



Congratulations on purchasing Carvin's **CM30D** drum and instrument microphones. The **CM30D** mic kit is capable of handling high sound pressure levels without distortion making them ideal for live or recording close-miking of all types of drums and percussion instruments. They are also accurate for use in sonic reproduction of brass, woodwind and other instruments producing high sound fields.

FEATURES

- Cardioid pattern allows close miking to minimize bleed-through from other drums or stage instruments.
- Neodymium element delivers maximum output.
- Up to 140dB SPL handling capacity for distortion free reproduction of even the loudest drums.
- Transformerless moving-coil dynamic design for enhanced bass and fast transient response.
- All metal construction for maximum reliability.
- Special rubber shockmount mic holder minimizes floor vibration pick-up.
- Incredibly small, low-profile design for minimum visibility and close miking placement around the drum kit.
- Gold plated XLR connectors for maximum conductivity.
- Full frequency response for sonic punch with exceptional clarity.

CHECK LIST OF PARTS Included with your **CM30D** is:

- One **CMBD1** Bass drum mic with extended low-end response.
- Two **CMST1** Snare-Tom mics for close-miking snares, toms, percussion, brass and woodwinds.
- One molded carry case with internal padding



GETTING STARTED QUICKLY

If you are like most people, you probably want to get started right away. Great! In order to get started, you will need your new **CM30D** mics and **XLR Mic Cables**. You will also need a microphone stand to hold your **CM30D** mics. Carvin recommends our **MS** line of stands (**MS11**, **MS13**, **MS15**). Other equipment needed is your mixer (sound system or recording system).

1. With the mixer power off, plug the **CM30D** mics into your mixer using balanced **XLR** cables.
2. Please see the other side of this manual for suggested **Mic Placement**. Each mic can be mounted on a mic stand with the built-in mount. Depending on the threading of your mic stand, you may need to remove the inner threaded adapter. Use a large flat screwdriver or coin to assist you.
3. Once the mics have been placed into position, you can turn the mixer ON (make sure all volume, gain knobs, or faders on your mixer are turned OFF).
4. Bring the channel volume or fader up to 0 dB.
5. Play each drum individually and turn the mixer's gain up on each channel and stop just before the signal peaks. This should be done at the loudest volume you will perform at. Check for transients that can cause the signal to peak and adjust your gain up or down as needed. It might be a good idea to do a second signal check while playing the entire kit. Drummers can tend to play louder during a song with other band members playing along.
6. With the signal levels set, adjust any EQ that might be needed.
7. You are now ready to use your new **CM30D** mics.

SPECIFICATIONS

Type Dynamic, neodymium cartridge
Directional Pattern Unidirectional Cardioid

Frequency Response
Snare-Tom Mic **CMST1:** 70Hz to 15kHz
Bass Drum Mic **CMBD1:** 30Hz to 15kHz

Sensitivity (@1kHz, 74dB SPL)
Snare-Tom Mic **CMST1:** -73dB, ± 3dB
Bass Drum Mic **CMBD1:** -72dB, ± 3dB

Impedance
Snare-Tom Mic **CMST1:** 600Ω
Bass Drum Mic **CMBD1:** 250Ω

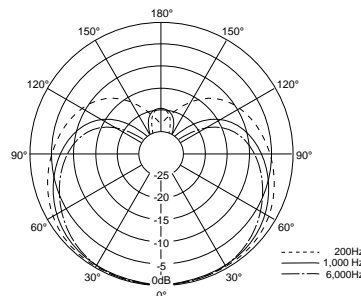
Maximum SPL (@1%THD)
Snare-Tom Mic **CMST1:** >130dB
Bass Drum Mic **CMBD1:** >140dB

Dimensions & Weight
Snare-Tom Mic **CMST1:** 1.65" x 4.5" Wt 8.5oz
Bass Drum Mic **CMBD1:** 2.1" x 4.7" Wt 10.6oz

Material
 Holder Mount: rubber, plastic with brass insert.
 Ballscreen: steel mesh
 Gold-plated XLR contacts

TYPICAL POLAR PATTERNS

Cardioid — rotationally symmetrical about microphone axis, uniform with frequency



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MIC PLACEMENT

Ask any studio or live sound engineer and they'll have their own preference on how to mic a drum kit. There are numerous ways to close-mic, distance-mic or stereo-mic a drum kit. The drum kit and drummer can also be a large factor in how it will sound. The one hard rule is "whatever works for you is correct".

For beginners here is a quick overview on how to close-mic a drum kit.

KICK (BASS) DRUM

For a tight punchy sound place the **CMBD1** mic inside the drum at a distance of approximately 1 to 6 inches from the beater head. Move the mic until the desired sound is obtained. Placing a blanket or small pillow inside the drum is helpful to reduce rattle and help muffle a bass drum that resonates too much.

SNARE DRUM

The **CMST1** snare drum mic is placed just above the top of the head with a 2 to 6 inch distance. Distance and angle can vary. Very thin or snappy sounding snare drums may benefit from a mic placement with a minimum of 4 inches from the actual snare head. If a drummer is not consistent with the attack or power in which they play their snare, a compressor is extremely helpful to provide a constant level for recording and helps smooth out transient signals that could cause clipping or distortion.

TOM TOMS

Tom Tom drums can have **CMST1** mics placed just above the drum head. Pan the Tom Toms slightly in the mix for a stereo effect. For Tom Tom drums that have top as well as bottom heads, be sure to tune both heads for optimum performance. A loose bottom floor Tom Tom head can create unwanted low frequency resonance that is undesirable for both live and recording purposes.

OVERHEADS (CYMBAL MICS)

The **CM30D** mics are intended for miking drums. Carvin also makes Condenser mics that are ideal for miking cymbals. The **CM90E** is ideal for overhead placement of crash, splash and ride cymbals. It is also excellent for hi-hat use. Some engineers also use a pair of these mics for placement over the entire kit to add the sound of distant mics to the mix. Be aware that other instruments in the same room can bleed through into the overhead mics. Other high-end condenser mics available from Carvin are **CM87S** and **CM98ST**. These two mics are primarily used as studio vocal mics but can also be used for recording percussion.

One final note. Always try to accommodate the drummer. If the drummer is likely to smack the mics while playing or if the mic stand is in the way, move them into a better position. Perfect mic placement must also include a set-up that will allow the drummer to play comfortably.

