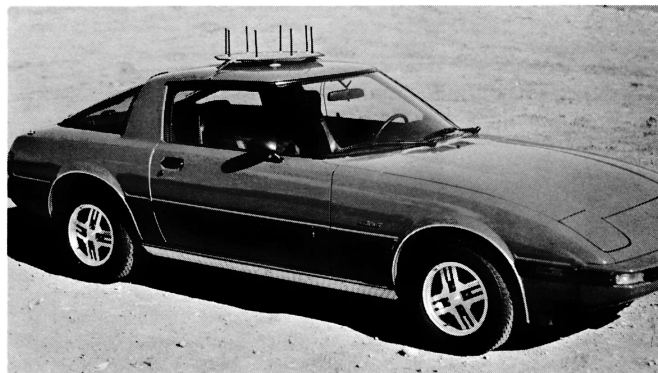# NEW PRODUCTS

1Ø-5-4
**PAL 9ØØØ Radio Direction Finder**

The ALF PAL 9ØØØ Phased Antenna Locator is an advanced radio direction finder. When attached to a 2-meter (144-148 MHz) FM receiver or transceiver, it continuously determines the directions of received radio signals with its eight sequenced-phased antennas. The directions are indicated on a light emitting diode (LED) display.
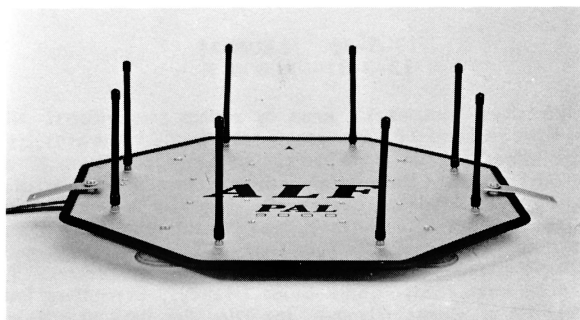
The PAL 9ØØØ has a compact display unit with an adjustable-tilt mounting bracket, and a rugged antenna assembly with suction cups and rain gutter straps for cartop mounting. The lightweight, compact system is designed for quick and easy mounting and removal so it's always ready for use.
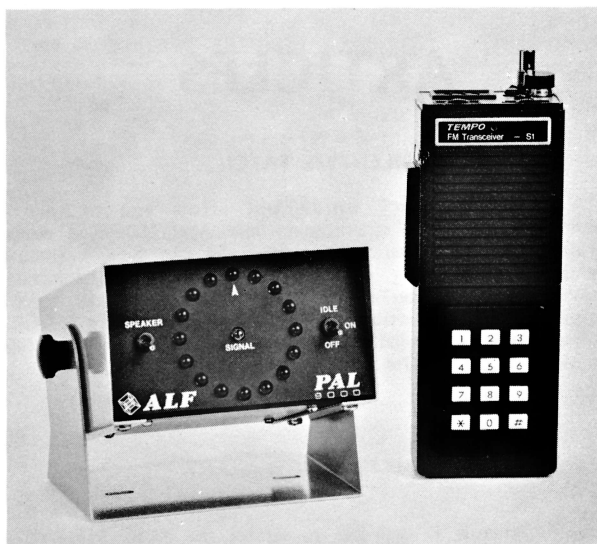
With the PAL 9ØØØ, amateur radio users can rapidly locate a transmission source. It is ideal for jammer finding, transmitter hunting contests, and similar activities. Its range is limited only by the range of the FM receiver used.

The controls of the unit are simple to operate, and the display is easy to read. The advanced FIR digital filter gives fast responce to minimize spurious readings from reflections. Since the unit is completely assembled (including antenna), no complicated mechanical assembly is needed. The PAL 9ØØØ is solidly built, and designed for years of trouble-free operation.

Suggested list price is $345.ØØ. Request the PAL 9ØØØ data sheet for further information.

1Ø-5-5
COPY SYSTEM

The ALF Copy System consists of hardware and software for use with a standard Apple II or Apple II-Plus computer with video display and 2 to 1Ø Apple disk drives. It can copy disks accurately and reliably, with copying times ranging from 37 seconds to under 18 seconds (depending on the number of drives used). The Copy System copies any standard 13 or 16 sector Apple format disk. The hardware supplied connects to an Apple computer without permanent modifications, and the Apple can be
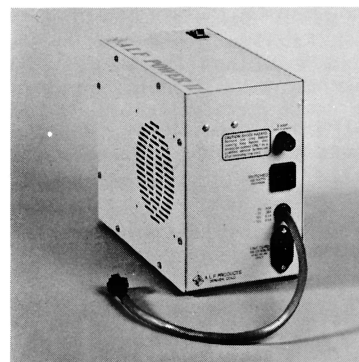

used normally when not copying. Special hardware, software, and instructions are provided for those who wish to do their own disk drive maintenance. The Copy System is based on techniques used by ALF's disk copying service since mid-198Ø, and many tips on reliable copying are given in the detailed owner's manual. Hardware is covered by a full 3 year warranty, software by a full 1 year warranty (warranty text available free from ALF).

Price is $595.ØØ. Request the Copy System data sheet for further information. Manual alone is available as order number 11-1-3, $5.ØØ.

12-2-2, 12-2-3 SQUARE
12-2-4, 12-2-5 RECTANGULAR
FLOPPY BOXES

Floppy Boxes are a versatile floppy protector and mailer, available in two sizes: square for holding 1-3 minidisks with or without disk-sized printed matter, and rectangular for holding disks and standard 5.5"x8.5" booklets or other printed matter (8.5"x11" folded in half). Made of sturdy corrugated cardboard and featuring a special "cross-grain" double thickness design, they can be ordered with adhesive closure tabs for use as mailers (no need for a mailing envelope). Order numbers 12-2-2 and 12-2-4 are without tab; 12-2-3 and 12-2-5 are with closure tab. For product packaging, the rectangular size is designed for closure with a standard 8.5"x11" adhesive label which covers

NEW PRODUCTS (cont.)
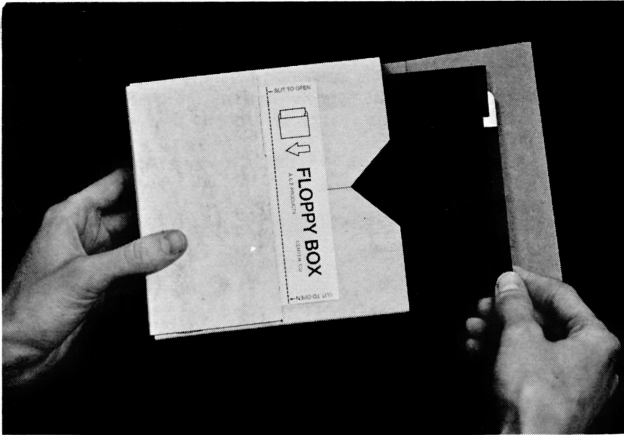
the entire front of the package and can be printed with single or full color printing (Albums 7–1Ø and H–K are packaged in rectangular Floppy Boxes).

Suggested single quantity list price: square, $Ø.95; rectangular, $1.Ø5. Substantial quantity discounts available, ask for price list. Request Floppy Boxes data sheet for further information.

13–3–2Ø   ALBUM 6
13–3–21   ALBUM G

The second in a series of "single artist" albums, Album 6/G is titled "David Exotic's Greatest Hits" and consists of 12 songs programmed by David Silveria (remember What's New Pussycat? on Album 2/C?). The Album 6 version is for 3 MC16 cards and the Album G version is for 1 MC1 card. It contains Chopsticks (traditional), Dream a Little Dream of Me (Kahn, Schwandt, Andree), Fast Food (commercials by Woloshin, Gavin, Redington), Can You Read My Mind? (Williams, from "Superman"), Starlight Waltz (Brainard), Variations on a Theme (Halligan), Dixie Boogie (Emmet), Fanfare for DACs (Silveria), PATAL (Silveria), Lara's Theme (Jarre), Majestic Rag (Rawls, Neel), and Le Banjo (Gottschalk). Quite an experience!

Suggested list price is $14.95.

13–3–22   ALBUM 7
13–3–23   ALBUM H

Third in the "single artist" albums series, this double–disk album contains 1Ø songs programmed by Antone Walloch, M.D. (of Album 3/D fame). The Album 7 version is for 3 MC16 cards and the Album H version is for 1 MC1 card. It contains Pink Panther (Mancini), Sweet Georgia Brown (Bernie, Pinkard, Casey), The Nearness of You (Washington, Carmichael), Honky Tonk Train (Lewis), Up a Lazy River (Carmichael, Baron), When Your Lover has Gone (Goldsboro), One for the Woofer (Taylor), No Moon at All (Evans, Mann), Bolero (Ravel), and Baubles, Bangles, & Beads (Wright, Forrest, from "Kismet"). Incredible jazz performances in Walloch's unique style.

Suggested list price is $24.95 (includes two disks).

13–3–24   ALBUM 8
13–3–25   ALBUM I

Fourth in the "single artist" album series, this double–disk album contains 11 songs programmed by Michael Abelson. Abelson's flair for classical pieces of unusual complexity (one is over 1ØØ disk sectors long!) prompted us to make him the first programmer on a "single artist" album without any songs on a regular album first. The Album 8 version is for 3 MC16 cards and the Album I version is for 1 MC1 card. It contains the finale from the William Tell Overture (Rossini), the overture to The Marriage of Figaro (Mozart), the finale from Brandenburg Concerto #2 (Bach), the Galop from the ballet Comedians (Kabalevski), Sabre Dance from the Gayne ballet (Khachaturian), Overture from the Carmen Suite (Bizet), Prelude to Act I from

the Carmen Suite (Bizet), Aragonaise from the Carmen Suite (Bizet), Polovetsian Dances I from Prince Igor (Borodin), Polovetsian Dances II from Prince Igor (Borodin), and Mars, the Bringer of War from The Planets (Holst). Very impressive if you're not familiar with these pieces, unbelievable if you are!

Suggested list price is $24.95 (includes two disks).

13–3–28   ALBUM 9
13–3–29   ALBUM J

Fifth in the "single artist" album series, this disk contains 12 songs programmed by Craig Crossman (plus Swingin in the Country, from Album 2/C for an encore appearance). Six songs from Album 9 are for 2 or 3 MC16 cards, the remaining six are for 3 MC16's. All songs on Album J are for 1 MC1 card. The album contains: Hawaii Five-O (Stevens), Saints go Marching In, William Teller (a variation on the William Tell Overture by Rossini), Baby Elephant Walk (Mancini), Sandra's Exotic Dance! (Crossman), Variations on Electronic Happiness (Crossman), March of the Alfwumps (Crossman), Computing the Fifties (Crossman), The Alf Love Song (Crossman), The Disco Diode (Crossman), Waltz of the Electrons (Crossman), and California Girl (Crossman). Craig Crossman's lively songs cover a wide variety of musical styles.

Suggested list price is $14.95.

13–3–3Ø   ALBUM 1Ø
13–3–31   ALBUM K

This album contains 12 songs by various programmers. Nine songs from Album 1Ø are for 2 or 3 MC16 cards, the remaining three are for 3 MC16's. All songs on Album K are for 1 MC1 card. Claude Neely has programmed Six Variations on a Theme by Piesiello (Beethoven). Tim Gill has programmed Moonlight Sonata (Beethoven), the Washington Post March (Sousa), Anitra's Dance from Peer Gynt (Grieg), and Danse de la Fee-dragee (Dance of the Sugarplum Fairies, Tchaikovsky). Ted Cohn programmed St. Louis Blues (Handy), Friendless Blues (Handy), Mister Crump (Handy), and Ole Miss (Handy). Antone Walloch programmed Etude in Thirds (Chopin). David Silveria has programmed Going Out of My Head (Randazzo, Weinstein). And John Ridges has programmed Cotton's Dream (Nadia's Theme, DeVorzon, Botkin).

Suggested list price is $14.95.

ARTICLES

SILENTYPE PATCH

A patch for Entry which will allow you to take a "snapshot" of the Entry screen using your Apple Silentype printer is available. After adding the patch, you can type * (return) while Entry is running and the top portion of the screen (everything but the menu at the bottom) will be printed on the Silentype. The instructions for making the patch are available free from ALF; just send a stamped, self–addressed envelope (business size) and ask for the "Silentype Patch".

DISABLING AUTO–START
By Philip Tubb

Sometimes it is desirable to disable the Auto–Start ROM when using Entry. For example, if you have a printer which can print hi–res screens, you may wish to press RESET to go into

ARTICLES (cont.)

the monitor and print the screen, then type C00G to continue with Entry. If you have regular monitor ROM you can do this, but if you have an Auto-Start ROM Entry will automatically continue when RESET is pressed. However, the Auto-Start ROM can be disabled by a simple change to Entry. The following procedures create an "ENTRY1" which has the Auto-Start ROM disabled.

```
(FOR THE MC16)
(INTEGER)          (APPLESOFT)

INT                FP
HIMEM:24576
LOAD ENTRY         LOAD ENTRY
POKE 20326,105     POKE 16484,105
POKE 20327,255     POKE 16485,255
POKE 20328,90      POKE 16486,90
SAVE ENTRY1        SAVE ENTRY1
INT
```

```
(FOR THE MC1)
(INTEGER)          (APPLESOFT)

INT                FP
HIMEM:24576
LOAD ENTRY         LOAD ENTRY
POKE 15344,105     POKE 11441,105
POKE 15345,255     POKE 11442,255
POKE 15346,90      POKE 11443,90
SAVE ENTRY1        SAVE ENTRY1
INT
```

USING THE MC EXPANSION CHASSIS
Philip Tubb

If you've tried to use the MC16 with the Mountain Computer Expansion Chassis, you've probably discovered that the Expansion Chassis switches on and off during song playback. This is because the memory address Mountain Computer picked to turn the Expansion Chassis on and off was already dedicated to another function in the Apple: the cassette output port. This means the Expansion Chassis will not function properly when used with any program that uses the cassette output port. The Entry and Play programs for the MC16 put out a "timing tone" on the cassette output which allows the playback speed to be recorded and possibly used in specialized applications. This feature can be removed in the following fashion:

```
(FOR ENTRY)
(INTEGER)          (APPLESOFT)

INT                FP
HIMEM:24576
LOAD ENTRY         LOAD ENTRY
POKE 10450,16      POKE 6586,16
SAVE ENTRY1        SAVE ENTRY1
INT
```

```
(FOR PLAY)
(INTEGER)          (APPLESOFT)

INT                FP
HIMEM:24576
LOAD PLAY          LOAD PLAY
POKE 22462,16      POKE 5054,16
SAVE PLAY1         SAVE PLAY1
INT
```

The above patches will cause the "clear keyboard input" memory address to be referenced rather than the cassette output memory address.

"B" VERSION OF PROCESS

An updated version of PROCESS is available. This version works with the Silentype printer (the Silentype uses memory locations that printers are not supposed to use), solves problems previously encountered with using any printer, and has a slightly different MLIST print-out format. If your PROCESS disk is labeled 13-3-11A, send it to ALF for a free update to 13-3-11B.

USING THE TG JOYSTICK
Philip Tubb

If you're using the joystick from TG Products (P.O. Box 2931; Richardson, TX 75080) you may have noticed the joystick directions don't match Entry's directions. Rick Harman has written the following patch for the MC1 version of Entry:

```
(INTEGER)          (APPLESOFT)
INT                FP
HIMEM:24576        HIMEM:24576
LOAD ENTRY         LOAD ENTRY
POKE 7487,126      POKE 3582,126
POKE 7489,0        POKE 3584,0
POKE 7491,0        POKE 3586,0
SAVE ENTRY STICK   SAVE ENTRY STICK
```

This should make the directions match.

MORE ON DIVISOR TABLES
Philip Tubb

The article in Alpha 1 on changing divisor tables was written before the introduction of the Apple II-Plus, so it was assumed that all Apples had Integer BASIC. If you're using Applesoft, the $1A76 address won't be the divisor table since that address is for the Integer version. Dennis Patrick, of the Electronic Music Studio of the University of Toronto, wrote to point this out and even supplied the correct address for the Applesoft version, $0B5E. Note that when using the Applesoft version, the HIMEM:24576 command shown in the procedure is not required, and "FP" should be substituted for "INT".

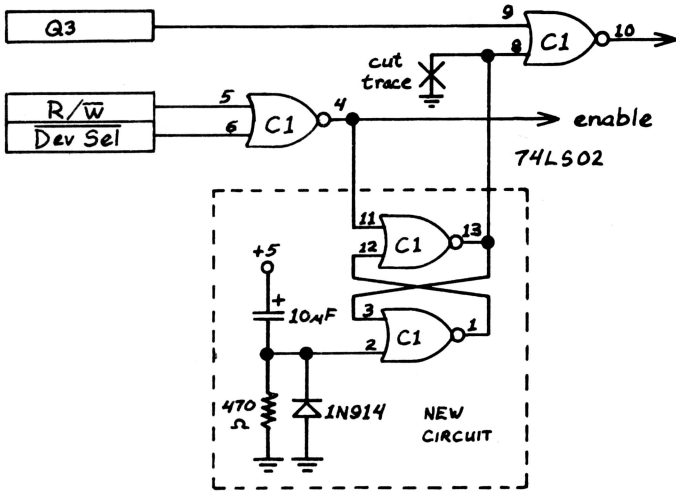### A NOTE ON THE ALF
Henry Spragens

You say you were going to do some more work on your version of the Eroica Symphony, so you hooked your 9-voice card to the hi-fi, turned the selector to AUX, turned on the Apple][, and when your cat sleeping next to the speaker heard the SCREECH!!!! from the uninitialized synthesizer he ran across the keyboard, typing INITZXCVBNM!? And now instead of three weeks' work, you have a blank disk (except for ZXCVBNM!)... is that what's got your synapses scintillatin', Bunkie? Well, reboot your nervous system, and examine your MC1 card:

If you peruse page 7-10 (the schematic diagram) in the manual, you'll see C1, a 74LS02, has 2 leftover sections shown at the bottom of the page. Suppose those two NOR's were hooked up as a flip-flop and were used to enable the 2 MHz clock (Q3)? That'd keep the board from speaking before it was spoken to. If a capacitor from +5V goes to one input of the circuit, that'll flip the clock "off" when the Apple is turned on. A resistor could bleed the charge off the capacitor, so that after a couple of milliseconds the board can be used. Whenever the card is addressed, there is a high on pin 4 of C1, so that can be used to flop the clock "on". Once addressed, the clock remains on until the computer is turned off, but now the volume controls have been initialized, and presumably everything's under control. If it still screeches, studying music theory may help...

[Note: ALF does not recommend modifying the circuitry on your MC1 card. While the following suggestion will generally work if properly installed, you'll have to take responsibility for

ARTICLES (cont.)

the results yourself.] We'll need 3 additional parts, a capacitor of about 5 or 10 uF (mFd), a resistor of about 470 or 1000 Ohms, and a diode such as a 1N914. If there's nothing close in your junk box, the Radio Shack catalog numbers are: 271-1317, 470 Ohm 1/4 Watt resistor; 272-1423, 10 uF 35 V capacitor (a tantalum capacitor of 5-10 uF and 10 V or more is preferred because it's smaller); 276-1620, 1N914 diodes. If you didn't have a junk box, the handy 5 and 50 packs will give you some resistors and diodes to start one with!

Now for the wiring. The new parts can be mounted on the component side of the board, next to the 74LS02 at C1 above the ALF name on the p.c. board. One trace has to be cut on the circuit side of the board between C1 pin 8 and the adjacent ground bus. Then run jumpers from C1 pin 8 to 13, from 13 to 3, from 12 to 1, from 11 to 4, and from pin 2 to the junction of the new resistor, capacitor (– lead), and diode cathode (banded end). Connect the other end of the capacitor (+ lead) to +5V at C1 pin 14 or the bypass capacitor between C1 and D1. Connect the remaining end of the resistor and diode to ground at the bypass capacitor between IC's A1 and B1. That's it! (See diagram.)

This modification has been made to two MC1's and works 99% of the time. The other 1% of the time a stray pulse appears on the address lines while the Apple is still half asleep, and turns on the oscillators. In such cases, the cognoscenti will repeat Copland's remark on first hearing a work by P.D.Q. Bach: "What the hell is that?!" (Sam Copland (1929-1979) died laughing during a performance of "Iphegenia in Brooklyn".)

[Henry Spragens has programmed some spectacular songs for the MC1 which will be appearing in a future ALF Album.]

SUBSCRIPTION INFORMATION

Alpha is published whenever it seems like a good time to do so. To receive the next Alpha, send a stamped, self-addressed envelope (business size) with a note requesting Alpha 5. If you wish, you can subscribe by sending $5.00 for 7 issues. Please specify which issue the subscription should start at. Those outside the U.S. should inquire for rates.

NOTICE:

Prices given in this newsletter are current U.S.A. prices only and are subject to change without notice. Ask for a recent price list if this issue is not current. Albums may not be available in both MC1 and MC16 versions until the necessary conversions have been completed.

LABEL INFORMATION

After your name on the mailing label you'll find a star (*) followed by a digit. The digit tells how many issues are remaining in your subscription. (If there is no *, you have no subscription.) If the digit is a letter, you are indeed privileged; you'll continue receiving Alpha until the letter changes to a digit.

ON SUBMITTING SONGS

If you have songs you've programmed on an MC1 or an MC16 Music Card, you might want to consider submitting them to ALF for possible inclusion on a future Album. We pay cash for the songs we accept, so get started right away by sending a stamped, self-addressed envelope with a note asking for publications 8101 and 8102. They have all the information you need.