GREAT VIBES

Norman Weinberg is followed home by a Yamaha YV3400 Vibraphone.

DURING THE EARLY part of this century, entertainers were constantly searching for different and innovative ways to entertain their audiences and at the same time advance their careers. Vaudeville percussionists were notable in this endeavor, creating specialty acts featuring the xylophone and marimba. Manufacturers of the day served their clients by introducing a wide variety of "new" instruments into their catalogs. In 1921, the Leedy Drum Company released the vibraphone. It caught on, and the rest (as they say) is history.

Vibes differ from their marimba and xylophone cousins in several respects. The primary difference is that vibe bars are made of metal instead of rosewood or a synthetic resin. Metal bars account for the long sustained tone which is part of the vibraphone sound. The other main aspect that sets the vibraphone apart is the use of small "fans" inside the resonators. The fans are turned by a motor to produce a distinctive vibrato effect, hence the name vibraphone.

Extra Touches

THE YAMAHA YV3400 is a three-octave (F-F) vibraphone with full-size bars ranging from 2¼" at the lower end and graduating

to 1½" at the upper end. In this regard, the instrument is pretty standard for a professional model vibraphone. When I opened the shipping crate (a large anvil case) and started putting it together, it was obvious that this is no standard instrument. At almost every point of assembly, small "extra" design features made themselves known. It seems Yamaha did their homework *before* putting this instrument on the market.

I first noticed that the pins that hold the rails in place at the frame ends have little leather washers around them to help keep the rails from vibrating against the frame. And each rail slot was lettered from A to H – another perfect example of a nice touch. Yamaha didn't have to letter the slots this way, but it makes life a little easier. Sure, most companies number their rails from one to four (is rail #1 facing the player or facing the audience?) and anyone with a speck of intelligence knows that the wider bar suspension posts are on the lower end of the instrument. But with the YV3400, you don't have to remember where rail #1 goes, and you don't have to worry about putting the rails in backwards. Like I said – a little something extra.

A more accurate description of the wheels would be *tires*. These guys have a three-inch steel hub, a rubber ring around the outside, and measure in at a height of four inches. It's about time a manufacturer realized that musicians don't always roll their instruments across perfectly smooth floors; they often have to be moved over brick surfaces or poorly paved driveways or just plain ol' dirt. These wheels look as if they could take such abuse without bending or snapping their support posts. The two wheels facing the player have locking levers that are larger than most and hold the frame securely.

How about a vibraphone with adjustable height? It seems that Yamaha is one of the few manufacturers who has correctly determined that some people are taller than others. Accordingly, the YV3400 can be adjusted from 32⅓" to 35⅜" in height, easily, by turning four wing bolts, raising the frame end from the frame legs, and then tightening the wing bolts. Simple and elegant. Etched on the frame legs are a series of scale markings that make setting both ends to the same height a snap. In addition, there are four "height adjustment stoppers" (which look sort of like modified hose clamps) that can be adjusted with a drum key and serve as a memory lock.

Rods and Bars

THE NEXT STEP in erecting the instrument involved attaching the pedal stay rod (that's the one that connects the two frame ends). All together, it supports the oversized sustain pedal and the pedal rod that leads up to the damper. The whole assembly can be broken down into▶

► its three component parts, and the pedal stay itself can be folded in half so that the instrument can fit into a smaller space. No need to worry about the pedal folding up during a performance, either; there's a heavy-duty brace which prevents any wobble or movement of the pedal stay once it's tightened into place. Here's another nice touch: the stay and the sockets on the frame are both slotted so that the pedal stay can't be inserted into the frame incorrectly. You won't need to refer to the instruction manual to put this vibe together. Not only that, but the sockets that hold the pedal stay have plastic bushings – again, insulation to prevent any metal-to-metal contact which could cause rattling and buzzing.

The sustain/damper bar is a pretty normal affair. The only special features to mention are that the bar itself is made out of a substantial piece of metal (it's not going to warp); the felt looks to be of very high quality and, at one inch, is thicker than on most other vibes; and the entire bar can be broken down into two pieces! If this instrument were completely disassembled, it could have been shipped in a box a quarter the size of the anvil case. Perhaps a set of custom designed cases for the YV3400 wouldn't be a bad idea . . .

Resonators and Motors

TIME TO PUT the resonators on the frame. Yamaha has followed their own lead (from some of their marimbas) by including adjustable resonator stops for the lowest eight notes (low F to low C). This isn't a minor detail, it's a major design consideration. The purpose of the resonator is to increase the volume and the duration of the tone produced by the bar, and the resonator's length is critical in determining the sound of an instrument. To get technical for just a second, closed-end resonators should be a quarter wavelength of the fundamental frequency of the bar. Even though vibraphone bars are metal, changes in temperature and humidity do have an effect on their pitch. By allowing the player to change the effective length of the resonators, the instrument can be "fine tuned" to different playing conditions. Why only the lowest eight resonators? These lower notes are the most critical in terms of proper resonator length, and offering adjustable resonators for every bar on the instrument would boost the price considerably.

Next comes mounting the motor. The motor is *really* cool. Once the power is turned on, you simply touch the side of the control housing to turn the vibrato effect on and off. Yamaha calls it the "touch pause system." Touch once, on. Touch again, off. You know, like the touch controlled lamps you see at Sears. If for some reason you feel that the touch control is too sensitive, you can adjust it by turning a small screw under the control housing. Motor speed is controlled by a sliding lever rather than a knob. Instead of having a single belt connecting the motor to both sets of fans (naturals and sharps), this motor uses two belts. The belts themselves are grooved and fit into similar grooves on the fan pulleys. These belts *aren't* going to slip!

"The motor is ***really*** *cool. Once the power is turned on, you simply touch the side of the control housing to turn the vibrato effect on and off. Yamaha calls it the 'touch pause system.'"*

Without a doubt, the neatest thing about the motor is its ability to turn in complete revolutions. Let me try to describe how this works. If you set the fans to their full open position, then whenever you turn the motor off, it will stop the fans in the same open position. You never have to worry about the fans coming to a stop in the closed position (effectively cutting off the resonators). Depending on how you have the fans set initially (from full open to full closed), the motor will always stop the fans in the same location. Très cool!

After putting on the bars, the instrument looks like a winner. The entire frame and all its parts are black (except the dark grey rubber wheels). The bars and resonators are an anodized gold. Believe me, this isn't just a gold color, the bars actually look like they're made of gold.

When the instrument was together, my wife looked at me and said "No, you can't keep it." I guess I had that look in my eye again. This thing is a rock. The wheel locks prevent any extra movement, and the frame is secure and sure. It reminds me of a sports car that looks like it's moving at 80 mph when it's standing at the curb. It seems to say "Let's make some music."

"At almost every point of assembly, small 'extra' design features made themselves known. It seems Yamaha did their homework ***before*** *putting this instrument on the market."*

Sounding It Out

IT SOUNDS GREAT! The tone is different from any other vibraphone I've ever heard. It's tough describing a timbre with words, but a few did come to mind as I was playing: warm, dark, rich, full, thick, fat, centered, expressive, and easy to control. There seems to be more fundamental to the tone than on other vibraphones. However, I was wondering if my appreciation of all the design details was affecting my sonic judgement, so I called a few colleagues into my office.

One felt that the instrument would lend itself well to solo or small groups because it sounded very warm and rich. Another said that the tone had more "character" than other instruments. In addition, the instrument was very quiet. All of the metal-to-metal insulation actually works. Even when pounding on the bars, I never heard any buzzing, rattling, or extraneous sound from the frame. The fans rotated without squeaking or grinding, and the motor was the most unobtrusive I've ever heard on any vibraphone. An instrument this quiet would be perfect for a recording studio.

I decided to get a few other opinions. I placed the Yamaha and a Musser M-55 Pro Vibe in the band hall and invited five other teachers and several students to listen to them. I didn't ask them to select which instrument they liked best, only if they could tell a difference between the two. Without looking at the instruments, a strong majority could pick out the Yamaha (they all knew the sound of the Musser). It didn't make any difference if I played single notes, chords, or running passages, the differences in timbre were obvious.

The bars are tuned to A = 442, and the tuning is extremely accurate. When playing octaves, fifths, even major thirds, there is no telltale "beating" in the sound. I tested the tuning of the overtones, and believe me, they're also right on!

One of the things that impressed me the most about the sound was its evenly balanced across the keyboard; I couldn't find any hot spots or "dead" bars. On most other vibes, lower notes will tend to fade out faster than the middle and upper range. On this instrument, all bars had approximately the same maximum duration.

The Bottom Line

IS THIS INSTRUMENT for you? With a list price of $4450, it's comparable to other professional model vibraphones. The sound is very warm and mellow, the workmanship is definitely quality throughout, it's extremely quiet, packs up for easy transportation – in short, it's very well built – *and* it looks great. What more could you ask for? If you're in the market for an extraordinary vibraphone, check out the YV3400 in person . As for myself . . . But gee, it followed me home, can I keep it, huh, can I? ®

PRICE $4450

MORE FROM Yamaha Music Corp., PO 7271, Grand Rapids, MI 49510. Tel: (800) 253-8490.