

OKTAVA MICROPHONES

MICROPHONE APPLICATIONS & PLACEMENT GUIDE

- 1.Oktava MK 319 large diaphragm condenser**
- 2.Oktava MK 219 large diaphragm condenser**
- 3.Oktava MK 012 small diaphragm condenser**
- 4.Oktava MKL 2500 darge diaphragm valve condenser**
- 5.Oktava ML 52 Ribbon microphone**
- 6.Drum kit applications**
- 7.Instrument list**

The notes and applications in this manual are intended as a guide only. Due to the subjective nature of sound recording and the variations in instrument type, location, room size and acoustic soundproofing in many cases experimentation is the best form of finding the ideal recording method for your chosen instrument. We suggest using these notes as a starting guide and if not 100% happy with the results experiment with microphone placement to achieve the desired results

1. Application notes MK 319

Vocals male / female vocals: This mic is optimised for vocals. It has a smooth proximity effect good for vocal presence and warmth.

Piano:

If you can use a pair of Mk 319 mics, a stereo X-Y technique yields the most natural sounding results. If you only have one mic (or channel), set-up the MK 319 placed about 2 feet (24") above the center of the soundboard and slightly toward the front. You may have to experiment with exact location since every piano is unique in both sound and physical layout.

Solo Cello: On cello this mic produces a natural representation of the acoustic sound in the studio without sounding scratchy or hard and gives plenty of depth

Set-up the Oktava Mk 319 placed 3-6 inches in front of the cello pointing toward the "F" holes or bridge

Toms and Bass drums: see drum kit applications

Double / Upright Bass:

Set-up the MK 319 6 inches above the bridge and aimed slightly (to taste) toward the sound hole

Electric Guitar Amps: The MK-319 is an excellent mic when used in conjunction with the MK-012 for miking guitar Amps. For example Marshall and Mesa/Boogie Triple Rectifier electric guitar amplifiers. This mic is able to handle particularly high SPL

Setup the MK-012 one foot away from the first 12" driver in the speaker cabinet at an angle and the MK-319 4' back

Acoustic Guitar: The MK 319 is a great mic for capturing the warmth and detail of an acoustic Guitar

Set up the MK-319 one foot away, aimed at the neck joint at the 12th fret. Each note comes out clear and since the mic is quite close to the guitar, it manages to capture the body resonance of the guitar as well adding an excellent warmth to the overall sound

Comparisons

The MK-319, even when compared to the Neumann U87 (which costs many times more) shared a very similar sound character that I found inviting in vocals. (Terry Kok EXHardware)

2. Application notes MK 219

Vocals and Spoken word: This microphone has a smooth proximity effect good for vocal presence and warmth. It is optimised for spoken word and is a very good vocal mic for singers also.

Set up the MK 219 placed 12 inches straight in front of the vocalist ,
For singing set up the MK 219 placed approx 3 feet away from singer. Closer miking is a very good option though a pop shield is recommended. The proximity effect gives a wonderfully rich and full bottom end

Woodwind and brass: Instruments with square wave formations such as trombone and clarinet are particularly favourably recorded with the MK 219

French Horn:

Set-up the mic anywhere from 6-12" away from the bell so it doesn't get overloaded, you may still need to switch in a pad on the mic.

Saxophone: The MK 219 will allow you to relatively close mic without the harshness that is often evident with cheap or low cost condenser microphones.

Set-up the mic anywhere from 6-12" away from the bell so it doesn't get overloaded, you may still need to switch in a pad on the mic.

Orchestral Harp:

Cello: The MK 219 gives the cello sound plenty of depth

Set up the MK 219 in a close miking situation if instrument needs to be miked in noisy environment. Miked 10cm from instrument with on axis pickup don't get the harshness usually associated with close miking on this instrument just the warmth and enough gain.

Drums, particularly Toms Rack toms and Bass drums: As overheads the MK 219 creates a feel of perfect spacing. It makes the ride and crash cymbals give a nice roomy sound and the make the toms sound nice and close. The wide High Frequency polar pattern will give a wide stereo sound field.

Set-up the microphones about 2 feet about the level of the highest cymbals situated slightly behind the drummers stool, one at each side of the drum kit facing into the whole kit at about a 45 degree angle from the front.

Acoustic Guitar. The MK 219 will give a similar but brighter sound to a Gefell UM 70.

Acoustic guitars have a wide range of EQ at the various locations on the instrument. In front of the soundhole, the guitar sounds boomy. Toward the bridge is mellower and thinner. The best overall spot for most applications is where the neck meets the body of the guitar, where it's not too boomy and has good top end

Set-up the mic initially about 6 inches from the guitar roughly at the join between the neck and the body. Point the capsule towards the centre hole in the body. To get exactly the sound you are looking for have someone move the microphone Left to Right while the guitarist is playing. There will be a sweet spot, this will vary in location depending on the type of guitar and size of room. Move the microphone Left to Right to change the timbre. If you move the microphone towards or away from the guitar you can control the bass to treble amounts via the proximity effect. You will get more bass the closer you get to the guitar.

Comparisons

Placed 3 feet away from singer. This mic is virtually indistinguishable from a Microtech UM 70 (Paul White sound on Sound)

Reminiscent of Neumann U87 (Janis V Bers Radio World buyers guide

This mic is particularly similar to Senheiser 421 on rack toms (Ty Ford The Mix)

3. Application notes MK 012

General comments: This mic works particularly well on strings due to the sensitivity of the mic.

Drum kits: The MK 012 is particularly suited to Hi Hat, overheads, and the mic captures a very nice attack on snare beats. **See drum kit applications**

For overheads set-up the microphones about 2 feet about the level of the highest cymbals situated slightly behind the drummers stool, one at each side of the drum kit facing down into the whole kit at about a 45 degree angle from the front. For the Hi hat and snare place the mic at about 6 inches from the sound slightly above and source angled down towards it.

Harp: The MK 012 is very good for a dedicated mic on a harp specifically placed in the middle of an orchestra to allow the harp to cut through the mix

Violin: The MK 012 is particularly useful used on the first violin in an orchestra

Set up the Oktava MK 012 placed a foot or so above the instrument pointing down toward the F holes

Acoustic guitar: The MK 012 will capture the delicate high end of an acoustic guitar accurately and give warmth and depth to the whole sound.

Mandolin: Small diaphragm condensers like the Oktava MK 012 are perfect for recording stringed instruments such as the mandolin and capturing the high frequency detail

Set-up the mic about 6 inches away, perpendicular to the instrument and pointed toward the treble f-hole. If the sound hole is guitar-style beneath the strings, aim upward at it from below (the treble side) about the same distance away. If the sound is too thick, back the mic away from the instrument until the desired color is achieved.

String Sections: The MK 012 is great for miking up full large string sections and also smaller groups where individual miking is possible

Set-up 4 room overhead mics placed several feet above the players for full 18 pieces string sections

For viola and violin set up the Oktava MK 012 placed a foot or so above the instrument pointing down toward the F holes. Individually miking will also give you a much more up front and intimate sound, where you'll be able to hear the horsehairs of the bows drawing across the strings

Comparisons

Used on the voice the MK 012 omni capsule is virtually indistinguishable from a Neumann U87 in omni mode (Ty Ford Pro Audio Review)

Sonically the MK 012 compares extremely well with an AKG 451 (Zennon Schoeps Studio Sound)

The MK 012 is very similar in design and sound quality to the Neumann KM 84 and MK 184 microphones

4. Application notes MKL 2500

Vocals: Female vocals sound particularly good with this mic. There is a nice sweet spot around 3.5k - great for vocals Using the MKL2500 with vocals you find that the tube circuitry has been tweaked to give the mic a slightly larger-than-life sound, which comes across mainly as emphasised presence, though that slightly chesty character that comes with many valve mics is also in evidence. The result is flattering on most voice types.

Flute and particularly "shakuhachi", a Japanese flute

Piano: The MKL 2500 gives amazing clarity and detail to the piano giving a slightly larger-than-life sound, which comes across mainly as emphasised presence.

Set up the mic inside the raised lid about 1-1.5 foot from the strings

Acoustic Guitar: The MKL 2500's warm valve sound and tweaked third harmonic distortion is perfect for capturing the warmth and detail of an acoustic Guitar

Set up the MKL 2500 one foot away, aimed at the neck joint at the 12th fret. Each note comes out clear and since the mic is quite close to the guitar, it manages to capture the body resonance of the guitar as well adding an excellent warmth to the overall sound

Solo Cello: On cello this mic produces a natural representation of the acoustic sound in the studio without sounding scratchy or hard and gives plenty of depth

Comparisons

We did a comparison test with the Neumann (U89 and M150), Manley and AKG (C12) Valve mics.

The Oktava matched the Neumann exactly (a good start), and with a little EQ,

copied accurately the Manley's rich bottom end and "grunt", and compared

pretty favourably with the AKG (which in this case is a particularly

wonderful and rare vintage model that has recorded many famous vocalists and sax players) Leo Sayer

5. Application notes ML 52

General Comments: Ideal for digital recording as the noise floor is virtually non-existent. The ML 52 is also particularly useful in broadcast and installation due to the negligible sound it picks up from the sides, as well as 90 degree stereo recording

Female vocal: The ML52 had a very warm and soft sound which is perfect for jazz vocals. It gives a rich sound perfect for over sibilant performers. There is an abundance of rich bottom end at very close spacing.

Steinway baby grand piano: The ML 52 produces outstanding results on all pianos particularly Grand and Baby Grand.

Piano is most commonly recorded in stereo with two mics, one capturing the upper musical range and the other the lower, and with the piano lid propped open. Set up the mics inside the raised lid. The first mic 8-10" above the upper strings closer to the keyboard end of the piano. The second mic is placed above the lower strings toward the back of the piano. The first mic track is panned hard right and the second hard left, so that as the player plays from the low notes to the highs, the sound moves across the stereo field from left to right

Solo singing guitarist: The ML 52 sounds great on both vocals and acoustic guitar and its figure of 8 pattern allows flexibility when recording two sound sources at the same time in the same space.

Set up the mics one for the guitar angled to reject to voice and one for the voice angled to reject the guitar.

Electric Guitar: This mic is perfect for electric guitar cabinets. The mic run through a good mic pre amp straight to tape with no EQ gives amazing sound quality

Set the mic up about 8 inches from the speaker, if you are using a 2 cone amp use two mics each the same distance away. Alternatively use the ML 52 in conjunction with the MKL 5000, in this instance place the ML 52 about a foot back from the speaker and the MKL 5000 as a room mic set several feet back and above, depending on the size of the room

Brass: The ML 52 is very adept at recording brass instruments where the warm character of the sound is captured very well by the mic

Tenor sax:

Trumpets and trombone: These can both be captured with fine clarity and detail using the ML 52, which is harder to achieve with budget condensers

Set-up the mic anywhere from 6-12 inches away from the bell so it doesn't get overloaded.

For trumpets position the mic 45 degrees off axis and about one foot away. This will produce a sound that will mix better with the rest of the instruments.

Bongos: The ML 52 gives bongos a clear and unadulterated sound capturing the punchy attack and warm ring of the instrument

Set up the bongos with the mic in between the two skins at about 6-10 inches away. Alternatively set-up as room mic, placed above and about 5 foot away will leave bongos sounding particularly natural and clear when placed in the mix

Double / Upright Bass:

Set-up the MK 319 6 inches above the bridge and aimed slightly (to taste) toward the sound hole

Toms: see drum kit applications

If the drum set you're miking has six or more toms, individually miking each tom may not produce the clearest sound (due to phasing). Instead, place an ML 52 microphone between each pair of toms, using one half of the figure of 8 pattern directed towards each tom

Clarinet and flute:

Steel strung acoustic guitar:

Nylon classical guitar:

Comparisons

Next to an STC / coles 4038 the ML 52 sounded not entirely dissimilar (Zennon Schoeps Resolution)

I find this mic to be sonically similar to the RCA 77s that I've used, with slightly higher output (Harmony central.com)

6. DRUM KIT APPLICATIONS:-

For an unbeatable drum sound use the following Oktava microphones to mic up your full drum kit

Overheads: 2 x Oktava MK 012 cardioid capsules

For overheads set-up the microphones about 2 feet about the level of the highest cymbals situated slightly behind the drummers stool, one at each side of the drum kit facing down into the whole kit at about a 45 degree angle from the front.

Alternatively for overheads: 2 x Oktava MK 219

Set-up the microphones about 2 feet about the level of the highest cymbals situated slightly behind the drummers stool, one at each side of the drum kit facing down into the whole kit at about a 45 degree angle from the front. As overheads the MK 219 creates a feel of perfect spacing. It makes the ride and crash cymbals give a nice roomy sound and the make the toms sound nice and close. The wide High Frequency polar pattern will give a wide stereo sound field.

Try to keep the overheads about the same distance from the snare to prevent phase cancellation wandering of the stereo image

Snare: 1 x Oktava MK 012 tight (hyper) cardioid capsule.

Place the microphone from the front of the kit underneath the level of the hi hat angle the mic downward toward the top head as much as possible (almost perpendicular); this will prevent the hat from spilling over into the snare track. For a nice attack on the snare beats place the mic 6 inches from the skin.

Toms: 1 x Oktava MK 012 or alternatively 1 x MK 219 per tom

Place the mic with the capsule angled down towards the skin about 4 inches from the surface.

Alternatively for toms: If you don't have enough room or mics to have one mic per tom place an ML 52 microphone between each pair of toms, using one half of the figure of 8 pattern directed towards each tom

Bass Drum: 1 x Oktava MK 319

Place the mic inside the bass drum from the back of the drum. Face the capsule towards the drum pedal keeping the mic just inside the case and angled slightly down towards the floor to avoid excessive SPL. The further inside toward the head, the drier and less boomy the sound becomes, and the better the acoustic separation from the rest of the kit

Hi Hat: 1 x Oktava MK 012

For the Hi hat and snare place the mic at about 6 inches from the sound slightly above and source angled down towards it.

Rack Toms: 1 x Oktava MK 219

Place the mic about one foot above the rack toms with the capsule facing down and towards the skins

Bongos: 1 x Oktava ML 52

Set up the bongos with the mic in between the two skins at about 6-10 inches away. Alternatively set-up as room mic, placed above and about 5 foot away will leave bongos sounding particularly natural and clear when placed in the mix

Room Mics: 1 x MKL 5000

The MKL 5000 could be the only mic you need for miking up a full drum kit.

The clarity of the top end with colour added by the tube circuitry of this mic will give a wonderfully detailed full and rich sound. Each drum and cymbal should come through clearly and brightly. For the simplistic approach the sound created by this set up is unmatched even with hours of experimentation on mic placement and application suitability with a bunch of other mics.

Place the MKL 5000 about 1.5 foot above the level of the highest cymbal with the stand about 2 foot behind the drummers stool and face the mic angled down towards the center of the kit.

7. INSTRUMENT LIST

Instrument	Oktava microphone
Accoustic Guitar	319,219,012,2500
Bass Drum	319,219
Bongos	52
Brass sections	219,52
Cello	319,219,2500
Clarinet	52
Classical Guitar (nylon strings)	52
Double Bass	319,52
Drums	012,219,319
Electric Guitar	319,52
Flute	2500,52
French Horn	219
Grand piano	52
Harp	219,012
Hi Hats	012
Mandolin	012
Oboe	219
Piano	319,2500
Rack toms	219
Saxophone	219,52
Snares	012
Tenor Sax	52
Tom toms	319
Trombone	219,52
Trumpet	219,52
Viola	012
Violin	012
Vocals – singing	319,219,2500
Vocals – speech	219
Vocals Female	2500,52,319,219
Vocals Male	319,52,2500
Woodwind	219,52