

USB Microphone Audio Interface Microphone USB Interface Audio

6

# **Owner's Manual**

by Miktek™

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES CLASS B. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MUST NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION. SUITABLE FOR HOME OR OFFICE USE.

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### Introduction

Congratulations on your purchase of the ProCast SST studio condenser by Miktek. The ProCast SST is a high quality 24 BIT USB studio condenser microphone with integrated radio style boom, weighted base and on-board mixer. The heart of the ProCast SST is its broadcast quality, studio condenser microphone featuring a large, 19mm, capsule with an ultra thin diaphragm, an on-board high-pass filter, multi stage windscreen and heavy-duty die-cast metal body construction. The ProCast SST's mixer section offers two inputs, which can be used to connect mic or line sources. Channel 1 allows you to use the on-board condenser microphone or select the rear panel ¼-inch Instrument/Line level input. Channel 2 provides a rear panel mini XLR to connect a second microphone, or selectable rear panel ¼-inch Instrument/Line level input. Each input features a mic/line switch, Clip LED, a 60 mm studio quality fader, plus Mute switch. Plus there's a phantom power switch to power an external condenser microphone. The ProCast SST provides no latency direct monitoring, which can be mixed in with the computer playback. In addition, the SST has a second headphone/ monitor output for producers or additional talent. The ProCast SST's professional features makes it an ideal choice for home recordist, singer songwriters, and of course, podcasters. If you're serious about home recording or podcasting, you need the ProCast SST.

The ProCast SST is perfect for recording your music or any acoustic audio source on your favorite DAW (Digital Audio Workstation). Just plug in the supplied USB cable, launch your DAW and start recording. The ProCast SST faithfully reproduces a variety of sound sources including vocals, acoustic string and wind instruments and percussion to name a few. The extended frequency and fast transient response ensures an accurate reproduction with linear characteristics from bottom to top. Whether you're recording your latest song idea, a podcast, or your band's next big hit, the ProCast SST is one of the most simplest and comprehensive solution for high quality recording on a Mac or PC. Just plug it in and start recording great audio!

In these pages, you'll find a detailed description of the features of the ProCast SST USB Studio Condenser Microphone, as well as step-by-step instructions for its setup and use, and full specifications. With proper care your ProCast SST will operate trouble free for many years. We recommend you record your serial number in the space provided below for future reference.

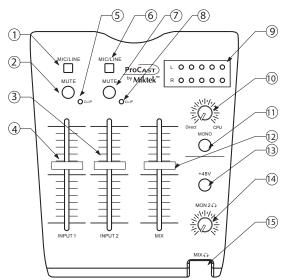
Serial number: \_\_\_\_\_ Date of purchase: \_\_\_\_\_

Please visit www.miktekaudio.com for additional information on this and other Miktek products.

#### **ProCast SST Features**

- Internal shockmounted, 19mm, fixed charge Studio Condenser USB microphone with high-pass and die-cast metal construction
- Integral Heavy-duty desktop stand with non-skid rubber feet and adjustable radio style scissor boom
- 24 Bit 2 x 2 Audio Interface with high quality converters
- Plug and play no additional drivers needed for Mac or PC.
- Two inputs with Mic or Line connections for recording electric guitar and bass, keyboards, drum machines, MP3 players and just about any other line level or instrument signal.
- 60mm Input fader controls with backlit Mute switches and Peak LEDs make it easy to set the proper clean signal when recording with the mic or line inputs.
- +48V phantom power for Mic Input 2.
- Output signal level LED monitoring.
- Two on-board headphone amps with level controls.
- A Direct Monitor Mix control, with mono or stereo modes, is provided for zero latency monitoring and adjustable input and playback blending.
- 3 meter Mini XLR to XLR and 3 meter USB cables included.
- Records two vocal inputs, a vocal and instrument, or stereo instruments.
- Compatible with most any Mac and PC based Digital Audio Workstation.

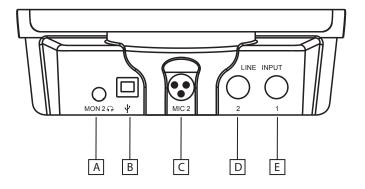
## **ProCast SST Layout**



- Channel 1 Input Selector switch to select the internal Microphone or rear panel LINE input.
- Channel 1 Input MUTE Push switch used to turn off the Channel 1 input
- **3. Channel 2 Level** 60mm Fader level control to adjust the input level of the channel 2 Mic or line inputs.
  - Channel 1 Level 60mm Fader level control to adjust the sensitivity of the internal microphone or line input.
- Channel 1 CLIP LED The Power/ Clip LED lights red when the input signal is clipping.
- Channel 2 Input Selector switch to select the external microphone or rear panel line input.
- Channel 2 Input MUTE -Push switch used to turn off the Channel 1 input
- 8. Channel 1 CLIP LED The Power/ Clip LED lights red when the input signal is clipping.

- 9. OUTPUT METER 2 x 5 segment LED meter displays the left and right MIX output level.
- 10. Direct Monitor Control knob allows you to mix the Channel 1 and 2 direct input signal with the CPU playback.
- **11. MONO Switch** Push switch used to send the direct input signal from Channel 1 and Channel 2 to both the left and right headphone outputs.
- 12. MIX Fader level control to adjust the overall volume of the Mix headphone output.
- **13. 48V Switch** used to activate phantom power for the Channel 2 microphone input
- **14. Monitor/Headphone 2** Control knob used to set the level of the Phones 2 output.
- **15. MIX OUTPUT** 1/8-inch (.35mm) stereo jack for connecting headphones.

### **ProCast SST Layout**



- **A. Monitor 2 / Phones** 1/8-inch (.35mm) stereo jack for connecting headphones.
- **B. USB** B size USB connector for interfacing with your PC or Mac.
- **C. Channel 2 MIC Input** Mini XLR connector for connecting a microphone to the Channel 2 input.
- **D. Channel 2 LINE Input** Instrument Input on 1/4-inch (6.35mm) input jack for connecting instruments in mono like electric guitar and bass guitar, or the left side of a stereo line level signal like those from keyboards, drum machines and MP3 players.
- **E. Channel 1 LINE Input** Instrument Input on 1/4inch (6.35mm) input jack for connecting instruments in mono like electric guitar and bass guitar, or the right side of a stereo line level signal like those from keyboards, drum machines and MP3 players.

## Installing the ProCast SST

Installing the ProCast SST is a simple procedure that takes just a few minutes. Since the ProCast SST is USB compliant, you can use either a MAC or PC, connect the included USB cable and plug and play. You will be able to control your ProCast SST using the standard audio interface controls in the MAC or Windows operating system. You will find detailed instructions on setting up with MAC OS and Windows in the following sections of this manual.

#### Getting Started with MAC OS X

The following example is for setting up the ProCast SST in MAC OS X .

- 1. Plug in the ProCast SST. The LED will light to indicate it is receiving USB power. The MAC will recognize the USB audio device and automatically install a universal driver.
- 2. To select the ProCast SST as the computer's audio input, open the System Preferences from the dock or the main Apple Menu.
- 3. Next open the Sound preference.
- 4. Now, click in the Input tab and select Miktek ProCast. You may notice that the Volume slider sets itself to the full level. This will allow you to have full range using ProCast SST 's hardware input level controls.
- 5. Next, click in the Output tab and select Miktek ProCast. You may notice that the Volume slider sets itself to the full level. This will allow you to have full range using ProCast SST 's hardware Volume control.

At this point you can begin using your microphone with most any audio recording software, but you need to select it as an input and output device within the DAW. When selecting the inputs and outputs just look for and select the Miktek ProCast.

Plug and Play - Most MAC OS DAW's, like Apple's Garage band, will let you plug and play without going to the Sound preference set up. When you plug the ProCast SST into the USB port you'll see a dialog box that will ask you if you want to select Miktek ProCast SST. Select yes and you're ready to go.

#### **Getting Started with Windows**

- 1. The first time you plug the ProCast SST into a USB port, Windows will install the universal drivers for that port. A balloon tip will pop up, telling you it has found the USB Audio codec.
- 2. When it is finished installing the drivers, it will say "Your new hardware is installed and ready to use". Note: This balloon will not pop up again for the same USB port.
- 3. Most of the time, you'll want the output volume from the computer at the maximum position, but sometimes it defaults to the middle of the slider, making the output very quiet. The volume can be increased in several ways. The simplest is to click the loudspeaker icon in the system tray and drag the slider to the top.
- 4. If the icon is not there, the volume can be changed by going to Control Panel and opening Sound and adjust system volume.
- 5. To use the ProCast SST as your default input/output device (for system sounds and programs like Sound Recorder), ensure that it is set for playback and recording in the Audio tab.
- 6. The volume can then be set by pressing the Volume button.
- 7. To prevent system sounds from coming through the ProCast SST, select a different sound card for the system default, and then choose the ProCast SST manually within your DAW software.

#### A Word on Sample Rates and Bit Depth

The ProCast SST is capable of recording and playing back various sample rates and Bit depths. The sample rate is the resolution the converters use to capture the analog audio and convert it into digital information. The higher the resolution, the better the audio quality. While you can choose a higher sample rate, keep in mind that CD quality audio is at a sample rate of 44.1 kHz which is the choice of many professional recording engineers since that's the sample rate that will be used in the final mastered CD. In general, the larger the

## **Installing the ProCast SST**

Bit depth the more dynamic range (another way to say signal to noise ratio), which helps keep recordings quieter. A common setting for most professional recording projects is with a sample rate at 44.1 kHz and depth of 24 bit. Most MAC and PC based DAWs allow you to select the Bit depth and sample rate within the program. However, you can also select them at a system level with in the Mac "Audio MIDI Setup" utility or in the "Sound" control panel on the Windows based computers.

#### Selecting Sample Rates and Bit Depth on Apple-Macintosh

You can select the sample rate and Bit depth in the "Audio MIDI Setup" utility located in the "Utilities" folder.

- 1. From the desktop select menu "GO" then, "Utilities" then, "Audio MIDI Setup" to launch the Audio MIDI set up utility.
- 2. Since it's possible to record and playback at different sample rates, the Mac OS separates the ProCast into input and output drivers. So, first set the Input sampling rate by selecting the ProCast 2/00 and choose the desired sample rate.
- 3. Next set the Output sampling rates by clicking on the ProCast 00/2 to select the sample rate.
- 4. At this point you can select the Bit depth using the pull down menu.
- 5. Now, click Apply and the new settings will be in place.

## **Installing the ProCast SST**

#### Selecting the Sampling Rate and Bit Depth in Windows Systems

- 1. Connect your ProCast SST to an available USB port on your computer.
- 2. Next, navigate to your computer's Control panel.
- 3. From the Control panel, click on the "Hardware & Sound" option.
- 4. Now, from the "Hardware & Sound" menu, choose the "Sound" icon.
- 5. Next, select the "Recording" tab.
- 6. Choose the "Miktek ProCast" from the available input devices.
- 7. Click on "Properties" and select the "Advanced" tab.
- 8. Set the sample rate from the "Default Format" pull down menu.
- 9. Now set the Output by going to your computer's control panel, and from there, select the "Hardware & Sound" option.
- 10. From the "Hardware & Sound" menu, choose the "Sound" icon.
- 11. Once you're in the "Sound" set up, select the "Playback" tab. and select the "Miktek ProCast" as the output device.
- 12. Next click on "Properties" and choose the "Advanced" tab from the "Properties" window.
- 13. Now, set the sample rate and Bit depth from the "Default Format" pull down menu.

#### **ProCast SST Quick Start**

Before you get going it's recommended that you follow the instructions on installing the ProCast SST with either Mac or Windows OS in the previous sections of this manual. Once you confirm the ProCast SST is connected to your computer properly, it will be easy to start recording. The more you learn about ProCast SST, the more you'll discover its versatility and powerful features. There are many ways to use the microphone, and our quick start example is for a typical set-up for recording electric guitar and vocals. Just follow the simple steps below to start recording.

- 1. First, plug the USB cable into the ProCast SST and into an available USB port on your computer. Note: Be sure to check the installation guide for Windows and Mac OS to confirm your computer will recognize the ProCast SST. Also, make sure your computer's output level is set to maximum for full volume in the ProCast SST monitor.
- 2. Set all the level controls off by pushing the faders all the way down.
- 3. Position the ProCast SST's microphone towards the vocalist about 4 to 6 inches away. Since the SST's microphone is an end address, unidirectional type, be sure to face the front grille side towards the sound source.
- 4. Set the Channel 1 Input MIC/LINE switch to MIC, which will enable you to use the internal microphone.
- 5. Use a standard 1/4-inch instrument cable and connect your guitar to the ProCast SST 's Channel 2 LINE input which is located on the rear of the base.
- 6 Set the Channel 2 Input MIC/LINE switch to LINE, which will enable you to use your instrument in the LINE input.
- 7. Connect your headphones to the MIX output located on the front of the ProCast SST.
- 8. Next, set the Direct Monitor control to the fully counter clockwise position and press the MONO switch in, so you will hear the guitar and mic in both sides of the headphones. Note: The direct monitor allows you to hear your instrument and voice directly from the microphone, with zero latency and without having to monitor the output of DAW software. You'll want to make sure your DAW's input monitoring is turned off to avoid any unwanted echos or feedback.

### **ProCast SST Quick Start**

#### **ProCast SST Quick Start - continued**

- 9. Now set level of the microphone by raising the MIC level control to about half way up. If you see the Power/Peak LED light red, then turn the MIC level control down until it does not flash red.
- 10 .Now set the level of your guitar by raising the Channel 2 fader level control to about half way up. If you see the Peak LED light red while playing, turn the INSTRUMENT level control down until it does not flash red. Don't forget to check the input meter on your DAW to make sure it's not clipping.
- 10. Now, put on your headphones, speak or sing into the mic and then raise the MIX control fader until you reach a comfortable listening level.
- 11 .Next, launch your DAW and select the Miktek ProCast for the input and outputs.
- 12. Set up two mono tracks in your DAW for the vocal and guitar track. Then, select Miktek ProCast mono left for the vocal track and select Miktek ProCast mono right for the guitar track.

Now follow the instructions of your DAW software to enable the two tracks for recording and you're ready to record

#### A Note on Powering the ProCast SST

The ProCast SST is a condenser microphone, and like all condenser microphones, it has internal electronics that require an active power supply. Traditional studio condensers are almost always powered by a Phantom Power supply which is usually derived from the mixing console. The ProCast SST receives its power from the USB bus. Simply connect the microphone to the computer's USB port and the microphone is ready to operate. The ProCast SST features a power on LED, which will illuminate when USB power is present.

### **Connecting LINE/Instrument level signals**

Line signals like those from keyboards drum machines and DJ mixers and instrument level signals like those from electric guitars can be easily connected using the ProCast SST's Channel 1 and 2 LINE inputs. The connections are made using standard ¼"-phone cables. Be sure to select the LINE input using the MIC/LINE switch as explained in a section later in this manual.

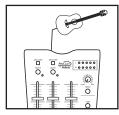
#### **Connecting an External Mic**

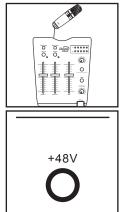
You can connect an external microphone to the Channel 2 MIC 2 input using the supplied mini XLR to XLR adapter cable. Most any dynamic like the Miktek PM9 or condenser microphone such as the Miktek C1 or PM5 can be used to mik a separate vocalist or instrument. Be sure to select the Mic input using the MIC/LINE switch as explained in a section later in this manual. Also, if you're using a condenser microphone, be sure to see the following section on Phantom power.

#### **Using Phantom Power**

It is possible to use an external condenser microphone like the Miktek C1, C5 or PM5 on Channel 2 thanks to the on-board 48 volt Phantom power source. Be sure to connect the microphone first, then turn on the Phantom power by pressing the +48 switch down. You'll see the LED illuminate. Once the Phantom power switch is turned on, the external condenser receives the phantom power directly from a mic cable.

**IMPORTANT NOTE**: Do not plug and unplug any microphone with phantom power on since it will create an annoying pop. You should turn off the phantom power by setting the +48V switch to the up position so that the LED is off. You should also turn the Channel 2 MUTE on, remove your head-phones and/or lower your monitor speakers before disconnecting and reconnecting.





#### **Selecting the Inputs**

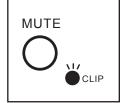
The ProCast SST has two input modes; MIC and LINE for each channel, allowing you to connect and record a variety of different input signals and configurations.

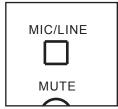
#### **MIC/LINE**

Each of the ProCast SST's inputs can be set to select either Mic or line level signals. On Channel 1 you can select between the SST's internal microphone and an external line signal connected to the rear panel ¼-inch LINE IN 1 jack. On Channel 2 you can select between an external microphone connected to the rear panel MIC 2 mini XLR and an external line signal connected to the rear panel ¼-inch LINE IN 2 jack. To select the microphone input on either channel press the MIC/LINE switch up, or press the MIC/LINE switch down to select line input signals.

#### Setting a Good Signal Level

You can adjust the ProCast SST's internal analog input gain stage by using the ProCast SST's LINE and MIC level faders. The purpose of the level, or gain, controls are to optimize the amount of good signal relative to any associated noise. A good mic or instrument pre-amplifier, like those inside the ProCast SST, will also have a PEAK indicator to show when the input signal is clipping. To set a good level on the mic, set the ProCast SST up in front of the desired sound source and slowly raise the input trim control until you see the red CLIP or Peak indicator light up. Then, turn the input trim fader down until the indicator does not light red any more. Repeat the same process for the second microphone or instrument. Once you set the input level controls you shouldn't need to change them during recording. Use the level controls on the DAW to set the balance between the instrument mic and stereo mix from the DAW.





## **Operating the ProCast SST**

#### **USING the MUTE switches**

Each of the ProCast SST's input channels includes a MUTE switch, which allows you to turn off the signal on the channel. When the Mute switch is on the red LED will illuminate indicating that the signal is cut in both of the headphones/monitors outputs, as well as, the send to the CPU.

#### **Using the Direct Monitor**

The ProCast SST has a simple, yet sophisticated direct monitor system, which provides zero latency monitoring.

#### What's Zero Latency, and why do I need it?

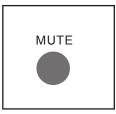
Latency is the delay time between record and playback that all computer DAW's, including yours, have when recording and monitoring simultaneously. Simply stated, when recording, the DAW needs to recognize the input signal, then crunch a bunch of numbers and then send the signal through to the output. Depending on several factors like the speed of your computer, the amount of tracks you've recorded, and whether or not you're using the DAW's effects, this can take a few to several milliseconds. A delay of several milliseconds can sometimes make it hard for a musician to play on time. To solve this problem, the ProCast SST lets you monitor the internal microphone and line inputs directly on the headphones without making the round-trip in and out of the DAW. As a result you hear the inputs with no latency. The ProCast SST's Monitor Blend control allows you to mix between the Direct signal from the inputs channels and CPU playback signal.

#### **Direct Signal**

The Direct signals are those signals that feed directly off the Channel 1 and Channel 2 inputs. Since this signal path is sent straight to the MIX or MONITOR 2 headphone outputs there is no delay caused by the computer DAW.

#### **CPU Signal**

The CPU signals are those coming from your computer like the playback of your DAW. The CPU signal can also be your computer's MP3 player, or it can be any sound the computer generates depending on how you configure the SST in the system's audio set up. 13



#### Using the Monitor Blend control.

Now that you know where the direct and CPU signals originate from you can decide how you want to set the Monitor Blend. Here are three common set ups.

Monitor Blend all the way towards CPU.

With this set up you will only hear the playback of the computer. You can check this by playing a previous recording from your DAW or a recording from your computer's MP3 payer (This is assuming that the Procast SST is set as the computer's main audio device).

Monitor Blend all the way towards DIRECT

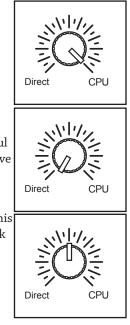
When the Monitor Blend knob is positioned all the way towards DIRECT you will hear the mic or line inputs. It is normal to hear the CPU playback at a very low volume.

**IMPORTANT NOTE**: If you have studio monitors connected to the MONITOR 2 outputs be careful to lower the MON 2 level control, or turn it all the way off, to avoid feedback while recording the live microphones.

Monitor Blend knob set at the half position point.

In this mode you will hear both the Direct Signal off the inputs along with the CPU playback. This is how you set up the monitor if you are recording an overdub and you want to hear the playback track together with the direct input from the mic or line.

Another way of thinking about the MONITOR BLEND control knob is as follows: **RECORDING** - Monitor Blend all the way towards DIRECT **OVERDUBBING** - Monitor Blend knob set at the half position point **MIXING** - Monitor Blend all the way towards CPU



#### **Polar Pattern**

The most important characteristic of any microphone is its directionality or "pick-up pattern". There are three basic categories of pick up patterns; omni, bi, and unidirectional. Omni mics pick up sound from all directions, bidirectional mics pick up the sound directly in front and back of the microphone while rejecting the sound on the left and right sides, and unidirectional (cardioid) mics pick up the sound in front of the microphone.

While omni and bidirectional microphones are very useful for a variety of applications, a majority of "miking" situations in recording and live sound require unidirectional or cardioid microphones. The unidirectional pick-up pattern allows for better separation of instruments in the studio and more control over feedback in live sound reinforcement. The ProCast SST's pick-up pattern is super-cardioid, which offers even more side-to-side rejection. When positioned correctly, the super-cardioid pick-up pattern allows you to pick up more of the sound you want and less of the sound you don't want.

#### **Microphone Placement**

In order to maximize the sound quality, you must pay careful attention to the placement of your ProCast SST and how it is positioned for the instrument or vocalist that you are miking. Most microphones, not omni, but especially unidirectional or cardioid microphones, exhibit a phenomenon known as "proximity effect." Very simply put, the proximity effect is the increase in low frequency response a microphone exhibits as it is moved closer to the sound source. Vocalist tend to love this effect since when they get really close to the mic they get the "FM radio", big bass sound. A good vocalist with good mic technique will use the proximity effect to adjust their tonal response in real time. The key to developing the best mic technique is experimentation along with awareness of the general principle that the closer your SST's microphone directly in front of the artist. The same may be true for miking instruments, however, you can make some pretty amazing equalization adjustments by slightly changing the angle of the capsule to the sound source. This can be a very useful technique in capturing the optimum sound of drum set, acoustic guitar, piano or other instruments in a live room or sound stage. Experimentation and experience are the best teachers in getting good sounds, so plug in!

## **Operating the ProCast SST**

### **P-Popping**

P-popping is that annoying pop that you can get when the microphone diaphragm gets a blast of air from a vocalist pronouncing words with the letter "P" included. There are a few ways to deal with the problem including using an external pop filter. Some famous engineers have relied on an old nylon stocking over a bent clothes hanger, which actually works very well. You can also try placing the microphone slightly off axis (on a slight angle) from the vocalist. This can often solve the problem without using an external pop filter. However, the simplest, most reliable way to reduce P-popping is to use the included foam pop filter placed on the microphone. Using a pop filter also makes it easy to maintain a good level by keeping the vocalist at a constant distance from the microphone.

#### **Using the High-Pass Filter**

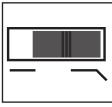
The ProCast SST microphone has an on-board High-Pass, or low-cut filter, which when engaged, will reduce the response of the bass frequencies. The knee (*the frequency where the roll off starts*) of the Hi-Pass is set at 100 Hz and the roll off occurs at 12dB per octave. To engage the filter, slide the High-Pass switch so the picture of the roll off is showing. The High-Pass filter can be a valuable tool to help eliminate unwanted low-end content to reduce bleed in the studio and stage rumble in

a live situation. Plus, if you're recording an instrument that doesn't make any sound under 100 Hz, don't record under 100 Hz. It's often better to set the High-Pass filter on to reduce any unwanted low frequency pick up.

#### **Connecting Studio Monitors**

You can connect the ProCast SST to studio monitors using the MON 2 output. Use a standard 1/8-inch to dual RCA, or an 1/8-inch to dual quarter inch cable available at your local audio dealer to connect the monitors. Set the monitor amplifier(s) to the normal operating level. Then, use the MON2 control know to set the desired listening level.

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The ProCast SST is a great microphone choice for many instrument miking situations. Below is a brief guide on using the ProCast SST in some typical applications:

#### Vocals

When using the ProCast SST on vocals, position the microphone directly in front of the artist so that the microphone grille is approximately 4 to 10 inches away. You can record a group of vocalists by positioning them around the front of the microphone. Just remember that the extreme sides of the microphone pick up less with less response, so have them stand together tight, and/or move the microphone from one to two feet away from the group.

#### **Acoustic Guitar**

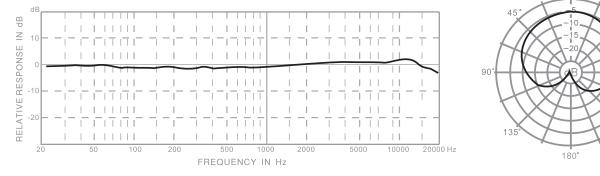
There are a variety of ways that the ProCast SST can be used to mic an acoustic guitar. The microphone placement will depend on the type of instrument and what kind of sound you're looking to capture, for example the tonal quality you want to focus on, and how much finger slide or pick noise you may or may not want. When miking a standard steel string acoustic, a good place to start is with the microphone positioned pointing towards the end of the fingerboard at a distance of about 6 inches to 2 feet away from the instrument. You can experiment by moving the microphone slightly in the direction of the sound hole, which will produce more low frequencies, or move it in the direction of the fingerboard to capture more high-end or to remove any unwanted boominess. For nylon string acoustic, try positioning the microphone above the bridge to emphasize more of the attack from the sound of the finger picking, or for less, move the mic closer to the sound hole.

#### Piano

You can achieve outstanding results using the ProCast SST on acoustic piano. Several placement approaches can be used depending on the size of the piano, and the type of sound you are looking to record. When miking a Grand Piano, (for an ambient sound like that used in a classical recital), a ProCast SST can be positioned directly in front of the instrument. Open the lid to the full position and place the microphone five to twenty feet in front of the instrument.

## Specifications

Polar pattern Super- cardioid
Element type Fixed charged condenser
Diaphragm thickness 3 microns
Frequency Response 20~16000 HZ
Sensitivity
SPL 132 dB



ProCast SST Typical Frequency Response

ProCast SST Polar Response

0°

45°

. 135° - 90

Specifications are subject to change without notice.

### www. miktekaudio.com

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