## APROSPAND-64 OPERATING MANUAL

Congratulations! Your are the owner of a 4 place, switchable expander for the Commodore 64, 64C or 128 computer. The operation of Aprospand-64 is as follows and is very simple.

To use Aprospand-64, be sure that the computer power is turned OFF then plug Aprospand-64 into the right rear expansion cartridge connector slot. Be sure that the Aprospand-64 is firmly seated by assuring that the small metal fuse clip nearest the computer goes inside of the computer. If it does not, the unit is not firmly seated. Rock slightly back and forth while pushing to allow it to seat correctly. Next, turn on the computer and see that the display screen comes on with the standard "Bytes Free" power on message.

To use any cartridge designed for the C-64 or C-128, first be sure that the computer power is turned off then simply plug the cartridge into one of the four expansion slots on Aprospand-64. Be sure that it seats firmly into place. The connectors used in Aprospand-64 are of the highest industrial quality (technically, gold-plated, bifurcated-contact) and have the exact same configuration as those used in the computer so there will never be any compatibility problems with any cartridge made for the computer.

Next, turn off all the four cartridge slide switches located on a row on the right hand side of Aprospand-64 by pushing the slide to the position farthest from the computer, then turn on the power to the computer. After the "power on" message is displayed on your display screen, switch on the cartridge you want to use by sliding its adjacent slide switch toward the computer (ON position) then momentarily push the small black round reset pushbutton switch. In a few seconds, Presto! - the display screen will show the new display associated with the particular cartridge you have selected. You may install up to 4 cartridges in Aprospand-64 and the only thing you need to do to select from one to the other is to switch off all but the one you wish to use, then momentarily press the reset pushbutton. A few seconds after pressing the reset pushbutton, the computer will initialize in the mode of the newly selected cartridge. In some cases more than one cartridge may be used at the same time. To determine which cartridges are compatible, read the cartridges' instruction manual or simply switch them on simultaneously then press reset. If they are compatible, operational aspects of both cartridges will be evident. If not, the display screen will fill with random characters or otherwise clearly exhibit noncompatibility.

The fuse supplied with Aprospand-64 is rated at 1 amp which gives your computer maximum protection from overuse of power from its power supply. This means that the maximum power all of the cartridges used at one time

in Aprospand-64 is limited to 1 amp. If you put cartridges into Aprospand-64 which use more than the 1 amp limit. the fuse will open (the small wire inside of the glass tube of the fuse will break open) thus protecting your computer. In some cases you may wish to use more than the 1 amp allowed by the fuse by using a larger current fuse such as a 2 amp type of the same physical size. Aprotek does not necessarily recommend this. Some computers may be able to supply the additional current with no problem but others may not be able to. If you need to try to use a larger value fuse, be sure to check the power transformer of the computer occasionally to make sure it does not overheat. If, at any time, it is too hot to put your hand on it and leave it there, it is unable to safely supply the added power. Aprotek will not be responsible for damage to computers or any consequences thereof when operated in excess of the limitations of the computer. A few computers do not have interface circuits and extra power of sufficient strength to operate some cartridges. If your computer happens to be one of these, your only alternative is to buy a buffer product which "steps up" the signals coming from the cartridge port.

Call our customer service line @ (805) 987-2454 weekdays between 8 a.m. and 5 p.m. Pacific time for specific answers to drive capability or cartridge adaptability.

## SOME DOs AND DON'Ts

To be assured of reliable operation of Aprospand-64 and your cartridges be sure to keep them stored in a clean environment and avoid touching the connector portion. A clean rag saturated with ordinary rubbing alcohol or electronic contact cleaner may be used to clean the printed circuit board edge contacts on your cartridge or Aprospand-64.

Keep all foreign objects out of the connector slots on Aprospand-64. Plugging a cartridge into a connector with a foreign object may cause irreparable damage to the connector and is not covered under the product warranty.

Always install cartridges with the label facing foreward.

Never switch a cartridge in or out of use unless you reset the system with the reset pushbutton before continuing on with your activities. In some cases it may be necessary to push and hold the reset pushbutton for several seconds. In the C-128, use the reset button on the right side of the keyboard.

