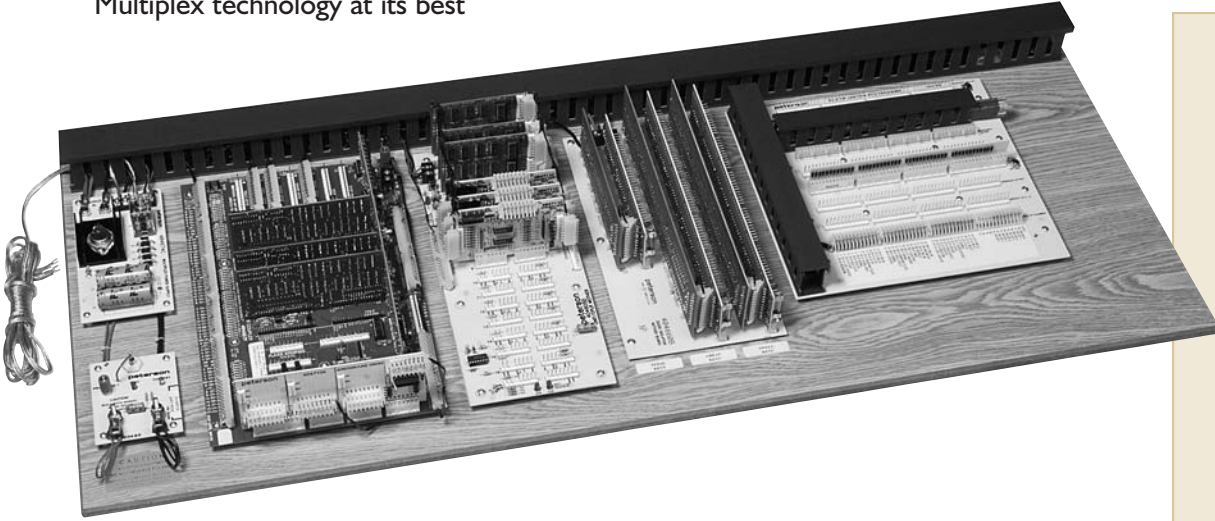


OrgaPlex™ Coupler & Switching System

Multiplex technology at its best



The Peterson OrgaPlex™ is a "Time Division Multiplex" type switching and coupler system for pipe organs. This means that the "on" and "off" status of many related controls, such as all the keys of one keyboard or a large group of stops, are repeatedly scanned at high speed, then processed and transmitted within the system on essentially a single wire. That one wire for each group carries informational data in what is called "serial form", in contrast to "parallel" systems that require separate wires for each note, repeated for each stop, throughout the organ.

Because one signal carries the status of many contacts, a single circuit can be used to perform functions that would take dozens of circuits in a parallel type system. This means that transposing, inter- and intra-manual coupling, unification, manual transfer, and other manipulations can be handled quite simply- and often more economically than with other types of organ control systems.

In most applications, the streams of serial data representing the coupled, unified and otherwise manipulated information for each division are transmitted via small, shielded, computer industry standard cables to "chamber panels" located near the wind chests. These main cables measure only about 3/4" in diameter and are easily unplugged at each end, making OrgaPlex an excellent choice for situations where a movable console is required. Cables are available in standard lengths from Peterson or local computer supply stores. Runs may be up to several hundred feet in length where necessary.

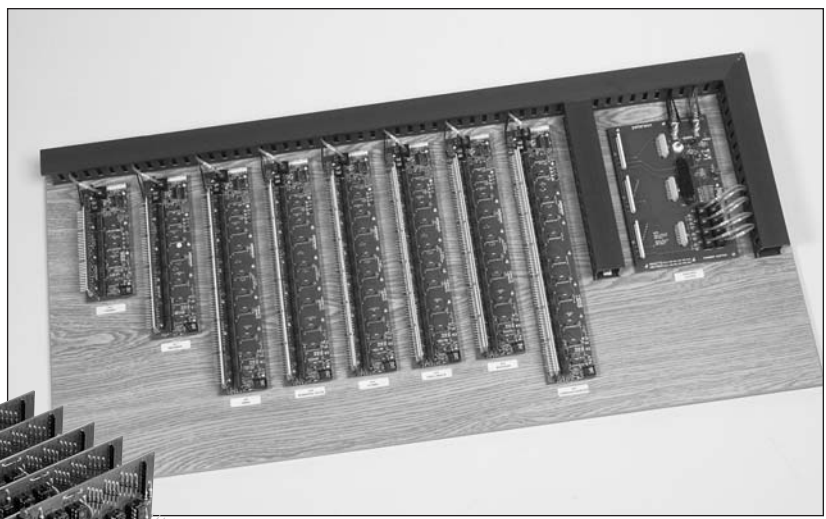
The Peterson OrgaPlex Switching System represents an important milestone in applying modern technology to the organ builder's art. Important because, for the

first time, this system brought high tech methods to the organ builder and service person in a way that is totally practical and understandable. Even those who have little or no understanding of electronic systems and perhaps little interest in the electronics field quickly feel comfortable working with this equipment. Today nearly two thousand OrgaPlex systems are in service throughout the world, making it one of the most widely used types of pipe organ switching.

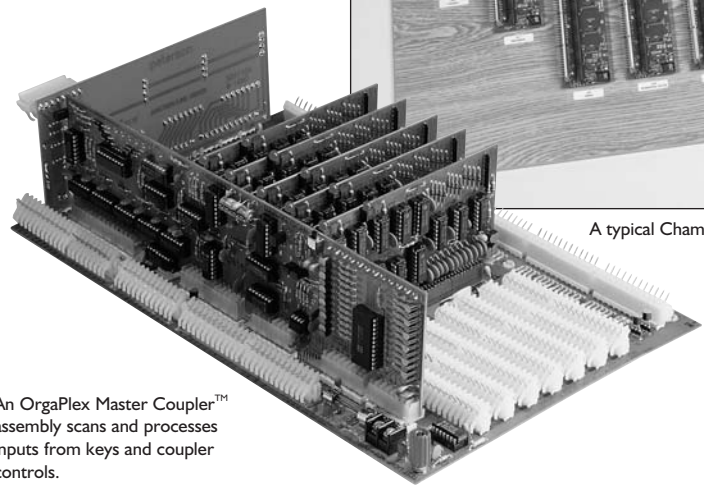
When Peterson engineers began development of a multiplex switching system in 1985, it was considered imperative that the product's design follow a similar, modular philosophy to that of the Peterson Diode Matrix relay and Duo Set™ combination action: a philosophy that still sets Peterson control systems apart today. Specifically, OrgaPlex systems are custom configured at the factory for each organ using several types of small, limited-function circuit boards plugged together into three dimensional assemblies called base systems. Each circuit board module contains readily available components that are widely used throughout the electronics industry. The use of standard components, interchangeability of small modules, and huge number of identical circuit boards produced every year assure that OrgaPlex systems will remain supportable for many decades.

With regard to serviceability, OrgaPlex is nearly self-diagnostic. There are built-in LEDs so one can follow the data stream completely through the system, all the way to the output of the drivers. This allows the organ builder to quickly isolate a problem down to the wiring, key contacts, chest, or a specific module of the OrgaPlex system. The modular design concept itself offers many advantages to the organ builder including

- Time division multiplex technology.
- Modular base system design.
- Small, easily unplugged main cable.
- Highly flexible and expandable.
- Specification easily modified by moving a wire.
- Extensive self-diagnostic features.
- Provided completely assembled, cabled, and documented.
- Accepts pre-made Peterson keyboard or key contact cables.
- Easy interface with MIDI Resource System.™
- Low cost optional transposer.
- Available manual transfer.
- Sostenuto, melody coupler, pizzicato, glissando.



A typical Chamber Panel with Demultiplexer boards and Chamber Junction.



An OrgaPlex Master Coupler™ assembly scans and processes inputs from keys and coupler controls.



OrgaPlex™ main cable.

ease of making changes or additions; a logical, easy to understand layout; and simple troubleshooting and repair by swapping or replacing modules.

Specification details such as the assignment of a pitch to each unit stop, borrowing and unification, and the choice of couplers used may be modified by simply adding or moving one wire. This hard wires the spec so that it is never subject to unintended loss or changes. Any desired changes and additions are easily made on-site by the organ technician with no specialized equipment: it is never necessary to return the system or request replacement chips in order to adjust the specification. Since OrgaPlex uses digital electronics technology but is not a software-driven, microprocessor based system, it represents an attractive blend of technically sophisticated features and hard-wired simplicity.

For performance, features, and well-proven reliability, the Peterson OrgaPlex switching system is hard to beat! A Peterson customer service representative will be happy to help you determine whether this product is best suited to the requirements of your next new organ or rebuild project.

Specifications

Operating Voltage: Organ rectifier 12-18 VDC. Supplied 9 VAC Class 2 transformer or optional Console AC Control System must be plugged into a 117 VAC 50/60 Hz always-on outlet.

Keying: DC Key Encoders require positive key commons through a single contact per note.

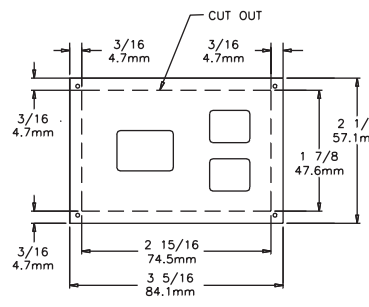
Stop Common Polarity: Positive.

Chest Return Common Polarity: Negative.

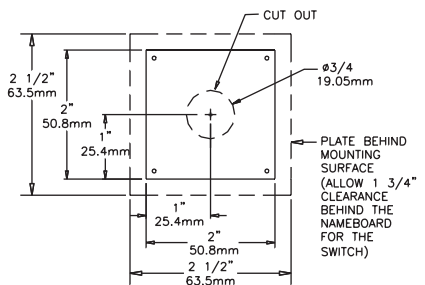
Output Load Rating: Please specify the location and resistance of all magnets below 50 ohms. Outputs are over-current protected.

Performance: One scan every 8.3mS; entire organ is refreshed approximately 120 times per second.

TECHNICAL INFORMATION



Digital Transposer Select



Rotary Transposer Select