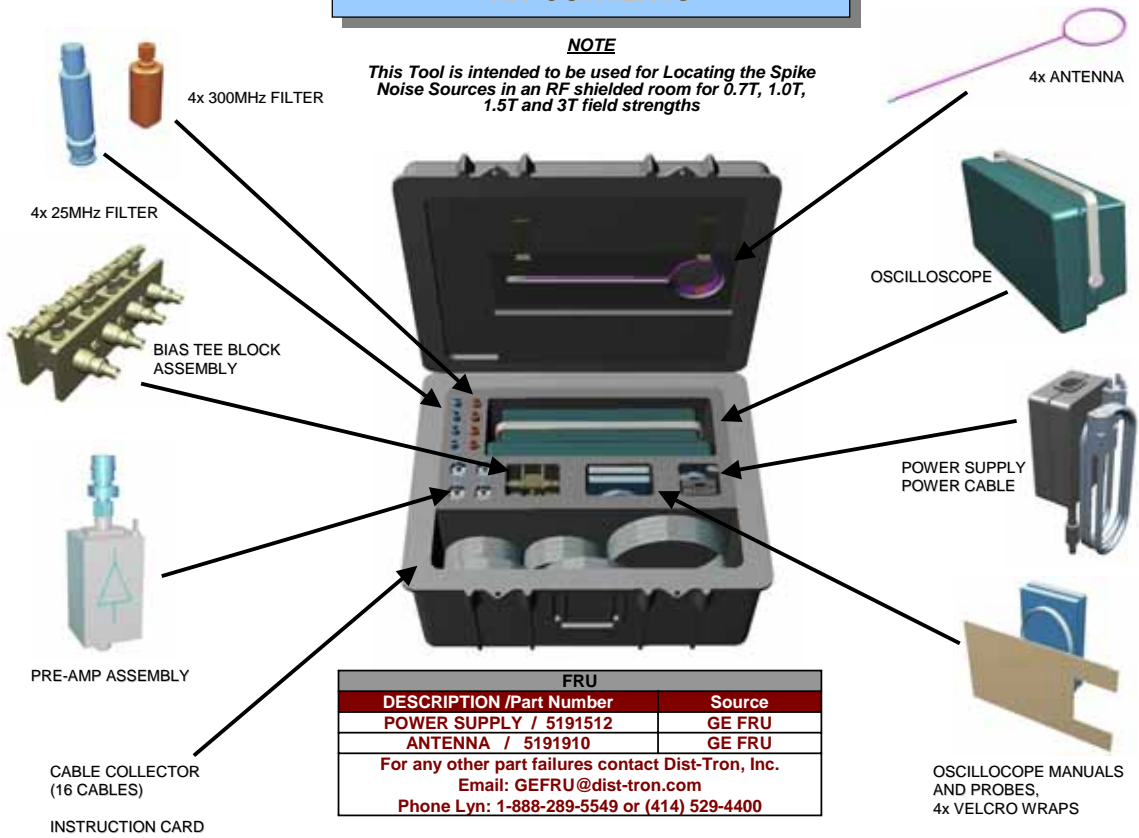


# SPIKE NOISE TRIANGULATOR (SNT) KIT CONTENTS

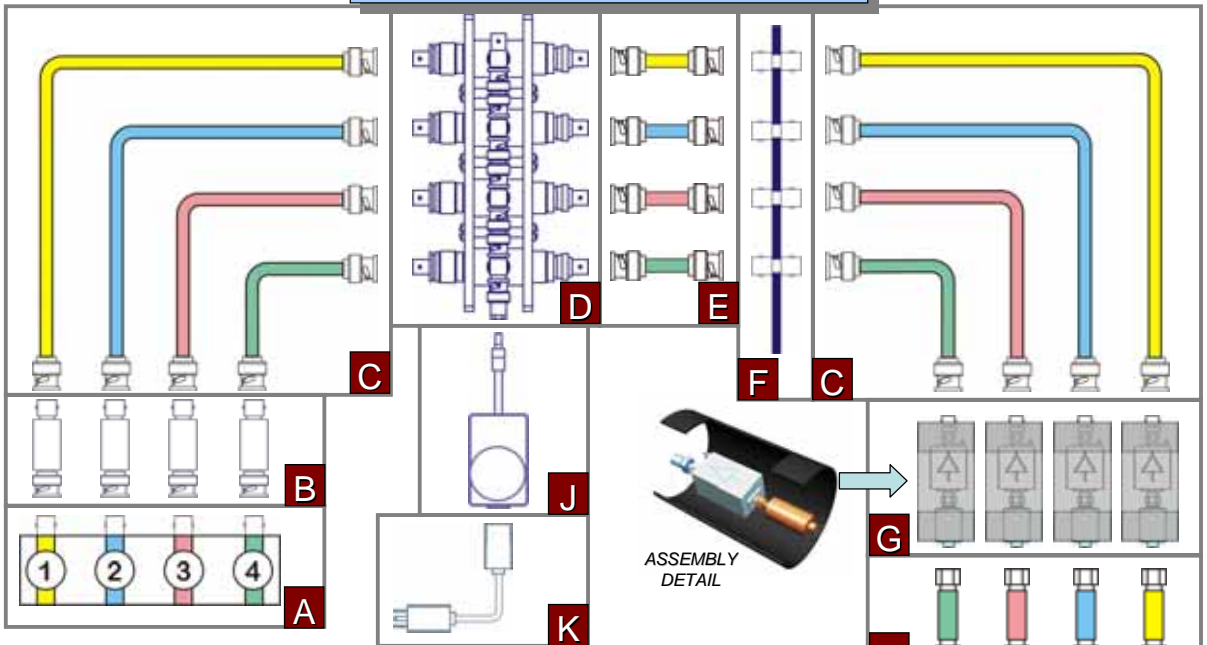
**NOTE**

*This Tool is intended to be used for Locating the Spike Noise Sources in an RF shielded room for 0.7T, 1.0T, 1.5T and 3T field strengths*



| FRU  |        |
|--|--------|
| DESCRIPTION /Part Number   | Source |
| POWER SUPPLY / 5191512   | GE FRU |
| ANTENNA / 5191910  | GE FRU |
| For any other part failures contact Dist-Tron, Inc.<br>Email: GEFRU@dist-tron.com<br>Phone Lyn: 1-888-289-5549 or (414) 529-4400 |        |

## SYSTEM SET-UP



| LABEL | DESCRIPTION  | QTY |
|-------|--|-----|
| A     | DPO4054 or DPO4104 OSCILLOSCOPE 500 MHz-1GHz/4CH INPUTS  | 1   |
| B     | 25MHz HI-PASS FILTER   | 4   |
| C     | 9 METER BNC CABLES ON ONE SIDE OF PENETRATION PANEL AND 20 METER BNC CABLES ON OTHER SIDE. SITE CONFIGURATION DETERMINES WHICH LENGTH IS USED WHERE. | 4   |
| D     | BIAS TEE BLOCK ASSEMBLY (NOTE "OUT TO OSCILLOSCOPE" LABEL FOR ORIENTATION)   | 1   |
| E     | 2 METER BNC CABLES   | 4   |
| F     | PENETRATION PANEL, UTILIZE FREE BNC CONNECTORS   | 1   |
| G     | ASSEMBLE PRE-AMP TO 300MHz FILTER AND WRAP WITH VELCRO SHEET. SEE DETAIL   | 4   |
| H     | 2 METER SMA CABLES   | 4   |
| I     | ANTENNAS   | 4   |
| J     | POWER SUPPLY (15VDC BIAS FOR PRE-AMPS)   | 1   |
| K     | POWER CABLE (TO WALL OUTLET)   | 1   |

## SPIKE NOISE TRIANGULATER (SNT) SCOPE SETUP – PART 1



| OVERVIEW |   |
|----------|---|
| LABEL    | DESCRIPTION   |
| 1        | VERTICAL CHANNEL CONTROL MENU: CHANNELS 1,2,3,&4, POSITION SELECT, AND SCALE. |
| 2        | HORIZONTAL CONTROL BUTTONS  |
| 3        | TRIGGER   |
| 4        | SUB MENU BUTTONS  |
| 5        | UTILITIES, SAVE/RECALL, MENU BUTTONS  |
| 6        | MULTIPURPOSE "A" AND "B" KNOBS AND BUTTONS FOR INTENSITY & CURSORS            |
| 7        | INFORMATION AREA  |

### 1- INDIVIDUAL CHANNEL SETUP

Always begin by pressing DEFAULT SETUP in the "5" Setup/Recall menu. Then push the "1" (YELLOW) CH1 BUTTON; adjust the vertical scale to 10mV/div by turning the SCALE button in the "1" Vertical menu. On the "4" sub menu functions select COUPLING and set it to 50 ohm impedance. Press the POSITION button and set it by knob "6" Multipurpose "a" to 3.00 div. Repeat the same step for the rest of the channels with ch2 position at 1.00 div, ch3 position at -1.00 div, and ch4 position at -3.00 div respectively.

### 2- HORIZONTAL SETUP

Push the ACQUIRE button under "2" Horizontal Menu and check 10K is selected under Record Length "4" sub menu. With the Horizontal SCALE knob adjust until 4ns/div and 2.50GS/s (or 5.00 GS/s if your scope is a DPO4104) is seen on the "7" Information Area

### 3- TRIGGER MENU SETUP

Push the MENU button under "3" Trigger Controls. Press Type in the "4" bottom sub menu until you have selected Logic. Then press the DEFINE INPUTS button and with the buttons on the right side of the screen set all channels to "H". Similarly, press DEFINE LOGIC and select "OR", and press THRESHHOLDS and set all of the channels to 10mV by using the "a" and "b" Multipurpose buttons. Then press Mode and choose Normal.

### 4- SAVING MENU SETUP

Select the MENU in the area Save/Recall "5". Push Save Setup in "4" and select one of the 1-10 empty locations with buttons on the right.

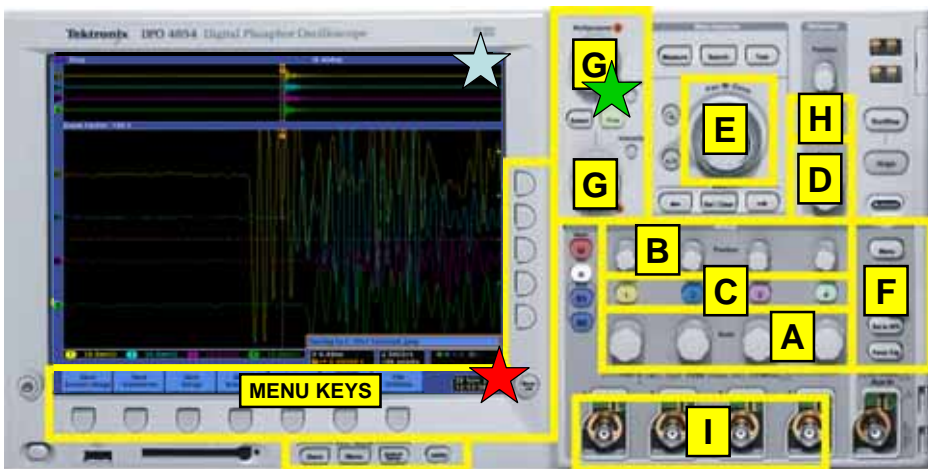
Alternatively, you can select the To File menu and save your setup on the Compact Flash Memory Card.

NOTE: The screen shot shown and the provided setup, "DPO4xx4setup.set", incorporate ZOOM "E".

PART NUMBER: 5191921

REVISION: 1.0

## SPIKE NOISE TRIANGULATER (SNT) SCOPE SETUP – PART 2



| TIPS |   |
|------|---|
| 1    | VERIFY ALL SIMILAR CABLES ARE EQUAL LENGTH +/-1"  |
| 2    | CONNECT ALL CHANNELS  |
| 3    | VERIFY CHANNEL #'S ARE ALL CONSISTENT   |
| 4    | SETUP SCOPE WITH INITIAL SETTINGS (10mV/Div, 4ns/Div)   |
| 5    | TEST EACH CHANNEL FOR FUNCTIONALITY (RATTLING KEY TEST)   |
| 6    | CHECK AND ELIMINATE ABNORMAL INSTRUMENTATION NOISE  |
| 7    | CHECK FOR ROOM NOISE WITHOUT GRADIENTS  |
| 8    | BEGIN EPIWP MODE TESTING  |
| 9    | ★ MAKE SURE YOU SEE THE "TRIG?" ON TOP RIGHT CORNER OF THE SCREEN. IF NOT, TOGGLE RUN/STOP BUTTON IN THE "F" TRIGGER AREA.  |
| 10   | ★ BY HITTING "CURSOR" BUTTON TWICE THE LINE CURSORS WILL TOGGLE FROM ZOOM VIEW TO NORMAL VIEW.  |
| 11   | ★ BY HITTING THE "MENU OFF" THE MENUS ON THE SCREEN WILL BE REMOVED.  |
| 12   | WHEN YOU SEE THE "a" or "b" IN A RED CIRCLE ON THE SCREEN, USE THE "G" MULTIPURPOSE BUTTONS TO ADJUST.  |
| 13   | YOU MAY NEED TO GO TO THE INDIVIDUAL CHANNEL TRIGGER BY USING THE MENU BUTTON IN AREA "F" BY SELECTING THE "TYPE" TO "EDGE" AND CHOOSE THE SOURCE TO SET THE TRIGGER CHANNEL WITH THE BUTTONS ON THE RIGHT. |

| QUICK REFERENCE GUIDE |                 |                                     |              |                   |
|-----------------------|-----------------|-------------------------------------|--------------|-------------------|
| FUNCTION              | INITIAL SETTING | SECOND STAGE SINGLE CHANNEL TRIGGER | TUNED COIL   | FIGURE LOCATION   |
| VERTICAL SCALE        | 10mV/Div        | 10mV/Div                            | 2mV/Div      | A                 |
| OFFSET CHANNEL 1      | +3 Div          | +3 Div                              | +3 Div       | B + MENU KEYS + G |
| OFFSET CHANNEL 2      | +1 Div          | +1 Div                              | +1 Div       | B + MENU KEYS + G |
| OFFSET CHANNEL 3      | -1 Div          | -1 Div                              | -1 Div       | B + MENU KEYS + G |
| OFFSET CHANNEL 4      | -3 Div          | -3 Div                              | -3 Div       | B + MENU KEYS + G |
| INPUT IMPEDANCE       | 50 Ohm          | 50 Ohm                              | 50 Ohm       | C + MENU KEYS     |
| SAMPLE RATE           | 2.50GS/sec *    | 2.50GS/sec *                        | 2.50GS/sec * | D                 |
| TIMESCALE             | 4ns/Div         | 4ns/Div                             | 4ns/Div      | E                 |
| TRIGGER CHANNEL       | 1,2,3, or 4     | CLOSEST CHANNEL                     | TUNED COIL   | F + MENU KEYS     |
| TRIGGER MODE          | Normal          | Normal                              | Normal       | F + MENU KEYS     |
| TRIGGER SETTING       | 10mV            | >7mV                                | >2mV         | F + MENU KEYS + G |
| HOLD OFF              | 20ns            | 20ns                                | 20ns         | TRIGGER MENU + G  |
| PERSISTENCE           | 50ms (auto)     | 50ms (auto)                         | 50ms (auto)  | H + MENU KEYS + G |
| INPUT                 | H Field Probe   | H Field Probe                       | SURFACE COIL | I                 |

\* 5.00GS/s if using a DPO4104 oscilloscope