
TECHNICAL NOTE TN-1047 Addendum
Changes to TBA101B Paging Interface Setup.19 December 2006

Applicability

TB8100 base stations fitted with TBA101B paging interface

1. Introduction

An issue with deviation level has led to a revision of the way the TBA101B paging interface is set up. This addendum gives details of the new method and will be included in TN-1047 next time it is updated.

2. New Setup Procedure

The following procedure was carried out using a HP 8920A communications test set. Other test sets should be able to be set up in a similar way. Please refer to your communications test set manual.

Set the communications test set to show frequency error by selecting Tune mode as Manual and entering the transmitter carrier frequency.

Select a wide IF filter on the test set, the 8920A has 230kHz as the widest filter.

Audio filters on the HP 8920A need to be set to >99kHz low pass filter (LPF) and <20Hz high pass filter (HPF).

Switch de-emphasis off.

Section 7.2 of TN-1047 gives the setup details of the paging interface. Set the switches as shown in 7.2 part 1 and key the transmitter as described in part 2.

Substitute the following for part 3 of TN-1047.

Values for wide band paging, Narrow band values in [].

3. For 512 baud paging, adjust trim pot RV1 for +3.2kHz [1.55kHz] from the centre frequency.
For 1200 baud paging, adjust trim pot RV1 for +3.4kHz [1.60kHz] from the centre frequency.
4. Turn S1 switch 5 OFF and switch 6 ON.
5. For 512 baud paging, adjust trim pot RV2 for -3.2kHz [1.55kHz] from the centre frequency.
For 1200 baud paging, adjust trim pot RV2 for -3.4kHz [1.60kHz] from the centre frequency.
6. Remove the transmitter key input.
7. Turn S1 switch 5 and switch 6 off.
8. Setup a function generator set to produce a square wave at 600Hz for 1200 baud paging or 256Hz for 512 baud paging. Set the output to 5Vpp, DC coupled.

On the HP 8920A, you can use the Encoder function. Set the Waveform to Square, AFGen2 Freq to 600Hz for 1200 baud paging, 256Hz for 512 baud paging. Select AFGen2 to Audio Out and set the level to 5V. Set Audio Out coupling to DC.

9. Connect the function generator output (Audio Out on the HP 8920A) to pin 6 of J4 on the paging interface.
10. Key the base station by grounding pin 5 of J4.
11. Check the deviation level is close to +/-4.5kHz [+/-2.25kHz] and the frequency error is close to 0.
12. Check peak + and peak - deviation. The difference should be less than 2.5% or 113Hz [56Hz]. If it exceeds 2.5%, check all test set settings and reciter calibration.

3. Compliance and Special Instructions

Compliance Issues	None
CSO Instruction	Ensure this setup procedure is carried out until TN-1047 is updated.

4. Issuing Authority

Name and Position of Issuing Officer	Jeff Northcott Senior Technical Support Engineer		
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