

**Volume**

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JOHNSON AMPLIFICATION

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Tube Integrated Modeling

# Information Worksheet Guide

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## Tube Integrated Modeling

### What it Means to You

*The importance of integrating actual tube circuits for the purpose of giving you the finest amplification available today.*

#### ICON KEY

-  Valuable information
-  Test your knowledge
-  Workbook review

Tubes have long been a staple in guitar tone. Johnson Amplification has gone to great lengths to capture the magic only a true tube circuit can produce. So what exactly is “Tube Integrated Modeling”?

**Tube Integrated Modeling** is the integration of tubes and their authentic driver circuitry into both digital and analog circuitry. By incorporating real “high-voltage” driver tubes and their authentic circuitry into the digital realm Johnson Amplification has taken a step beyond ordinary modeling.

### Driver Tubes and Their Circuitry

Tube amps all have one thing in common... driver tubes. The “driver tube” is what took your standard guitar level signal and transformed it into a higher voltage signal that your amp could use and understand. Before your signal could make it to the tone controls it had to be boosted by a driver tube. This driver tube (or tubes) adds warmth, gain, natural compression and responsiveness to the amplifier. Most classic amps have one driver tube. Most “hot-rodded” amps have two driver tubes. This extra driver tube adds more gain to the circuit.

Johnson Amplification has gone an extra step in modeling tube circuitry in their amps. Johnson actually incorporates the actual “driver circuitry” along with the actual tubes. If you select a classic “American” amp model your guitars signal is routed through the actual circuitry that surrounds that tube in it’s original amp. You’re driving that tube exactly the same way it would be driven in the original amp modeled. Switch to a classic “British” amp and the “driver circuitry” changes again. No other amplifier in the world operates at this level of sophistication.

## Authentic EQ Tracking

### Plotting a Course for Tone

*How can you possibly sound like those amps unless you're working with the same tools? Not just "modeled" tone controls, "Authentic" tone controls.*

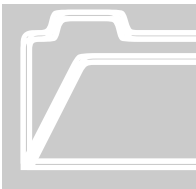
**T**one controls have been the major force in defining the sound of an amp. It goes without saying that the tone controls are the heart of the amps voicing. There are many types of tone controls. There's active, passive and in between.

**Authentic EQ Tracking** is the plotting and tracking of the original tonal curves and characteristics of the tone controls of the amplifier being modeled. Johnson has gone another step beyond by modeling the actual tone circuits of these classic amps

### Authentic EQ Tracking... Don't be Fooled

Some of the modeling amps on the market claim that they model EQ sections. In the world of magic they tend to call this "smoke and mirrors." Let's explain the difference between simply modeling something and modeling authentic EQ curves.

If you model an EQ curve your saying that you store that curve into digital memory. This being said, these other modeling amps do "model EQ curves." But are these curves accurate? The answer: No. Johnson Amplification has gone to great measures to incorporate "authentic" EQ tracking in every one of their models. You select a classic "American" amp you get those tone controls. Sweep the treble control on a "British Class A" model and see what happens... very active. Just like the authentic amp. Try that on one of the other modeling amps on the market. Try the bass control on an "American" model. Other modeling amps don't even come close.



Authentic EQ tracking gives you an accurate tonal map of the amp you're seeking. This is the only way to get great sounding amp models in a modern package. Authentic EQ tracking is only on Johnson Amplifiers. Don't be fooled.

## Amp Models... The Best That They Can Be

*When you add it all together you get the finest amp models in the industry. Tube Integrated Modeling and Authentic EQ Tracking makes it all happen.*

**A**ssuming you now understand the importance of Tube Integrated Modeling and Authentic EQ Tracking, you'll notice a marked difference in the actual sound of Johnson's amp models.

**Details, Details, Details...** They say that god is in the details. It's true. It's the small details that make all the difference in the world when you're modeling classic tube amplifiers. Details like driver tubes and their circuitry integrated into the amp. Details like Authentic EQ Tracking giving you the tone you want.

### The Amps Modeled

Now that we've explained a bit about tubes and EQ's let's take a look at how we applied it all in modeling classic amplifiers.

**Classic American Amplifiers** - The reference amplifiers used for these models include;

65 Black Face Twin, 65 Twin Reissue, 57 Tweed Deluxe, Boogie MKII Combo, Boogie MKII Head, Boogie Rectifier Combo, Boogie Rectifier Head, Matchless DC30

**Classic British Amplifiers** - The reference amplifiers used for these models include;

70 Super Lead 100, JCM800, JCM900, Bluesbreaker Combo, HiWatt 2000, Vox AC30 Top Boost



Johnson models include tonal characteristics from many of these amps with modern gain stages and channel switching combinations.

## It's About Effects... Do You Have Control?

*If you're going to have effects on your sound you surely need control over them. Sometimes a little is all you need. Are you in control over your effects?*

**E**ffects have become a very common part of every guitarists arsenal. From the early days of stomp boxes that offered distortions and modulation effects to the full blown rack systems that rivaled your families refrigerator. Effects have made their way into our music.

**Do you have control?** They say the best effects go un-noticed. Can you imagine having a chorus pedal with no speed or depth control? Can we interest you in a delay that doesn't allow you to program the feedback repetition? Wouldn't you like to select the type and amount of reverb on each preset?

### I Wanna Be Like SRV

I'm a fanatic. I've got the perfect guitar. I use 13 gauge strings. I've practiced until my fingertips have come off... let's check out some of those modeling amps.

**The Johnson JM120** - I'll set my amp model to "Black Face". Now I'll add that classic "Rotary" speaker effect. A pinch of delay (1 repetition slapback) for affect, and now some spring reverb. Cool tone. Let's try it on the other modeling amp.

**Other Modeling Amps** - I set my amp model to "Black Panel". Grab the "Rotary" effect. Add delay... wait a minute, I can't have delay with the rotary effect? Oh well, I'll just try it with a delay/chorus mix. I'll turn the speed up on the chorus to compensate... wait a minute, no speed control for my



chorus? The delay is bothering me, let me set the feedback... what? No feedback control? What does "Tweak" do?

Johnson Amps give you vital control over your effects like, chorus speed and depth, delay feedback and reverb type.

## Presets... Are you Limited by Your Amplifier?

*We don't make you buy an expensive foot controller to get more presets. You bought them, they're yours.*

**W**ouldn't it be nice if we always got what we paid for? Johnson Amplification gives you the presets that you paid for. With Millennium series amps you get a hefty 100 user and 100 factory presets. With Marquis series amps you get 27 user and 27 factory presets. You get these presets without having to buy an extra pedal. They're yours. You paid for them.

**The extra pedal trick** - Other amplifier manufacturers would like you to buy an expensive pedal so you can get more presets. So all the sudden that \$899 amp is costing you \$1,198. What does that pedal give you in the way of presets? 12 more. You're still left with 16 presets.

You should get what you pay for. More presets allow you the freedom to express yourself in many different ways as you play. Don't be limited by your amplifier.



## The Back Panel... Where it All Comes Together

**T**he back panel of your amp never gets noticed however, this is where it all happens. Headphone jacks. Direct recording outputs. Effects loops. Speaker switches. Controller jacks. They're all hiding back here waiting to be used

**Make the most of it.** Johnson amps come with a ton of extra features. Why not put them to good use? You'll never know how flexible a Johnson amp can be until you put it through it's paces.

### Controller Jacks

These inputs allow you to hook up an external foot controller for live applications.

### Headphone Jacks

This output allows you to practice in total privacy without bothering others.

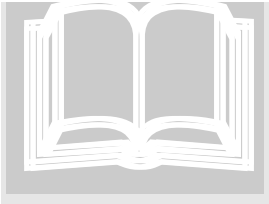
### Direct Recording Jacks

This output allows you to go directly into a mixing console or power amp. The signal is compensated with a cabinet simulated sound.

### Effects Loop Jacks

These stereo TRS (tip, ring sleeve) inputs and outputs allow you to insert a true stereo effect into the signal chain of your amp.





## Workbook Review

*Take a few minutes to review what we've learned, it makes that really tough test that much easier.*

**L**et's review what we've learned so far. After the workbook review is a simple test to challenge your newfound knowledge on Tube Integrated Modeling and Johnson Amplification.

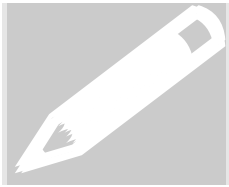
**Tube Integrated Modeling** - The integration of tubes and their authentic driver circuitry into both digital and analog circuitry. By incorporating real "high-voltage" driver tubes and their authentic circuitry into the digital realm Johnson Amplification has taken a step beyond ordinary modeling.

**Authentic EQ Tracking** - is the plotting and tracking of the original tonal curves and characteristics of the tone controls of the amplifier being modeled. Johnson has gone another step beyond by modeling the actual tone circuits of these classic amps

**Great Amp Models** - Details like driver tubes and their circuitry integrated into the amp. Details like Authentic EQ Tracking giving you the finest amp models available today.

**Effects Control** - Can you imagine having a chorus pedal with no speed or depth control? Can we interest you in a delay that doesn't allow you to program the feedback repetition? Wouldn't you like to select the type and amount of reverb on each preset? Johnson Amplification gives you these vital controls over your effects.

**Presets** - Don't get stuck having to purchase an extra pedal just to get at your presets. Johnson Amplification constantly gives you more presets and allows you to access them all from the front panel.



## It's Test Time

*Time to sharpen those pencils and begin. Circle the correct answer.*

### **What is “Tube Integrated Modeling”?**

- (a) A marketing catch phrase to make you think there's a tube in the amp.
- (b) The integration of tubes and their authentic driver circuitry into digital and analog circuitry.
- (c) Something all modeling amps have.
- (d) A way of making a digital chip sound like a tube.

### **What is “Authentic EQ Tracking”?**

- (a) Your sound changes when you turn your tone controls.
- (b) A way of saving your tone control settings in presets.
- (c) The plotting and tracking of the original tonal curves and characteristics of the tone controls of the amplifier being modeled
- (d) Something all modeling amps include...

### **Johnson Marquis and M**

- (a) High-Voltage tubes with authentic driver circuitry.
- (b) Authentic EQ Tracking for each amp modeled.
- (c) Painstaking attention to the detail of tone.
- (d) All the above.

### **Do all modeling amps give you control over your Chorus Speed?**

- (a) Yes.

(b) No.

**Johnson Amplifiers always give you...**

- (a) Limited preset access. You'll need an expensive foot controller to access more.
- (b) Less presets than other modeling amps.
- (c) More presets than other modeling amps with access to every one.
- (d) All the above.

**Johnson Amp Patches Include...**

**Johnson Marquis and M**

- (a) High-Voltage tubes with authentic driver circuitry.
- (b) Authentic EQ Tracking for each amp modeled.
- (c) Painstaking attention to the detail of tone.
- (d) All the above.

**Do all modeling amps give you control over your Delay Feedback?**

- (a) Yes.
- (b) No.

<b>Test Answers:</b>	
(b) The integration of tubes and their authentic driver circuitry into digital and analog circuitry.	(d) All the above.
(c) The plotting and tracking of the original tonal curves and characteristics of the tone controls of the amplifier being modeled	(b) No.
(d) All the above.	(c) More presets than other modeling amps with access to every one.
(b) No.	(d) All the above.
(c) More presets than other modeling amps with access to every one.	(b) No.

**Notes:**