



Resistor Values for Gain Programming

dB Gain*	R1	Rf	Rd**
7	330	270	27
10	330	390	22
13	330	510	18
16	330	680	15
19	330	1000	10
24	330	1800	4.7
15	470	620	20
22	470	1500	10

*Gain figures are approximate due to component variations and tolerances.

**Small-value resistors for Rd should be measured and selected for actual value rather than rely on color code.

Note 1: This schematic follows Hayward W7ZOI and Kopski K3NHI paper (2009) on termination-insensitive IF amps [http://w7zoi.net/bidirectional_matched_amplifier.pdf]. This version is for a single rather than bi-directional amp. This makes it usable in non-bi-directional systems or paired together for bi-directional use.

Note 2: All transistors are 2N3904. All resistors are 1/4 Watt 5%. All capacitors are 0.10μF disk or MLCC types. Component reference numbers (R8, C3, etc.) follow the Hayward/Kopski original.

Note 3: The gain "programming" resistors are indicated in large bold typeface. See the "Gain Programming" table for resistor values.

PG-TIA Programmable Termination Insensitive IF Amplifier

mostly
DIY RF

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Drawn by T.F. Carney

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