

Soundpage Exhibits From The Butterfly Collection

By Dominic Milano

THIS MONTH'S SOUNDPAGE, LOCATED between pages 50 and 51, is a little different from our typical offering. Instead of being a sampling of one or two pieces of music, it features three short excerpts from Wendy Carlos' *Beauty In The Beast* album and some commentary excerpted from her *Secrets Of Synthesis* record. Before each of the examples, you'll hear an unaccompanied line illustrating some aspect of the piece's tuning. For more details on those tunings, see page 64. Here's a breakdown.

Track 1. This is an excerpt from the barong dance (the dance of the dragon) in "Poem For Bali." The piece makes extensive use of Balinese pelog scales, which feature 5 of 7 notes and a sharp octave. The scale is heard before the example.

Notice also the incredible ensemble feeling of the playing.

Track 2. The pelog scale is perfect for producing rich, haunting melodies that can't be exactly produced in equal temperament, as this theme from "Poem For Bali" shows. The music (Ex. 1) shows what Carlos actually played on her standard keyboard; the opening lines of this track let you hear the melody in unaccompanied form. Compare what it sounds like in equal temperament and in the pelog scale by playing what's notated on an equal-tempered instrument.

Track 3. This excerpt from the title track to *Beauty In The Beast* demonstrates Wendy's alpha and beta scales. In the first unaccompanied line, you hear the minor third with a flat second step. Then comes the minor third divided further with three steps between the outer notes. Following that is the chord progression the piece is

based around. Finally we hear the finished excerpt (see Ex. 2).

Track 4. These examples are excerpted from *Secrets Of Synthesis*. Carlos lets us A/B the difference between equal temperament and her perfect tuning by playing the arpeggio (Ex. 3) first in one temperament, then in the other. Notice the quality of the eleventh (a perfect quarter-tone) in the perfect tuning. Next we hear cluster chords in both tunings. Notice the sub-octave fundamental that's clearly audible in the perfect tuning cluster. Though it's not actually being played in the cluster, it is perceived because the notes in the cluster are its harmonics.

Track 5. First we hear the perfect scale, followed by an excerpt from the "Dreams" movement of "Just Imaginings." Since this tuning involves 144 notes per octave, the four-bar phase (Ex. 4) took Wendy something like four hours to compose. is

Ex. 1. The "Poem For Bali" themes. Notice the notation for the particular pelog scale used in this example at upper right. This example is taken from the composer's handwritten notes. © 1985 Wendy Carlos, used by permission.

"POEM FOR BALI" - THEMES

0 = \underline{Bb} (D = 0, E = 121, G = 514, A = 698, B = 824)

Ex. 2. This excerpt from "Beauty In The Beast" demonstrates the rich harmonies available in Wendy's alpha tuning. © 1985 Wendy Carlos.

"ALPHA" scale: (#10-3) scale of 78 cent steps (= split -3rds) "Beauty In The Beast"

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Ex. 3. The arpeggiated chord used to illustrate the difference between equal-tempered tuning and perfect intonation.

"DREAMS" Har. Scale - Ending passing...

In D Harmonic → In F# Harmonic →