

S E R V I C E N O T E

SUPERSEDES: NONE

**Agilent 8922 GSM Test Sets**

**Serial Numbers:** See Below

**A23 Input Module modified to correct intermittent GSM signal power loss.**

**Duplicate Service Notes:**

- 8922M-10      Serial Numbers: 0000A00000 / 4006U99999
- 8922F-03      Serial Numbers: 0000A00000 / 9999Z99999
- 8922H-03      Serial Numbers: 0000A00000 / 9999Z99999
- 8922P-07      Serial Numbers: 0000A00000 / 4006U99999
- 8922R-04      Serial Numbers: 0000A00000 / 4006U99999
- 8922S-05      Serial Numbers: 0000A00000 / 4006U99999
- 8922X-07      Serial Numbers: 0000A00000 / 4006U99999

**To Be Performed By:** Agilent-Qualified Personnel

**Parts Required:**

Agilent P/N	Description	Quantity
08922-69897	Refurbished A23 Input Module	1

*Continued*

DATE: April 2000

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:			
<b>MODIFICATION RECOMMENDED</b>			
ACTION CATEGORY:	<input type="checkbox"/> IMMEDIATELY <input checked="" type="checkbox"/> ON SPECIFIED FAILURE <input type="checkbox"/> AGREEABLE TIME	STANDARDS:	LABOR 4.0 Hours
LOCATION CATEGORY:	<input type="checkbox"/> CUSTOMER INSTALLABLE <input checked="" type="checkbox"/> ON-SITE <input type="checkbox"/> SERVICE CENTER	SERVICE INVENTORY:	<input checked="" type="checkbox"/> RETURN <input type="checkbox"/> SCRAP <input type="checkbox"/> SEE TEXT
		USED PARTS:	<input checked="" type="checkbox"/> RETURN <input type="checkbox"/> SCRAP <input type="checkbox"/> SEE TEXT
AVAILABILITY:	PRODUCT'S SUPPORT LIFE	AGILENT RESPONSIBLE UNTIL: April 2002	
AUTHOR: FH	ENTITY: E600-6423	ADDITIONAL INFORMATION:	



**Situation:**

Intermittent loss of signal power (typically 10 to 30 dB) in the GSM band reported in the field. The problem has been traced to two failure mechanisms on the A23 Input Module:-

1. Failure of a relay in the output path.
2. Solder process problem producing poor electrical connection between the relay contacts and the circuit board.

**Solution / Action:**

The fault can be verified by Agilent service personnel running the test software "Pwr\_chk". To obtain the test software, access the following web URL:

[http://www.sqf.hp.com/QMD\\_Mktg/prodsup/8922/index.htm](http://www.sqf.hp.com/QMD_Mktg/prodsup/8922/index.htm)

Click on "verification" then "Software Tools". Go to PWR\_CHK:Version A.02.02 and download the program version you want, ie, "Pwr chk.bas", "Pwr chk.asc", or "Pwr chk.txt".

Perform the following procedure.

**Equipment Required:**

- Agilent 8902A Measuring Receiver
- Agilent 11722A Power sensor
- Agilent 8657A/B Signal Generator
- PC or Controller with GPIB card
- HP Basic
- GPIB cables
- BNC co-axial cables
- Test software - Pwr\_chk (as above)

**Procedure**

1. Connect the PC (or controller), 8922, 8902A, and 8657A/B GPIB interfaces together using GPIB cables.
2. Connect a high stability 10 MHz reference to the 8922 REF IN port. Connect the 10 MHz OUT port on the 8922 to the 10 MHz REFERENCE IN port on the 8657A/B. Connect the 10 MHz REFERENCE OUT port on the 8657A/B to the 10 MHz REFERENCE IN port on the 8902A Measuring Receiver.
3. Open an HP Basic window on the PC (or controller).
4. Change the directory path to the one that contains the test software (Pwr\_chk) using the MSI "yyyy" command, where yyyy is the directory path.
5. Load the test software using the command GET "pwr\_chk.asc", GET "pwr\_chk.txt", or LOAD "pwr\_chk.bas".
6. Type RUN or press F3 to start the program.
7. Follow the instructions given on the screen and all testing will be performed automatically.

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The program stops when an out-of-limits error is encountered - follow the instructions on the screen and check that the power reading on the 8922 AUX RF OUT port is -85 dBm, indicating that the relay has failed.

**Note:**

Due to the intermittent nature of the fault, it may be necessary to leave the program running for several hours (typically 2-10 hrs) before a relay failure is detected.

Halt the Pwr\_chk program by pressing Control/Break.

The results will be stored in a file named RESxxxx.txt where xxxx is the last four digits of the serial number entered at the beginning of the Pwr\_chk program.

**Note:**

The modification recommended in this service note will only be implemented free of charge if a valid printed set of results or customer data showing the failure is returned with the faulty A23 Input Module.

If the A23 Input Module proves to be faulty, replace it with refurbished part 08922-69897 using the exchange program.