



Application Note

Proof of Performance Testing

12/11/2006

The Super Buddy™ Signal Level Meter includes a Proof of Performance Test (PoP) feature that collects and stores signal level and quality data for later transfer to a PC and reporting. This feature may be used to document the quality of installation for later reference.

To use this feature, perform the following steps:

- 1) Install PC software
- 2) Upgrade instrument (if needed)
- 3) Prepare file storage
- 4) Collect test data
- 5) Transfer data file to PC
- 6) Print report

Install PC Software

The SatTransfer program is required to transfer the data from the instrument to the PC and to print reports. This software is available from the Applied Instruments web site along with the FlashUpdate software used to upgrade the instrument.

You may use one of the following links to obtain the software:

For Windows 95 or 98: www.appliedin.com/downloads/flashupdate9x.exe

For Windows XP or NT: www.appliedin.com/downloads/flashupdatexp.exe

Open or run the linked program; it is a self-extracting zip file. Unzip the files onto your hard drive. An icon for FlashUpdate and an icon for SatTransfer will be added to your desktop.

Upgrade Instrument

You must have Super Buddy main software V1.48 or above to utilize the PoP test. If you do not have V1.48 or above, upgrade the instrument in the usual way:

- 1) Connect the Super Buddy to the PC with the serial cable provided and turn it on.
- 2) With an internet connection established, start the FlashUpdate software.
- 3) The installed and available versions will be displayed.
- 4) Click "Update" to update the instrument.

Prepare File Storage

Before using the PoP feature for the first time, the flash memory used for file storage must be erased.

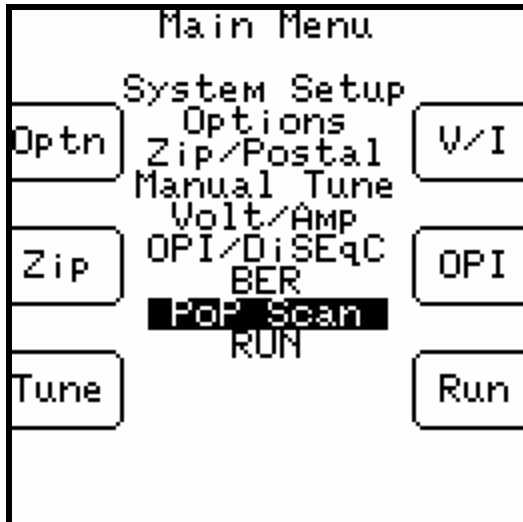
- 1) Connect the Super Buddy to the PC with the serial cable provided and turn it on.
- 2) Start the SatTransfer software.

3) Click "Erase All Files" (even though there are no files)

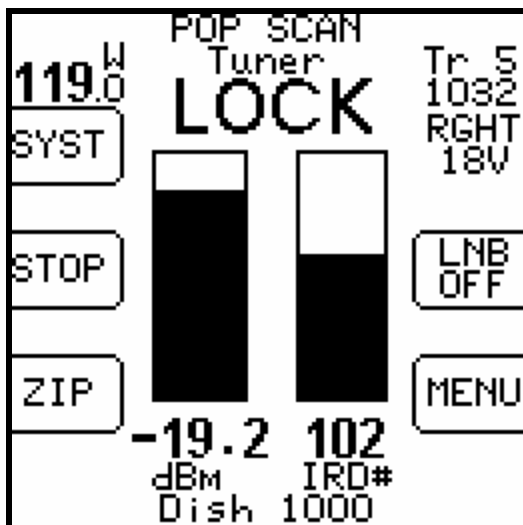
Your Super Buddy should now be ready for use.

Collect Test Data

Perform your installation as usual. When the system is fully peaked, and with LNB power applied and the desired LNB selected, select "PoP Scan" from the main menu:



The meter will begin scanning though all transponders on the satellite collecting the measurement data. You may press STOP to abort the scan, otherwise, wait until the scan completes.



When the scan completes, the following screen displays a summary of the data:

Proof of Performance	
MIN LEVEL dBm	
Tr 1	-27.5
Tr 2	0.0
MAX LEVEL dBm	
Tr 3	-25.1
Tr 2	0.0
MIN IRD#	
Tr 1	102
Tr 2	102
MAX IRD#	
Tr 1	102
Tr 2	102

SAVE

EXIT

You press "Exit" to discard the data or "Save" to continue.

If you press "Save" the following screen appears allowing you to enter some identification data about the test:

Proof of Performance	
Date	MM/dd/yyyy
	12/11/2006
Location	
	INDY
Technician	
	FRED
Notes	
	_

SAVE

EXIT

Note:

Alphabetic characters can be entered in the following way:

Press the key once to display the numeric digit.

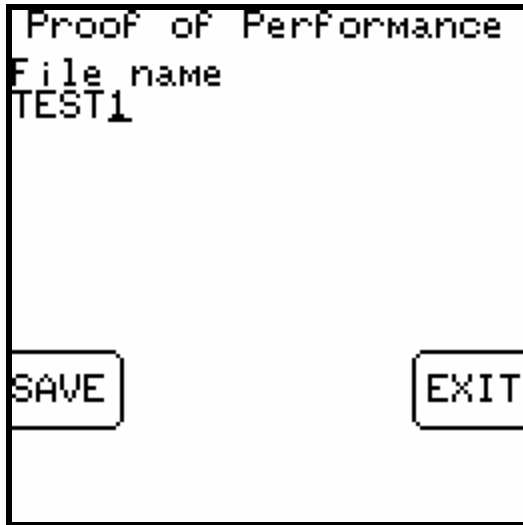
Press it quickly a second time to display the first alphabetic character.

Press it quickly a third time to display the next alpha character, etc.

A new key always moves to a new column.

A pause will also move to a new column.

Again, press "Save" to continue and the next screen lets you enter a file name:



The filename must be unique. An error message will appear if you enter a name that has already been used. At present, there is no method for determining what names have been used on the instrument other than by running the SatTransfer program.

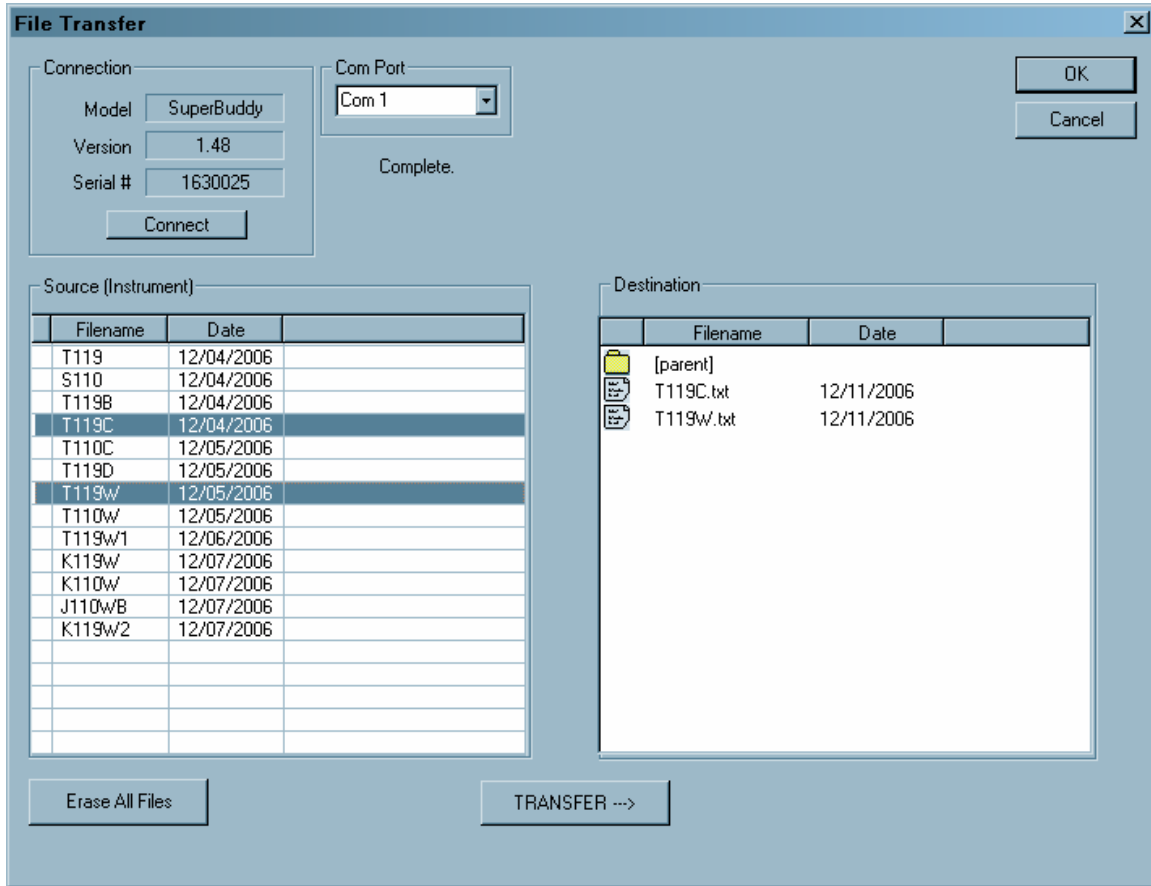
There is file storage space for about 70 files. The actual limit depends on the number of transponders used.

Press "SAVE" again and the system will copy the file from temporary storage to flash file storage. The instrument must then restart and go through the initialization count-down. If an error occurs during the copy process or the flash storage area is too full, the message "Flash copy failed" will appear and the test data will be lost.

Transfer Data File to PC

After the data is collected you can take the meter back to your PC and transfer the files to the PC disk using the SatTransfer program.

- 1) Connect the meter to your PC using the supplied serial cable and turn it on.
- 2) Start SatTransfer. An icon that looks like the Super Buddy should be installed on your desktop for this purpose.
- 3) The File Transfer window appears somewhat like the following example.



The box on the left displays the files stored on the meter. The box on the right shows the files stored on the PC. The files are stored in a text file format so they can be easily opened in Excel or other PC applications.

By default, the files are stored in a "Data" folder under the "FlashUpdate" folder where the SatTransfer program is installed. You may navigate to other folders by double clicking on the folder icons shown in the destination file box. The [parent] folder icon takes you up one level.

Select the files on the left that you want to transfer by clicking on them. Selected files are highlighted. You may select more than one. Then click on "Transfer" to have the files copied to the PC folder. A status message near the top of the screen will show you when the transfer is complete and the right hand box will be redrawn with the newly added files.

When you have transferred all desired files, click “Erase All Files” to erase the files from the meter and free up the flash storage space. Due to the way the flash memory works, it is not possible to erase only selected files; all files must be erased to free up the memory.

Print Reports

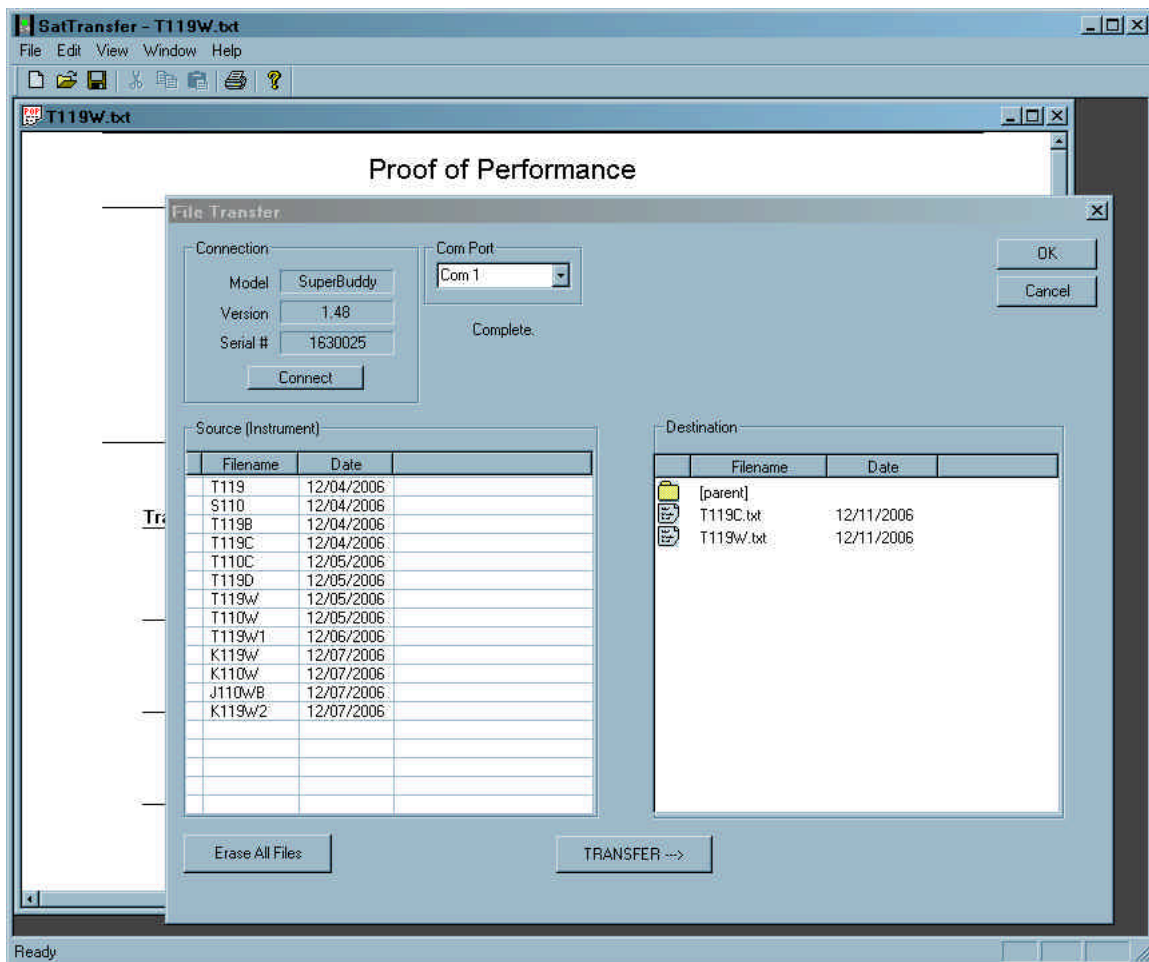
The File Transfer window is not the only window available in the SatTransfer program. You may also open one or more report windows to display and print the data.

There are two ways to open a report window:

- 1) Double click the text file in the right side of the File Transfer window.
- 2) Use the menu bar File Open function.

The report may be viewed on the screen or printed using the File Print menu option.

When a report window is opened, it is usually mostly hidden behind the File Transfer window. The File Transfer window may be moved aside or closed to get it out of the way:



The report itself may not fit entirely on the screen but you may scroll down to see the rest.

SatTransfer - [T119W.txt]

File Edit View Window Help

Proof of Performance

Filename : T119W
 Date: 12/05/2006
 Location: INDY
 Technician: J
 Notes:
 Orbit: 119.0 West
 LNB Model: DP Twin

Tran	Freq (MHz)	Level (dBm)	IRD SigQ	C/N (db)	Eb/No (dB)	Es/No (dB)	Lock Status
1	974.000	-62.5	0	0.0	1.8	1.3	Unlock
2	2111.000	-67.6	115	14.0	13.7	15.3	LOCK
3	1003.000	-58.0	0	0.0	0.1	1.3	Unlock
4	2082.000	-66.5	108	12.8	12.5	14.1	LOCK
5	1032.000	-50.4	118	16.3	16.0	17.6	LOCK
6	2053.000	-65.1	114	13.9	13.6	15.2	LOCK
7	1061.000	-50.3	117	15.4	15.1	16.7	LOCK
8	2024.000	-65.6	115	14.2	13.9	15.5	LOCK
9	1091.000	-59.6	0	0.0	-0.5	1.3	Unlock
10	1995.000	-65.2	115	14.3	14.0	15.6	LOCK
11	1120.000	-56.4	117	15.3	14.8	16.6	LOCK
12	1966.000	-64.9	114	13.9	13.6	15.2	LOCK
13	1149.000	-56.4	116	15.1	14.8	16.4	LOCK
14	1936.000	-71.5	115	14.3	14.0	15.6	LOCK
15	1178.000	-56.4	116	14.9	14.6	16.2	LOCK
16	1907.000	-63.9	116	14.8	14.5	16.1	LOCK
17	1207.000	-57.0	116	14.8	14.5	16.1	LOCK
18	1878.000	-63.6	116	14.6	14.3	15.9	LOCK
19	1236.000	-56.4	116	15.0	15.1	16.3	LOCK
20	1849.000	-62.8	115	14.2	13.9	15.5	LOCK
21	1266.000	-55.5	117	15.2	14.9	16.5	LOCK
22	1820.000	-61.3	116	14.6	13.7	15.4	LOCK
23	1295.000	-56.7	74	9.1	9.2	9.9	LOCK
24	1791.000	-62.9	116	14.8	13.9	15.6	LOCK

Ready

SatTransfer - [T119W.txt]

File Edit View Window Help

25	1324.000	-58.6	0	0.0	-0.9	0.8	Unlock
26	1762.000	-60.8	117	15.2	14.3	16.0	LOCK
27	1353.000	-55.4	117	15.7	14.8	16.5	LOCK
28	1732.000	-59.9	116	15.1	14.2	15.9	LOCK
29	1382.000	-57.9	2	2.0	1.1	2.8	Unlock
30	1703.000	-60.9	117	15.2	14.3	16.0	LOCK
31	1411.000	-54.4	116	14.9	14.0	15.7	LOCK
32	1674.000	-60.1	117	15.3	14.4	16.1	LOCK

TRANSPONDERS FOUND

2 4 5 6 7 8 10 11
12 13 14 15 16 17 18 19
20 21 22 23 24 26 27 28
30 31 32

STATISTICAL SUMMARY

	Left Hand / Even				Right Hand / Odd			
	Minimum		Maximum		Minimum		Maximum	
	Trans#	Value	Trans#	Value	Trans#	Value	Trans#	Value
Level	14	-71.50	28	-59.90	17	-57.00	7	-50.30
IRD	4	108.00	26	117.00	23	74.00	5	118.00
C/N	4	12.80	32	15.30	23	9.10	5	16.30
Eb/No	4	12.50	16	14.50	23	9.20	5	16.00
Es/No	4	14.10	16	16.10	23	9.90	5	17.60

Adjacent Channel Power Difference

	Trans#	Trans#	dB
Left Co-Polar	14	16	7.6
Right Co-Polar	7	11	6.1
Cross Polar	4	5	16.1

Ready