A Comprehensive Guide:
Off-Season
Percussion Equipment Maintenance

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Chops is the percussion department at Paige's Music and is run by percussion educators. They stock a full line of concert, marching, drum set, and world percussion.

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General Maintenance Tips

The use of percussion equipment at the middle school and high school level is greater now than ever before. With schools using equipment for marching band, concert band, orchestra, jazz band, solos, ensembles, and indoor percussion, there is very little time throughout the year that the equipment is not being used. Over time, that extensive use will place wear and tear on any instrument but by being proactive and putting some systems into place, you can extend the life of almost all your equipment.

Try to find two times are year for a thorough cleaning and inspection of your gear. The best time would be right after the school year ends and right after your marching band season. Depending on how much you are using your equipment throughout the year, you may only need to do this once a year, but it will still keep your equipment in top condition.

While this guide covers a majority of instruments that you might have in your percussion section, it is meant to be an overview of specific things to look for and check on individual instruments. This guide can help you come up with a game plan for checking your equipment and performing some general maintenance on a majority of your percussion equipment.

Taking Inventory

Even though it may seem like an obvious task to perform each year, do a complete inventory of your equipment every year. Taking the time to know everything you have, will ensure that everything is always accounted for, and also allows you to cross-reference the maintenance process. Despite the fact it double checks for any "missing" equipment, taking inventory allows you to do a quick inspection of the equipment in the process.

Be sure to take inventory of the small things as well such as stands, cymbals, accessories, heads and mallets. If you find things that are not repairable, keep the small parts such as wing nuts, screws or bolts because you may be able to use them in the future.

While doing inventory create a way to keep note of damages, major cleaning projects, etc.

Cleaning and Inspecting Your Equipment

Cleaning percussion instruments is a fairly simple task that can be done in one setting by the students. The following four things should be done at minimum for all percussion equipment. You can find more specific maintenance tips and focus areas for each instrument later in this guide.

- Clean all equipment using a soft cloth to remove any dirt or grime that has built up over time. A small amount of diluted rubbing alcohol can help remove major build-up.
- Inspect your instruments for any missing parts.
- Check for broken or damaged areas on your equipment that may require repair or replacement.
- Ensure that all frame bolts, nuts, carrier parts, etc. are at the correct tightness.

Storage of Equipment

One of the most overlooked aspects of percussion maintenance is storage. It is true that not every band or orchestra room is outfitted with extra storage, but you can still do things to help keep the equipment in top shape. Most importantly is to cover large instruments such as marimbas, vibes, timpani or concert bass drum. Keeping drums and cymbals in cases or bags when possible.

Lastly, keep all musical instruments in a cool, dry environment year around. Equipment should never be left on the equipment truck for extended periods of time, as the extreme temperature changes will create unwarranted wear and tear on the equipment. Work to find a solution at your school that keeps the equipment dry and safe.

Get Students Involved

Having the students actively involved in the entire inventory, cleaning and storage process can help give them a sense of pride in not only how they sound, but how they look. While supervision certainly still needs to take place, giving them tasks during this process will go a long way with training them to take care of the equipment. Here are some other ways to keep the students involved year round:

- Post Show Inspections
- Clean Drums Before Shows or Concerts
- Create a Storage Map so things can always be found
- Have section leaders inspect equipment for common issues on a weekly basis.

Marching Percussion

Marching percussion equipment is exposed to the most environmental challenges throughout the course of the school year and is often times used year round. With these environmental demands, there comes a need for taking care of the instruments on a routine basis.

One of the biggest pitfalls in maintaining marching percussion equipment is failing to regularly change your heads. With the materials and high tension nature of modern marching heads, failing to change them regularly can place unneeded pressure on the bearing edge and shell if heads continue to be over tightened. If you are at a school that does both marching band and indoor percussion, try and line up a cleaning day when you are executing a head change. This allows you to thoroughly clean your equipment and get fresh new heads on the drums.

Below you can find specific issues to check for on the different types of marching drums.

Marching Snare Drums

- Do a visual inspection for any missing or broken parts that may need replaced. Some common parts missing or broken include the following:
  - Rim Guards or Feet
  - Bent Tension Rods
  - Bent Long Tension Posts or Tubes
  - Bent Strainer from overtightening snare guts
  - Inspect the bearing edges when heads are off for any damage
- Wipe down each drum with a soft cloth, including the hardware and the shell.
- If there is extreme dirt or grime, you can use denatured alcohol diluted in water. If you have anything that is extremely sticky use a small amount of valve oil. In both cases, put the product on the cloth instead of spraying directly on the drum.
- Check the snare guts, if they are extremely bent consider replacing or tightening with a screw of the side as they are too loose causing them to bend over the rim incorrectly.
- When executing a head change, be sure to use lithium grease on the tension rods.
- Ensure that any hardware for attached to the drum for the carrier is tight and in working order.
- Place a clean drum cover on the drum and then place the drum in a hard or soft case.
- Each drum should be stored in a secure and cool environment.
- If storing for the winter season, the tension on both the top head and bottom head should be reduced by half to keep the tension rods in place and pressure of the drum and heads.

Marching Tenor Drums

- Do a visual inspection for any missing or broken parts that may need replaced. Some common parts missing or broken include the following:
  - Bent Tension Rods
  - Cracked Lug Casings
  - Screws missing to hold lug casing on drum (found inside drum)
  - Bent or missing spacers between the drums
  - Bent rims causing the heads to not sit correctly and causing tuning issues
  - Missing or loose tenor trim
  - Inspect the bearing edges when heads are off for any signs of damage
- Wipe down each drum with a soft cloth, including the hardware and the shell.
- If there is extreme dirt or grime, you can use denatured alcohol diluted in water. If you have anything that is extremely sticky use a small amount of valve oil. In both cases, put the product on the cloth instead of spraying directly on the drum.
- When executing a head change, be sure to use lithium grease on the tension rods.
- Ensure that any hardware for attached to the drum for the carrier is tight and in working order.
- Place a clean drum cover on the drum and then place the drum in a hard or soft case.
- Each drum should be stored in a secure and cool environment.
- If storing for the winter season, the tension on both the top head and bottom head should be reduced by half to keep the tension rods in place and pressure of the drum and heads.

Marching Bass Drums

- Do a visual inspection for any missing or broken parts that may need replaced. Some common parts missing or broken include the following:
  - Bent Tension Rods
  - Cracked Lug Casings
  - Screws missing to hold lug casing on drum (found inside drum)
  - Cracked or Broken Hoops
  - If foamed inside drum; loose or missing foam
  - Overly bent claw hooks that don't attached properly
  - Inspect the bearing edge when heads are off for signs of damage
- Wipe down each drum with a soft cloth, including the hardware and the shell.
- If there is extreme dirt or grime, you can use denatured alcohol diluted in water. If you have anything that is extremely sticky use a small amount of valve oil. In both cases, put the product on the cloth instead of spraying directly on the drum.
- When executing a head change, be sure to use lithium grease on the tension rods.
- Ensure that any hardware for attached to the drum for the carrier is tight and in working order.
- Place a clean drum cover on the drum and then place the drum in a hard or soft case.
- Each drum should be stored in a secure and cool environment.
- If storing for the winter season, the tension on both the top head and bottom head should be reduced by half to keep the tension rods in place and pressure of the drum and heads.

Marching Cymbals

- Do a visual inspection for any missing or broken parts that may need replaced. Some common parts missing or broken include the following:
  - Check for Cracks or Dents
  - Worn or Ripped Cymbal Straps
- Wipe down each cymbal with a soft cloth, including the hardware and the shell.
- If there is extreme dirt or grime, you can use denatured alcohol diluted in water. If you have anything that is extremely sticky use a small amount of valve oil. In both cases, put the product on the cloth instead of spraying directly on the cymbals.
- Each cymbal should be stored in a secure and cool environment.
- If storing for the winter season, place in cymbal bags rather than leaving them exposed to the air.

Cymbal Polish: Using cymbal polish is optional and should only be used for additional cleaning. Keep in mind the type of cymbals you have will affect the amount of "shine". If it started with a non-brilliant finish it will remain non-brilliant.

Keyboard Percussion

While each type of keyboard instrument in the percussion family requires slightly different care and maintenance, there are some common things to check from time to time. These simple tasks will improve the quality of your instruments and additionally keep your mallets in great shape.

1. The most obvious thing to inspect first is the condition of the string used to suspend the bars. Instead of waiting for them to break, change the string when it should considerable wear.
2. Check for bent bar posts that may be resting against bars and giving them a dead sound. These can be easily straightened out. You should also make sure each post has a rubber insulator installed.
3. Check for any out of tune or cracked bars that may need replaced.
4. Clean the bars. Doing this regularly will also help to keep you mallets from picking up dirt and grime.
5. Perform weekly checks to tighten frames and carts.
6. Make sure each keyboard has a cover. You can purchase these or make your own.

Below you can find some specific things to check on each type of mallet instrument.

Marimba and Xylophone

Marimbas and xylophones can be made of different materials that should be treated differently. If your instrument has real wood bars, one major factor is making sure they do not get wet for any reason. In addition to check for the above mentioned issues, you should check for the following:

- Rosewood Bars: First clean with a soft cloth to remove any dust that has collected. To remove any other dirt or grime you can apply a small cost of lemon oil to the bars. Place the oil directly on the cloth and not the bars
- Synthetic Bars: First clean with a soft cloth to remove any dust that has collected. To remove any other dirt or grime you can use denatured alcohol diluted with water.
- Resonators: Take the time to clean out the resonators. Dust, dirt and other particles often collect at the bottom on these and can affect the overall sound of the keyboard.
    - First remove resonators from keyboard and flip over and lightly tap.
    - Use a long dust brush to remove more dust.
    - Long longer resonators you can carefully use a vacuum with hose attachment to help remove the lowest settled particles of dust or dirt.

Vibraphone

The vibraphone is one of the most complex instruments in the percussion family due to its many moving parts to make it all work. Unfortunately, the pedal and damper mechanisms are not universal from brand to brand so you will need to give these instruments a more thorough inspection. A majority of the time issues on vibraphones are from the pedal or the damper. Beyond the basic keyboard cleaning tips mentioned you can check for the following issues:

- Bar Cleaning: Since the vibes have metal bars cleaning them with a dry cloth first and then denatured alcohol will help remove the built up dirt and grime.
- Pedal Issues: There are often three main concerns when it comes to vibraphone pedals and they are as follows:
    - Pedal attachment loose from frame. Re-attach with new bolt and nut.
    - Upper Pull Rod gets stripped and won't hold in place. Replace upper pull rod.
    - Bent upper pull rod. Often times will need to be replaced.
- Damper Issues: The damper is the part that actually touches the keys and attaches to the pedal. In general you should look for the following issues on the damper system.
    - Missing or bent compression spring
    - Worn Damper Felt. Overtime the keys will wear out the damper felt causing notes to ring when dampened.
    - Uneven dampening of bars. You would likely need looked at by a repair technician to fully diagnose the issue.
- Resonators: Take the time to clean out the resonators. Dust, dirt and other particles often collect at the bottom on these and can affect the overall sound of the keyboard.
    - First remove resonators from keyboard and flip over and lightly tap.
    - Use a long dust brush to remove more dust.

- Long longer resonators you can carefully use a vacuum with hose attachment to help remove the lowest settled particles of dust or dirt.

Orchestra Bells

Orchestra bells, while simple by design, certainly come with some key components to check when conducting an inspection.

- Bar Cleaning: Since the bells have metal bars cleaning them with a dry cloth first and then denatured alcohol will help remove the built up dirt and grime.
- Bent or Missing Screws: Each bar is often head to the frame with either one or two holes that contain screws. If bent it will cause for notes that do not resonate properly.
- Missing or Corroded Bushings: Each screw should be surrounded by a rubber bushing to keep the bars from clanking against the screw when played.
- Bent or Missing Spacers: Some bell sets come with spacers in between each note as well. These can become bent similar to the screws causing the cars to have a dead or muted sound.
- Frame Issues: A majority of bell cases have a layer of felt and string that sit underneath the bars. Over time these can become extremely worn and need replaced.

Chimes

Similar to the vibraphone the chimes tend to be complex by design as they also contain both a pedal and damper system. There are many designs of each of these but often times the issues are similar as follows:

- Bell Cleaning: Since the chimes have metal bells cleaning them with a dry cloth first and then denatured alcohol will help remove the built up dirt and grime.
- Frayed or Damaged Wire/String: Depending on the method used to hang your chimes, be sure to inspect the string or wire for damage. If they needs replaced be proactive and replace them before they fall off and get damaged.
- Pedal Issues: There are often three main concerns when it comes to chimes pedals and they are as follows:
  - Pedal attachment loose from frame. Re-attach with new bolt and nut.
  - Upper Pull Rod gets stripped and won't hold in place. Replace upper pull rod.
  - Bent upper pull rod. Often times will need to be replaced.
- Damper Issues: The damper is the part that actually touches the keys and attaches to the pedal. In general you should look for the following issues on the damper system.
  - Missing or bent compression spring
  - Worn Damper Felt. Overtime the bells will wear out the damper felt causing notes to ring when dampened.
  - Locked up internal spring.

Carts and Frames

This is probably one of the more important aspects of keyboard percussion equipment being used in the school setting these days. With more year round use occurring in many programs having a quality frame is just as important as the bars. Taking these few simple steps can help keep them working properly year round.

1. Check your wheels or tires for signs of wear and tear. It is not always easy getting the wheels replaced so checking in the off-season can help you get them before they break.
2. Inspect all wing screws/bolts/nuts on the frame and tighten as needed. If stripped or a new part or replace the bolt.
3. Paint: While not important to the overall life of the keyboard, giving the frames (where possible) a fresh coat of paint from time to time will help keep all your gear looking new.

It is highly suggested to use the original parts when possible. Unless there is a known design issue replacing with the original parts, makes sure you get exactly what will fit your needs and work properly with your keyboard.

Concert Percussion – Large Instruments

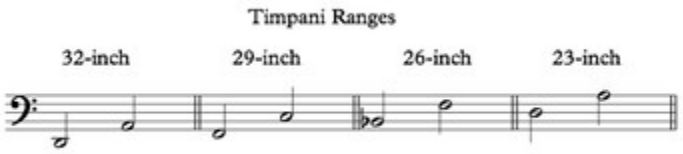
The concert side of percussion equipment should also be inspected and cleaned with regularity to keep it in great shape even if it is not used as often. Taking the clean the instruments and inspect them can help you know whether or not it is time to repair or replace. These particular instruments you will like use more often throughout the school year in both the concert and marching setting, so the wear and tear could still be extensive if not maintained properly. This section will focus more on common issues that will often lead to the need for repair.

Timpani

- Cleaning: Any dirt or dust on the heads can be wiped off with a soft cloth. The bowls and struts can be cleaned with a soft cloth and denatured alcohol with diluted water. It is also advised to thoroughly clean the dust from tension rod areas and underneath the timpani at least once a year. Keeping the pedal adjustments and springs clean are important to keeping the parts functioning properly.
- Lubrication: Once cleaned a high quality grease can be used on all the moving parts such as tuning bolts, pedal springs, etc.
- Pedal Issues: Inspect the pedals to ensure they are staying in position at both the top and bottom position and the pedals are not slipping. Here are some common things to check for with regard to pedal issues:
    - Head Tension: 9 times out of 10 pedal issues are created when the head is out of range. More often than not the head is not tuned to the proper low note thus not allowing balance between the head and the pedal.

- Spring Adjustment: For models of timpani that have a hand adjustment knob for the spring this can also become overtightened and not work to balance with the pedal.
- Brake Adjustment: The brake adjustments are often found directly under the pedal and should be inspected to make sure the brake pads are still intact.

- Head Replacement: Another factor that can lead to issues with the pedal are heads that are over worn and stretched. Check the heads for dents, rips, of scratches that may affect the tuning of the head. It is advised that you replace your timpani heads once every one or two years depending on their use.
- Bowl Dents: Inspect the bowls for large dents that will need to be hammered out in order to keep the resonance of the timpani. Large dents can be removed by a professional repair technician.
- Storage: Timpani should be kept in a cool, dry environment when possible and should remain covered at all times when not in use.



Concert Bass Drum

- Cleaning: Any dirt or dust on the heads can be wiped off with a soft cloth. You can use a soft cloth with diluted denatured alcohol for the stand and hardware areas. Be sure to spray onto the cloth and not directly onto the drum.
- Visual Inspection: Look for any damage to the head, missing T-handles or tuning rods, missing parts of the stand and objects that might have gather between the rim and the head.
- Head Replacement: Worn heads that are more than 2 years old on a concert bass drum should be changed. While it is a fairly simple process to replace the heads, being sure of keeping even tension while installing a new head is very important.
- Rattles: Play the drum and listen for any extra noise or rattles that may occur when striking the drum. The possible causes could be as follows:
  - Loose bolt or nut on the stand.
  - Loose bolt or nut inside the drum
  - Debris that is inside the drum (remove the head to check for this)
  - Loose or broken caster (wheel)
- Suspended Bass Drum Stand: Many schools have the suspended bass drum stand that uses poly rubber straps. Over time these will wear down and cause the drum to hit parts of the stand when played.
- Cracked Rim or Damaged Shell: Check the rim and shell for any visible cracks or damage.
- When possible cover the drum when not in use.

Snare Drum

- Cleaning: Wipe down each drum with a soft cloth, including the hardware and the shell. If there is extreme dirt or grime, you can use denatured alcohol diluted in water. If you have anything that is extremely sticky use a small amount of valve oil. In both cases, put the product on the cloth instead of spraying directly on the drum.
- Parts Inspection: Do a visual inspection for any missing or broken parts that may need replaced. Some common parts missing or broken include the following:
  - Bent Tension Rods
  - Damaged Tension Posts or Tubes
  - Bent Strainer from overtightening snare strands
  - Bent or out of Round Rims
  - Inspect the bearing edges when heads are off for any damage
- Head Replacement: Changing the heads on a concert snare drum that is used regularly should happen about once a year. Over time the head will get stretched so far that it will not hold tuning for long even if tuned daily. If the head is dented, ripped, or severely scratched consider replacing the heads.
- Damaged or Bent Shell: Inspect the shell for and damage. Metallic shells with dents can often be put back into round by a repair technician.

Concert Toms

- Cleaning: Wipe down each drum with a soft cloth, including the hardware and the shell. If there is extreme dirt or grime, you can use denatured alcohol diluted in water. If you have anything that is extremely sticky use a small amount of valve oil. In both cases, put the product on the cloth instead of spraying directly on the drum.
- Parts Inspection: Do a visual inspection for any missing or broken parts that may need replaced. Some common parts missing or broken include the following:
  - Bent Tension Rods
  - Damaged Lug Casings
  - Bent or Out of Round Rims
  - Inspect the bearing edges when heads are off for any damage
  - Inspect the Tom Mounting System for any damaged or missing pars
- Head Replacement: Changing the heads on a set concert toms that is used regularly should happen about once every year or two. Over time the head will get stretched so far that it will not hold tuning for long even if tuned daily. If the head is dented, ripped, or severely scratched consider replacing the heads.

Tam-Tam or Gong

- Cleaning: Wipe down each drum with a soft cloth. If there is extreme dirt or grime, you can use denatured alcohol diluted in water.
- Cracked or Dented Gong: Inspect the gong for any cracks or dents. Depending on the size and position of the dent, the gong can still be repaired and used.
- Hanging the Gong: It is advised to hand the gong with holes that are already placed in the gong by the manufacturer. While it is possible to change, unless you know what to use and how to drill you can crack the gong.

Concert Percussion – Accessories

Every percussion section contains many small accessory instruments that need to be inspected and cleaned on a routine basis. In general these instruments can be clean like others with a soft cloth and the occasional use of diluted denatured alcohol. Below are some other common issues you should be checking for upon inspection.

Cymbals

- Cracks or Dents: Do a visual inspection to check for any cracks or dents on the cymbals. Depending on the severity and location of the cracks the cymbals may be repairable.
- Worn or Damaged Straps: For hand crashes, check for worn or damaged straps that can be easily replaced.
- Stands: When checking a cymbal stand make sure you have a plastic or rubber sleeve, felt for above and below bell, and the correct size wing nut.

Tambourine

- Cleaning the Head: It is strongly advised to not use any liquid on the tambourine head, if they are skin heads.
- Cracked or Damaged Wood: Check the wooden parts of the tambourine for any cracks or damage. While this will not affect the sound of the tambourine, it does affect the longevity of the tambourine. If not to severe, these cracks can often be repaired.
- Bent Jingles: Check each jingle for any bent areas that may not be allowing them to move freely. These can be straightened back out with the right equipment and knowledge.
- Loose Head and Replacement: Inspect the head for tension. Over time and given temperature fluctuations a skin head will start to lose its tension. While there are some ways of salvaging a head it is often better to replace the head. If your jingles are still in great shape, doing a head change will save you money and you get more out of your original instrument.
- Storage: Keep your tambourine in a bag and in a cool, dry environment. If you do not have one there are many companies that sell only the bags such as Grover or Black Swamp.

Triangle

- Bent or Damaged Beater: Inspect your triangle and beaters for any damage such as bends, large scratches.
- Mounting Clip: Make sure your triangle mounting clip works properly. Allowing the triangle to hang freely but not move around too much when played. Fishing line or similar product is recommend over any type of string or yarn.
- Storage: Keep your tambourine in a bag and in a cool, dry environment. If you do not have one there are many companies that sell only the bags such as Grover or Black Swamp.

Castanets

- Machine Castanets: Depending on the type of castanet machine you own the attachment product may be different (some companies use zip ties and others use string), but you should check to see if these are worn and need to be replaced. You should be able to have enough tension on the mount to get a clear and consistent sound.
- Hand Castanets: Much like a castanet machine, the attachment products may differ, but you should inspect them from time to time for wear and tear. Another common issues is the string or plastic tie becoming loose and not having enough tension to get a clear sound. In this case, they will need to be replaced.
- Storage: When possible have a storage bag or case for your castanets. It keeps them protected and easier to find when it is time to use them.

Woodblock or Temple Blocks

- Cracked or Dented Blocks: Woodblocks do have a tendency to crack or break overtime and this should be checked on a regular basis. Often time they will need to be replaced but depending on the size and place of a crack it could be repaired.
  - Be sure to play woodblock with correct implement such as yarn or rubber mallets.
- Dried out Wood: Depending on the quality of your instrument the wood can have a tendency to dry out and cause cracks. If you have a high end professional set of woodblocks or temple blocks you can use a small amount of lemon or mineral oil to help with this issue.
- Granite Blocks: Granite blocks tend to be fairly durable and won't crack very easily but you should still inspect them for any damage.
  - One common issue with these is the screws attaching them to their mount can become loose and strip out. These can be easily replaced or repaired.

It is highly recommended that you have a percussion cabinet or storage shelf to keep all your small equipment. Another great idea if space is limited is to attach pegboard with hooks to the wall and hang small items that are also easily accessible and can visibly be checked for inventory. Thing of tools in a shop on the wall and label everything so it has a permanent home.

Combo and World Percussion

Drum Set

A majority of programs are now using drum set on a year-round basis between marching band, jazz band, and indoor percussion so it is important to take inventory and clean regularly. Here are some important things to check or with the drum set.

- Cleaning: Wipe down each drum with a soft cloth, including the hardware and the shell. If there is extreme dirt or grime, you can use denatured alcohol diluted in water. If you have anything that is extremely sticky use a small amount of valve oil. In both cases, put the product on the cloth instead of spraying directly on the drum.
- Be sure to clean around the lugs casings and tension rods.
- Parts Inspection: Do a visual inspection for any missing or broken parts that may need replaced. Some common parts missing or broken include the following:
  - Bent Tension Rods
  - Damaged Lug Casings
  - Bent or Out of Round Rims
  - Inspect the bearing edges when heads are off for any damage
  - Inspect the Tom Mounting System for any damaged or missing pars
  - Inspect the BD spurs for damage or missing parts.
- Head Replacement: Changing the heads on a drum set that is used regularly should happen about once every year. Over time the head will get stretched so far that it will not hold tuning for long even if tuned daily. If the head is dented, ripped, or severely scratched consider replacing the heads.
  - Having worn and over tightened heads can cause damage to bearing edges and put strain on the lug casings. Be pro-active about keeping the heads in tune and fresh.
  - If your budget does not allow a full head change every year at least change the batter heads as they obviously take a majority of the beating.
  - Your BD head will need to be replaced less often especially the resonant head; it is recommended to change your batter head when you replace your other heads.
- Hardware: Along with the heads drums and heads take the time to inspect your stands and hardware. Some common issues to check for include:
  - Cymbal stands missing felt, spacers or wingnuts
  - Bass Pedals that won't attach to the rim anymore
  - Hi-Hat Stands that may need slight lubrication
  - Hi-Hat Stand missing crutch felts or wing nuts

Congas/Bongos/Djembe

The use of hand percussion instruments such as congas or bongos often times have real-skin heads that need to be inspected for specific issues. While slight variations may occur with the instruments you should check for the following:

- Synthetic or Skin Heads: Check the heads for scarps, dents or holes that may lead to replacement.
- Tuning: If the drums will no longer hold the tuning for a period of time they have likely been stretched beyond their means and will need to be replaced.
- Temperature: The advantage of synthetic heads on hand percussion instruments is they are less susceptible to weather changes. Skin heads will stretch or loosen more easily based on their storage and performance environment
- Storage: Hand percussion instruments should be slightly detuned when not in use. Not to the extent of having no tension, but enough to allow for the heads to stay taut. Since these instruments are often used more infrequently than others, doing this on a regular basis can help extend the life of the instruments. Store in a case or bag if possible.
- Hardware: Inspect the stands and hardware for missing parts. It is highly recommended to never drill holes in these drums. They are often constructed with layers of wood glued together or carved in ways that are not meant to be manipulated.

Cowbells/Shakers/Rattles/Guiro

The percussion section will often times have various instruments from around the world such as rattles, shakers, cowbells and guiro. These should be inspected for damage and replaced on a regular basis.

- Inspect: Check for holes, cracks and damage they may be causing issues when playing.
- Replacement: More often than not, damage to these instrument will lead to purchasing a replacement. So be sure to account for this when gearing up for the next year.
- Cowbell: If the bell section of the cowbell (open end), if major bent it will likely need replaced. Small dents or bends can be repaired. A major component to this is making sure the correct implements are used on the cowbell. Hard plastic or metal mallets should not be used.
- Storage: The biggest factor to preserving these typically fragile instruments is having a good system for storage. Having a cabinet or shelf for these instruments will soft padding is suggested. You can also use normal drum bags or cases if doing more long-term storage.

Pro-Audio and Electronic Equipment

The ever changing world of percussion now includes being responsible for and maintaining high quality electronics and pro-audio gear. This equipment is often some of the most expensive equipment in your band and should therefore be taken as a high priority. As a general rule of use the following:

- Store equipment indoors and in cool dry place
- Before cleaning ensure all equipment is turned off and unplugged.
- It is possible to give this equipment a thorough cleaning with a soft cloth and spray cleaner. Just be sure to spray onto cloth rather than directly on the equipment.
- If anything is carpeted you can use a vacuum to clean.

Mixers and Carts

Mixers are often part of larger carts that may contain power amps, wireless mic receivers, power conditioners or crossovers. Here are some useful items to check regarding your mixer cart.

- Take the time at the end of your season to carefully clean dust and dirt out of the cart.
- Inspect the wheels and lubricate with some DW-40 if needed.
- It is highly recommended to take out any cables and stretch them out and check for any damages. (Just take pictures so you re-connect everything properly)

Speakers

Your speakers and subwoofers should be checked at the end of the season for any rattles, buzzes or other noises that may indicate an issue with the speaker. Inspect the connectors and plugs for any damage or wear. Look for tears and cracking on the speaker boxes that may indicate unseen damage.

Microphones

Microphones should be removed at the end of the season and stored while not in use. Even if they are only stored for a few weeks this can help keep inventory of them and keep them in once place. Inspect

microphone connections for any bent or damaged pins. If you use some wireless devices, take out the batteries and put new ones in at the start of the new season.

Cables

Cables should be removed from keyboards, cleaned, and coiled neatly. Stretching out the cables to full length and letting them stay for a few hours can help avoid spirals or kinks in the cables. Inspect the cable for any tears that may need to be patched up or replaced. Check connectors and plugs for damage from being drug on the ground that may cause issues when connecting in the future.

Final Thoughts

Preserving your percussion equipment and gearing up for the overturn of new seasons is a year round task that can be handled by yourself and your students. This guide can hopefully begin to set you up with a checklist of sorts that will allow you to plan ahead for any repairs or new purchases needed on your equipment. Large percussion equipment can last for a lifetime if maintained properly and kept in good working order year round. While everything eventually will need to be replaced, being proactive and checking for common issues can help you identify missing parts or easily repairable damage that can help extend the life of your percussion gear.