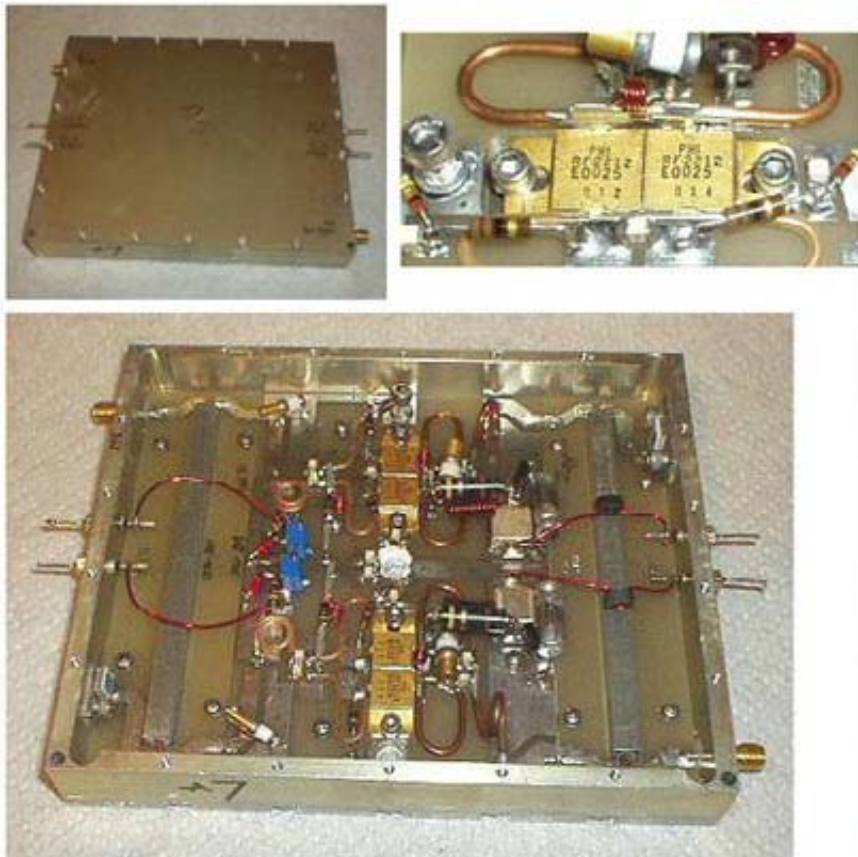
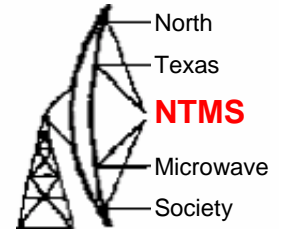


# Surplus solid state amplifiers

Dave Robinson WW2R

# 220/432MHz



28V operation

222MHz

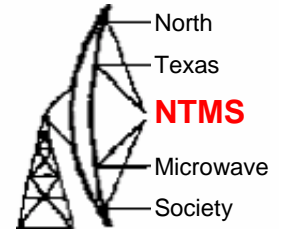
2W in 95W output

432MHz

3.5W in 45W output

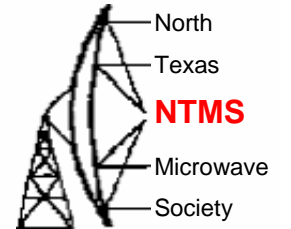
**\$25!**

# Spectran 2.3GHz PA Unit



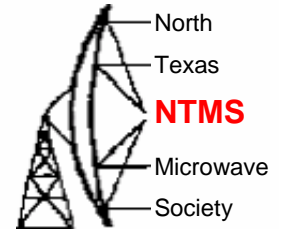
Commercially rated at 50W out on 2.3GHz, claimed to do 180W in Amateur service! Still available from Pyrojoseph on ebay

# Spectran Amp module

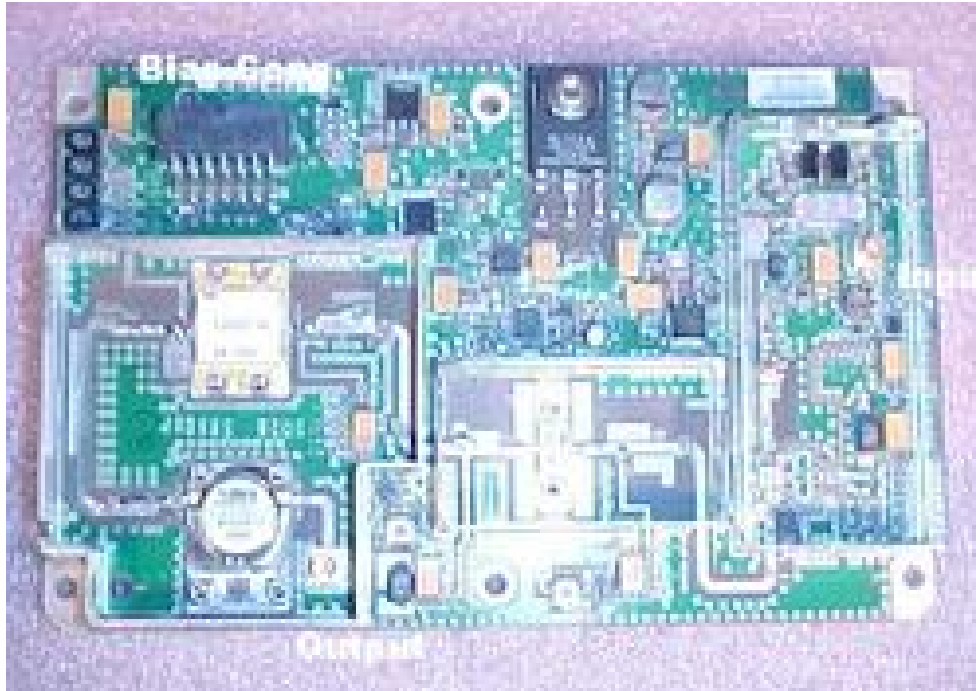
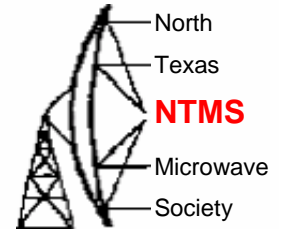


For a while DEMI sold module mounted in Box with Fan.  
Mine does 95W output with 1 W drive. Uses 28V

# Amp External View

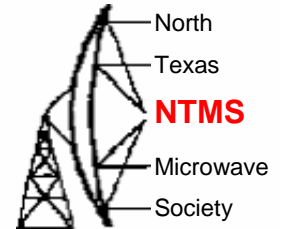


# Spectran Driver



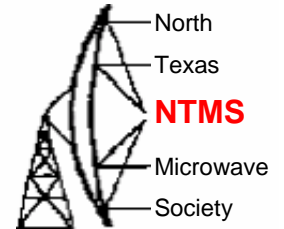
**7mW input 15-30W output. Class A, 13.8V 10A**

# 3456MHz



- California Microwave 11-026700 transmitter assembly
- Toshiba UM2683A amp

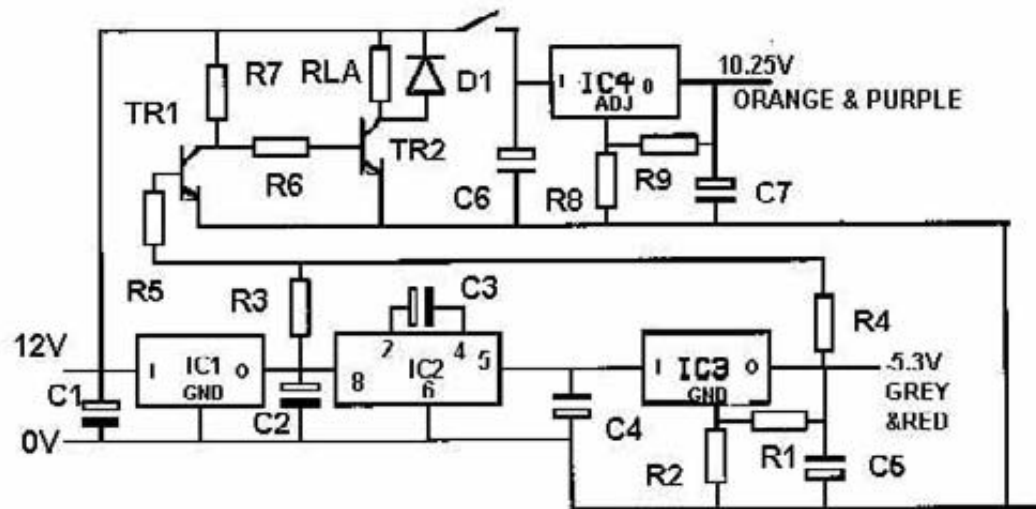
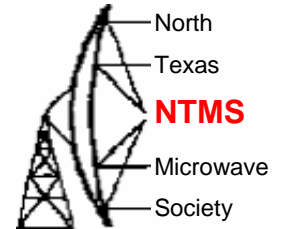
# California Microwave 11-026700 transmitter assembly



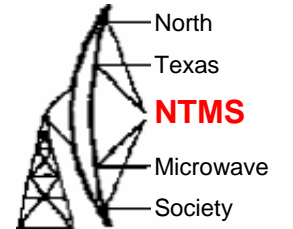
1. Used by AT&T for 3.7 - 4.2GHz microwave links
2. 24V powered by separate "Power supply 52-090095-0".
3. PA unit 12.5 x 5.5 x 1.5 " can +13 x 6.75 x 1.5 " heatsink.
4. SMA input, waveguide output (easily modified to SMA)
5. PSU 19 x 6.5 x 2.5" box provides +10.25 and -5.3 Volts.
6. In its original state the amplifier's performance is poor at 3456MHz and will need retuning.

# Performance

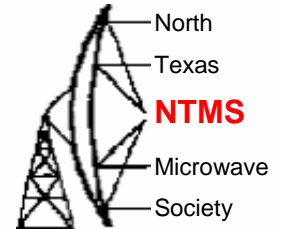
- Needs retuning with copper foil tabs
- When retuned 1mW in on 3456MHz produces >7W output
- Easily converted to 12V operation



# Integration

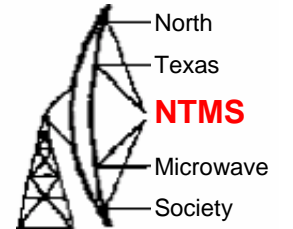


# Toshiba Amp

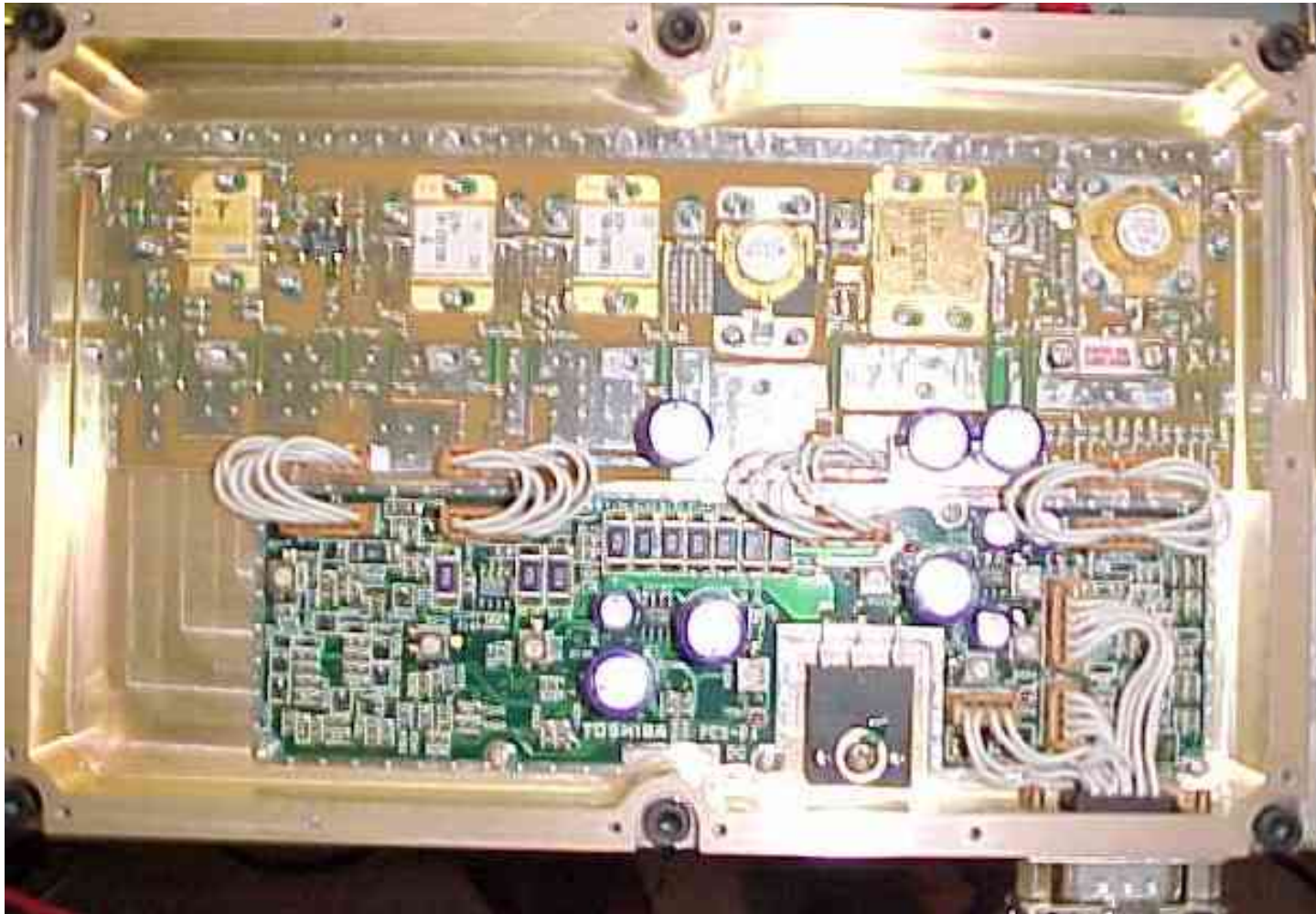
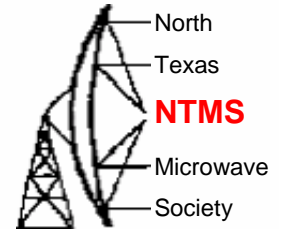


- Surplus from South American ATT project
- Covers 3456MHz; no RF tuning needed
- Two versions “20W” and “40W”
- Only adjustment is setting the bias pots
- Best operated from 12.6V. 13.8V possible but extra heat to dissipate, takes ~15A
- Needs big heatsink anyway!
- Mine produces 55W with 1mW drive

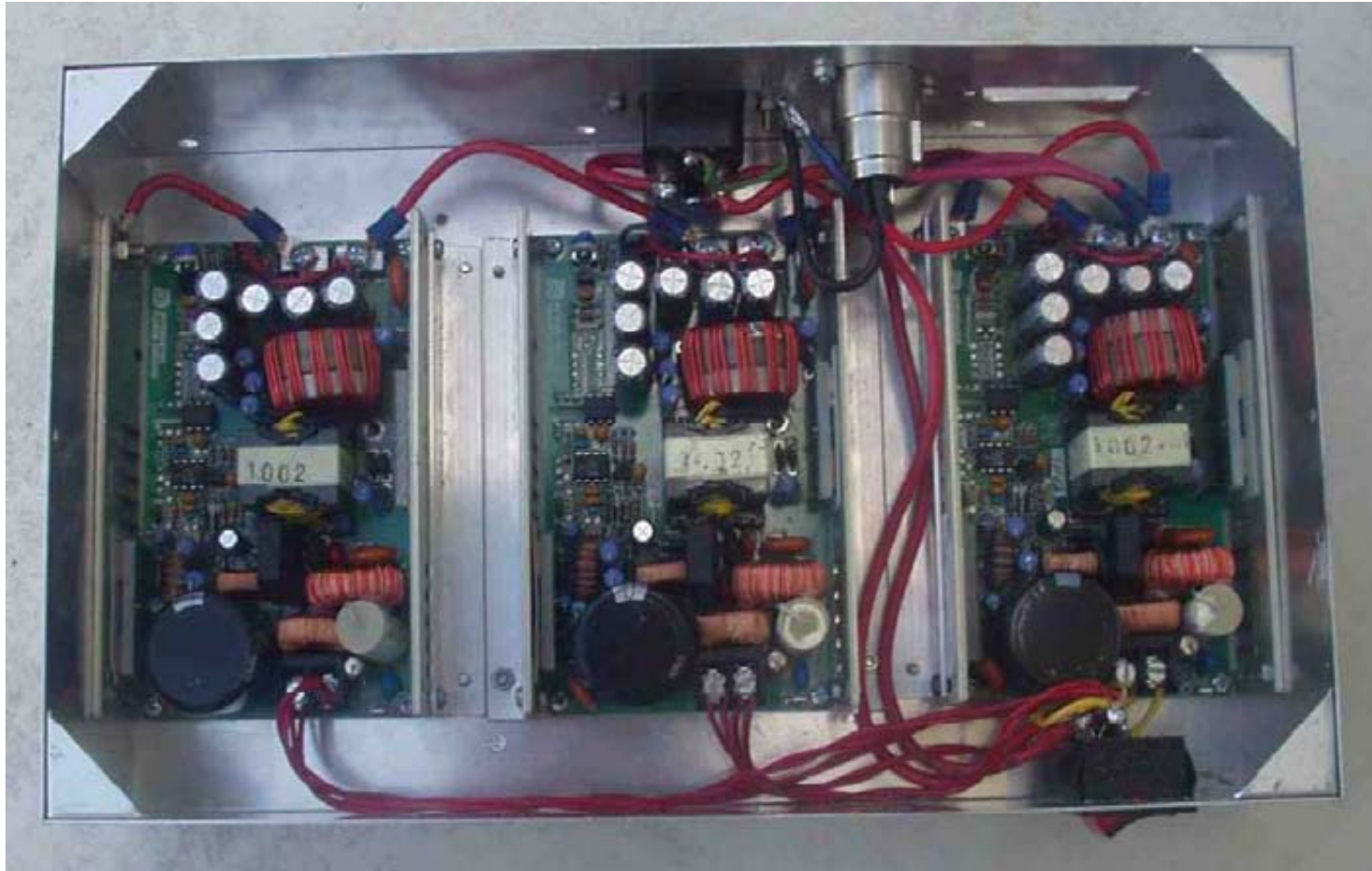
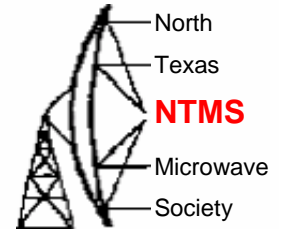
# Toshiba Amp



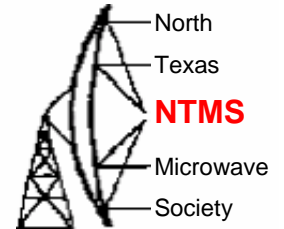
# Toshiba Amp



# Toshiba PSU

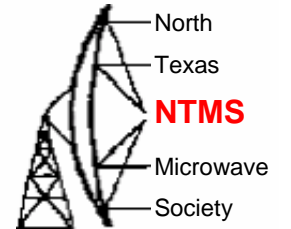


# 5760MHz



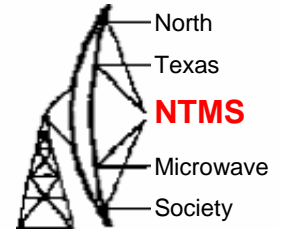
- Rockwell 251-9735-010
- Fujitsu Amplifier
- Avantek AWP-64100
- All run around 6W output with ~1mW drive
- Originally designed to work off 28V supplies, can be run off 13.8V (Rockwell details published, rest to follow)

# Rockwell 251-9735-010

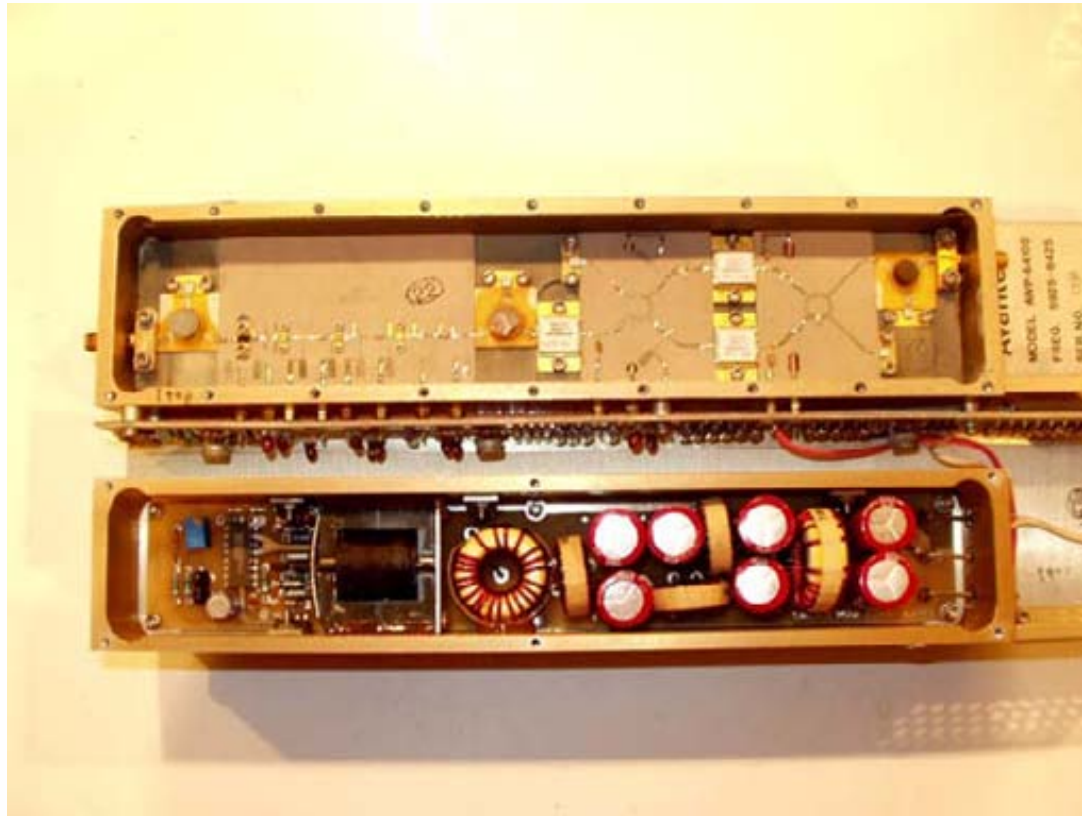
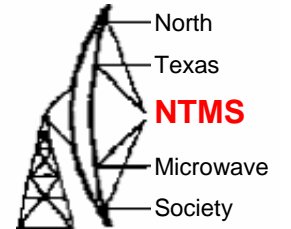




# Avantek Amp: External

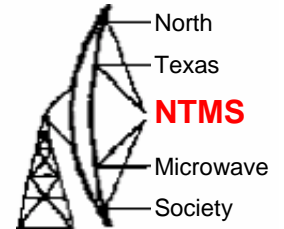


# Avantek Amp: Internal



28V powered PSU in lower compartment, can be replaced by much smaller 13.8V powered unit (to be published)

# References



220MHz amp

- <http://users3.ev1.net/~g4fre/gallery.htm>

California microwave 3456 Amp

- <http://users3.ev1.net/~g4fre/34pa.htm>

Rockwell 5760 Amp

- <http://users3.ev1.net/~g4fre/rockpa.htm>

Toshiba 3456 Amp

- [http://users3.ev1.net/~g4fre/Toshiba\\_amp.htm](http://users3.ev1.net/~g4fre/Toshiba_amp.htm)

Avantek 5760 Amp (deals with mechanical aspects)

- <http://www.nr6ca.org/avantek-amp.html>