A L F

Amiga **L**oads **F**aster

Increased speed,
safety, & efficiency
on the Amiga.

Contents

ALF1 Version 1.6 Software 2

ALF2 Software – The New Standard for Amiga Memory Devices 3

ALF2 Utilities – An Extensive Set of Programs 5

ALF2 and the Bridgeboard PC-Card 7

The New Generation of ALF Controllers for the Amiga 7

The ALF Family

ALF, a device for controlling IBM-PC compatible harddisk controllers with a Commodore Amiga computer, was first introduced in Europe in October 1988, and became an immediate success. ALF facilitates computer operation, and its high reliability and speed just might provide you with the only way of achieving optimum results with your Amiga.

ALF consists of two parts: a hardware unit with a standard IBM harddisk controller and an adapter to connect the controller to the Amiga computer, and a software unit which serves the controller through the computer. Defects on the disk are dealt with superbly, and it is for this reason that it is now possible to use disks in combination with ALF which would not normally work with other computers.

ALF software is being continually improved upon, and is now available in two versions: ALF1 version 1.6 (update of the original), and ALF2. ALF hardware is available in disk-bootable, rebootable, and autobootable models, all offering increased speed, safety and efficiency.

ALF1 Version 1.6 Software

This software connects standard IBM-compatible ST412/ST506 harddisks to the Amiga computer. As well as allowing two harddisks to be used simultaneously, ALF1 also offers shorter loading times, an increased writing rate, higher data safety, driver CheckDrive function, AmigaDOS "cheat" function, ALFmount (automatic mountlist editor), many additional utility programs started from workbench, hard-disk write-protect function, and automatic installation. When used together with an ALF-RE-MFM or RLL controller, the ALF1 version 1.6 software provides the most economical method of connecting an ST412/ST506 harddisk to an Amiga computer. Surprisingly, even a damaged track "0", which could never run with an IBM or IBM-compatible, works with ALF1.

ALF2 Software – The New Standard for Amiga Memory Devices

Today we are proud to introduce a new addition to the ALF family. Data safety, increased speed, and universal standards: ALF2 welcomes you to the future!

In developing ALF2 software, we have created a universal standard which does not restrict its use with only the ST412/ST506 controller. The modular concept enables the Amiga to control any type of memory device now on the market, as well as those to be introduced in the future. Because all equipment (e.g. ST412/ST506, SCSI, XT-Bus, AT-Bus, harddisk, changeable disk, CD-ROM, streamer) is controlled by only one device, all ALF2 software and user interfaces are the same kind no matter which equipment is used.

■ A Revolutionary Concept

The concept is simple. Instead of a specially designed device for each module, only one hardware-independent enhanced ALF device is required. This device is capable of controlling up to 8 softSCSI devices which are, in turn, adapted to various kinds of memory devices and controller types, and may be interchanged and updated constantly. Consequently, you are not restricted to the use of the StandardFileSystem or the FastFileSystem. Furthermore, ALF2 will automatically adapt to the installation of any of the new Amiga processors (i.e. 68010/20/30/40) because the data transfer program code is generated only at the "object time". This revolutionary concept insures maximum performance of all Amiga models.

■ Easy Installation

ALF2 is operated by the graphic user-menu of your Amiga. All commands are interactive, so even the most complicated operations are easy to perform. Installation does not restrict the user's range of possibilities, and there are absolutely no mountlist entries or startup sequences required. Mountlist is banned from the parameter section of your harddisk, and the startup sequence of your workbench does not have to be changed. When using SCSI devices, all disk parameters are recognized automatically.

■ Autobootable

ALF2 is autobootable with ALF-A controllers, and will boot the moment you switch on your computer.

■ **Rebootable**
ALF2 is rebootable with ALF-R controllers as well as with controllers from other manufacturers. Once loaded from the disk, ALF2 is resident in your Amiga RAM until you switch off the computer. Immediate booting from the connected equipment is also possible when performing a RESET, or when a medium GURU occurs. These features are only possible with Kickstart version 1.3 and up. ALF2 is also reset-resistant using Kickstart version 1.2, but a mountALF command must be carried out by disk.

■ **Faster**
The phenomenal speed associated with ALF1 was acknowledged by numerous computer magazines and highly appreciated by thousands of users. ALF2's greatly-enhanced code allows data transfer rates of more than 600kB/sec using suitable controllers and memory devices, exceeding considerably the rates of the ALF1. FastFile System is also supported – an important feature which allows ALF2 to boot from any FastFileSystem partition.

When using ALF-A-SCSI controllers, data transfer by advanced MOVEP allows maximum performance, and booting time is minimized substantially. With normal SCSI harddisks, ALF2 starts working immediately. With slower SCSI harddisks, ALF2 requires a maximum of 30 seconds standby time.

■ **Disk Change Capability**
ALF2 is the only driver software available for external memory devices which recognizes a change of memory device during operation (disk change). The system will, therefore, work perfectly with an ALF changeable disk (available November 1989) and/or optical disks (CD-ROM).

■ **Safe**
ALF2 is a very safe program. The software was tested for months under tough conditions by users operating different Amiga computers, hardware configurations, and processors, and was not released until all tests were completed successfully. Several test programs are included with ALF in order to check hardware and data. If your harddisk does not provide AutoPark, you can park your harddisk with ALF2's help (optional feature).

■ **Multi-user Operations**
In order to protect your data from unauthorized access, an owner ID can be entered for each partition. You decide who can have access to your private data.

■ **Virus Protection**
Each partition can be write-protected. Furthermore, you can disconnect all ALF2 devices during a RESET with the touch of just one key. If booting is being done from a "contaminated" disk, all ALF2 devices are protected.

■ **Software Designer Information**
ALF2 includes design utilities, demo sources, error codes, and command lists – detailed information for all software designers.

■ **Detailed Instruction Manual**
The ALF2 instruction manual offers many helpful hints and ideas for using external memory devices. Besides information on the construction and operation of harddisks and changeable disks, it provides instructions for the installation of standard software, and includes a detailed glossary.

ALF2 Utilities – An Extensive Set of Programs

ALF2 includes many helpful and specially designed utility programs. These programs far exceed the normal range of any other harddisk device on the market, and provide a basis for safe and easy operation of an external memory device. Included, for example, is a fast and extremely safe backup program – an indispensable item which we believe, in itself, justifies the price of the ALF2.

The most important ALF2 utilities include:

■ **InstallALF**
Manages all installation operations: parameter entry (automatically or manually), automatic recognition of type of processor used, autopark option, disk-error handling, partitioning with selection of file system, delineation of boot priorities, DOS formating, copying of any workbench unto the device.

■ **Password**
Allows password entries for various partitions, as well as selection of access modes (i.e. owner, public, format, read, write).

■ **Checkdrive**
Hyper-sensitive test program. Tests the device's surfaces and reports possible data losses before it's too late.

■ **Readusage SCSI**
Reads the usage counter of the SCSI device, reports the number of completed read and seek operations, and counts all correctable and non-correctable errors that have occured.

■ **TestALF**
Tests controller and verifies correct connection of all devices.

■ **DiagALF**
Similar to the DOS "why" command, it reports the latest ALF device error and the affected softSCSI device. Offers more detailed information on the workbench than just the annoying "Volume . . . has a read/write error". Any type of error, be it with the cable, controller, or the medium, can be traced. An indispensable aid anytime something hasn't worked the first time.

■ **ALFbackup**
Extremely fast and safe backup program. Features include: backup and restore to multiple disks, real verify (no read after write), directory selection, streamer and changeable disk capabilities (e.g. ALF-SCSI disk), capacity to memorize all paths and settings in a configuration file.

■ **FSSchange**
Automatic recognition of diskchange with FastFileSystem using Kickstart version 1.2 or 1.3, or floppies.

■ **ALFduplicate**
Allows diskcopy from one ALF changeable disk to another using only one ALF changeable disk drive.

Optional ALF2 utilities include:

■ **ALFstreams**
Controls all common SCSI streamers. ALF2 software together with an ALF-SCSI controller is needed to run this option. (available November 1989)

■ **ALF2 Developer Package**
This is designed for programmers who want to create special utility software for the ALF2. Apart from the information included with an ALF2 package, this package offers additional information, demo sources, and invaluable tips. Any brilliant idea contributed for the ALF2 system will merit a free software package.

■ **ALF2 Commercial Package**
This is designed for commercial harddisk manufacturers. It contains important information on the ALF2 device, the ALF2 resource, the integration of other softSCSI devices into the softSCSI resource, and the ALF2 service task. A softSCSI skeleton device in source code is also included that allows it to be adapted to other manufacturers' hardware. This package does not come with a sub-license.

ALF2 and the Bridgeboard PC-Card

Good news for all owners of an Amiga PC-XT or AT card: with the help of Commodore's Janus software 2.0, the PC can use all ALF controllers and even boot from the Amiga harddisk. Now you can finally avoid a slow, malfunctioning Janus harddisk on the PC. Automatic PC-card installation is included.

The New Generation of ALF Controllers for the Amiga

The best software is useless without a controller that triggers the different devices. ALF harddisk controllers enhance the use of any software, and are available in the following versions.

■ **ALF Controllers Using the ST412/ST506 Interface**
These controllers use the widespread ST412/ST506 interface, and have proven to be the most reliable of all the Amiga harddisk controllers. With these controllers ALF will achieve a speed of 400 kB/sec., and can, therefore, be used for all professional applications. They are available in diskbootable, rebootable, and autobootable models.

Diskbootable Controllers (for use with Amiga 500/1000/2000)
The least expensive of all ST412/ST506 interface controllers, these controllers are diskbootable with ALF1 version 1.6 software, and only require Kickstart 1.2. Diskbootable controllers are available in three models for use with the different Amiga computers.

ALF-DE-MFM or RLL A500/1000
Includes adapter without case for installation at the expansion port of the Amiga 500 or 1000, ALF1 version 1.6 software, and connection cable for the harddisk. Available in MFM or RLL versions. Bus is not pass-through, and an external power supply is required for the harddisk.

ALF-DG-MFM or RLL A500/1000
Includes adapter with case for installation at the expansion port of the Amiga 500 or 1000, ALF1 version 1.6 software, Busdriver, connection cable for the harddisk, and a special 50 cm cable for use between the adapter and the controller. Available in MFM or RLL versions. Bus is pass-through, and an external power supply is required for both the harddisk and the controller.

ALF-DC-MFM or RLL A2000
Half-length card for installation in any Amiga 2000 slot, available in MFM or RLL. Includes ALF1 version 1.6 software and connection cable for the harddisk.

Rebootable Controllers (for use with Amiga 500/1000/2000)
These controllers are the low-cost alternative to autobootable controllers, but offer, nonetheless, an equivalent booting time of approximately 15 seconds using ALF2 software. Once the driver device software is loaded from the floppy disk to the computer's RAM, it is installed reset-resistant – meaning, after a RESET (rebooting the system), the software does not have to be reloaded. If you own Kickstart version 1.3 or up, you can boot from the harddisk after each RESET. Rebootable controllers are available in three models for use with the different Amiga computers.

ALF-RE-MFM or RLL A500/1000
Hundreds of Amiga 500 users have been able to build their own "Amiga Tower" with this particular controller. Includes adapter without case for installation at the expansion port of the Amiga 500 or 1000, ALF2 software, and connection cable for the harddisk. Available in MFM or RLL versions. Bus is not pass-through, and an external power supply is required for the harddisk.

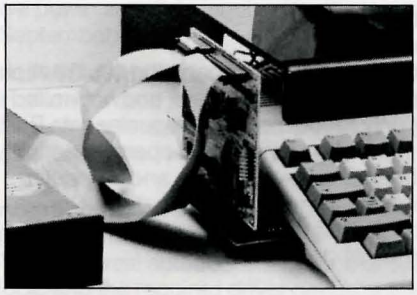
ALF-RG-MFM or RLL A500/1000
Includes adapter with case for installation at the expansion port of the Amiga 500 or 1000, ALF2 software, Busdriver, connection cable for the harddisk, and a special 50 cm cable for use between the adapter and the controller. Available in MFM or RLL versions. Bus is pass-through, and an external power supply is required for both the harddisk and the controller.

ALF-RC-MFM or RLL A2000
Half-length card for installation in any Amiga 2000 slot, available in MFM or RLL. Includes ALF2 software, and connection cable for the harddisk.

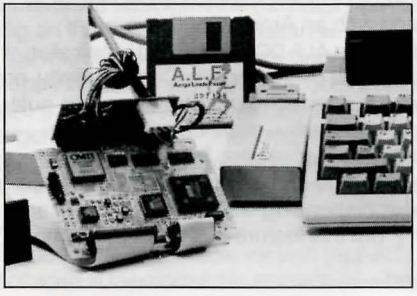
Autobootable Controllers (for use with Amiga 500/2000)
These are real autoboot controllers, providing autoboot logic and the required driver device software in special chips (PROMS) on the systems board. Consequently, it is possible to boot from the harddisk immediately after switching on the computer if Kickstart version 1.3 or up is used. The real autoboot resolution dispenses with the handling of floppy disks. Simply switch on your computer, and away you go! Note: If an ALF autobootable controller is operated together with an ALF rebootable controller, the latter will be triggered by the former. Autobootable controllers are available in two models for Amiga 500 and 2000 computers.

ALF-AG-MFM or RLL A500
Same as the rebootable version (ALF-RG) except that ALF2 software is memorized in PROMS, and Bus is pass-through.

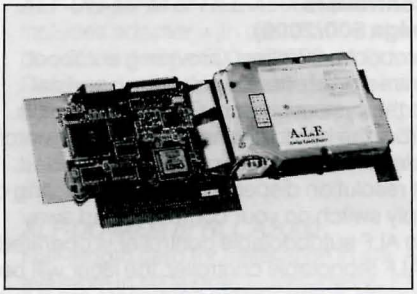
ALF-AF-MFM or RLL A2000
Full-length card for installation in any Amiga 2000 slot, available in MFM or RLL versions. Allows the installation of a 3½" harddisk, turning it into a filecard. Includes ALF2 software, and connection cable for the harddisk.



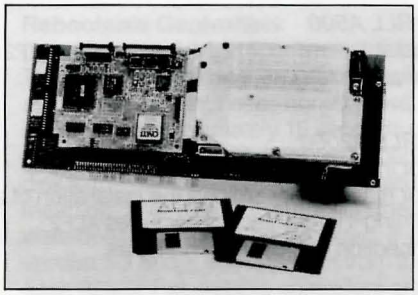
Shown here, the ALF-E-MFM or RLL controller. Available in diskbootable and rebootable models.



Shown here, the ALF-G-MFM or RLL controller. Available in diskbootable, rebootable, and autobootable models.



Shown here, an ALF-C-MFM or RLL controller mounted with a 60-meg harddisk. Available in diskbootable and rebootable models.



Shown here, an ALF-AF-MFM or RLL autobootable controller mounted with a 60-meg harddisk.

■ ALF Controllers Using the SCSI Interface

SCSI (small computer systems interface) is the usual periphery Bus taken over from micro computers, and not limited to the operation of only harddisks. It is a regualar data Bus similar to the one inside your Amiga, and operates peripheral devices like streamers, laser printers, and computer networks, apart from hard and changeable disks. Consequently, the SCSI concept is a much more flexible and universal one than the ST412/ST506 Bus.

The new SCSI controllers offer two important advantages to all ALF-DC-MFM or RLL controller users. If an ALF-AF-SCSI controller is operated with an Amiga 2000 computer already equipped with an ALF-DC-MFM or RLL controller, the latter will be controlled by the former. Consequently, no hardware or software is needed to update. Secondly, autoboot is possible with Kickstart version 1.3 with no SCSI device required at the SCSI controller. So, for a little more money, an autoboot update can be purchased at the same time as the controller, dispensing with the need for a hardware update. (Sorry, but this feature is only for the Amiga 2000 owner.)

These controllers support advanced MOVEP transfer of ALF2 software – an important feature which enables them to achieve extremely high data transfer rates (up to 800kB/sec) without using Amiga DMA cycles.

Although at present relatively expensive, SCSI devices are definitely the memory devices of the future. Prices for SCSI harddisks, changeable disks, and optical disks will drop as their use becomes more widespread. Our ALF is the perfect example of this phenomenon. SCSI controllers are available in rebootable and autobootable models.

Rebootable SCSI Controllers (for use with Amiga 500/2000)

These controllers are the low-cost alternative to autobootable controllers, but offer, nonetheless, an equivalent booting time of approximately 15 seconds using ALF2 software. Once the driver device software is loaded from the floppy disk to the computer's RAM, it is installed reset-resistant – meaning, after a RESET (rebooting the system), the software does not have to be reloaded. If you own Kickstart version 1.3 or up, you can boot from the harddisk after each RESET. Rebootable controllers are available in two models for use with Amiga 500 and 2000 computers.

ALF-RG-SCSI A500

Includes adapter with case for connection to the expansion port of the Amiga 500, 25-pin mini "D" plug and sub-mini "D" plug for connection of external SCSI devices (e.g. ALF-SCSI changeable disk), ALF2 software, and connection cable for the harddisk. Bus is pass-through, and an external power supply is required for the harddisk. (available September 1989)

ALF-RC-SCSI A2000

Half-length card for installation in any Amiga 2000 slot. Includes ALF2 software, and connection cable for the harddisk. (available November 1989)

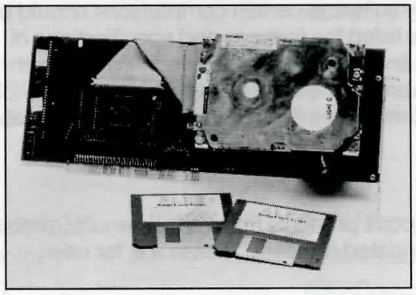
Autobootable SCSI Controllers (for use with Amiga 500/2000)

These are real autoboot controllers, providing autoboot logic and the required driver device software in special chips (PROMS) on the systems board. Consequently, it is possible to boot from the harddisk immediately after switching on the computer if Kickstart version 1.3 or up is used. The real autoboot resolution dispenses with the handling of floppy disks. Simply switch on your computer, and away you go! Note: If an ALF autobootable controller is operated together with an ALF rebootable controller, the latter will be triggered by the former. Autobootable controllers are available in two models for Amiga 500 and 2000 computers.

ALF-AG-SCSI A500

Same as the rebootable version (ALF-RG), except that ALF2 software is memorized in PROMS. (available October 1989)

ALF-AF-SCSI A2000
Full-length card for installation in any Amiga 2000 slot. Allows for the installation of a 3½" harddisk, turning the controller into a filecard. For optimum results, a Quantum ProDrives harddisk is recommended. Its incredible transfer rate of up to 700kB/sec turns an ALF-SCSI controller into a high-performance harddisk unit. A 5¼" harddisk can also be connected, but without the filecard feature. Includes ALF2 software, and connection cable for the harddisk. (available now)



Shown here, an ALF-AF-SCSI auto-bootable controller mounted with a 120-meg harddisk.

Controller Specifications

ALF ST412/ST506	
Power	5V ± 5%; 12V ± 5%
Temperature	5 – 50°C
Capacity approx.	500mA
Interface	According to Seagate specifications: ■ 36-pin plug for controller cable ■ 20-pin plug for data transfer cable
Data Transfer	■ blind or burst software – selection via software ■ no utilization of DMA cycles
Maximum Data. Transfer	MFM: ■ standard Amiga – approx. 350kB/sec ■ Amiga A2620 board – approx. 420kB/sec RLL: ■ standard Amiga – approx. 500kB/sec ■ Amiga A2620 board – approx. 650kB/sec
Type	MFM: OMTI 5520B RLL: OMTI 5527B

ALF-SCSI	
Power	5V ± 5%
Temperature	5 – 60°C
Capacity approx.	200mA
Interface	According to ANSI specifications: ■ A2000 internal – 50-pin plug ■ A500/A2000 external – 25-pin sub-mini "D" plug compatible with A590, A2090, or Macintosh
Data Transfer	advanced MOVEP transfer without using DMA cycles
Maximum Data Transfer	MOVEP: ■ standard Amiga – approx. 800kB/sec ■ Amiga A2620 board – approx. 1.2mB/sec Blind or burst: ■ standard Amiga – approx. 500kB/sec ■ Amiga A2620 board – approx. 650kB/sec
Type	Designed in-house: ■ LSI-SCSI chip ■ 128-byte parameter RAM ■ CMOS technology for rapid reply ■ ALF custom chip

Software Buying Guide

Before buying any software, certain comparisons should be made. Here we've listed the features and specifications of ALF1 Version 1.6 and ALF2 Software for comparison with other similar software on the market. In itemizing what to look for, we hope that this table will facilitate software purchases.

Note
ALF software supports products from other manufacturers. The list below is updated regularly. Please ask for new additions.

C'T do-it-yourself project (4/88 and 2/89)
HK Computers
MegaTronic Hard Disks DigiPro Ltd. Hard Disks
The Vault PP&S (progressive peripherals and software)
Skyline Hard Disks
REX Amigos/Promigos Vesalia
High Screen X-Tension A1Comp
CompTec
Message AHD (models up to 1988)
Commodore A2090/A2090A (available soon)
Otronic OSSI
KUPKE Hard Disks
Reisware Double Disks

Feature
Usable filesystem
Bootable from any FastFileSystem partition
Disc parameters on harddisk
Parameter section compatible with Commodore standards
Startup sequence alterable
No editing required on harddisk for mount list
Optional file system reloadable from harddisk
Supports Commodore HD-SCSICMD startup
Supports Commodore file system resource
Supports 68010/20/30 processors
Supports other types of Bus-systems (SCSI, AT-Bus, etc.)
Supports changeable disks
Supports CD-RAM
Supports SCSI streamer
Autopark included with driver device
Professional backup program included
Checkdrive included
Overscan included
Readable SCSI usage counter
Hardware test programs included
Time-out function for hardware error
Error codes in clear commands
Password-protection (for each partition)
Read-protection (for each partition)
Read-protection (for each unit)
Write-protection (for each partition)
Write-protection (for each unit)
Format-protection (for each partition)
Format-protection (for each unit)
Rebootable driver device
Autobootable driver device
Automatic disk change
Manual disk change
Driver complies with Commodore standards
Prepared for advanced MOVEP transfer*
Prepared for advanced MOVEM transfer*
Prepared for DMA
ST412 disks supported like an SCSI

* very important feature

ALF2	ALF1 V1.6	Specification	ALF2	ALF1 V1.6
yes	yes	What the program is running in when performing autoboot	ROM	–
yes	no	Maximum number of units controlled	100	2
yes	yes	Maximum number of controllers	8	1
yes	no	Maximum capacity of one unit	1GigaB	416mB
no	yes	Maximum speed with ST412-MFM (approx.)	450kB/sec	380kB/sec
yes	no	Maximum speed with ST412-RLL (approx.)	450kB/sec	400kB/sec
yes	no	Maximum speed with SCSI (approx.)	800kB/sec.	–
yes	no	Maximum speed with SCSI and ALF disk (approx.)	550kB/sec.	–
yes	no	Maximum speed with ALF-SCSI FileCard (approx.)	1.2mB/sec.	–
automatically	manually	Maximum speed with ST412-RLL and A2026 (approx.)	600kB/sec	500kB/sec
yes	no	Maximum speed with SCSI and A2026 (approx.)	1.2mB/sec.	–
yes	manually			
yes	no			
yes	no			
yes	no			
yes	no			
yes	yes			
yes	yes			
yes	no			
yes	yes			
yes	no			
yes	no			
yes	no			
yes	yes			
yes	yes			
yes	no			
yes	yes			
yes	no			
yes	yes			
yes	no			
yes	no			
yes	no			
yes	yes			
yes	no			
yes	no			
yes	no			
yes	no			
yes	no			

Pricelist

Amiga Computer	ALF Hardware	ALF Software	Price (US$)
500	ALF-DE-MFM	ALF1 Version 1.6	194.00*
500	ALF-DE-RLL	ALF1 Version 1.6	225.00*
500	ALF-DG-MFM	ALF1 Version 1.6	240.00*
500	ALF-DG-RLL	ALF1 Version 1.6	272.00*
500	ALF-RE-MFM	ALF2	252.00*
500	ALF-RE-RLL	ALF2	280.00*
500	ALF-RG-MFM	ALF2	307.00*
500	ALF-RG-RLL	ALF2	335.00*
500	ALF-RG-SCSI	ALF2	(available soon)
500	ALF-AG-MFM	ALF2	365.00*
500	ALF-AG-RLL	ALF2	384.00*
500	ALF-AG-SCSI	ALF2	(available soon)
1000	ALF-DE-MFM	ALF1 Version 1.6	194.00*
1000	ALF-DE-RLL	ALF1 Version 1.6	225.00*
1000	ALF-DG-MFM	ALF1 Version 1.6	240.00*
1000	ALF-DG-RLL	ALF1 Version 1.6	272.00*
1000	ALF-RE-MFM	ALF2	252.00*
1000	ALF-RE-RLL	ALF2	280.00*
1000	ALF-RG-MFM	ALF2	307.00*
1000	ALF-RG-RLL	ALF2	335.00*
1000	ALF-RG-SCSI	ALF2	(available soon)
2000	ALF-DC-MFM	ALF1 Version 1.6	188.00*
2000	ALF-DC-RLL	ALF1 Version 1.6	209.00*
2000	ALF-RC-MFM	ALF2	242.00*
2000	ALF-RC-RLL	ALF2	278.00*
2000	ALF-AF-MFM	ALF2	297.00*
2000	ALF-AF-RLL	ALF2	339.00*
2000	ALF-AF-SCSI	ALF2	371.00*
		ALF1 Version 1.6	76.00
		ALF2	109.00

D = diskboots the harddisk using Kickstart 1.2 or up
R = reboots the harddisk after each RESET using Kickstart 1.3
A = autoboots the harddisk using Kickstart 1.3
E = without case
G = with case, pass-through, and Busdriver
C = half-length card
F = full-length card for use as a filecard
MFM = ST412/ST506 17-sector coding OMTI Interface
RLL = ST412/ST506 27-sector coding OMTI Interface
SCSI = small computer systems interface

*Price includes hardware and software.

Note
All ALF controllers have been tested and approved, and come with a one-year warranty on parts and labour. ALF-MFM or RLL controllers include an OMTI-MFM or RLL controller, software, instruction manual, and connection cable. The ALF-SCSI controller is our own product, and also includes software, instruction manual, and connection cable.

Prices subject to change without notice. All companies and brand names mentioned in this pricelist are the property of their respective owners.

Payment Terms
Money order, cheque, or cash. UPS: add $3.00 US. Free delivery on orders of 5 units or more. Corporate and university POs are welcome. Personal cheques require 2 weeks to clear. Quebec residents please add provincial sales tax.

Guarantee
Our systems carry a 15-day money-back guarantee, with a full refund excluding shipping charges. Returned items must be unused, include documentation, and be shipped prepaid and insured with a return authorization number.

Orders
Products can be ordered directly (see addresses below), or through your dealer.

Europe
bsc bueroautomation gmbh
Postfach 400368
D 8000 Muenchen 40
West Germany
Tel: (089) 3084152
Fax: (089) 3071714

All Other Countries
Pre'spect Technics Inc.
P.O. Box 670
Station 'H'
Montreal, Quebec H3G 2M6
Canada
Tel: (514) 954-1483
Fax: (514) 876-2869

Return to:
Pre'spect Technics Inc.
P.O. Box 670, Station 'H'
Montreal, Quebec H3G 2M6
Canada