

The Definitive Guide to Live Recording

# RECORDING *ON THE GO*



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Gottlieb, Gary. Recording on the Go : The Definitive Guide to Live Recording.

: Course Technolgy, . p 1

<http://site.ebrary.com/id/10251037?ppg=1>

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# Recording on the Go: The Definitive Guide to Live Recording

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## Appendix A: Popular Microphones and Their Placement



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**Figure A.1** You can get a beautiful sound on a flute with a Neumann TLM 170, a large-diaphragm condenser microphone (left), or a Red Bottle Type A with an R6 capsule (right).



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**Figure A.2** Another very popular choice for flute would be the small-diaphragm condenser Neumann KM 140 (left), and an interesting sound can be obtained with a large-diaphragm condenser like the Heil PR 40.

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**Figure A.3** An extremely accurate microphone, the Bruel & Kjaer (DPA) 4007 condenser microphone (left) may pick up too much for some, while the large-diaphragm dynamic Heil PR 30 (right) has a nice round tone.



**Figure A.4** The small-diaphragm AKG 451 (left) is a popular choice, as is the extremely accurate Earthworks SR77 (right).



**Figure A.5** Moving on to the piano, a pair of Neumann TLM 193s, large-diaphragm condenser microphones, can really bring out the rich tones of the instrument, although we do not always have the opportunity to record pianos at full stick, as this one is pictured.



**Figure A.6** Another excellent choice to bring out the character of the piano is a pair of Schoeps CMC6s with the MK 4 capsules.



**Figure A.7** Here is a pair of Neumann KM 140 small-diaphragm condenser microphones in a piano.



**Figure A.8** A classic choice for the piano is a pair of Sanken CU-44X condenser microphones.



**Figure A.9** The Red Bottle Type A with an R4 capsule is another good choice in a piano. Red microphones are made by Blue microphones, if only to ensure your confusion.

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**Figure A.10** In the category of "don't try this at home," these Bruel & Kjaer (DPA) 4006 condenser microphones would sound very clean on a piano if they were placed correctly, instead of pointing at the hammers.



**Figure A.11** At the top of the "you can't go wrong with this choice" category, a Neumann U 87 is a top choice for a trombone or pretty much any brass instrument. Beware of placing condenser microphones like the U 87 too close to the instrument—brass has high SPL output that can damage a condenser microphone if placed too close.

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**Figure A.12** This Sanken CU-44X condenser microphone sounds as good as it looks.



**Figure A.13** A Shure SM7 dynamic microphone might seem like an odd choice, but it has a nice, full sound on brass.



**Figure A.14** Many consider a Beyer M88 dynamic microphone as their last choice, while others love its round tone.



**Figure A.15** Another fine choice among the condenser microphones is the Briel & Kjaer (DPA) 4006.



**Figure A.16** Although relatively new to the market, many engineers love the rich tones of the Heil PR 40 on a bass.



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**Figure A.17** A popular technique when recording double bass begins with a small-diaphragm condenser microphone like this Neumann KM 130, wrapped in foam and inserted up the bridge. Always ask the bass player before you insert a microphone up his bridge. Also, because this KM 130 is an omnidirectional microphone it doesn't matter, but be aware that if you are using a directional microphone and you cover the side ports with foam, you are changing the directionality and character of the microphone.

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**Figure A.18** Another small condenser that sounds excellent up the bridge of the bass is the Schoeps CMC6 with the MK-2 capsule.

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**Figure A.19** The Earthworks SR-77 is designed to pick up sound the same way the ear does, and it is an excellent choice on bass.

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**Figure A.20** The highly accurate Bruel & Kjaer (DPA) 4006 will accentuate the higher tones of the bass while reducing the woofy bottom tones.

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**Figure A.21** Some recordists like the depth of the EV PL20 on bass, or its sister microphones, the RE20 and PL27.



**Figure A.22** Most of us drool when we see a classic like this Neumann M 147.



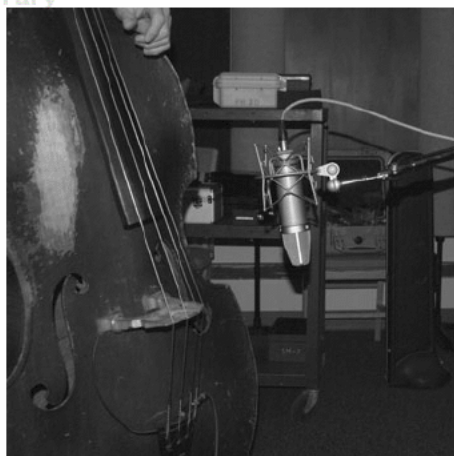
**Figure A.23** Another classic, the Apex 460 vacuum condenser microphone.



**Figure A.24** Just for fun, do what we did. Compare the Red Bottle Type A with the R6 capsule against the...



**Figure A.25** ...Red Bottle Type A with the R7 capsule.



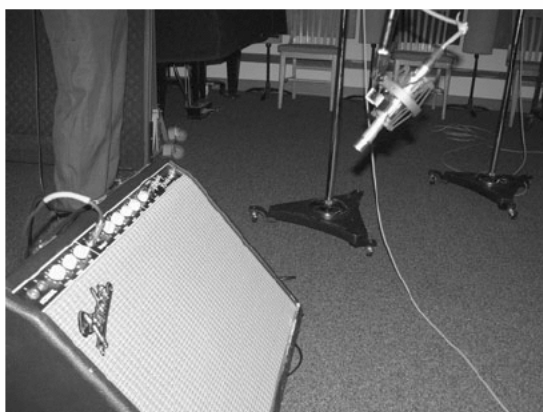
**Figure A.26** Another classic choice—you know this tune. You can't go wrong with a Neumann U 87, although few recordists end up using it on a bass.



**Figure A.27** A more common choice on the bass among Neumanns is the Neumann TLM 170, a large-diaphragm condenser microphone.



**Figure A.28** In the interest of trying everything, a Sennheiser 421 would more typically be found on a guitar amp or a high tom, but it might be exactly the sound you are looking for.

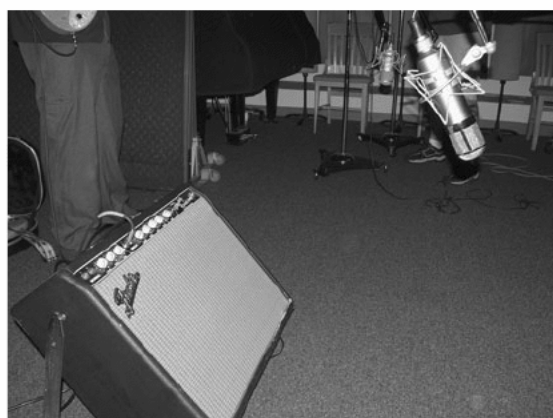


**Figure A.29** An AKG 451 with CK1 capsule, a small-diaphragm condenser microphone, sounds great on a guitar amp.

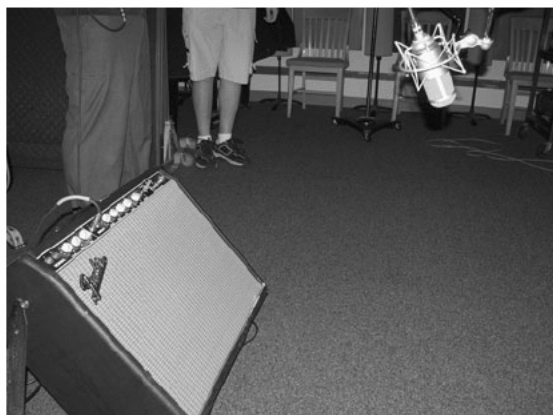




**Figure A.30** A newer AKG 451 boasts the same characteristics as the classic CK1.

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**Figure A.31** Time to drool again, a beautifully rebuilt Telefunken U 47 condenser microphone sounds great on everything! This one is truly a classic.

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**Figure A.32** And this classic Neumann M 147 condenser microphone is nothing to complain about either.

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**Figure A.33** The Red Bottle Type A with the R7 capsule is another good approach for a guitar amp.



**Figure A.34** And you can never go wrong with the old stand-by Neumann U 87.



**Figure A.35** An AKG 451 is a prime choice for a mandolin.



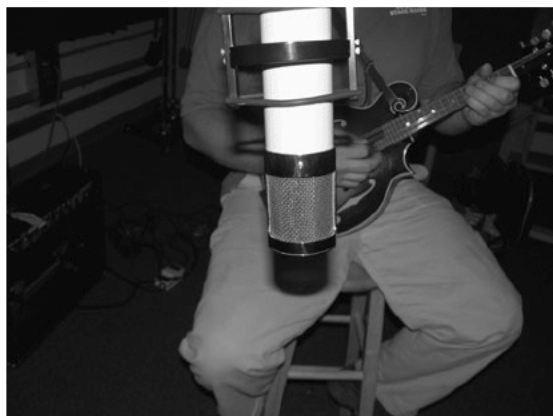
**Figure A.36** Another popular choice for stringed instruments like the mandolin is the small-diaphragm condenser Neumann KM 140.



**Figure A.37** And this other classic, the Neumann KM 54.



**Figure A.38** Getting into the good stuff here, this is a Microtech Gefell UM 92.1 tube microphone on the mandolin.



**Figure A.39** A Korby KAT 47 cardioid pressure-gradient microphone gives us an interesting sound on the mandolin.



**Figure A.40** Back to the basics, a Neumann U 87 offers a consistent sound on an acoustic guitar.



**Figure A.41** I would expect a sweeter, warmer sound from this Neumann M 147 condenser microphone.



**Figure A.42** And even sweeter still from this classic Neumann M 49 condenser microphone.

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**Figure A.43** Another view of the exceptional Neumann M 49.

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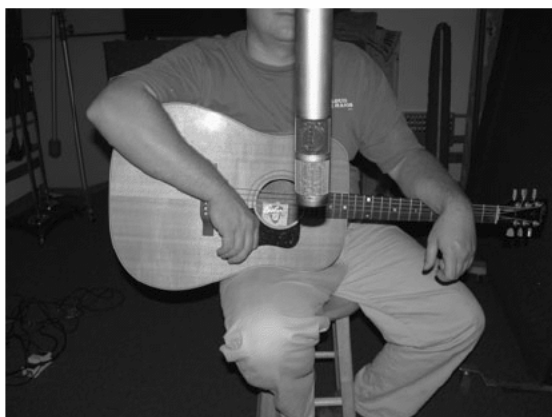


**Figure A.44** More modern but equally yummy, the Neumann M 149 sounds great on a guitar.

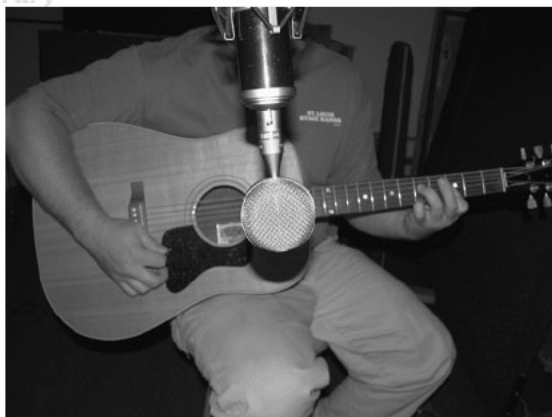
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**Figure A.45** It may look like the sound would be a bit thinner than some others, but the Schoeps CMC6 with the MK-4 capsule has a big sound on a guitar.



**Figure A.46** Some people just love the sound of the AKG C24 stereo vacuum tube microphone.



**Figure A.47** Once again, the Red Bottle Type A with the R6 capsule, a solid sound on a guitar.





**Figure A.48** The Microtech Geffel UM 92.1 tube microphone that sounded great on the mandolin sounds great here, too. No surprise there.



**Figure A.49** This Microtech Geffel UM 70 sounds amazing on a guitar.



**Figure A.50** Another view of the Microtech Geffel UM 70.