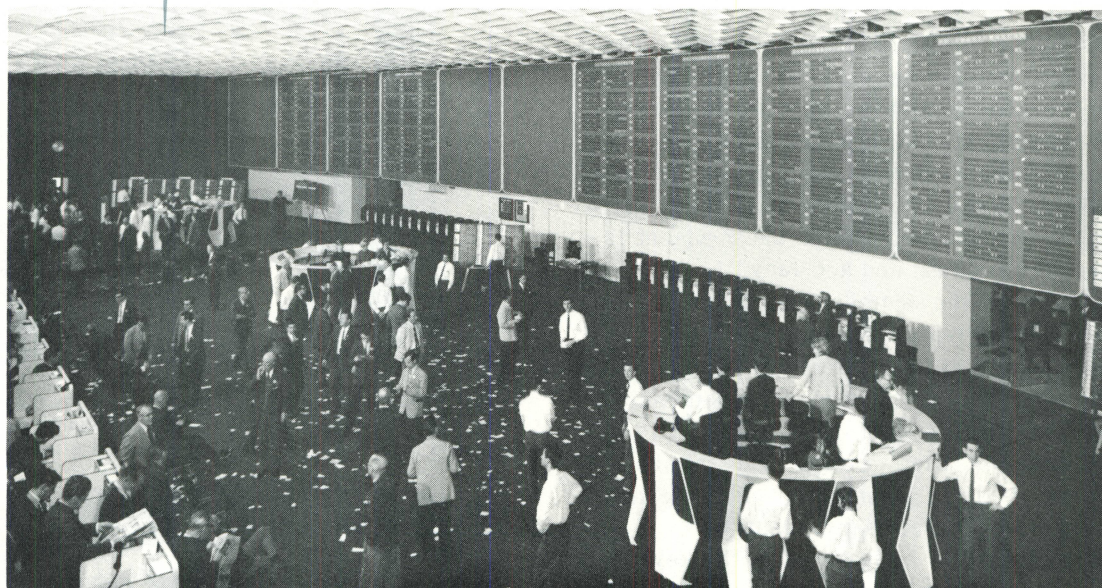**FERRANTI PACKARD**

INFORMATION DISPLAY SYSTEMS

Applications Information

The new premises of the Montreal and Canadian Stock Exchanges which were officially opened in October of 1965.

- The Trading Floor of the new Stock Exchanges in Montreal, is 160 feet long by 60 feet wide and has 3 Trading Islands and 9 Display Boards. Each of the 9 twelve and a half foot square boards show Bid Price, Preferred Bidder, Offered Price, Preferred Offerer and Last Sale Price. For 378 stocks on 7 boards, 10 other trader numbers per stock are also displayed.

- Changes are made from up to 23 keyboards. An average transaction is displayed in 1/20th of a second.

- There are a total of 16,382 characters displaying data on 666 stocks.

- The Display System feeds data from the keyboards to an on-line computer for checking and editing. The computer then drives the display system as well as the ticker and television display.

- Ferranti-Packard displays were selected for this application because of their high reliability, long life, high operating speed, quiet operation and the excellent visibility in bright ambient light.

A view of the control area behind the display boards with a test keyboard in the foreground and the dual control system in the rear.

The complete system has 126 plug-in panels as shown above — each panel is isolated by relays from the common drive bus to the duplexed control equipment. The high operating speed permits sequential operation without delaying the keyboard operators.

Data is entered into the system via the Ferranti-Packard input consoles. One console normally controls 54 stocks but can control all stocks if desired. The operator receives information verbally from the traders on the floor or reads from sales slips. She pushes 1 of 55 buttons to specify the stock, depresses keys in the price and/or trader columns and in the function area to indicate whether the price is a bid, offer or sale entry or cancellation, and whether the trader is 'preferred' or 'other'. The keys that were depressed, remain down to enable the operator to check that her keying was correct before pushing the 'transmit' button to initiate transfer of data to the display boards and computer.

Data from the keyboards is accepted by the Ferranti-Packard control equipment, stored and sent to the computer for checking. While the computer is checking the data for format and accuracy, the display system is setting up the address path so that it is ready for the computer reply. The reply message may contain additional or modifying information.

Within a fraction of a second after depressing the 'transmit' button the data is displayed in its location on the appropriate board, and is simultaneously sent to the computer for checking and driving the ticker and the television display.

If the operator has made an error, the keys on the console are locked down to show the incorrect message and a hooter in the console alerts the operator. The operator pushes a button to release the keys, makes the correction and retransmits the data.

Clearing transactions and other special messages can be entered via the input consoles. Also the computer can originate messages for the display system.

The display boards and the television display can be operated directly from the keyboards in case of a computer outage via either one of the dual Ferranti-Packard electronic control systems. To further insure continuous display operation, no-break back-up power is provided.
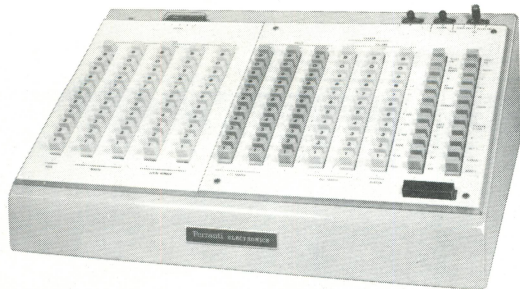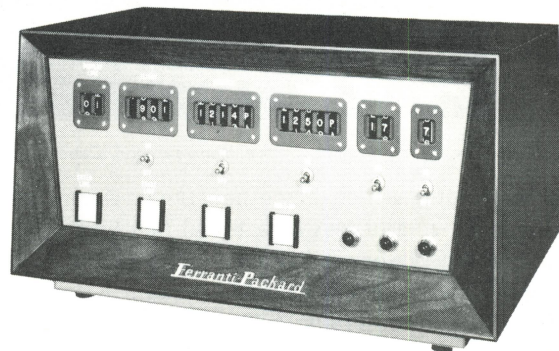

One of the 23 Input Consoles used to enter trading data into the system.

OTHER APPLICATIONS

In March 1962, the Flight Information Board as shown above was installed in the Western Airlines Terminal Building in Los Angeles, California, and comprised 300 characters of the self-encoding type.

Simple data input unit used in the Western Airlines System.

Originally designed to be used as remote information boards, score boards, or other applications where dynamic displays must be changed quickly and frequently. An obvious application is for arrival/-departure boards and gate boards in airline terminal buildings.

Such a display is ideally suited to the environment normally to be found in the new modern terminal buildings where high ambient light levels limit the effectiveness of TV or Light-Type display boards.

Data is entered into the system directly from the input unit illustrated demonstrating the simplest minimum system configuration.

Alternatively, a typewriter-type of input keyboard can be used or the display can be driven from pre-programmed data on paper tape or directly from a computer.