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AMT Limited Warranty. Duration of this warrantee will remain in effect for one year from the date of the original purchase. The original dated sales receipt may enforce this warranty or other proof of warranty coverage is presented when warranty service is required.

What is covered? Except as specified below, this warranty covers all defects in materials and workmanship in this product. The following are not covered by the warranty:

- 1. Damage resulting from accident, misuse, abuse or neglect.
- 2. Failure to follow instructions included with microphone.
- 3. Repair or attempted repair by anyone not authorized by A.M.T.
- 4. Failure to remove battery when storing.
- 5. Cause other than product defects including: lack of skill, competence, or experience of use.
- 6. Damages occurring during any shipment of this product (claims must be presented to carrier).
- 7. Damage to any unit which has been altered, or which the serial number has been defaced, modified, or removed.

AMT will pay all labor and material expense for covered items. Shipping charges are discussed later in this warranty. If your unit needs service, please write or telephone us and we will advise you where the unit should be taken or sent. If you write us, include your name, complete address, daytime telephone number, and a description of the problem.

DO NOT RETURN YOUR UNIT TO AMT WITHOUT A REPAIR AUTHORIZATION NUMBER.

If it is necessary to ship the product for service:

- 1. You must pay initial shipping charges, but if the warrantee covers necessary repairs, AMT will cover the return shipping charges via carrier of AMT's choice to any destination within the United States.
- 2. Whenever warranty service is required a copy of the original dated sales receipt must be presented.
- 3. For products purchased outside of the USA, please contact 973-222-1865 for information pertaining to your country.

Exclusion of certain damages: AMT's liability for any defective product is limited to repair of replacement of the product of our option. AMT shall not be liable for damages based upon inconvenience, loss of use of the product, loss of time, interrupted operation, commercial loss; or any other damages whether incidental, consequential, or otherwise.

Some states do not allow limitations an implied warrantee lasts, and/or do not allow the exclusion or limitations of incidental or consequential damages, so the above limitations may not apply to you. This warrantee is not enforceable outside of North America. This warrantee gives you specific legal rights, and you may also have other rights, which vary from state to state.

For International Customers (Outside of the United States):

If the product is purchased inside of the United States and taken to another country, it is the responsibility of the product owner to cover all shipping, customs, and duty if a warranty, upgrades, and repair issue is necessary. All provisions of the warranty above apply except for Shipping and all costs related to shipping. Ie.. Customs charges and V.A.T. are not covered by AMT. All outside charges associated with reentry of the product into the USA is the sole responsibility of the product owner. At no time shall a distributor or a dealer take it upon himself or herself to replace a defective system with a new system. This can only be done with the permission of AMT's tech support (973-222-1865) directly or through a distributor of the country purchased with AMT tech support approval.

Repairs:

1) The customer, dealer, or distributor should contact AMT tech support via phone (973-222-1865 E.S.T. 12pm - 12am) or email with a short description of the problem.

2) If out of warranty, we then advise the customer to call by phone to our tech support 1-973-222-1865 for a return authorization and to discuss possible solutions before sending.

3) Date and origin of purchase required for warranty repair. If the product is covered under warranty, the product must ship back to AMT, when completed, AMT will ship it back with the distributor's next order.

Under warranty regulations, if a product has been damaged from miss-use such as:

Damage resulting from accident, misuse, abuse or neglect.

Failure to follow instructions included with microphone.

Repair or attempted repair by anyone not authorized by A.M.T.

Failure to remove battery when storing.

Cause other than product defects including: lack of skill, competence, or experience of use.

Damages occurring during any shipment of this product (claims must be presented to carrier).

Damage to any unit which has been altered, or which the serial number has been defaced, modified, or removed.

4) Most common problems found to be are over stressed goosenecks, broken cables, and plugs that have been crushed or bent. These problems are NOT covered under warranty BUT in certain cases, if the shipping is taken care of both ways, we will repair it for free. Due to this unique product, which is specialized in the audio field, most components that make up this product are proprietary. In most cases, the entire product must be taken apart to its manufacturing stage in order to rebuild or replace damaged components. This makes it almost impossible to use outside of the USA repair stations.

AMT Manual of Operation: In choosing Applied Microphone Technology you have not only selected the best hand-crafted microphone for your specific application but a company with the finest in personalized technical support. We understand difficulty in the decision making process that has critical impact on your performance.

The intention of the information in this manual is to help you achieve peak performance from your AMT microphone. Careful reading of the technical data and instructions will be helpful in the installation and maintenance of your AMT microphone, and will ensure correct operation and maximum musical reproduction.

AMT microphones represent an innovative method of microphone manufacturing. AMT does not use an assembly line approach to construction; instead each unit is carefully hand assembled by dedicated technicians under laboratory conditions. This procedure is required as many of the microphone components are either too small or too delicate to adapt to mass production techniques. Without the limitations imposed by large scale production, AMT can utilize materials and concepts not attainable with other construction methods. This concept also permits unusual flexibility in design and construction. As a result some details of AMT microphones may differ slightly from published data and specifications. Ongoing changes to improve performance are introduced whenever advances in technology and research permit. Our goal is to ensure every AMT microphone is at the forefront of current design standards when it leaves our facility. Keeping the mic clean by wiping with a damp rag on the clip and the rubber parts. Never use us solvents to clean; you may use Armor All on rubber parts occasionally. Even though the mic has a supple, flexible gooseneck, do not excessively bend and never twist. Never keep in a damp or wet environment.

BELT PACK: BP40 - Special Order beltpack - Open battery compartment on back by sliding pane down (#1). Put in 9 volt battery (not supplied). Turn volume knob fully counterclockwise until you feel the click. (This ensures the mic is off.) Plug mic into mini-jack (A40, then plug supplied cable into the 1/4 inch jack. This jack has a built in switch, so remember when the % inch jack is plugged in it turns the belt pack on. LED will illuminate. *After using always unplug*.



This belt pack is not only a power source for the mic, but is also a pre-amplifier. This gives the highest quality performance in all applications. (#5) is the output of this system. It can be used in both high and low impedance (low impedance cable supplied). For applications such as sound reinforcement and recording systems make sure that the channel of the PA, recording console or amplifier (used for the mic) is turned down.

After you plug your belt pack into the PA or amplifier turn up knob fully on belt pack. The LED will illuminate on the microphone then slowly turn up the PA or amplifier until the volume is at the required level. Now you can use the volume knob on the belt pack to control your volume and turn it on and off. Never keep 1/4 inch jack plugged in on the belt pack when not in use - (it will drain the battery). Never unplug from amp or PA without turning down the channel.

The belt pack has been designed for multipurpose uses. Even though it uses a 1/4 inch phone jack for output, it is still low impedance (balanced).

INSTRUCTIONS for Hardwired Microphone system series Z1, LS, WS, VS Belt packs.

The "TA2" Series: Used with, TA-2 Microphones. Most instruments have sound emanating out of more than one spot, the soprano saxophone being no exception; that is why we use more than one microphone on one instrument: one over the keys, the second over the armature. The volume of this mic positioned over the keys is balanced at 100% while the one at the armature is balanced at 75%. This is to enable reproduction of the flute's natural sound. The recommended placement is 3 1/2 - 4 inches over the keys for the first mic, and 1 inch away from armature for the second (see Figure 1).

The "LS" Series: Used with P800, Z1, & LS microphones. A low profile microphone that can be used on most wind instruments with a flange on the bell. It's supple gooseneck and harmonic dampener absorbs most of the handling noise that is produced by keys or valves. It is important to realize the microphone is attached to the bell of the instrument, and it must be placed in an area that keeps it safe from impact by mutes, stands, etc. The microphone can be placed on the instrument by holding the clip between the thumb and middle finger and pressing the button with the index finger. The indentation in the clips should be placed on the flange of the bell. At the end of the microphone wire is a 3.5mm plug which allows it to be used with the BP40 Belt Pack or a mini xlr which connects to the BP45 beltpack.

The "WS" Series: Used with WS microphone. A low profile dual microphone designed with bi-directional principles. The four primary instruments are: Clarinet, Oboe, Bass and Alto Flute. To attach the microphone to Clarinet or Oboe first open the clamp to the full position by turning thumbscrew counterclockwise. The clamp has been provided with rubber cushioning to prevent marring the instrument. If at this time you are uncomfortable placing it directly on the instrument, we suggest making a sleeve out of felt, suede, leather, or flannel. Place the clamp over the ring joint of the bell with the longest gooseneck of the microphone able the keys. The smaller gooseneck can be placed above the bell, or moved up to the lower keys, or anywhere in between, for a specific sound desired.

If used with Alto or Bass Flute, placement of clamp should be over the head joint. If you have any reservations about placing it directly on the instrument, we suggest making a sleeve out of felt. All other materials could damage the finish. Placement of the longest gooseneck should be over the keys while the shorter should be aimed at the armature not to be in the direct path so as not to pick up wind noise.

The "VS" Series: Used with VS microphone. A low profile microphone designed for Violin and Viola. This microphone incorporates a clamp that is adjustable for different widths of the Violin and Viola. This can be achieved by loosening the set screw with the allen wrench that is provided. Sliding the lip of the clamp to the width of the instrument. The thumbscrew is used to apply pressure to the opposite side - to keep the microphone firmly placed on the instrument. Allowing the user to decide how much tension they wish to apply. The lips are fitted with soft suede to prevent marring the instrument. If you are uncomfortable placing the microphone directly on the instrument at this time - we suggest soft material such as felt or chamois over the instrument where the clamp will be in contact. Once you have the clamp open far enough to allow placement on the instrument turn the thumbscrew clockwise to apply pressure. The supple gooseneck attaching the clamp to the microphone must be positioned in close proximity to the f-hole, but not point in. Experimenting with placement will increase or decrease certain frequencies.

Caution: It is important to realize when performing outside - the slightest breeze will create excessive noise. A wind screen must be used in this situation. We suggest using Windtec's model number 2100. After use of the microphone it is important to keep it clean. Using a soft brush remove any rosin or residue from the head of the microphone. For the rubber gooseneck we suggest using a damp rag, or commercial product known as Armor All.

WS, VS, LS, Z1 Technical Configuration

Tip - non-inverted Pin 2 Ring - inverted Pin3	Sleeve - common Pin 3	(See Figure 5)
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We supply a 1/4 inch stereo XLR chord for balanced use with the BP40 Beltpacks. For high impedance or, unbalanced use any high quality 1/4 inch to 1/4 inch guitar chord. There might be some loss of signal in this mode. Most likely it is not the signal but the amplifier is not designed for the frequencies of your particular instrument.

Remove the battery when not in use for long periods of time. Never store belt pack with mic or chord plugged in.

Troubleshooting:

Problems:	Solutions:	For Technical Support:
Microphone Not Working:	 No battery Battery dead Mic not plugged in all the way Bad wire from belt pack to PA or amplifier Wrong setting on the belt pack or PA EPROM installed incorrectly in belt pack. 	Monday through Friday between the hours of 12:00 noon - 9:00 P.M Eastern Standard Time, 9:00 am - 6:00 P.M. Pacific Standard Time
Excessive Feedback:	 Too Close to sound source Wrong setting on PA or amplifier Turn Trim to off. Set channel volume to Unity Set EQ controls to Unity (12 o'clock) position to start. Turn master volume on mixer to Unity. Slowly turn Trim up till the microphone begins to feedback, then back off slightly. Gain structure on EPROM too hot. 	PH: (973) 222-1865

BP45 Instructions

BELT PACK:

- 1. Microphone plugs into belt pack.
- 2. Switch on belt pack includes 3 positions:
 - a. Bottom = Off
 - b. Middle = Standard Setting
 - c. Top = Rolls off the Low End
- 3. The Belt pack uses 1 AA Battery <u>OR</u> Phantom Power. Battery is preferred.
- 4. The OFF position only works with a battery. (When used with phantom power, the microphone will not be able to be turned off.

Preamp Instructions for Studio Series Microphones / S25B Bass / S18C Cello / M40 Piano / M51.

Pre-amp:

- **1.** Works with 9 Volt Battery OR Phantom Power.
- **2.** 9 Volt Battery is preferred and will last around 80 Hours.
- **3.** The Battery is activated ONLY when the mic is plugged into the pre-amp.
- **4.** When not using the microphone, disconnect the battery from the pre-amp.
- **5.** Do not use both phantom power and a battery at the same time.

Ground Lift Switch: If Experiencing a HUM – lift the ground. The switch next to the XLR output connector marked 'L'. In this mode only, the 9 volt battery MUST BE USED, phantom power is disabled.

Instructions for S15G Guitar Microphone System

The S15B is a low-profile cardioid condenser microphone. The microphone is intended clamp to the outside of the guitar. The gooseneck is adjustable from a minimum of 3" to a maximum of 5 7/8". The microphone is powered either by a 9 Volt Battery or 48 Volt Phantom power. The LED indicates status of the voltage. The S15G comes with a BP40 Belt pack preamp. See instructions for all belt pack preamps. Connect the microphone cable already attached to the pre-amp using the mini XLR connector. Using a standard XLR / microphone cable, not included, connect the cable to your PA system.

Instructions for S3G Studio Microphone







Omni pattern. The microphone is powered either by a 9 Volt Battery or 48 Volt Phantom power. The LED indicates status of the voltage. Low profile microphone allows it to be placed under the strings and clipped to the side of the sound hole. Connect the microphone cable to the included pre-amp. See instructions Studio preamps.

Instructions AMT 97C & 97-4C

Included in the AMT A97-4C set is 4 drum / percussion microphones with 4 "Inline" preamps. *Phantom power required for use of "Inline Preamps"*.

Use the A97 with:

- Drums
- Tom Toms
- Snare Drum
- Hand Percussion

A97 – 4C Comes with:

- 4 AMT A97's Microphone
- 4 Inline preamps.
- Hard shell Blo-mold protective case.

Instructions AMT ERTS

Included with AMT ERTS 1 microphone with 1 "Inline" preamp, and 1 clamp. Phantom power required for use of "Inline Preamps".

Use the ERTS with:

- Banjo
- Hand Percussion

Included with the ERTS:

- 1 AMT ERTS Microphone and special clamp.
- 1 Inline Preamp.



AMT Studio Series Microphone Instructions



The AMT Studio Microphone versions combine the most natural clip-on microphone systems on the market with the AMT AP40 floor pre-amp. The AP40 replaces the stock AMT BP40 belt pack pre-amp. The AP40 converts the microphones to low impedance; it regulates the voltage to each microphone, and with certain models creates a specific frequency curve. The curve is necessary is on certain models or instruments in order to maintain the most natural reproduction of sound in conjunction with the achieving the most amount of gain before feedback in a live application. The output of the preamp is an XLR Low Impedance balanced output. The output sends signal at Mic Level.

Studio (AP40) Pre-amp:

• Works with 9 Volt Battery OR Phantom Power.



- 9 Volt Battery is preferred and will last around 80 Hours.
- The Battery is activated ONLY when the mic is plugged into the pre-amp.
- When not using the microphone, disconnect the battery from the pre-amp.
- Do not use both phantom power and a battery at the same time.

Ground Lift Switch:

• If Experiencing a HUM – lift the ground.

• The switch next to the XLR output connector marked 'L'. In this mode only, the 9 volt battery MUST BE USED, phantom power is disabled.

Applications: The AMT Studio versions are meant to be used either in a studio setting where close micing of an instrument is desired or in a professional level setting where the "Sound Engineer" needs / wants control of the microphone. In a studio setting, the studio models are meant to help in capturing the nuances of an acoustic instrument that a stand microphone can not achieve due to placement. The studio systems are meant to double for live and studio applications.

Comes With:

- AMT Microphone with connector for AP40 Floor Preamp.
- AMT AP40 floor preamp with XLR Output
- Hard shell protective case

AMT "W"ireless Series Microphone Instructions

The AMT "W"ireless Microphone Systems allows the player to directly connect an AMT with a Wi5C beltpack free wireless system and Shure or Sennheiser belt pack style transmitters / wireless systems. The "W" series comes wired directly with a 4 pin connector to connect directly to any Shure wireless belt pack or if ordered for Sennheiser, the systems come with an 1/8in cable.

Applications:

The AMT LSW - Shure Microphone System is meant to be used by the player that requires a multi - channel professional level wireless system. This application is a commonly preferred method used by many professional level "Sound Engineers" as well as sound companies on major tours.

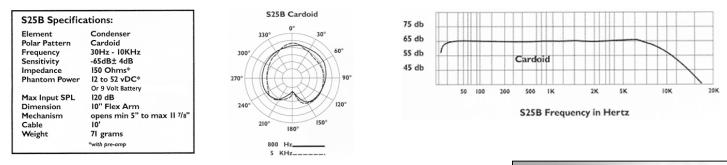
S25B Condenser Microphone System for Acoustic Bass

The S25B is an electret-condenser microphone that has been designed for acoustic bass. All of the parameters that are problematic for the double bass have been addressed. To be able to get the most gain before feedback it uses a very tight pattern to give a high rejection to surrounding noise, at the same time reproducing accurately the subtleties of the bass. As placement is especially important with an instrument that has a fine finish and varying dimensions, this microphone's attachment mechanism is designed to secure the mic to the bass in different positions taking seconds to attach. This mechanism is fitted with natural soft suede so as not to mark or mar instrument.

Made from aluminum to keep the mass low yet extremely strong, this microphone will remain durable through many years of use. The flex arm is easy to position yet retains it's placement throughout the most active of performances. The mic has an LED that can be easily seen while performing. This indicates status of a battery or phantom power.

The pre-amp for the microphone is rugged anodized aviation aluminum, which houses the electronics that can be placed on the floor. This preamp utilizes a circuit that can change EQ, curve, and gain by exchanging EPROM-like chip. The pre-amp runs off of battery or phantom power. The output is terminated with a male XLR type connector for balanced use. The mic is connected to the pre-amp by a four pin locking connector.





SP25B Condenser Microphone System for Acoustic Bass

The SP25B is the same microphone as the S25B however uses the "super pre-amp" which has 2 XLR outputs, one of which has a ground lifted isolation transformer split. A quarter inch line driver output with volume control is also included. The pre-amp runs off of battery, phantom power, or optional power supply.

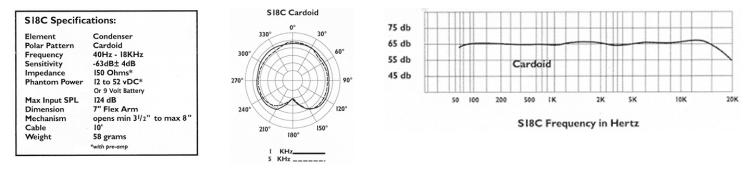
The "Super Pre-Amp" has 3 outputs. There are two XLR outputs, each for a different use. The one on the left is your standard XLR output for standard use to a PA System. The XLR on the right is an isolation transformer marked ITS. If you performing with a PA that starts to "hum",

move the connection from the standard XLR output to the right or isolation XLR output. This should eliminate the 'hum'. The ¼ inch output is your line driver. You can use the line driver in conjunction with your amp, and send the XLR signal to the house PA or recording device. The external volume control is for the line driver / ¼ inch output. The preamp works with Phantom power or a 9 volt battery. We recommend using the 9-volt battery all the time. The line driver and isolation transformer will not work unless you have a 9-volt battery in the pre-amp.

The preamp also has an internal volume control that you can adjust with a screw driver. You should only use this if more or less gain is required to match the gain on your existing amplifier.

S18C Condenser Microphone System for Cello

The S18C is an electret-condenser microphone designed for cello. This microphone has all the same characteristics of the bass microphone (S25B) with the exception of a slightly wider pattern, higher frequencies, and smaller size.



AMT P43S Harp Microphone System

The AMT P43S Microphone is attached to a two-part clip. The clip will fit into the sound holes in the back of almost any harp. Simply turn the thumbscrew to loosen the clip, slide it over the edge of a sound hole, and tighten the thumbscrew again.

Positioning the Microphone

There is not any "correct" spot to attach the microphone to the harp. Each harp has its own place where the microphone will sound best. If you have multiple sound holes in the back of your harp, you may want to try the microphone in all of them. The microphone attaches as readily at the top of a sound hole as at the bottom. The gooseneck can be bent to point the microphone straight in or at an angle, and to position it either outside or inside the body of the harp. We encourage you to try several positions and get a feel for the different types of sound you will get with the mic in different places. In general, positioning the



microphone higher up on the harp will emphasize the higher notes, while putting it lower emphasize bass notes. You may be able to use this to "tune" your harp to the room in which you are playing.. It is a good idea to position the microphone so that it does not come in contact with your clothing while you are leaning the harp back or while playing, as this will cause unwanted noise.

A good place to start this process is with the microphone as close as possible to the center of the sound box (top to bottom as well as side to side), with the head of the microphone slightly outside the harp and pointing straight into a sound hole.

Connecting the Microphone

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Unless your amplifier has phantom power (see below), you will need to install a 9-volt battery inside the AMT Preamp box. Remove the screw that holds the cover in place, attached the battery leads to the battery, and insert the battery in the battery clip. Replace the cover. Plug the microphone cable into the preamp box. You will notice that there is a slight indentation of the end of the cable which matches a tab in the input jack on the preamp. Make sure these are lined up when you insert the cable. There is also a lock ring on the cable. After you plug in the cable, slide the ring forward slightly and turn in clockwise. This will secure the cable to the preamp. Be sure to unlock this ring when you unplug the cable. The cable is also the on / off switch. When it is plugged in, the system is active. If you wish to get your system all set up, with the volume levels set, you can simply unplug the cable from the preamp to deactivate the system without needing to change any settings or go to the amplifier to turn it off.

Cables and Inputs

Standard microphone cables are called by a variety of names: "Microphone", "Low impedance", "Low-Z, "Balanced Line", and "XLR". "Z" means "Impedance". These terms, along with "Balanced line" refer to the way in which the signal is passed along the cable. "XLR" is a description of the connectors on the end of the microphone cables and the inputs on amplifiers and mixers. The only times these terms become important to most musicians is when you need to describe to purchase or tell a sound engineer what type of cable / connections you have or need. The P43s preamp is equipped with an XLR type balanced low-Z output jack. A standard microphone cable will have an end that plugs into this type of jack. As mentioned above, many guitar amplifiers don't have XLR type inputs. They typically have 1/4" input jacks which will require an impedance matching transformer. We encourage you to use good quality cable and adapters. The very inexpensive ones fail with startling regularity.

Phantom Power

The P43s is a condenser-type microphone, which means it requires power in order to operate. Most PA systems and some amps are equipped with phantom power, which means the power required to operate the microphone is supplied by the amp or PA and is conducted to the microphone by the same cable that carries the signal from the microphone to the amp. Be sure the phantom power is turned on. Since many amps and some PA's do no have phantom power, the preamp uses a 9-volt battery that will supply power if needed. The phantom power overrides the battery, so you should use phantom power whenever possible to save your battery.

Volume, Tone Controls, and Feedback

When a microphone is placed in front of or near a speaker that is producing a n amplified signal from that microphone, there is a possibility for feedback. This is the annoyingly loud high-pitched squeal (or sometimes the low irritating hum) that amplification systems produce all too often. It is important that the speaker be positioned so that it is pointing away from the harp as much as possible. If you need to hear the sound coming from the amp, try positioning if off to one side and angled slightly away.. If you are in a situation when you can hear yourself adequately, position the amp in front of the harp (with the back of the amp facing you). This is the best way to control feedback.

Either turning down the volume or adjusting the tone controls can also control feedback. In general, you can turn down the Treble controls to get rid of the high feedback or turn down the Bass controls to get rid of the low hum. Remember that the tone controls also control the sound of your instrument; so relying on them exclusively for feedback control can create problems. Some combination of positioning, volume control, and tone control I usually best. If you are using your own amp or PA system, you will quickly learn what feedback sounds like and how to control it. Two things that make it hard to control are playing in a very small room or having the speaker pointed directly at the microphone. With some experimentation, it's usually possible to achieve the volume you want without introducing feedback.

An amplifier or mixer with a balanced XLR input is the preferred type for use with your P43S. If you are choosing an amp to buy, you may want to look for one with this type of input.. Please be aware that the P43s is a professional piece of sound gear designed to reproduce the natural acoustic sound of your instrument. However, the amp you use will play a big role in determining the final sound quality you get from your system. If you are not satisfied with the sound you are getting, you may want to invest in an amp designed for amplifying acoustic instruments. Electric guitar amps are not likely to deliver a sound that you will be happy with.

Clamp Instructions - LS, Wi5, & System 1

The LS, Wi5 & System 1 ship complete with a clamp for flanged bell instruments such as saxophone, trumpet, and trombone bells. These models can mount to additional instruments such as percussion, accordion, and clarinet with the purchase of optional clamps. To mount these models on a flanged bell instrument, insert the rod from the microphone into the open hole. Tighten thumbscrew to hold microphone rod in place. Place clamp in the palm of your hand and open the spring-loaded clamp onto the bell of the horn with bottom or underneath side of the horns bell in the groove of the clamp.

Optional Clamping systems for LS, Wi5, System 1, ERTS, ACCX, P43S



ACCX Accordion Clamp



