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REVIEW

BY SCOTT DORSEY

The Ingram Engineering MPA685 preamp is one of an increasingly rare breed of preamplifier: a preamp designed to be clean and accurate while using transformer coupling. This is a difficult task to do, but it's a worthy one in the real world, where RF interference is a problem and getting the best performance out of dynamic mics is essential.

I think the Ingram does it well. The MPA685 also has a lot of additional features like highpass filtering and high-Z unbalanced inputs and outputs in addition to the normal balanced ones. These are features that make it very useful as a general-purpose tool in this age of studios without consoles.

worth worrying about. I think you could get something more neutral in style with something like the Grace or the Millennia Media, but the little coloration that this preamp has is pleasant and musical.

This preamp has both instrument-level high-Z inputs and isolated instrument-level outputs. I tested these to see that they worked and they were seemingly noise-free, but I can't say more than that because I don't really know what those signals are "supposed" to sound like. They sounded like a clean DI box to me, but I don't spend a lot of time listening that way so you'll have to try that out for yourself. I really liked the stepped gain controls, a big plus for stereo miking since you can set both channels very

Shure SM57 (famous for how its tone can be tweaked by messing with impedance). The highest setting wasn't quite high enough for a vintage 77DX to get some crispness in the top end, but it was entirely reasonable even for that RCA.

Note that the effective gain changes when you adjust the input impedance, so this can fool you; the higher setting always sounds better because it's louder, but when you adjust the levels you find the tone is not always better that way for a lot of mics. This is actually the way all adjustable input preamps are, so it's not a flaw of the Ingram but just a thing to watch out for when testing preamps.

If you regularly use moving-coil dynamic and ribbon microphones a lot, the ability to adjust the impedance is a hugely powerful tool. If you're using condenser microphones

Ingram Engineering MPA685

Flexibility, clear sound, and loving care in construction distinguish this beautiful preamp



Listening

In general listening to it, I thought the sound of the thing to be in the same category as that of the old Great River MP-2 or the John Hardy Jensen Twin Servo: very clean, with a slight hint of the kind of blending effect that transformer coupling can give you. It was not harsh in any way, but it was also not artificially "warm", and what effect it did have was quite subtle.

I wound up using it along with a Great River MP-2 preamplifier on a classical job, and the sound of the two was quite close overall. Extremely neutral sounding, not artificially warm but not artificially cold or bright either. I also used it on a couple of sessions for spot mics, and did some comparisons with the Millennia Media HV-3. It's a bit more colored, a bit more warm-sounding perhaps, than the HV-3. Definitely not a sound you would do poorly with on anything, I don't think.

I really like this whole style of sound and design because it's so versatile. It's intended to be neutral, and it manages to come very close to neutrality, to the point where the coloration that is left behind is hardly

precisely to identical gains. The controls had a huge number of steps as well, more than the attenuators I am used to.

I do sort of wonder why there are separate input and output gain controls. This is a common feature for a highly colored preamp where you might want to change the sound by adjusting the level that the input stage is being operated at. But that's not the case with this preamp; I found I could trade gain between input and output with little change other than noise, which is how it's supposed to be. The highpass filter was handy and useful although it didn't seem as sharp as the console filters I am used to. Also, with the gains all the way up, there was a hum when my hand was touching the highpass control knob; this went away during normal use.

I was very pleased with the adjustable impedance control, which does the job the proper way—by adjusting input taps on the input transformer rather than just adding shunt resistors. You can tell this because the noise floor remains low as you drop the impedance. The lowest setting was enough to make a tremendous difference with a

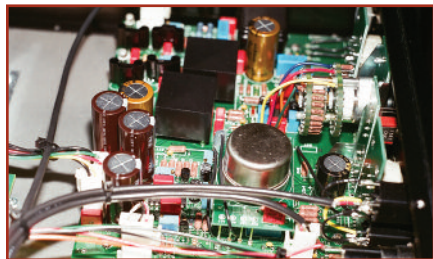
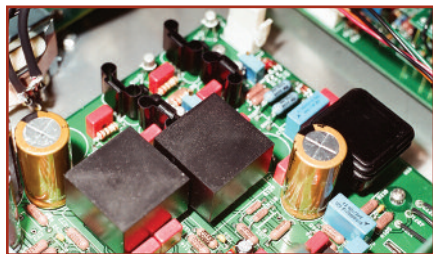
exclusively it's not something you'll need to bother with. On more efficient and tightly coupled dynamics like the SM57, the difference is amazing, and the ability to control the top end ringing of the microphone is a useful production tool, especially for drum miking.

Inside the box—looking and testing

The circuit topology is a very familiar one that has served well over the years, but the manner in which it's implemented is clean and up to date. The normal microphone input stage is transformer coupled, with a Sowter 1196 input transformer which is mounted on a little daughterboard to allow other transformers to be swapped in. What is the Sowter 1196? I don't know, it's not even in the Sowter manual... but whatever it is, it sounds pretty clean and passes a 1 kHz square wave nicely. This drives a circuit that seems to be based around three discrete potted gain block modules. What's inside them? I don't know, but they look to be pin-compatible with the classic Jensen JE990 op-amp module, although I'm guessing at least the first one in the chain has an FET front end in there.

There is a huge number of trimpots inside the box, making it clear that offset and symmetry are being hand-set individually on each unit at the factory. There is some servo control going on in there too. The gain controls are indeed genuine stepped attenuators, very nicely made with a lot of steps. And there was a very clean Jensen output transformer, known for its ability to produce low distortion into a variety of different loads without worrying about termination. The internal layout is modular with common AMP connectors, which makes service work a lot easier than it would be on many modern designs. The power supply is oversized, aggressively regulated, and has a lot of line filtering.

Overall, the layout and design are impressive and carefully done, and it's clear that building something like this in today's world is very much a labour of love,



because it's clearly designed for the long-term, to be easily maintained and to be reliable. I so seldom see gear like this today, because people aren't willing to invest what it takes to do things right most of the time. I do worry about long-term support for products like this because, without complete service documentation, it's difficult to repair them properly, and when you have a product designed to last a century, sooner or later someone other than the manufacturer is going to have to work on it.

Frequency and impulse response tests looked good; you could see enough of a little ringing peak on a 1 kHz square wave to believe that there was a transformer in there, but you'd have to look very closely on the scope to see anything. I tested RF sus-

ceptability in two ways: first of all by keying up a 1 W walkie-talkie on 146 MHz near the microphone, and secondly by using it in the broadcast studio of a 1500W AM radio station. Both tests seemed fine. None of this is conclusive since it's not an exhaustive test of all possible frequencies, but it's a good basic sanity check. The gain controls matched to less than 0.2 dB in the middle of the adjustment range; I am not equipped to measure more accurately than that!

Summary

The Ingram MPA685 sounds good, as clean and neutral as a transformer-coupled preamplifier can be, but it has some of that sense of blending that good transformer designs give you. It is built to last

a long time, so the comparatively high purchase cost may seem fairly small over the lifetime of the preamp.

This is the kind of preamplifier I want to see more of in our world. It does what it's supposed to do and it doesn't add much else to the sound. It has a lot of Swiss-army-knife style features that can be very handy in a modern studio. And it's built with care and to last several lifetimes. ☺

Price: \$1650

More from: Ingram Engineering,
www.ingramengineering.net

*Scott Dorsey (dorsey@recordingmag.com)
loves it when gear manufacturers get it right.*