



802.11a Signal Studio Software for the ESG-D/DP Series RF Signal Generator

Software Release Notes

Release date: May 28, 2002

Software revision: A.01.04

New Features

- **Select “User File” as the payload data**
 - From the Payload Setup section of the main menu, a User File may be selected as the Data Type. The user file must be in binary form. The least significant bit (LSB) of the first byte in the user data file will be the first bit of the user payload, and the LSB of the second byte in the user file will be the ninth bit of the user payload, and so on. If User File is selected as the Data Type, the number of bits in the user’s data file will equal the value displayed in the Data Length field. An example Matlab program that generates and saves user data is included at the end of this document.
- **Refresh button added**
 - Download the current settings of the ESG’s configuration without reloading the entire waveform.

Enhancements

- Waveform calculation speed improved.

Issues Resolved

- RS-232 connection verified with Windows 98, Windows 2000, and Windows NT 4.0
- Installation package uses the E443xB subdirectory instead of the ESG-B directory.

Release date: September 19, 2001

Software revision: A.01.03

New Features

- Added CCDF plot.

Enhancements

- Sinc (x) compensation added.

Issues Resolved

- Header Checksum (CCITT-CRC 16) has been corrected.
- MAC Address fields have been enlarged to fit large fonts.

- MAC Header field ordering corrected.

An example Matlab program to generate and save a user data file is shown below.

```
%***** Userdata File Example*****

% Set some constant parameters
numBytes = 16;
bitsPerByte = 8;

% Construct a bit stream
databits = ones(1,numBytes*bitsPerByte); % Sets entire stream to 1's
databits(11:2:29) = 0; % Set some alternating bits to 0's
databits(51:70) = 0; % Set a block of bits to 0's

% Convert from an array of bits to an array of bytes
databytes = ones(bitsPerByte, length(databits)/bitsPerByte); % Make array 8 x N/8
databytes(:) = databits; % Each column is 1 byte = 8 bits
c = [128 64 32 16 8 4 2 1]; % Weight according to bit position
data = c*databytes; % Change to decimal

fid = fopen('Userdata','w'); % Open a file named Userdata
fwrite(fid, data, 'uint8'); % Write the data to the file
fclose(fid); % Close the file
%*****
```