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Episode #56

# Putting 1 + 1 Together

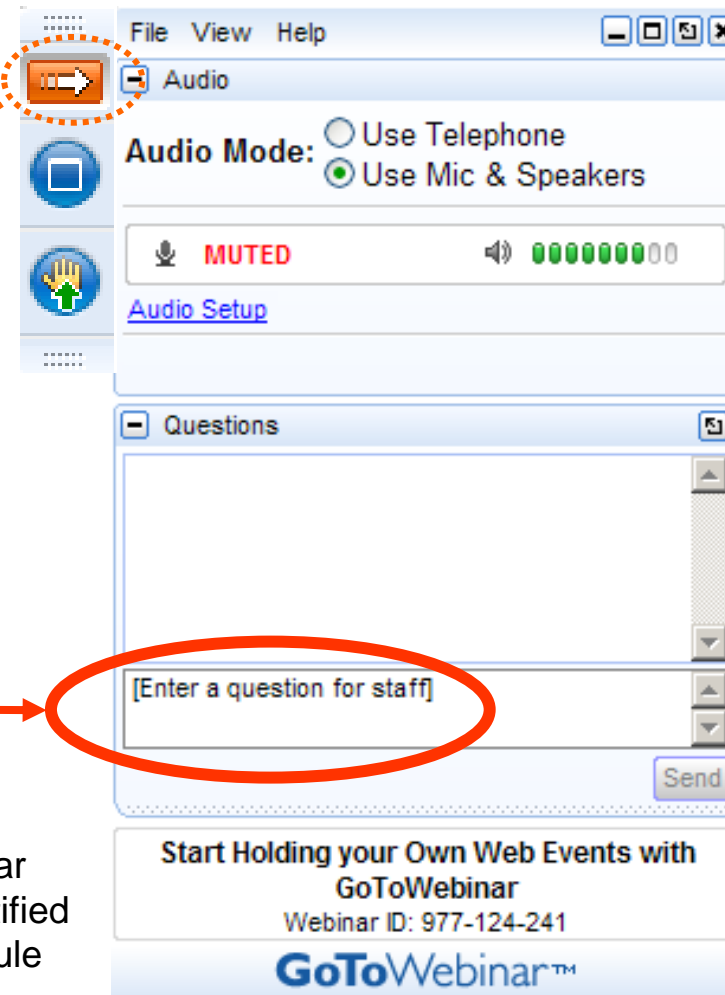
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## DIPLEXING AM TRANSMITTERS WITH BUT 3 PERCENT FREQUENCY SEPARATION

JUN 25 1975

### DIPLEXING AM TRANSMITTERS WITH BUT 3 PERCENT FREQUENCY SEPARATION

**SUMMARY:** A diplexing network to combine the output of two transmitters operating on 2522 and 2598 kilocycles is described. Many of the practical limits and considerations pertinent to all diplexing systems are discussed in connection with the description. A slightly different approach to the design of critical systems is taken pointing out the practical limitations of prior designs. Conclusions drawn show the definite need for regular attention to the operation of diplexing systems in general. More specifically, the combination of the outputs of transmitters operating simultaneously on the above two frequencies is shown to be both practical and possible, provided the system receives regular attention.

<https://worldradiohistory.com/Archive-Catalogs/Gates-Harris/Gates%20Engineering%20Report%20Diplexing%20AM%20Transmitters.pdf>



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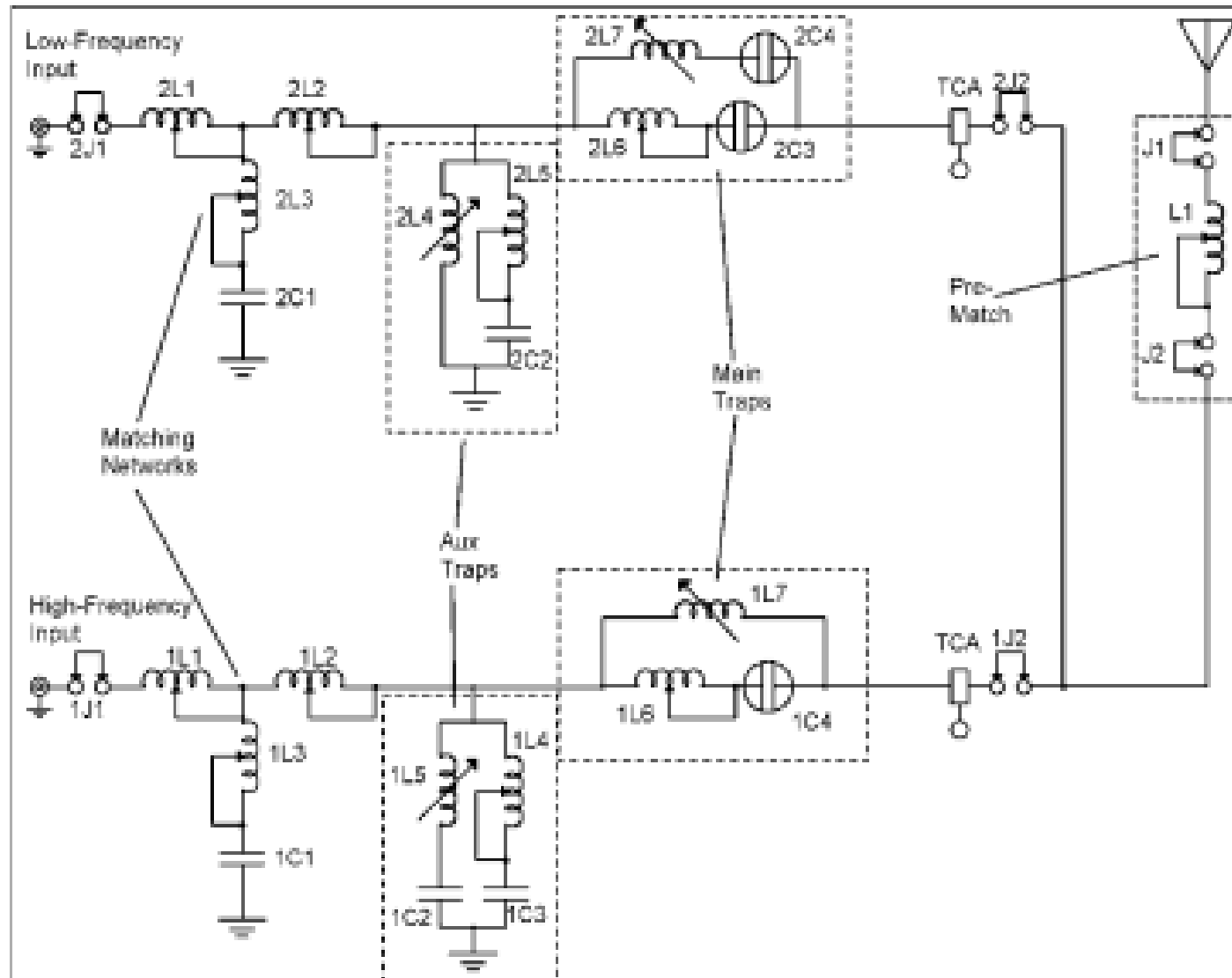
## Diplexing AM transmitters

BY JOHN BATTISON

PUBLISHED: SEPTEMBER 1, 2002

Throughout the years that radio broadcasting has existed there has not been a strong need to operate more than one AM transmitter into a single antenna. However, during the past several years vertical real estate has become increasingly valuable due to economic factors affecting large tracts of open land. The frantic efforts of the anti-tower consortium to stop the erection of as many towers as possible, together with FAA restrictions, have also added to the value of existing transmitting antennas and their sites. Consequently, the idea of feeding two or more transmitters into a single tower is becoming increasingly attractive and more stations are finding it necessary to diplex to stay viable, or even find a suitable site.





[https://crawfordbroadcasting.com/Eng\\_Files/Practical%20Diplexing.pdf](https://crawfordbroadcasting.com/Eng_Files/Practical%20Diplexing.pdf)

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**DIPLEXER QUESTIONNAIRE**

**GENERAL:**

A. Frequency 1: \_\_\_\_\_ kHz Frequency 2: \_\_\_\_\_ kHz

**B. Operating Power(Watts)**

- 1. Daytime \_\_\_\_\_
- 2. Nighttime \_\_\_\_\_
- 3. Pre-Sunrise \_\_\_\_\_
- 4. Other \_\_\_\_\_

**Frequency 1**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Frequency 2**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**C. Tower Type** \_\_\_\_\_

- Guyed \_\_\_\_\_
- Self Supp \_\_\_\_\_
- Other \_\_\_\_\_

**D. Tower Feed**

- Series \_\_\_\_\_
- Shunt \_\_\_\_\_
- Unipole \_\_\_\_\_

E. Tower Height: Meter \_\_\_\_\_ Ft \_\_\_\_\_ Degrees \_\_\_\_\_

F. Transmission Line Type (or should Phasetek select) Frequency 1: \_\_\_\_\_ Frequency 2: \_\_\_\_\_

G. Input terminal: Frequency 1: Type: EIA \_\_\_\_\_ Clamp \_\_\_\_\_

Frequency 2: Type: EIA \_\_\_\_\_ Clamp \_\_\_\_\_

H. Tower Impedance (If Known) Frequency 1: \_\_\_\_\_ Frequency 2: \_\_\_\_\_

I. A.T.U.: Weatherproof cabinet \_\_\_\_\_ Open Panel \_\_\_\_\_

1. Lighting chokes: 2 wire \_\_\_\_\_ 3 wire \_\_\_\_\_ No \_\_\_\_\_ S.D. chokes: Yes \_\_\_\_\_ No \_\_\_\_\_

2. Meters: Thermocouple \_\_\_\_\_ Delta \_\_\_\_\_ None \_\_\_\_\_ Plug-in \_\_\_\_\_ Switched \_\_\_\_\_

3. Jacks: Input \_\_\_\_\_ Type \_\_\_\_\_ Output \_\_\_\_\_ Type \_\_\_\_\_ R.P.U. Yes \_\_\_\_\_ No \_\_\_\_\_







# The Broadcasters' Desktop Resource

... edited by Barry Mishkind - the Eclectic Engineer

## DA Q&A: Using A Pi Filter For Better Diplexing

Written By [Kurt Gorman](#) Posted In [Antennas](#).

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*[June 2013] There are a number of reasons for diplexing AM stations. Sometimes it can save a station which lost its site to developers when a lease ran out. Other times, companies just seek to unlock land asset value by combining sites and selling one site off.*

Either way, as Kurt Gorman explains, how the diplexer is designed is important.

<https://www.thebdr.net/using-a-pi-filter-for-better-diplexing/>









Scott Fybush/fybush.com 2013





<http://www.mwpersons.com/articles/2013/four-am-stations/four-stations.html>





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## **Online Info, such as the Broadcasters' Desktop Resource**

<https://www.thebdr.net/>



# THANK YOU!

