

Microphone Types, Polar Patterns and Placement for recording

	Mic Type	Polar Pattern	Mic placement	
Here is some information for recording instruments/ vocals. Have a look at the link below for more information: https://www.dpamicrophones.com/mic-university/how-to-mic-a-saxophone				
accordion (2 mics)	matched/ stereo pair of Condenser mics	cardioid	stereo mic'ing (AB/ XY/ ORTF at least 1 metre from accordion)	This ensures a good balance of direct sound and room ambience
acoustic guitar	condenser mic	cardioid	Close mic'd placement - Guitar - up to 30cm , Near the sound hole	Condenser mics are better than dynamic mics at capturing high-frequency detail of the instrument.
backing vocals (one mic)	condenser mic	figure of 8 or omni directional mic	close mic technique, up to 30cm and adjusted for balance	Should result in good, balanced sound from the backing vocals around the microphone, or allow pick up from more than one direction.
Bass Guitar played through a guitar amp	Dynamic mic	Cardioid	close mic technique, up to 30cm directly in front of the amplifier	

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backing vocals (one mic)	condenser mic	figure of 8 or omni directional mic	close mic technique, up to 30cm and adjusted for balance	Should result in good, balanced sound from the backing vocals around the microphone. or allow pick up from more than one direction.
Bass Guitar played through a guitar amp	Dynamic mic	Cardioid	close mic technique, up to 30cm directly in front of the amplifier	
choir / orchestra (stereo mic'ing)	matched/ stereo pair of Condenser mics	Cardioid	stereo mic'ing (AB/ XY/ ORTF at least 1 metre in front of choir taking into account room size, acoustics and size of choir - mics <i>for large choir could/ orchestra be</i> up to 3 metres away	Stereo mic'ing procedure outlined should result in good stereo separation and should capture a good balance of direct sound and room ambience
Drum kit (using 4 mics)	stereo pair of condenser mics for overheads small <u>dynamic mic on snare</u> large <u>dynamic mic on bass drum</u> (e.g. AKG D112 bass mic)	cardioid	The stereo overhead mics should capture the whole drum kit using AB/ XY/ ORTF placement. (approx 10-30cm) Kick drum (<i>approx 5-7 cm from the inside head</i>) and snare drum use close mic'd technique	
electric guitar played through a guitar amp	Dynamic mic	Cardioid	close mic technique, up to 30cm directly in front of the amplifier	

piano	matched/ stereo pair of Condenser mics	Cardioid	An ORTF stereo set-up approx 30 cm over the strings at the mid frame or 2 spaced pair less than 60cm apart . In either case the microphones are pointed 45° downwards and at the pianist	
saxophone/ string quartet	matched/ stereo pair of Condenser mics		stereo mic'ing (AB/ XY/ ORTF at least 1 metre from accordion	Should result in good stereo separation and capture a good balance of direct sound & room ambience
sax/ trumpet (live setting)	Dynamic mic	cardioid	close mic technique, up to 30cm from bell of the instrument	
sax/ trumpet (studio setting)	Condenser mic	cardioid	Mic pointed above/ into the bell 30-120cm distance	
solo guitarist and voice	two condenser mics	cardioid	Close mic'd placement - Guitar - up to 30cm , Vocals up to 20cm	results in good separation between the two tracks
violin (studio)	Condenser mic	Cardioid	mic placed between 30-100cm above violin	
vocals (studio)	Condenser mic	Cardioid	close mic technique, up to 30cm and pop guard	