

## ALTAIRA GROUNDING SYSTEM HUB SELECTION GUIDE

This guide will allow you to determine how many hubs you may need in your grounding system and which specific models to order. There are two versions of the ALTAIRA: the Chassis Ground hub and the Signal Ground hub. Each has slightly different filtering characteristics. The ALTAIRA Chassis Ground model is an excellent all-around grounding hub and is perfect if you have no more than 6 components and want a simple, yet high-performance grounding system. Simply order the ALTAIRA Chassis Ground Model CG-NR.

The ALTAIRA Signal Ground model was created for more advanced ground network systems that employ a segmented grounding concept. It allows for a higher level of isolation by grouping components together based on type and isolating the different groups on separate dedicated hubs. For instance, digital and analog components may be segmented and isolated from one another by placing each category of component on different ALTAIRA Signal Hubs.

**Please begin by answering the questions associated with scenario #1 — Single Hub Systems.** You may skip to other sections if you already know which type of grounding system you need.

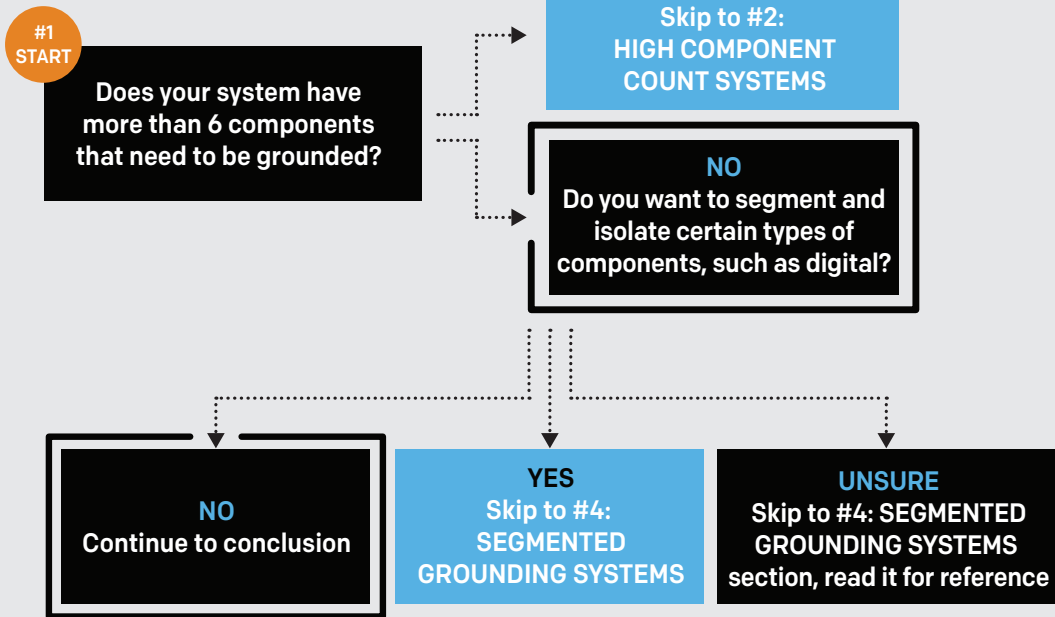


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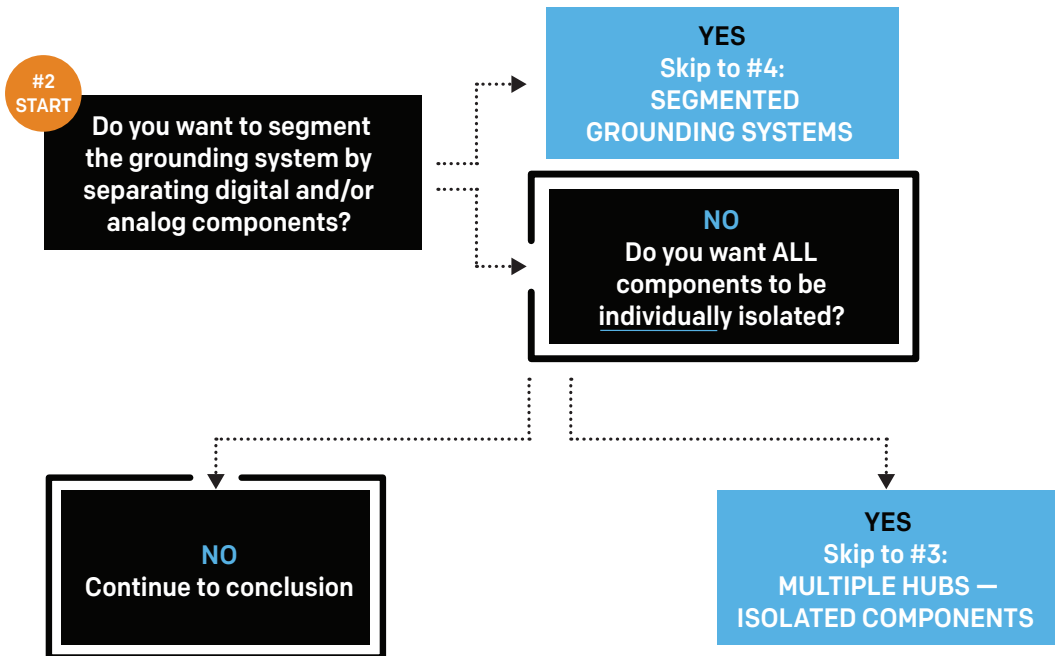
1 SINGLE HUB SYSTEM



**CONCLUSION:** You have no more than 6 components and you DO NOT want a complicated or costly grounding system. If this is correct, we recommend: 1 ALTAIRA: Chassis Model (CG-NR)

~ You may stop here. ~

2 HIGH COMPONENT COUNT SYSTEMS

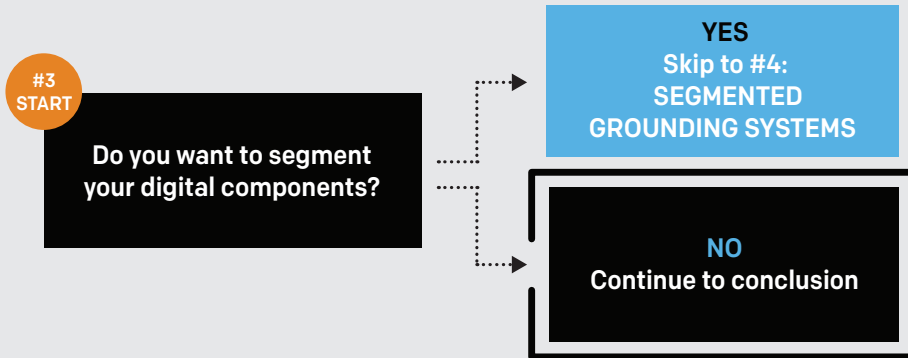


**CONCLUSION:** You have more than 6 components that need to be grounded but you DO NOT want the expense and complexity of multiple hubs. If this is correct, we recommend: 1 ALTAIRA: Chassis Model (CG-NR)

~ You may stop here. ~

### 3 MULTIPLE HUBS — ISOLATED COMPONENTS

Since your grounding system requires more than one ALTAIRA, you may want to consider a *Segmented Grounding System*. This is especially advantageous if you have several digital components. Digital components produce more noise than analog components and the entire system benefits if the digital components are segmented (grouped) together and isolated from the other system components. Implementing a Segmented Grounding System usually does not require more hubs than a non-segmented, multi-hub, grounding system.



Purchase multiple ALTAIRA Chassis Hubs. Each hub can support up to 6 components. Just order the number of hubs required for the total number of components in your system.

**CONCLUSION:** You have more than 6 components and you want each component to be *individually isolated*, but you DO NOT want to segment the grounding system into domains. If this is correct, we recommend:

**Multiple ALTAIRAs — Chassis Model (CG-NR)** (1 hub for every 6 components)

*~ You may stop here. ~*

### 4 SEGMENTED GROUNDING SYSTEMS

**#4 START** A Segmented Grounding System uses multiple grounding hubs to segregate specific component types into logical groups (domains). For instance, digital components may be grouped together and connected to a single dedicated hub. The analog components may be grouped together and connected to a different hub. Digital components produce more noise than analog components and the entire system benefits when the digital components are segmented and isolated from the other system components.

When deploying a segmented system you will need two or more hubs. The hubs must be interconnected using the 7th earth-ground terminal located on each ALTAIRA hub. Interconnecting multiple ground hubs creates a *Network Grounding Architecture*. The networked hubs may be applied in several configurations including a star network, buss network, or a hybrid of both.

*Please refer to the Grounding Concept Guide for more information*

**The ALTAIRA Signal Hub model is always used to segment components into logical domains.**

**CONCLUSION:** You want to segment your system into logical digital and/or analog domains. We recommend:

- **Segmented Digital Domain — ALTAIRA Signal Hub (SG-NR)** (1 hub for every 6 components)
- **Segmented Analog Domain — ALTAIRA Signal Hub (SG-NR)** (1 hub for every 6 components)

*NOTE: If you have an existing grounding system that already has an ALTAIRA Chassis Hub, and you want to segment the digital components, you will only need to purchase a single ALTAIRA Signal Hub for the digital components. All the other non-digital components may be connected to the existing Chassis Hub.*

## MORE ADVANCED GROUNDING SYSTEMS

Greater levels of performance are available for systems that have *dual-mono* type components. Dual-mono means that the left and right channels are completely separated within the component's chassis and may have separate power supplies for each channel. If you have dual- mono components, you have the option to deploy a grounding system that is a more advanced permutation of the Segmented Grounding System. In this case, you will need two hubs dedicated to the *Analog Domain*. One analog hub will be used to connect all of the left channel grounds across each of the primary analog components. This includes the phono-preamp, preamp, and the power amps (mono-blocks). This means that the left channel of the phono-preamp, the left channel of the preamp and the left mono-block amplifier are connected to a dedicated ALTAIRA Signal Hub. A second ALTAIRA Signal Hub is dedicated to all the right channel ground connections. This system prevents cross-channel noise interference and transient- intermodulation of the channel ground-planes.

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## WARNING

*Just to be very clear* — when referring to connections to a left channel or a right channel we DO NOT mean that you connect an interconnect to the component (a normal interconnect) and the other end to the grounding hub. This would *short out the signal* and could *possibly damage the equipment*. Do not make DIY grounding cables unless you are absolutely sure that you know what you are doing! We strongly recommend that you ONLY use grounding cables specifically designed for the purpose.

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*See the Grounding Concepts Guide and the ALTAIRA User Guide for more detailed information  
or contact Shunyata Research customer service.*

## LIMITED LIFETIME WARRANTY

The unparalleled craftsmanship and build quality of Shunyata Research products is backed by a limited lifetime warranty. This demonstrates our commitment to building the finest products on the planet and providing exceptional customer support.

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