Boss TU-15 Teardown

Reverse Engineering (SE4920) Final Project

Steve Mazza

Functional Blocks

Tuning

Pitch Generation	Pitch Analysis

Note Selection	Play	Mode Selection	Input

Chromatic	Bass	Guitar	Microphone	¼" Jack
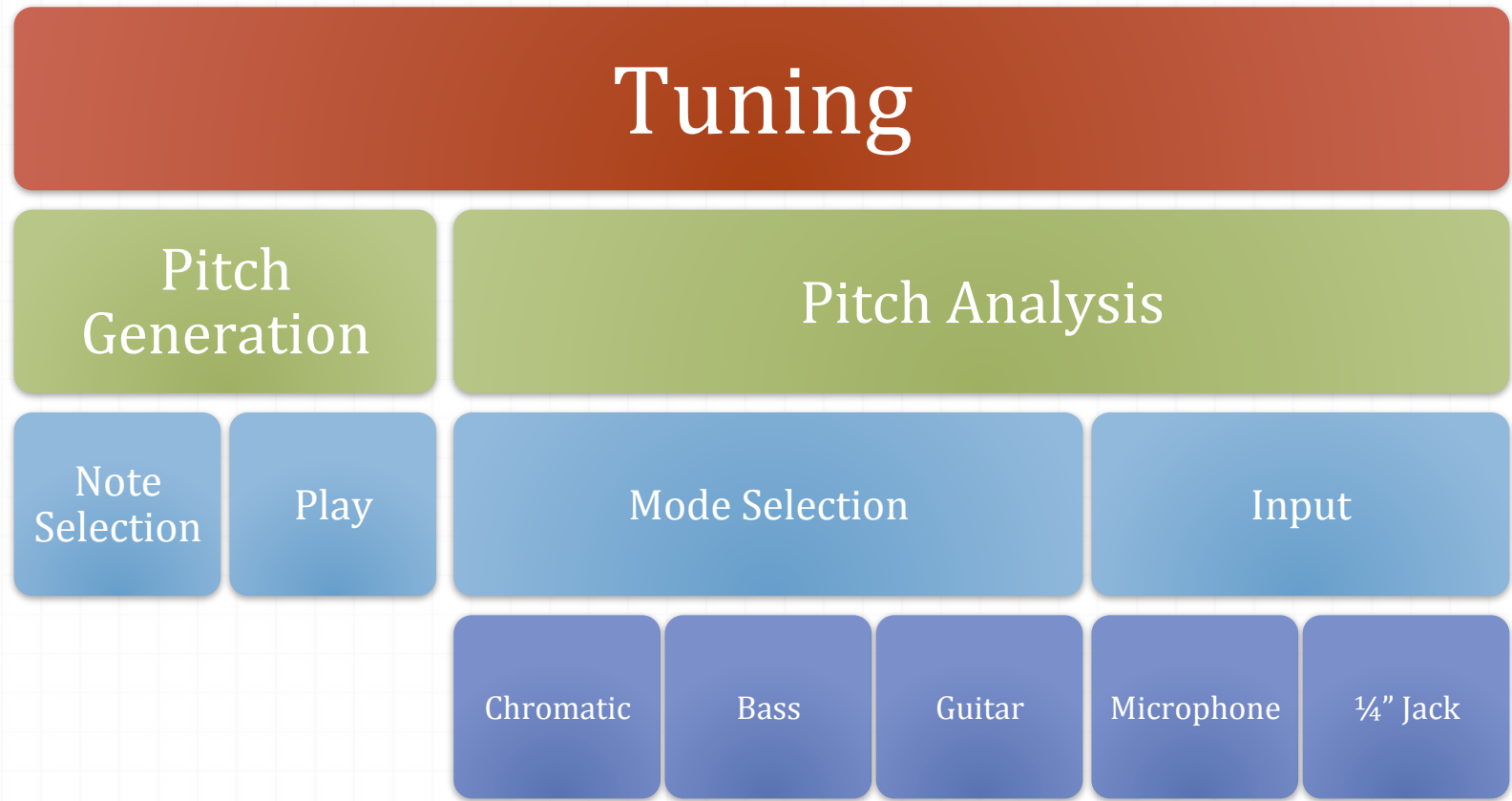
Outstanding Questions

What is the largest chip on the board which is labeled TUN0281?

Who manufactures this chip?

Are all of the system's functions contained in this chip?

What other commercially available devices use this (or a similar) chip?

Lessons Learned

It is efficient and safe for a manufacturer to encode almost all of an appliance's intelligence into a single integrated circuit. This effectively black boxes the capability, lowering manufacturing costs and protects the company's intellectual property.