

Introduction

This is a simple summary of the main points to consider, followed by a list of useful references for more information.

Basic Principles

1. Good Microphone Quality is essential; don't rely on the camcorder's built-in mic, even if it's useful in some situations.
2. Microphone Type & Placement must be suited to the purpose; consider handheld (e.g. Shure SM58), lavalier (e.g. Sennheiser ME2 omni clip-on mic), shotgun, boom, & boundary mic types; also consider wired vs. wireless (e.g. ew112P-G2 or ew100ENG-G2 wireless sets).
3. Balanced Cables are important; these typically use XLR connectors; also make sure all cables are in good condition, including short patch cables.
4. Isolate & Match Signals with an audio adapter device; adapts pro microphones & balanced cables to camera audio connectors (e.g. BeachTek or similar devices); or use a camera with "native" XLR inputs.
5. Correctly Adjust Gain & Signal Levels for the Input Source; set for mic or line input, adjust gain and/or volume for a strong recording level, but without peaking (causes distortion).
6. Monitor the Audio Level, and adjust as needed as the session proceeds; use headphones and camera's audio level meter.
7. Mix Audio Specifically for Video; it's best to use a dedicated mix if you have more than one audio source.
8. Mixer Channel EQ Controls are Useful; these help in achieving good tonal characteristics.

References:

1. <http://www.videouniversity.com/audio2.htm> Audio for Video – Part 2, Microphones & Techniques; Hal Robertson, 1998
2. <http://www.videouniversity.com/audio3.htm> Audio for Video – Part 3, Audio Production Techniques; Hal Robertson, 1998
3. <http://www.videomaker.com/article/9520/> Microphone Jungle; Tip McPartland, July 2003
4. http://en.wikipedia.org/wiki/Direct_box Wikipedia definition for Direct (DI) Boxes used in pro audio
5. www.beachtek.com Product information on audio adapter devices for video camcorders; see question & answer section for explanation of key concepts
6. www.sennheiserusa.com Wireless microphone systems for video camera, with portable receivers and transmitters, at an affordable price (ew112PG2, ew100ENGG2); also, short shotgun or supercardioid mic with integrated camcorder mount (MKE400, MKE300), and pro short shotgun mic (ME66) suitable for boom or fish-pole usage (appropriate shock-mount also needed, and consider windscreen)
7. <http://www.rane.com/note110.html> "Sound System Interconnection", RaneNote 110; 1985 (Rev 07)