



Microphone Choices:

Heading Off of the Harpmic's Main Drag /
Where Angels Fear to Honk...

"At The Harmonica Microphone Bench" with Fritz
Hasenpusch, Mel Bay's HarmonicaSessions® eZine

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Our Harpmobile is breaking into new terrain now, picking-up speed and racing over a flat broad landscape only recently mapped and partially explored. There's a signpost up ahead... You're entering "The Dynamic Zone"...

To visualize the function and design of the Dynamic microphone cartridge you need only look at the construction of an audio speaker or tweeter and then reverse the direction of the audio path. There's an exterior membrane (the cone of the speaker) that gathers soundwaves (projects them in the case of the speaker) which is attached to a metallic coil at its base. This coil is suspended within the cylindrical gap of a powerful magnet, thus affecting the unit's magnetic field when put in motion by the soundwaves it senses, producing the mic's output signal. Voila! The Dynamic-or moving coil-element. Many companies would come to delve into the use of the Dynamic design both in econo-models and higher-end units, among them the familiar names of Shure, Electro-Voice, and Turner.

Often the same mic housing would be employed to create microphone models containing a variety of elements. For example, the Turner CX and CD ("Flash Gordon Juniors") employed the same two-piece body casting and brushed chrome finish, but were offered with a crystal element (CX) or a Dynamic element (CD). Before the release of its harp-famous Controlled-Reluctance element in 1949, Shure offered a brushed-chrome bullet called the Model 52 "Econodyne" which featured a hulking Dynamic element employing a huge alnico magnet. Forward thinking, but it was only produced in 1947. Development of the "moving coil" unit saw great strides through the 1930's, culminating in the 1939 unveiling of Shure's Model 55 (the Fat Elvis), the first microphone to achieve a Cardioid (heart-shaped) unidirectional pick-up pattern utilizing a single microphonic element.

Through the genius of designer Benjamin Baumzweiger (better known as Ben Bauer), it was demonstrated that the desired unidirectional pattern could be achieved through the partial venting of the rear of the Dynamic cartridge, thus altering the phasing of the arriving soundwaves. This became an essential weapon in the fight against "FEEDBACK." As live audio presentations became bigger and louder, this capability could not be over estimated.

The development and application of the "moving coil" or "dynamic" microphone saw greater refinement under the supervision of another Shure engineer, Ernst "Ernie" Seeler, also known as "Mr. Precision." Mr. Seeler performed his audial magic at Shure from the early '50's to the late '90's, and was chiefly responsible for development of the Unidyne 111 cartridge and its related models, among them the SM57, SM58, and the 545 series, arguably the most popular mics in concert audio and live sound reinforcement. How ironic that Mr. Seeler loved classical music and HATED Rock'N'Roll! Oh well...

Enter the Tin Sandwich. How does Saint Harmonica interact with this comparatively upstart technology? We'll be checking in with Paul Butterfield, Jason Ricci, John Popper, Magic Dick, Carlos del Junco, and Howard Levy next time on THE MIC BENCH

For pictures and descriptions of most of the microphones listed visit
http://www.harmonicamasterclass.com/vintage_collection.htm

To contact Fritz for his Custom Mics or Repair email him at harpmicman@earthlink.net