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University-scale pulsed-power system using linear transformer driver PO-YU CHANG, MEI-FENG HUANG, TZONG HUAN IANG, YI-LIANG TSAI, National Cheng Kung University — Linear transformer driver (LTD) [A. A. Kim *et al.*, Phys. Rev. ST Accel. Beams **12**, 050402 (2009)] is a compact pulsed-power system suitable for x-ray sources or laboratory astrophysics and space research for university-scale laboratory. A LTD with 20 bricks storing 8 kJ of total energy delivering 500 kA to the load with a 100 ns rise time is being built. It will be used for following two purposes: (1) gas-puff z pinches generating soft x-ray sources for bio-medical research in the future and (2) generating plasma jets to study interactions between plasma flows and unmagnetized/magnetized obstacles analogous to the interactions between solar winds and planetary magnetic fields or unmagnetized planets. One brick consisting of two 40 nF capacitors connected in series charged to $\pm$100 kV and delivering a peak current of 25 kA to the load was built. The results of current measurement and circuit characteristics are shown.

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