Measuring the Bit Error Rate on TB9100 Base Stations

1 August 2004

Applicability	All TB9100 base stations.

1. Introduction

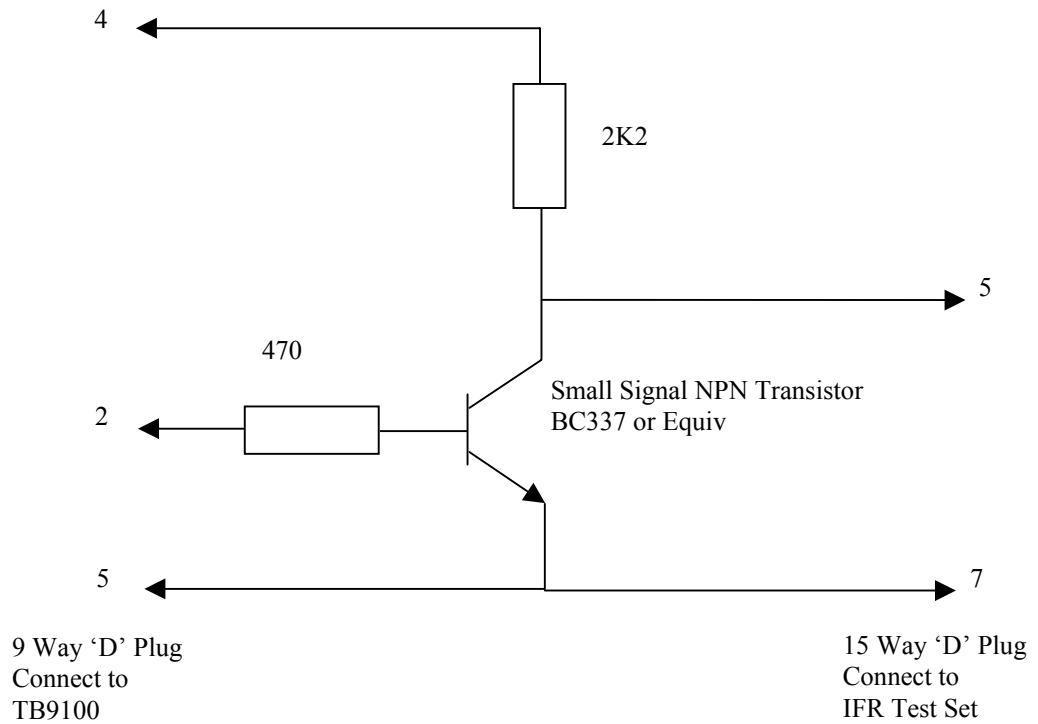|	
Measuring BER internally	The TB9100 base station has a built-in ability to estimate the BER (bit error rate). While this is not an exact measure, users will find it sufficiently useful in many situations.
Measuring BER with test equipment	If an exact method of measuring the base station's receive BER is required, this can be done using an IFR 2975 P25 radio test set from Aeroflex Incorporated. Follow the instructions in the IFR documentation, and make up the following interface cable.

2. The Interface cable

Make up the following interface cable for connecting the base station's RS-232 output to the IFR's rear RS-232 input. This cable is necessary because the IFR input does not follow the RS-232 standard..

Parts required	9-Way 'D' Plug
	9-Way 'D' Shell
	15-Way 'D' Plug
	15-Way 'D' Shell
	Transistor BC337 or equivalent
	Resistor 470R
	Resistor 2k2

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4  ←────────────────────┐
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                      ┌─┴─┐
                      │   │  2K2
                      └─┬─┘
                        │
                        ├──────────────────────→  5
           470          │
                      ┌─┤  Small Signal NPN Transistor
2  ←──────┤   ├───────┤  BC337 or Equiv
          └───┘       └─┤
                        │
5  ←────────────────────┴──────────────────────→  7
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9 Way 'D' Plug
Connect to
TB9100

15 Way 'D' Plug
Connect to
IFR Test Set

3. Issuing Authority

Name and Position
of Issuing Officer   John Crossland
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