In addition to the assigned problems in the text: 7.20, 7.23, 7.24, you are required to do a PSpice analysis of the following four arbitrary circuits for the load using the following time domain reflectometry circuit below.

For each case, provide a probe plot like that given for part i) on the back of this page.

The four cases are:

i) parallel RC load with $R_L = 50$ ohms and $C = 1$ nF using the following PSpice code:

```plaintext
*ee 335 TDR TL tl_rc_tdr.cir
*parallel rc load 50 ohm and 1nF
vg 1 0 pulse(0 1 0 1ns 1ns .5us 1us) ;0 to 1V pulse, zero delay, 1ns rise/fall time, 0.5us width, 1us period
rg 1 2 50
tl 2 0 3 0 z0=50 td=40ns ;lossless TL: input 2 0, output 3 0, Zo=50 ohms, time delay 40ns
t2 3 0 4 0 z0=50 td=40ns ;lossless TL: input 2 0, output 3 0, Zo=50 ohms, time delay 40ns
rl 1 4 0 50
c1 4 0 1n
.tran 0.1n 500n 0 1n ;transient analysis: print step, stop time, [optional parameters: start time,
.probe ;maximum internal step time]
.end
```

ii) series RC load with $R_L = 50$ ohms and $C = 0.25$ nF

iii) series RL load with $R_L = 50$ ohms and $L = 2.5$ uH

iv) parallel RL load with $R_L = 50$ ohms and $L = 0.625$ uH