



LOU BURROUGHS



PAUL FRANKLIN

MICROPHONE FACTS

for the operating engineer

from *Electro-Voice*[®]

ELECTRO-VOICE, INCORPORATED
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THE 635 IS DEAD, LONG LIVE THE 635A!

By the time you receive this letter, the long popular Model 635 will have been replaced by the all-new Model 635A.

There is an increasing demand for a small, lightweight, high output microphone for stand and hand held use. It was with these things in mind that field tests began many months ago on a redesign of the Model 635.

During the field investigations into the design of the 635A various prototypes passed through many hands and a number of comments and opinions were accumulated guiding us to a more complete and versatile microphone than we alone could have conceived.

I want to take this opportunity to thank those of you who helped guide us to the final product. Following are some of the answers found through tests we were able to make under your operating conditions.

STEEL CASE DESIGN

A steel case proved to be superior for shielding purposes and when machined from one particular special steel alloy proved to be exceptional from a mechanical shock standpoint. Thus it was ideal for use in a microphone designed for hand held use where it is subject to the roughest treatment a microphone will receive in normal operations. I have one unit that was purposely dropped on hardwood and concrete floors twenty-seven times during tests without altering its frequency response.

INTERNAL SHOCK ABSORBER

A great deal of the ability of the 635A to withstand these many drops is due to the steel case, but there is another contributing unit, an internal jelly-like nest supporting the dynamic element. This shock absorber is used primarily to reduce the transfer of contact noise from case and cable

to the diaphragm but has contributed greatly to the prevention of mechanical damage to the internal assembly.

REDUCTION OF CONTACT NOISE

The combination of special steel case and internal shock absorber has reduced noise pickup due to mechanical transfer far below most would-be competitive microphones when used hand held. The 635A is equal to even the very few satisfactory ones but those sell for many times the price of the E-V unit.

INTERNAL POP FILTER AND WIND SCREEN

Where a microphone is hand held it is important that it have adequate protection against breath blast. In this instance we had two major problems, the breath filter had to solve the pop problem and also be compact enough to be built in. During tests many ideas were tried with the final choice being a four stage filter which proved to be so effective that, when used outside for hand held and lavalier applications, no additional wind screen was found necessary for distortion-free response under gusty wind conditions.

635A UNDER P.A. CONDITIONS

In many studio applications where P.A. systems are used, microphones must be relied upon to help control feedback. In several instances where small unidirectional units had been used with this in mind, it was found an equal output could be reached before feedback occurred using the omnidirectional 635A. This, of course, would not have been the case had the unidirectional microphones been well designed units with peak free response and good front to back ratio. This simply means that in these particular instances, unidirectional units were unnecessary for feedback control in the first place.

OMNIDIRECTIONAL VS CARDIOID MICROPHONE

Where a cardioid microphone is unnecessary for feedback control, the 635A will have three definite advantages over cardioid types as follows:

Where the 635A is used hand held, the pickup of noise from hand contact and from the cable will be greatly reduced over cardioid types. Breath popping will be almost totally eliminated; and due to the much wider pickup angle of the 635A, chances of the user ever sounding "off mike" are practically nil.

STAND MOUNTING

The Model 311 stand adapter was developed as an accessory to make the 635A instantly removable from a stand for hand held use. There will be no noticeable noise when removing the microphone and only a slight click when replacing it. A Model 311 specification sheet is enclosed.

CASE FINISH

It was found, during the tests, that regardless of the type, a painted finish would not long withstand the rigors of hand held use and the constant removal and replacement in the stand adapter. A matte satin chrome plate was found to be far more durable, much more attractive, and as non-reflecting as paint.

FREQUENCY RESPONSE

The tests indicated frequency response should be slightly rising above 2 kc to supply maximum presence and articulation without the harsh, raspy presence range found in several would-be competitors' products. The extreme low frequency response was also adjusted to help control rumble without attenuation of useful low frequency response. See response curve.

635A AS LAVALIER

Should you ever care to use the 635A as a lavalier, the latest 649B neck cord assembly will fit. All of the features of the 635A make it ideal for wearable-use, particularly under outdoor conditions.

SUMMARY

In summary, the Model 635A was designed with the help of several very knowledgeable users of microphones to include specific features required of a present-day versatile unit. The 635A has built into it the frequency response characteristics found most desirable for this use, minimum susceptibility to mechanical damage, maximum reduction of contact noise transfer from case and cable, minimum possibility of breath pops, and remarkable reduction of distortion caused by wind.

Watch for the 635A on your TV screen, they are popping up like mushrooms on TV network shows as the new first run productions appear this fall.

The final feature and the one that will really amaze you is the price tag it carries—a user net of \$49.20. That's remarkable, considering the recent comments of one recording mixer, who said, after listening to a vocal pickup, "The frequency response of the 635A is equal to my condensers."

DELIVERY DATE

The 635A is now in stock at the factory and on several distributors' shelves for immediate delivery.

The 635A, like all E-V professional microphones, is guaranteed unconditionally against malfunction for two years from date of purchase. Within this period, Electro-Voice will repair or replace, at no charge, any 635A exhibiting any malfunction regardless of cause, including accidental abuse. In addition, the 635A is guaranteed for life against defects in the original workmanship and material.

There are letters and then there are letters

We receive many letters in regard to many things and a good many times these letters will contain a word of praise for one of our products. Often satisfied customers take time to write in detail at some length about a product or service. Then along comes the occasional one that is really too good to keep to ourselves and this is the case with the following one that I am passing along to you.

Januarius primus, MCMLXV

Mr. Paul K, Franklin
Chief Field Engineer
Electro-Voice, Incorporated
Buchanan, Michigan

Dear Sir:

Some time back, I wrote you, asking to be "sold" on the merits of the E-V Sentry line of speakers. You told me to go forth to the Parts House and borrow a pair. I did. I heard. I bought them. And I heartily recommend them to any and all with a requirement to know what they are transmitting, what they really sound like -- uncolored by any gimmickry, boomy bass, or metallic treble.

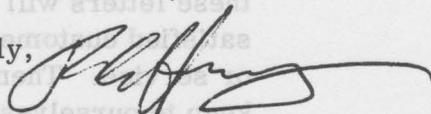
Having been a nut of sorts on audio for 10, these many years--since the days of Cinaudigraph speakers that we all used to over-excite the fields of to the point just short of fire for "better" results -- and a long time member of the AES, I am about as critical as they come. Having been educated by more than fourteen years in the same "good music" FM station, I have gotten even more critical as the years have passed. I am satisfied completely with my Sentry II monitors, which got only as far as my own living room. After the first evening's listening, I wrote a check for them and put in for a purchase order for two "Sentry I" units for the station that I run. Since then, engineers from several other stations have heard my II's and have avowed desire to own a pair for themselves and more for their control rooms. You were right -- these speakers sell themselves, just like the E-V mikes. They perform as advertised, which is quite a bit more than most advertisers can truthfully say about their products.

I have long been aware of the prevailing taste in audio, among most audiophiles -- they want lots of bass and too much high end for my ears -- yet every last hi-fi nut that has heard my system has wanted the dope on make, model, and specs on my Sentry II's. All have made the same comment -- "Clean sound" -- which it most emphatically is! I feel certain that my E-V speakers have resulted in the impending sale of several more pairs, just from listening to them. They should be advertised a bit more widely, I think. Or have you adopted the Hershey philosophy that a really good product need not be advertised -- it advertises itself? These speakers certainly do!

My good wife has been sort of "take-it-or-leave-it" about stereo, but since I installed the Sentry's in the living room, she now wants me to pick up a pair of your little suitcase Sonocasters and wire our front yard, which fronts on a big ravine, for stereo. (I already have mono speakers in the trees!)

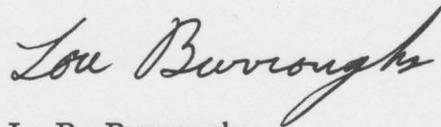
Your Sentry speakers are as much of a bargain as your 635 mikes, which have advertised themselves into almost every radio station in the country. It won't be long before there will be Sentry's in the control rooms of most stations, I'm sure.

Sincerely,


Frederick C. Hervey
Engineer in Charge, WHKW

As Mr. Hervey was told, borrow a Sentry and try it, don't take his word or ours, try one, or two if necessary and prove to yourself under your conditions what they have to offer. See Specification Sheet enclosed.

User Net price Sentry I\$165.00
User Net price Sentry II.....\$174.00



L. R. Burroughs
Vice President
Broadcast and Recording Equipment