

ASSOCIATION
FOR RECORDED
SOUND
COLLECTIONS



ARSC New York Chapter

Wednesday, October 19, 2022, 7:00 - 8:30 P.M.

KLAVIERHAUS: 790 11th Avenue

New York, N.Y. 10019

212.245.4535 info@klavierhaus.com

**(Southeast corner of 11th Avenue & West 54th Street -
One door South of the main entrance)**

Directions: Take the 1, 2, 3 or A, B, C, D to the 59th Street Columbus Circle Station, Q, R, W to the 7th Avenue/57th Street Station, or F to the 6th Avenue/57th Street Station on the west side. For the East Side, take the 4, 5, 6 or the Q, R, W to the Lexington Avenue/59th Street Station. Walk to the north side of 57th Street and transfer to the westbound M-31 Bus and take it to the last stop, which is on the north side of 54th Street, just east of 11th Avenue which is around the corner from Klavierhaus. An alternative is taking the M-57 Bus in the same direction and get off at 11th Avenue & West 58th Street; you'll have to walk 4 blocks south on 11th Avenue.

ARSC and its New York Chapter gratefully acknowledge the generosity of CCNY's Sonic Arts Center and its director, Paul Kozel, in making their facilities available for our meetings during the past decade.

Red-Book De-Emphasis Using the iZotope RX EQ Module Presented by Gary Galo

Audio Engineer Emeritus, The Crane School of Music, SUNY at Potsdam, NY

Many early digital recording systems used analog high-frequency pre-emphasis ahead of the analog-to-digital converters as a means of improving the poor low-level, high frequency performance of the early converters. A complementary analog de-emphasis curve was applied in playback, after the digital-to-analog conversion. The Sony/Philips book of specifications for the Compact Disc – known as the “Red Book” – included optional pre-emphasis and de-emphasis curves, with time constants specified as 50 and 15 μ Secs. Some early CDs, mostly discs made in Japan by Denon, employed this option. Several early digital recording systems, including the popular Sony PCM-F1, also employed pre-emphasis and de-emphasis equalization using the same time constants. Some 40 years later, audio engineers and archivists are faced with myriad problems in transferring obsolete digital formats to modern digital audio standards, not the least of which is how and where to apply “Red Book” de-emphasis when needed.

This presentation will describe the nature of the “Red Book” pre-emphasis and de-emphasis curves, including an analysis of these curves based on computer simulations. These computer simulations can be used to create a precise de-emphasis curve applied in the digital domain, using the equalization module included with the popular iZotope RX restoration software. The presentation will describe the evolution of digitally applied de-emphasis, the problems associated with some of the earlier efforts, and the final settings developed for the iZotope RX EQ module. Frequency response measurements based on computer simulations will be shown, verifying the accuracy of the final version, along with the errors inherent in some of the earlier efforts. This presentation is a slightly updated version of the one given at the ARSC annual conference in May 2022.

Gary Galo retired in 2014 after 38 years as Audio Engineer at The Crane School of Music, SUNY at Potsdam, NY. An active member of ARSC since the 1980s, he has given numerous presentations at ARSC annual conferences, many of which have been published in the *ARSC Journal*, and has written myriad book and recording reviews for the *Journal*. He has also been a regular presenter at ARSC New York Chapter meetings. He was the Sound Recording Review Editor of the *ARSC Journal* from 1995-2012, and co-chair (with Seth Winner) of the ARSC Technical Committee from 1996-2014. He is a Life Member of the Audio Engineering Society, and a member of the Boston Audio Society, as well as the *Société Wilhelm Furtwängler*, and The Furtwängler Center of Japan.

Klavierhaus has limited seating - up to 50 seats per presentation. As a result, please visit this link to register to attend the live meeting:

<https://forms.gle/AmK1x8wXv1mP9hCN7>

Please follow the link below in order to view the live stream that will occur during the meeting:

<https://www.youtube.com/channel/UCf-NmYJQD9BuREpJHi3L79Q>

The recorded version will be available for later viewing as always on the ARSC YouTube channel.

We apologize for the inability to stream the September meeting which was due to technical difficulties that sprung up just before the starting time; we are assured that the situation will be corrected for the October meeting.

OUR NEXT PROGRAM WILL BE ON THURSDAY

NOVEMBER 17th, with MATTHEW BARTON

"Presenting the Winter 2021-22 Compact Disc Issue of the ARSC Journal: An international tour of pre-1923 sound and music finally in the public domain, curated from the collections of ARSC's members, fully annotated and illustrated in the pages of Journal issue 53.3."

All ARSC NY Chapter meetings are free and open to the public.

Voluntary contributions to help defray our expenses are welcome and also tax deductible!

To join ARSC, visit <http://www.arsc-audio.org>