HEWLETT PACKARD

data systems newsletter

For HP Field Sales Personnel

SPECIAL EDITION

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February 15
1975

DIVISION NEWS

HP ANNOUNCES 30% MEMORY PRICE REDUCTION

by Larry Lotito

Effective February 17th, X/2 memory modules are reduced in price by 30%. 8K now lists for $1,500 and 4K for just $900. In quantity 50, the prices drop to $990 and $594, respectively.

Believe it or not, HP now offers 32K for only $6,000 – less than $4,000 at the quantity 50 discount level.

When the 21MX was first introduced last May, HP stressed its modularity, 4K RAM semiconductor memory, user microprogrammability, and very high reliability.

Modularity means that these price cuts apply across the board, not just to specific bundled, large memory configurations.

4K RAM Memory means 30% price slash less than 8 months after introduction, coupled directly to significant price reductions in 4K RAM prices.

Microprogrammability – means the lowest cost, most flexible memory management scheme in the industry – Dynamic Mapping – that lets your customer take advantage of these incredibly low memory prices.

Reliability – means 25% lower maintenance costs and 50% greater MTBF than the 2100 (the industry standard).

Immediate price reductions apply only to X/2 memory system options and DISComputer prices (2102A-004, 2102A-008, 2124B, 2124B-204 and 2124B-208). There are no changes at this time in field add-on prices (12994A or 12998A) or memory option prices in systems. X/1 memory prices are not affected.

With our strong new product program, our very attractive new purchase agreement, a growing OEM customer base and exciting new prices, HP is in the strongest position ever in the minicomputer business. And the MX is in volume production – sell volume accounts!

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NET EFFECT ON STANDARD CONFIGURATIONS

Memory Size (x/2)	21–M/10 New Price	21–M/10 % Reduction	21–M/20 New Price	21–M/20 % Reduction	21–MX/55 New Price	21–MX/55 % Reduction
4K	5,550	7	6,700	6	17,650	2
8K	6,150	10	7,300	8	18,250	3
12K	7,050	13	8,200	11	19,150	5
16K	7,650	15	8,800	13	19,750	6
20K	–	–	9,700	15	20,650	8
24K	–	–	10,300	16	21,250	8
28K	–	–	11,200	17	22,150	10
32K	–	–	11,800	18	22,750	10
48K	–	–	20,250	16	31,200	11
64K	–	–	23,250	18	34,200	13
96K	–	–	29,250	21	40,200	16

All prices quoted in this Newsletter are domestic USA prices only

In This Issue . . .

TESTS PROVE MX 48 TO 57% MORE RELIABLE

by Wayne Gartin

The first set of reliability tests for the 21MX have been completed and the results confirm a 48 to 57% improvement in MTBF over the highly reliable 2100A:

Memory Size	2100A (hours)	21MX (hours)	Improvement
8K	3746	5884	57%
16K	3200	4848	51.5%
24K	2721	4123	51.5%
32K	2422	3586	48%

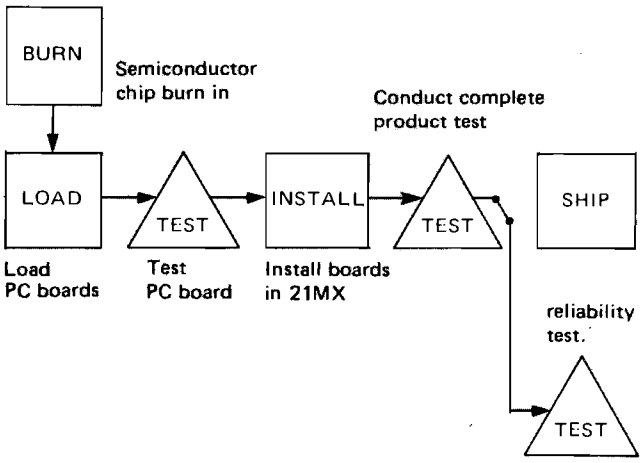
(Continued on page 2)

TESTS PROVE MX 48 TO 57% MORE RELIABLE -
(Continued from page 1)

The test program was comprehensive and demanding; it involved 100 computers, over 370 8K memory modules, and over 6.5 million test hours on the 4K memory chips. Diagnostics were run throughout the test which exercised a large portion of the product functions and comprehensive diagnostics were run periodically to test all functions.

21MX ASSEMBLY AND TEST – This is what they do

THE HP 21MX MANUFACTURING/TEST CYCLE



Another of the encouraging results of the test is that the 21MX and its semiconductor memory are continuing to improve in reliability and next year they will be even better.

An interesting comparison of products during their early life is shown below. Values are based on data as of the first time that there were at least 100 units in warranty:

Computer	Operating Months Between Failure
2116B	8.6
2114A	26
2100A	15.8
21MX	29.3

The 21MX is more reliable than any of our computers at introduction.

With this reliability and with these prices, the 21MX is the computer for your customer – today! HEWLETT PACKARD

HP Honors Top OEM Field Engineers

by LeRoy Nelson

HP's top OEM sales performers have been presented with an attractive framed color picture of the 21MX with a personalized nameplate, in recognition of outstanding performance in the OEM area.

Awards are being given to winners in two categories:

* Top OEM Sales for Fiscal 1974,
* Highest Number of New OEM Accounts for Fiscal 1974.

The awards were presented by Doug Hanson, OEM Sales Development Manager, and accepted by the factory Sales Development teams for the winners in each region.

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The Eastern team is accepting awards for the following Field Engineers: Pat Tucciarone, Walt Benedetto, John Kupiec, Tom Montella for Top Sales and Ange Colucci, Walt Benedetto, Will Workman, Dale Sutton for Top New Accounts.

The Neely Regional Team is accepting awards for the following Field Engineers: Bill Hilliard, Ron Westergren, Joe Sigismonti, Joe Pifko for Top Sales and Ron Johnson, John Tourkolias, Ron Westergren in Top New Accounts.

The Southern Regional Team is accepting awards for the following Field Engineers: Tom Fisher, Dave Head in Top Sales and Ed Oakley in Top New Accounts.

(Continued on page 3)

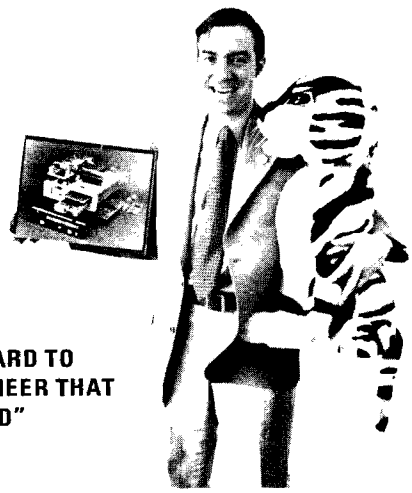
HP HONORS TOP OEM FIELD ENGINEERS - (Continued from page 2)

The Midwest and Canadian team is accepting an award for Mike Naggiar of Canada for Top OEM Sales.

The European and International Regional Sales Team is accepting awards for the following Field Engineers in Top OEM Sales:

Seiro Takahashi—Japan
Oscar G. Barbosa—Brazil
Gilles Bastien—France
Roger Cooper—U.K.
Placido De Luca—Italy
Horst Enzelmueller—Germany
Bjorn Hagstrom—Sweden

ED HAYES PRESENTING



THE OEM AWARD TO THE FIELD ENGINEER THAT "ROARED"

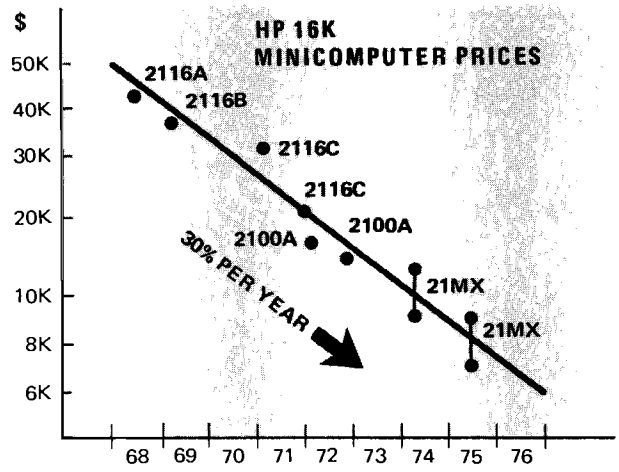
HP MINICOMPUTERS BEAT INFLATION – MAINTAIN PROGRAM COMPATIBILITY FOR 8 YEARS

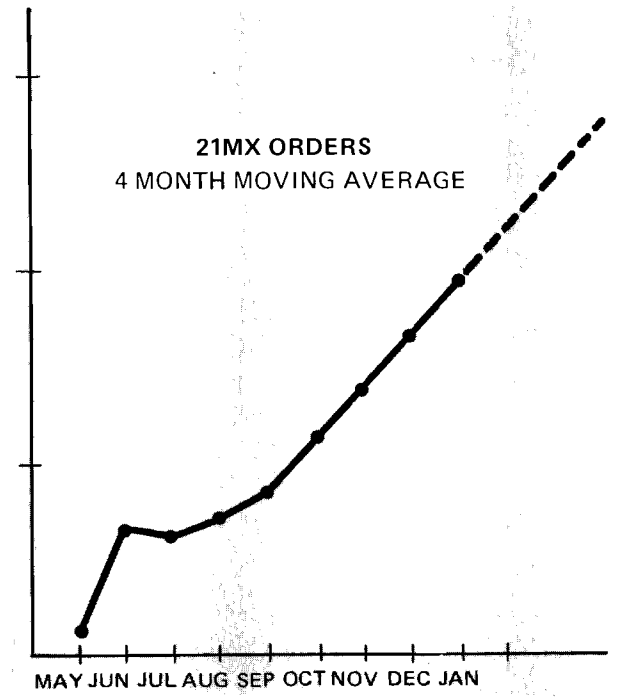
by Ed Hayes

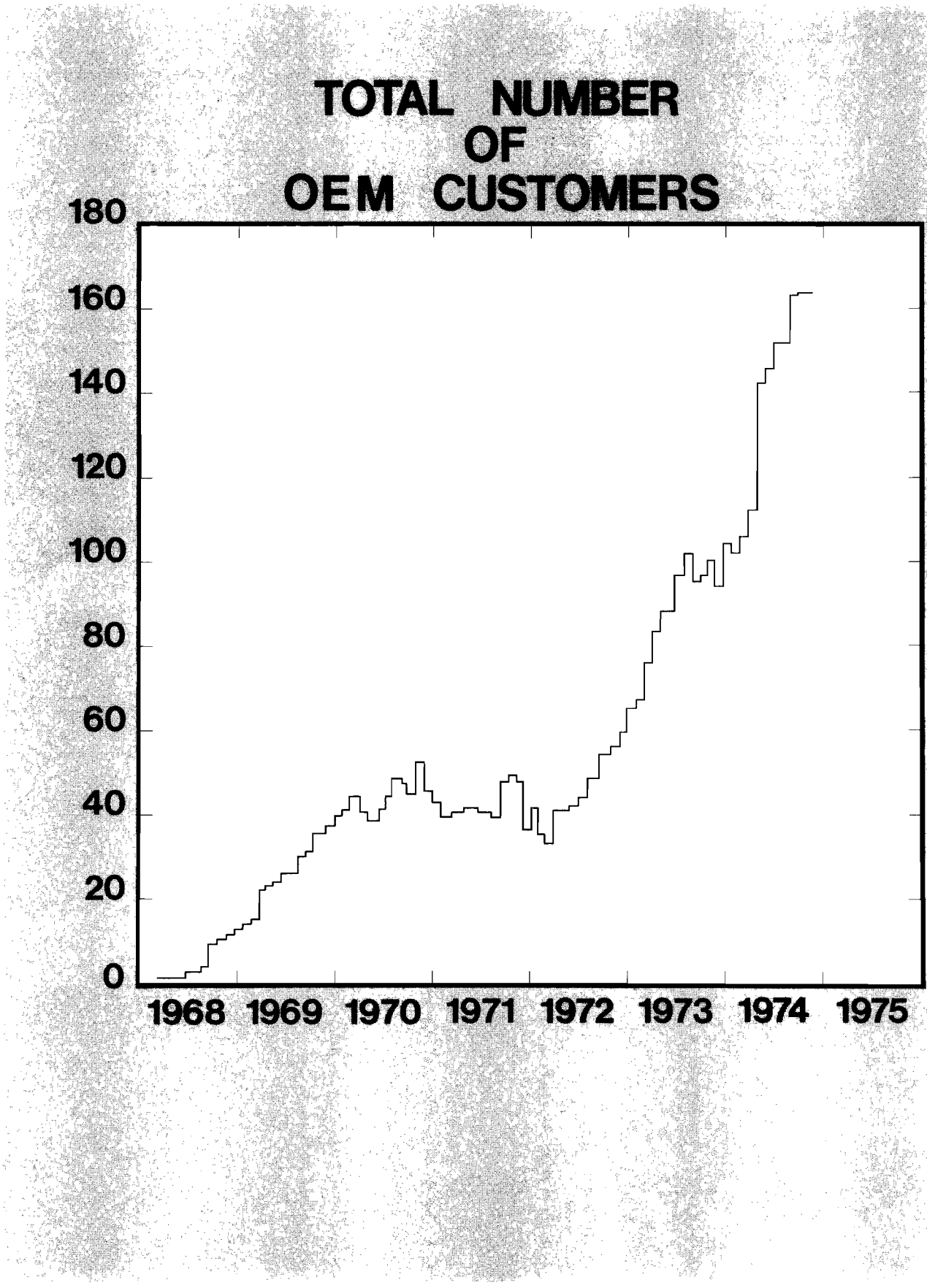
HP has always maintained a philosophy of helping your OEM beat price inflation and decrease his programming expense. That philosophy has never been more important than now.

In Nov. 1967, the 2116A was introduced with the capability to expand all the way to 8K of memory. Programs written for those 2116A's will run on today's 21MX which has a million words of addressing, as will all the other programs written for computer models in between.

The chart below shows what has happened to the price of a 16K minicomputer since we started shipping them out the door. Show this chart to your OEM – Prices have been rolling off at 30% per year – From HP – that's how you beat inflation!






TOTAL NUMBER
OF
OEM CUSTOMERS
180
160
140
120
100
80
60
40
20
0
1968
1969
1970
1971
1972
1973
1974
1975

PRICE MOVES STRENGTHEN MX MARKET POSITION

by David Carver

The 30% memory price reduction strengthens the competitive position of the 21MX in areas where it has always been strong: Where the customer needs the standard features of the 21MX, such as EAU, parity, and floating point, and where the customer wants to expand or enhance the capabilities of his computer beyond what even HP considers standard. In addition, HP now has the experience to *demonstrate* the reliability of 4K RAM semiconductor memory – a major advantage when selling against core-only machines. No other manufacturer has anywhere near HP's experience with 4K RAM memory – DEC says it won't be able to deliver the 11/04 until October of 1975.

The following table compares the large memory configuration pricing of the 21MX with its major competitors. The models shown in the table represent the competition's best answer to the 21MX in situations where expandability beyond 32K is a requirement.

LARGE SYSTEM PRICE COMPARISON

Prices include CPU, memory, EAU, powerfail recovery, parity, and memory management and protect.

32K			64K		
Model	Price	%Δ	Model	Price	%Δ
1. HP 21–M/20	14,225	–	1. HP 21–M/20	23,725	–
2. Nova 830*	17,550	+ 23	2. Nova 830*	24,550	+ 3
3. Interdata 7/32	19,600	+ 38	3. Interdata 7/32	28,500	+ 20
4. DEC 11/35	22,445	+ 58	4. DEC 11/35	30,445	+ 28
5. Nova 840*	24,330	+ 71	5. Nova 840*	37,130	+ 57
6. Eclipse S/200	30,400	+114	6. Eclipse S/200	45,200	+ 91
7. DEC 11/45	36,000	+153	7. DEC 11/45	51,000	+115

**Parity is not available on the Nova series.*

This comparison shows that the 21MX is clearly the price/performance leader for these types of configurations. HP has a large advantage for two reasons: One, the major competition isn't near HP's price of $1,500 for 8K of parity memory. Data General is the closest at $3,500 for 16K, but parity is not available. DEC will sell parity memory for $2,000 for 8K, but the customer must by 32K at a time to realize this price – score one for 21MX modularity! Two, the 21MX was *designed* for expandability – the microprogrammed architecture allows HP to build options such as the Dynamic Mapping System at low cost, and the 21MX packaging design allows low cost, modular expansion.

Note that the prices don't include floating point, which is a costly option from the competition, but a standard feature on the MX.

The Eclipse is the fastest machine in the table in terms of "raw speed", but the customer must pay double the price! The Eclipse also has a feature called error correction that corrects the majority of memory bit errors, and costs $1,000, plus $1,000 per 8K of memory. Sounds a bit like expensive overkill, especially in view of the vast reliability improvement the customer gets with HP semiconductor memory.

HP's key strengths against this competition are expandability, reliability advantage, ability to deliver semiconductor memory, the microprogramming lock-out spec, HP's commitment to the OEM market and the price advantage. Win those OEM accounts with the 21MX series!

The following price comparison table shows how the 21MX stacks up against the major competitors in the "low end", or minimum capability market. Comparative prices are shown for 4K, 8K, and 16K memory configurations.

(Continued on page 6)

"LOW END" PRICE COMPARISON

(price includes CPU, memory, EAU & powerfail recovery)

4K			8K			16K		
Model	Price	%Δ	Model	Price	%Δ	Model	Price	%Δ
1. Interdata 7/16	$4850	–20	1. Interdata 7/16	$5350	–19	1. Interdata 7/16	$ 6,850	–16
2. DEC 11/04	5435	–10	2. Nova 2/4	6000	– 9	2. Nova 2/4	7,600	– 6
3. Nova 2/4	5500	– 9	3. DEC 11/04	6235	– 6	3. HP 21–M/10	8,125	–
4. HP 21–M/10	6025	–	4. HP 21–M/10	6625	–	4. Nova 2/10	8,500	+ 5
5. DEC 11/05	6335	+ 5	5. Nova 2/10	6900	+ 4	5. HP 21–M/20	9,275	+14
6. Nova 2/10	6400	+ 6	6. DEC 11/05	6935	+ 5	6. DEC 11/05	9,435	+16
7. HP 21–M/20	7175	+19	7. HP 21–M/20	7775	+17	7. Interdata 7/32	10,650	+31
						8. Nova 830	11,330	+39
						9. Eclipse S/100	12,300	+51
						10. DEC 11/35	13,260	+63
						11. Nova 840	14,630	+80

HP Computer Museum
www.hpmuseum.net

For research and education purposes only.

PRICE MOVES STRENGTHEN MX MARKET POSITION-
(Continued from page 5)

The figures shown that the 21MX is now in a better position in the low-end, but is still at a price disadvantage compared to some machines. The significant fact of this comparison is that the 21MX offers the *lowest cost* expansion/enhancement paths of any machine in the table. For example, of the less expensive machines, only Interdata offers parity at all, and charges $500 for it. Floating point is standard on the 21MX, but costs the customer $3,400 from Data General, $4,000 from Interdata, and is not available at all on the 11/04 or 11/05. Note also that memory expansion costs less from HP than any competitor, and that the customer is not constrained to buying "packaged" systems as with DEC. The 11/04 and 11/05 upgrade paths are very expensive (maximum memory available in the 11/04 today is 8K) and *no* machine in the table that is priced below the M/20 is expandable beyond 32K. And remember that HP is the leader in instruction set enhancements, offering the best in microprogramming capability and support.

The message of this table is clear: when selling against low-end machines, the customer must be shown that he needs the flexibility the 21MX offers. HP can deliver the MX with semiconductor memory *now* – why buy a dead-end computer?

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NEW OEM PRICE LIST

by LeRoy Nelson

The new revision of the OEM Computer Products Price Information is printed and being distributed at this time. This printing is updated and revised to make it even more useable than the previous issue.

The features of this new issue include the list price, basic monthly maintenance price and discount schedule equipment type. All of the discountable products have an equipment type number to identify the particular schedule on the OEM Purchase Agreement.

Another new feature is the DISComputer configurator on the back cover to supplement the computer configurator on the front cover.

This OEM Computer Products Price Information along with the OEM Purchase Agreement will give you a complete set of documentation to close that OEM deal!

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MINICOMPUTER PRODUCT MANAGEMENT TEAM

WAYNE GARTIN:	21 MX Processor and Memory Systems
LEROY NELSON:	DISComputers, general purpose interfaces, and discontinued products. Boise liaison.
DAVE CARVER:	2100A/S and Data Communications Interfaces
HOWARD COLEY:	Microprogramming, Memory Management, and Memory Protection Products.

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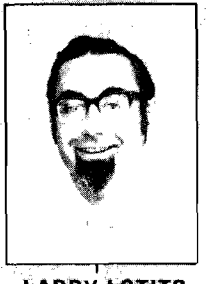
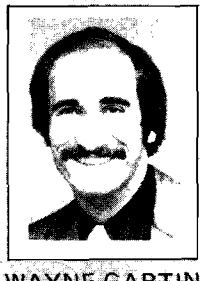
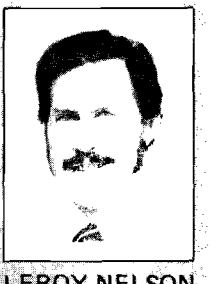
21MX



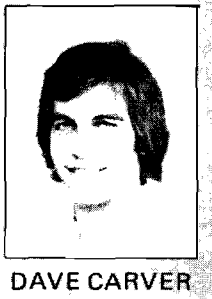
LARRY LOTITO



WAYNE GARTIN



LEROY NELSON



DAVE CARVER

HOWARD COLEY

16K MODULE NEWS

The following TWX was issued on February 7th concerning positive steps towards bringing a 16K memory board to market.

TWX

7 FEB 75
TO:
ALL FE's
DM's
RSM's
BOB BOND/GRENOBLE
cc: SALES DEVELOPMENT/CUP
BEN HOLMES

X/2 MEMORY IS ALIVE AND WELL AND SHIPPING IN VOLUME TODAY. HIGH DENSITY MEMORY IS STILL IN THE DEVELOPMENT STAGE. RECENT FAVORABLE RESULTS WITH 18-PIN 4K RAMS INDICATE THAT OUR SOLUTION WILL BE A 16K BOARD, FULLY COMPATIBLE WITH THE CURRENT X/2 MEMORY SYSTEM. VOLUME SHIPMENTS OF PROVEN RELIABLE PARTS WILL NOT OCCUR, HOWEVER, UNTIL LATE SUMMER. A FURTHER PROGRESS REPORT WILL BE ISSUED NO LATER THAN 31 MARCH. AT THIS TIME THE 16K BOARD IS NOT A PRODUCT; WE CANNOT ACCEPT ORDERS. BECAUSE WE ARE FULLY COMMITED TO SUPPLYING A HIGH DENSITY MEMORY MODULE, X/1 MEMORY WILL REMAIN ON THE CPL, BUT WITH INDEFINITE DELIVERY.

IN LIGHT OF THESE DEVELOPMENTS, WE ARE ENDING OUR MEMORY EXCHANGE PROGRAM AND LIMITING EXCHANGES TO THOSE VOLUME CUSTOMERS WHO HAVE ALREADY PLACED AN ORDER (AS OF 9 FEB) AND HAVE SPECIFICALLY INDICATED ON THEIR ORDER THEIR DESIRE TO TAKE ADVANTAGE OF THE EXCHANGE PROGRAM. IN ORDER TO AVOID MIS-UNDERSTANDINGS, PLEASE NOTIFY TED DOYLE BY TWX NO LATER THAN 14 FEB OF ALL OUTSTANDING COMMITMENTS, STATING CUSTOMER NAME AND ALL RELEVANT ORDER NUMBERS.

NO OTHER COMMITMENTS WILL BE HONORED BY DATA SYSTEMS.

LARRY LOTITO/DSD – CUPERTINO

data systems newsletter
For HP Field Sales Personnel

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