The front panel of LabVIEW includes connection, speed, acceleration, and the parameters of movement of each axis which control multi-axis automatic control system. Whether test light is on or not indicates whether the LabVIEW is properly connected to ActiveX object. Movement modes can be chosen as absolute motion or relative motion to control different objects in different conditions. If any errors occur during system operation, it can be reviewed in the error report section to modify.

The diagram of multi-axis automatic control is shown in Fig. 3 which fMoveVE, fMoveACC, bMoveAbsolute are used to set the system running speed, acceleration and patterns. Connect is used to set the communication of control card and PC and will be set for the PCI bus, the Move to set the motor position and axis of movement.

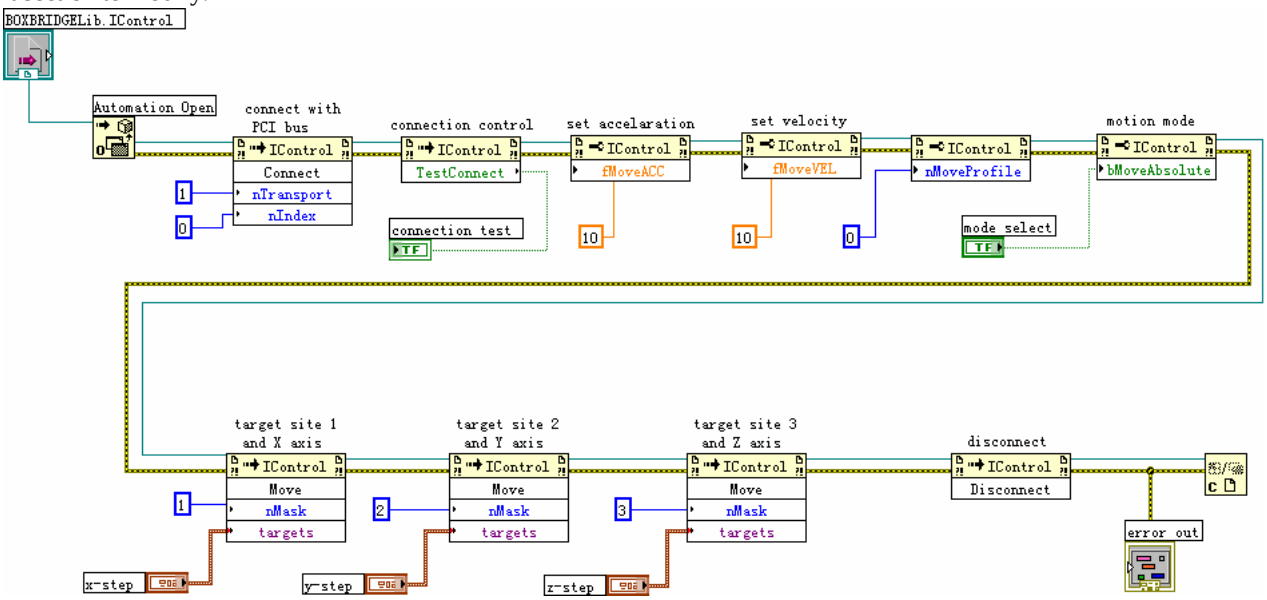

Figure 3. The front panel interface of LabVIEW

V CONCLUSION

The thesis aims to design a multi-axis automatic control systems based on “Personal Computer + Motion Control Card "program to research and apply it in the LabVIEW software platform. Compared with other commonly used VB, VC++, LabVIEW is superior in intuition, simple operation, development potential, low cost and its suitability for system design and development. Application in multi-axis automatic control system can be realized through compiling the interface and control procedures of LabVIEW software and calling the ActiveX and other feature. This system is precise, fast, easy to operate with low cost and ensures instantaneity, reliability and stability in practical applications.

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