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INSTALLATION MANUAL AND USER'S GUIDE

B-BAND A1.2 AND A1.2N ONBOARD PREAMPS WITH B-BAND UST OR AST TRANSDUCER

This is a basic installation manual, user's guide and tip sheet. For more information, technical support and pictures of installations about all B-Band products please check the B-Band website at www.b-band.com or contact your B-Band dealer, distributor or B-Band directly.

Date: 4th July 2006. Version 1.0.

B-BAND LIMITED WARRANTY STATEMENT

In the unlikely event that your product needs guarantee service, please contact your dealer, distributor or manufacturer. To avoid any unnecessary inconvenience on your part, we recommend you read this instruction manual carefully before seeking guarantee service.

YOUR GUARANTEE

By this Guarantee, B-Band guarantees the product to be free from defects in materials and workmanship at the date of original purchase for a period of one (1) year from that date.

If within the guarantee period the product is determined to be defective (at the date of original purchase) due to improper materials or workmanship, B-Band will, without charge for labour or parts, repair or (at B-Band's discretion) replace the product or its defective parts subject to the terms and limitations below. B-Band may replace defective products or parts with new or refurbished products or parts. All products and parts replaced become the property of B-Band.

TERMS

1. Guarantee services will be provided only if the original invoice or sales receipt (indicating the date of purchase, model name and dealer's name) is presented with the defective product within the guarantee period. B-Band may refuse free-of-charge guarantee service if these documents are not presented or if they are incomplete or illegible. This Guarantee will not apply if the model name or serial number on the product has been altered, deleted, removed or made illegible.
2. This Guarantee does not cover transport costs and risks associated with transport of your product to and from B-Band.
3. This guarantee does not cover:
 - a) periodic maintenance and repair or parts replacement due to wear and tear.
 - b) consumables (components that are expected to require periodic replacement during the lifetime of a product)
 - c) damage or defects caused by use, operation or treatment of the product inconsistent with normal use
 - d) damage or changes to the product as a result of:
 - i. misuse, including:
 - treatment resulting in physical, cosmetic or surface damage or changes to the product
 - failure to install or use the product for its normal purpose or in accordance with B-Band's instructions on installation or use
 - failure to maintain the product in accordance with B-Band's instructions on proper maintenance
 - installation or use of the product in a manner inconsistent with the technical or safety laws or standards in the country where it is installed or used
 - ii. the condition of or defects in systems with which the product is used or incorporated except other B-Band's products designed to be used with the product
 - iii. use of the product with accessories, peripheral equipment and other products of a type, condition and standard other than prescribed by B-Band
 - iv. repair or attempted repair by persons who are not B-Band employees
 - v. adjustments or adaptations without B-Band's prior written consent, including:
 - upgrading the product beyond specifications or features described in the instruction manual, or
 - modifications to the product to conform it to national or local technical or safety standards in countries other than those for which the product was specifically designed and manufactured
 - vi. neglect
 - vii. accidents, fire, liquids, chemicals, other substances, flooding, vibrations, excessive heat, improper ventilation, power surges, excess or incorrect supply or input voltage, radiation, electrostatic discharges including lighting, other external forces and impacts.
4. This guarantee covers only hardware components of the product.

EXCLUSIONS AND LIMITATIONS

EXCEPT AS STATED ABOVE, B-BAND MAKES NO WARRANTIES (EXPRESS, IMPLIED, STATUTORY OR OTHERWISE) REGARDING PRODUCT PERFORMANCE, ACCURACY, RELIABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OTHERWISE. If this exclusion is not permitted or fully permitted by applicable law, B-Band excludes or limits its warranties only to the maximum extent permitted by applicable law. Any warranty that cannot be fully excluded will be limited (as far as permitted by applicable law) to the duration of this Guarantee.

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Where applicable law prohibits or limits these liability exclusions, B-Band excludes or limits its liability only to the maximum extent permitted by applicable law. For example, some countries prohibit the exclusion or limitation of damages resulting from negligence, gross negligence, willful misconduct, deceit and similar acts. B-Band's liability under this guarantee will in no case exceed the price paid for the product, but if applicable law permits only higher liability limitations, the higher limitations apply.

YOUR LEGAL RIGHTS RESERVED

Consumers have legal (statutory) rights under applicable national laws relating to the sale of consumer products. This guarantee does not affect statutory rights you may have nor those rights that cannot be excluded or limited, nor rights against the person from whom you purchased the product. You may assert any rights you have at your sole discretion.

B-BAND A1.2 AND A1.2N INSTALLATION INSTRUCTIONS

DEAR CUSTOMER,

We thank you very much for your purchase of this B-Band® state-of-the-art acoustic transducer system.

B-Band takes care to provide the highest quality product and is manufactured and supported in true spirit of acoustic instrument aficionados. The outstanding sound reproduction of B-Band transducers is based on the technology of a very special, worldwide-patented material that is exclusive to B-Band. This material is very different from, and has nothing to do with, piezo-electric films or transducers.

How is it different? We could write a long story here about the technical characteristics of the material, like how the "microscopic lens-like gas bubbles"™ work inside the permanently charged film, but the most important difference is the sound. Whereas piezo pickups tend to impart a sound of their own (often described as "quacky" or "plastic"), B-Band transducers act in much the same way a condenser microphone does. B-Band systems will provide an excellent reproduction of your instrument's unique sound.

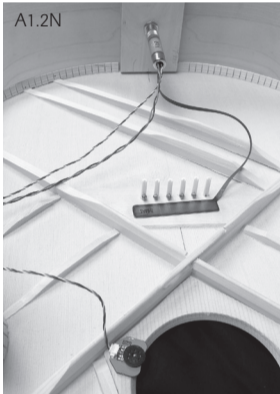
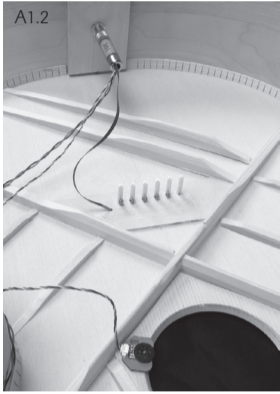
All of us at B-Band truly hope you enjoy this product.

Please contact us if you have any comments about B-Band products.

Always ready to help you.

Yours sincerely,

Heikki Räisänen
CEO, B-Band Ltd



1. SAFETY AND PRODUCT CAUTIONS

Although B-Band products could be easy to install by following these instructions carefully and checking the B-Band website and references, we highly recommend the installation be done by a professional qualified guitar craftsman or technician. Some installations require a high knowledge about woodworking and guitar structure.

B-BAND LTD AND B-BAND, INC. WILL NOT BE RESPONSIBLE FOR ANY DAMAGES, PERSONAL INJURIES OR LIABILITIES RESULTING FROM INSTALLATIONS, IMPROPERLY DONE INSTALLATIONS OR MISUSE OF PRODUCT.

Read all of these instructions closely before starting installation.

All B-Band UST and AST work with all B-Band A-series preamps.

Do not cut, pull, crimp or bend at a sharp angle any B-Band transducers.

B-Band UST and AST can NOT be shortened or altered in any way. This will cause audible hum and void the warranty.

Long-time exposure of UST or AST to high-temperatures (over 50 °C / 120 °F) may reduce the output level permanently.

B-Band transducers will only work with B-Band preamps.

Before installation make sure instrument is in good working condition.

Even with the battery secure in the battery tray with the tray button down, the battery could get loose when transported. We strongly recommend removing the battery before transporting the instrument in heavy conditions, for example, with freight companies or airlines, to avoid possible damage to the instrument.

When doing any drilling, sawing, cutting or routing at the guitar, be sure to secure the guitar so it will not move when doing such work.

2. OVERVIEW OF B-BAND UST AND AST TRANSDUCERS

Both the B-Band UST (Under-Saddle Transducer) and AST (Acoustic Soundboard Transducer) use the same, patented transducer technology.

They are very flexible, but you should never pull or bend them at a sharp angle. B-Band transducers themselves do not require electrical power, as they are permanently charged elements. Because of the very high output impedance (typical for condenser microphones) B-Band UST and AST always require a B-Band preamp.

Standard piezo preamps will not work properly with B-Band transducers. They will produce low output and poor bass response.

The active portion of the B-Band UST transducer is 80 mm (3 3/16") from the end of the transducer at the opposite side of the connector.

The active portion of the 1470 AST is the 14 X 70 mm (9/16" X 2 13/16") area that attaches to the guitar.

The rest of the UST and the "lead" wire of the AST are not active. However, for best performance always keep the inactive portion of either UST or AST pickup from touching each other, or touching or rubbing on the inside of the guitar, or touching the battery or output jack wires. These may produce unwanted handling noise.

UST models and sizes:

Saddle width: 2.3-2.9 mm / .090-.115" (3/32")
B-Band model #: 22L
UST width: 2.3 mm / .090"

Saddle width: 3.0 mm / .120" (1/8") or more
B-Band model #: 29L
UST width: 3.0 mm / .118"

Always use model "L" size UST transducer for A1.2 and A1.2N.

3. OVERVIEW OF A1.2 AND A1.2N PREAMPS

All B-Band A-series preamps are designed to give optimum performance with B-Band UST and AST transducers. The main criterion in designing these preamps was to deliver studio quality and user-friendly electronics to the diverse needs of acoustic instrument musicians.

The A1.2 and A1.2N are single input endpin preamps with a mini volume control. The A1.2 can be used with UST or AST pickups.

The A1.2N is specifically for use with the AST pickup only. The "N" is for notch, as the output signal has a special notched EQ curve of 6 dB at 180 Hz for a smoother sound with the AST.

Both the A1.2 and A1.2N use a standard 6.3 mm (1/4") plug to turn on the 9-volt power.

Both preamps can be phantom powered with the optional B-Box external 9-volt battery.

4. PACKAGE CONTENTS

4.1 UST package contents:

- 1 pc UST transducer

4.2 AST package contents:

- 1 pc AST transducer
- 1 pc cardboard installation guide for 1470 AST pickup

4.2 A1.2 package contents:

- 1 pc A1.2 preamp with strap attachment
- Strap attachment includes:
 - Small hex nut
 - Small dress washer
 - Lock washer
 - Large dress washer
 - Large hex nut
 - Strap button
- 1 pc cover tube for preamp
- 1 pc battery holder with adhesive
- 1 pc battery wire harness with snap (length 65 cm (25 3/8"))
- 1 pc mini volume control wired to preamp
- 2 pcs wire clips
- 1 pc instructions and user guide

4.2 A1.2N-1470 AST bundle package contents:

- 1 pc 1470 AST pickup
- 1 pc cardboard installation guide for 1470 AST pickup
- 1 pc A1.2N preamp with strap attachment
- Strap attachment includes:
 - Small hex nut
 - Small dress washer
 - Lock washer
 - Large dress washer
 - Large hex nut
 - Strap button
- 1 pc cover tube for preamp
- 1 pc battery holder with adhesive
- 1 pc battery wire harness with snap (length 65 cm (25 3/8"))
- 1 pc mini volume control wired to preamp
- 2 pcs wire clips
- 1 pc instructions and user guide

5. TOOLS AND MATERIALS NEEDED FOR INSTALLATION

- Drill, preferably with continuously variable speed
- Wood or metal drill bit, 2.3 mm (3/32") or 3 mm (1/8") depending on the width of the transducer
- Wood or metal drill bit, 3 mm (1/8")
- Rotary wood router with sharp 3 mm (1/8") cutting bit
- Screwdriver, Posidriv #1
- Endpin reamer, 12 mm (1/2") or wood drill bit, 12 mm (1/2")
- Allen wrench, 2 mm (3/32")
- Punch (spike)
- 13 mm (1/2") wrench to tighten the nut on the preamp endpin jack
- Small hand-held mirror
- Flashlight (penlight)
- Small round file
- Masking tape
- Ink pen
- If installing 1470 AST: cardboard installation mounting guide (supplied)

6. PREPARING THE GUITAR FOR INSTALLATION

Please read completely before starting the actual procedure.

6.1 Test fitting AST

For test fitting 1470 AST (if applicable), loosen and remove the strings from the tuning machines.

Before removing the strings and bridge pins from the bridge check to see if the AST will fit at the bridge plate correctly. Also at this time, clean the bridge plate surface with a moist cloth and let dry completely.

The cardboard installation template for the 1470 AST is specifically made for a bridge that the saddle is at a slight angle to the bridge pinholes. It may also be that the guide is too long for the space. If so, the template can be trimmed with scissors slightly to accommodate this. If the template still does not fit the transducer may be installed by hand. Although the

instructions do not specify how to do this, if you carefully read the instructions you will be able to adapt them to perform the installation by hand. It really is not that hard or critical if you are careful.

For classical guitars the installation the AST is done by hand. For most classical guitars the AST is placed inside the guitar parallel to center brace that runs parallel to the strings on the bass strings side at the area between the bridge and soundhole.

Sometimes there is also a flat brace running parallel under the bridge. The AST should be placed so that the AST is on the bass side of the brace running parallel to the strings and that part of the active area of the AST, that has the lead to the preamp, goes on the brace for the bridge. If the brace there is too tall put the AST in front of the brace. Please read the instructions carefully and adapt them to the installation.

To test fit the 1470 AST in a guitar with a bridge plate, take the cardboard installation template from the tray in the box. Note! There is a small 4.5 mm (3/16") round and a 4.5 mm elongated part that both need to be punched out to make their respective guide holes. The 4.5 mm round guide hole is for the low "E" bridge pin and the elongated guide hole to fit at the high "E" bridge pin inside the guitar. Peel away the protective covers from the two adhesive dots on the cardboard. Do not peel away the actual AST mounting adhesive protective cover yet!

The placement of the AST is important for connection to the preamp. Check that the pickup will reach the preamp before installing. Usually, using an A1.2 or A1.2N preamp the lead of the AST goes away from the high "E" side of the bridge area and towards the butt-end of the guitar (see pictures). When using A1.2 or A1.2N in left-handed guitars the lead of the AST should be turned around, with the red B-Band logo still up, so it goes the opposite way and will reach the preamp.

Now mount the AST to the top of the cardboard installation template at the rectangle AST area inscribed on the cardboard. Put the assembly to the bridge pins, with the AST towards the bridge plate and check the fit. All of the AST's active area must fit at the soundhole side of the bridge plate without touching the bridge pins or string ball-ends or hanging over the edge of the bridge plate.

With A1.2 and A1.2N preamps:



Remove the strap button (if applicable). Carefully enlarge the hole using 12 mm (1/2") endpin reamer or 12 mm (1/2") wood drill bit. Smooth the edge of the hole with a small file or a sinking drill bit.

6.2 Drilling hole for UST

For A1.2 preamps drill the hole for the UST at the low-E string side of the slot.



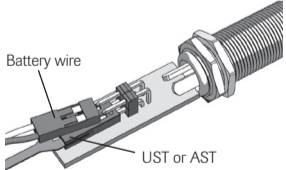
Remove the strings, bridge pins and the saddle. Check that the pickup fits into the slot easily and that the saddle is sufficiently tight in the slot.

Check the inside of the guitar to find the position of the braces. Drill a preferably 30-45 degree angled, 2.3 mm (3/32") or 3 mm (1/8") hole (depending on the model of your B-Band UST) for the transducer into the one end of the saddle slot. **Be careful not to damage the braces!** In case you cannot make the hole angled, because of possible damage to the braces, you can make it straight down. It is very important to smooth the edge of the hole using a bit of rolled sandpaper or a small file, to avoid pinching the UST as the saddle lies on it.

Be sure to check that the pickup will reach the preamp from its position under the saddle and / or bridge area.

7. CONNECTING THE PICKUPS AND BATTERY, AND INSTALLING THE PREAMP INTO THE GUITAR

Open the preamp and check the picture (below) for making the connections. The pickup connector goes at the bottom set of pin headers, the battery connector at the top pin header.



If you will be using 9-volt phantom power, instead of an onboard 9-volt battery, carefully bend the pin headers for the battery connector together so they make a good connection. To be sure of a very good connection, carefully solder the pins together. Do not heat up the circuit board - it could cause damage. Be sure that the pickup connector still can fit easily and that the preamp's cover can fit. The optional B-Band B-Box external battery box is a great choice to supply 9-volt phantom power.

Thread the pickup and battery connectors through the cover tube and attach the connectors to the pin headers at the circuit board with the holes of the plastic connectors facing up. If UST or AST is connected improperly a loud audible hum will occur. Make sure that they are connected correctly. Screw the preamp cover back on.

For the next portion of the installation, be careful not to catch the pickup on anything as you work; inadvertent tugging may cause damage to the transducers or pull the connectors off the pin headers at

the preamp.

Regarding AST, please note to lift one corner of the protective layer of the mounting adhesive so it is easier to remove later.

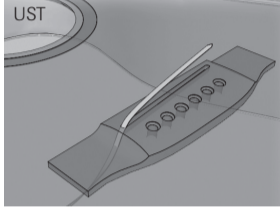
At the output jack end of the preamp, unscrew the strap attachment, the small nut and the small dress washer from the endpin jack. Make sure that the large nut; lock washer and large dress washer are threaded onto the jack almost all the way to the opposite end of the output jack.

Put the preamp assembly inside the guitar through the soundhole. Let the pickup and wire harnesses hang loose inside the guitar at this moment.

Next, test-fit the preamp in the end pin hole. It is easier to install the preamp jack by using an ink pen (or something similar) that fits into the jack. Put the pen through the hole at the guitar where the jack will go and with the other hand holding the output jack, and that going through the sound hole, put the jack on the pen and guide it through the hole of the guitar. Adjust the large nut so that only the smaller threaded section comes almost entirely out of the guitar. Put the dress washer and the small nut onto the threads outside pin the guitar. Tighten securely using an appropriate wrench. Prevent the jack from rotating during tightening by inserting a small allen wrench into the holes of the end of the jack. Install the strap attachment. Be careful not to over-tighten it...it just needs to be snug.

8. INSTALLING THE PICKUPS

If installing UST, do it now. Thread the B-Band UST up from inside the guitar through the hole in the saddle slot. It is easier to find the hole inside the guitar if you insert a small screwdriver or toothpick from the top through the hole as a guide. Fit the UST all the way to the other end and bottom of the slot. Then put the saddle in place.



For installation of the 1470 AST (steel string guitars; x-braces), place two bridge pins in their holes, one at the low "E" string side and one at the high "E" side. Set the bridge pins normally. This, with the cardboard installation template / AST assembly will guide the AST to fit correctly. Having the AST cardboard installation template / AST assembly lying on the bottom of the guitar, remove the adhesive protective layer from the AST. Lift the assembly up and guide the assembly so the bridge pins insert the guide holes and carefully place it to the bridge plate. Then stick it firmly by holding and pressing for a short while. Next carefully remove the cardboard installation template. Make sure the AST fits there tight and secure.



If necessary, you can remove the AST shortly after attaching, but be careful when doing this. Carefully lift under the edge of the AST, with your fingernail, and work it off slowly. Don't attempt to lift the AST off by pulling on the transducer lead. Peel the adhesive off the wood, rather than peeling the pickup off the adhesive. At the time of installation this can be removed and reattached two or three times.

Note! After 24 hours the adhesive will dry and it will be hard to remove. Removal after this time may damage the pickup.

Inside the guitar, make sure that the UST or AST leads do not touch anything. We do not recommend attaching the "lead" wires of the UST or AST to the guitar by any means. This may cause excessive handling noise and resonance that sounds like distortion.

Find a good place to mount the mini volume control. The recommend place is just inside the soundhole near the low "E" string. Clean the location before attaching the mini volume. Remove the adhesive cover, attach the volume control and hold it in place for a minute.

Next, install the battery holder. Check for a convenient place for the battery holder inside the guitar where it can be reached and the battery can be replaced easily. Recommend places are the neck block or the back of the guitar. Connect a battery and put it in the holder.

Test the system before putting on the strings. To do this, plug into an amplifier and then tap lightly on the top of the guitar to make sure that you can hear the transducer when you tap. Another good test is to shake the guitar when plugged into an amplifier. If anything is loose or if the transducer's leads are touching something you will hear it. This should not happen.

Install the strings and test the system. Now play, keep it real and enjoy!

9. TROUBLESHOOTING

9.1 No sound at all or intermittent sound

- Check the guitar cable and amplifier / mixer you are using.
- Check that the battery is not discharged. If the sound is noisy or distorted, replace the battery.
- Check that the transducer and battery connectors are attached correctly to the pin headers of the preamp.
- Check that the plug is making good connection with the output jack. It may be so that the output jack is not sticking out far enough when the strap button is on. To check, unscrew the strap button off and plug in to the jack. If the symptoms go away the output jack needs to be removed and the nuts adjusted so the jack sticks out further.

9.2 Loud hum

- Check to see that the connectors of the UST / AST are inserted with the two holes up. If these connectors are upside-down the system will work but it will buzz.
- Check that the connectors are attached correctly onto their pin headers at the preamp.

9.3 Resonance or distortion with some played notes

There are places where a resonance can typically occur with some notes, causing distorted-sounding output.

First, check that the lead wire portion of the pickup to the preamp is not touching anything and that the battery or output wires are not loose and thus cause resonance.

With the UST, another place that in some cases has caused resonance is inside the UST hole from the saddle slot to the inside of the guitar. Using a small piece of soft padding inside it has cured these problems effectively.

With the AST, if resonance is occurring, it may be coming from the first 5 mm (13/64") of the "lead" wire coming from the AST. Using double stick tape, stick this first 5 mm (13/64") of the lead wire to the guitar.

9.4 Imbalance, one or several strings sound louder or quieter than the others (with UST).

If there's only a very slight imbalance, let the saddle "shape" on the UST for a few days. The fault may be repaired on its own. Users have reported that after three (3) days the saddle has settled on the UST and the balance becomes perfect.

9.5 Possible reasons for imbalance:

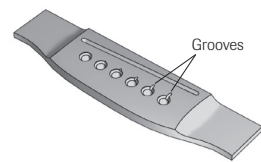
- The saddle or the bottom of the saddle slot is not flat.
- The saddle fits too loosely in its slot.
- The saddle slot might be too tight for the saddle to go in all the way. Try pushing on the saddle firmly to seat the saddle all the way down on the transducer.
- The saddle is too short.
- There is debris in the saddle slot.
- The angle of some of the strings behind the saddle is too low or too high.
- The top of the guitar is bent.
- The pickup is not installed all the way to the end of the saddle slot.

If the material of the saddle is bone. Bone is a natural material and the density and grain may not be consistent. This may cause inconsistencies in the way the sound is distributed making some strings louder or softer than others. We highly recommend a man-made material for the saddle.

- A compensated saddle (the type where, for instance, where the "B" string sits on the saddle, that part of the saddle is a little back of the line-up of the strings) makes the angle behind the string(s) more shallow could put more pressure at the string(s) making those louder than the others. The string angle behind the saddle of these strings should be correct so even pressure is on the saddle.

9.5 If the balance problem does not disappear on its own, do the following:

- Check there is no debris in the saddle slot.
- Check the bottoms of both the saddle slot and saddle. They should be flat and straight. It is common that the guitar top "lives" and moves and because of this the saddle slot could become curved, not straight. This may happen especially during transport or by change of season when the humidity changes. By making the saddle flexible, as in picture, these problems can be greatly avoided.
- Check saddle is not loose in its slot. The saddle should be so tight that you cannot pull it away with your fingers.
- Check string angles behind the saddle. They should be about the same behind every string. If the angle is too low, the string will not put enough pressure on the pickup and that may cause balance problems - usually higher output from the corresponding string. To deepen the angle, you can, for example, file a wedge-shaped groove on the bridge pinhole so that the string will have deeper angle behind the saddle (see the next picture).



- On some instruments the outer most strings are too close to the edge of the saddle, causing balance problems to these strings. It may happen that the E-string at the end of the UST does not come as loud as other strings. In this case, make another, shallow hole (not all the way through) at that end of the saddle cavity and move the pickup so the tip of the UST goes in the hole.

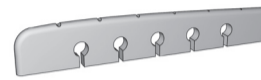
If nothing else helps, you should machine the saddle slot longer and use a new longer saddle.

- Balance problems may also occur with some string sets, for example with classical guitars the G-string may cause problems.

9.7 If all things mentioned above are correct, and there still is a balance problem, you should try the following tricks:

- The easiest way is to install a spacer, made of soft wood, underneath the saddle or underneath the UST. The proper thickness is 0.5 - 0.8 mm (1/64" - 1/32"). This will cure imbalance problems effectively.

- Very efficient way is to make the saddle more flexible by modifying it for example according to the picture. Even more efficient it is to cut the saddle into six separate pieces, or to cut it almost through between the strings but leave just a small portion on the bottom side of the saddle, i.e. cut it from the bottom towards the top.



- Most of the balance problems are due the fact that the guitar top lives. By making the saddle flexible, these problems can be greatly avoided.

If anything else does not help, you can try to add one or two layers of ordinary letter paper under the saddle, underneath the quieter strings. This will cause a better mechanical contact between the saddle and the UST and thus increase the volume. If the volume decreases when adding the paper, the balance problem is due to unequal pressure distribution, not bad mechanical contact. In this case, add the paper underneath the louder strings. Try this as the last choice because it is very time consuming and not so efficient.

9.8 Other problems

If you notice any other problems, please contact the dealer, distributor or manufacturer, for help.

10. CUSTOMER'S FEEDBACK

If you have any comments, positive or negative, about any B-Band product, please do not hesitate to contact B-Band.

11. A1.2 AND A1.2N SPECIFICATIONS (SPECIFICATIONS ARE SAME UNLESS INDICATED)

S/N ratio:
Greater than -90 dB

Distortion:
0,05 %

Frequency response:
50 Hz - 40 kHz (+0, -3 dB)

Input channel voltage gain:
+24 dB

Input impedance:
50 MΩ || <10 pF

Output impedance:
< 3.5 kΩ

Nominal output level:
-10 dB u (0.245 V_{rms})

Power supply:
9 V battery (not included)

Current consumption:
1.2 mA typical

Connections:
Transducer input, 2.54 mm (3/32") header;
Output, 6.3 mm (1/4") jack

Weight (with accessories):
50 g

Dimensions:
Ø 13 mm (33/64"); L 97 mm (3 13/16")

12. EU/DECLARATION OF CONFORMITY

This B-Band product has been designed, manufactured and tested to comply with the requirements of EMC directive 89/336/EEC and CE mark directive 93/68/EEC and carry the CE marking accordingly.

LED's in this product are Class 1 in accordance to EN 60825-1. Statement of EU Declaration of Conformity and is available from manufacturer upon request.



- Check saddle is not loose in its slot. The saddle should be so tight that you cannot pull it away with your fingers.

- Check string angles behind the saddle. They should be about the same behind every string. If the angle is too low, the string will not put enough pressure on the pickup and that may cause balance problems - usually higher output from the corresponding string. To deepen the angle, you can, for example, file a wedge-shaped groove on the bridge pinhole so that the string will have deeper angle behind the saddle (see the next picture).