A musician dropping an instrument during a performance would usually be cause for alarm. And at first, so it was, as the ensemble So Percussion played on Sunday during the Bang on a Can Marathon in the Winter Garden at Brookfield Place in Lower Manhattan.

The piece was Bobby Previte’s “Terminal 4,” and the four members of the group stood at the front of the stage, holding drumsticks in X formations above their heads, beating them in increasingly complex rhythms. Then a stick fell to the ground.

The player hurriedly knelt to pick it up and continued with the rhythm. Order was restored. Then another person’s stick fell, and another, and another.

It quickly became clear that the players were intentionally dropping the sticks. They were also fishing sticks out of their pockets to increase the thickness of the bundles they held, such that they were eventually slapping together clusters of five, six, seven. That meant that five, six, seven sticks fell every time they were dropped, building the cacophony and also the sense of absurd hilarity.

Nothing better captured the playfulness of the annual Bang on a Can Marathon, a quality that came through even more strongly this year as a contrast with the event’s ever sleeker, ritzier surroundings. The Winter Garden used to be, if not exactly a dump, hardly glamorous. Now, with shiny Ferragamo and Burberry boutiques and an upscale food court, it has the chilly cookie-cutter fanciness of an airport in Dubai or Shanghai.

Bang on a Can is many things, but chilly cookie-cutter fancy is not one of them. Even as this new-music organization, founded and still run by the composers Michael Gordon, David Lang and Julia Wolfe, has grown from its humble roots over the past few decades, it has remained self-effacing and scruffy. Its yearly marathon is always attended by a charming mix of die-hards who stay for the whole thing (the better part of 11 hours on Sunday) and tourists who catch a few seconds as they walk through the glass-enclosed space on the way to 1 World Trade Center across the street.

The music, while eclectic as ever, often hewed to the overarching Bang on a Can aesthetic, which owes a substantial debt to the evolving repetitions of the Minimalism of Glass and Reich, infused with the sweetness of pop and the propulsion of rock. There was room on Sunday’s program for the sweet shimmer of the Crossfire Steel Orchestra, a steel-drum band; the Asphalt Orchestra’s raucous brass arrangements of both Pixies songs and Ivo Papasov’s Bulgarian wedding-band music; the Brazilian composer and musician Cyro Baptista’s joyous “Forró for All,” complete with melodicas and a percussion instrument made out of plastic tubing; and an impressive quantity of works (three, that is) for six pianos.
Those piano sextets were played by Grand Band, a kind of new-music supergroup. Mr. Lang’s “face so pale” and Paul Kerekes’s “wither and bloom” used this unusual ensemble to achieve a similar effect: gently poetic washes of sound. But Mr. Gordon, in “Ode to La Bruja, Hanon, Czerny, Van Cliburn and little gold stars ... (or, To Everyone Who Made My Life Miserable, Thank You),” inspired by his early (and clearly not entirely happy) piano training, conjured an entire ocean of pounding swells and receding tides, twinkling floods and chugging rhythms, a surprisingly loving homage to the études that haunted his childhood.

The marathon closed with Glenn Branca’s “Ascension Three,” a collection of intense pieces — deafening even through earplugs — for four electric guitars, bass and drums; among them, “German Expressionism” was languid yet muscular, “Lesson No. 4” raging and grinding. It was a stylistic echo (and substantial amplification) of Lainie Fefferman’s “Tongue of Thorns,” a surging, dark scream for electric guitar quartet, played earlier in the day with moody focus by the ensemble Dither.

Vicky Chow, one of the pianists in Grand Band as well as the keyboardist in the Bang on a Can All-Stars ensemble, brought comparatively bright focus to Tristan Perich’s dazzling “Surface Image,” an hourlong piece for solo piano and 40-channel one-bit electronics (in essence, a choir of 40 simple electronic sounds). The piano line was sometimes surrounded by a dense thicket of sounds and sometimes played a duet with a lonely beep; Ms. Chow remained serene and nuanced throughout.

Of four selections from “Field Recordings,” a recent Bang on a Can project that includes commissioned works for the All-Stars ensemble based around prerecorded elements, Johann Johannsson’s mysterious, hovering “Hz” and Anna Clyne’s sun-bleached, woozy “A Wonderful Day” were most memorable. But Best in Marathon honors may well go to the extraordinary Chinese singer Gong Linna. Her voice, a mixture of traditional and contemporary styles, was commanding and full of feeling in “Cloud-River-Mountain,” a song cycle by Lao Luo, Mr. Gordon, Mr. Lang and Ms. Wolfe set to Chinese poetry. Whether belting, keening or murmuring, insinuating or girlish, Ms. Gong is a star.