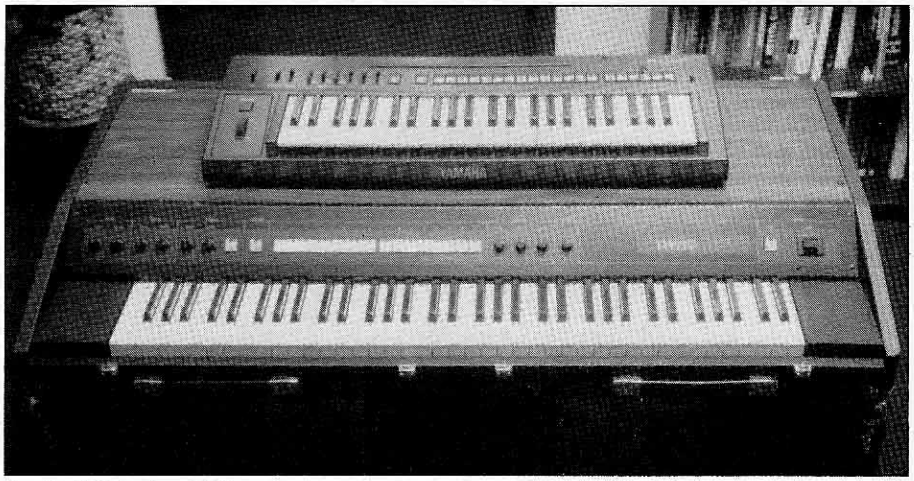
DOMINIC MILANO
KEYBOARD REPORT
Yamaha CE20 & GS2

THERE'S A COMMON misconception about high-tech digital keyboard instruments to the effect that they're necessarily very expensive and nearly impossible to fathom at first glance. This misconception tends to leave the guy who's just going to be playing casuals either intimidated by or just plain disinterested in digital instruments. However, Yamaha has recently unveiled a group of more affordable keyboards that use digital sound-generating circuitry and yet are more keyboard instruments and less synthesizers, making them readily accessible to players who aren't ready for a course in computer programming or who just don't want to bother having to figure out how to program basic sounds. In other words, you get some of the advantages digital technology provides, without the hassles that go along with the more intricate machines. This approach to instrument design will be a plus to many people, but a minus to a few (those who like getting their hands on the intricacies).



Yamaha CE20 (top) and GS2.

The CE20

The CE20 was by far the less expensive of the two instruments we looked at. It uses the kind of digital FM synthesis technology found in its big brother, the Yamaha GS1.

The Keyboard. The CE20's 49-note C-to-C keyboard is both velocity- and pressure-sensitive. When you hit a note hard, you'll hear plenty of dynamic change in its loudness. The pressure sensitivity is an after-touch effect — you have to press the key down into the key bed to get the effect. The pressure effect isn't quite as pronounced as the velocity effect, and the after-touch is monophonic, so that if you're using one of the polyphonic settings and you push down to cue in vibrato on one note, you'll get vibrato on all the notes.

When playing one of the CE20's polyphonic presets, you can play up to eight notes at once. If you press down more than eight keys, you won't hear the added keys until you let up some of the eight that are sounding. When one of the monophonic presets is in use, the keyboard puts out a single trigger (playing legato, you won't retrigger on every note, which is useful for phrasing), and the highest note played gets priority.

The Presets. The instrument has 20 preset tone colors, six of them polyphonic and 14 of them monophonic. The polyphonic sounds are called brass, horn, organ, electric piano, harpsichord, and strings. The monophonic sounds range from flute and oboe to electric bass. The sounds in the polyphonic section are good for all-around organ and string machine playing. The organ preset is especially pretty, but don't expect it to growl and spit the way Keith Emerson's Hammond does — it's not that kind of organ sound. The monophonic voices are also largely imitative of other instruments. The flute sound has a little breath noise in it for added authenticity. And the trumpet and trombone, when played idiomatically, sound very realistic. On the other hand, the electric bass and 'cello sounds aren't all that convincing, but you could still find musical uses for them.

To the left of the preset buttons is a button labelled 'symphonic,' which turns on a rich chorusing effect that fattens up the tone. You can put the symphonic effect on any of the sounds, but when you select certain of the presets it comes on automatically.

The Left-Hand Controls. To the left of the keyboard are a wheel and a pushbutton switch. If you're used to thinking of wheels as bending pitch, this one might confuse you for a second, because it doesn't bend pitch. It controls the speed of the glide between notes in the monophonic voices. (There is no polyphonic glide.) The switch turns the glide on and off. It is possible to mimic pitch-bending, since you only get glide between notes when you hold down one note, add a second, and then let off the first. Playing staccato won't produce any glide at all. This factor, coupled with the velocity and after-touch sensitivity, lets you do some very expressive playing with just one hand, while the other hand is comping on a piano or some other instrument.

Other Front-Panel Controls. At the left side of the front panel are a group of sliders. These control pitch, volume, tone, touch-sensitivity, and vibrato. The pitch control lets you adjust the range of *A*-440 as low as 435Hz or as high as 447Hz, which is useful for tuning the CE20 to other instruments, but isn't really enough range to let the control function as a pitch-bending device. The volume slider adjusts the maximum volume put out by the instrument; an expression pedal is supplied which will control the volume up to the maximum level set by the volume control. A brilliance control lets you adjust the brightness of the sound.

There are three sliders for controlling the touch-sensitivity, and another three for controlling the vibrato. Next to these six is a switch labelled 'preset.' When the preset switch is on, the sliders are overridden by the information in the presets; when it's off, the sliders are active. The touch-sensitivity controls are labelled 'tone initial,' 'tone after,' and 'vibrato after.' Tone initial adjusts the level of the note attack. The higher the setting, the more pronounced the effect of the velocity sensitivity will be. Tone after lets you vary the amount of brightness introduced by the after-touch. On voices that decay after their initial attack, such as electric piano, you won't hear much effect from the tone after control. Vibrato after changes the amount of variation in vibrato depth caused by the after-touch.

The three vibrato controls are labelled 'depth,' 'speed,' and 'delay.' The maximum vibrato depth is about a half-step. The speed is variable from around 3Hz to around 12Hz. The delay slider lets you introduce vibrato automatically at some point after a key is depressed (with polyphonic presets, a reset to zero vibrato occurs only after all the keys are let up; if you hold one key down until the vibrato starts and then add a second key, it will have vibrato immediately).

Inputs And Outputs. On the left end of the instrument is a recessed port with four jacks in it. There is a line level signal output, expression and sustain pedal inputs (pedals are supplied with the instrument), and an 8-ohm stereo headphone output.

Conclusions. The CE20 isn't a high-tech instrument on the outside. You can't program your own sounds into it, but you can do a lot of expressive playing with the touch-sensitive keyboard, and the sounds of the presets are mostly quite good, though some of them sound a bit odd in octaves outside the range of the instrument they're designed to imitate. It's not an instrument that will replace an entire keyboard stack — its main appeal will probably be to players who are looking for an expressive lead-line and polyphonic instrument to set on top of their piano for cocktail work, casuals, or whatever. Its touch sensitivity will be quite an advantage in a situation like this. Another advantage will be that it's quite portable. It measures 33-1/8" long, 11-5/8" deep, and only 3-3/8" high,

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