

TLS-4/5 Signal Modification

Ringling Signal - see table for values:

1. Remove resistor R201. R201 is located in the row of resistors between DS5 and DS6.
2. Remove CR61, CR62, and CR63. CR61 is located behind DS6. CR62 and CR63 are located in the row of components between DS4 and DS6.
3. Select CR61, CR62, and CR63 from Table 1 for your desired setting.
4. Install these zener diodes in their respective locations. Make sure you replace them with the correct replacement part. In correct installation can result in damage to the unit.
5. Use a true RMS voltmeter to verify the ringling voltage from the TLS-5. The ringling voltage will vary with the load placed across the Tip and Ring leads.
6. Note on the rear panel that your TLS-5 has been modified.

The voltage measurements show in Table 1 apply to 20 Hz pseudo sine-wave ringling

Configuration	Ring Voltage 0 REN Load (No Load)	Ring voltage 1 REN Load (7000 Ω)	CR61	CR62	CR63
Factory	91 VAC RMS	80 VAC RMS	1N4761A (75V)	1N4754A (39V)	1N4747A (20V)
#1	43 VAC RMS	38 VAC RMS	1N4754A (39V)	1N4747A (20V)	1N4740A (10V)
#2	42 VAC RMS	37 VAC RMS	1N4753A (36V)	1N4746A (18V)	1N4739A (9.1V)

TLS-5C/D Caller ID - FSK signal level

The Teltone TLS-5C/D has a limited ability to adjust the signal level for the FSK output. Please use the following instructions to change and adjust the signal levels. The variable resistor on the FSK daughter board in the TLS-5C/D allows for a limited range of change from the default output of -25dBm +/- 2dB (ref. 900Ω). To adjust the FSK level to be able to reach a -35dBm level, will require a resistor to be added. A 1kΩ 1/4 watt resistor will need to be added in parallel across resistor R3 (3.9Ω 1/4 watt). This will allow adjustment of R13 to meet a -35dBm signal level. The signal level will vary depending upon the load across Tip and Ring. The CAS signal is set for 3dB less than the FSK tone level.

FSK Test Tone Procedure (used for adjustment)

1. Turn power off, connect jumper from J7-1 to J7-6 on the main PCB (next to EPROM)
2. Turn power on, wait 10 seconds, then remove jumper. This will cause a FSK tone to be generated for adjustments.

TLS-5C FSK PCB 201-00969-XX

1. Connect AC voltmeter + to U4 Pin 1 - to ground
2. Factory settings should read 106 to 116 mVAC (if R3 modification is not completed)
3. Adjust R13 as necessary
4. Turn power off to TLS-5C/D to reset from this Test Tone adjustment.

DISCLAIMER

Please be aware that customers may perform this modification at their own risk. Modifications may cause your Teltone product to operate outside of advertised specifications. Any modification (including those documented in the application note) to a unit under warranty will void the warranty and any damages will not be covered under warranty. Any repair costs will be billed as "Out of Warranty".