Spring 1980 CATALOG

$1.00

PROGRAMMA

Computer Products

PROGRAMMA
INTERNATIONAL, Inc.
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Los Angeles, CA 90010
(213) 384-0579

PROGRAMMA

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NOTE - PRICES OR SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

ALPHABETICAL LISTING

PROGRAMMA

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PRODUCTS..	NAME.....
AP124	3-D ANIMATION
AP125	3-D DOCKING
PE082	3D-OXO
PE024	6502FORTH
AP001	ACK-ACK
AP002	ACTIVE FILTER
AP130	ADVENTURE
AP003	ALGEBRA I
AP004	ALIEN ENCOUNTERS
AP005	ALIEN INVASION
AP006	AMPERSORT II
AP007	ANALYST
TR001	ANYSORT3
AP008	APMAIL
AP009	APPLE ALLEY
AP016	APPLE II TRIVIA BOX
AP010	APPLE INVADERS
AP011	APPLE INVADERS
AP012	APPLEFORTH
AP013	APPLEFORTH
AP014	APPLEPIE VER 2.0
AP015	APPLEPIE VER 2.0
AP135	APPLEPIE WD PROC SYS
TR002	ARITHMETIC
AP017	ASM/65 EDITOR ASSM
AP018	ASSIST-II
PE001	ATLANTIC PATROL
AP019	ATOMIC CASINO
AP020	AUDIO ENGINEER
PE002	AUTO GRAPH
EX003	AWARI
PE003	BANNER PLUS
AP021	BASEBALL
AP022	BASKETBALL
PE004	BASKETBALL
AP023	BATTLEFIELD
PE005	BATTLESHIP
AP024	BATTLESTAR 1
AP129	BAZOOKA
AP025	BIORHYTHM
AP026	BLITZKRIEG
AP027	BLOCKADE
PE006	BLOCKADE
PE007	BOND YLD/PURCH VAL
AP061	BOXING
AP028	BREAKTHRU
PE008	BRIEFING CHARTS
PE009	BUG/SISC-ROCK-PAPER
AP029	BUSINESS & FINANCE
AP030	CAMERA OBSCURA
AP031	CANTER DOWNS

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PRODUCTS..	NAME.....
AP032	CASSETTE DATABASE
EX002	CHARACTER GENERATOR
AP033	CHASE
AT001	CHASE
EX001	CHASE
AP034	CHECKBOOK
AP035	CHRISTMAS STORY
PE010	CIPHER PACK
PE011	CIVIL WAR
AP036	CLOWNS & BALLOONS
AP037	COLOR STARTREK
AP038	COMPU-READ
TR003	COMPUTER MINDREADER
TR004	CONCENTRATION
AP039	CONEY ISLAND
AT009	CONNECT 4
AP040	COUNTRY DRIVER
PE013	CRAPS/TIC-TAC-TOE
AP041	CROSS CHASE
PE014	CURVE FIT
TR008	D.U.P.
AP133	DART ROOM
AP042	DATABASE
AP043	DATABASE MAILER
TR030	DATACOMM MANUAL
TR005	DBM/5 DATA BASE
AP044	DEATH RACE
AP045	DEPTH CHARGE
PE015	DEPTH CHARGE
PE016	DIET
TR006	DIR
PE017	DIR/REF
AP046	DISK MAGIC
PE019	DOMINOES
TR007	DOODLE
AP047	DRAWING BOARD KALEID
PE018	DRONE
AP048	EARTHQUEST
AP049	ECHO
PE020	ECHO
PE021	EL PRESIDENTE
PE022	ESP
TR009	FIFTEEN NUMBERS
TR010	FIVE SPEED RACER
AT005	FLEET
AP050	FLYSWATTER
AP051	FOOL'S SPOOL
AP052	FOOTBALL
AP053	FOOTBALL PREDICTIONS
PE023	FORECAST
AP054	FORMAT VER 1.0

PRODUCTS..	NAME.....
AP055	FORMAT VER 1.0
AP056	FRUSTRATION
AP057	FUNCTION PLOT
AP058	GALACTIC BATTLE
PE025	GAUSSBAND
PE026	GERMAN VERBS
AP131	GOBLINS
PE027	GRAND PRIX
PE028	GREMLIN
AP059	GUIDED MISSILES
AP060	GUNFIGHT
EX004	HANGMAN
PE029	HEAD START/AD IMS
AP062	HIRES CHAR GENERATOR
AP063	HIRES ECHO
AP064	HOME ACCOUNTING
AP065	HOME ACCOUNTING
PE030	HOME ACCOUNTING
PE031	HORSE RACE
AP137	HOUSEHOLD FINANCE
AP066	HTEXT
AP067	HUNT
PE032	HUNT/HUNTWRITER
PE033	HUNT/HUNTWRITER
TR011	HUNT/HUNTWRITER CASS
TR012	HUNT/HUNTWRITER DISK
AP068	I CHING
AP069	I CHING
AP070	INCOME TAX 1979
AP071	INDEX FILE
AP072	INTERCEPTER
AP073	JUMPOUT/SHOOTING ST.
AP074	KALEIDOSCOPE
TR013	KEYBOARD
AP075	KING
AT002	LANDER
AP077	LASER TURRET
AP076	LASERBLAST
AP078	LEAP FROG
PE034	LETTER SQUARES
AT008	LETTERS
PE035	LIFE
PE036	LINEAR REGRESSION
AP079	LISA ASSEMBLER V1.5
PE037	LOAN AMIZ/PAY SCHED
AP080	LORES HYPERPAK
AP081	LUNAR LANDER
AP082	LUNARSCAPE
TR014	MACHINE TO BASIC
AP083	MAGIC SQUARES
TR015	MAILING LIST

PRODUCTS..	NAME.....
PE038	MARG ACCT/STOCK PORT
AP084	MASTER CATALOG
PE039	MASTERMIND
AP085	MATCH WITS
TR016	MAZE-80
PE041	MAZEMASTER
TR017	MINEFIELD
AP086	MINI LEDGER
PE042	MONITOR
AP134	MONITOR II
AP087	MOTOCROSS
AP088	MOUSE HOLE
PE043	NAME & ADDRESS FILES
TR018	NIM
PE044	OTHELLO
TR019	PACHINKO
AP089	PASCAL (TINY PASCAL)
AP090	PEG JUMP
TR020	PENTOMINOES
AP091	PERPETUAL CALENDAR
PE045	PERSONAL ACCTG SYS
PE046	PERSONAL ACCTG SYS
AP092	PERSONALITY PROFILE
PE047	PERSONALITY TEST
AP093	PHAZOR ZAP
TR022	PHONEGRAMS
TR021	PIE TEXT EDITOR
AP094	PILOT
PE048	PINBALL
AP095	PIRATES
AP140	PLANETARIUM
AP096	PLANETS
PE049	PLOT SUB
PE050	PONG
AP097	POWER EDITOR
AP098	QUARTERHORSE RACE
PE051	QUICKDRAW/TOUGHDRAW
TR023	QUIZ MACHINE
PE052	RABBIT HUNT
PE053	RANDOM
AP099	REALTY PACKAGE
AP100	RELIGION
EX005	REPEAT
AP101	RETREAT
AT007	REVERSE
PE054	RHINO
AP102	RICOCHETTE
PE055	ROOT, GAL/CONV.
PE056	ROULETTE
TR024	ROULETTE
PE040	RPN MATH PACK

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PRODUCTS..	NAME.....
AP103	SAUCER WAR
AP104	SCRAMBLE
PE057	SCRAMBLE
AP105	SECURITY CHARTING
AP106	SHAPE BUILDER II
PE058	SHOOTING GALLERY
AP107	SIRIUS
PE059	SLOT MACHINE
PE061	SPACE SHUTTLE
AP108	SPACE WARS
PE062	SPACE WARS
PE060	SPANISH VOCABULARY
AP109	SPEEDWAY
AP132	SPYTREK
AP110	STAR DODGER
AP111	STAR VOYAGER
AT006	STARTRAK
PE063	STARTRAK
PE064	STAT DIST
AP112	STATE CAPITALS
AP113	STATISTICS
PE065	STATISTICS
PE066	STEEPLE CHASE
PE067	STOCK CONTROL
AP114	STRATOLASER
AP115	STUNT CYCLE
AP116	SUB COMMAND
AP117	SUB DETECT
AP118	SUB VIEW
AP138	SUPER COPY
AP119	SUPER DUNGEON
PE069	SUPER KIM
AP120	SUPER OTHELLO
AP121	SUPER STARWARS
PE068	SUPEREVERSE
PE070	T&PI ATTENUATOR PADS
AP123	TALKING DISK
TR025	TANK
PE071	TARGET
AP122	TAROT CARDS
PE072	TELEPHONE BOOK
AP139	TELEPHONE DIRECTORY
TR026	THE I-CHING THING
PE073	THOUSAND MILES
PE074	THREE OF A KIND
TR027	TIELINE
AP126	TIME CLOCK
AT005	TIME CLOCK
PE075	TOUCH-TYPING
PE076	TRACE-A-WORD
TR028	TRIBBLE TRAP II

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PRODUCTS..	NAME.....
TR029	TRS-80 FORTH
AP136	TYPESETTER
AP127	U F O
PE077	VIDEO CHECKERS
PE078	WHO DUNIT
AP128	WIPE OFF
PE079	WORD PROCESSOR
PE080	WORD SEARCH
PE081	Z-A-P
AT010	ZAP

265 ITEMS LISTED.

PRODUCTS..	PRODUCT NAME.....	MEM K	MEDIA	LANGUAGE..	PRICE..	REVISED
AP124	3-D ANIMATION	24	DISK	*I	24.95	02-06-0
AP125	3-D DOCKING	16	CASS	I	15.95	02-06-0
AP001	ACK-ACK	8	CASS	I	9.95	01-31-0
AP002	ACTIVE FILTER	48	DISK	* A-ROM	24.95	01-31-0
AP130	ADVENTURE	48	DISK	*	24.95	03-05-0
AP003	ALGEBRA I	32	CASS	A	15.95	01-31-0
AP004	ALIEN ENCOUNTERS	32	CASS	A +	6.95	01-31-0
AP005	ALIEN INVASION	16	CASS	*	9.95	02-06-0
AP006	AMPERSORT II	32	CASS	*A	15.95	02-06-0
AP007	ANALYST	48	DISK	A	19.95	02-06-0
AP008	APMAIL	48	DISK	A	19.95	02-06-0
AP009	APPLE ALLEY	16	CASS	*I	6.95	02-06-0
AP016	APPLE II TRIVIA BOX	48	DISK	I	19.95	02-06-0
AP010	APPLE INVADERS	24	CASS	*	15.95	02-06-0
AP011	APPLE INVADERS	48	DISK	*I	19.95	02-06-0
AP012	APPLEFORTH	32	CASS	*	34.95	02-06-0
AP013	APPLEFORTH	32	DISK	*I	49.95	02-06-0
AP014	APPLEPIE VER 2.0	32	CASS	*	29.95	02-06-0
AP015	APPLEPIE VER 2.0	32	DISK	*I	34.95	02-06-0
AP135	APPLEPIE WD PROC SYS	48	DISK	*	79.95	03-05-0
AP017	ASM/65 EDITOR ASSM	48	DISK	*	69.95	02-06-0
AP018	ASSIST-IT	8	CASS	I	6.95	02-06-0
AP019	ATOMIC CASINO	24	CASS	A	6.95	02-06-0
AP020	AUDIO ENGINEER	48	DISK	A	22.95	02-06-0
AP021	BASEBALL	16	CASS	*	15.95	02-06-0
AP022	BASKETBALL	8	CASS	I	9.95	02-06-0
AP023	BATTLEFIELD	24	CASS	A+	9.95	02-06-0
AP024	BATTLESTAR I	32	CASS	I	15.95	02-06-0
AP129	BAZOOKA	48	CASS	*I	15.95	03-05-0
AP025	BIORHYTHM	8	CASS	I	6.95	02-06-0
AP026	BLITZKRIEG	16	CASS	*I	15.95	02-06-0
AP027	BLOCKADE	16	CASS	*I	9.95	02-06-0
AP061	BOXING	24	CASS	*I	15.95	02-06-0
AP028	BREAKTHRU	16	CASS	*	9.95	02-06-0
AP029	BUSINESS & FINANCE	32	CASS	A	19.95	02-06-0
AP030	CAMERA OBSCURA	16	CASS	I	6.95	02-06-0
AP031	CANTER DOWNS	16	CASS	*I	15.95	02-06-0
AP032	CASSETTE DATABASE	16	CASS	*I	15.95	02-06-0
AP033	CHASE	8	CASS	I	9.95	02-06-0
AP034	CHECKBOOK	48	DISK	A	34.95	02-06-0
AP035	CHRISTMAS STORY	48	DISK	*I	29.95	02-06-0
AP036	CLOWNS & BALLOONS	16	CASS	*I	15.95	02-06-0
AP037	COLOR STARTREK	8	CASS	I	6.95	02-06-0
AP038	COMPU-READ	32	DISK	iA	24.95	02-06-0
AP039	COREY ISLAND	16	CASS	I	9.95	02-06-0
AP040	COUNTRY DRIVER	8	CASS	I	6.95	02-06-0
AP041	CROSS CHASE	8	CASS	I	6.95	02-06-0
AP133	DART ROOM	32	CASS	*I	15.95	03-05-0
AP042	DATABASE	48	DISK	*I	29.95	02-06-0
AP043	DATABASE MAILER	48	DISK	A	29.95	02-06-0
AP044	DEATH RACE	16	CASS	*I	15.95	02-06-0
AP045	DEPTH CHARGE	16	CASS	I	15.95	02-06-0
AP046	DISK MAGIC	48	DISK	*I	24.95	02-06-0
AP047	DRAWING BOARD KALEID	16	CASS	I	9.95	02-06-0
AP048	EARTHQUEST	32	DISK	I	19.95	02-06-0
AP049	ECHO	8	CASS	I	6.95	02-06-0

ALPHABETICAL LISTING — APPLE II

PRODUCTS..	PRODUCT NAME.....	MEM K	MEDIA	LANGUAGE..	PRICE..	REVISED
AP050	FLYSWATTER	8	CASS	I	9.95	02-06-0
AP051	FOOL'S SPOOL	8	CASS	I	6.95	02-06-0
AP052	FOOTBALL	16	CASS	I	9.95	02-06-0
AP053	FOOTBALL PREDICTIONS	16	CASS	I	19.95	02-06-0
AP054	FORMAT VER 1.0	32	CASS	*	19.95	02-06-0
AP055	FORMAT VER 1.0	32	DISK	*	24.95	02-06-0
AP056	FRUSTRATION	16	CASS	I	9.95	02-06-0
AP057	FUNCTION PLOT	48	DISK	A	24.95	02-06-0
AP058	GALACTIC BATTLE	16	CASS	I	9.95	02-06-0
AP131	GOBLINS	32	CASS	*I	15.95	03-05-0
AP059	GUIDED MISSILES	16	CASS	*I	15.95	02-06-0
AP060	GUNFIGHT	8	CASS	I	6.95	02-06-0
AP062	HIRES CHAR GENERATOR	48	DISK	*I,A	19.95	02-06-0
AP063	HIRES ECHO	24	CASS	*I	9.95	02-06-0
AP064	HOME ACCOUNTING	16	CASS	A	9.95	02-06-0
AP065	HOME ACCOUNTING	32	DISK	A	15.95	02-06-0
AP137	HOUSEHOLD FINANCE	48	DISK	A	24.94	03-05-0
AP066	HIEXT	32	CASS	* A BK	24.95	02-06-0
AP067	HUNT	32	DISK	A	24.95	02-06-0
AP068	I CHING	48	CASS	A	15.95	02-06-0
AP069	I CHING	48	DISK	A	19.95	02-06-0
AP070	INCOME TAX 1979	32	CASS	A	19.95	02-06-0
AP071	INDEX FILE	48	DISK	I	29.95	02-06-0
AP072	INTERCEPTER	16	CASS	I	9.95	02-06-0
AP073	JUMPOUT/SHOOTING ST.	8	CASS	I LP	6.95	02-06-0
AP074	KALEIDOSCOPE	16	CASS	I	9.95	02-06-0
AP075	KING	32	CASS	A	6.95	02-06-0
AP077	LASER TURRET	8	CASS	I	6.95	02-06-0
AP076	LASERBLAST	16	CASS	*I	15.95	02-06-0
AP078	LEAP FROG	16	CASS	I	6.95	02-06-0
AP079	LISA ASSEMBLER V1.5	48	DISK	*I	34.95	02-06-0
AP080	LORES HYPERPAK	16	CASS	*I	6.95	02-06-0
AP081	LUNAR LANDER	16	CASS	*I	9.95	02-06-0
AP082	LUNARSCAPE	8	CASS	I	6.95	02-06-0
AP083	MAGIC SQUARES	32	CASS	I	9.95	02-06-0
AP084	MASTER CATALOG	32	DISK	*A	29.95	02-06-0
AP085	MATCH BITS	16	CASS	I	9.95	02-06-0
AP086	MINI LEDGER	48	DISK	A	59.95	02-06-0
AP134	MONITOR II	48	DISK	*	49.95	03-05-0
AP087	MOTOCROSS	16	CASS	I	9.95	02-06-0
AP088	MOUSE MOLE	8	CASS	I	6.95	02-06-0
AP089	PASCAL (TINY PASCAL)	32	DISK	*I	49.95	02-06-0
AP090	PEG JUMP	16	CASS	*	9.95	02-06-0
AP091	PERPETUAL CALENDAR	16	CASS	I	9.95	02-06-0
AP092	PERSONALITY PROFILE	32	CASS	I	19.95	02-06-0
AP093	PHAZOR ZAP	16	CASS	I	15.95	02-06-0
AP094	PILOT	48	DISK	*I	24.95	02-06-0
AP095	PIRATES	8	CASS	I	9.95	02-06-0
AP140	PLANETARIUM	48	DISK	A	24.95	03-05-0
AP096	PLANETS	48	CASS	A+	15.95	02-06-0
AP097	POWER EDITOR	16	CASS	*I	15.95	02-06-0
AP098	QUARTERHORSE RACE	16	CASS	I	6.95	02-06-0
AP099	REALTY PACKAGE	48	DISK	A	59.95	02-06-0
AP100	RELIGION	48	DISK	I	29.95	02-06-0
AP101	RETREAT	8	CASS	I	6.95	02-06-0
AP102	RICOCHETTE	16	CASS	*I	9.95	02-06-0

PRODUCTS..	PRODUCT NAME.....	MEM K	MEDIA	LANGUAGE..	PRICE..	REVISED
AP103	SAUCER WAR	32	CASS	A+	15.95	02-06-0
AP104	SCRAMBLE	16	CASS	I	9.95	02-06-0
AP105	SECURITY CHARTING	48	DISK	A	79.95	02-06-0
AP106	SHAPE BUILDER II	48	DISK	A-ROM	19.95	02-06-0
AP107	SIRIUS	48	CASS	A+	15.95	02-06-0
AP108	SPACE WARS	16	CASS	*I	9.95	02-06-0
AP109	SPEEDWAY	16	CASS	*I	15.95	02-06-0
AP132	SPYTREK	16	CASS	*I	9.95	03-05-0
AP110	STAR DODGER	8	CASS	I	6.95	02-06-0
AP111	STAR VOYAGER	32	CASS	I	15.95	02-06-0
AP112	STATE CAPITALS	16	CASS	I	9.95	02-06-0
AP113	STATISTICS	24	CASS	A	19.95	02-06-0
AP114	STRATOLASER	32	CASS	A	15.95	02-06-0
AP115	STUNT CYCLE	16	CASS	*I	15.95	02-06-0
AP116	SUB COMMAND	8	CASS	I	6.95	02-06-0
AP117	SUB DETECT	8	CASS	I	6.95	02-06-0
AP118	SUB VIEW	8	CASS	I	9.95	02-06-0
AP138	SUPER COPY	48	DISK	*I,A	19.95	03-05-0
AP119	SUPER DUNGEON	48	DISK	I	24.95	02-06-0
AP120	SUPER OTHELLO	16	CASS	*I	15.95	02-06-0
AP121	SUPER STARWARS	32	CASS	*I	15.95	02-06-0
AP123	TALKING DISK	32	DISK	*I	19.95	02-06-0
AP122	TAROT CARDS	16	CASS	I	9.95	02-06-0
AP139	TELEPHONE DIRECTORY	32	DISK	A	19.95	03-05-0
AP126	TIME CLOCK	8	CASS	I	6.95	02-06-0
AP136	TYPESETTER	48	DISK	A	29.95	03-05-0
AP127	U F O	16	CASS	*I	9.95	02-06-0
AP128	WIPE OFF	8	CASS	I	6.95	02-06-0

140 ITEMS LISTED.

LEGEND:

I	Integer BASIC
*	Machine Language
,	Non-exclusive, OR
A-RAM	Applesoft RAM only
A-ROM	Applesoft ROM only
A	Applesoft (either RAM or ROM)
+	Program can be run in 48K A-RAM
LP	Light Pen Required
BW	Black & White Monitor Recommended

TITLE :ACK ACK
AUTHOR :JIM ANDERSON
STOCK # :AP001
PRICE :$ 9.95

This is a game for the sharp of eye and the fleet of finger. The object is to shoot down the enemy RECON DRONES before they can photograph your anti-aircraft batteries.

TITLE :ACTIVE FILTER
AUTHOR :JOEL AMROMIN
STOCK # :AP002
PRICE :$ 24.95

This program designs multiple feedback OP-AMP audio filters from specifications given by the user. LOW PASS, HIGH PASS and BAND PASS. Schematics and foil pattern are drawn in HIRES. The program also calculates circut specifications given the component values.

TITLE :ALGEBRA I
AUTHOR :JOSE FARRAN
STOCK # :AP003
PRICE :$ 15.95

This program is used to solve first degree algebraic equations
The program shows eacn iteration of work much like an algebra student would. This program is great for both BASIC LEARNING and REVIEW.

TITLE :ALIEN ENCOUNTERS
AUTHOR :METZ AND MAHIN
STOCK # :AP004
PRICE :$ 6.95

This is an ACTION GAME in HIGH RESOLUTION GRAPHICS. The S.S. PROGRAMMA has been sent to the Bermuda Triangle to patrol the search the waters and try to solve the mystery of all the dissappearances. Armed with a POWERFUL LASER CANNON and MISSLE LAUNCHER it cuts through the waters of the ATLANTIC OCEAN in search of an ALIEN ENCOUNTER. One player is the ALIEN and the other is the CAPTAIN of the S.S. PROGRAMMA.

TITLE :APPLE INVADERS
AUTHOR :ESD LABORATORIES
STOCK # :AP010
PRICE :$ 15.95

This game is just like the popular 'arcade game in which you shoot down the rapidly decending rows of INVADERS before they hit you with laser blast three times.

TITLE :ASSIST-IT
AUTHOR :JIM ANDERSON
STOCK # :AP018
PRICE :$ 6.95

This is a low-res graphic game played on a 13 by 13 grid. Try to assist the computer in covering all 169 squares by clearing the way with your piece.

TITLE :ATOMIC CASINO
AUTHOR :ERIC WALLER
STOCK # :AP019
PRICE :$ 6.95

This game will test your sense of time. The object is to amass the largest amount of CASH by guessing the amount of APPLEADIUM you have. APPLEADIUM is a radioactive element that has a half life of 3 minutes.

TITLE :AUDIO ENGINEER
AUTHOR :JOEL AMROMIN
STOCK # :AP020
PRICE :$ 29.95

This program is great for all engineers. It draws the AUDIO CIRCUITS in HIRES and solves for unknowns.

TITLE :BASEBALL
AUTHOR :CHARLES SULLIVAN
STOCK # :AP021
PRICE :$ 15.95

Here is a HIRES game that is fun for two players. This is computer baseball at its finest. Players take turns at bat and out in the field.

TITLE :BATTLEFIELD
AUTHOR :METZ AND MAHIN
STOCK # :AP023
PRICE :$ 9.95

You are the driver of a tank and it is your job to shoot down the enemy in your three passes across the BATTLEFIELD. Watch out for the LASER SATTELITE. Excellent graphics in HIRES.

TITLE :BATTLESTAR I
AUTHOR :RICHARD KAPLAN
STOCK # :AP024
PRICE :$ 15.95

As commander of BATTLESTAR I, your mission is to escape the deadly CYLON MENACE and travel to the furthest quadrant.
You start in quadrant OMEGA 1, and must pass two BASESTARS and 5 CYLON INTERCEPTERS guarding the quadrant

TITLE :BIORHYTHM
AUTHOR :PAUL LUTUS
STOCK # :AP025
PRICE :$ 6.95

This program uses your birthdate and a forecast date to GRAPHICALLY display your biorhythm in COLOR GRAPHICS.

TITLE :BLITZKRIEG
AUTHOR :MARK CROSS
STOCK # :AP026
PRICE :$ 15.95

This shoot-em-down HIRES GAME is exciting and fast moving. You are at a large anti-aircraft gun and it is your job to shoot down all enemy aircraft .

TITLE :BLOCKADE
AUTHOR :HARRY TARNOFF
STOCK # :AP027
PRICE :$ 9.95

A game for two in which one player tries to box the other one in and make him crash into a wall.

TITLE :BREAKTHRU
AUTHOR :GARY SHANNON
STOCK # :AP028
PRICE :$ 9.95

This is a very popular game. The object is to knock out or BREAKTHRU the layers of wall with a ball you hit with the paddle.

TITLE :CAMERA OBSCURA
AUTHOR :ROBERT MCNALLY
STOCK # :AP030
PRICE :$ 6.95

This is a low res color graphic game on an 8 by 8 grid. The computer selects 4 squares to hide its pieces and you try to determine where they are with clues given to you by the the computer as you place RAYS around the perimeter of the grid.

TITLE :CANTER DOWNS
AUTHOR :HARRY TARNOFF
STOCK # :AP031
PRICE :$ 15.95

This is an excellent example or COMPUTER ANIMATION done in HIRES graphics. Two players jump their horses over fences and race to the finish line. Real time animation.

TITLE :CHASE
AUTHOR :HARRY TARNOFF
STOCK # :AP033
PRICE :$ 9.95

You are pursued by a number of computer controlled ROBOTS. As you run from them you move in such a way as to make the robots smash into barriers.

TITLE :CHECKBOOK
AUTHOR :STEVEN WELCH
STOCK # :AP034
PRICE :$ 34.95

This is a complete checkbook management program that resides in only 12K of memory. This allows the user almost the entire diskette for storage of data. This program allows; posting checks and deposits, listing checks and deposits, reconciling, balancing, searching on any field, and clearing accumulated balance. Hard copy routines are built into the program to aid the user in record keeping for tax purposes.

TITLE :COLOR STARTRAK
AUTHOR :PAUL LUTUS
STOCK # :AP037
PRICE :$ 6.95

Here is a low resolution, full color version of the most famous computer game of all time. In this program you pilot the Starship Enterprise through the hostile Klingon forces. Your shots bounce around the galaxy and if you are not careful you can easily destroy one of your own starbases or the Enterprise itself.

TITLE :CLOWNS AND BALLONS
AUTHOR :ESD LABORATORIES
STOCK # :AP036
PRICE :$ 15.95

Can you position the spring board under the clowns just right so that they can pop the ballons? If you are off, the clown goes SPLAT. HIRES-Arcade game.

PROGRAMMA
INTERNATIONAL, Inc.
3400 Wilshire Boulevard
Los Angeles, CA 90010
(213) 384-0579

Interactive Business Management System

DESIGNED AS A TURN-KEY SYSTEM FOR FIRST-TIME USERS THE IBMS BRINGS THE POWER OF A FULL-FLEDGED BUSINESS SYSTEM INTO THE GRASP AND BUDGET OF A MICRO-PROCESSOR BASED SYSTEM. USING THE APPLE II WITH ASSOCIATED I/O DEVICES THE IBMS IS DESIGNED TO ALLOW THE USER FULL CONTROL OVER HIS BUSINESS ACCOUNTING, GENERATING EVERYTHING FROM THE ORIGINAL INVOICE TO THE FINAL PROFIT & LOSS STATEMENTS.

THE IBMS IS OF AN ORIGINAL NATURE AND REPRESENTS OVER TWO YEARS OF EXTENSIVE RESEARCH INTO THE SOFTWARE AND HARDWARE REQUIREMENTS FOR A SMALL BUSINESS SYSTEM. THERE ARE CURRENTLY ELEVEN PROGRAM MODULES WITHIN THE SYSTEM WITH MORE IN DEVELOPEMENT, ALL OF WHICH ARE INTERACTIVE WITH THE OTHERS, GIVING THE USER THE ADVANTAGE OF MULTI-USAGE WITH A SINGLE ENTRY OF ALL DATA INTO THE SYSTEM.

INCLUDED IN THE PROGRAM MENU ARE THE FOLLOWING: SYSTEM START-UP, ACCOUNTS RECEIVABLE, INVENTORY CONTROL, ACCOUNTS PAYABLE, PAYROLL, FIXED ASSETS, GENERAL LEDGER, MAILING LABELS, APPOINTMENTS, AND THE SYSTEM SORT.

THE FIRST OF THESE, SYSTEM START-UP, IS DESIGNED TO BOOT-UP UPON POWERING ON THE SYSTEM AND UNDER NORMAL OPERATION SIMPLY ALLOWS THE USER TO INPUT THE CORRECT DATE AND PASSWORD FOR ENTRY INTO THE SYSTEM. IT'S USAGE IS ALSO TO SET UP THE MASTER INDEX FILE FROM WHICH THE ENTIRE SYSTEM OPERATES. UPON ENTRY OF THE PROPER PASSWORD FOR SETTING UP THESE FILES THE PROGRAM MENU APPEARS WITH SIXTEEN PROGRAM SLOTS IN WHICH TO ENTER THE NAMES OF THE PROGRAMS TO BE USED BY THE SYSTEM. THE SECOND MENU FOLLOWING ALLOWS ENTRY OF THE COMPANY NAME AND ADDRESS, ETC. AS WELL AS TAX DATA AND ENTRY "KEYS". THE THIRD MENU IS FOR THE FILE STATUS INDICATORS, OR RECORD COUNTERS. NEXT COMES TAX RATES AND CASH DATA INDEXED BY THE SYSTEM. THE FOLLOWING MENU ALLOWS THE USER TO CONFIGURE THE SYSTEM TO THEIR HARDWARE CONFIGURATION, AND THAT MENU IS FOLLOWED BY ONE ALLOWING SEVERAL OPTIONS FOR PAYROLL AND FUTURE EXPANSION. CURRENT SOFTWARE CONFIGURATIONS ALLOW USAGE OF FROM TWO TO SIX MINI-FLOPPIES, TWO TO FOUR 8" DRIVES, OR A HARD-DISK LIKE THE LOBO 10 MEGABYTE. STANDARD CONFIGURATION REQUIRES THE USE OF ONE PRINTER, HOWEVER THE ADDITION OF A POSSIBLE SECOND HAS BEEN ALLOWED FOR.

PROGRAM SELECTION IS VIA A SELECTION MENU, SO AS WITH THE ENTIRE SYSTEM, THE OPERATOR NEED ONLY A MINIMUM KNOWLEDGE OF THE HARDWARE OPERATION.

THE ACCOUNTS RECEIVABLE SYSTEM, AS WELL AS THE OTHER UNITS IN THE SYSTEM, WILL ALLOW THE USER TO SET UP TO 32767 ACCOUNTS INTO HIS FILES. FLOPPY DISK ALLOCATION AND DISTRIBUTION IS ACCOMPLISHED BY A SIMPLE SUBROUTINE WHICH CONSISTS OF ONE LINE FOR EACH FILE IN THE SYSTEM AND CAN BE CHANGED BY THE USER TO CUSTOMIZE OR OPTIMIZE HIS OPERATION AND UTILIZATION OF THE AVAILABLE FILE SPACE.

TITLE :CONEY ISLAND
AUTHOR :RICHARD NITTO
STOCK # :AP039
PRICE :$ 9.95

This is a color graphics SHOOTING GALLERY game. Use the paddles and buttons to fire upon the moving duck, two moving targets and an occasional periscope.

TITLE :COUNTRY DRIVER
AUTHOR :MARK CROSS
STOCK # :AP040
PRICE :$ 6.95

Test you driving ability on the Apples screen using its color graphics. The object of the game is to drive your car along the winding road without going off the edge.

TITLE :CROSS CHASE
AUTHOR :MARK CROSS
STOCK # :AP041
PRICE :$ 6.95

Two players compete with each other, one trying to catch the other while avoiding obstacles.

TITLE :DATABASE
AUTHOR :PAUL LUTUS
STOCK # :AP042
PRICE :$ 29.95

This is a data storage and retrieval system that allows you to access information almost instantaneously within the 80 charactor field.

TITLE :DEATH RACE
AUTHOR :BOB ANDREWS
STOCK :AP044
PRICE # :$ 15.95

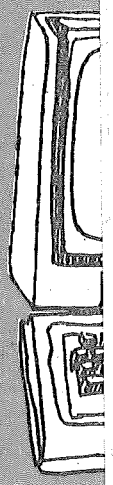
Another example of an excellent HIRES GRAPHIC 'ARCADE TYPE' GAME, DEATH RACE proves to be challenging. You drive your car around and try to run over people moving on the road. When you hit one he disappears and is replaced by a marker. You score points for each object you hit.

TITLE :DEPTH CHARGE
AUTHOR :CHRIS OBERTH
STOCK # :AP045
PRICE :$ 15.95

You are the pilot of a P.T. BOAT, in this HIRES GAME, that drops depth charges on enemy submarines. You normally get 3 passes but if you score over 600 points, you win an extra pass.

TITLE :DISK MAGIC
AUTHOR :DIAN GIRARD
STOCK # :AP046
PRICE :$ 24.95

This utility program allows the user to examine and modify diskettes created for the Apple][from the physical sector level and without the limitations imposed by standard DOS commands. It is possible to determine actual remaining disk space, release system space for program use, fix damaged files of all types, and restore some files that have been deleted. A comprehensive manual included.



TITLE :DRAWING BOARD/KAL
AUTHOR :CHRIS OBERTH
STOCK # :AP047
PRICE :$ 9.95

These are TWO programs in one. DRAWING BOARD lets you draw in HIRES on the screen and save the picture. KALEIDOSCOPE produces pretty patterns at randon or you can control the pattern yourself with the paddles.

PROGRAMMA
INTERNATIONAL, Inc.
3400 Wilshire Boulevard
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PROGRAMMA

NEW SOFTWARE

Announcement

PROGRAMMA IMPROVED EDITOR FOR TRS-80, APPLE II, SORCERER

Programma International, Inc. has announced immediate availability of their text editor, called PIE, or Programma Improved Editor. The 2-dimensional, cursor-based editor is designed to operate on the TRS-80 Level II (16K), Apple II (32K), and SORCERER (16K). The program generates cassette tapes which are compatible with the TRS-80 Editor/ Assembler, the Exidy Assembler ROM Pack, and the Programma ASM/65 Editor Assembler.

Over 25 commands permit the cursor to be located anywhere on the screen, moved forward or backward a full page, search for a string, append, insert, delete, backspace, set horizontal tabs, and page scroll. Commands are extremely simple to implement, consisting each of a single character depressed simultaneously with the SHIFT key. Any command may be preceded by a numeric or string argument.

Soon to be available for the Pet and SWTPc 6800 computers as well, PIE is sold on cassette for the TRS-80, Apple II, and Sorcerer, complete with operating instructions. The cassette version is priced at $19.95, and diskette version for Apple at $24.95.

For more information contact Programma International, Inc. 3400 Wilshire Blvd., Los Angeles, CA 90010. Telephone (213) 384-0579.

PROGRAMMA
INTERNATIONAL, Inc.
3400 Wilshire Boulevard
Los Angeles, CA 90010
(213) 384-0579

FORMAT Processing Program for Apple II Announced

A text processing system called FORMAT is available for immediate delivery from Programma International for use on the Apple II microcomputer system. The system requirements include at least 16K of memory.

Commands imbedded in the actual text perform the formatting functions. Twenty-two commands permit control of margins, spacing, indentation, centering, underlining, head and foot titles. An option is available to provide right margin justification.

Users with upper case only keyboard and CRT, but with upper/lower case printer can obtain an option designed to generate lower case characters in the printer output.

The following commands are available with FORMAT:

.ad		Begin adjusting right margins	.ml	n	Top spacing including head title
.bp	n	Begin page numbered n	.m2	n	Spacing after heading title
.br		Cause a line break	.m3	n	Spacing before foot title
.ce	n	Center next n lines without fill	.m4	n	Bottom spacing including foot title
.fi		Start filling output lines	.na		Stop adjusting right margins
.fo	t	Foot title becomes t	.nf		Stop filling output lines
.he	t	Head title becomes t	.pl	n	Page length is n lines
.in	n	Indent n spaces from left margin	.pp	n	Begin paragraph= .sp, .fi, .ti n
.li	n	Literal, next n lines are text	.sp	n	Space down n lines, except at top
.ll	n	Line length including indent is n	.ti	n	Temporary indent of n
.ls	n	Set line spacing to n	.ul	n	Underline next n input lines

The FORMAT text processing system is available on cassette for $19.95 or disc for $24.95 with full user documentation. For complete information, contact Programma International, Inc., 3400 Wilshire Blvd., Los Angeles, CA 90010. Telephone (213) 384-0579

PROGRAMMA

NEW SOFTWARE

Announcemen

TITLE :EARTHQUEST
AUTHOR :JIM DAY
STOCK # :AP048
PRICE :$19.95

This is one for all you INTERSTELLAR FEDERATION MEMBERS to go INTERGALACTIC TRAVELING while comfortably sitting at the keyboard. You will travel around the Universe in search of the lost planet EARTH (sound familiar?) Visit as many planets as you like asking questions of its inhabitants. EARTHQUEST is a must for any program library.

TITLE :FLYSWATTER
AUTHOR :JIM MASON
STOCK # :AP050
PRICE :$ 9.95

A zany adventure in the art of flyswatting, complete with animated closeups of the little darlings. This is a very good lores game. It is you against the computer controlled flys. Your weapon, a FLYSWATTER. Build your efficency by not wasting swats.

TITLE :FOOLS SPOOL
AUTHOR :DAVID GARSON
STOCK # :AP051
PRICE :$ 6.95

This game is based on a spool with four moving wheels, each of which have eight numbers ranging from one to six. The object is to make each of the eight rows add up to twelve. This is done by moving the wheels independently. This is an excellent game of logic.

TITLE :FOOTBALL
AUTHOR :HARRY TARNOFF
STOCK # :AP052
PRICE :$ 9.95

FOOTBALL is a game for two players, each taking turns playing offense against the computers defense. The COLOR GRAPHICS field is a five by ten yard grid. By hitting various keys on the keyboard, the players can move in any direction, pause or kick.

TITLE :FRUSTRATION
AUTHOR :CHRIS OBERTH
STOCK # :AP056
PRICE :$ 9.95

Here's a real memory tester for you. It is based on one of the MOST POPULAR TV QUIZ SHOWS of the 1960's and early 1970's. FRUSTRATION will demand all of the CONCENTRATION you have to offer. The game board is in HIRES GRAPHICS. The idea of the game is to turn over two game cards at a time and try to MATCH their faces.

TITLE :GALACTIC BATTLE
AUTHOR :RICHARD KAPLAN
STOCK # :AP058
PRICE :$ 9.95

ATTACK the ENEMY STARBASE with your SPACESHIP! The base is protected by a number of space pods which, like the STARBASE, can fire at you. The STARBASE is also protected by shields. For your offense, you have both PHASERS and PHOTON TORPEDOS.

TITLE :GUIDED MISSILES
AUTHOR :MARK HAHN
STOCK # :AP059
PRICE :$ 15.95

GUIDED MISSILES is a real time high resolution shooting gallery simulation for two players. It is written entirely in machine language The play is extremely fast. It is as good as most real arcade video games. You won't believe it.

FORTH

FORTH is a unique threaded language that is ideally suited for systems and applications programming on a micro-processor system. Programs written in FORTH are compact. The user may have the interactive FORTH Compiler/Interpreter system running stand-alone in 8K to 10K of RAM. The system also offers a built-in Incremental Assembler and a mini Text Editor as part of the above memory requirements. Since FORTH is a vocabulary based language, the user may tailor the system to resemble the needs and structure of any specific application.

The basic element of the FORTH system is termed a "word", which is comparable to a subroutine. When a word is referenced, it causes an action or a series of actions to be performed. Before the word can be executed, it must have been previously defined in the FORTH system's disctionary. The dictionary is a linked list of words containing each word's name and action. The Standard Vocabulary of the FORTH system comes with nearly 200 words in the dictionary.

Reverse Polish Notation (RPN) and Last-In First-Out (LIFO) stacks are used in the FORTH System in order to process arithmetic expressions. Most FORTH words which operate on data accept their data from the stack, operate on the data, and push the result back on the stack. Therefore, arithmetic expressions are specified in RPN, with operands preceeding the operators.

Programming in FORTH consists of defining new words, which draw upon the existing vocabulary, and which in turn may be used to define even more complex applications. FORTH provides a number of ways to define new words into the dictionary. The language even provides a facility for defining words, whose function is to define words.

Under normal operation, FORTH acquires its input for execution from the keyboard. All output is routed to the output list device. The system is usually idle and waiting for the user to type a complete line of words. When this is done, the system interprets the line, tries to execute the valid words, and then proceeds to prompt the user for more input.

PROGRAMMA INTERNATIONAL, INC.
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PROGRAMMA PRODUCT DESCRIPTION

PROGRAMMA
INTERNATIONAL, Inc.
3400 Wilshire Boulevard
Los Angeles, CA 90010

(213) 384-0579

PROGRAMMA

FORTH may also take its input from a BLOCK I/O Buffer. The buffers are used to edit FORTH "screens" of text and to LOAD and SAVE the screens to auxiliary storage. Data in the buffers can be executed just as if it had all been keyed in at the keyboard.

One of the best advantanges of FORTH over other programming languages is that software development times are cut in half or much more over assembly language programming. The programming in FORTH is entirely done in a structured manner, since there are no GOTOs.

FORTH SYSTEM ENVIRONMENT

10K of RAM Memory
256 Bytes to contain Input Buffer
1024 Bytes to contain Buffer 0
1024 Bytes to contain Buffer 1
256 Bytes to contain the Normal Stack
256 Bytes to contain the Return Stack
1 Input Device - Keyboard
1 Output Device - CRT Screen
1 Auxiliary Storage Device - Cassette

FORTH CONFIGURATIONS

AppleFORTH Ver 1.2 Cassette	$34.95
AppleFORTH Ver 1.2 Disk	49.95
PetFORTH Ver 1.2 Cassette	34.95
6800FORTH Ver 1.1 Cassette	34.95
CPMFORTH Ver 1.2 Diskette	49.95

The FORTH system is sold on a non-exclusive limited license basis for use on one (1) CPU by the original purchaser of the software. Purchase of the system includes a Reference Manual and the media containing the object code. Source code and source screens are available at additional cost.

The word "FORTH" is a trade-mark of FORTH INC., Manhattan Beach, California. There is no connection between PROGRAMMA International, Inc. and FORTH INC.

TITLE :GUNFIGHT
AUTHOR :JIM MASON
STOCK # :AP060
PRICE :$ 6.95

You're back in the old west about to meet 10 gunfighters from DODGE CITY. Being the good guy, you may only fire when the gunfighter starts to draw... CAUTION!!! Each gunfighter is faster than his predecessor. Lo-res graphics and sound.

TITLE :HIRES BOXING
AUTHOR :DAVID STRADA
STOCK # :AP061
PRICE :$ 15.95

BOXING is one of the most enjoyable games that has been created for the APPLE][COMPUTER. The players have control of both the back and forth and swinging motions of their boxers. The play is fast and furious and has all the excitement of a real boxing match.

TITLE :HIRES ECHO
AUTHOR :DAVID KALMICK
STOCK # :AP063
PRICE :$ 9.95

Similiar to LORES ECHO, but with HIRES characters and your choice of either random or sequential ECHO. Sequential ECHO adds an additional number to the previous sequence each time you respond correctly. Random ECHO is similar except that a DIFFERENT string of numbers is used after every successful input.

TITLE :I CHING
AUTHOR :PHILLIP WAYNE
STOCK # :AP068 (CASS)
PRICE :$ 15.95 (CASS)
STOCK # :AP069 (DISK)
PRICE :$ 19.95 (DISK)

This program will cast two figures called 'hexagrams', and it will interpret them according to the ancient Chinese 'Book Of Changes' of I CHING.

TITLE :INDEX FILE
AUTHOR :ERIC WALLER
STOCK # :AP071
PRICE :$ 29.95

This program, which is an electronic index card file, allows you to create a card file for any purpose. You can add, delete, edit and list cards and also rename your lines. The QUIT command saves cards and closes files. Files may be searched by line name or by keyword.

TITLE :JUMP OUT/
SHOOTING STARS
AUTHOR :JIM DAY
STOCK # :AP073
PRICE :$ 6.95

JUMP OUT is a lores HI-Q game. Use your light pen to select a piece to be jumped and the jumping piece. Try to end with only one peg left on the board.

TITLE :KALEIDOSCOPE
AUTHOR :CHRIS OBERTH
STOCK # :AP074
PRICE :$ 9.95

KALEIDOSCOPE is a hires graphics demo which makes a very intricate kaleidoscopic pattern. The user has control of the color used, control over when the pattern is restarted, and control over how fast the pattern is formed.

TITLE :KING
AUTHOR :RICHARD KAPLAN
STOCK # :AP075
PRICE :$ 6.95

KING is a challenging of resource management
The problems that face you and you have to resolve are:
What is land worth?
How much does the average resident eat? How much should be planted? How many acres should be sold? What about population control? How is the population maintained? There is only one way to find out the answers to these questions and many more...

TITLE :LASER TURRET
AUTHOR :JIM ANDERSON
STOCK # :AP077
PRICE :$ 6.95

LASER TURRET is a color graphics game in which you control a movable gun turret, which can fire laser blasts at an enemy.
The game can be played by one or two players and with four levels of difficulty.

TITLE :LEAP FROG
AUTHOR :JIM DAY
STOCK # :AP078
PRICE :$ 6.95

LEAP FROG is a game of logic in which you move purple frogs to the right and green frogs to the left side of the screen by jumping. The frogs are drawn in hires graphics and the challenge is to move all the frogs correctly in 25 moves.

PROGRAMMA
INTERNATIONAL, Inc.
3400 Wilshire Boulevard
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PROGRAMMA

NEW SOFTWARE

Announcement

LISA Interactive Assembler Announced

An interactive assembler called LISA is available for immediate delivery from PROGRAMMA International for use on the APPLE II microcomputer system. The system requirements include at least 48K of memory and a DISK II disk drive.

LISA is a totally new concept in assembly language programming. Being fully interactive, all syntax/addressing mode checks occur as the source code is entered into the system! All error messages are displayed in plain, easy to understand English...not just Error Codes! Commands in LISA are structured very close to those used by the APPLE II Integer Basic; i.e. LIST, DELETE, INSERT, PR //n, IN //n, SAVE, LOAD, APPEND, ASM, NEW, and a special "user-definable" key envisioned for use with "dumb" peripherals.

LISA uses extensive code compression techniques and as a result a 1000 line textfile requires only about 8K of memory! For those programs which are too long to be held in memory, LISA operates in a disk-mode that allows you to assemble files which are larger than the physical memory of the computer. Likewise, the object code that is generated can be stored on a disk, hence, object files of any length can be generated.

LISA is very fast; i.e. a 1000 line program typically requires 3 seconds to assemble (assuming the listing option is off, of course). During the assembly process, the user may stop the listing to inspect the generated code by depressing the space bar... the assembly will continue upon depressing the space bar again.

Some of the features that are available in the LISA Interactive Assembler are:

- Disk Based System
- ASCII Literal Constants (w/High Order Bit set/reset)
- One to six character labels
- Location Counter Addressing "*"
- Addition/Subtraction operators in expressions
- High-order byte selection
- Low-order byte selection
- 61 valid machine Op-Codes including BGE, BLT, BTR, BFL, and XOR
- SWEET-16 Op-Codes supported
- All valid addressing modes
- Automatic Zero-Page Addressing

13 valid pseudo operators including:

- NLS - No listing/Error only
- LST - Listing on
- EQU - Equate
- EPZ - Equate to Page Zero
- ORG - Origin
- OBJ - Object
- ADR - Address
- HEX - HEX String
- ASC - ASCII String
- STR - String w/length byte
- END - End of source code
- ICL - Include - chains text files
- DCM - Disk Commands

LISA supports upper & lower case in the event the user has the proper hardware modification. The special characters "[", "__", " ", " ", etc. are directly available from the keyboard. Full Apple text editing is incorporated using control keys instead of the "ESC" sequence.

The LISA Interactive Assembler is available on diskette for $34.95 with a 41 page documentation manual. For complete information, contact PROGRAMMA International, Inc. 3400 Wilshire Boulevard, Los Angeles, CA 90010 Telephone (213) 384-0579

PROGRAMMA
INTERNATIONAL, Inc.
3400 Wilshire Boulevard
Los Angeles, CA 90010
(213) 384-0579

PROGRAMMA

NEW SOFTWARE

Announcement

ASM/65 EDITOR ASSEMBLER Announced

The ASM/65 Editor Assembler is available for immediate delivery from Programma International.

ASM/65 is a powerful, 2 pass disk-based assembler for the Apple II Computer System. It is a compatible subset of the FORTRAN cross-assemblers which are available for the 6500 family of micro-processors. ASM/65 features many powerful capabilities, which are under direct control of the user. The PIE Text Editor co-resides with the ASM/65 Assembler to form a comprehensive development tool for the assembler language programmer. Following are some of the features available in the ASM/65 Editor Assembler;

PIE Text Editor Command Repetoire
Disk Based System
Decimal, Hexadecimal, Octal, & Binary Constants
ASCII Literal Constants
One to Six character long symbols
Location counter addressing "*"
Addition & Substraction Operators in Expressions
High-Byte Selection Operator
Low-Byte Selection Operator
Source statements of the form: [label] [opcode] [operand] [;comment]
56 valid machine instruction mnemonics
All valid addressing modes
Equate Directive
BYTE Directive to initialize memory locations
WORD Directive to initialize 16-bit words
PAGE Directive to control source listing
SKIP Directive to control source listing
OPT Directive to set select options
LINK Directive to chain multiple text files
Comments
Source listing with object code and source statements
Sorted symbol table listing

The ASM/65 Editor Assembler system is available on diskette for $69.95 with full user documentation. For complete information, contact Programma International, Inc., 3400 Wilshire Boulevard, Los Angeles, CA 90010 Telephone (213) 384-0579

TITLE :LUNAR LANDER
AUTHOR :DAVID STRADA
STOCK # :AP081
PRICE :$ 9.95

A great hires LUNAR LANDER game. Land softly and watch the astronaut plant his flag and then take off. This program is a good example of animation using the HIRES CHARACTER GENERATOR by PROGRAMMA.

TITLE :LUNARSCAPE
AUTHOR :PAUL LUTUS
STOCK # :AP082
PRICE :$ 6.95

LUNARSCAPE is an interesting version of the popular computer game LUNAR LANDER. In LUNARSCAPE the player not only controls the vertical thrust and horizontal thrust.

TITLE :MAGIC SQUARES
AUTHOR :DAVID KALMICK
STOCK # :AP083
PRICE :$ 9.95

MAGIC SQUARES is a challenging game of logic and foresight with three levels of difficulty, beautifully displayed in hires graphics. The object of MAGIC SQUARES is to manipulate the cubes into a predetermined pattern. Success is based upon your ability to plan ahead. WARNING !! MAGIC SQUARES has been proven to be highly addictive!

TITLE :MATCHWITS
AUTHOR :R.J. NITTO
STOCK # :AP085
PRICE :$ 9.95

MATCHWITS is a game much like television's CONCENTRATION. The board contains the letters A-Z and the numbers 1-4. One or two players pick two letter or number combinations. Two shapes then appear behind them. If they match 1000 points are added to the players score, and you get another turn.

TITLE :MOTOCROSS
AUTHOR :CHRIS OBERTH
STOCK # :AP087
PRICE :$ 9.95

MOTOCROSS is a hires game of motorcycle racing. It uses both the paddles to control speed and the switches to do wheelies. The game can be played by either one or two players.

TITLE :MOUSE HOLE
AUTHOR :JIM ANDERSON
STOCK # :AP088
PRICE :$ 6.95

MOUSE HOLE is a lores graphics game.The object is to find the hole where the mouse is hidden. There are 361 holes and you have to work against clock.

TITLE :PERPETUAL CALENDAR
AUTHOR :ROBERT HELMBOLD
STOCK # :AP091
PRICE :$ 9.95

PERPETUAL CALENDAR is a useful program that displays any year's calendar on your television screen. You can quickly page both forward and backward through the months. The program shows holidays and important dates. The program also displays the flower and birthstone of each month.

TITLE :PHASOR ZAP
AUTHOR :CHRIS OBERTH
STOCK # :AP093
PRICE :$ 15.95

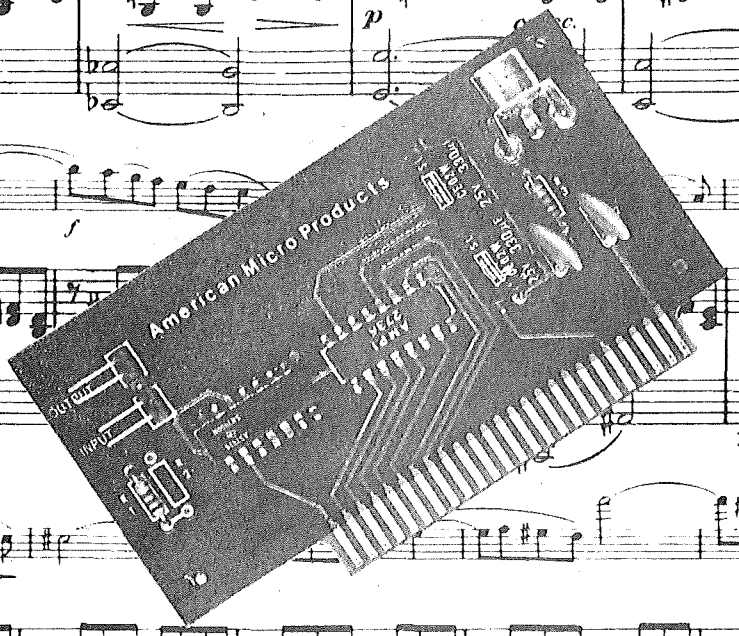
PHASOR ZAP is a hires graphics space game in which you fire on enemy ships moving through a star field. If you don't hit them by the time they reach the center of the star field they zap you back. This game has especially good graphics and sound effects.

TITLE :PIRATES
AUTHOR :DON GRAHAM
STOCK # :AP095
PRICE :$ 9.95

The object is to sink the Jolly Roger (skull and crossbones). But, beware... Sir Edwin Denner is the captain of the Jolly Roger and he never misses. You have to choose the right amount of powder to blow the sails off, one at a time, before you can fire the fatal shot. Since Sir Edwin never misses, you have to sink the ship before he blows the base of your fortress away.

American Micro Products, Inc.

MUSIC BOARD FOR THE APPLE II



PROGRAMMA Computer Products

PROGRAMMA INTERNATIONAL, INC.
3400 Wilshire Blvd.
Los Angeles, CA 90010 (213) 384-0579 • 384-1116 • 384-1117

FEATURES

- Three simultaneous voices
- One white noise generator
- Directly drive up to one 8 ohm speaker (no amplifier needed)
- A total of six boards can be installed to generate 18 notes.
- Stereophonic, quadraphonic and polyphonic operation.
- Boards can be daisy chained to increase the number of notes per speaker
- Comprehensive interactive software enables musical notes to be input directly from keyboard.
- Music can be composed, edited, played and stored on tape or disk.
- Each unit is shipped completely assembled and tested. Included with the Music Board is a detailed instruction manual, interactive software, cassette and sample music programs.

$129.95

TITLE :QUARTERHORSE RACE
AUTHOR :JIM MASON
STOCK # :AP098
PRICE :$ 6.95

This program allows you and your friends to bet on the horses. There are five horses with different odds. Take a chance on a horse with large odds and win big, or play it safe with low odds. This program takes full advantage of the APPLE]['S music and lores animation capabilities.

TITLE :RETREAT
AUTHOR :DON GRAHAM
STOCK # :AP101
PRICE :$ 6.95

RETREAT is a fast color graphics game that uses both paddles. The object is to steer your token through the obstacles before your opponent does. If you make a mistake you must retreat to the very start of the track.

TITLE :RICOCHETTE
AUTHOR :CRAIG CROSSMAN
STOCK # :AP102
PRICE :$ 9.95

A FLYING SAUCER is flying around you. Can you hit it when it is above you? If you miss, your shot will ricochette around and might hit you.

TITLE :SAUCER WAR
AUTHOR :VIC LEONE
STOCK # :AP103
PRICE :$ 15.95

This Hi-res two player game makes use of the Apple's paddles and buttons. Each player has a saucer, and tries to destroy his opponent.

TITLE :SCRAMBLE
AUTHOR :HARRY TARNOFF
STOCK # :AP104
PRICE :$ 9.95

The scrambled word is "PLPEA." Can you unscramble it within the alloted time? Choose your time--anywhere from 3 to 90 seconds. Fun and educational.

TITLE :SECURITY CHARTING
AUTHOR :BILL BARRIER
STOCK # :AP105
PRICE :$ 79.95

This program is geared towards the stock investor. Stocks can be entered day by day or week by week, and can be graphed, in Hi-res on a 4, 9 or 14 day moving average.

TITLE :SHAPE BUILDER II
AUTHOR :CARL SWENSON
STOCK # :AP106
PRICE :$ 19.95

Sick and tired of writing out all those little arrows converting them to hexadecimal, etc.? Cure the pain of messy shape tables--see the shape in Hi-res as you enter it.

TITLE :SIRIUS
AUTHOR :MARK CROSS
STOCK # :AP107
PRICE :$ 15.95

This is an educational Hi-res Mini-Movie. It is a display of Sirius and it's white dwarf and their interactive orbits. Highly educational.

TITLE :SPACE WARS
AUTHOR :DICK SUITOR
STOCK # :AP108
PRICE :$ 9.95

This is a super-fast action, Hi-res game. Two players use paddles to manuver their ships into postion in order to fire upon one another.

TITLE :SPEEDWAY
AUTHOR :BOB FLANAGAN
STOCK # :AP109
PRICE :$ 15.95

Race down the Speedway in your Hi-res formula racecar. With the game paddles and buttons you steer, shift gears and control the car's speed.

TITLE :STAR DODGER
AUTHOR :MARK CROSS
STOCK # :AP110
PRICE :$ 6.95

Try to steer your ship past a series of randomly generated stars. This game uses the game paddles to steer and the button to control your speed.

TITLE :STAR VOYAGER
AUTHOR :RICHARD KAPLAN
STOCK # :AP111
PRICE :$ 15.95

You are the commander of a spacecraft and your mission is to get through the outer defenses of a star base, destroy the base, and land back on earth safely.

TITLE :STATE CAPITALS
AUTHOR :CHARLES HEARN
STOCK # :AP112
PRICE :$ 9.95

This program displays a Lo-res man of the U.S.A. with each capital of each state plotted on the map. You try to guess guess the name of each capital. Highly Educational.

TITLE :STATISTICS
AUTHOR :SHERWIN STEFFIN
STOCK # :AP113
PRICE :$ 19.95

This program will give the user the ability to carry on many of the statistical calculations found in FORTRAN driven SPSS programs.

PASCAL

PROGRAMMA PRODUCT DESCRIPTION

Clarity Pascal is a high level language specifically designed for today's single-user limited-memory microprocessor-based computers. Clarity Tiny Pascal is a subset of Pascal inspired by Chung & Yuen's "Tiny Pascal Compiler" (Byte 3(9), Sept. 1978). The compiler compiles the Pascal program into an intermediate P-code, which is then translated or interpreted on the host computer. Since only the P-code translator or interpreter changes from microprocessor to microprocessor, Clarity Pascal can be quickly and easily implemented on new computers. The P-code instruction set used by Clarity Pascal was designed by the guidelines in Tanenbaum's "Implications of Structured Programming for Machine Architecture" (Communications of the ACM 21(3); Mar 1978). This article details the optimal instruction set for block-structured contour-modelled programming languages such as Pascal. By using this optimized P-code set, it was possible to shrink the Tiny Pascal compiler to its present size of 5K (about 5000 bytes), with a significant increase in speed. (Details of the P-code set may be obtained from Programma International.)

The purpose of a high-level language is to shield the user from boring or complicated details of program implementation and to allow him to design his program in a clear and structured fashion. However, programs written for a microprocessor environment sometimes need access to machine-level features, such as a panel switch or monitor subroutine. Tiny Pascal has two extensions to handle such needs:

1. a built-in phantom array called MEM. The size of MEM is the entire address space of the computer. Reading to or writing from memory is specified by assigning to or from MEM. A := MEM [1000_{16}] reads memory location 1000_{16} into variable A.

2. subroutine calls may be made directly to absolute addresses. The Pascal contour is not affected. When the subroutine returns, the program continues normally. CALL 9000_{16} transfers control to 9000_{16}.

Tiny Pascal is a one-pass compiler which assumes that both source code and P-code are in memory. To conserve memory requirements, the P-code may be generated on top of the source code. Tiny Pascal will work effectively in environments where the only secondary memory storage is a cassette tape recorder. Tiny Pascal will compile short programs in a 16K memory space. Since the P-code interpreter only occupies about 2K (about 2000 bytes) during actual program run-time, Tiny Pascal can be used as a high level language for dedicated controller applications.

Clarity Tiny Pascal includes the standard flow of control constructs IF - THEN - ELSE, CASE expression OF - ELSE, WHILE - DO, REPEAT - UNTIL and FOR - TO/DOWNTO - DO. Procedures and functions are fully recursive. Hexadecimal constants are allowed and hexadecimal and decimal conversion input/output routines are provided.

Clarity Pascal is designed by Martin Tracy of Clarity Consultants and is available through Programma International.

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PROGRAMMA

Clarity Pascal Version 1.0

Grammatically identical to Chung & Yuen's "Tiny Pascal Compiler" (Byte Sept. 1978), the compiler produces an optimized intermediate P-code set. Version 1.0 occupies about 5K (5000 bytes) of memory and will compile short programs in a 16K memory space, although a 32K memory space is recommended. Tiny Pascal is a single-pass compiler and will work effectively with cassette-based computers. An editor is included which provides both line and intra-line editing. Version 1.0 includes the standard flow of control constructs: IF - THEN - ELSE, CASE expression OF - ELSE, WHILE - DO, REPEAT - UNTIL and FOR - TO/DOWNTO - DO. Procedures and functions are fully recursive. Hexadecimal constants are allowed and hexadecimal and decimal conversion input/output routines are provided.

NOTE: Clarity Tiny Pascal compiles programs into an intermediate P-code which is translated or interpreted on the host computer. This makes programs written in Tiny Pascal highly portable, including the compiler itself. The Apple II implementation of Tiny Pascal, for example, required only one man-month of programming effort. Programma International is interested in implementing Tiny Pascal on all popular microprocessors and will support such implementations on a royalty basis. Interested programmers should contact Programma International for the implementation manual and further details.

Clarity Pascal Version 2.0

Version 2.0 will include multi-dimensional arrays and procedure and function parameter "call by reference". Character manipulation will be enhanced. A complete disk-based operating system will be provided. The operating system, which will also work with cassettes, will be written in Tiny Pascal with subroutine calls to machine language input/output drivers. Version 2.0 is projected for Winter 79.

Clarity Pascal Version 3.0

Version 3.0 will include records, subscript lists and floating point and trigonometric functions. Program overlay (independent compilation) will also be provided. Version 3.0 is projected for Summer 80.

TITLE :STRATOLASER
AUTHOR :ORION
STOCK # :AP114
PRICE :$ 15.95

As commander of a remote outpost at the edge of the galactic frontier. Your duty is to sweep the quadrant for klunkon starships.

TITLE :STUNT CYCLE
AUTHORS :R. BAIZER/H. TARNOFF
STOCK # :AP115
PRICE :$ 15.95

This is a real-time action game that tests your reactions and skill. To achive a high overall score, you must, while jumping busses, race your motorcycle against the clock.

TITLE :SUB COMMAND
AUTHOR :JIM ANDERSON
STOCK # :AP116
PRICE :$ 6.95

Sink as many enemy ships as you can by firing torpedoes from a submarine, while avoiding their depth charges. The game is in Lo-res and uses the paddles.

TITLE :SUB DETECT
AUTHOR :DON GRAHM
STOCK # :AP117
PRICE :$ 6.95

The object of this game is to hit the enemy ship with explosives by choosing its X,Y coordinates and depth.

TITLE :SUB VIEW
AUTHOR :JIM MASON
STOCK # :AP118
PRICE :$ 9.95

You are the Captain of a submarine in charge of policing waters for ememy ships which are disguised as friendlies. Object--seek and destroy enemy.

TITLE :SUPER DUNGEON
AUTHOR :ROD NELSON
STOCK # :AP119
PRICE :$ 24.95

This is a SUPER version of the popular Dungeons and Dragons game. Enter the maze and try to find treasures, magical items, etc., while combatting thieves, monsters, and more!

TITLE :SUPER REVERSI
AUTHOR :GARY SHANNON
STOCK # :AP120
PRICE :$ 15.95

This a super-fast Hi-res Reversi game that allows you to enter your moves via the forward and backward arrows. The computer shows you all of your legal moves for speed.

TITLE :SUPER STARWARS
AUTHOR :BRUCE HENDERSON
STOCK # :AP121
PRICE :$ 15.95

This is an excellent Hi-res game which starts you from hyper space and moves you into normal space where you try to destroy 32 3-D Tie-fighters.

TITLE :TAROT CARDS
AUTHOR :GARY SHANNON
STOCK # :AP122
PRICE :$ 15.95

This fortune telling program can predict what the future has instore for you! You ask the computer a question, it shuffles the 78 card deck.

TITLE :TALKING DISK
AUTHOR :ERIC WALLER
STOCK # :AP123
PRICE :$ 19.95

Boot-up your TALKING DISK, and it will acutally talk to you! The disk includes software enabling you to create your own programs that talk.

TITLE :3-D ANIMATION
AUTHOR :JOHN ROWE
STOCK # :AP124
PRICE :$ 24.95

This program rotates Lo-res shapes and give the 3-D effect. The program comes with shapes already created and a program which lets you create your own.

TITLE :3-D DOCKING
AUTHOR :CHRIS OBERTH
STOCK # :AP125
PRICE :$ 15.95

In this Hi-res game you are shown split screen view of an asteroid field. The object is to dock your ship in the docking platform without hitting any asteroids.

TITLE :TIME CLOCK
AUTHOR :HARRY TARNOFF
STOCK # :AP126
PRICE :$ 6.95

This is a real-time software clock display with alarm. The program keeps track of the date, hours, minutes and seconds. The time is displayed in large numbers in Lo-res.

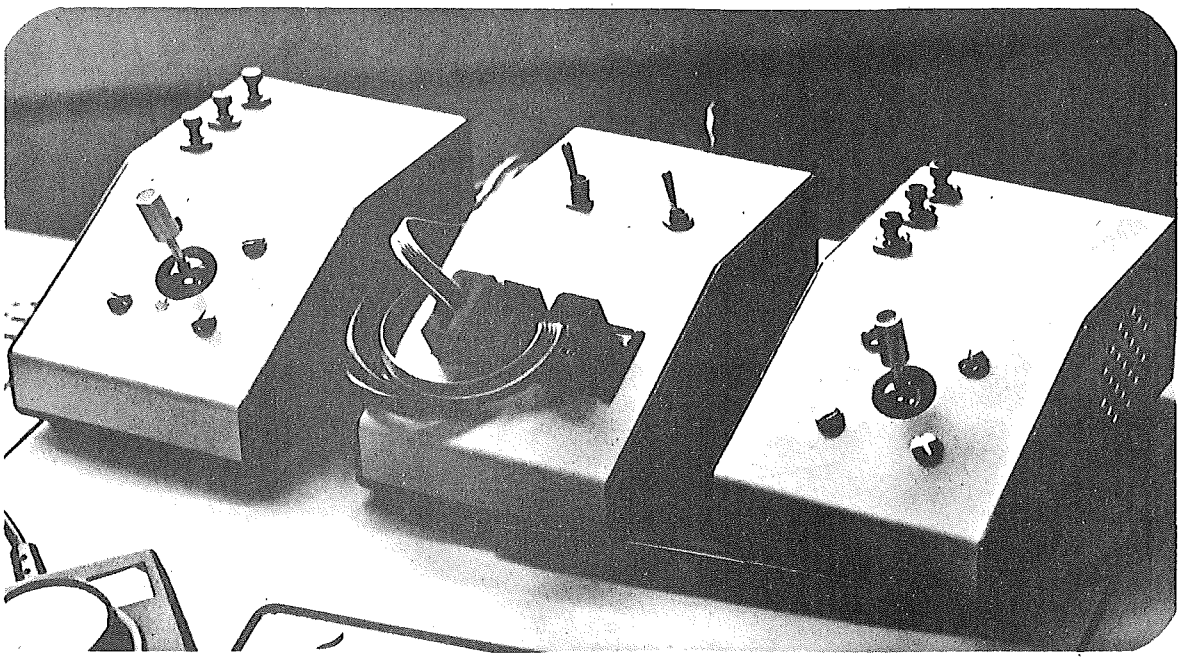
TITLE :U F O
AUTHOR :DICK SUITOR
STOCK # :AP127
PRICE :$ 9.95

Use your one laser to blast UFO's out of the sky. They remain friendly until you attack them so shoot wisely!

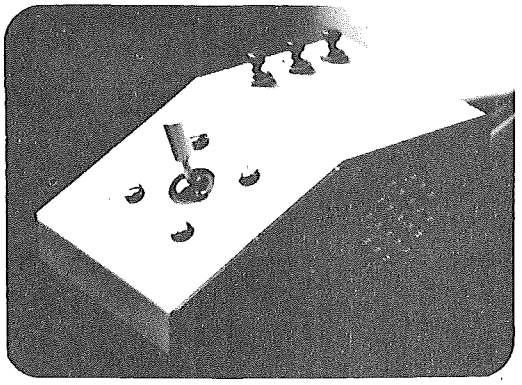
TITLE :WIPE OFF
AUTHOR :HARRY TARNOFF
STOCK # :AP128
PRICE :$ 6.95

A "BREAKOUT" type game, WIPEOFF lets you choose your colors and wipe off all the bricks that are spread out over the screen.

APPLE II® JOYSTICK & EXPANDA·PORT

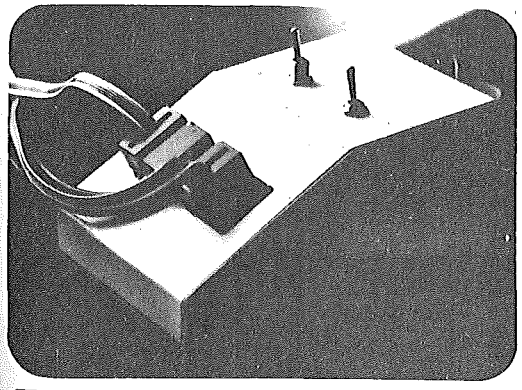


EVERY APPLE II OWNER SHOULD HAVE ONE!



JOYSTICK **$49.95**

The PROGRAMMA JOYSTICK is an input peripheral that attaches to the APPLE II Computer's game I/O Port. The JOYSTICK is a must for the serious game player, and it offers a degree of linearity not currently available with other joysticks. The ease of manueverability and the availability of the "functional" switches make the PROGRAMMA JOYSTICK a much needed enhancement to any APPLE II Computer System owner. The PROGRAMMA JOYSTICK comes completely assembled and tested, including a User's Guide.



EXPANDA-PORT **$59.95**

The PROGRAMMA EXPANDA-PORT is a multi-port expander for the game I/O port of any APPLE II Computer System. In addition to allowing expansion for up to six devices, the EXPANDA-PORT contains a built-in speaker that replaces the function of the Apple II's speaker. The switches on the EXPANDA-PORT allow for the selection of the specific device desired and for the switching of that device. No unplugging of any device connected to the EXPANDA-PORT is required. The PROGRAMMA EXPANDA PORT comes completely assembled and tested, including a User's guide.

The PROGRAMMA JOYSTICK and EXPANDA-PORT are available on a limited basis through your local computer dealer. Apple II is a registered trademark of Apple Computers, Inc.

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Software & Hardware Catalog Featuring ...

Professional, Personal, Educational

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