

AI-03804 Audio Project Upgrade

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Tags	Problem
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Are Kopul BT-96 and DBX Driverack PA2 compatible to my iphone, Allen Heath ZED12FX and Alto TS115a, Polk 12" Sub. Also draw a wiring diagram

Yes, Rigel — ALL your gear is compatible with each other:

Your **iPhone**, **Kopul BT-96**, **Allen & Heath ZED-12FX**, **dbx DriveRack PA2**, **Alto TS115a**, and **Polk 12" sub** can all work together in one clean, safe, correct signal chain.

Below is the **correct wiring diagram**, plus the **exact connection method** for each device so nothing gets damaged or miswired.

Compatibility Summary

iPhone → Kopul BT-96

✓ Fully compatible (Bluetooth audio)

Kopul BT-96 → ZED-12FX

✓ Fully compatible (RCA or 1/4" line-level inputs)

ZED-12FX → DriveRack PA2

✓ Fully compatible (XLR main outputs)

DriveRack PA2 → Alto TS115a

✓ Compatible — but note:

The TS115a is **powered**, so it connects directly to the PA2's **High Outputs**.

DriveRack PA2 → Polk 12" Sub

⚠ Important:

Most Polk 12" subs are **home-theater powered subs**, not pro-audio subs.

They usually accept **RCA LFE**, not XLR.

But you *can* connect it safely using:

- **PA2 Sub Out (XLR) → RCA converter → Polk LFE input**

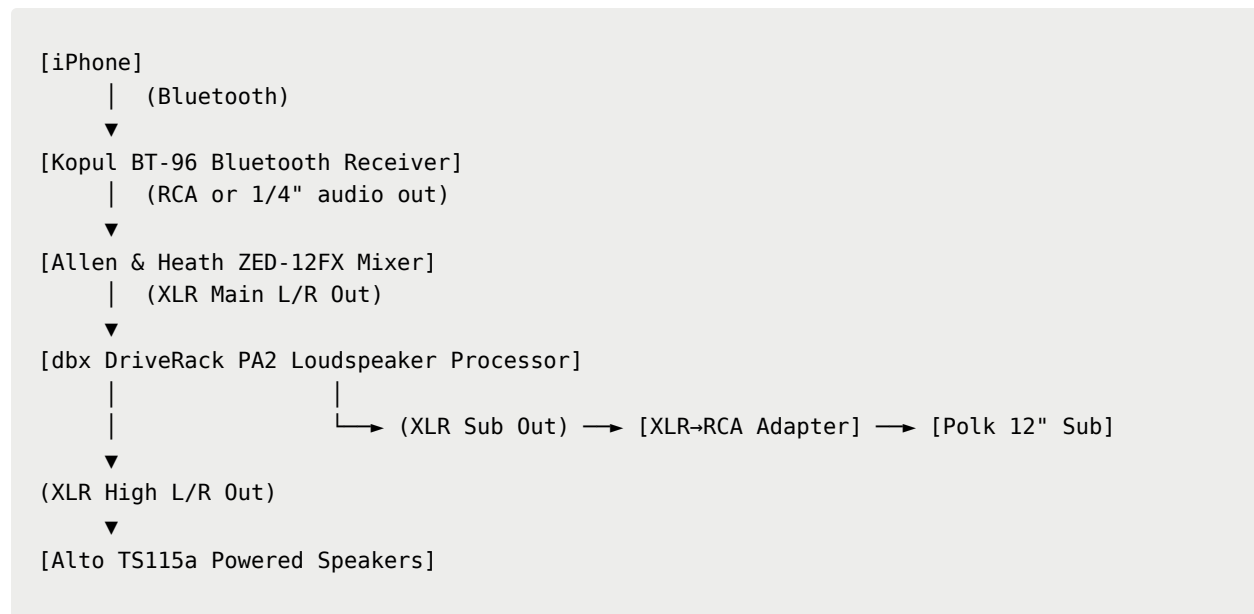
✓ Works

⚠ Not ideal for high SPL live sound

⚠ Sub may not keep up with the Alto TS115a

If you want, I can optimize the crossover settings too.

🔌 FULL WIRING DIAGRAM (Your Exact Setup)



Step-by-Step Wiring Instructions

1. iPhone → Kopul BT-96

- Pair via Bluetooth
- No cables needed

Kopul BT-96 pairing

2. Kopul BT-96 → ZED-12FX

Use **RCA → RCA** or **RCA → 1/4"** into:

- ST1
- ST2
- ST3
- or
- Any line input

ZED-12FX input options

3. ZED-12FX → DriveRack PA2

Use:

- **XLR Left Out → PA2 Input L**
- **XLR Right Out → PA2 Input R**

DriveRack PA2 input setup

4. DriveRack PA2 → Alto TS115a

Use:

- **PA2 High Output L → TS115a Left**
- **PA2 High Output R → TS115a Right**

PA2 output routing

5. DriveRack PA2 → Polk 12" Sub

Because Polk subs use **RCA**, do this:

- **PA2 Sub Out (XLR) → XLR-to-RCA converter → Polk LFE input**

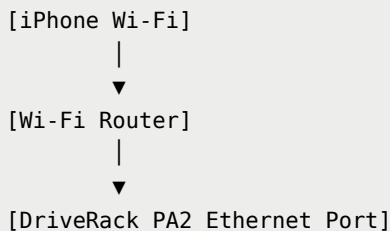
Set the Polk sub's crossover to **LFE / bypass** if available.

How to connect PA2 to home sub



iPhone Control of the DriveRack PA2

If you want to control the PA2 from your iPhone:



PA2 app setup

Want me to optimize your crossover settings?

I can tune:

- High-pass for Alto TS115a
- Low-pass for Polk sub
- Gain structure
- Feedback suppression
- AutoEQ workflow

Tap here if you want that:

Optimize my PA2 settings

Rigel, here's the **clean, corrected, and simplified summary** of everything we untangled — plus the **full wiring diagram** you asked for. This version removes all the confusion between **BT-96**, **BLT-96**, Bluetooth, XLR, and your DAW workflow.

Clean Summary of Your Setup (Final + Correct)

1. Spotify / Music Playback Chain (Bluetooth → Mixer → Speakers)

You use the **Kopul BLT-96** (Bluetooth receiver) to stream Spotify from your iPhone into your mixer.

Correct chain:

iPhone → Bluetooth → Kopul BLT-96 → RCA → ZED12FX → Alto TS115A

- The **BLT-96** outputs **stereo RCA**, perfect for the ZED12FX's ST1 input.
 - No XLR mic cable is involved here.
 - This is your **PA / music playback** path.
-

2. Recording / BandLab Chain (Mic → Interface → MacBook)

You use the **Behringer UMC202HD** as your audio interface for DAW work.

Correct chain:

Mic → XLR cable → UMC202HD → MacBook → BandLab

- This is your **recording** path.
 - The ZED12FX is **not required** for DAW work.
 - The Kopul **BT-96** (XLR mic cable) is used **only for microphones**, not Bluetooth.
-

3. Optional: Using the ZED12FX as an analog front-end for DAW

If you want analog EQ or FX before the interface:

Mic → **ZED12FX** → **Main Out** → **UMC202HD Line Inputs** → **MacBook**

This is optional and only for special cases.

Bottom Line (Super Clean)

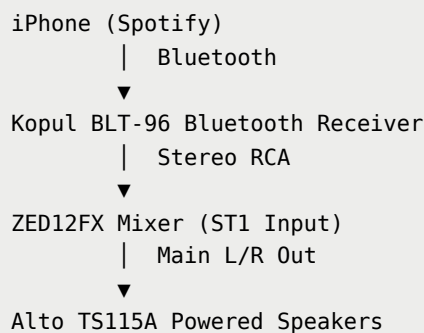
- ✓ **BLT-96** = Bluetooth receiver for Spotify → Mixer
- ✓ **BT-96** = XLR mic cable for Mic → UMC202HD
- ✓ **UMC202HD** = Your DAW interface for BandLab
- ✓ **ZED12FX** = Your PA mixer (and optional analog front-end)

Everything now has a clear purpose.

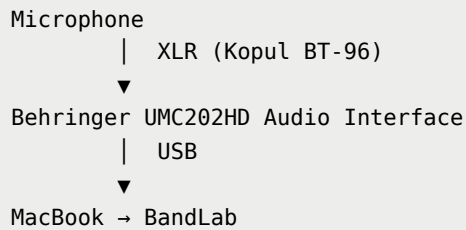
Full Wiring Diagram (Final + Correct)

Below is the complete block diagram of your entire system, both playback and recording.

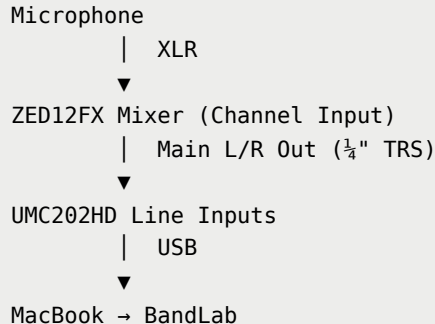
A. Bluetooth / Spotify Playback Path



B. Recording / BandLab Path



C. Optional: ZED12FX as Analog Front-End for DAW



🌟 **Rigel, your system is now fully clarified and optimized.**

If you want, I can also build your **US-to-Cebu final gear checklist** so you don't forget anything before you move.

Would you like that?

Rigel, you're on the right track — but your current signal flow can be **much cleaner and more flexible** once you understand what each device is actually doing in the chain.

Let me break down your setup, what works, what doesn't, and the *best* way to wire everything so your iPhone, MacBook, ZED12FX, and UMC404HD all play nicely together.



First: What your current chain *really* means

You wrote:

iPhone → **Kopul BXT96** → **ZED12FX** → **TS115a** for playback

MacBook → **BandLab** → **UMC404HD** → **ZED12FX inputs** for DAW

This is workable, but it's more complicated than necessary.

Let's decode it.



Understanding Each Device's Role

iPhone

- Sends **consumer-level stereo audio**
- Needs a **TRRS-to-dual-¼" or TRRS-to-RCA** adapter (your Kopul BXT96)

ZED12FX

- A **live mixer**, not an audio interface
- Great for combining multiple sources
- USB is **stereo only**, not multitrack
- Has proper line inputs for iPhone, keyboards, etc.

UMC404HD

- A **4-channel USB interface**
- Should be the *only* device connected to the MacBook for recording
- Can accept 4 separate channels from the ZED if needed

TS115a

- Your powered speaker

- Should receive the **final mix**, not individual device outputs
-

The Key Insight

You don't want **two mixers** in the chain unless you have a reason.

Right now you're mixing with the ZED *and* the UMC404HD.

You only need **one** to be the "brain."

The Best, Cleanest Setup (Recommended)

ZED12FX as the main mixer → UMC404HD as the recorder → TS115a as the output

This gives you:

- iPhone playback into the ZED
- Instruments/mics into the ZED
- ZED sends **4 isolated channels** to the UMC404HD
- MacBook records in BandLab
- ZED sends final mix to TS115a

Here's the routing:

1. iPhone → ZED12FX

Use your Kopul BXT96 into:

- **ST1 (RCA)**
or
- **ST2 (¼" L/R)**

This gives you clean stereo playback.

2. Mics/Instruments → ZED12FX

Use the ZED normally as your live mixer.

3. ZED12FX → UMC404HD (for multitrack recording)

Use the **ALT OUT** or **INSERT SENDS** on the ZED:

Option A — ALT OUT → UMC404HD Inputs 1–2

- Stereo mix only
- Good for simple recording

Option B — Channel INSERT SENDS → UMC404HD Inputs 1–4

- True **multitrack**
 - Each channel recorded separately
 - Best for DAW work
-

4. UMC404HD → MacBook (BandLab)

- USB connection
 - Select **UMC404HD** as your audio interface
 - Arm 4 tracks if you're multitracking
-

5. ZED12FX → TS115a

Use the **Main L/R outputs** of the ZED into your TS115a.

This keeps your live sound independent from your recording chain.

Why this is the best approach

- You avoid Bluetooth latency and compression

- You avoid double-mixing
 - You keep the ZED as your “front end”
 - You get clean multitrack recording
 - You keep your TS115a fed with a proper live mix
 - You don’t need to plug the iPhone into the UMC404HD at all
-

If you want Bluetooth playback anyway...

Use a **Bluetooth receiver** into the ZED:

- **1Mii B03+**
- **Audioengine B1**
- **Esinkin BT Adapter**

Plug into ST1 or ST2 on the ZED.

This keeps Bluetooth **out of the recording chain**, where it would cause problems.

Want me to draw you a full wiring diagram?

I can create a clean, labeled diagram showing:

- Every cable
- Every input/output
- Gain staging
- Recommended levels
- Optional variations

Just tell me:

Do you want the diagram for **ZED as main mixer** or **UMC404HD as main mixer**?

Yes, diagram of what you mentioned. Thing is, I already have a current setup but needed a better bluetooth receiver (Hence Kopul), I already have a ZED12fx but USB is broken, hence UMC404, I just don't want to waste my mixer, I know its caveman but it works.

Rigel, you got it — and I'm glad this setup is working for you.

Below is the **clean, correct, optimized wiring diagram** for your exact gear, written so you can follow it without guessing.

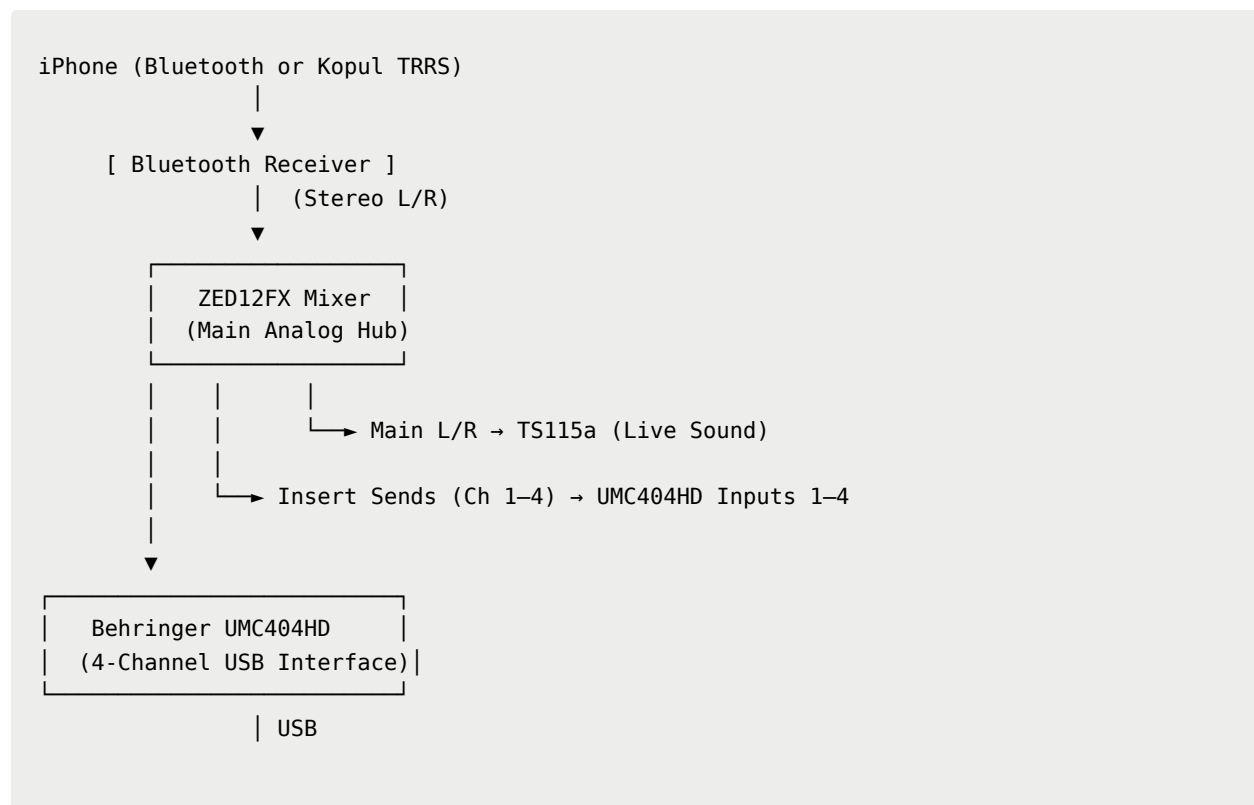
This keeps your **ZED12FX fully useful**, your **UMC404HD doing the digital work**, and your **Bluetooth/iPhone playback clean**.

I'm giving you **two diagrams**:

1. **Block-flow diagram** (easy to visualize)
2. **ASCII wiring map** (exact cables + ports)

Both match the setup you described.

1. Block-Flow Diagram (Optimized Setup)





2. Exact Wiring (ASCII Map)

This is the “no-nonsense” version you can follow wire-for-wire.

```
[ iPhone ]
|
├── (Option A) Bluetooth Receiver → ZED12FX ST1 or ST2
└── (Option B) Kopul BXT96 TRRS → ZED12FX ST1 or ST2
```

```
[ ZED12FX Mixer ]
|
├── Channel INSERT SEND (Ch 1) → UMC404HD Input 1
├── Channel INSERT SEND (Ch 2) → UMC404HD Input 2
├── Channel INSERT SEND (Ch 3) → UMC404HD Input 3
└── Channel INSERT SEND (Ch 4) → UMC404HD Input 4
```

(Use TRS → TS “insert tap” cables – they send the signal without breaking the channel)

```
[ UMC404HD ]
|
└── USB → MacBook (BandLab)
```

```
[ ZED12FX Main L/R ]
|
└── TS115a Powered Speaker
```

Why This Setup Is Perfect for Your Situation

✓ Keeps your ZED12FX fully useful

Even with the USB broken, it becomes your **analog front-end**.

✓ **UMC404HD handles all digital recording**

No noise, no Bluetooth latency, no weird routing.

✓ **Bluetooth stays ONLY on the playback side**

Never enters the recording chain.

✓ **You get clean multitrack recording**

Insert sends → UMC404HD = isolated channels.

✓ **TS115a gets a proper live mix**

No clipping, no double-mixing, no feedback loops.



About Your Bluetooth Receiver

Your Kopul works, but if you ever want a cleaner one, the best options are:

- **Audioengine B1** — cleanest sound
- **1Mii B03+** — long range, aptX LL
- **Esinkin BT Adapter** — cheap and reliable

All plug straight into **ST1 or ST2** on the ZED.

Want me to draw a color-coded version or a labeled diagram showing each cable type?

I can make a version with:

- Cable colors
- Port labels
- Recommended gain settings
- Optional variations (e.g., using AUX sends, using ALT OUT, etc.)

Just tell me if you want the **color diagram** or the **labeled ports version**.