

# Using the Line Sharing Switch in Power Utility Load Study Applications

**Background** Many utilities are implementing Load Study projects in association with EPRI and/or one of the Federal Power agencies. A special data logger RTU is installed in selected commercial or residential sites to log power usage for lights, HVAC, water heaters, dryers, special machinery, etc. The data logger includes a data modem and is called periodically via the public switched telephone network to retrieve the power usage data.

**The Problem** Since the data logger installation is usually temporary, many utilities are seeking a way to avoid the installation and monthly recurring charges for a separate dial-up line. On a national average, these lines cost about \$150 to install and about \$40 per month. The obvious way to avoid these costs is to share an existing telephone line.

The utility's problem is how to share the line and thus avoid the additional line costs while not disturbing the customer. Data logger calls must not ring phones inadvertently and the customer must be able to place a call at any time, even when the data logger is being polled.

**The Solution** The Teltone M-392 (2-port), and the M-394 (4-port) Line Sharing Switches (LSSs) provide a method of sharing a customer's telephone line without disturbing the customer. They unerringly route only data logger calls to the data logger modem; do not ring phones inadvertently, yet give the customer total priority access to the telephone line whenever he/she wants it. The LSS also effectively hides the data logger or additionally attached meter modems from unauthorized access.

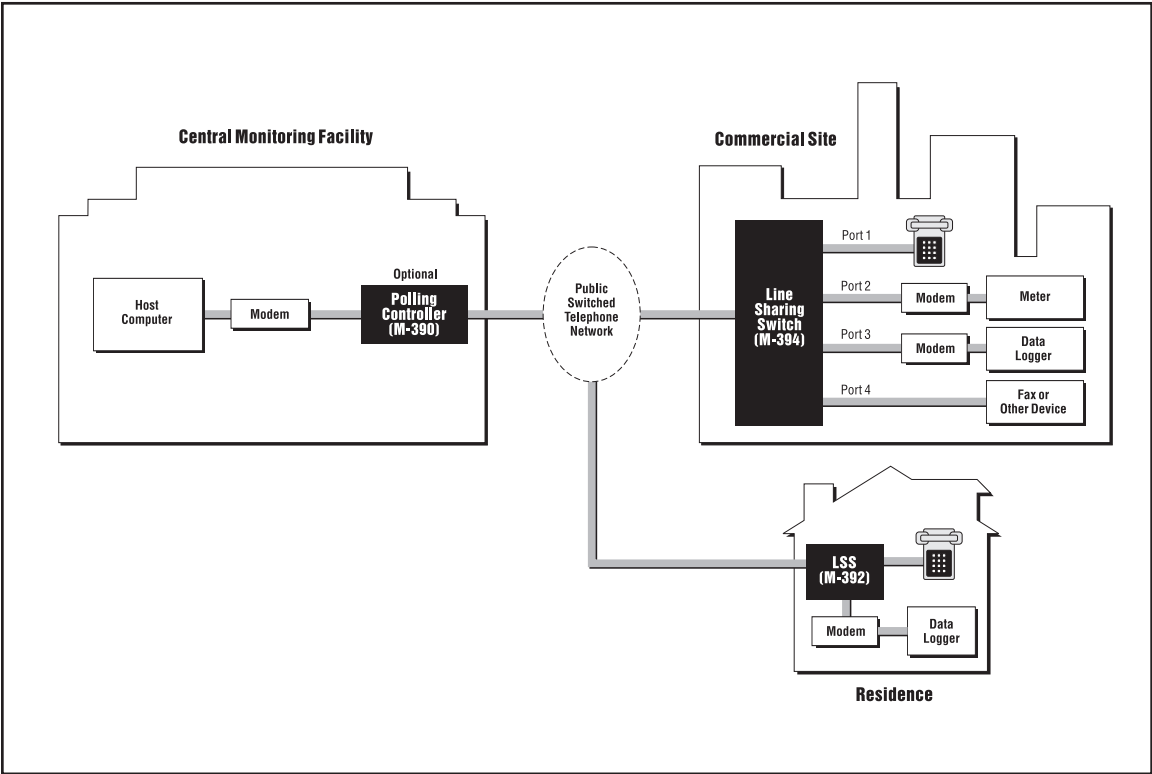


Figure 1

When the LSS answers a call, it expects a DTMF transfer code to tell it which port to ring. If no transfer code is received within 4 seconds after answering the call, the unit will ring a default port to which the telephone(s) may be connected. The transfer code contains from 1 to 4 DTMF digits and can be changed whenever desired. The transfer code and all other options in the LSS are fully remotely programmable. The Polling Controller can automatically send the transfer code thus simplifying the dialing string from the calling modem. It also ensures that calls are routed correctly without concern for network call processing delays, and it can improve security by utilizing an unpublished and proprietary set of transfer codes. A single Polling Controller can be used to call many LSS units.

The LSS solves a unique Load Study problem, pays for itself in just a few months, and can be used over again at new installations. Both the LSS and Polling Controller are compatible with all dial-up modems, and any Hayes modem compatible communications software programs.

The Line Sharing Switch and Polling Controller Reference Manuals are available for download at [www.teltone.com](http://www.teltone.com).