

# Z-100

## Automatic Antenna Tuner

Manual Version 1.0



## LDG Electronics

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# LDG Z-100 Automatic Antenna Tuner

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## **Introduction**

**Jumpstart, “Real hams don’t read manuals!”**

**Ok, but at least read this one section before you transmit:**

- 1. Connect your Z-100 to a source of 7 - 18 volts DC @ 300mA via the 2.5 by 5.5 mm power jack on the back (center positive).**
  - 2. Connect the antenna jack on your transceiver to the Transmitter jack on your Z-100 tuner using an RG-8X coaxial cable jumper.**
  - 3. Connect your antenna coax lead to the Antenna jack on the back of your Z-100.**
  - 4. Power up your transceiver and select the desired operating frequency.**
  - 5. Select AM, FM, CW or PKT mode, then key down to transmit a carrier<sup>1</sup>.**
  - 6. Press and hold the Tune button on the front panel of your Z-100 until the red LED comes on, then release; a tuning cycle will start and the red LED will come on.**
  - 7. Wait for the tuning cycle to end (red LED goes out, 1 – 6 seconds), and then unkey.**
  - 8. Reset your transceiver to your desired operating mode.**
  - 9. You’re ready to transmit.**
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## Features

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## Specifications

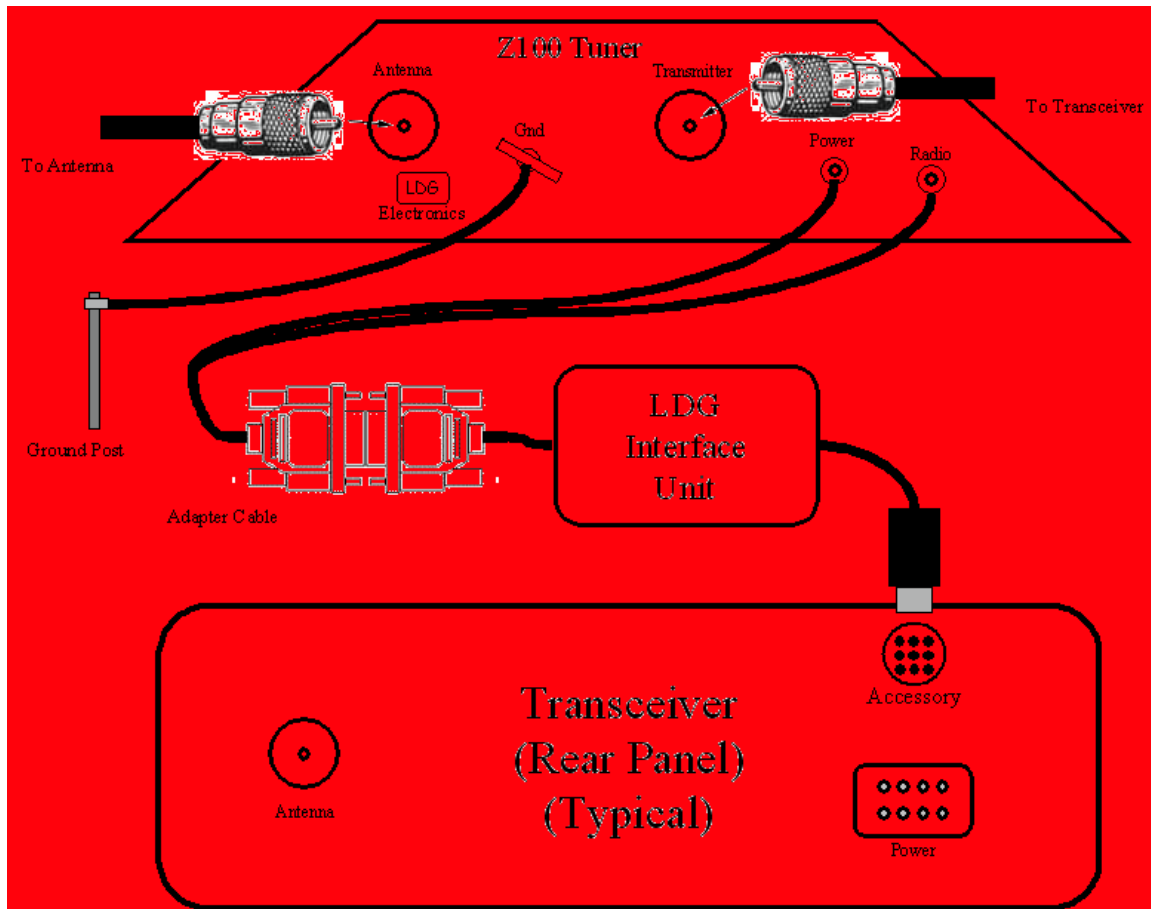
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**Getting to know your Z-100**



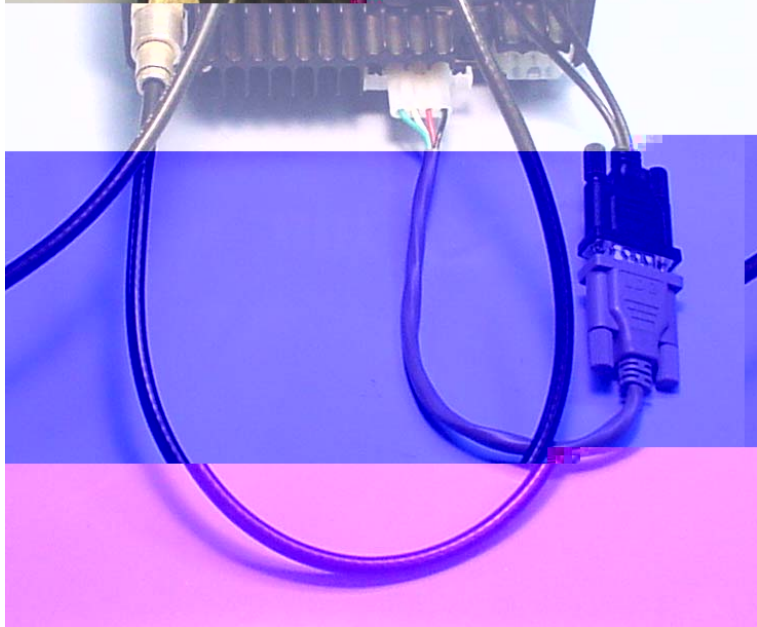
## **Installation**

*never cannot*



An important word about power levels:

at most

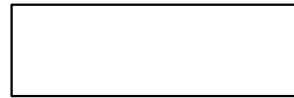
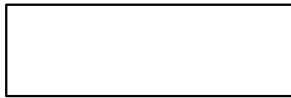
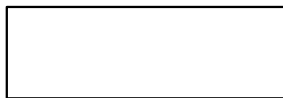
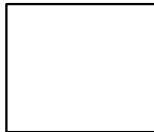


# Operating Instructions

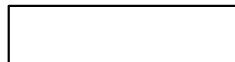
*release*

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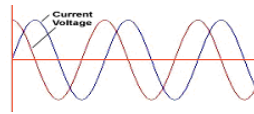
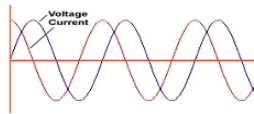
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## Theory of Operation

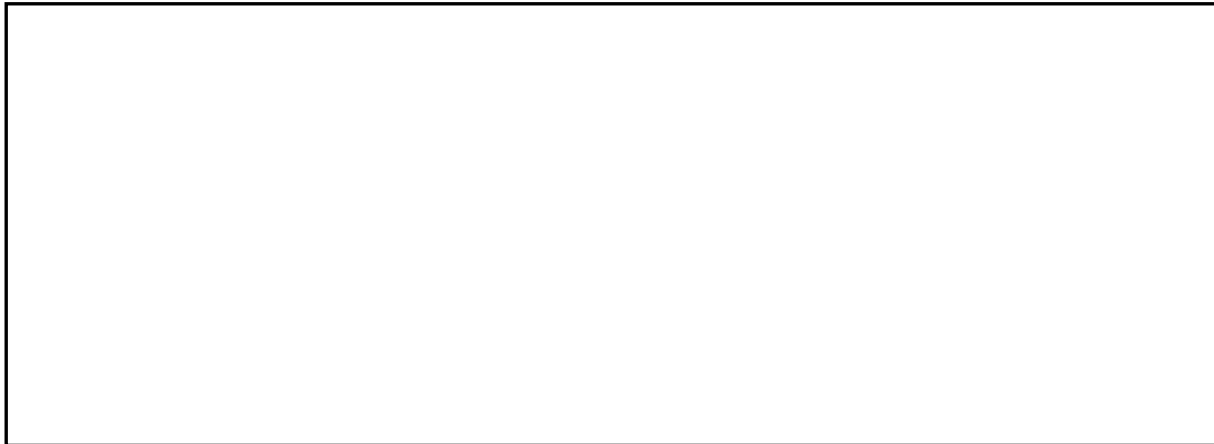
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$$SWR = \frac{+\sqrt{R F}}{-\sqrt{R F}}$$



		Forward Power (Watts)								
		20	30	40	50	60	70	80	90	100
Reflected Power (Watts)	2	1.92	1.70	1.58	1.50	1.45	1.41	1.38	1.35	1.33
	4	2.62	2.15	1.92	1.79	1.70	1.63	1.58	1.53	1.50
	6	3.42	2.62	2.26	2.06	1.92	1.83	1.75	1.70	1.65
	8	4.44	3.14	2.62	2.33	2.15	2.02	1.92	1.85	1.79
	10	5.83	3.73	3.00	2.62	2.38	2.22	2.09	2.00	1.92
	12	7.87	4.44	3.42	2.92	2.62	2.41	2.26	2.15	2.06
	14	11.24	5.31	3.90	3.25	2.87	2.62	2.44	2.30	2.20
	16	17.94	6.42	4.44	3.60	3.14	2.83	2.62	2.46	2.33
	18	37.97	7.87	5.08	4.00	3.42	3.06	2.80	2.62	2.47
	20	-	9.90	5.83	4.44	3.73	3.30	3.00	2.78	2.62
	22	-	12.92	6.74	4.94	4.07	3.55	3.21	2.96	2.77
	24	-	17.94	7.87	5.51	4.44	3.83	3.42	3.14	2.92
	26	-	27.96	9.32	6.17	4.85	4.12	3.65	3.32	3.08
	28	-	57.98	11.24	6.95	5.31	4.44	3.90	3.52	3.25
	30	-	-	13.93	7.87	5.83	4.79	4.16	3.73	3.42
	32	-	-	17.94	9.00	6.42	5.18	4.44	3.95	3.60
	34	-	-	24.63	10.40	7.09	5.60	4.75	4.19	3.80
	36	-	-	37.97	12.20	7.87	6.07	5.08	4.44	4.00
	38	-	-	77.99	14.60	8.80	6.60	5.44	4.71	4.21
	40	-	-	-	17.94	9.90	7.19	5.83	5.00	4.44
42	-	-	-	22.96	11.24	7.87	6.26	5.31	4.68	
44	-	-	-	31.30	12.92	8.65	6.74	5.65	4.94	
46	-	-	-	47.98	15.08	9.56	7.27	6.02	5.22	
48	-	-	-	97.99	17.94	10.63	7.87	6.42	5.51	
50	-	-	-	-	21.95	11.92	8.55	6.85	5.83	

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**Care and Maintenance**

**Technical Support**

**Warranty and Service**

**CE**