



# RHODES PICKUP MEASUREMENT & TROUBLESHOOTING

The DC resistance for a single Rhodes pickup is  $\cong 180\Omega$

The pickups are wired in a series – parallel arrangement that includes parallel groups of various numbers.

## PARALLEL RESISTANCE:

$$1 / ( 1 / R1 + 1 / R2 + 1 / R3.... )$$

## DC resistance of Rhodes pickups in parallel:

2 Pickups  $\cong 90\Omega$

3 Pickups  $\cong 60\Omega$

4 Pickups  $\cong 45\Omega$

You can measure the DC resistance of a group to determine if there are any open or shorted pickups within it.

## OPEN PICKUP MEASUREMENTS:

Parallel group of 2 pickups with 1 open will read  $\cong 180\Omega$

Parallel group of 3 pickups with 1 open will read  $\cong 90\Omega$   
2 open will read  $\cong 180\Omega$

Parallel group of 4 pickups with 1 open will read  $\cong 60\Omega$   
2 open will read  $\cong 90\Omega$   
3 open will read  $\cong 180\Omega$

If all the pickups in a parallel group are open, the measurement will read infinite resistance or over-limit.

If any of the pickups in a parallel group are shorted, the measurement will read  $0\Omega$ , or a short-circuit.

## TROUBLESHOOTING:

If the measurement of a parallel group reveals a fault, the pickups in that parallel group can then be isolated from one another and measured individually to find the bad pickup(s).