

Triple Probe Tuner 19 May 2004

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I think we can use the Triple-Probe Tuner as a harmonic load pull tuner too!

The tuner is calibrated, say, at 400 points for  $f_0$ ,  $2f_0$  and  $3f_0$ , for all 3 probes.

This will take, say, 20 minutes!

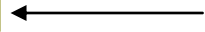
The combined impedances are  $400^3 = 64$  Million.

If we want to tune to a set of impedances:  $\Gamma(f_0) = \Gamma_0$ ,  $\Gamma(2f_0) = \Gamma_2$  and  $\Gamma(3f_0) = \Gamma_3$ , then we create a tolerance mask:  $\Gamma_0 \pm \Delta\Gamma_0$ ,  $\Gamma_2 \pm \Delta\Gamma_2$ ,  $\Gamma_3 \pm \Delta\Gamma_3$  and check the big matrix for points, which satisfy these conditions.

When we have a first solution we then go around it and create a finer grid around each point at each frequency and do a second run for the closest solution. I think two iterations will be enough.

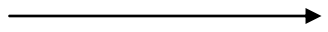
**History of a Product**

The first Idea... (May 2004)



Internal Memo of Christos Tsironis to Focus Engineers

The final Product



**iMPT-1818-TC**  
1.8-18GHz uses 6 independent probes



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