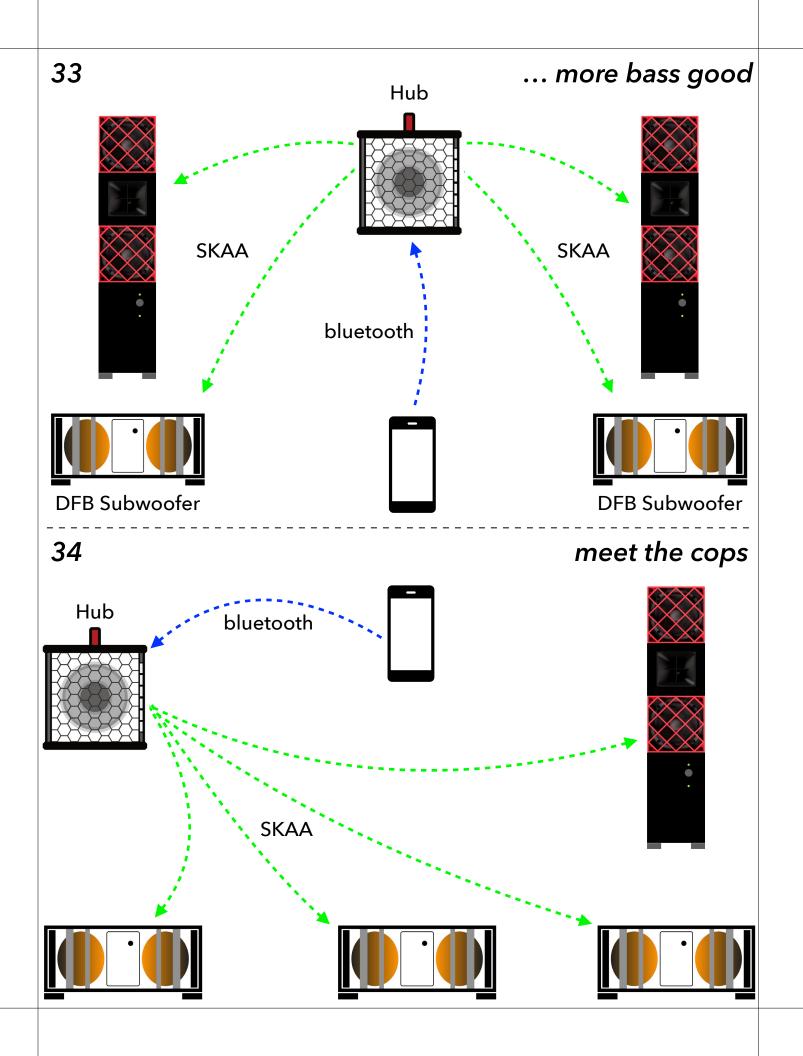
### 28 now pimp it with a DFA

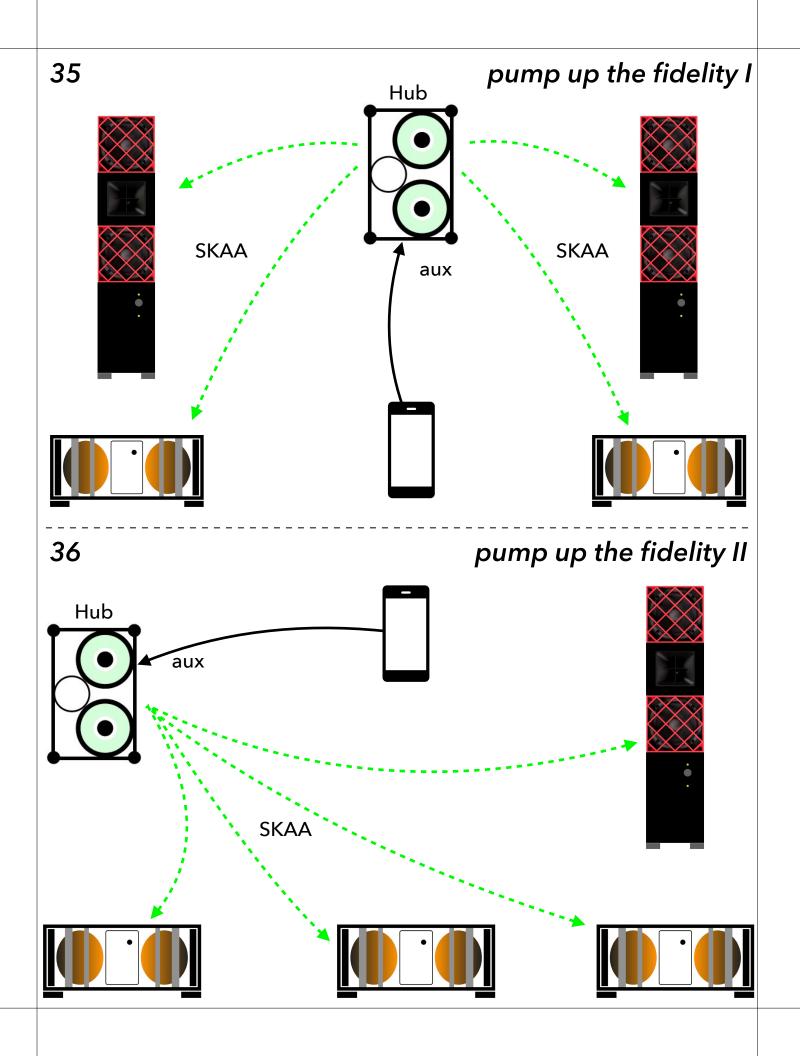


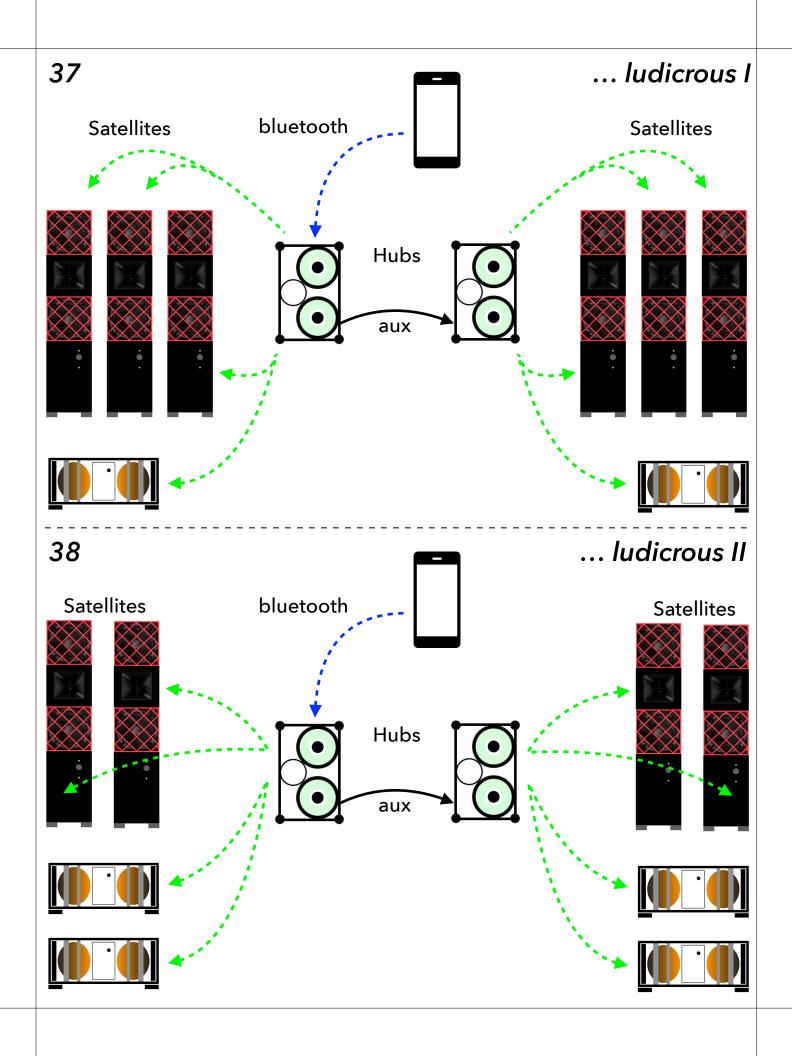


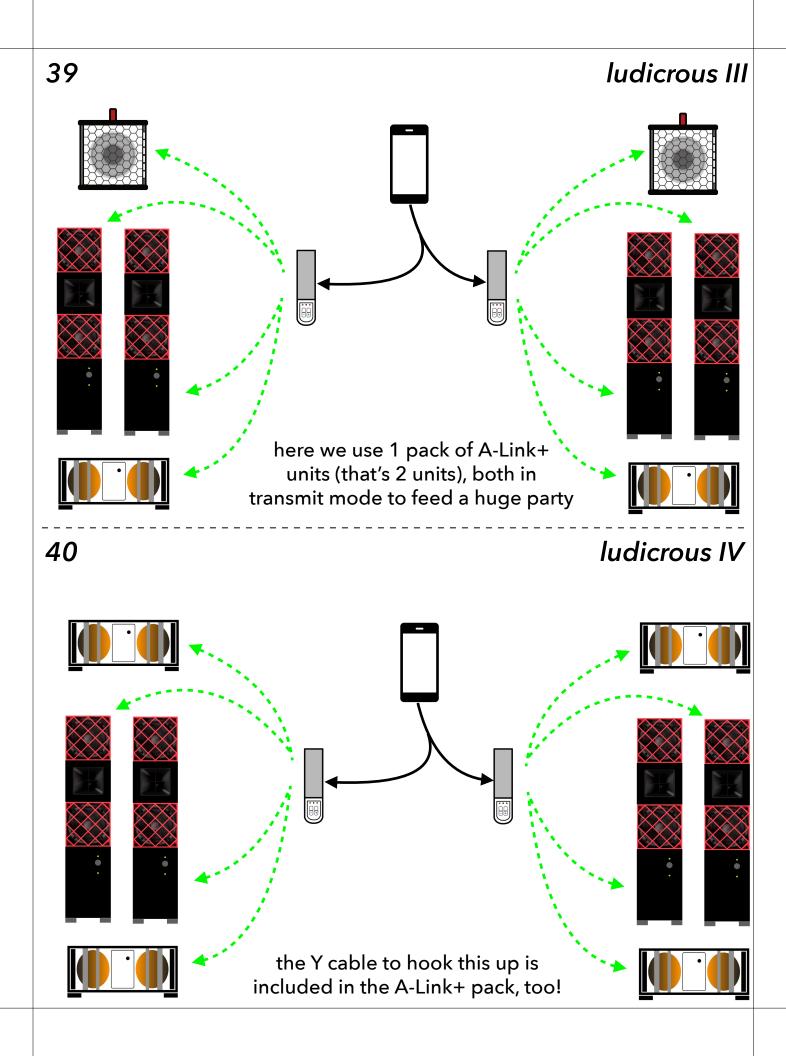
### don't forget the bass

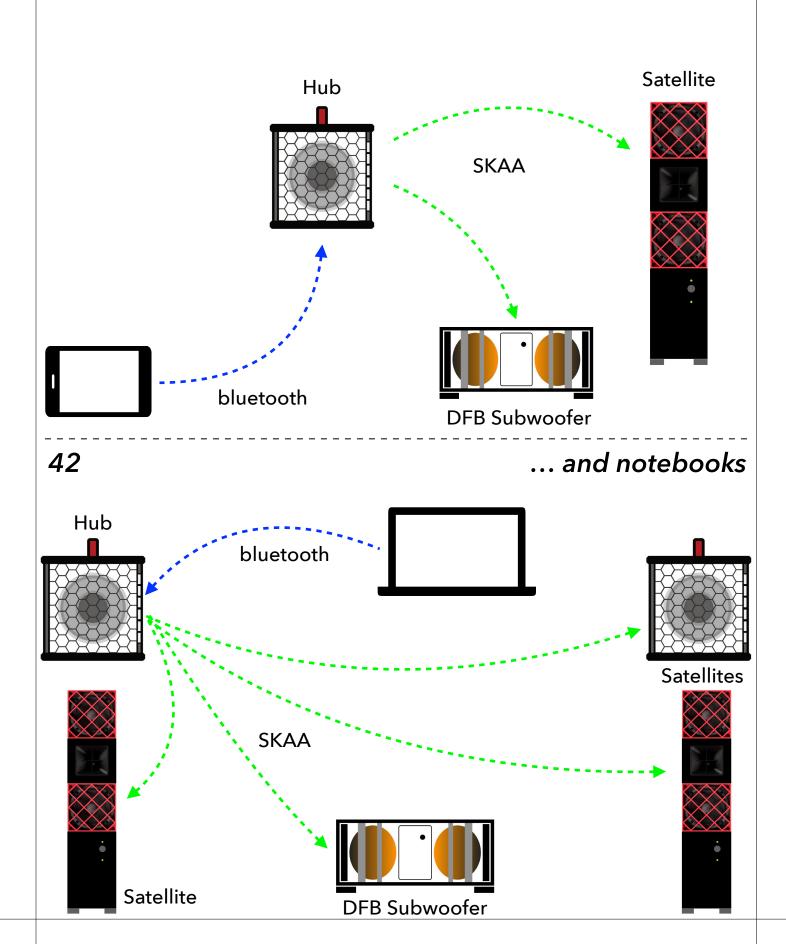


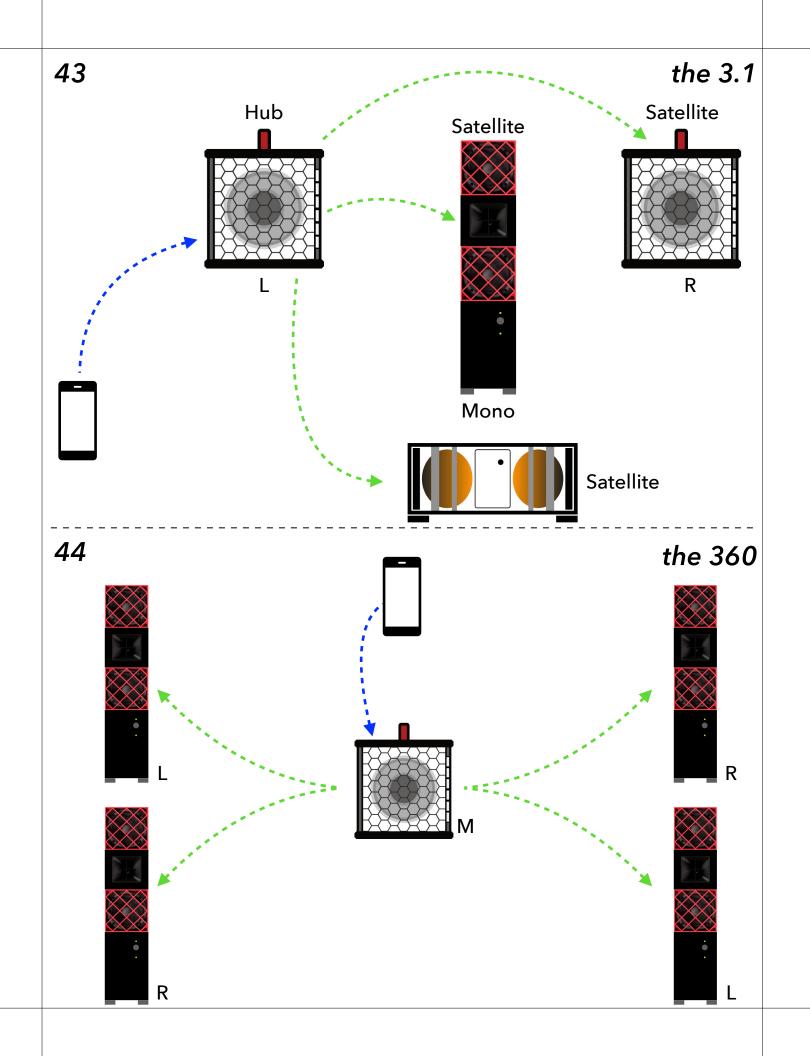


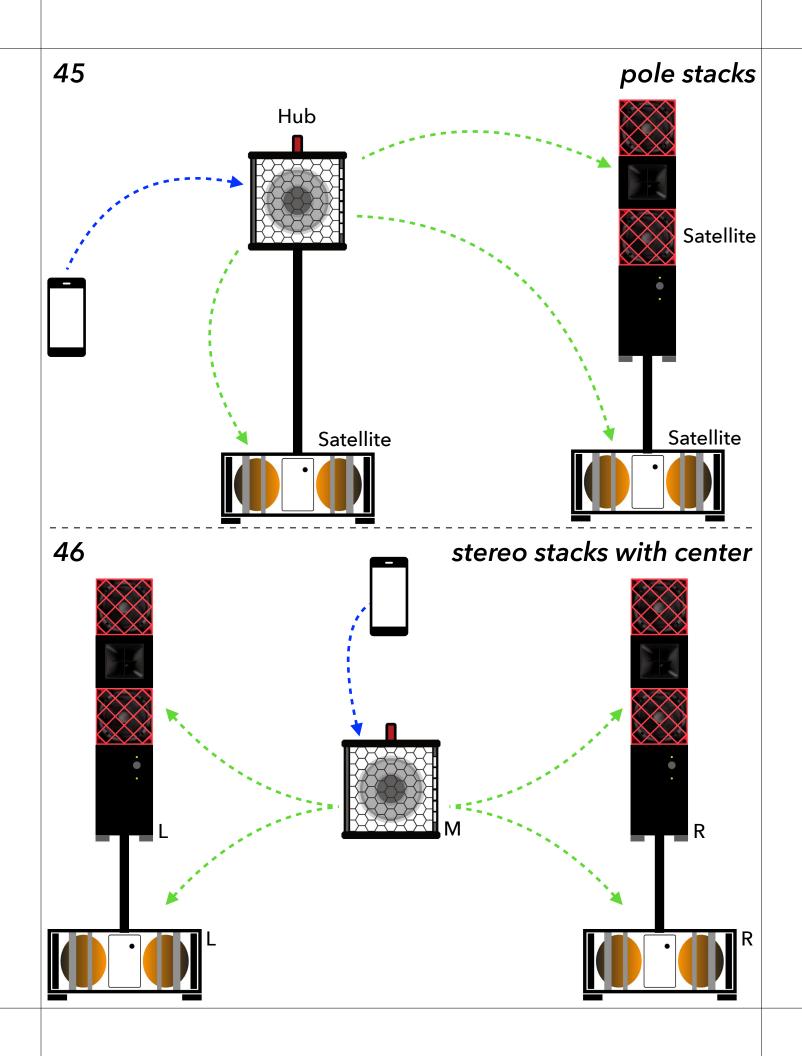


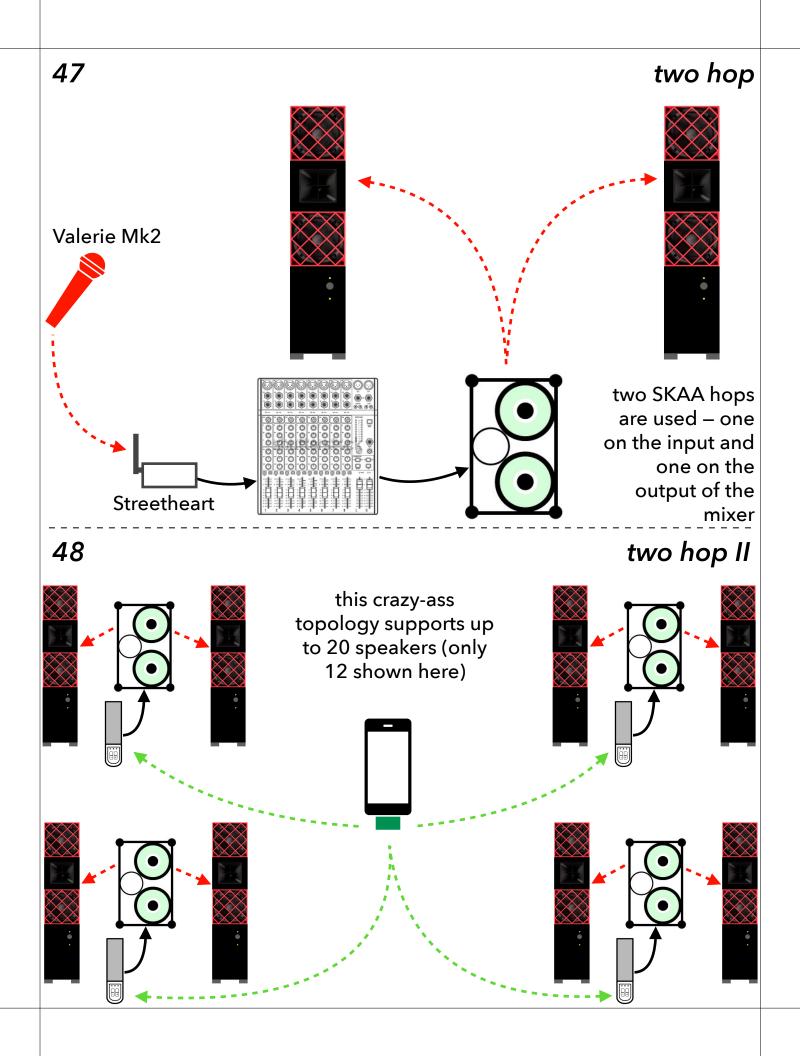




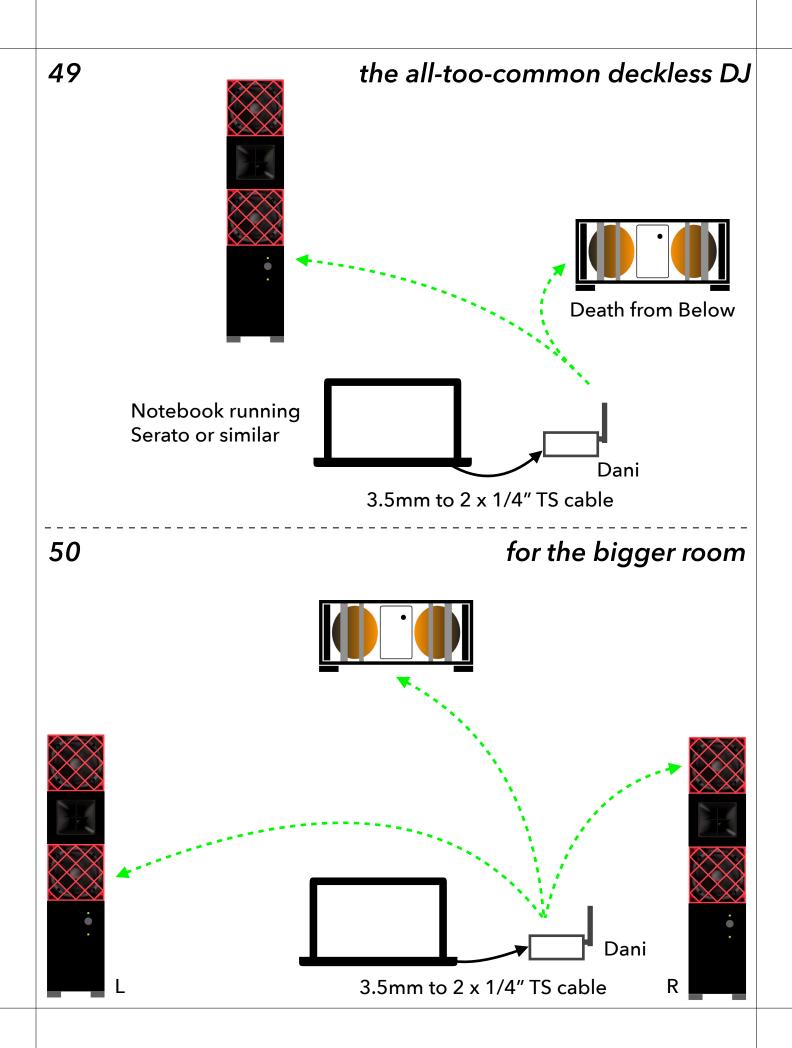


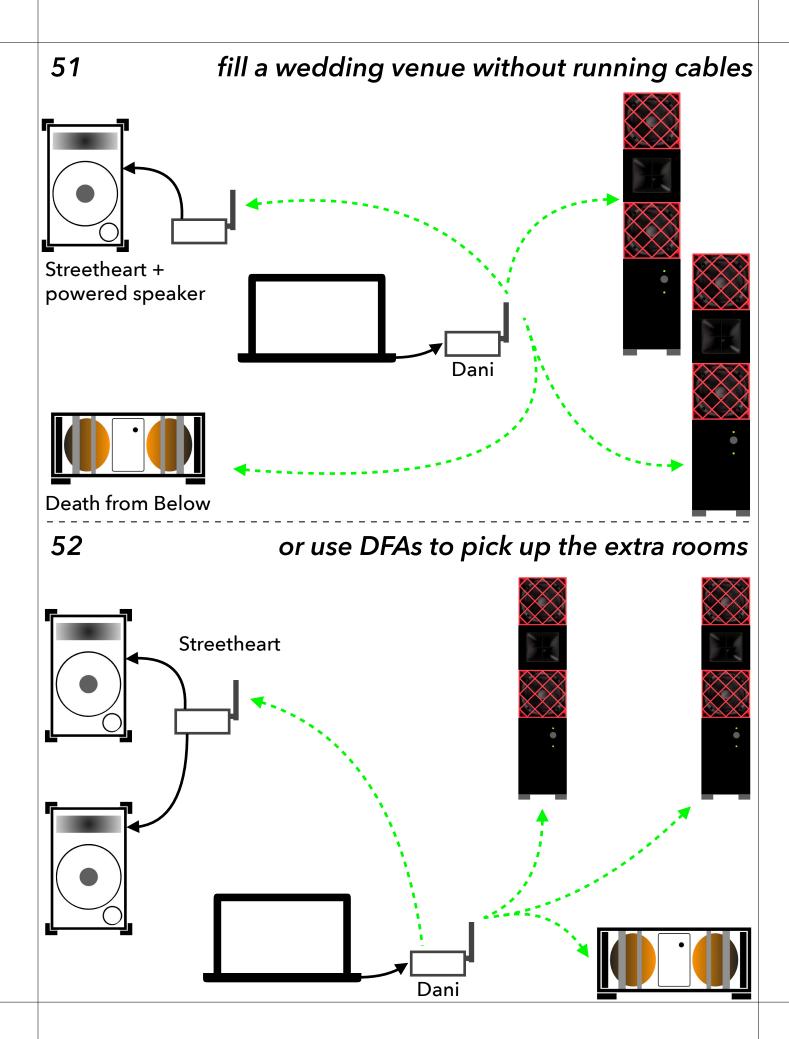


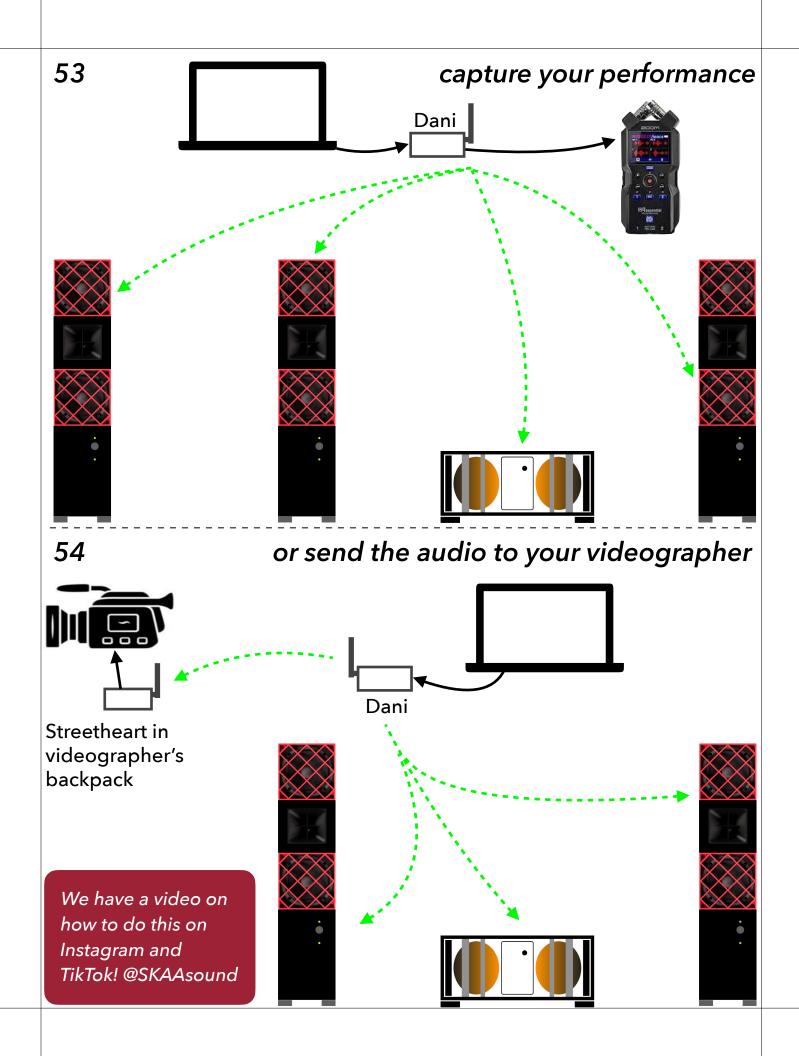


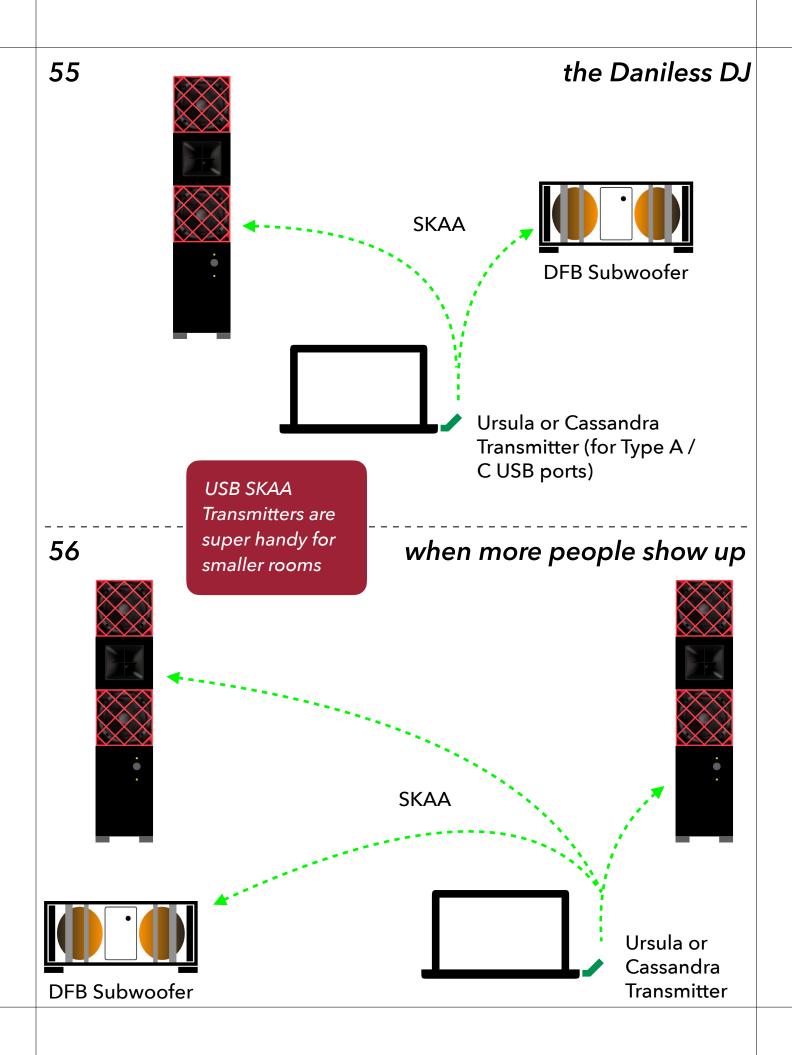


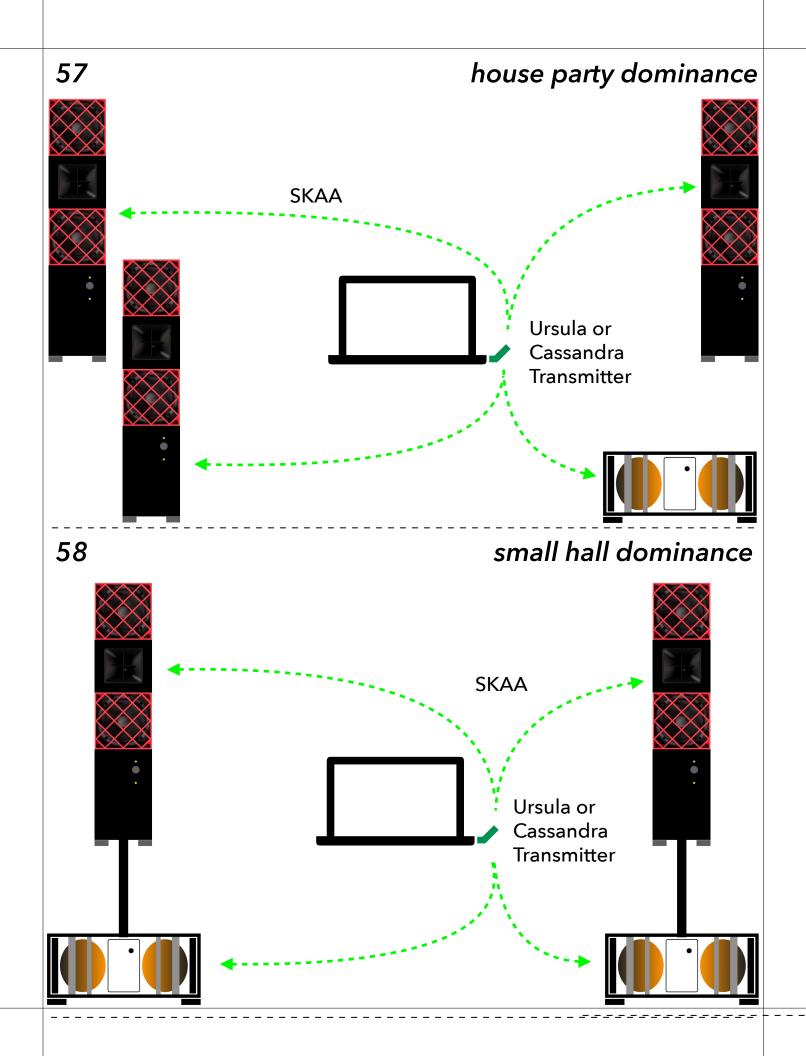
### Deckless DJ





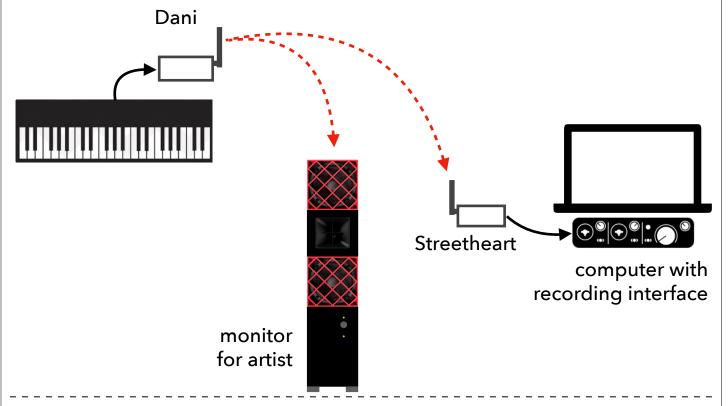




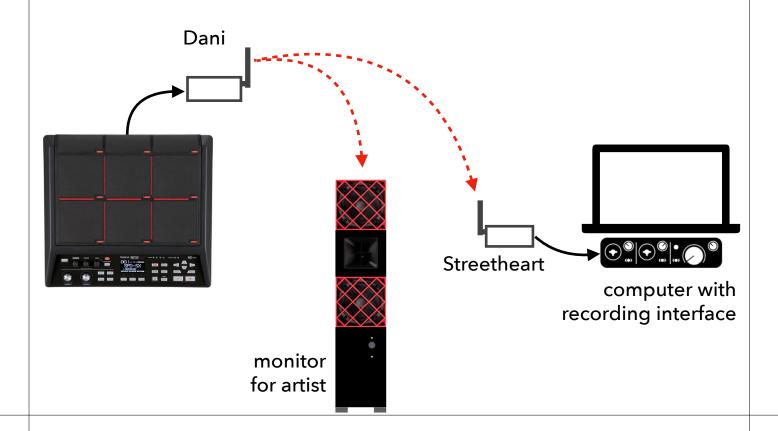


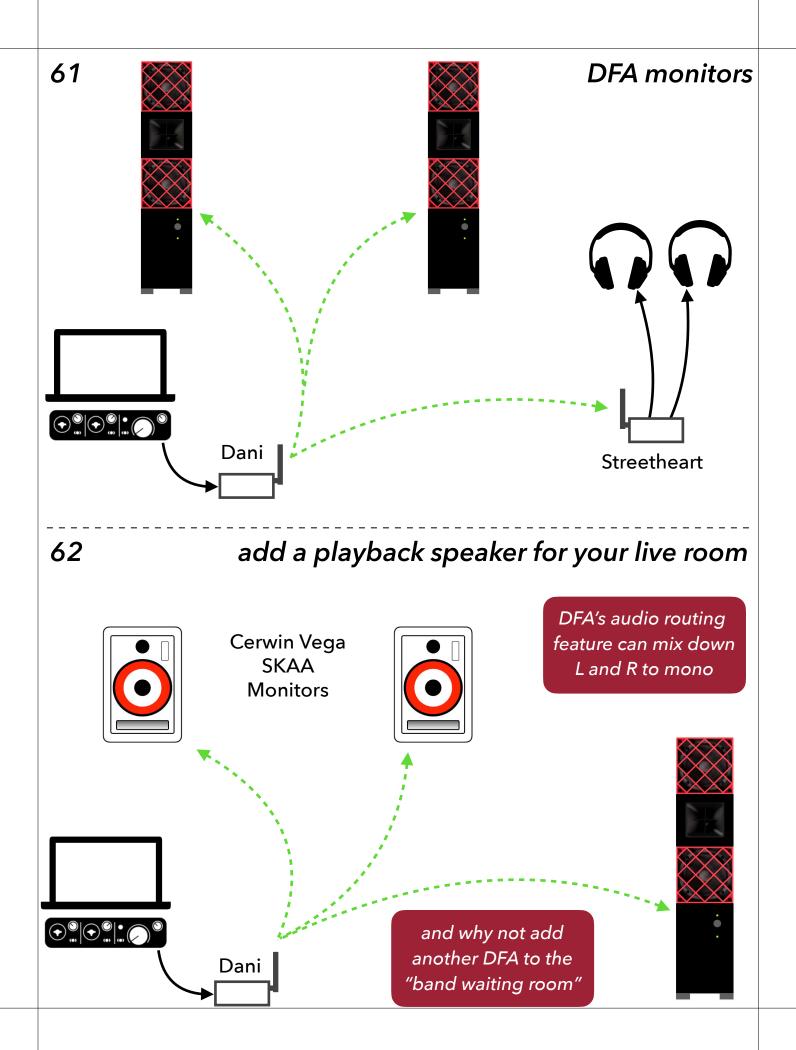
## Studio & Recording

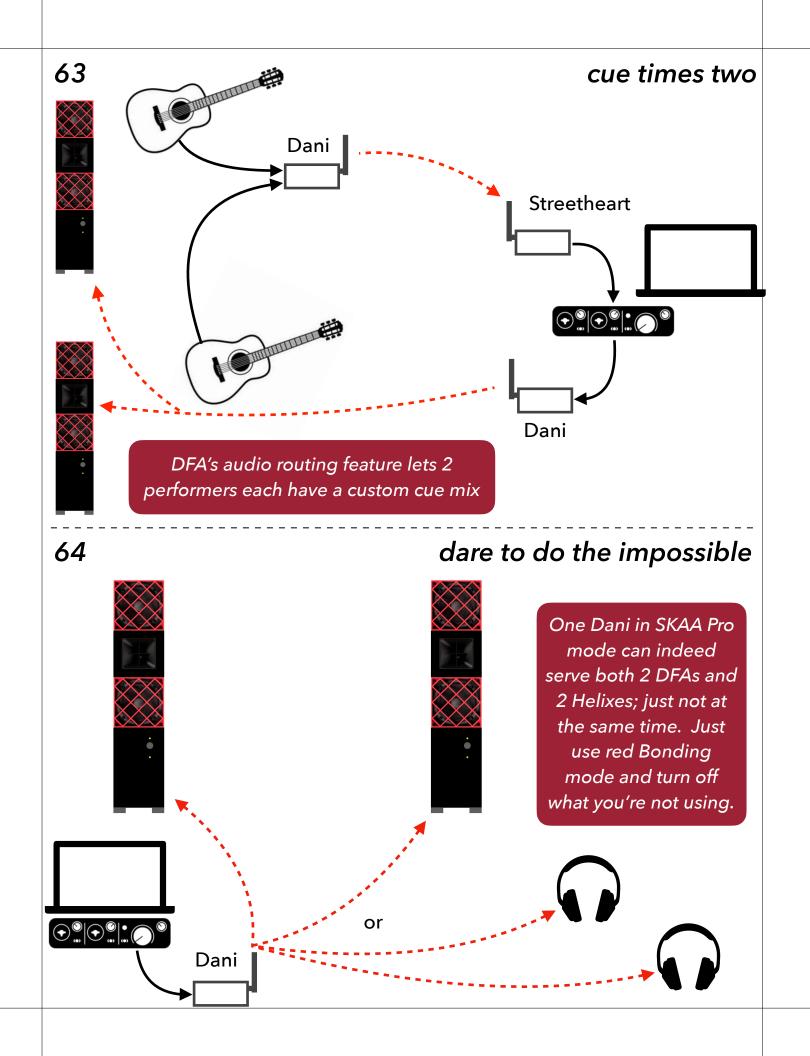
### what, me worry about studio cables?

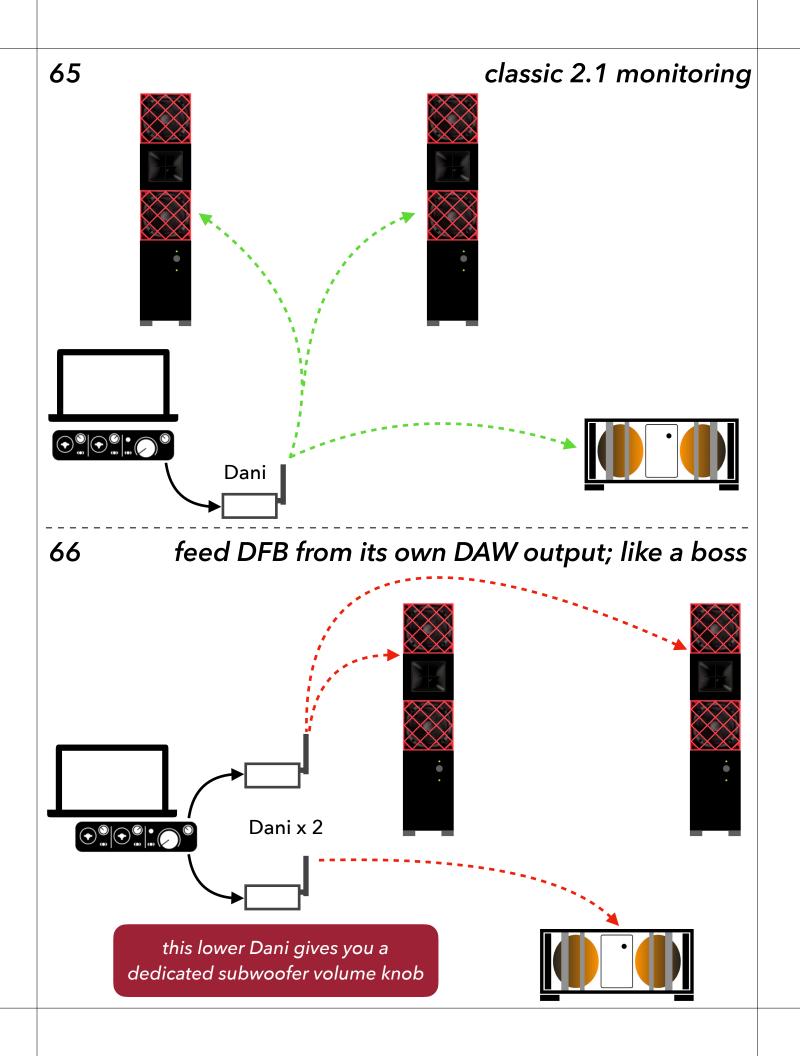


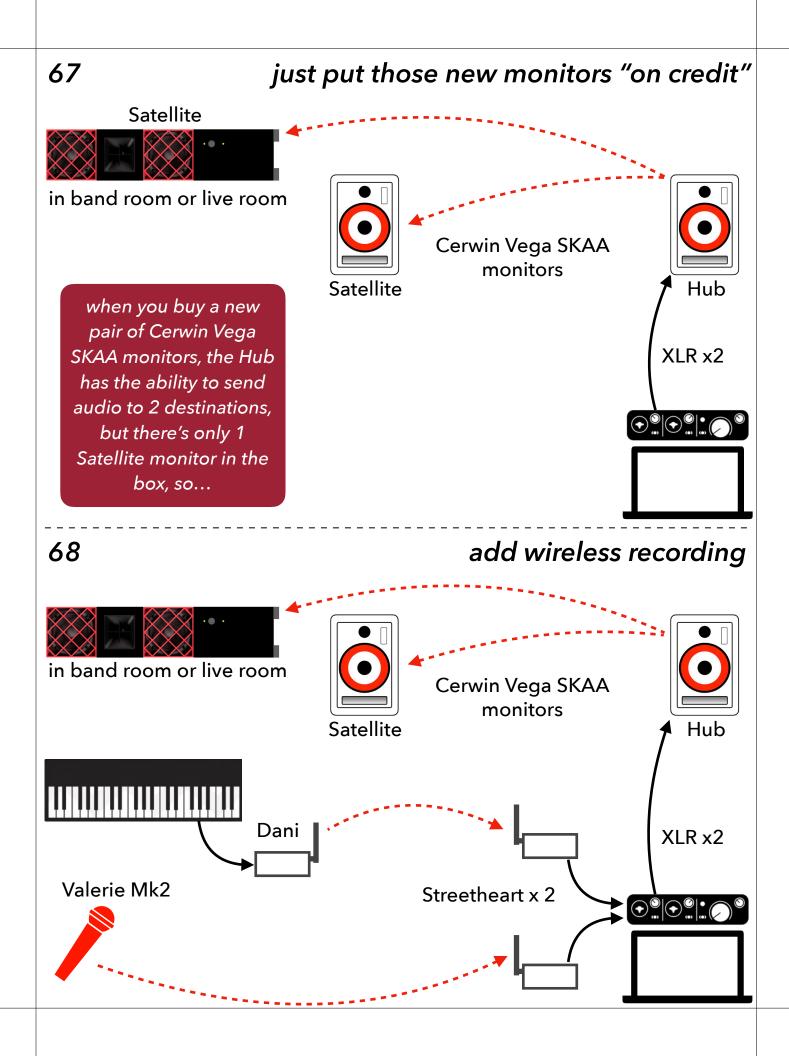
### 60 what, me wire up the live room?

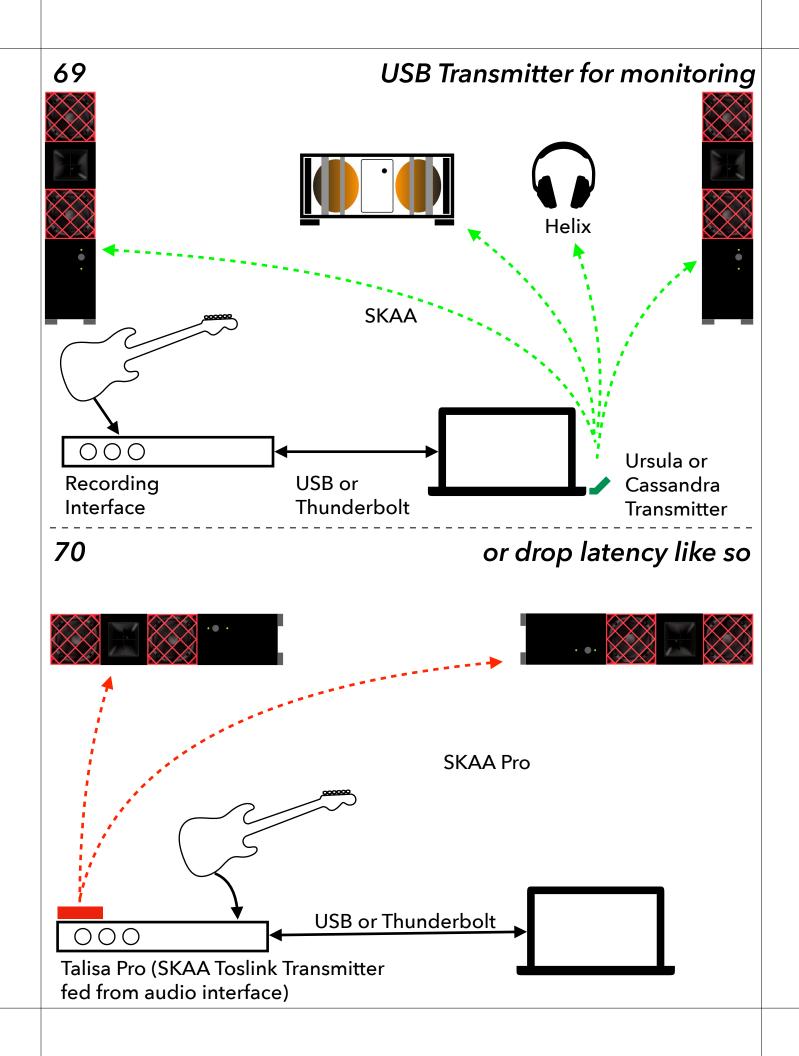


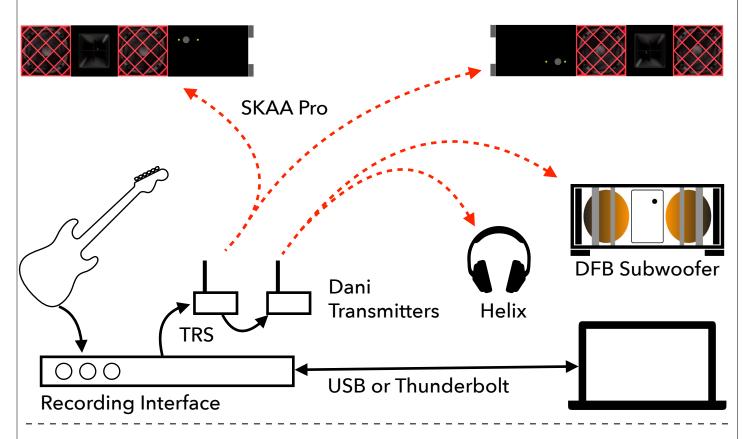




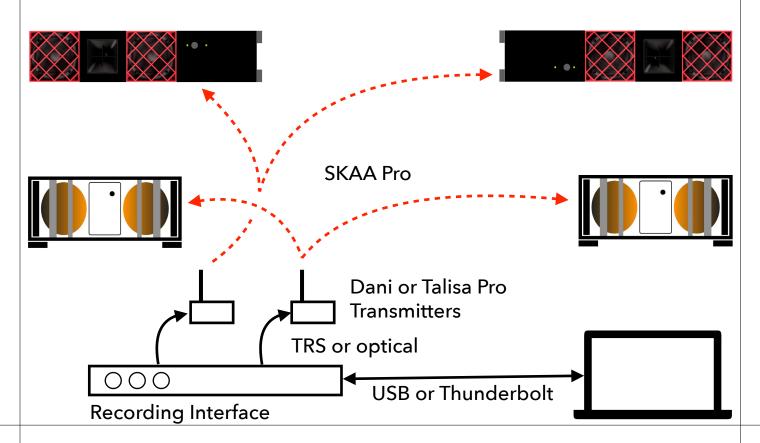




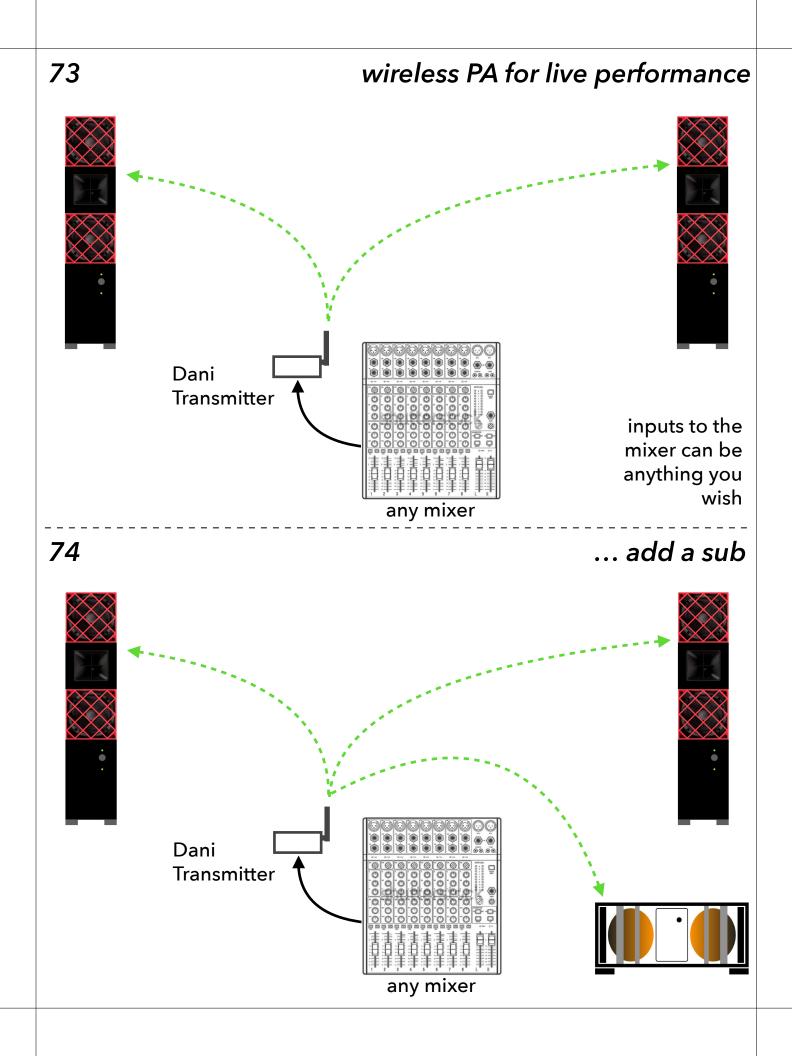


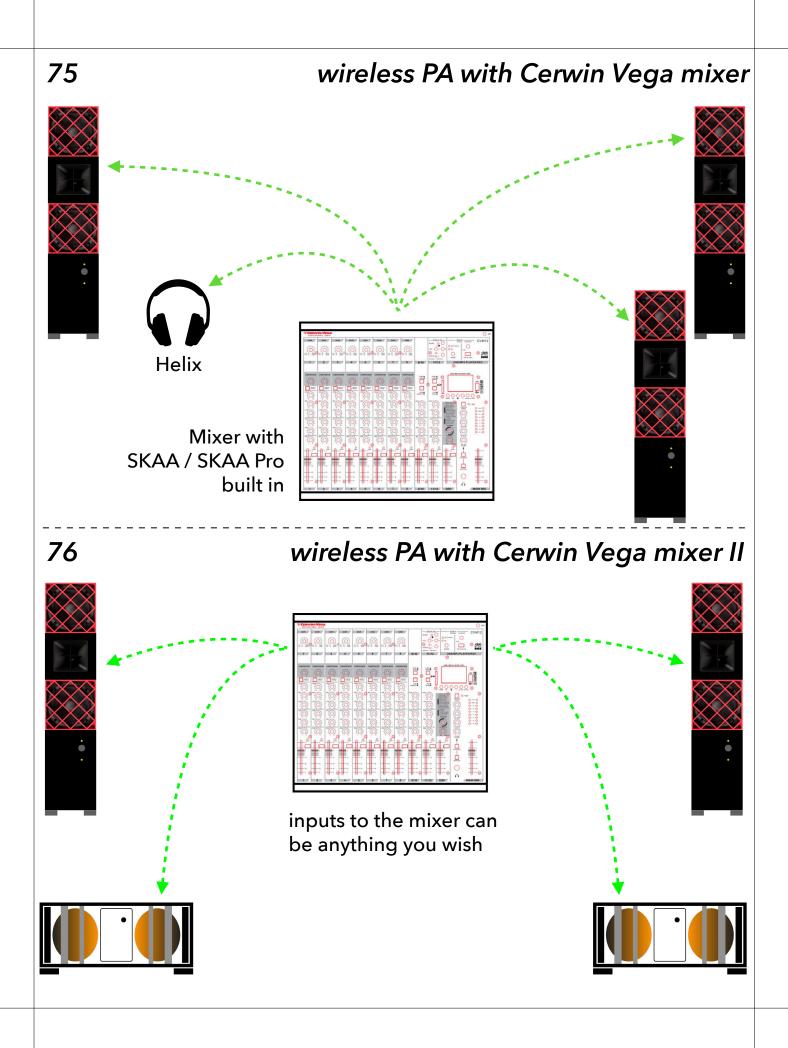


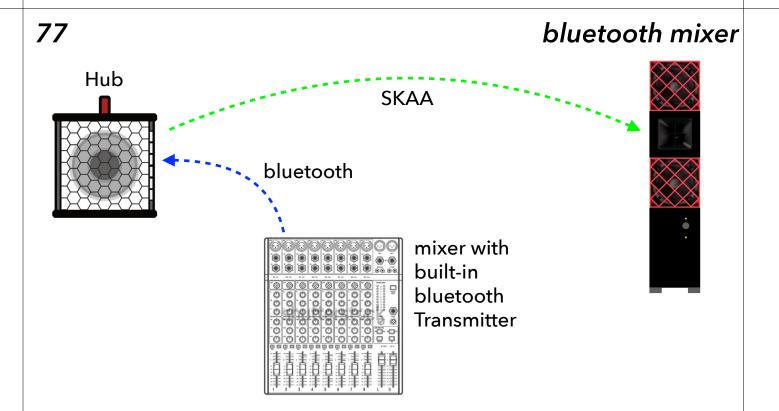
### 72 dual subs fed by separate DAW outputs



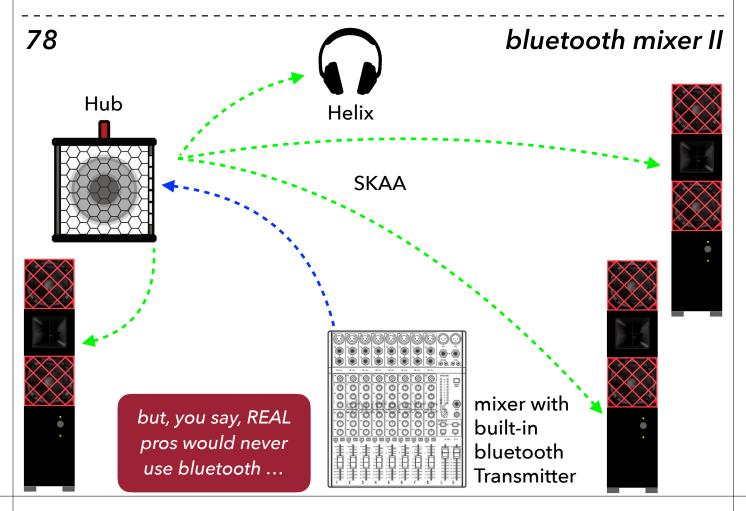
### PA & Live Sound

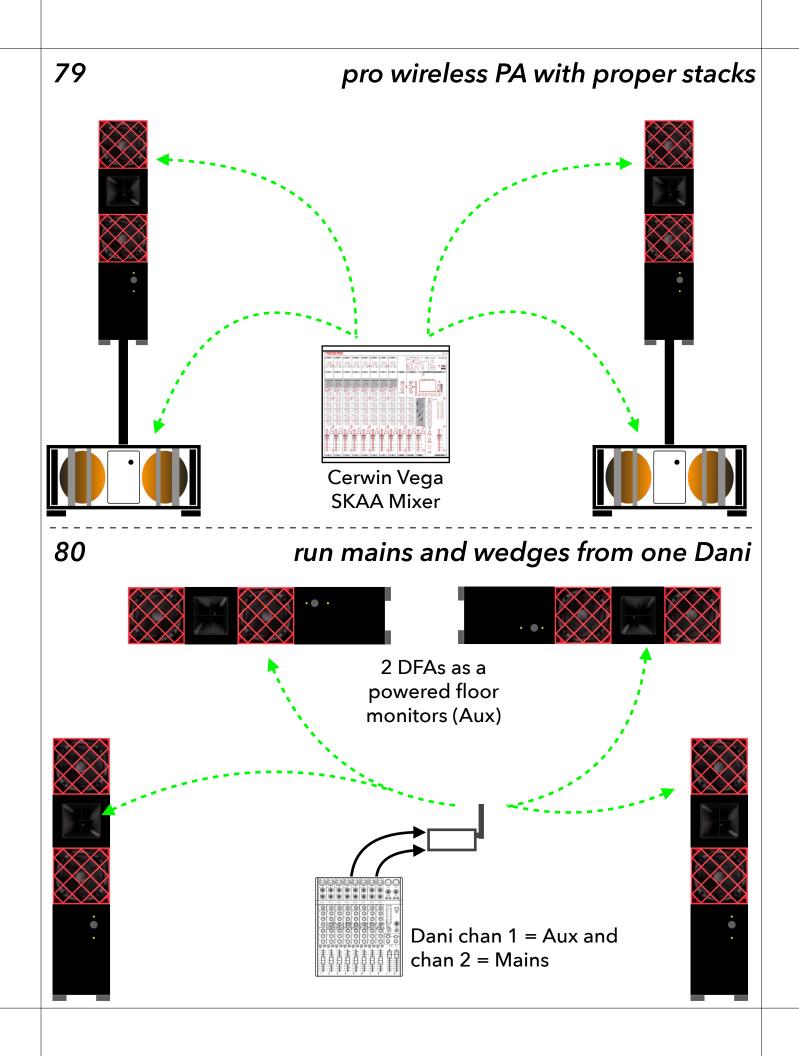


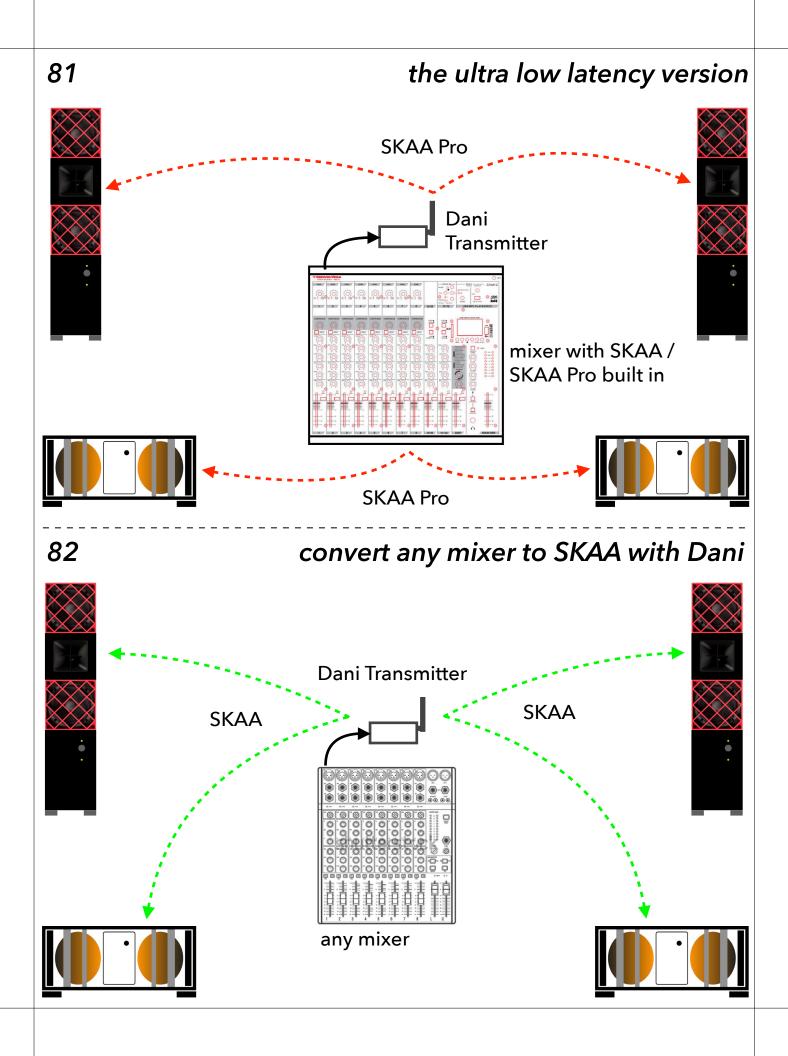




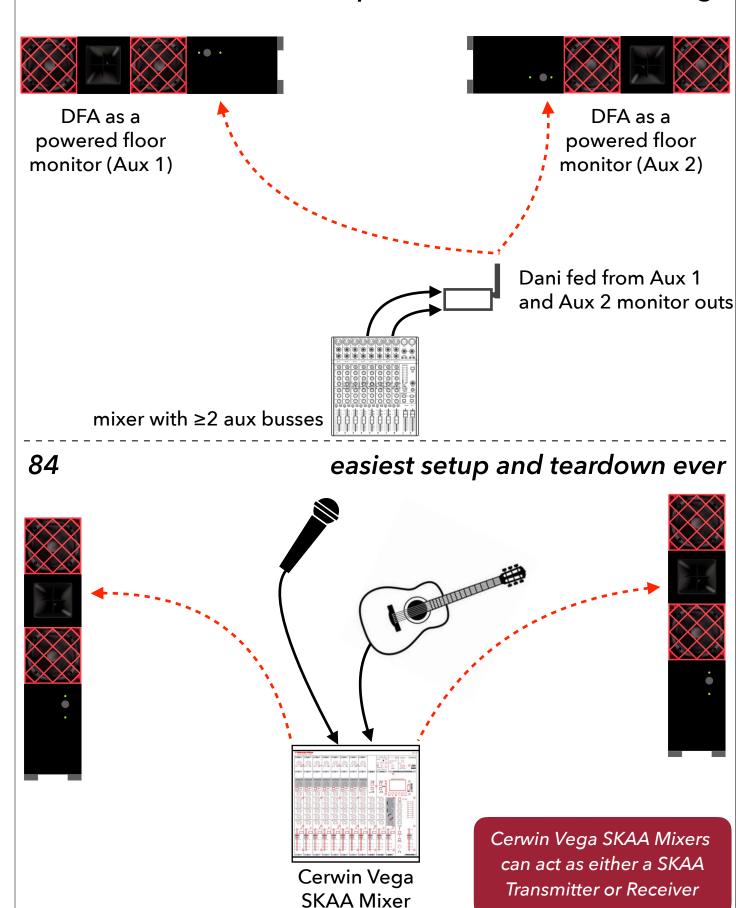
don't try these two setups with microphones or live instruments as inputs since long bluetooth latency will be applied to absolutely everything

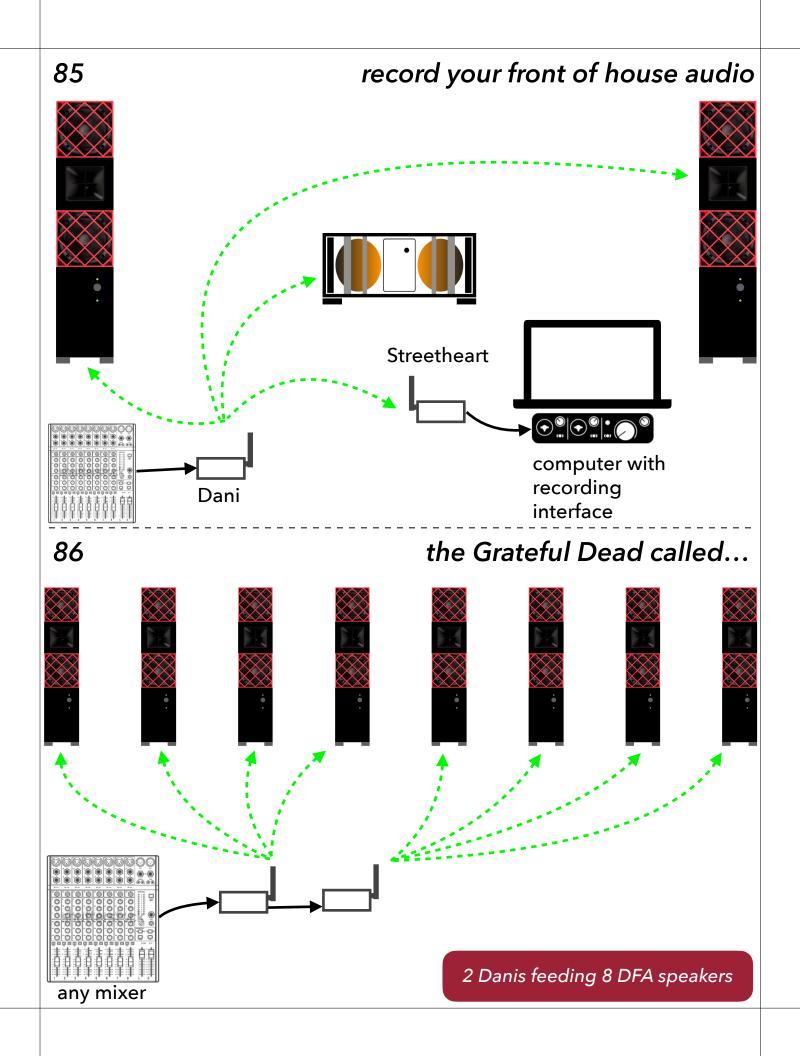


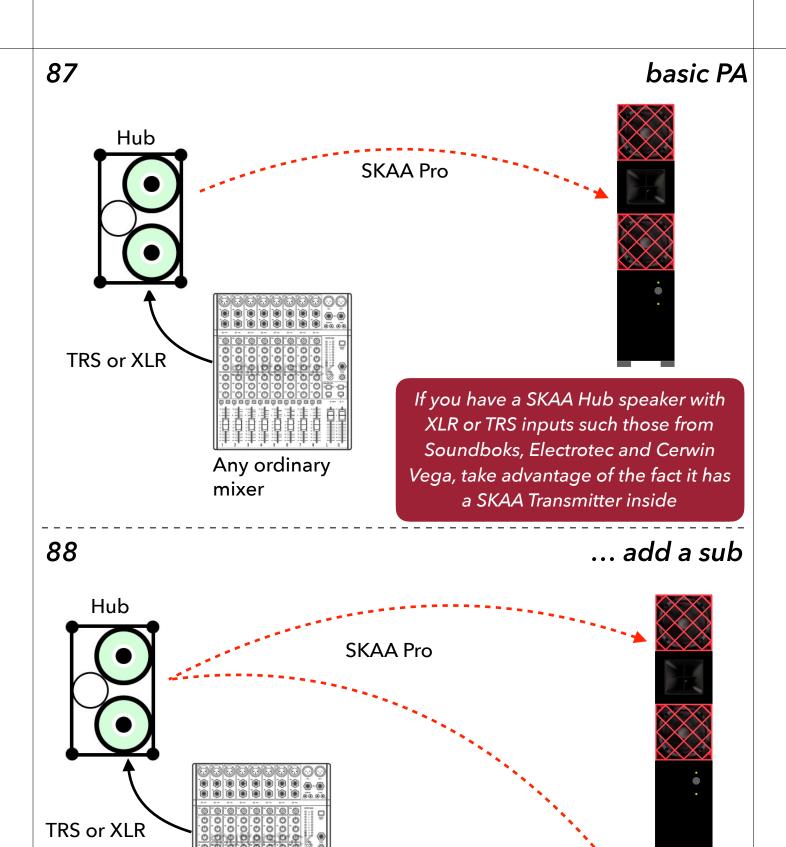




### run 2 mono separate monitor mixes on stage



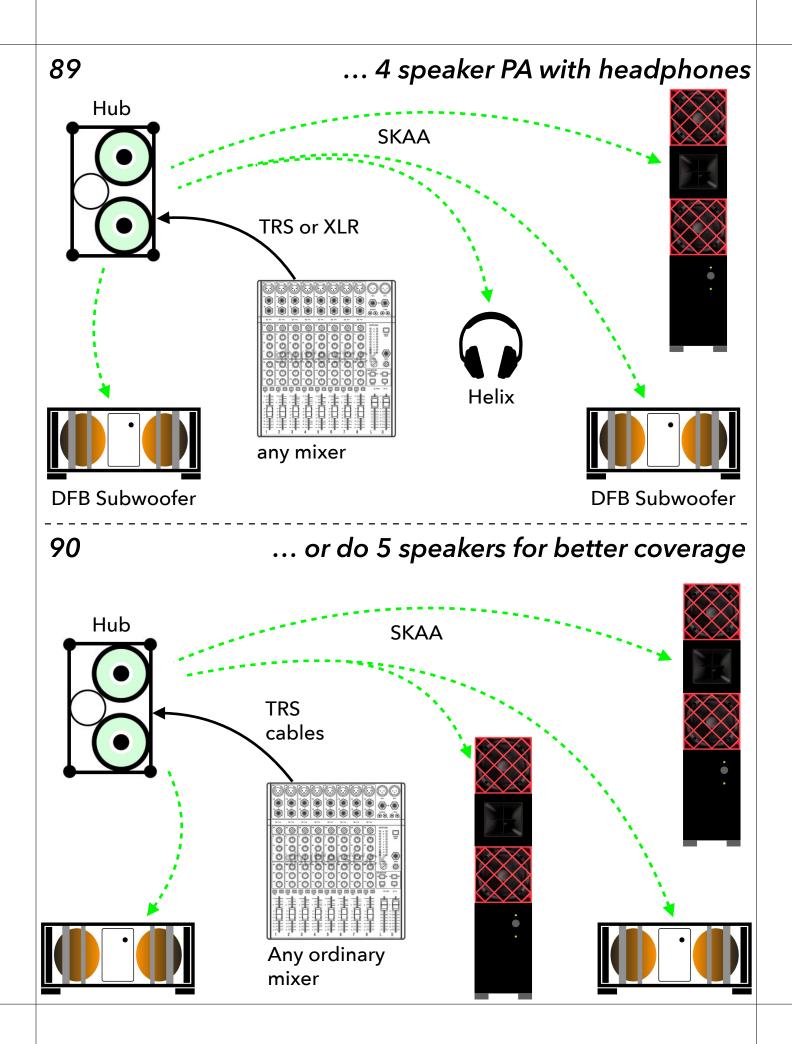


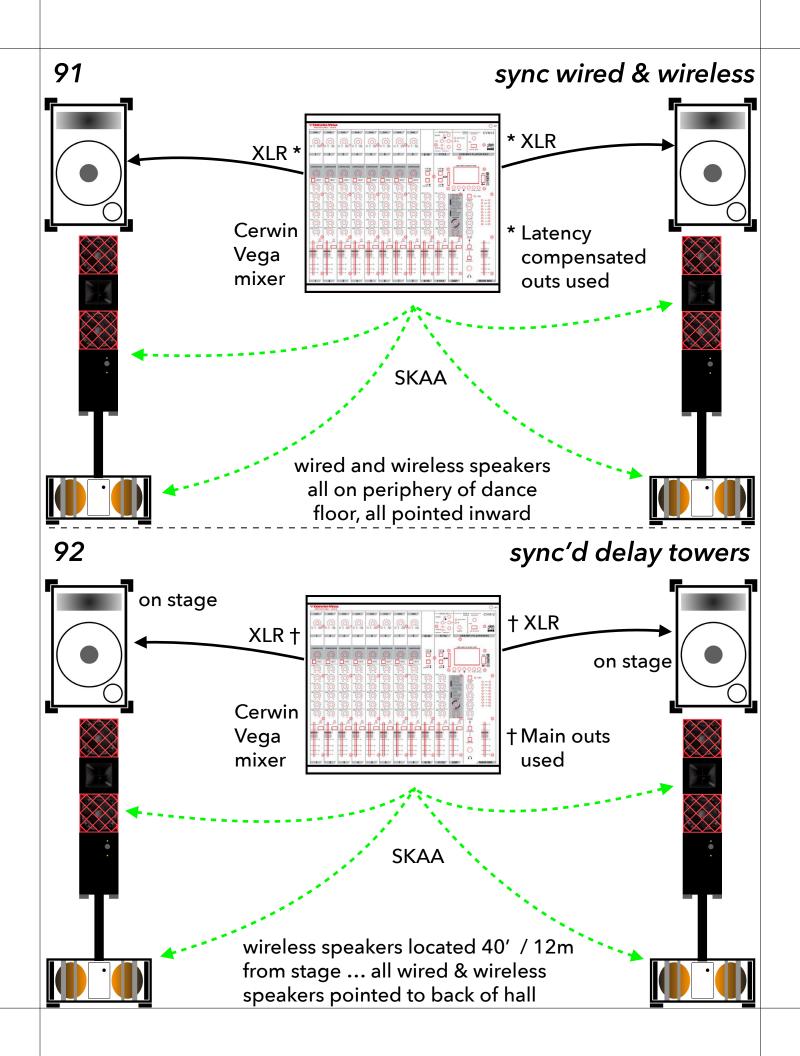


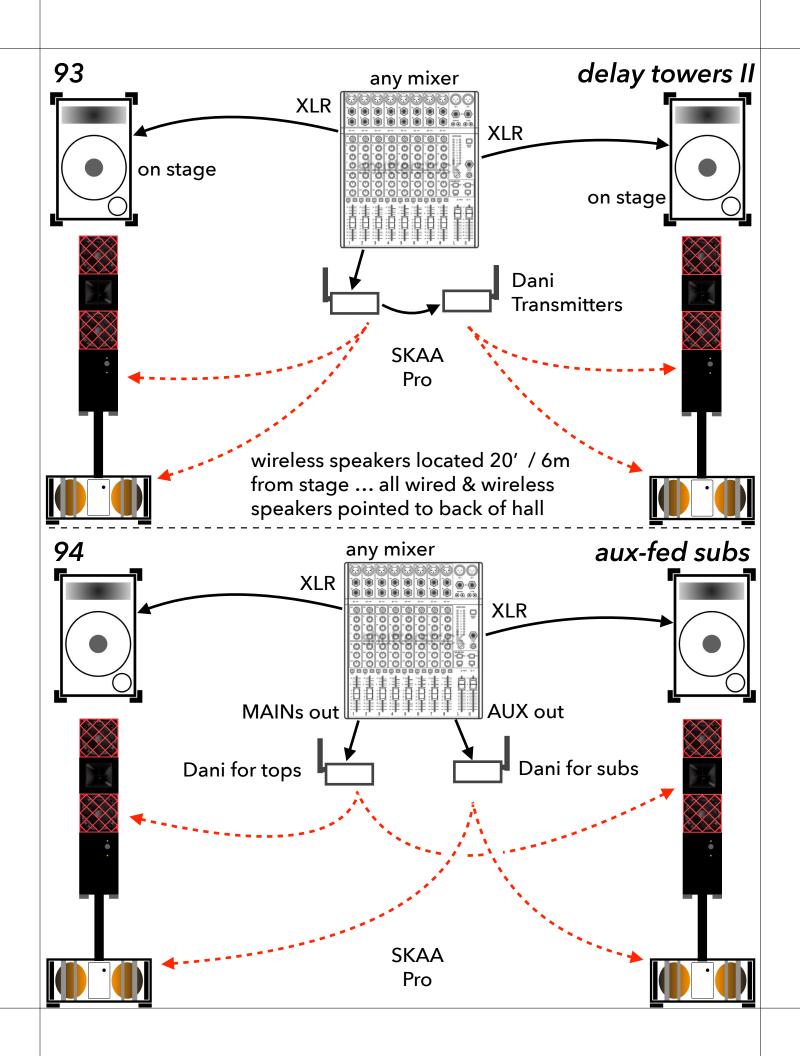
**DFB Subwoofer** 

Any ordinary

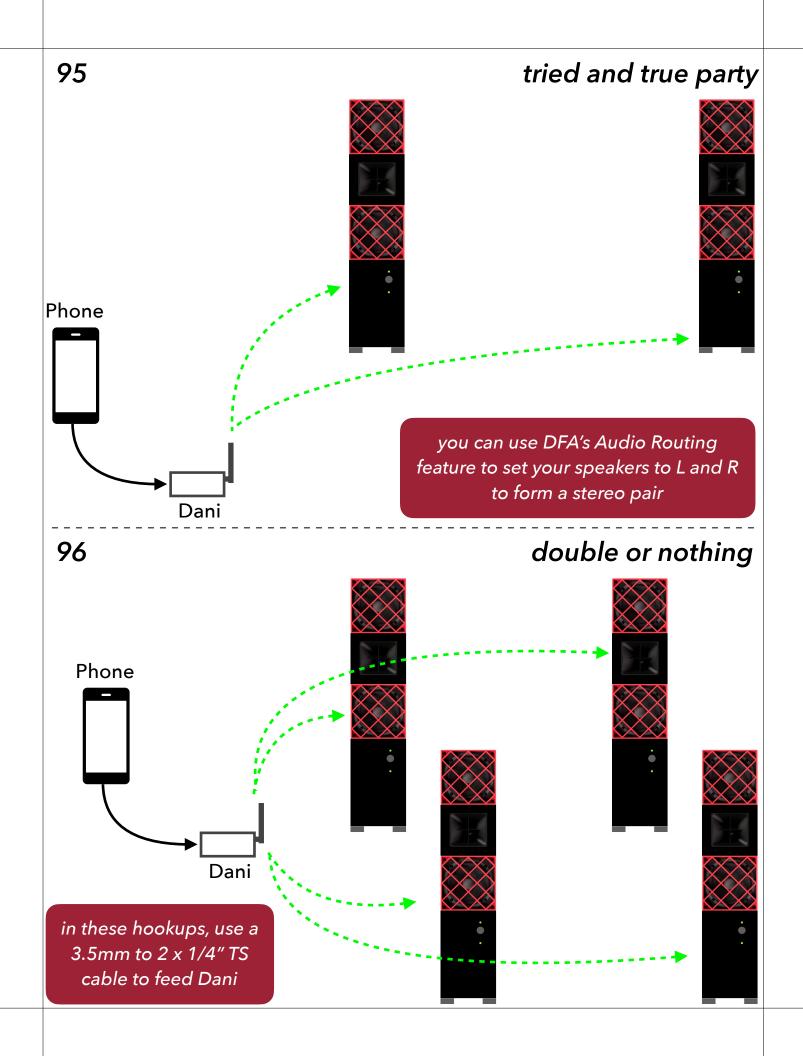
mixer

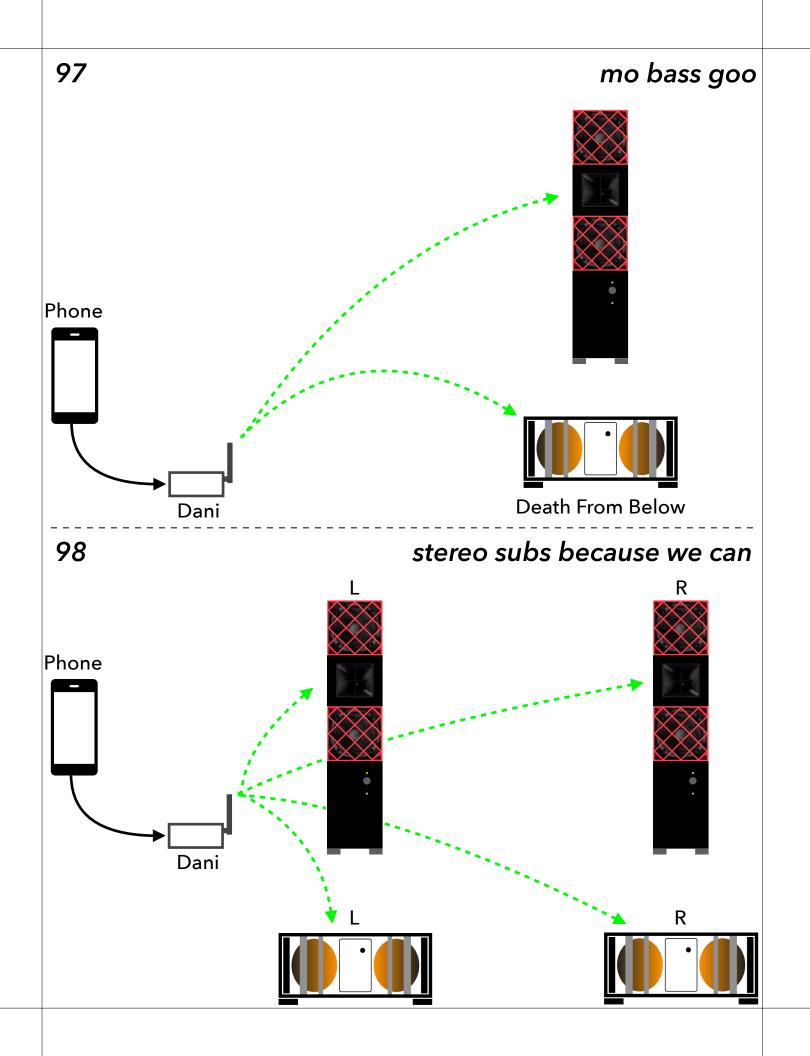


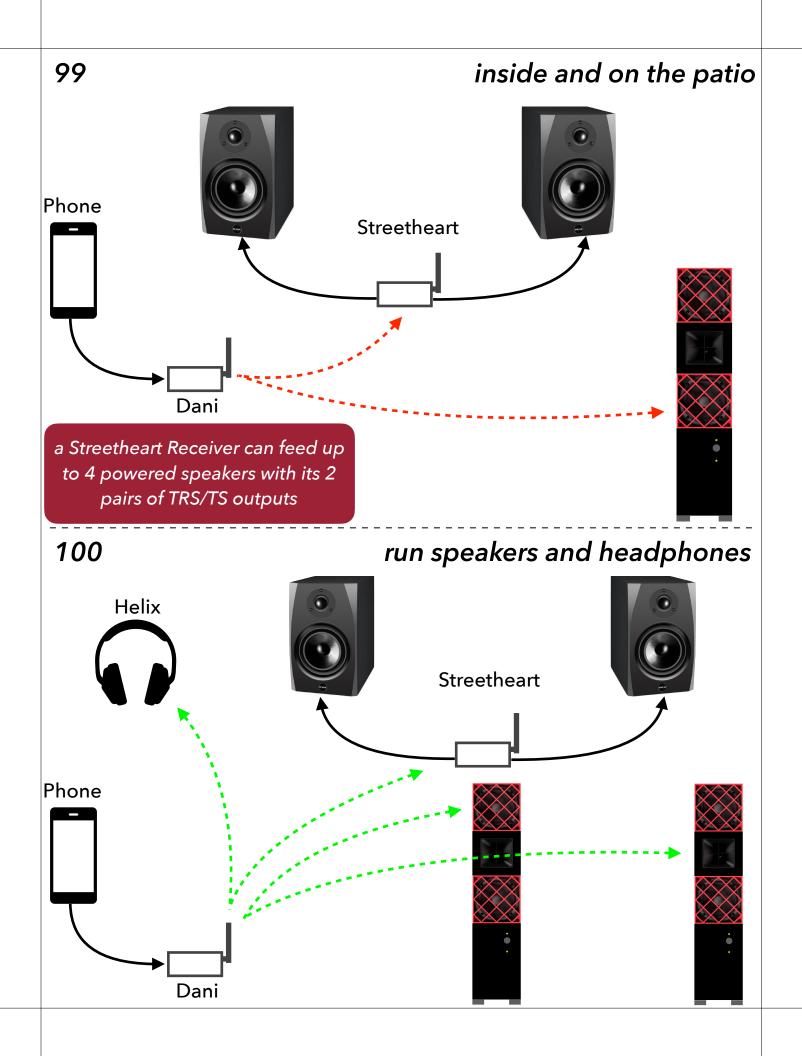


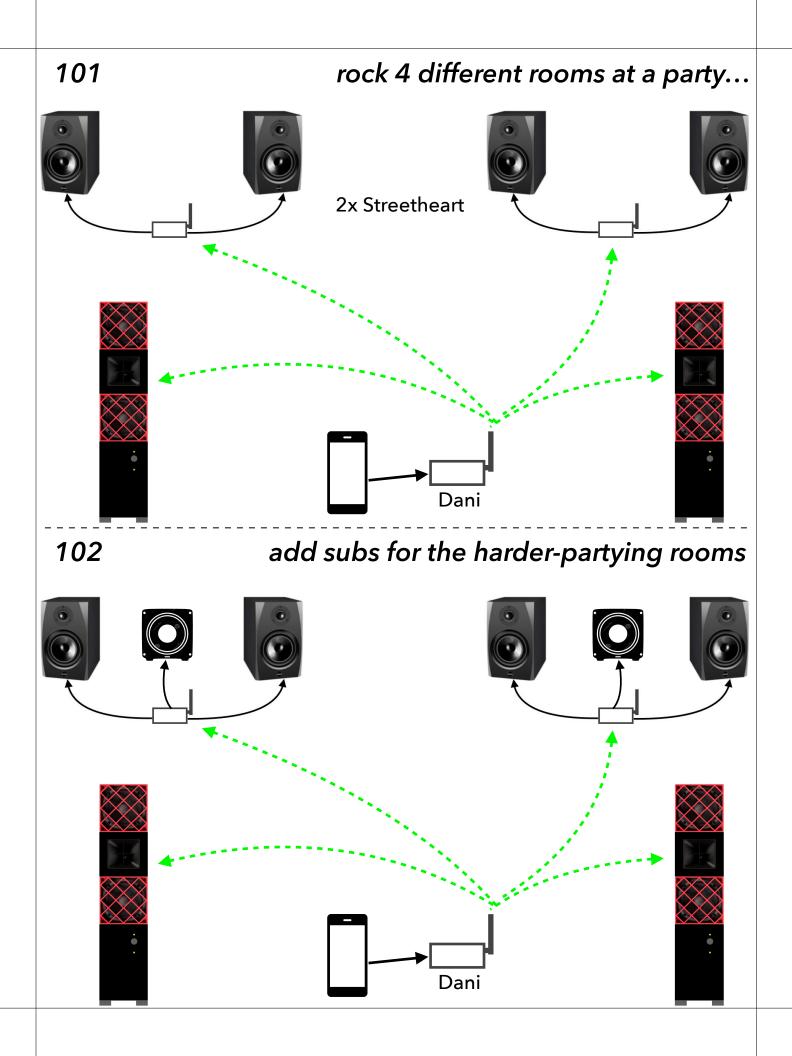


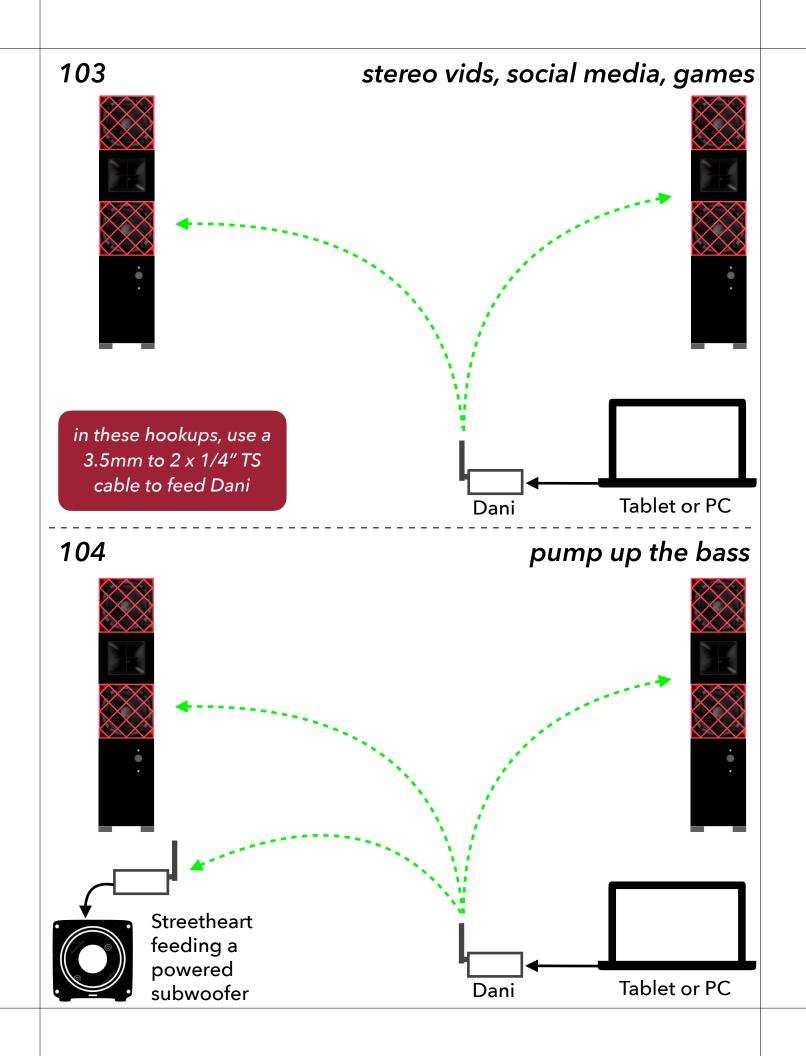
# Movies, TV, Social Media & Games

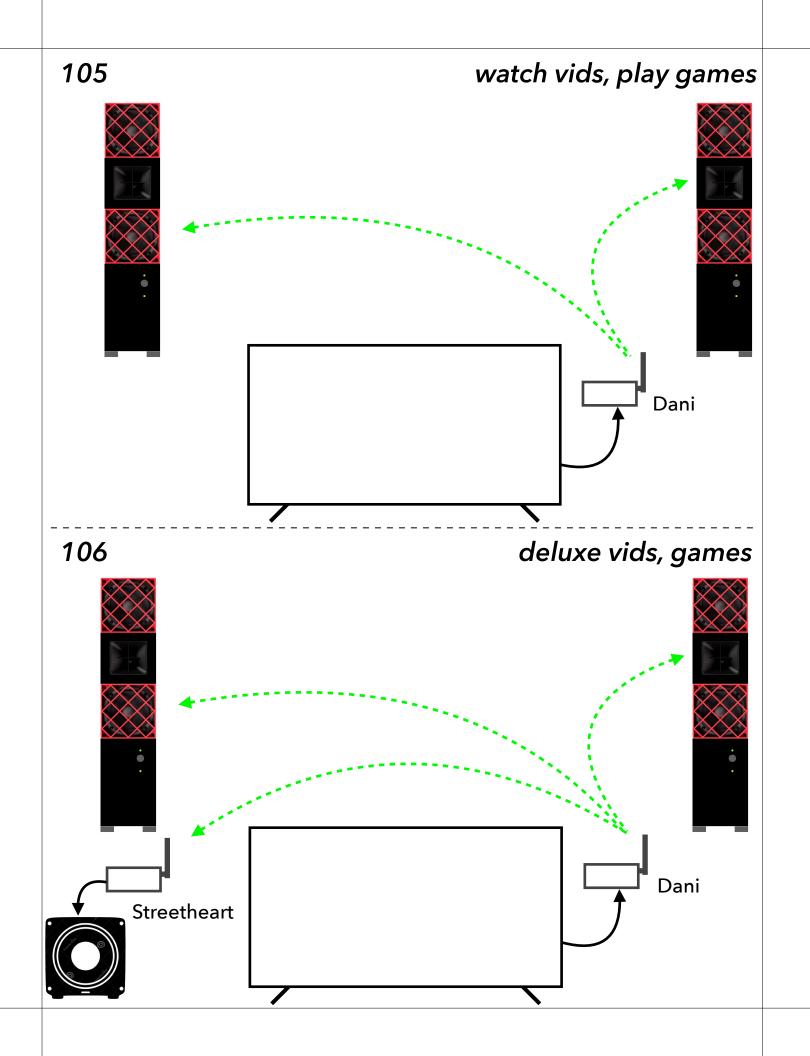


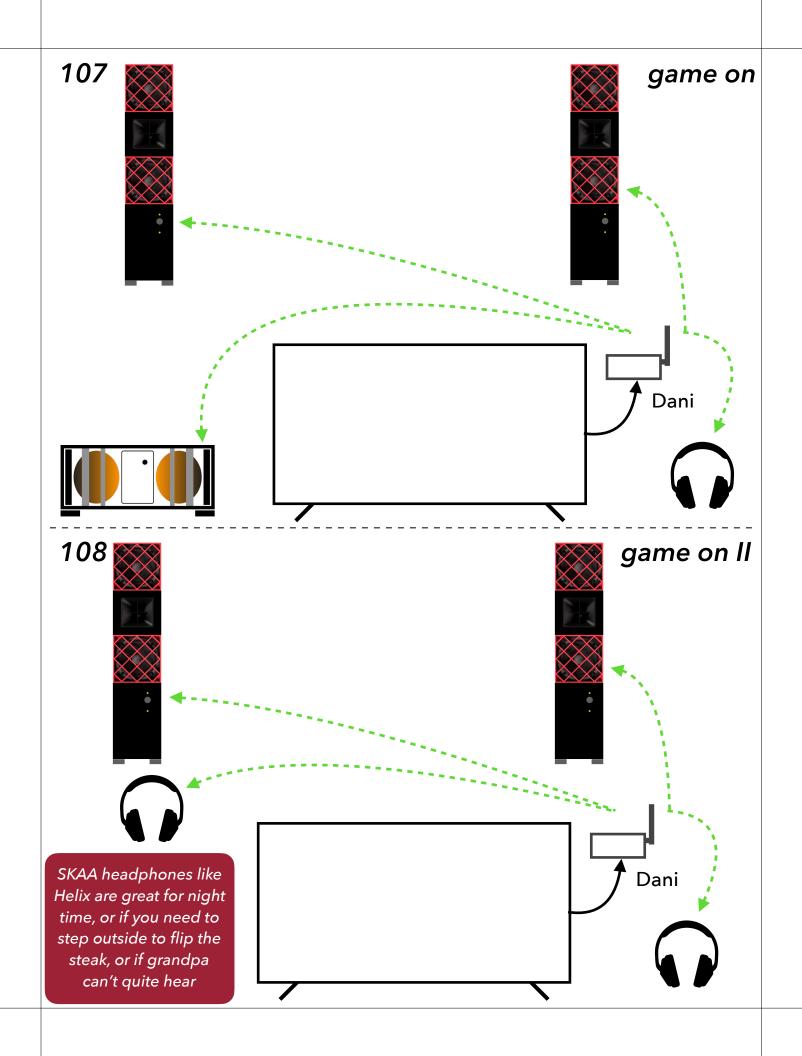








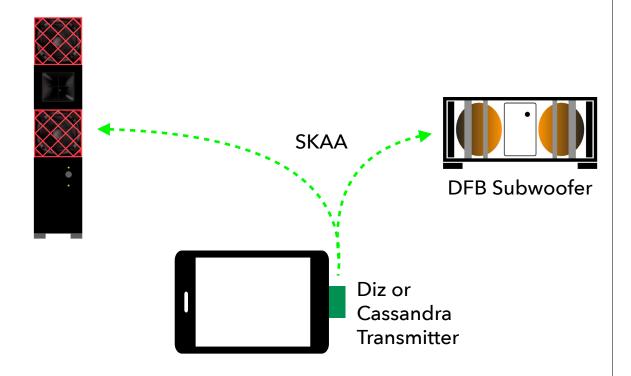




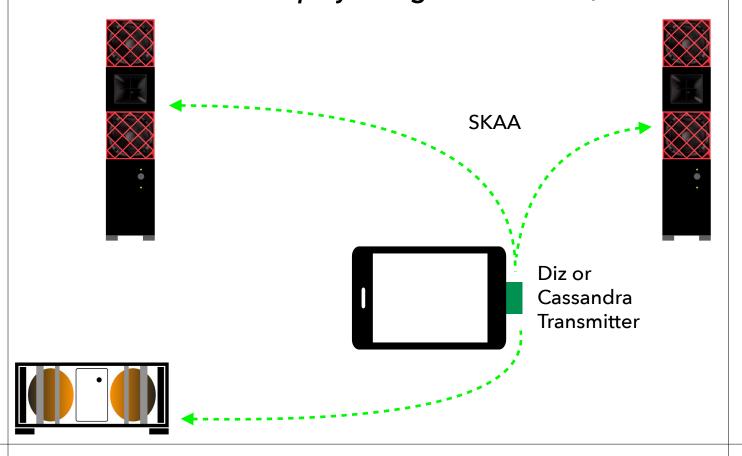
# 109 keepin' them Mackies busy when I'm not gigging Streetheart Dani 110 ... also, I hate my neighbours Streetheart Dani

### 111

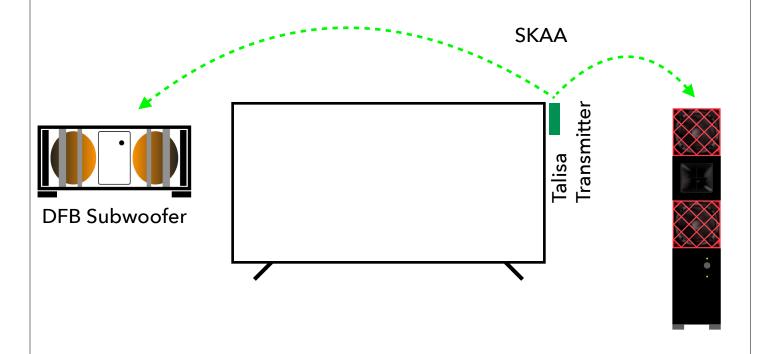
# watch vids, social media, play games



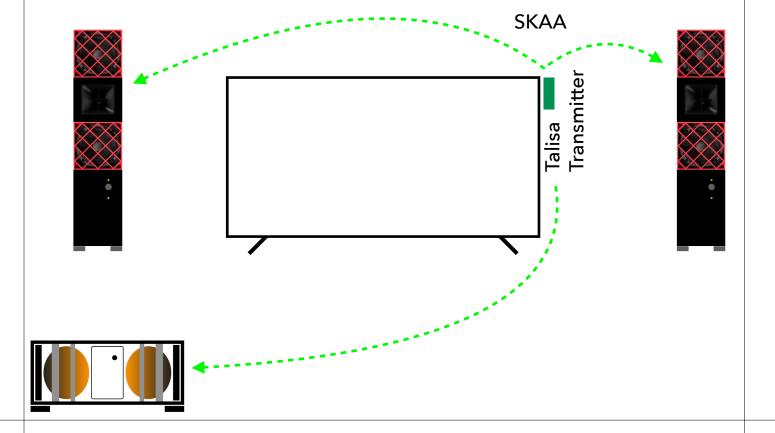
# 112 ... let's play that game in stereo, shall we?



# watch vids, play games on TV

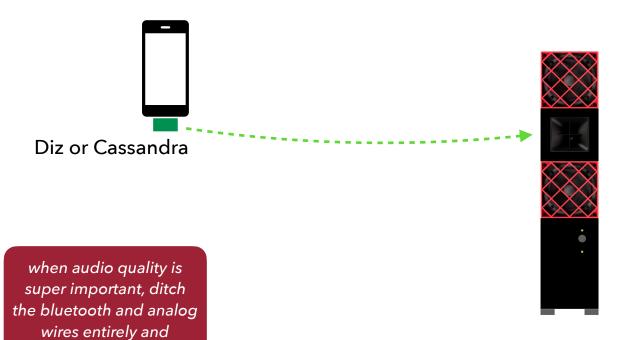


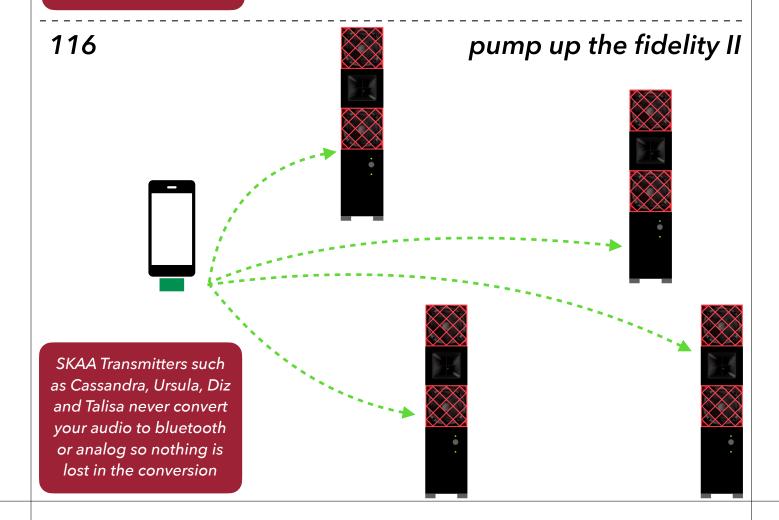
# 114 ... stereo TV with mondo bass



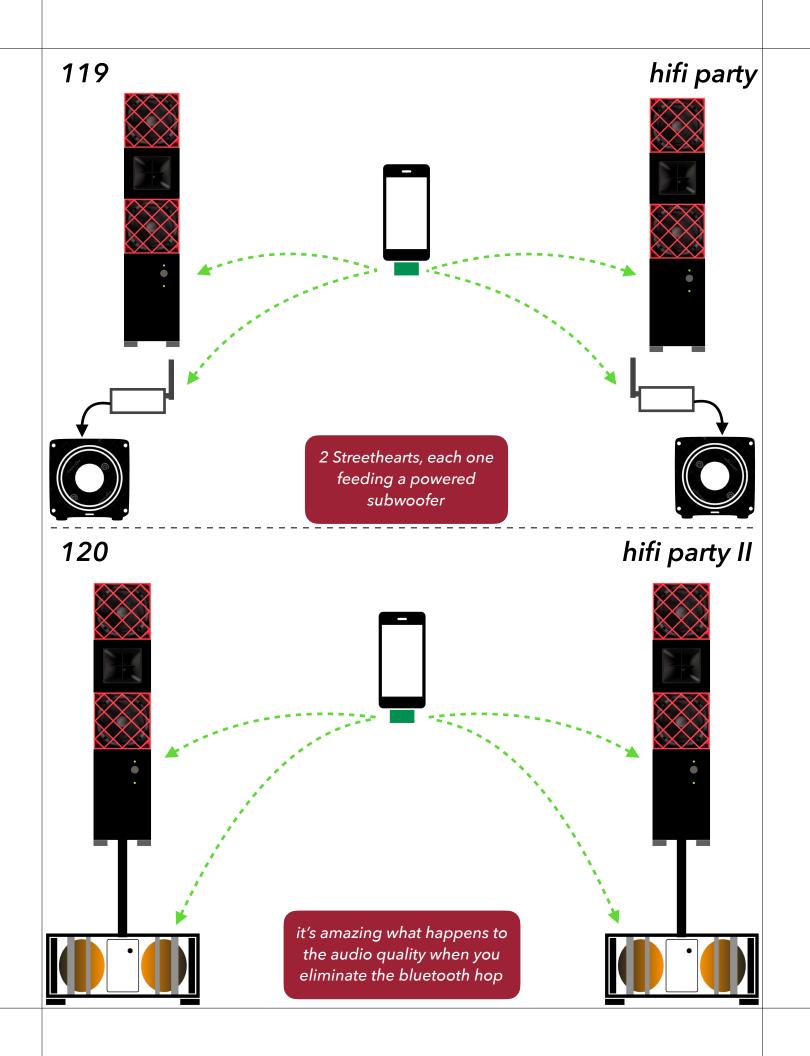
transmit pristine digital audio over SKAA instead

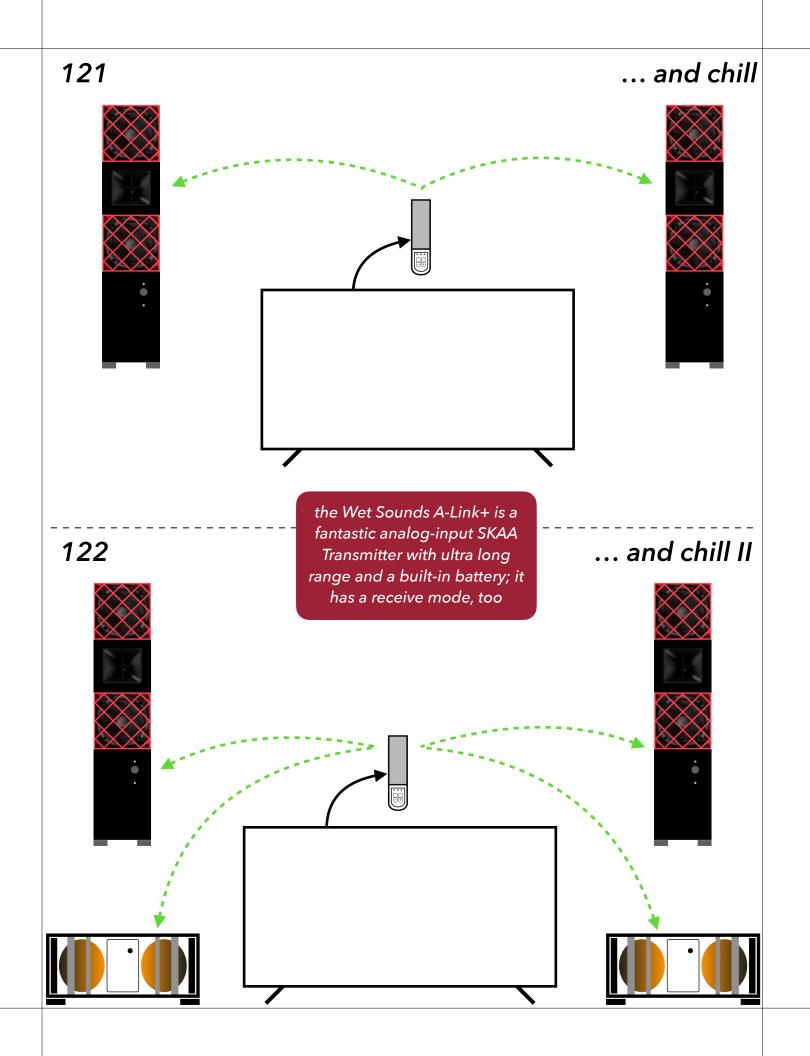
## pump up the fidelity

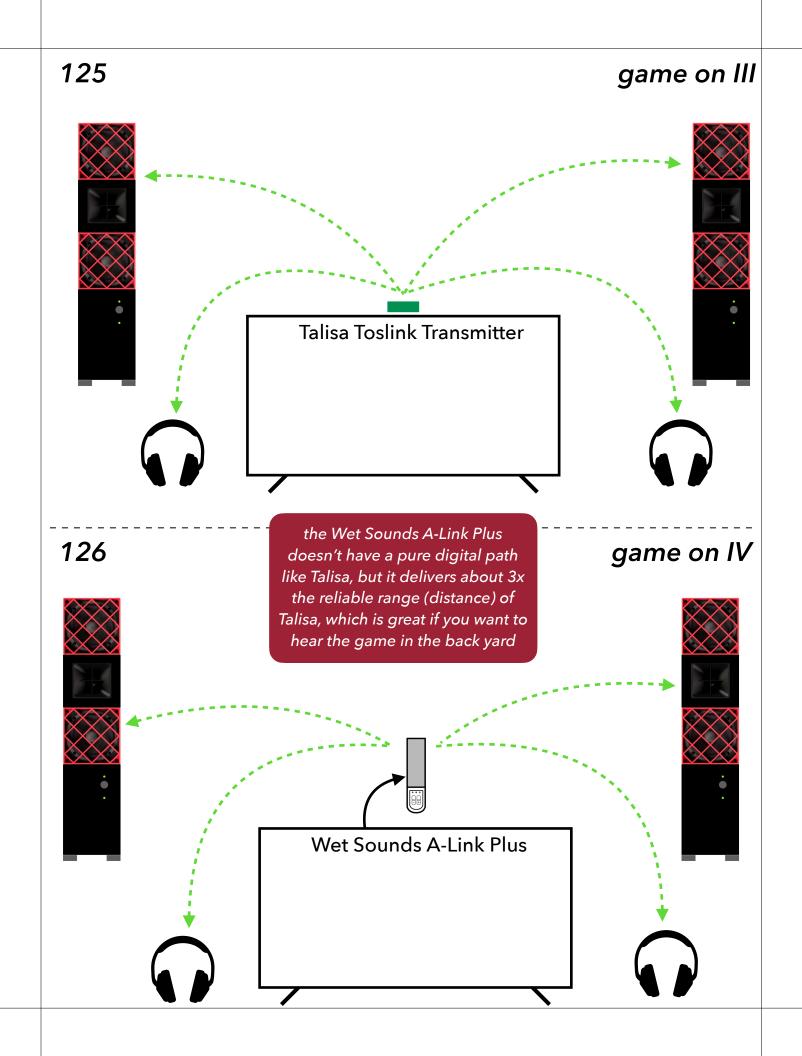


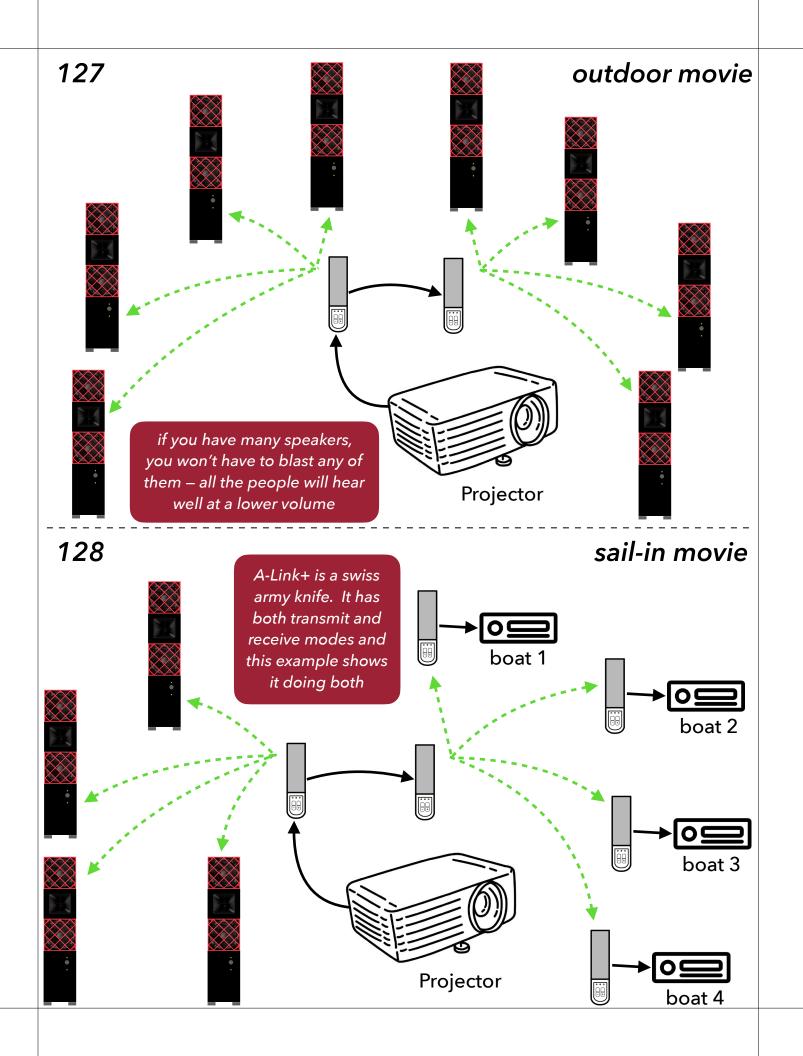


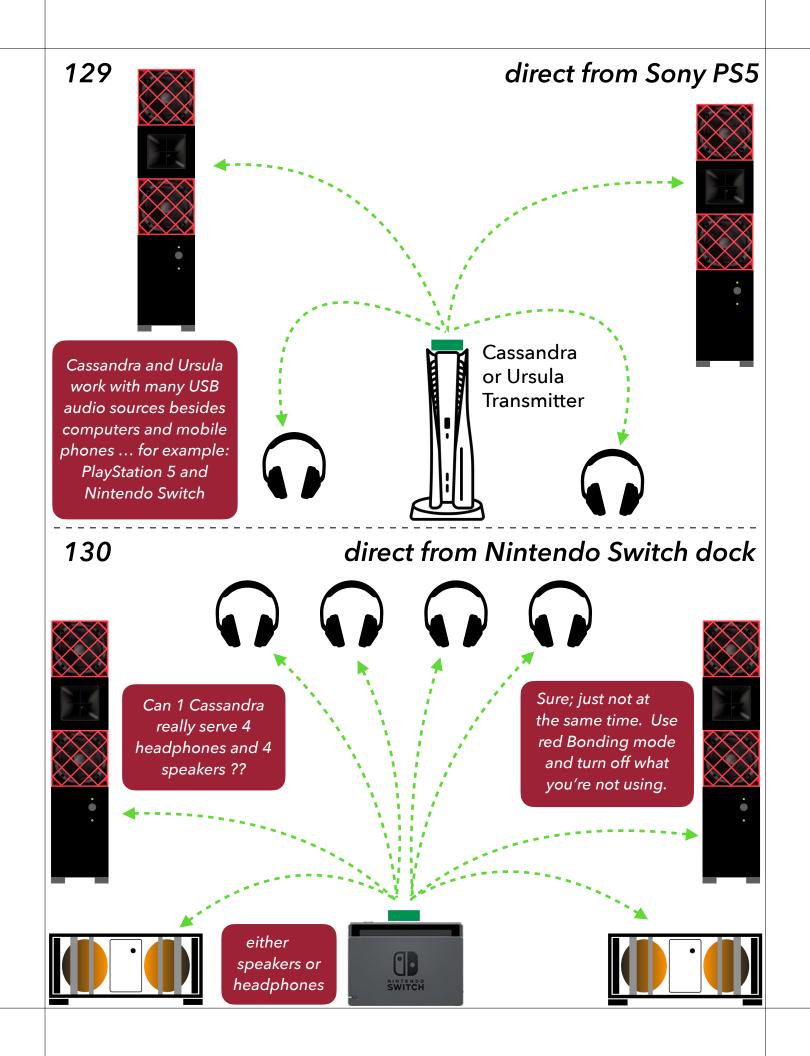
# pump up the fidelity III 117 Ursula or Cassandra **Transmitter** Notebook 118 pump up the fidelity IV tablet Rush SKAA Receiver Stereo Diz or Cassandra





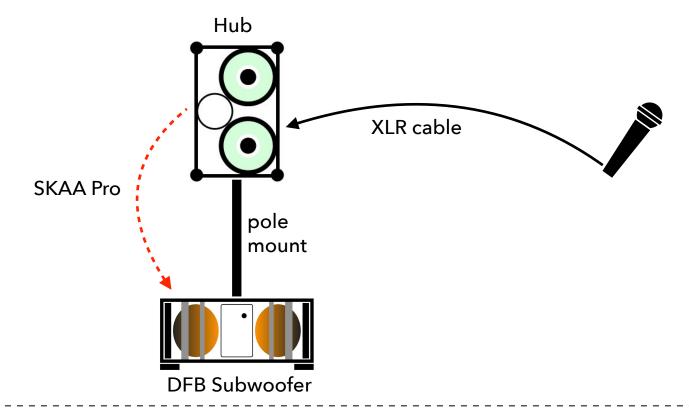




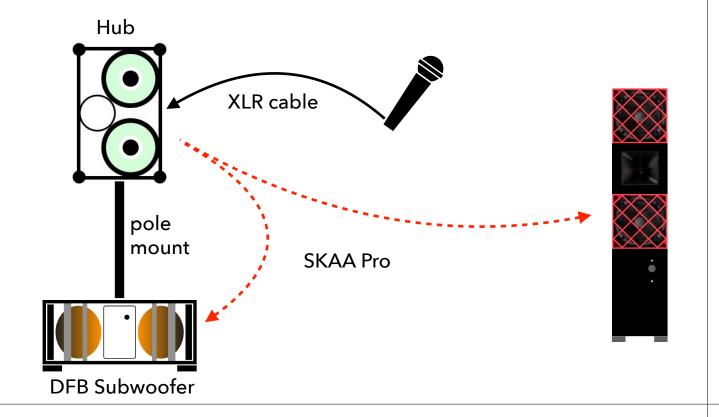


# Talk & Sing with Mics

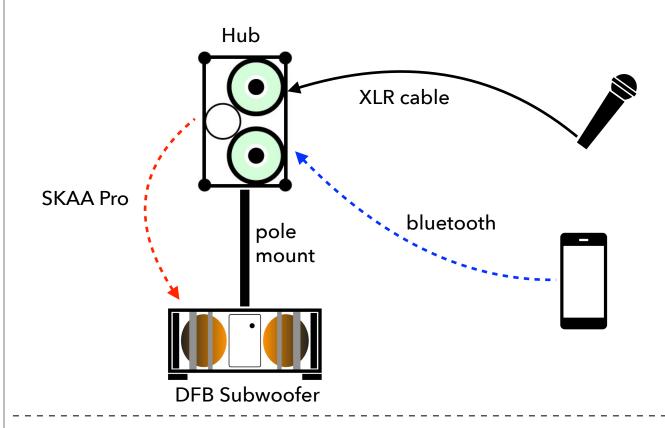
131 talk & hawk



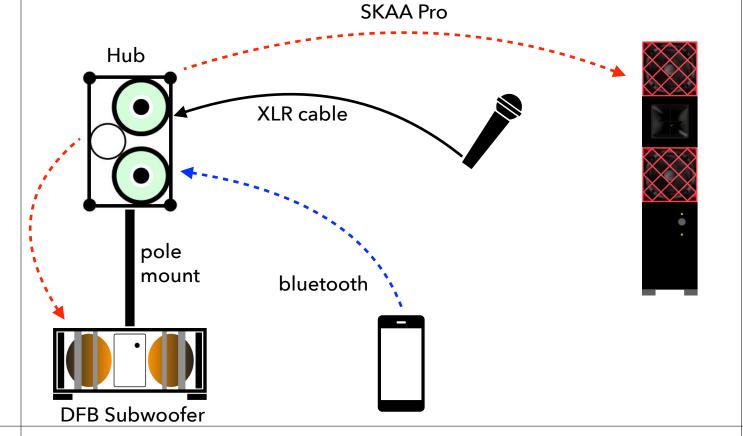
132 ... more coverage



# sing with background music

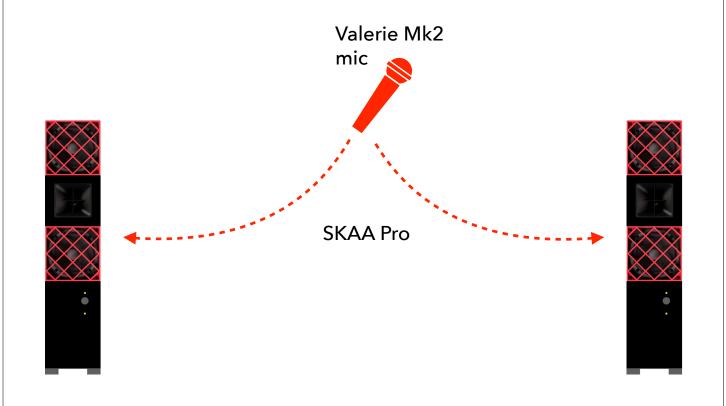




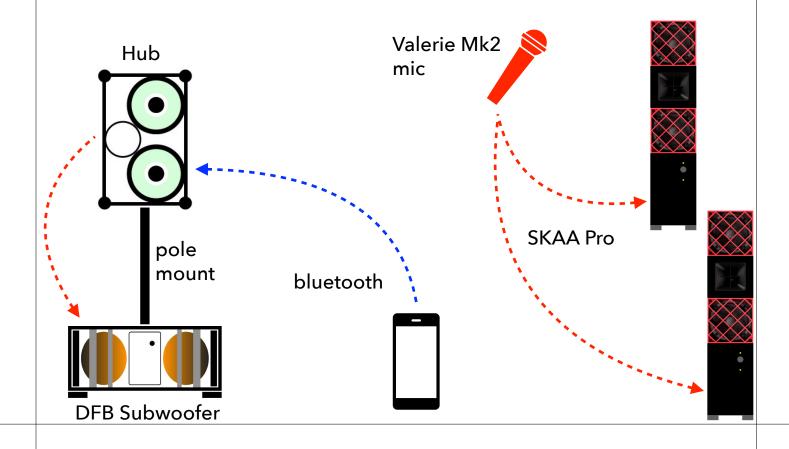


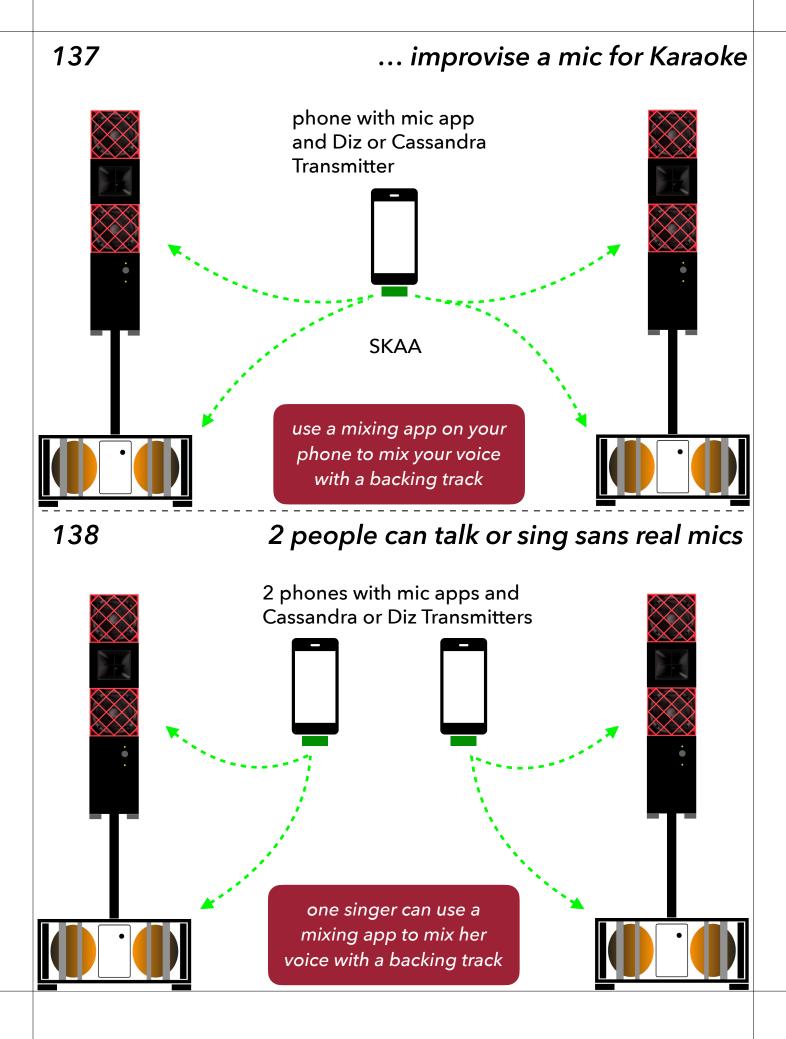
## 135

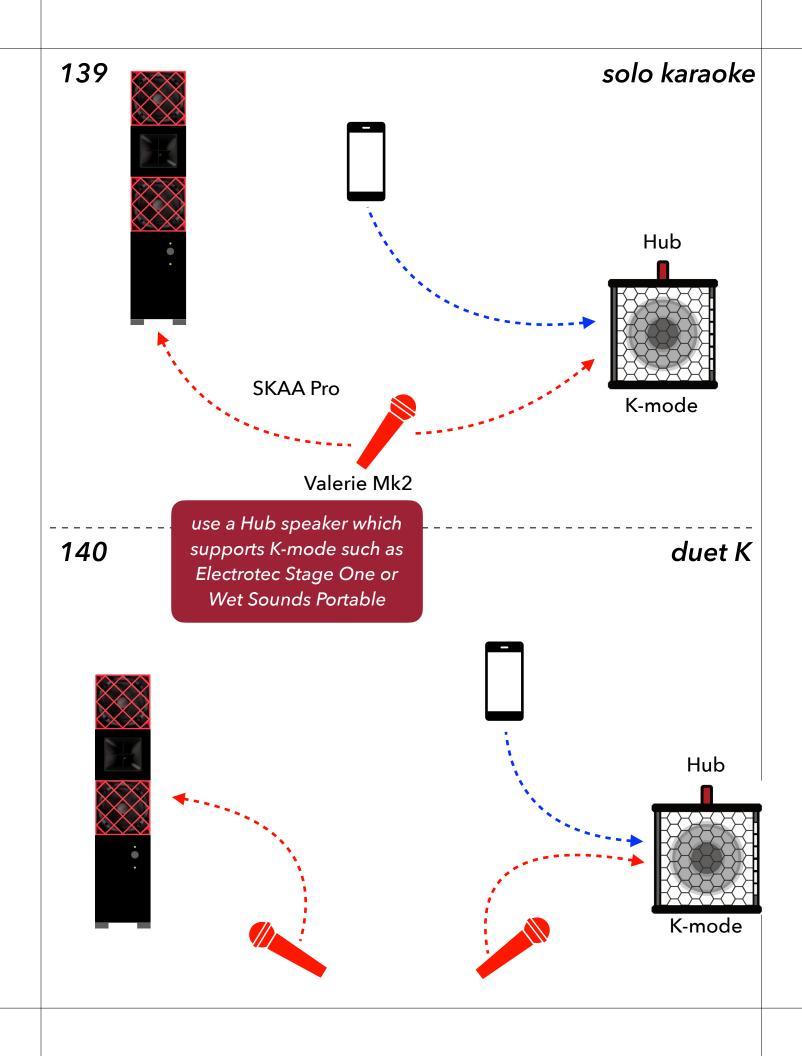
# ... go completely wireless

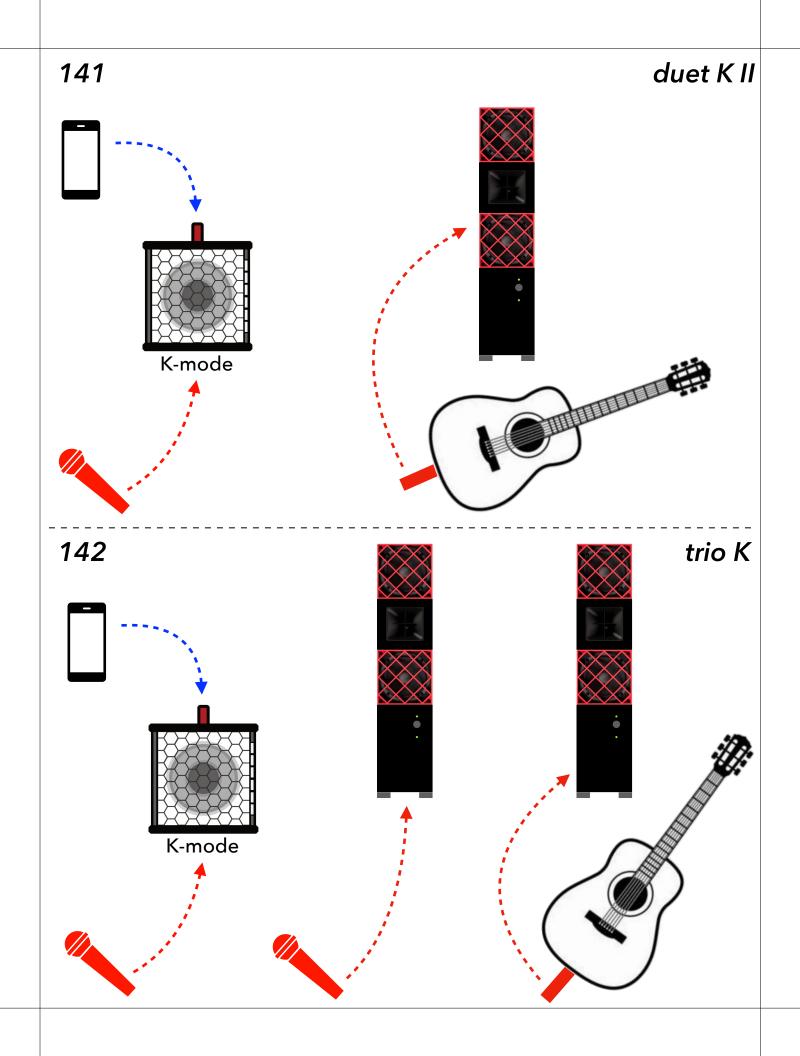


# 136 ... with a backing track

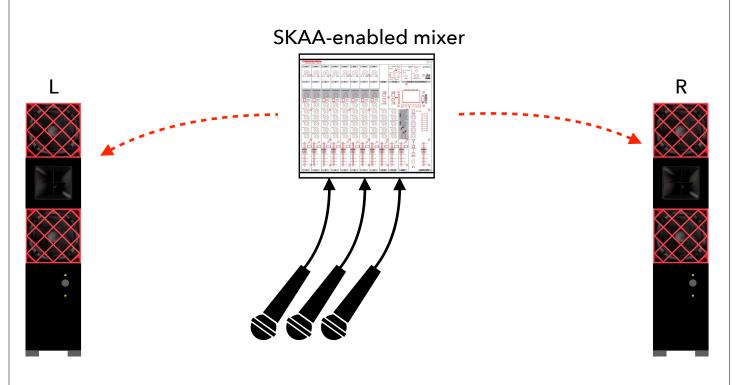


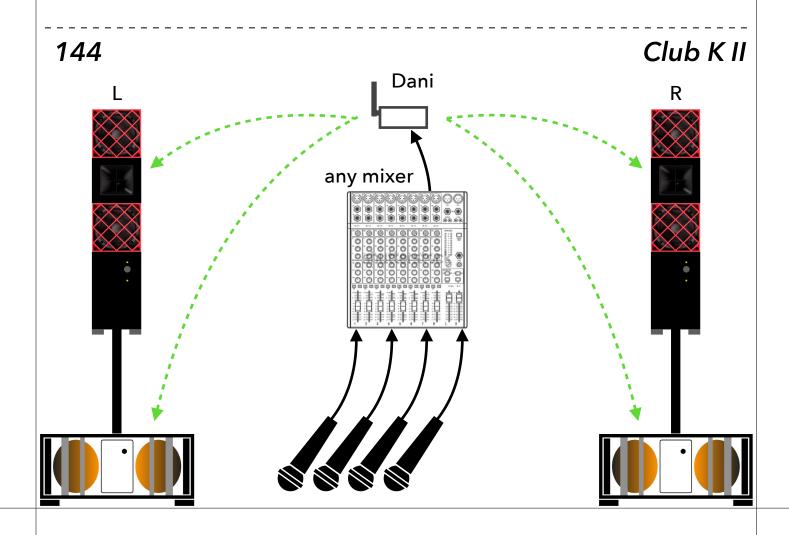


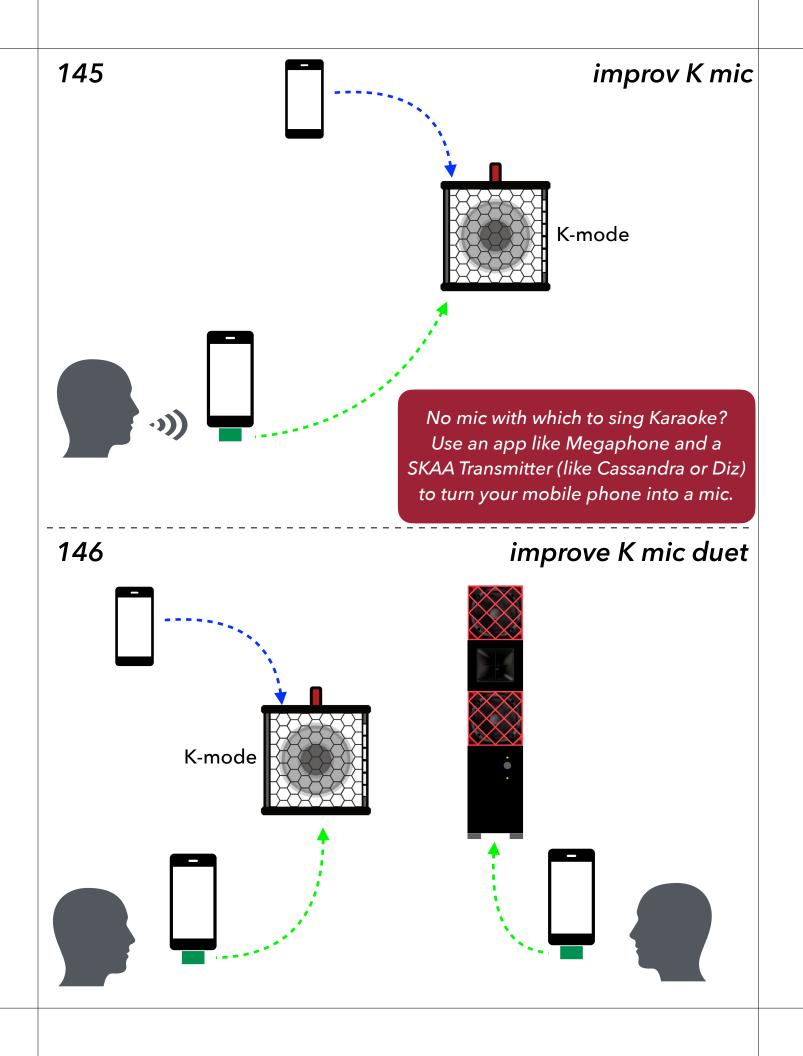


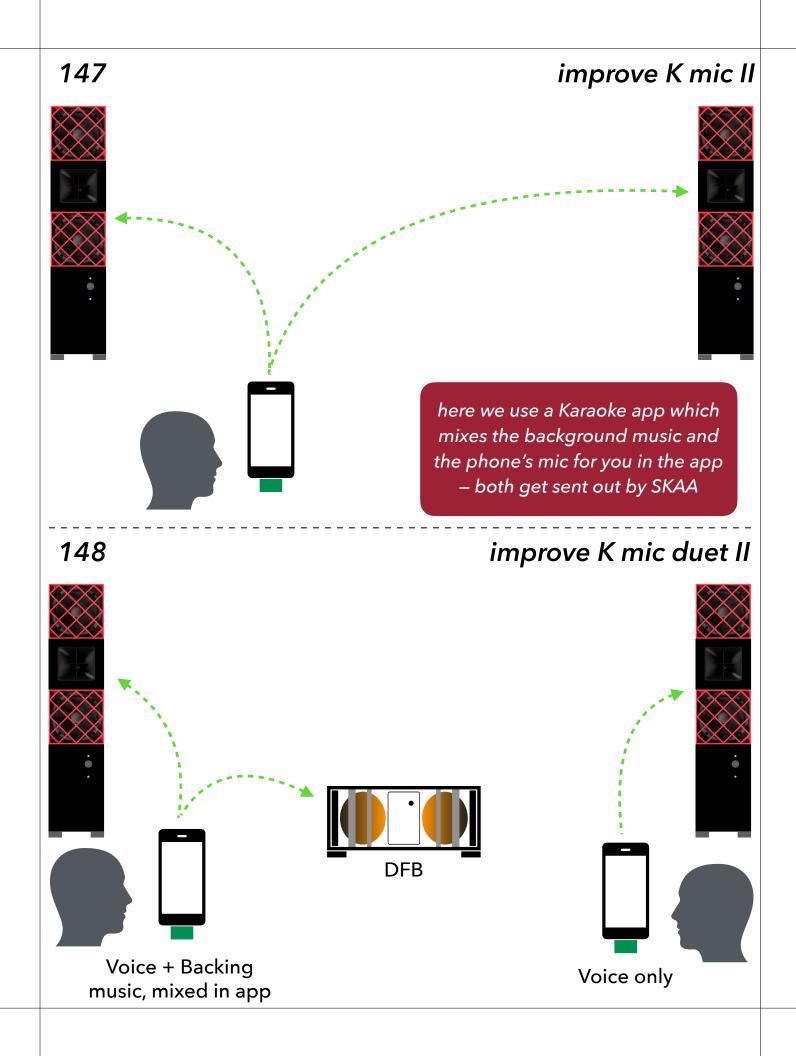


# 143 Club K I

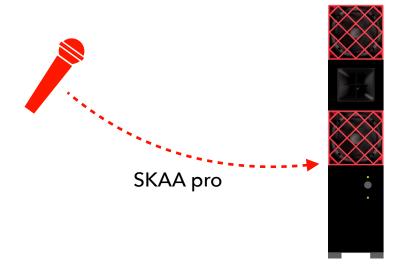








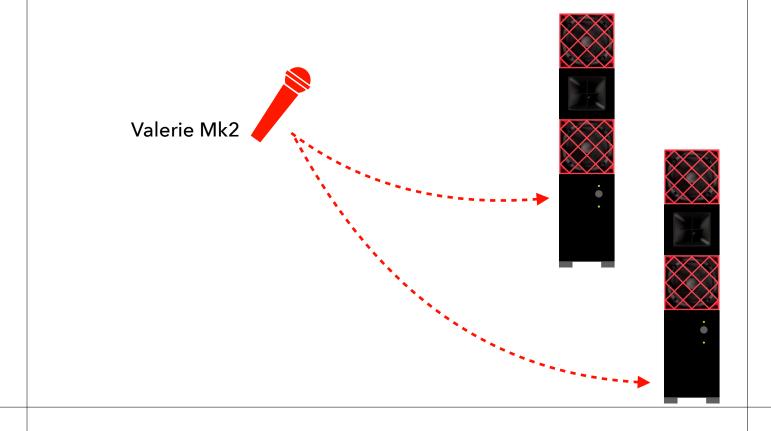
149 Check

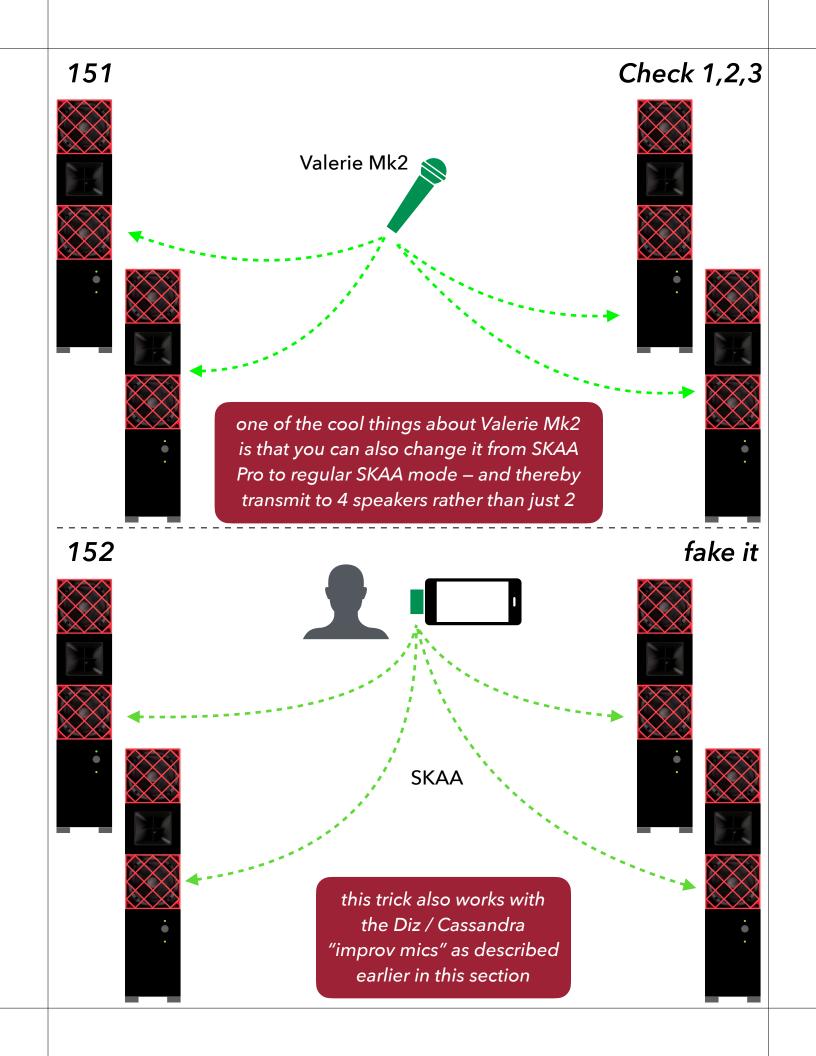


these are easy hookups for making a corporate speech, hawking at a trade show, or making announcements at a soccer game – come get your orange slices ...

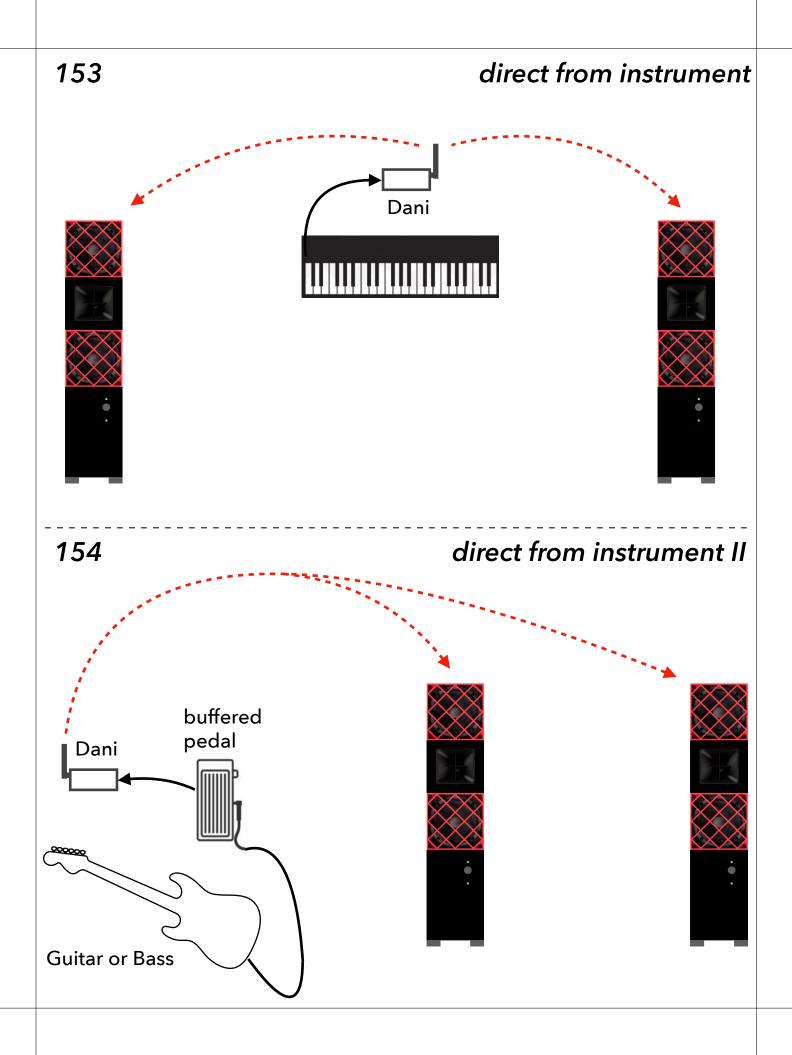
150

Check 1,2

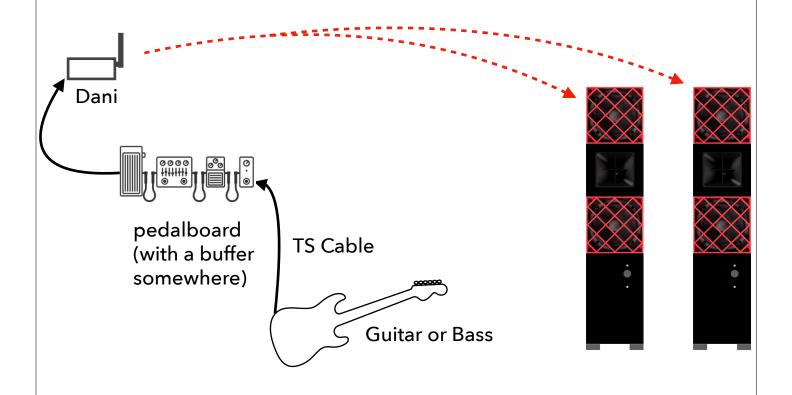


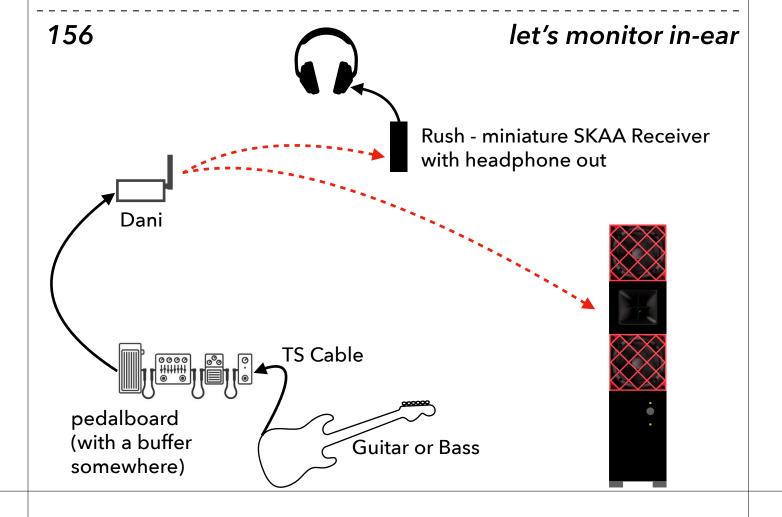


# Instruments & Jams

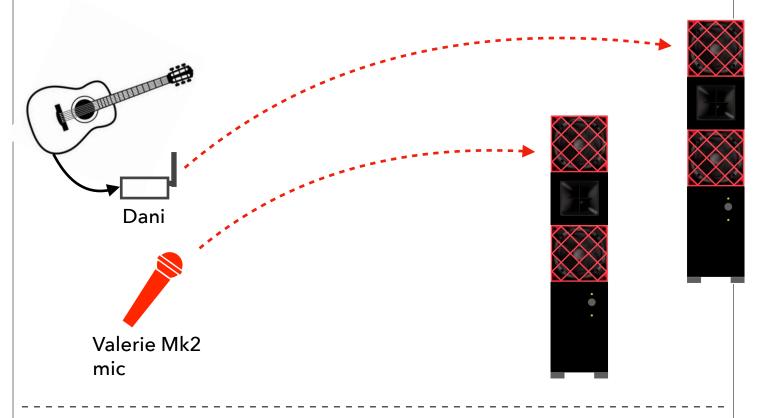


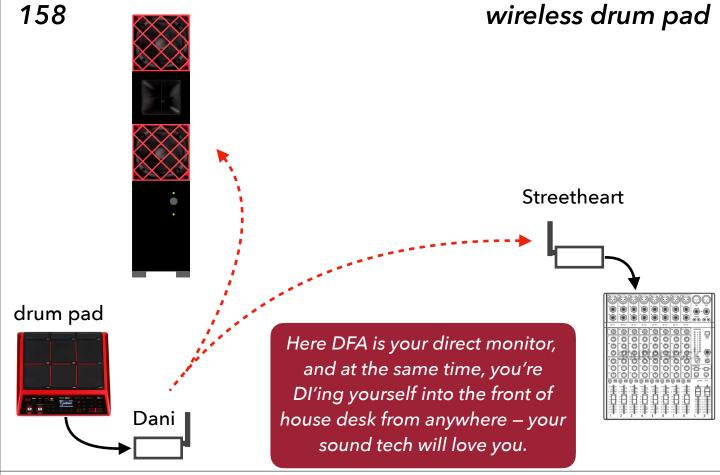
## direct from pedalboard

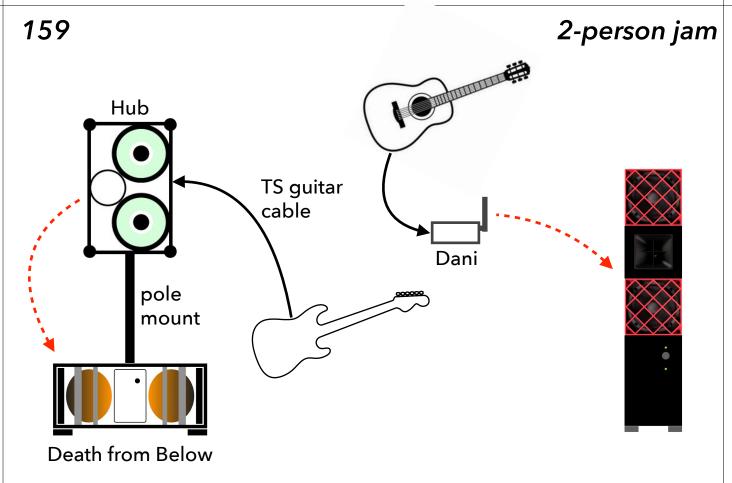


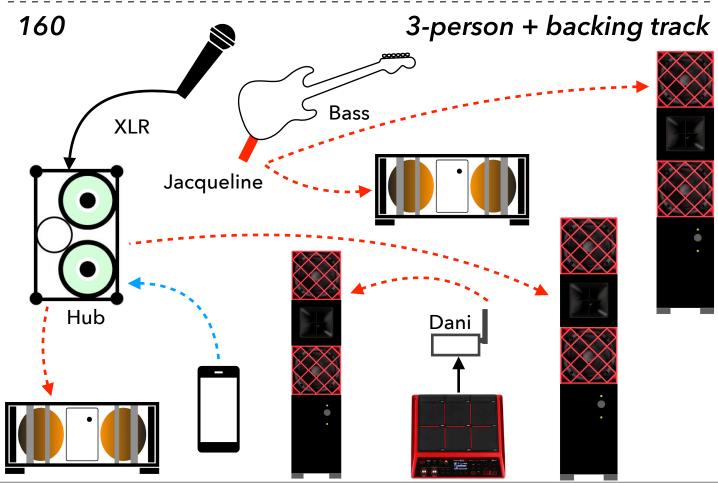


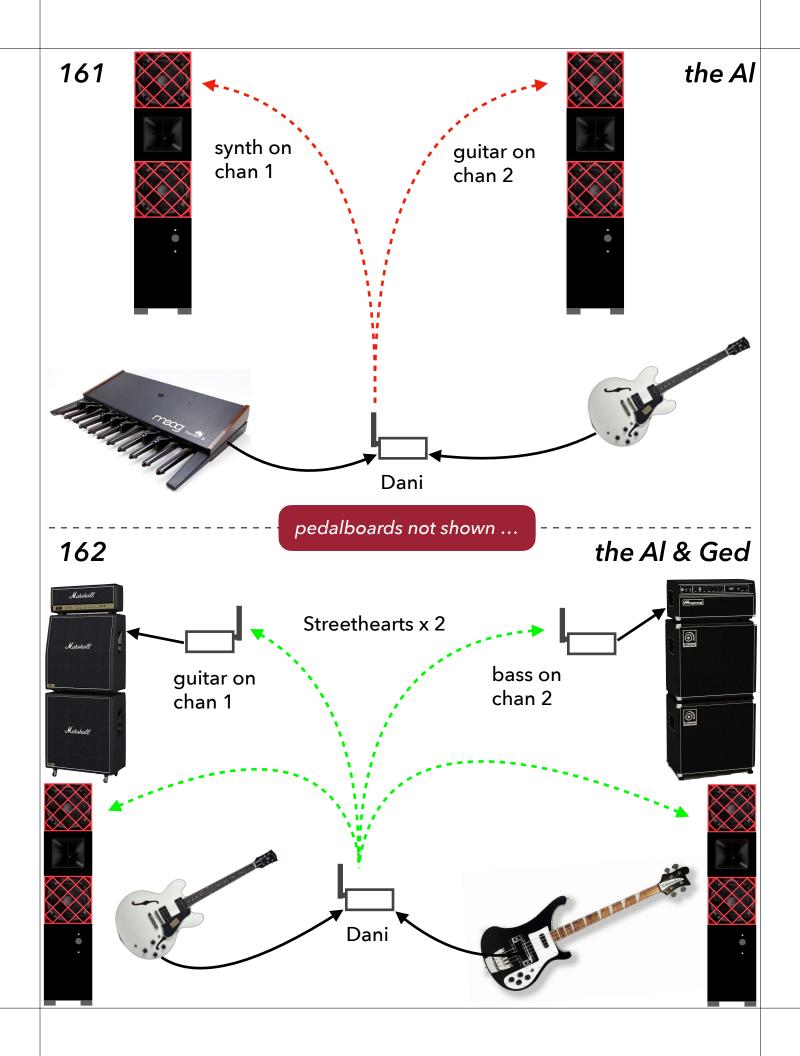
## coffee shop special

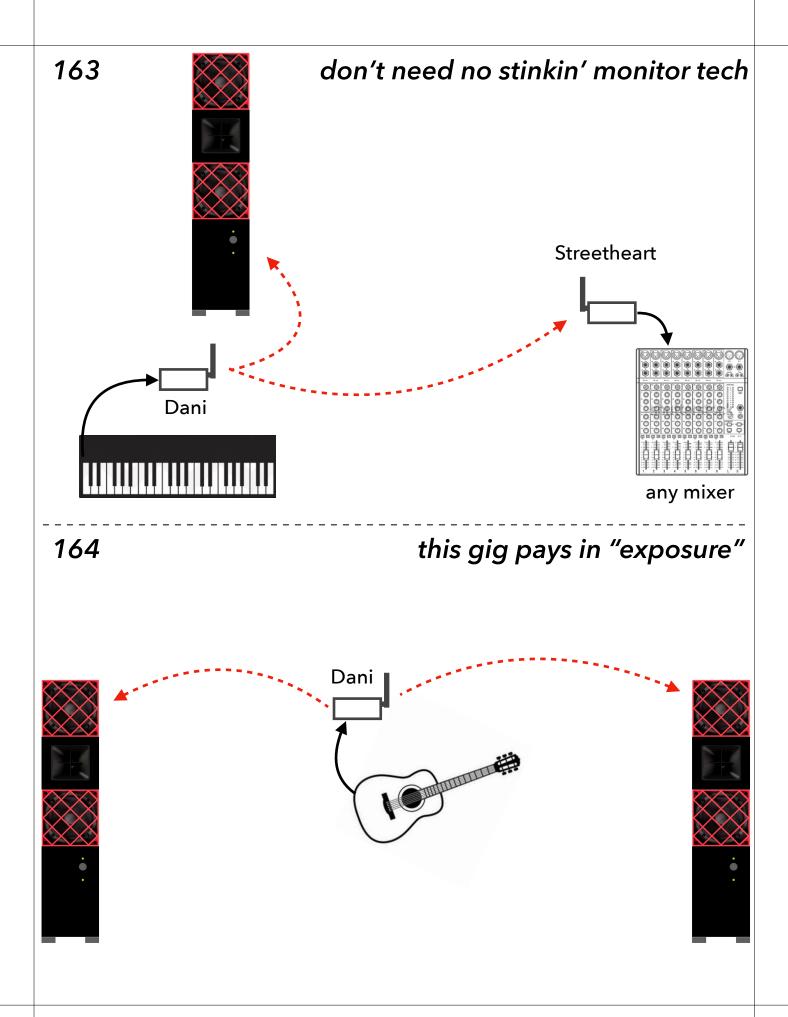


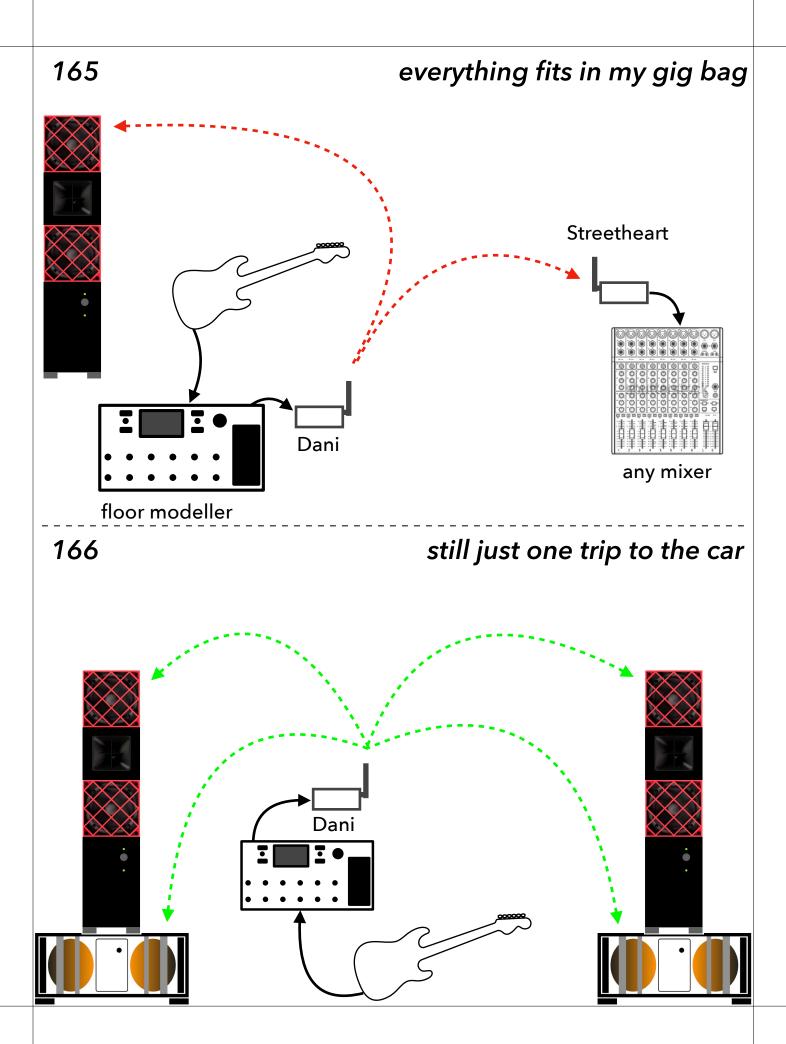


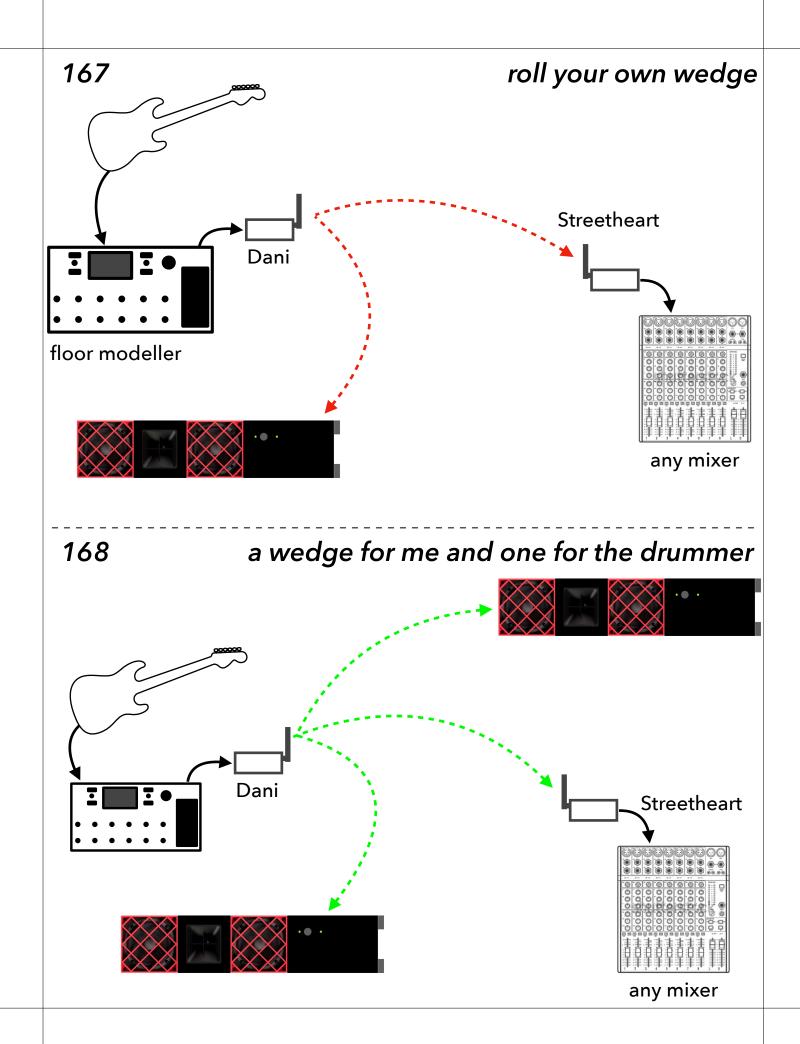


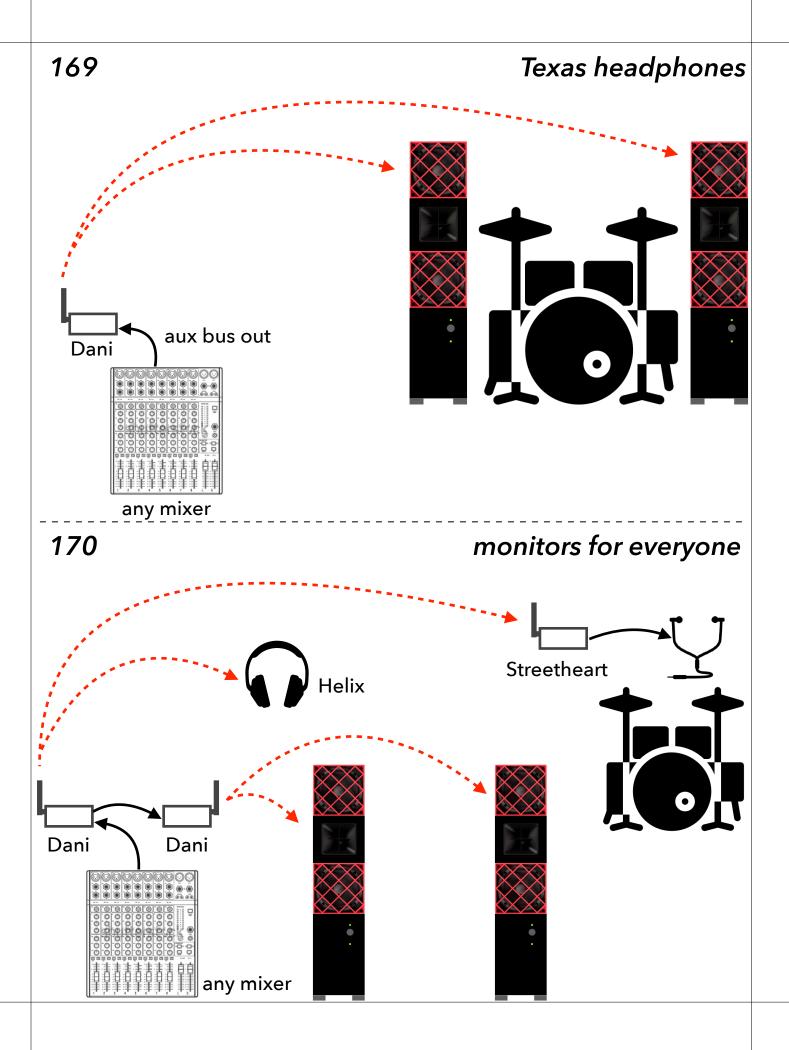


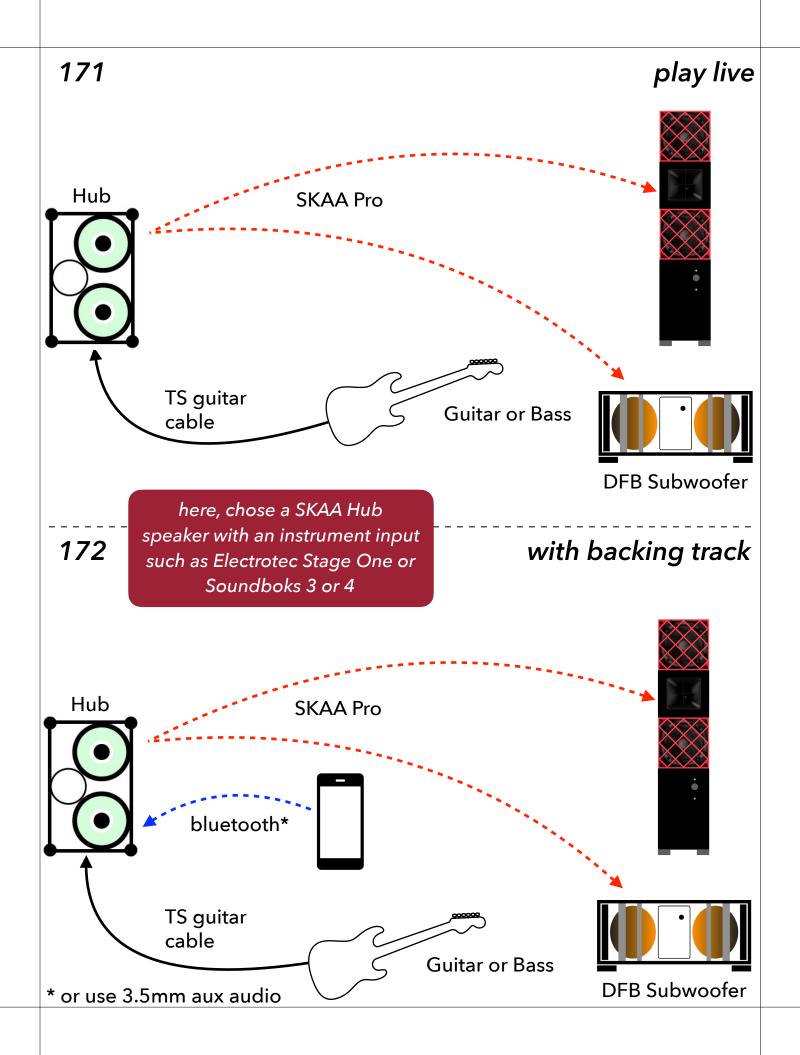




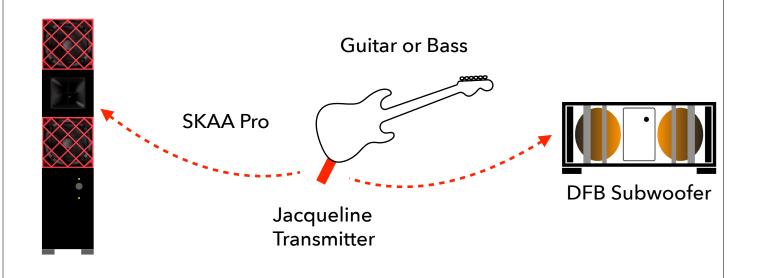


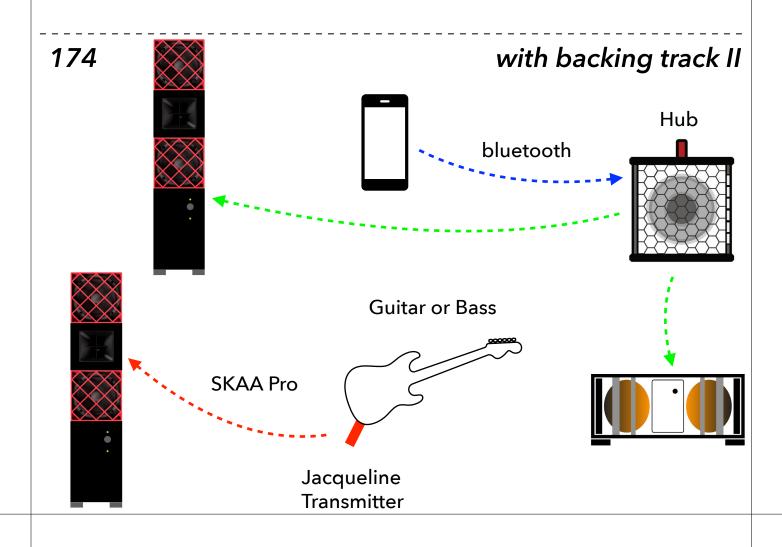


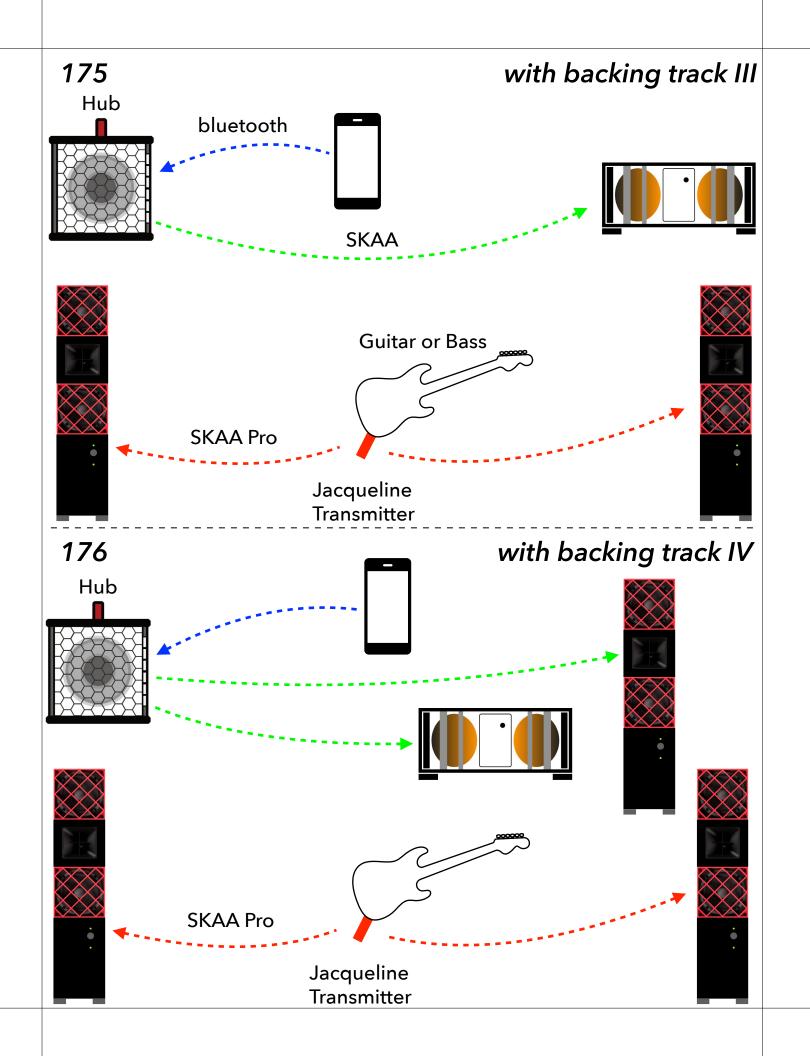


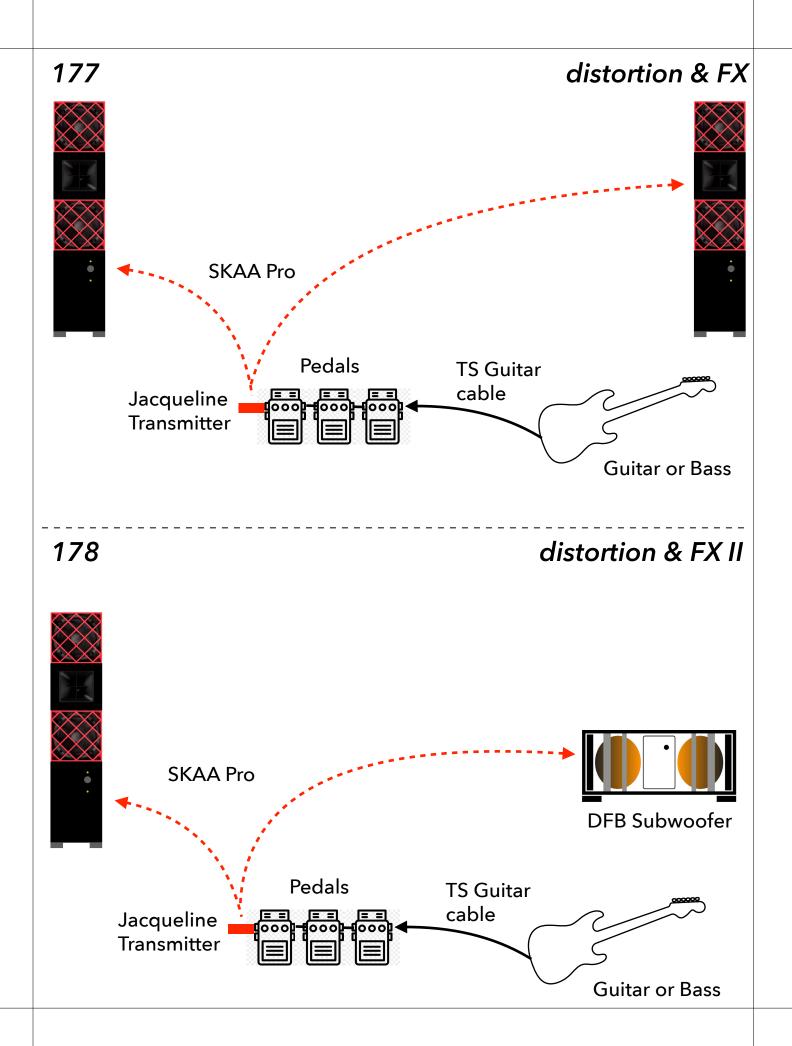


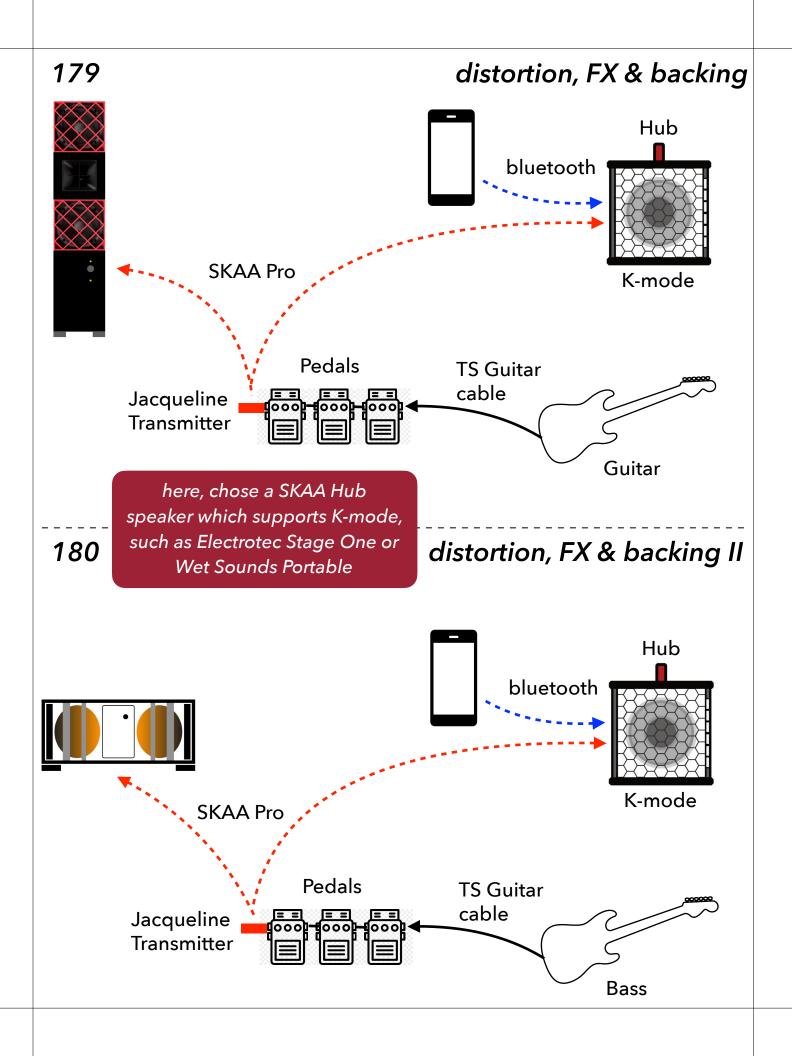
## play completely wireless

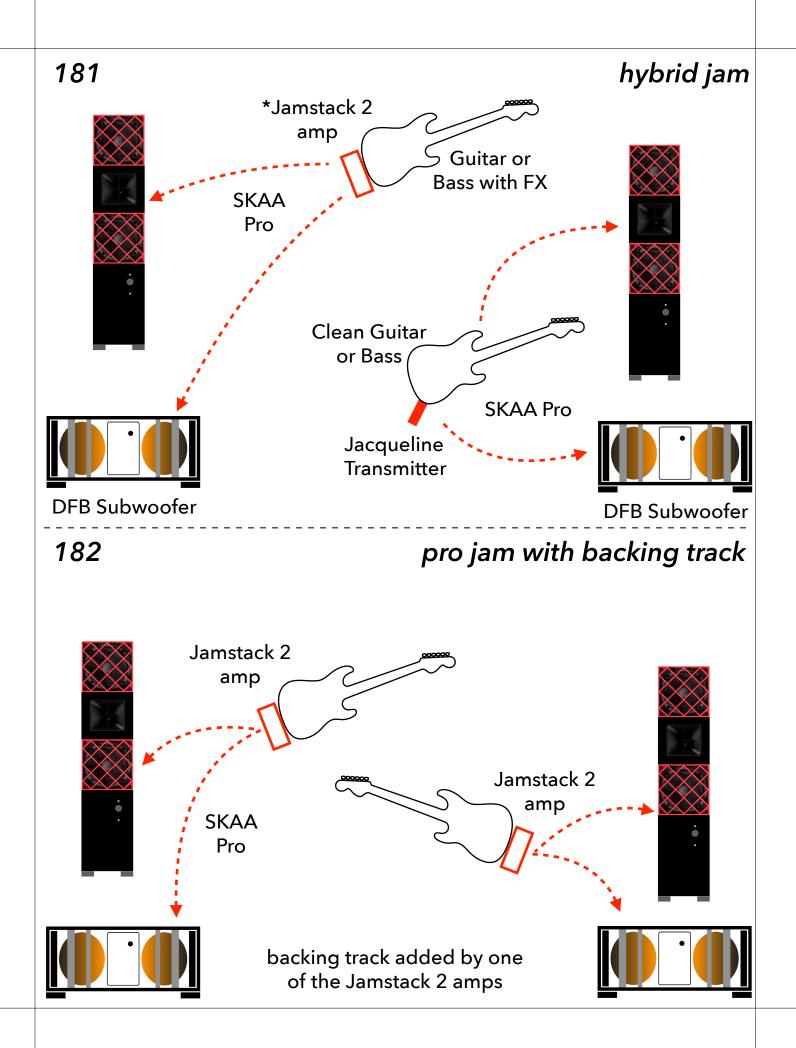


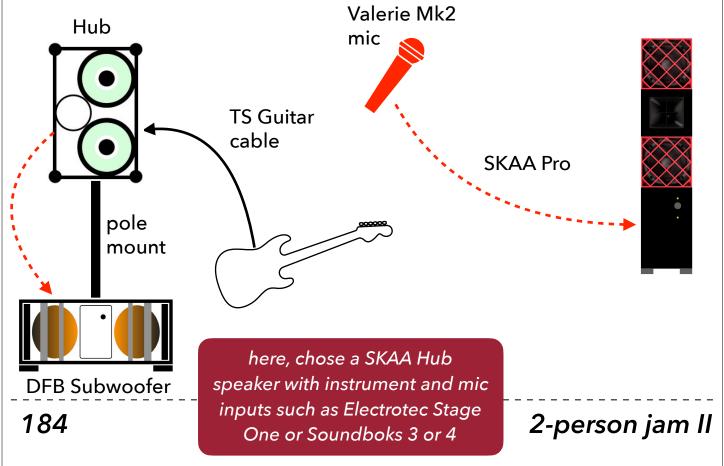


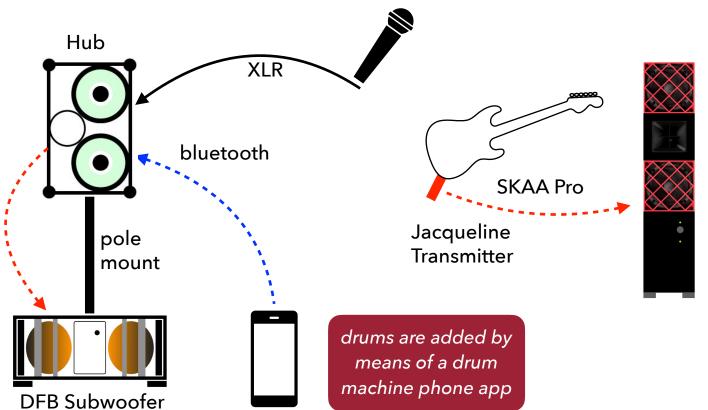


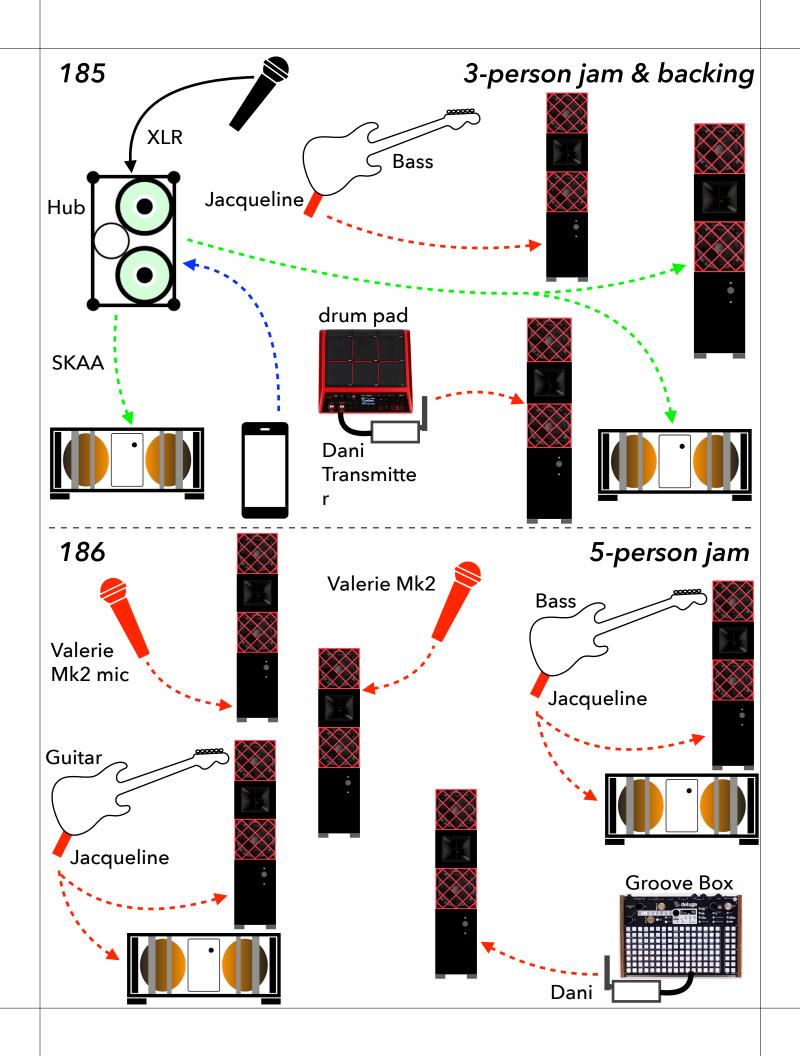


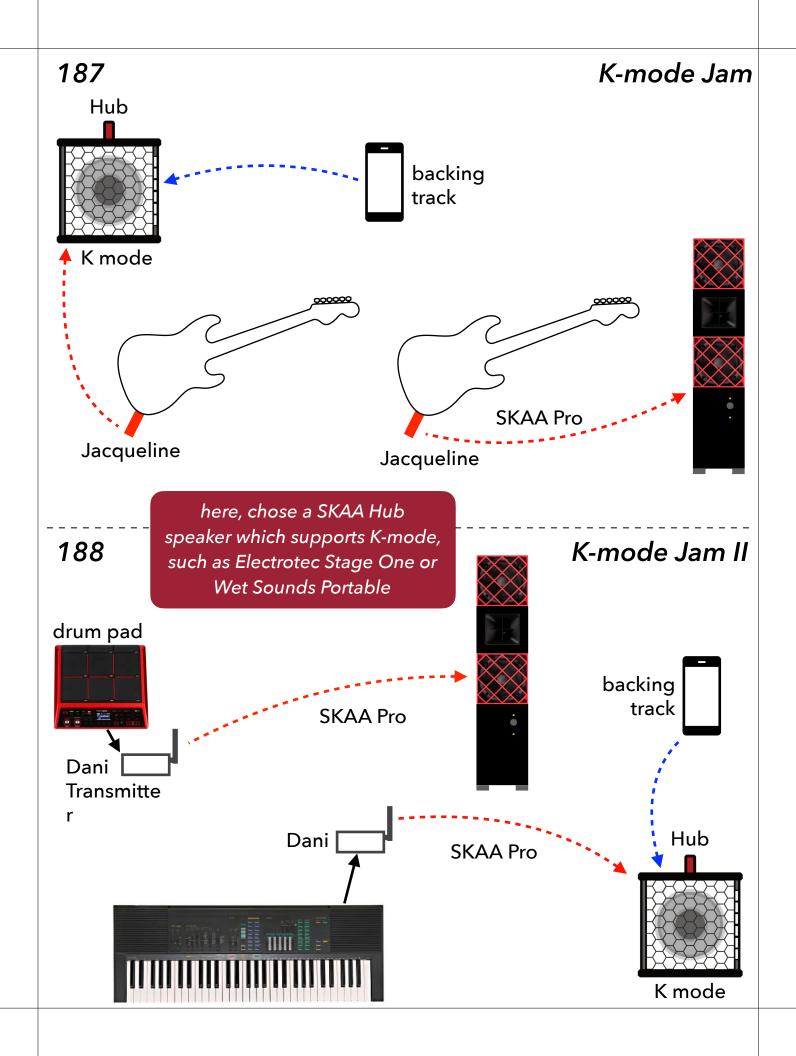


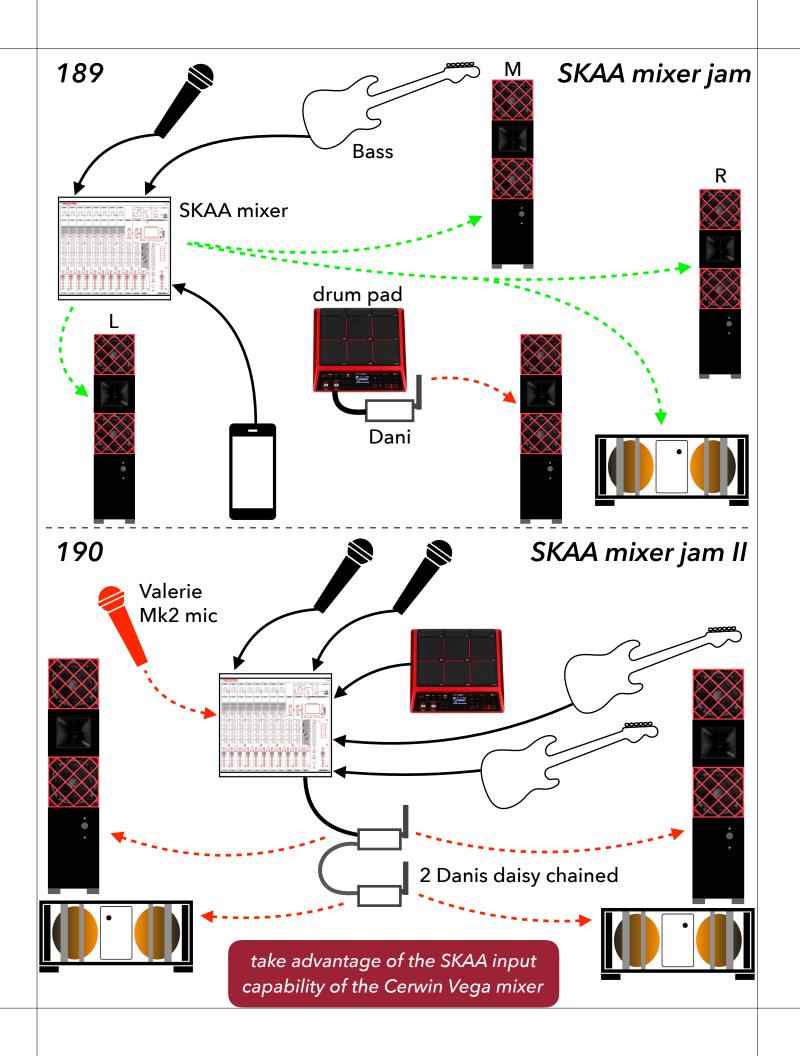




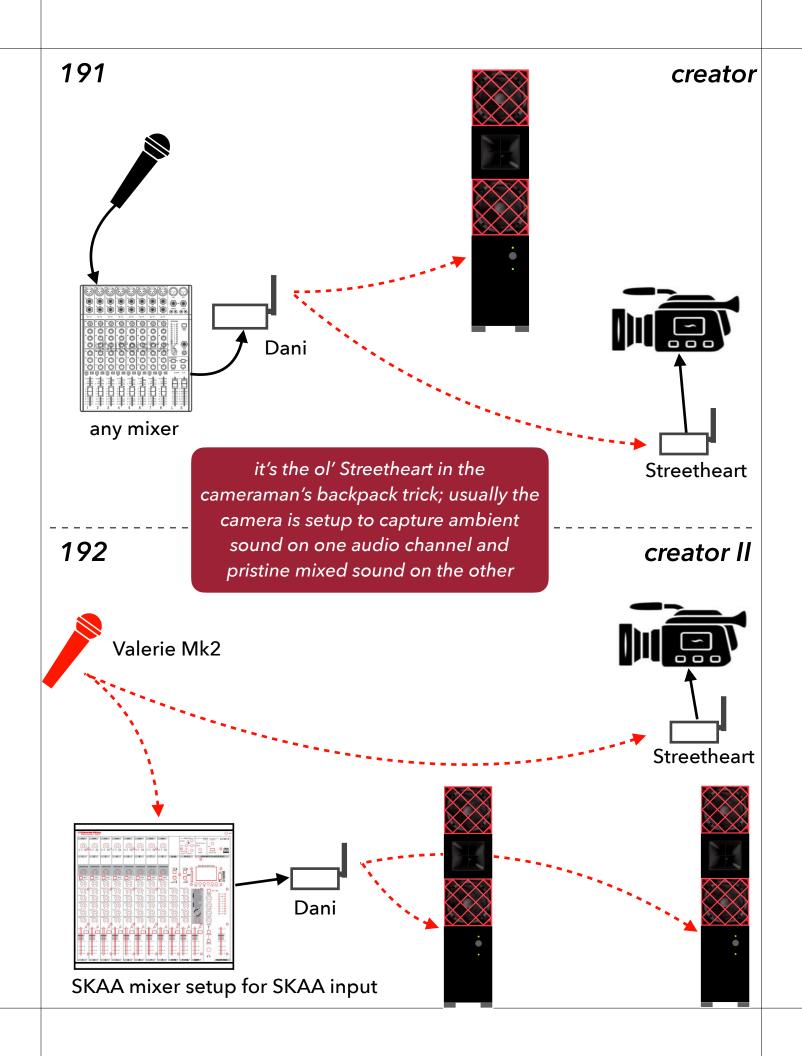


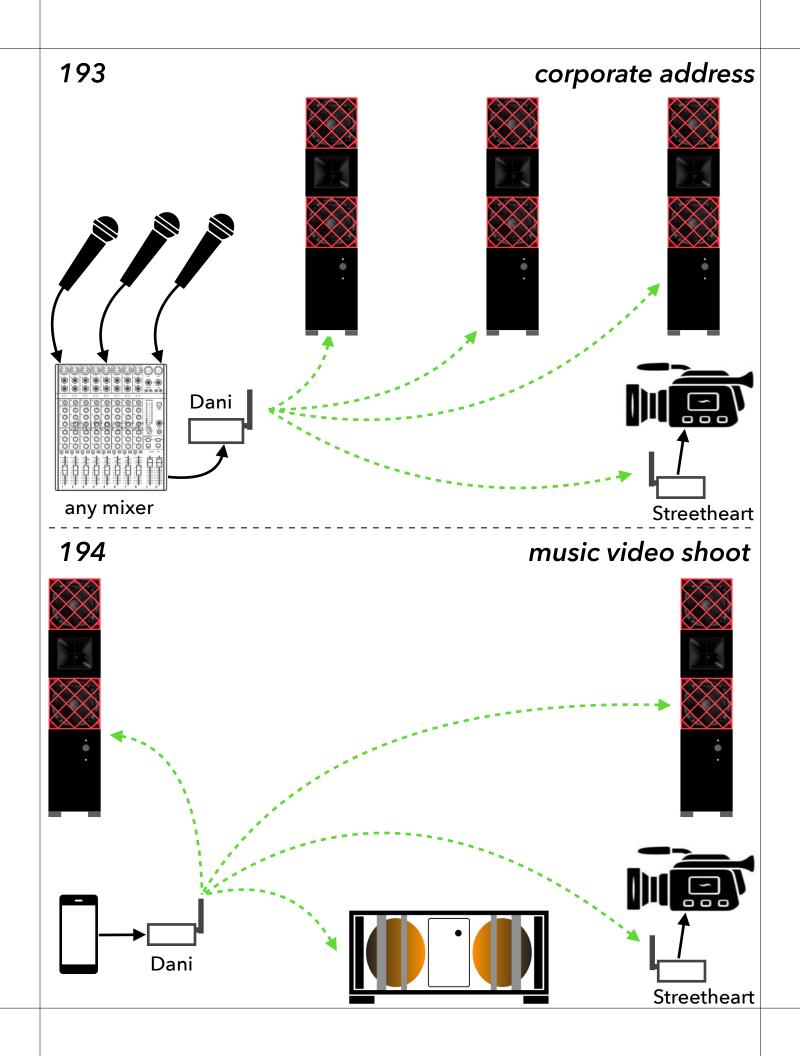


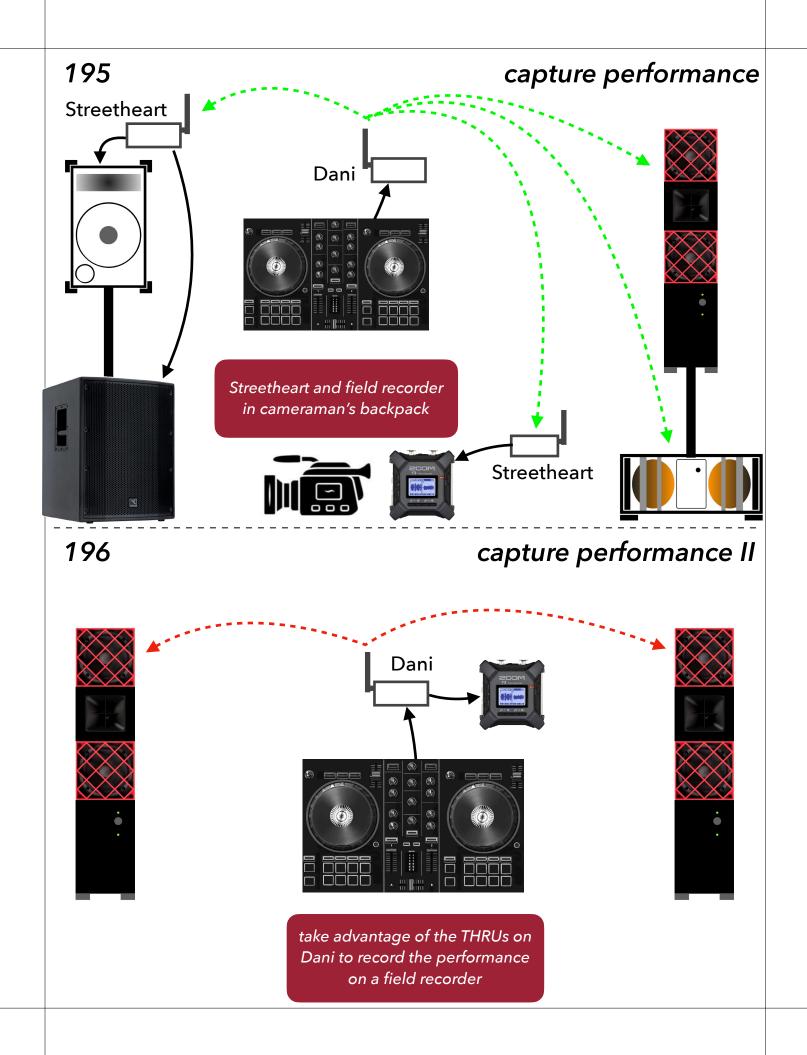


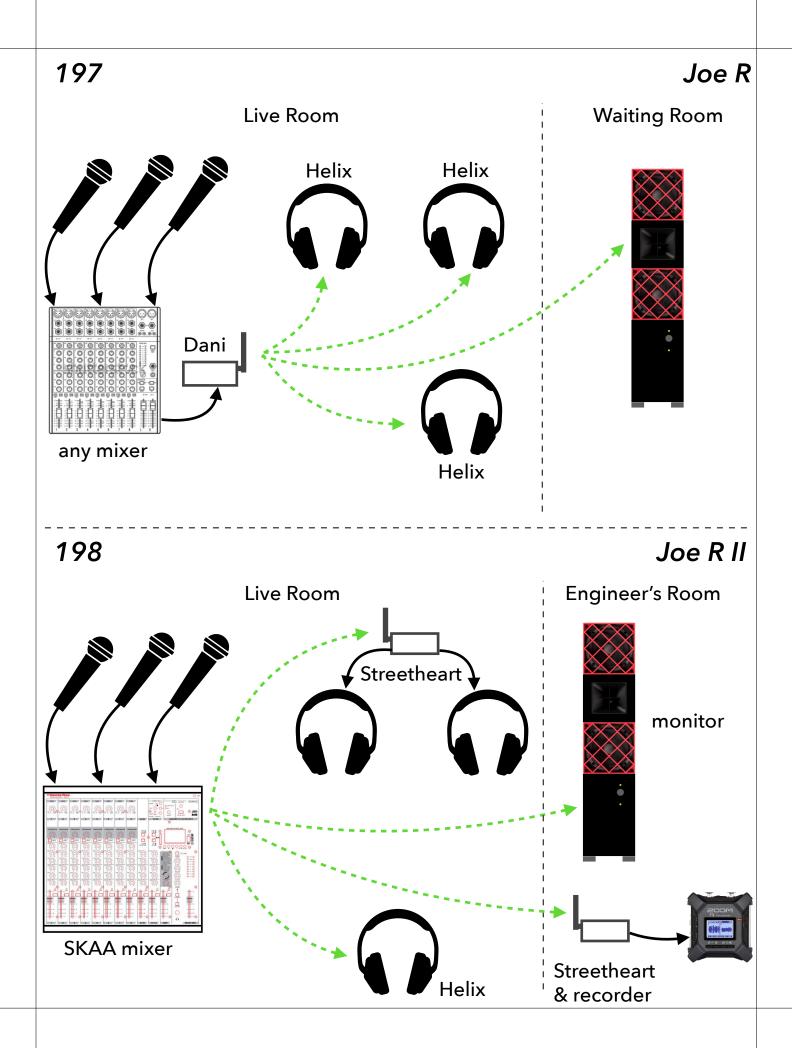


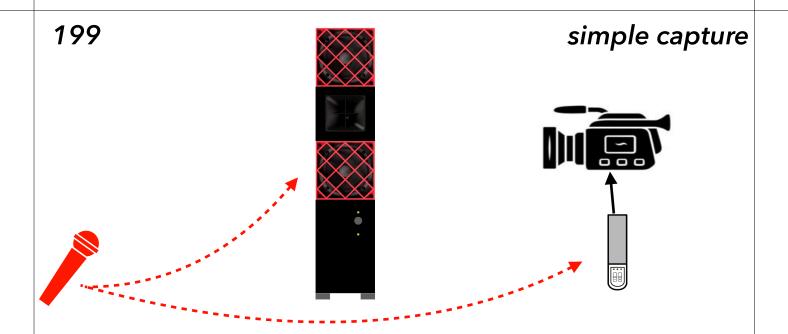
# Creator



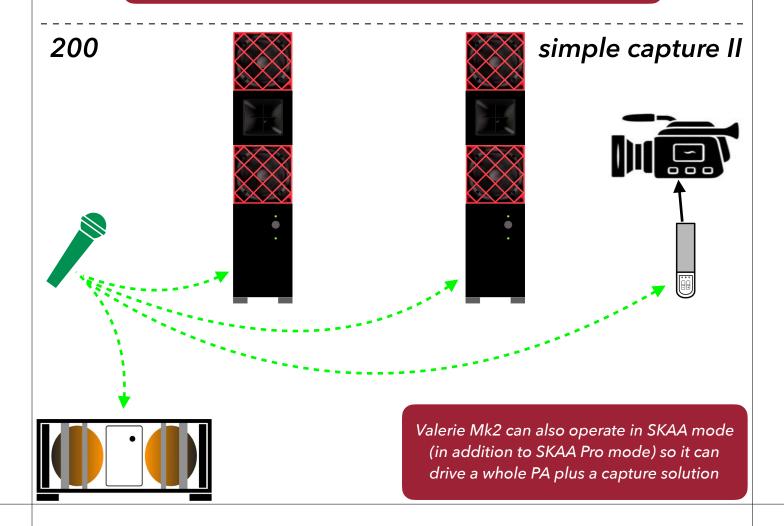








we take advantage of the fact the Valerie Mk2 SKAA Pro mic can send audio to 2 destinations, and capture that audio on our camera at the same time we're capturing video – A-Link Plus is a good Receiver for this since it's long-range, light weight and has a built-in battery



# Yard & Pool

