



## **VXR AUDIO STAND**

**A Low Noise Floor Is Fundamental**

## Introduction

Thank you for purchasing the patented Harmonic Resolution Systems VXR Audio Stand (US Patent No.: 10,045,615). When used properly, it will give you many years of superior musical or video signal reproduction.

The VXR Audio Stand significantly reduces the negative impact of structure-borne noise on your audio or video component performance. Decades of engineering experience, custom material development, and listening tests are incorporated into the design of the VXR Audio Stand. This reference level product from Harmonic Resolution Systems, Inc. will enable your audio/video source and amplification components to achieve peak performance.

The VXR Audio Stand, which includes the HRS Isolation Base as the primary shelf system, is a perfect match for the HRS Damping Plates, Nimbus, and Vortex products. While the VXR Audio Stand and Isolation Bases work to significantly reduce structure-borne noise, the HRS Damping Plates, Nimbus, and Vortex products significantly reduce the harmful effects of airborne noise and structural resonance on your components' chassis.

Please read this manual **completely** prior to assembly and use of your VXR Audio Stand. It contains instructions necessary for proper assembly, use, and care of this system. Proper care of your VXR Audio Stand will ensure optimum performance and an aesthetically appealing system.

All HRS products are manufactured in the US by highly skilled craftsmen using superior techniques, exotic finishes, and proprietary materials. HRS is dedicated to producing the finest audio products in the world. To accomplish that, all products advance through a series of intense inspection and approval protocol. All items are inspected 100% to verify the assembly fits are up to our exacting standards. This rigorous protocol, combined with precision design, results in a product that is a pleasure to install, use, change, or expand at anytime. From all of us here at HRS, we truly hope you enjoy our product.

Your order was built and inspected by the following HRS staff:

Production Process: \_\_\_\_\_

Inspection Approval: \_\_\_\_\_

Packaging: \_\_\_\_\_

## Safety Instructions

### IMPORTANT WARNINGS!

Do not place any tall objects on the top shelf of the VXR Audio Stand. A tall object is any object with a height that is greater than the length of the isolation base. A tall object is also any object that has a height greater than its own width or length. Tall objects **must not** be placed on top of the VXR Audio Stand for any reason. The object may become unstable and tip over causing damage to the component, adjacent objects, or injury to people.

Never lift or move the VXR Audio Stand with the HRS Isolation Bases installed. You should always move the VXR Audio Stand frame to its final location prior to loading shelves and components. Moving the VXR Audio Stand frame with the isolation bases installed (with or without equipment) can permanently damage the system's adjustable feet or cause the shelves to fall out of the rack resulting in potential damage or injury. Always take the time to remove all of the equipment and shelves to relocate the VXR Audio Stand.

**Always** lift or move the isolation base with the inner plate facing up and the external support feet facing down (same orientation as when used to support your component). **Always** lift isolation bases by their outer frame structure, not by their supporting feet. **Always** follow the handling instructions in the HRS Isolation Base manual and this manual to prevent personal injury or damage to the unit.

## Setup Instructions

**At least two people are required to assemble the VXR Audio Stand. Some subassemblies can weigh in excess of 50 pounds and the completed frame system without isolation bases will weigh approximately 60 pounds per shelf location. Always make sure you have the proper number of people to move the frame system safely and easily.**

The VXR Audio Stand consists of a frame structure and the isolation bases that support each component. The total number of boxes depends on the capacity of the system. The standard three and four shelf frame structures come in six and seven boxes, respectively. Each box will be marked with the model number starting with VXR. There should be two or more long wooden crates that contain the vertical leg subassemblies and cardboard boxes that contain horizontal crossmember subassemblies. The final small cardboard box contains the assembly manual, feet, fasteners, and tools required for assembly of the frame system. The only tool necessary for assembly that is not provided by HRS is a Philips head screwdriver for unpacking the wooden crates (electric drive with PH2 bit recommended).

**Work Surface** - Prior to unpacking any material, locate a very strong and stable work surface capable of supporting at least twice the weight of the completed assembly or an area on the floor that will provide a soft, scratch-resistant workspace at least three feet by six feet in size. The more space you have the better, as it will give you room to move around the frame to complete assembly. It is important that the area be free of all dirt, screws or small pebbles, and that it is covered with a clean soft protective blanket (min size 24" x 45") that will prevent damage to the cosmetic surfaces of the VXR frame parts.

**Unpacking VXR Assembly Hardware** - Remove all the contents from the smaller cardboard box containing the hardware required to assemble the frame. Place the contents on a table near your selected work surface and remove all the wrapping material. Be careful not to drop or allow the anodized aluminum parts to contact each other as that may scratch the surface. Do not stack the parts on top of each other once they are removed from the protective packaging material.

**Unpacking VXR Vertical Leg Subassemblies** - Unpack two vertical leg subassemblies by removing the top surface of the crate. This surface will be marked for clarity and you will need a Philips head screwdriver (manual or electric) to open the crate. Remove the legs from the crate by lifting vertically at each end and move them directly to your prepared work surface with the bolt plate and keyway facing up and flat black face on the work surface. If you are building a frame system for more than one column of components, you will have at least two vertical leg subassemblies with bolt plates on both sides. These double-sided subassemblies can be placed with either face down, but be very careful not to place the bolt plates on anything that may damage them. Saving all

the packing material is critical to secure transportation of the frame in the future. Shipping or moving the vertical leg subassemblies by any means other than how it was originally packaged at HRS may result in permanent damage to the unit.

**Installation of VXR Adjustable Foot System** - Unwrap two of the four feet supplied with the unit. Remove the nut and washer from each foot (see Photo 1).



Photo 1

Hand-tighten the nut all the way down on each individual foot. Then back the nut off one half rotation (see Photo 2).



Photo 2

Place the supplied washer on top of the nut and then screw each of the feet into the threaded inserts on the bottom of the first vertical leg subassembly (see Photos 3 & 4). The feet should be threaded into the insert until the washer is held in contact with the bottom of the leg. (This ensures maximum engagement between the insert and the foot).



Photo 3



Photo 4

**Attaching the VXR Horizontal Crossmember Subassemblies** - You are now ready to attach the horizontal crossmember subassembly to the vertical leg subassemblies. There are two braces that hold the two legs together to form the primary VXR Frame Structure. Take two of the VXR vertical leg subassemblies and lay them down on your soft work surface so that the outside edges are 19 inches apart for a VXR-1921 or 17 inches apart for a VXR-1719 (see Photo 5). This will minimize the adjustment required to attach the mount assemblies.



Photo 5

There are sixteen fasteners holding the horizontal crossmember subassembly rigid that need to be loosened prior to assembly. The eight on the top of the subassembly are circled in Photo 6 and there are eight more opposite them on the underside of the subassembly. Remove one horizontal brace subassembly from its crate and use the 5/32" T-wrench or ratchet wrench supplied with the VXR to loosen (counter clockwise) the sixteen bolts that connect to the isolation base mounts. Only loosen each fastener 1/4 turn to give the assembly some flexibility for easy installation.



Photo 6

Slowly lower one horizontal crossmember assembly into the keyways of the two vertical leg subassemblies at the location you desire for the top level of your system (see Photos 7 and 8). For your HRS isolation base to sit flush to the height of the VXR when setup is complete, the highest horizontal crossmember subassembly must be placed at the third thread down from the top so that the

isolation base mounts straddle the seam between the top two bolt plate sections (see Photo 9). Make sure the assembly is placed so that the HRS logo will be oriented correctly when the frame system is standing upright (see Photo 9), with the pocket for isolation base feet facing up away from the floor. Attach at least one of the 1/4"-20 x 3/4" screws to the brace assembly prior to removing your hand from the assembly to ensure it stays in place. It is very important that the 3/4" long screws are used at this location to obtain proper thread engagement.

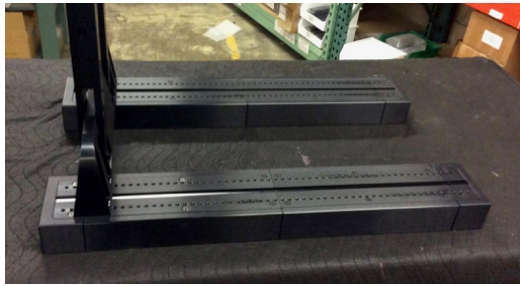


Photo 7

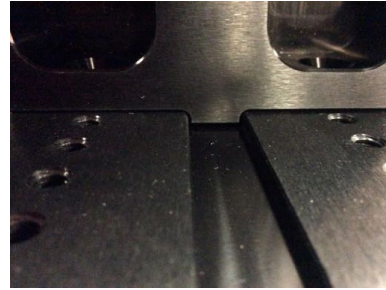


Photo 8



Photo 9

Install the rest of the eight 1/4"-20 x 3/4" screws to attach one side of the horizontal crossmember assembly (see Photo 10) to the first two vertical leg subassemblies. You will need to use the supplied ratchet wrench at the location closest to the crossbrace because the T-wrench will hit the crossbrace and prevent screw rotation. Make sure the screws are fully engaged, but do not torque the screws tightly yet. Leave them 1/4 turn away from fully tightened to allow for a very small amount of play so you can properly balance the assembly later. All the screws for the brace system will be fully tightened at a later point in the assembly process. If they are tightened at this time, you may not be able to complete assembly.



Photo 10

If your VXR is more than two levels tall (3V model or taller), the spacing between the two legs **must** now be checked to ensure that the bolt plates are aligned properly. Properly aligned bolt plates will guarantee that the horizontal crossmember assemblies can fasten at any and all locations in the future. This check is performed at HRS prior to shipping, but should be confirmed on arrival to make sure nothing has shifted in transit.

Carefully lower a third horizontal crossmember assembly into the keyways near the bottom of your stand to make sure it easily sets into the keys ways on both legs (see Photo 11). Lift the same horizontal crossmember assembly off the two legs and set it back into keyways a few holes up from the first location you checked. It should again fit easily into the keyways on both legs. Repeat this step every few holes until you reach the top of the stand. Do not drag the assembly along the face of the bolt plates and do not force the assembly into the keyways if it begins to stick. Even a slight misalignment in your movement can cause interference. When this happens, gently wiggle the horizontal cross member assembly to free it and recheck the fit at that location.



Photo 11

If the assembly will not set in easily at one or more locations, remove the horizontal crossmember assemblies and set them aside, and then follow the bolt plate alignment instructions beginning on page 25 of this manual.



Install the rest of the horizontal crossmember subassemblies the same way you did the first (see Photo 12). Make sure to space the assemblies properly for the components and isolation bases that will be placed on the stand. Make sure to take into account the three-inch height of each HRS Isolation Base when determining your desired spacing. Orient the HRS logo so that when the stand is sitting on its feet the HRS logo will be in the proper orientation. Make sure that all eight screws are fully installed connecting the horizontal crossmember subassembly to the legs, but 1/4 away from fully tightened before moving to the next assembly process.

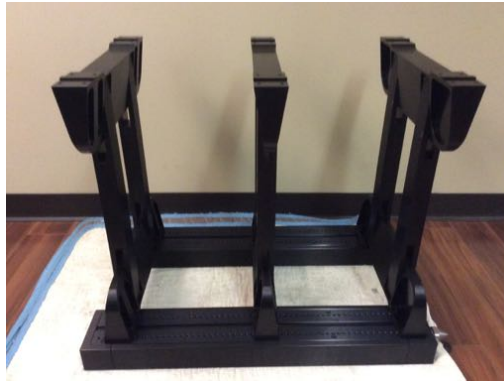


Photo 12

Remove two more vertical leg subassemblies from the wooden crate and place them on your work surface. If you are assembling a VXR frame system that is more than one column wide, use all the double-sided vertical leg subassemblies (with bolt plates on two sides) before installing the second set of one-sided subassemblies. Remove the legs from the crate by lifting vertically at each end and move them directly to your prepared work surface. Again, saving all the packing material is critical to secure transportation of the frame in the future. Shipping or moving the vertical leg subassemblies by any other means may result in permanent damage to the unit.

Install feet, nuts, and washers on the vertical leg subassemblies in the same way you did the first set. Unwrap two of the four feet supplied with the unit. Remove the nut and washer from each foot (see Photo 13).



Photo 13

Hand-tighten the nut all the way down on each individual foot. Then back the nut off one half rotation (see Photo 14).



Photo 14

Place the supplied washer on top of the nut and then screw each of the feet into the threaded inserts on the bottom of the first vertical leg subassembly (see Photos 15 & 16). The feet should be threaded into the insert until the washer is held in contact with the bottom of the leg. (This ensures maximum engagement between the insert and the foot).



Photo 15



Photo 16

**VXR Vertical Leg Subassembly Installation** - If you are assembling a VXR frame system that is more than one column wide, use all the double-sided vertical leg subassemblies (with bolt plates on two sides) before installing the second set of one-sided subassemblies.

Carefully lower one leg onto the open side of the mount assemblies you already installed (see Photo 17). Make sure the keys on the mount assemblies slot into the keyway on the leg completely (see Photo 18). Note that the photographs here show the installation of a one-sided vertical leg subassembly for a single-column frame system. Make sure that if you are assembling a frame system with multiple columns you install double-sided vertical leg subassemblies at this stage so that the other columns can be built off of the first.



Photo 17

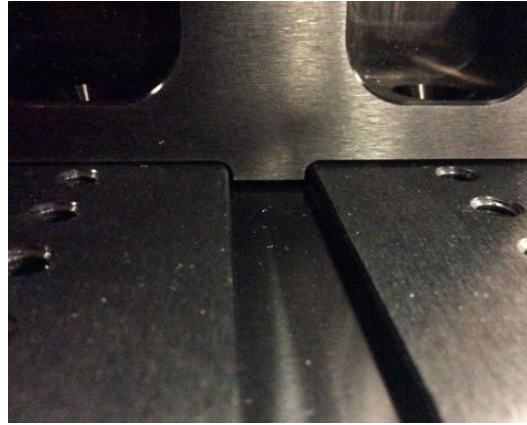


Photo 18

Install all the 1/4-20 x 3/4" screws on the third vertical leg subassembly (four at each mount location) until they are fully engaged, but do not torque the screws tightly at this time. As before, leave them 1/4 turn from fully tightened to allow a very small amount of play to complete the balance of the assembly.

Repeat "VXR Vertical Leg Subassembly Installation" section to install the fourth vertical leg subassembly (see Photo 19).



Photo 19

Torque all of the 1/4"-20x3/4" screws to rigidly secure all locations in the horizontal crossmember subassemblies to the vertical leg subassemblies (see Photo 20). Proper torque is achieved when you can turn the handle of the provided T-wrench 1/8 turn without further rotating the fastener, or 1/8 turn past snug if you are using the provided ratchet wrench. Do not use any extension or large wrenches that could over-torque and strip the threads. Tighten the sixteen 1/4"-20 x 7/8" screws (eight on top and eight on bottom) in each of the horizontal crossmember subassemblies to the same torque (see Photo 21).



Photo 20

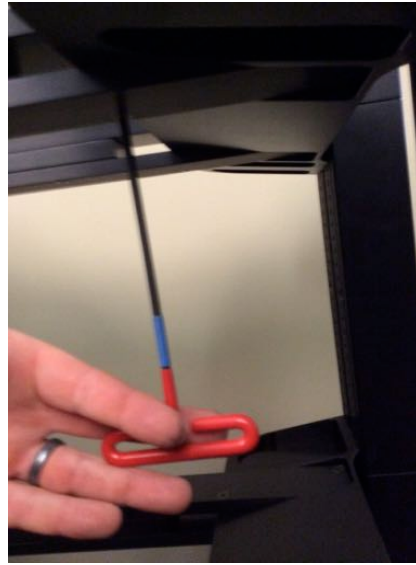


Photo 21

You can now stand the frame up on its four feet. Clear any objects out of the way first to prevent damage to them or the stand. Then, at least two people should lift the top of the stand together to tip it onto its feet (see Photo 22).



Photo 22

**Leveling the VXR Audio Stand** - You are now ready to stabilize and level the frame. If you are extending your frame into a doublewide (or larger) system, the first column must be leveled before building the other columns off of it. If you are setting up your VXR on HRS Floor Protectors, place one under each foot before you begin leveling the stand.

Move the frame to its exact final location for use in your system. Once the frame is in the final location, check to see if it is level and stable. If it is not, level the stand by extending the feet using the provided 1-1/4" crescent wrench. If there is instability, find out which foot is causing the instability by gently rocking the frame with the provided level laid across the top. Only adjust the feet required to make the frame system completely stable and level. **Never** thread any foot system out more than six full rotations (1/4 inch) from full engagement for **any** reason. There should always be at least four complete rotations of engagement remaining on each foot system.

If you have lost track of how many threads of engagement remain, start over by fully engaging the foot per the original instructions and work your way back out. If the floor the frame is sitting on is so uneven that this adjustment range is not adequate, place a metal shim under the feet as necessary to provide proper support of the frame system at each location.

Once all the feet are in a location where the frame is stable and level, use the provided 1-1/8" crescent wrench to tighten the nut on each foot against the bottom of the frame so that it locks the foot point in place. Use the 1-1/4" crescent wrench to hold the foot in place while you do this (see Photo 23). The nut is properly tightened when the frame system cannot rock in any direction (i.e. all feet are in constant contact with the floor or HRS floor protectors).

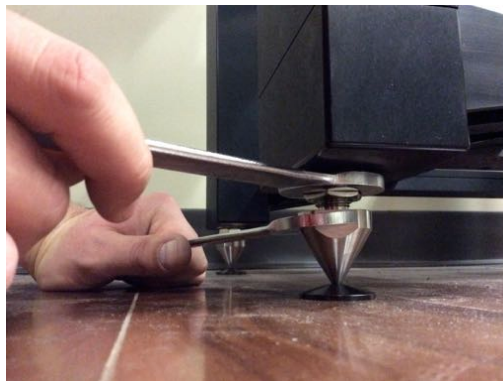


Photo 23

**Doublewide (and Larger) Systems** - Every column of the stand after the first will be built off the first while it is standing as shown in Photo 22. First, loosen the fasteners circled in Photo 24 that hold the horizontal crossmember subassembly rigid as you did for the ones in the first column. The fasteners on the top of the subassembly are circled in Photo 24 and there are an equal number

opposite them on the underside of the subassembly. Remove one horizontal brace subassembly from its crate and use the 5/32" T-wrench or ratchet wrench supplied with the VXR to loosen (counter clockwise) the fasteners that connect to the isolation base mounts. Only loosen each fastener 1/4 turn to give the assembly some flexibility for easy installation.



Photo 24

Have another person hold a horizontal crossmember subassembly in the desired place at the bottom of the stand and fasten it to the bolt plates using a 5/32" T-wrench and eight 1/4"-20x3/4" screws (see Photo 25). Attach the rest of the horizontal crossmember assemblies in the same way (see Photo 26).



Photo 25



Photo 26

Once all the mount assemblies are in place, collect the next two vertical leg subassemblies in your work area. Install feet, nuts, and washers into these legs as you did for the others. Unwrap two of the four feet supplied with the unit. Remove the nut and washer from each foot (see Photo 27).



Photo 27

Hand-tighten the nut all the way down on each individual foot. Then back the nut off one half rotation (see Photo 28).



Photo 28

Place the supplied washer on top of the nut and then screw each of the feet into the threaded inserts on the bottom of the first vertical leg subassembly (see Photos 29 & 30). The feet should be threaded into the insert until the washer is held in contact with the bottom of the leg. (This ensures maximum engagement between the insert and the foot).



Photo 29



Photo 30

Carefully set one leg assembly against the base mounts so that the keys and keyway lock together (see Photo 31). If you are setting up your VXR on HRS Floor Protectors, place one under the foot of this leg before it is secured. Use a large level spanning the new column to make sure the new leg assembly is perfectly level to the existing stand (Photo 32). Adjust the height of the foot as necessary to achieve this, but make sure to keep at least 4 full threads of engagement between the foot and the leg.

Once the leg is level with the existing stand, one person should hold the leg in position locked against the crossmember assemblies, while another fastens the leg to the mounts using four 1/4"-20x3/4" screws at each level (see Photo 32). Leave the fasteners 1/4 turn away from fully tightened until the stand is completely assembled. Do not force the alignment of the horizontal crossmember subassembly and vertical leg subassembly. If the subassemblies do not line up easily, make sure the fasteners (see Photo 24) holding the horizontal crossmember subassembly have been loosened a full 1/4 turn from fully tightened.



Photo 31



Photo 32



Photo 33

Repeat this process for the second leg of this column. Make sure all legs are leveled to each other before fastening the new leg. When assembling a stand with more columns, repeat this section to install the next column. Use the provided 5/32" T-wrench and ratchet wrench to apply the final torque on each fastener prior to installing additional columns. Final torque is achieved when you are able to turn the T-wrench handle 1/8 turn without rotating the fastener. Do not use any extension or large wrenches that could over-torque and strip the threads.



**Isolation Base Installation into VXR Frame** - Make sure you read and follow all of the instructions in the isolation base manual prior to installing into the VXR Audio Stand frame. You will want to verify that the frame size matches the isolation base size. The VXR-1921 uses 1921 isolation bases. The VXR-1719 uses 1719 isolation bases.

Match the load range of each isolation base with the component weight. Matching the isolation base to the proper component weight will ensure optimum performance. Identify the load range of each isolation base by the colored sticker on the back of the isolation base (opposite the HRS logo) or the colored dots on the rubber mounts in the feet of the base. The load range can be changed for a nominal factory fee so if you do not have the correct load range for a component, please contact Harmonic Resolution Systems or your local certified retail location to arrange to have this corrected. It is very easy to change from one load range to another, and with the proper tools, this can be done in your own home in about five minutes.

Load the HRS Isolation Bases onto the isolation base mounts, with the HRS logo facing the front of the rack system (see Photo 34A and Photo 34B). Be sure that the isolation base (shelf) foot is located securely in the pocket of the isolation base mount. This will automatically occur when the front and back edge of the isolation base are in line with the front and back faces of the vertical leg subassemblies. If the front and back edges do not line up with the front and back of the rack structure, contact Harmonic Resolution Systems or your certified retail location because you do not have the proper size isolation base or frame.



Photo 34A



Photo 34B

Measure the height of each component and determine if the shelves are in the proper location. If needed, you can move the isolation base (shelf) up or down by removing the shelf and adjusting the location of the mount for that isolation base.

Always follow the instructions above for mount assembly installation when moving mounts. Be **very careful** not to cross-thread the fasteners. The fastener should thread in very easily. If any do not, back them out and start in again. If necessary, back out the other three nuts and move the bracket until they all thread in with minimal torque. Apply proper torque once they are all fully threaded into the rack frame.

**Loading Components into VXR Frame** - Carefully load each component into the VXR Audio Stand. Be careful not to hit the front edge of the isolation base because you may scratch the aluminum frame.

Once all the components are loaded, you should check to see that none of the isolation bases are overloaded. By placing one or two fingers on the bottom of the bracket and your thumb on the top of the isolation base, you should be able to move the top of the isolation base slightly (at all four corners) when you squeeze your finger(s) together. If there is no compliance, remove the component and isolation base to verify the load range of the isolation base is correctly matched with the component. Identify the load range of each isolation base by the colored sticker on the back of the isolation base (opposite the HRS logo) or the colored dots on the rubber mounts in the feet of the base. Please consult with your authorized Harmonic Resolution Systems dealer or contact Harmonic Resolution Systems if you need assistance. Any isolation base load range can be easily modified at any time by sending it to Harmonic Resolution Systems or an authorized dealer to have the primary isolation stage rebuilt.

**Adjusting the Height of the VXR Horizontal Crossmember Subassemblies** - If you need to adjust the locations of the horizontal crossmember subassemblies for any reason, first remove all components and isolation bases from the frame system. The subassemblies are fit very tightly into the system so you will need to partially disassemble them to relocate them.

Once all components and isolation bases have been removed from the stand, use the provided 5/32" T-wrench or ratchet wrench to remove all six screws from the top of each of the two horizontal braces so that you can remove the tops of the braces (see Photo 35). Once they are removed, set the tops of the braces aside on clean, soft surface so they will not be scratched or damaged.



Photo 35

Next, have someone support the bottom of each brace while you remove the four screws securing each of them to the mounts so that they do not fall onto the lower parts of the frame system. Remove the bottoms of the braces and set them aside as you did with the tops (see Photo 36). Keep the spacer pieces with the HRS logo and dampers attached to the bottom horizontal brace. Photo 36 shows all the brace parts set aside.



Photo 36

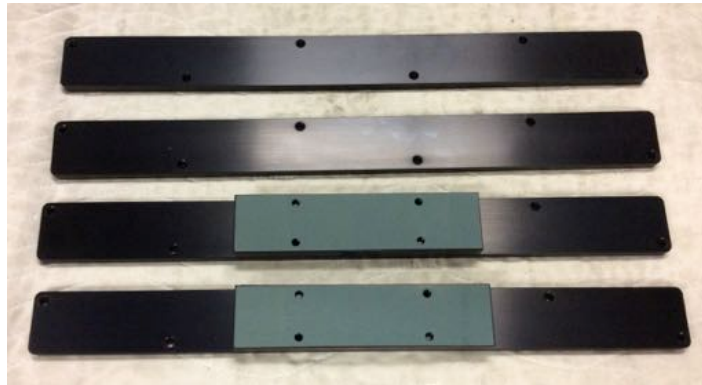


Photo 37

With the horizontal braces removed, you are now able to remove the eight fasteners securing the isolation base mounts to the vertical leg assemblies (see Photo 38). Have someone support the mounts as you do this so they do not fall onto lower parts of the frame system.



Photo 38

Once all the fasteners have been removed, you can move and reattach the isolation base mount at your desired location. Torque all eight 1/4"-20x3/4" screws on each isolation base mount with the 5/32" T-wrench until you can turn the handle of the T-wrench 1/8 of a rotation without turning the screw.

Refasten the bottoms of the horizontal braces to the isolation base mounts using four 1/4"-20x7/8" screws on the underside of each brace (see Photo 39). Make sure to orient the horizontal braces so the HRS logos are facing out. Refasten the brace tops at the center two holes first using two 1/4"-20x7/8" screws (see Photo 40).



Photo 39



Photo 40

Finally, thread in the other four 1/4"-20x7/8" screws at the ends of each horizontal brace top (see Photo 41). Torque all the fasteners in the horizontal crossmember assembly until you can turn the T-wrench 1/8 turn without the fastener rotating. When all the fasteners are properly torqued the relocation of the horizontal crossmember subassembly is complete. All isolation bases and components can be placed back in the frame system at this time.



Photo 41

**VXR Modular Leg Length Modification** - All the necessary equipment to disassemble and reassemble the modular vertical leg assemblies is included with your HRS VXR Audio Stand. Refer to these instructions if you need to disassemble your frame system for any reason, including altering the height by adding or removing leg sections. To disassemble and reassemble the modular vertical leg assemblies you will need the following tools supplied with the frame system:

- 1/8" T-wrench (see Photo 42)
- 5/32" T-wrench (see Photo 43)
- Ratchet wrench with 5/32" bit (see Photo 44)
- Two VXR modular bolt plate assembly jigs (see Photo 45)
- Nine metal shims of each thickness: .015", .010", .004", .003", .002", and .001" (see Photo 46) - 54 pieces total
- Eight 1/4"-20x3/4" flathead cap screws packaged with assembly jigs (see Photo 47)

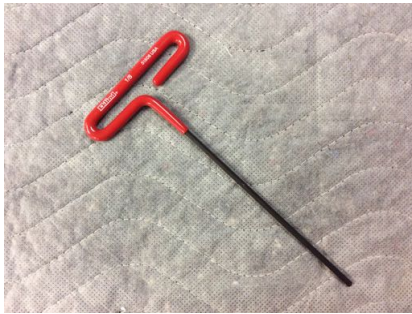


Photo 42



Photo 43



Photo 44



Photo 45

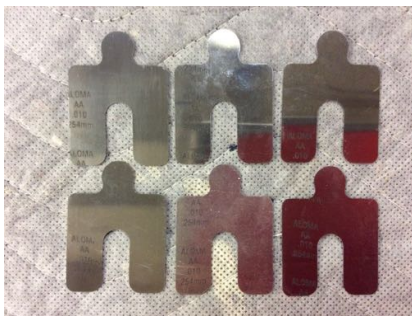


Photo 46



Photo 47

Always remove all components and isolation bases from the frame system before adjusting or removing any part of the VXR frame. Once the frame system and the area around it are free of any objects that may damage the VXR, prepare a work area the same as during initial assembly. Locate a very strong and stable work surface capable of supporting at least twice the weight of the completed assembly or an area on the floor that will provide a soft, scratch-resistant workspace at least three feet by six feet in size. The more space you have the better, as it will give you room to move around the frame to complete assembly. It is important that the area be free of all dirt, screws or small pebbles, and that it is covered with a clean soft protective blanket that will prevent damage to the cosmetic surfaces of the VXR frame parts. The blanket should be at least 25" x 45" to provide a spacious work area, but for large stands make sure to use a blanket large enough to fit the entire stand with open space to work.

At least two people should work together to tip the VXR over onto one side in your work area (see Photo 48). If you are working with a doublewide (or wider) stand, you will need to remove legs and horizontal crossmember subassemblies until you are left with only a singlewide VXR. At that point, the VXR can be tipped onto its side.



Photo 48

Use the 5/32" T-wrench and ratchet wrench to remove the four 1/4"-20x3/4" screws that connect one leg to the horizontal crossmember assembly at each level of the stand. Multiple types of screws will be removed throughout the disassembly process, so be careful to keep them separate and labeled so they can be identified easily when you eventually reassemble the VXR. Once all the screws have been removed, two people should work together to carefully lift the leg off the stand and place it in your prepared work area (see Photo 49). Repeat this process for the second leg.



Photo 49

Now use the  $5/32$ " T-wrench and ratchet wrench to remove the  $1/4$ "-20x $3/4$ " screws holding one horizontal crossmember subassembly to the final two vertical leg assemblies. Support each horizontal crossmember assembly as you remove its screws so it does not tip over. As you detach the horizontal crossmember subassembly, carefully lift it away from the vertical leg assemblies and set it aside on a clean, soft, surface where it will be out of the way until you begin reassembling the stand. Repeat this for the rest of the horizontal crossmember subassemblies.

Whether you are extending or reducing the height of your frame system, you will need to at least partially disassemble each vertical leg subassembly. Determine where on the vertical leg subassembly the change will be made. You will only need to fully disassemble the leg sections adjacent to where the change is being made. If you are altering a double-sided vertical leg subassembly, the bolts that hold the leg together can only be accessed from one side, and the other side can be left as-is. Find the small "X" stamped onto the bottom of these double-sided legs (see Photo 50). The side of the leg that is marked with the "X" is the side whose bolt plates will need to be removed so that you can access the fasteners necessary to extend or shorten the leg length.

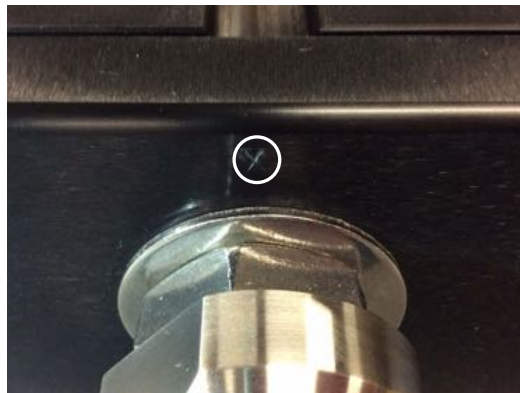


Photo 50

Begin disassembling the first vertical leg subassembly by using the provided 1/8" T-wrench to remove the #10-24x3/4" screws from a modular bolt plate section at the location you are changing (see Photo 51). Also use the 1/8" T-wrench to loosen (but not remove) the #10-24x3/4" screws in the other bolt plate sections.

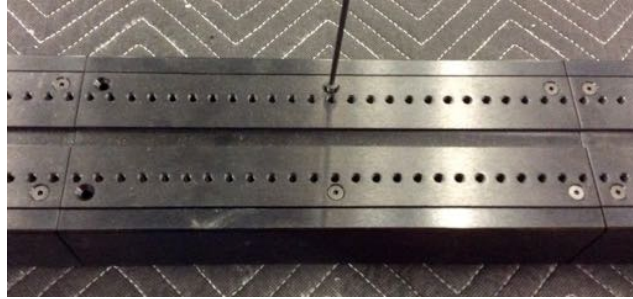


Photo 51

Once all the #10-24x3/4" fasteners have been removed from one section of the modular bolt plate, remove that section of the bolt plate and set it aside on your prepared work area. If you have difficulty lifting the bolt plate section out of the vertical leg subassembly, thread 1/4"-20x3/4" screws into the bolt plate threads and use them as handles to lift the bolt plate out (see Photo 52).



Photo 52

With the first modular bolt plate section removed, the other(s) will be easy to lift out. Use the 1/8" T-wrench to remove the #10-24x3/4" fasteners from the two bolt plate section(s) adjacent to the one you just removed. When all the screws in a section have been removed, lift it out and set it aside in your prepared work area.

The leg sections now must be separated at the location you are changing. Use the 1/8" T-wrench to remove the now-exposed 1/4"-20x3/4" socket head screws that hold the leg sections together (see Photo 53). When all four screws at one joint have been removed, carefully lift one end of the vertical leg subassembly and separate the two parts. Support both parts of the leg so they do not drop suddenly or slide across the work surface (see Photo 54). Use this method to separate each vertical leg subassembly and set aside any leg sections that you are removing from the VXR.





Photo 53



Photo 54

It is now time to begin reconstructing the vertical leg subassembly. Have someone stand the assembly up on its foot and hold it steady and upright. If you are adding a modular section, carefully slide it onto the existing assembly while it is being supported. If you were removing a section, slide the remaining part of the vertical leg subassembly on in the same way. The compression provided by assembling the leg upright (Photo 55) is critical to the function of the frame system. Run your fingers down all four sides of the vertical leg subassembly at the seam where the two sections now meet to make sure that the two sections are flush to each other.

With the leg sections in place and flush to each other, use the 1/8" T-wrench to fasten them together with the 1/4"-20x3/4" socket head screws (see Photo 55). Torque these screws until you can rotate the handle of the T-wrench 1/8 of a rotation without further turning the screw. It is important to do this now because these fasteners will be inaccessible once the bolt plates are reattached to the vertical leg subassembly. Make sure to keep the vertical leg subassembly upright to provide the necessary compression and to keep the two sections flush to each other. Once the leg is reassembled, carefully lay it back down in your work area so the bolt plates can be reattached.



Photo 55

Place all the necessary modular bolt plate sections in the leg channels. Make sure the seams between the bolt plates line up with the seams between the leg sections. Loosen all of the #10-24x3/4" screws in each bolt plate section by one full turn. Leave them engaged enough to remain seated in the countersinks but make sure they are not torqued. Install the #10-24x3/4" fasteners at each remaining location using the 1/8" T-wrench. Thread the screws so they are seated in the countersinks of the bolt plates, but do not torque them tightly yet. You should still be able to easily shift the bolt plates by hand. Proper use of the provided shims and VXR modular bolt plate assembly jigs as described in this manual is necessary to ensure the bolt plates in your VXR is aligned to fit a horizontal crossmember subassembly at every location.

To ensure the bolt plates are straight and centered, use the metal shims to center each bolt plate section in the channel before you torque them to the leg. The first step is to see if the .010" shim or the .015" shims are best starting point. Begin by placing a .015" metal shim at all 5 locations shown in Photo 56. Do not force shims into the gap, the shim thickness will be adjusted for a snug fit later on. If .015" shims will not fit at all 5 locations then use .010" shims instead. Place all four shims as near to the seam as possible without straddling it (see Photo 56).

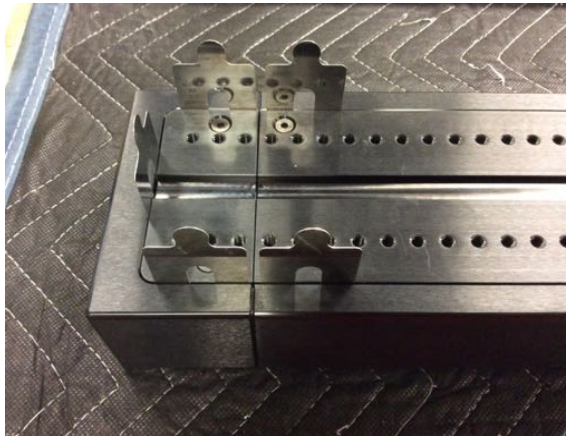


Photo 56

With the thick shims (.015" or .010") in place, determine by trial and error which thin shim (.001"-.004") produces the snugest fit at each of the 5 locations without needing to be forced into the gap. Always add shims equally to both sides of the bolt plate to ensure it remains centered. The total thickness of shims required may vary along the length of the vertical leg subassembly, but it must be equal at locations across from each other (see Photo 57). Repeat this shim placement method at the next seam down to completely align the first two bolt plate sections.

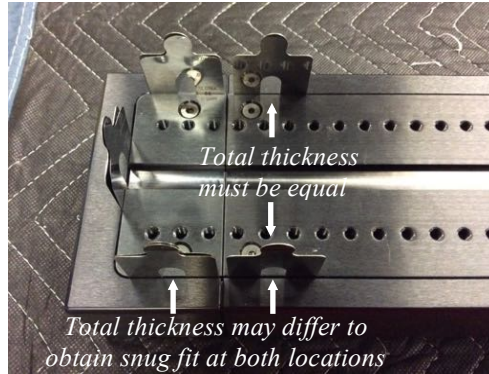


Photo 57

Rest the bolt plate assembly jigs in the keyway channel at both seams and secure them by threading the accompanying 1/4"-20x3/4" screws until finger tight through the four holes in each jig and into the modular bolt plate sections (see Photo 58). When the assembly jigs are located correctly they will straddle the seams between the bolt plate sections and still allow access to all of the screws that secure the bolt plate in the leg.



Photo 58

The first two bolt plate sections are now properly aligned and can be tightened in place. The bolts plate screws should be torqued following the numbered sequence (1 to 8) shown in Photo 59. Use the 1/8" T-wrench to torque the #10-24x3/4" screws until you can rotate the handle of the T-wrench 1/8 of a full rotation without turning the screws any further. The bolt plate assembly jigs and remain in place the entire time you are torquing it down. Never tighten down any bolt plate section that does not have assembly jigs and shims holding it in alignment at both ends.



Photo 59

You will now center and secure the next bolt plate down in the leg assembly. Remove only the shims and one jig that are located at the very top bolt plate location. These shims and one jig will be used at the next available seam down the leg, leap-frogging the still-secured jig (see Photo 60). Use the shims to center the next bolt plate as before. Start with .015” or .010” shims on both sides of the bolt plate and add .001”-.004” shims at both locations until the fit is snug and a greater total thickness of shims cannot be inserted without forcing them. Remember that the total thickness of the shims required may vary along the length of the vertical leg subassembly, but it must be equal at locations across the bolt plate from each other. After the shims are in place, install the jig and the four 1/4”-20x3/4” screws to be finger tight (see Photo 60).

*This jig and set of shims should not have been moved.*



*This jig and set of shims should not have moved from the first location to the next available seam.*

Photo 60

Use the 1/8” T-wrench to tighten down the #10-24x3/4” screws in the newly aligned section until you can turn the handle of the T-wrench 1/8 of a rotation without further rotating the screw. Repeat the entire shim/jig process for each bolt plate section, leap-frogging the assembly jigs at each step so that every bolt plate section has a jig and shims aligning it at both ends while you tighten it down. Once one of the legs is complete, duplicate this process for each leg until they are all complete.

When all of your vertical leg subassemblies are fully reassembled, lay two of them down with the bolt plates face up so they lie parallel to one another. If you are reconstructing a VXR-1921, space them so the outside edges are 19 inches apart (see photo 61). If you are reconstructing a VXR-1719, space them so the outside edges are 17 inches apart.



Photo 61

Slowly lower one horizontal crossmember assembly onto the vertical leg subassemblies leg to mate it with keyways at the location you desire for the top level of your system (see Photos 62). For the top of your HRS isolation base to sit flush to the top of the VXR frame, the top bolt hole of the horizontal crossmember subassembly must be placed at the third threaded hole down from the top. The HRS Isolation Base is 3 inch in height and proper location of the brackets will ensure the top of the isolation base matches the top of the frame.

Make sure the assembly is placed so that the HRS logo will be right side up when the frame system is standing upright, with the pockets for the isolation base feet facing up. Attach at least one of the 1/4"-20 x 3/4" screws to the brace assembly prior to removing your hand from the assembly to ensure it stays in place. It is very important that the 3/4" long 1/4"-20 screws are used to attached the cross brace assembly to obtain proper thread engagement.

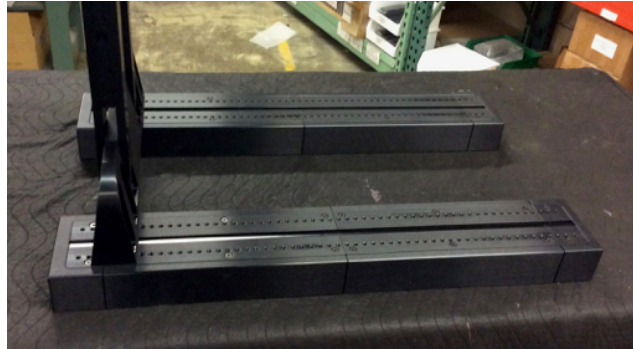


Photo 62

Carefully lower another horizontal crossmember subassembly into the keyways at the bottom level of your system (see Photo 63). Use your T-wrench and ratchet wrench to install, but do not torque (one full turn loose is ideal), all eight 1/4"-20 x 3/4" screws in both horizontal crossmember assemblies. After all the bolts are installed, then torque each of them until you can turn the handle of your T-wrench 1/8 turn without further rotating the screw.



Photo 63

The spacing between the two legs **must** now be checked to ensure that the bolt plates are aligned properly and will allow the horizontal crossmember assemblies to fasten at any and all locations in the future. Carefully lower a third horizontal crossmember assembly into the keyways near the bottom of your stand to make sure it easily sets into the keyways on both legs (see Photo 64). Lift the same horizontal crossmember assembly off the two legs and set it back into keyways a few holes up from the first location you checked. It should again fit easily into the keyways on both legs. Repeat this step every few holes until you reach the top of the stand. Do not drag the assembly along the face of the bolt plates and do not force the assembly into the keyways if it begins to stick. Even a slight misalignment in your movement can cause interference. When this happens, gently wiggle the horizontal cross member assembly to free it and recheck the fit at that location.



Photo 64

If the assembly will not set in easily at one or more locations along the length of the frame then your bolt plates may not be aligned correctly. To realign them, remove all horizontal crossmember assemblies from legs, use your 1/8" T-wrench to loosen all of the #10-24x3/4" screws in the bolt plate on both legs, and then repeat the shim/jig alignment procedure as described previously in this manual.

Please contact Harmonic Resolution Systems if you have repeated difficulty aligning the bolt plates in your system correctly. If done correctly the horizontal cross members should easily fit at every location. This procedure will ensure you can locate your components at any location in the VXR Frame system.

You are now ready to mate the remaining legs of the rebuilt VXR Frame System. Please continue by following the instructions in this manual beginning at "Attaching the VXR Horizontal Crossmember Subassemblies" on page 6 of this manual.

**VXR Cable Organizer Accessory** - The cable organizer system is available for the VXR Frame System as an accessory. It bolts into the back of the VXR frame using the remaining threaded holes in the VXR vertical leg subassemblies that are used to support the isolation bases. There is a separate manual for installation of this VXR accessory and it is shipped with the hardware for the VXR Cable Organizer. Please follow that instruction to ensure proper location when using this accessory.

## **Care and Maintenance**

The VXR Audio Stand is a very low maintenance item that will provide many years of trouble-free performance by applying these basic care instructions.

Clean the external surfaces of the VXR Audio Stand frame using a professional quality ultra-soft lint-free microfiber cloth available in high quality automotive stores. Use a damp cloth if you need to clean dirt from the frame. Do not use commercial furniture polishes on the VXR. For premium painted VXR frames use only HRS approved wax or detail solution.

Please follow the care instructions in the isolation base manual to clean and care for the shelves (HRS Isolation Bases) of the VXR Audio Stand. Read and follow the instructions received with the isolation base to ensure optimum performance and cosmetic appeal.

Do not spray, soak, or submerge the rack frame or isolation bases in water or cleaning solutions. The VXR Audio Stand and HRS Isolation Bases are made from many different parts and materials. Submerging, spraying, or soaking the rack system or isolation base may cause permanent damage to the assembly.

Clean the metallic parts of the HRS Isolation Base and VXR Audio Stand using a lint-free soft (non-abrasive) cloth. Use a damp cloth with a mild soap or Pledge Surface Cleaner if required. Do not use abrasive cleaners or solvents to clean the VXR Audio Stand or HRS Isolation Base, as they will damage the quality of finish. Solvents and solvent-based cleaners will attack and damage some of the materials used in the VXR Audio Stand and HRS Isolation Base and should never be used.

Do not wash the interior flex element of the isolation base feet even if you see a coating or white substance on the surface of the flex element. This coating is intentional and is put in the flex element to protect the isolation material from the environment.

## **Warnings!**

Do not place objects with sharp or pointed feet directly on the isolation base.

Do not immerse in water or spray with water or any other liquids.

Do not use abrasive cleaners or abrasive sponges.

Do not wash with any solvent-based cleaning solutions.

Do not wash the interior flex element of the isolation feet even if you see a coating or white substance on the surface of the flex element.

Be very careful not to cross thread the fasteners when moving the shelf brackets.

## **Limited Warranty**

Harmonic Resolution Systems warrants the product designated herein to be free of manufacturing defects in material and workmanship subject to the conditions herein set forth, for a period of 90 days from the date of purchase by the original purchaser. If the purchaser registers the unit with Harmonic Resolution Systems by mailing in the warranty card, together with a copy of the bill of sale, within 14 days of the date of purchase, said purchaser would be registered for an extended service contract. The extended service contract extends the 90 days to a period of 5 years from the date of purchase by the original purchaser or no later than 6 years from the date of shipment to the authorized Harmonic Resolution Systems dealer, whichever comes first. This warranty is subject to the following conditions and limitations.

1. This warranty is subject to the following conditions and limitations. The warranty is void and inapplicable if the product has been used or handled other than in accordance with the instructions in the owner's manual, abused or misused, damaged by accident or neglect or in being transported, or the defect is due to the product being repaired or tampered with or modified by anyone other than Harmonic Resolution Systems. The product must be packed and returned to Harmonic Resolution Systems by the customer at his or her sole expense. A written description of the defect and a photocopy of the original purchase receipt must accompany a returned product. This receipt must clearly list model and serial number, the date of purchase, the name and address of the purchaser and authorized dealer and the purchase price. Harmonic Resolution Systems reserves the right to modify the design of any product without obligation to purchasers of previously manufactured products and to change the prices or specifications of any product without notice or obligation to any person.
2. Warranty does not cover normal recommended care and maintenance.
3. Harmonic Resolution Systems shall not be responsible in any way for consequential or indirect damages or liabilities resulting from the use of the product covered herein or resulting from any breach of this warranty or any implied warranty relating to said product.
4. Harmonic Resolution Systems shall not be responsible in any way for damage to finishes resulting from normal use and exposure to sunlight and the environment even within the normal and extended warranty period.



During the warranty period, Harmonic Resolution Systems will repair or replace any defective components free of charge. A Return Authorization Number (RA Number) obtained directly from Harmonic Resolution Systems is required before any product is returned to Harmonic Resolution Systems for any reason. This number must be visible on the exterior of the shipping container(s) for Harmonic Resolution Systems to accept the return.

Units shipped to Harmonic Resolution Systems without a visible RA Number on the exterior of the shipping container(s) are subject to be returned to the sender, freight collect.

Units to be repaired by Harmonic Resolution Systems must be sent shipping and insurance prepaid by the original purchaser in the original packaging material. A returned product should be accompanied by a written description of the defect. Repaired units will be returned by Harmonic Resolution Systems shipping and insurance prepaid by the customer.

All other warranties or conditions either written or implied are void.

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