```
DEBUG DBASE.TMP
-E 05F4
  FF:05F4    25.        E3.39      C4.4F      EB.45
-E 0A44
68FF:0A44    B0.2D      5E.26      E6.AB      AF.36
68FF:0A48    1E.38      F1.06      41.9C      31.17      73.1A      59.54      C1.A5      A4.4B
68FF:0A50    0E.E8      CD.41      63.4C      FE.E0      C1.AF      39.68      0B.0B      62.07
68FF:0A58    60.6E      93.07      BE.80      CF.16      08.1B      F8.B6      4E.BF      56.B7
68FF:0A60    53.4C      D3.6B      5D.C2      4F.39      A3.26      9A.DC      AE.97      14.BF
68FF:0A68    C4.3B      7B.CE      DC.C0      E4.EB      EE.4F      45.BB      F9.B3      AB.C2
68FF:0A70    3F.27      15.A6      56.90      3D.75      5B.F4      A3.AF      A1.68      20.93
68FF:0A78    AD.DF      98.62      BE.43      02.CD      C8.B7      63.65      DF.AD      C3.34
68FF:0A80    E0.11      2F.B0      26.85      AF.93      31.29      29.A2      40.9B      4F.A4
68FF:0A88    86.42      98.74      90.A6      FC.84      D6.24      76.7C      E3.17      E5.4C
68FF:0A90    F1.7B      61.5E      08.F9      8A.2C      20.66      F7.0E      37.4E      64.27
68FF:0A98    4F.B4      E2.2F
-W
Writing 1B850 bytes
-Q
```

```
D02E0 02FF
5AAA:02E0   D8 E0 7C EF C6 F9 2E 2F-94 37 A6 42 41 70 00 68   X`!oFy./.7&BAp.h
  AA:02F0   B7 5F 6D 57 25 E3 C4 EB-D6 F5 71 25 AB FD 5F 79   7_mW%cDkVuq%+}_y
-D0730 07BF
5AAA:0730   09 88 B3 72 72 7B D8 83-3E 8C A5 F4 8B FE 01 07   ..3rr{X.>.%t.~..
5AAA:0740   27 0F 89 17 B0 5E E6 AF-1E F1 41 31 73 59 C1 A4   '...0^f/.qA1sYA$
5AAA:0750   0E CD 63 FE C1 39 0B 62-60 93 BE CF 08 F8 4E 56   .Mc~A9.b`.>O.xNV
5AAA:0760   53 D3 5D 4F A3 9A AE 14-C4 7B DC E4 EE 45 F9 AB   SS]O#...D{\dnEy+
5AAA:0770   3F 15 56 3D 5B A3 A1 20-AD 98 BE 02 C8 63 DF C3   ?.V=[#! -.>.Hc_C
5AAA:0780   E0 2F 26 AF 31 29 40 4F-86 98 90 FC D6 76 E3 E5   `/&/1)@O...!Vvce
5AAA:0790   F1 61 08 8A 20 F7 37 64-4F E2 50 4E 9C 76 CE D6   qa.. w7dObPN.vNV
5AAA:07A0   DB 51 21 D1 2C 4B 3B 73-48 EE 8E 6A 9C D7 E2 4F   [Q!Q,K;sHn.j.WbO
5AAA:07B0   FA B6 10 24 28 A0 45 C8-50 36 9A 5E 9F C4 A1 EC   z6.$( EHP6.^.D!1
-R
AX=5AAA   BX=0001   CX=B650   DX=0000   SP=012C   BP=0000   SI=0000   DI=0000
DS=5AAA   ES=5AAA   SS=5AAA   CS=5AAA   IP=014A   NV UP EI PL ZR NA PE NC
5AAA:014A 8B1E7601      MOV     BX,[0176]                              DS:0176=F79A
-U014A 016D
5AAA:014A 8B1E7601      MOV     BX,[0176]
5AAA:014E BE8001        MOV     SI,0180
5AAA:0151 8B0E7801      MOV     CX,[0178]
5AAA:0155 8BFE          MOV     DI,SI
5AAA:0157 D1E9          SHR     CX,1
5AAA:0159 49            DEC     CX
5AAA:015A 8B167A01      MOV     DX,[017A]
5AAA:015E FC            CLD
5AAA:015F AD            LODSW
5AAA:0160 AD            LODSW
5AAA:0161 2BD0          SUB     DX,AX
5AAA:0163 92            XCHG    DX,AX
5AAA:0164 33C3          XOR     AX,BX
5AAA:0166 AB            STOSW
5AAA:0167 E2F7          LOOP    0160
5AAA:0169 92            XCHG    DX,AX
5AAA:016A 33C3          XOR     AX,BX
5AAA:016C AB            STOSW
5AAA:016D E96001        JMP     02D0
-D02E0 02FF
5AAA:02E0   C6 06 2C 02 02 3D 00 00-74 03 FF 25 DB FF D3 FF   F.,..=..t..%[.S.
5AAA:02F0   D0 FF D2 83 FB 00 74 02-FF 27 5C D0 D6 73 88 FE   P.R.{.t..'\PVs.~
-D0730 07BF
5AAA:0730   CC E2 DB 00 00 00 00 00-03 60 80 01 10 00 40 00   Lb[......`....@.
5AAA:0740   04 00 43 4F 50 59 52 49-47 48 54 20 28 43 29 20   ..COPYRIGHT (C)
5AAA:0750   31 39 38 33 2C 20 31 39-38 34 2C 20 20 56 61 75   1983, 1984,  Vau
5AAA:0760   6C 74 20 43 6F 72 70 6F-72 61 74 69 6F 6E 20 61   lt Corporation a
5AAA:0770   73 20 61 6E 20 75 6E 70-75 62 6C 69 73 68 65 64   s an unpublished
5AAA:0780   20 77 6F 72 6B 2E 20 41-6C 6C 20 72 69 67 68 74    work. All right
5AAA:0790   73 20 72 65 73 65 72 76-65 64 2E 20 54 68 69 73   s reserved. This
5AAA:07A0   20 77 6F 72 6B 20 69 73-20 74 68 65 20 70 72 6F    work is the pro
5AAA:07B0   70 65 72 74 79 20 6F 66-2C 20 61 6E 64 20 65 6D   perty of, and em
-
```

```
-U02F3 02F3
64AA:02F3 E94C04          JMP       0742
  0742 0796
64AA:0742 C6061818E9      MOV       BYTE PTR [1818],E9
64AA:0747 C706191834EF    MOV       WORD PTR [1819],EF34
64AA:074D FF27            JMP       [BX]
64AA:074F FE069607        INC       BYTE PTR [0796]
64AA:0753 803E960708      CMP       BYTE PTR [0796],08
64AA:0758 7407            JZ        0761
64AA:075A FF97C609        CALL      [BX+09C6]
64AA:075E E9BB10          JMP       181C
64AA:0761 C606AA15EB      MOV       BYTE PTR [15AA],EB
64AA:0766 C606E115EB      MOV       BYTE PTR [15E1],EB
64AA:076B C7060F16EB0D    MOV       WORD PTR [160F],0DEB
64AA:0771 C7063216EB13    MOV       WORD PTR [1632],13EB
64AA:0777 C70662169090    MOV       WORD PTR [1662],9090
64AA:077D C6067316EB      MOV       BYTE PTR [1673],EB
64AA:0782 C606140AC3      MOV       BYTE PTR [0A14],C3
64AA:0787 C7061818FF97    MOV       WORD PTR [1818],97FF
64AA:078D C7061A18C609    MOV       WORD PTR [181A],09C6
64AA:0793 E98210          JMP       1818
64AA:0796 0000            ADD       [BX+SI],AL
```

-DBASE III Patching Procedure   Jeff Parsons 25-Sep-84

To patch locations that are only decrypted once (such as 02F2-02F5 and
0742-0941), the following is an example for modifying locations 0744 to
0799 to effect desired changes in locations 0742 to 0797.

```
[Desire 06C6 at 0742]   1789 - (06C6 XOR F79A) = 262D   [store at 0744]
[Desire 1818 at 0744]   262D - (1818 XOR F79A) = 36AB   [store at 0746]
[Desire C7E9 at 0746]   36AB - (C7E9 XOR F79A) = 0638   [store at 0748]
                            . . .
```

The pattern of the method should be apparent, and is basically a reversal
of the first DBASE III/ProLok decryption routine from 014A to 016D. The
only thing you might wonder about is where the 1789 came from. That
value is simply the original word at 0742 (before decryption starts). The
steps for a determining a similar patch are shown below.

```
[Desire E9D2 at 02F2]   576D - (E9D2 XOR F79A) = 3925   [store at 02F4]
[Desire 044C at 02F4]   3925 - (044C XOR F79A) = 454F   [store at 02F6]
```

One other thing to remember is that when you alter the file a byte at a
time, low byte goes before high byte. So in the above patch, you would
need to enter the 25 before the 39, and the 4F and then the 45.

```
DEBUG DBASE.EXE
-G 016D

AX=E83C   BX=F79A   CX=0000   DX=860A   SP=012C   BP=0000   SI=5180   DI=5180
DS=64AA   ES=64AA   SS=64AA   CS=64AA   IP=016D      NV UP EI NG NZ NA PE NC
64AA:016D E96001          JMP      02D0
-A 1A2E
64AA:1A2E JMP 1A3C
64AA:1A30
-G 02EF

AX=140A   BX=0EA8   CX=0000   DX=0000   SP=012C   BP=0010   SI=0FA6   DI=0FA6
DS=64AA   ES=64AA   SS=64AA   CS=64AA   IP=02EF      NV UP EI NG NZ NA PE NC
64AA:02EF FFD0          CALL     AX
-A 141C
64AA:141C JMP 1428
64AA:141E
-G 02F8

AX=66C3   BX=0616   CX=0000   DX=0F88   SP=012C   BP=0010   SI=18D6   DI=18D6
DS=64AA   ES=64AA   SS=64AA   CS=64AA   IP=02F8      NV UP EI PL NZ NA PO NC
64AA:02F8 FF27          JMP      [BX]                              DS:0616=0EA8
-A 0130
64AA:0130 INC BYTE PTR [014D]
64AA:0134 CMP BYTE PTR [014D],8
64AA:0139 JZ 0142
64AA:013B CALL [BX+09C6]
64AA:013F JMP 181C
64AA:0142 PUSHF
64AA:0143 PUSH CS
64AA:0144 PUSH [014E]
64AA:0148 JMP 6190:08E6
64AA:014D DB 0
64AA:014E DW 013C
64AA:0150
-A 1818
64AA:1818 JMP 0130
64AA:181B
-G

AX=001E   BX=0018   CX=0009   DX=1900   SP=0126   BP=0010   SI=1974   DI=1974
DS=64AA   ES=64AA   SS=64AA   CS=64AA   IP=013B      NV UP EI PL ZR NA PE NC
64AA:013B FF97C609       CALL     [BX+09C6]                        DS:09DE=1577
-G 15A5

AX=0000   BX=0742   CX=1101   DX=0000   SP=0124   BP=0010   SI=1974   DI=1974
DS=64AA   ES=64AA   SS=64AA   CS=64AA   IP=15A5      OV UP EI NG NZ NA PO NC
64AA:15A5 7205          JB       15AC
-G 15AA

AX=0000   BX=0742   CX=2702   DX=0000   SP=0124   BP=0010   SI=1974   DI=1974
DS=64AA   ES=64AA   SS=64AA   CS=64AA   IP=15AA      NV UP EI NG NZ AC PE NC
64AA:15AA 721A          JB       15C6
   F
NV UP EI NG NZ AC PE NC -CY
-G 15E1

AX=0300   BX=0742   CX=2702   DX=0000   SP=0124   BP=0010   SI=1974   DI=0942
DS=64AA   ES=64AA   SS=64AA   CS=64AA   IP=15E1      NV UP EI PL NZ NA PO CY
64AA:15E1 7316          JNB      15F9
-R F
```

```
NV UP EI PL NZ NA PO CY -NC
-G 160F

AX=0000   BX=0742   CX=2702   DX=0000   SP=0124   BP=0010   SI=1974   DI=0942
DS=64AA   ES=64AA   SS=64AA   CS=64AA   IP=160F    NV UP EI NG NZ AC PE NC
64AA:160F 7208          JB      1619
-R F
  UP EI NG NZ AC PE NC -CY
-R AX
AX 0000
:1000
-G 1632

AX=AAAA   BX=0742   CX=0000   DX=0000   SP=0124   BP=0010   SI=1974   DI=0942
DS=64AA   ES=64AA   SS=64AA   CS=64AA   IP=1632    NV UP EI PL ZR NA PE NC
64AA:1632 7502          JNZ     1636
-R IP
IP 1632
:1647
-G 165C

AX=0C3C   BX=0742   CX=0000   DX=0000   SP=0124   BP=0010   SI=1974   DI=0942
DS=64AA   ES=64AA   SS=64AA   CS=64AA   IP=165C    NV UP EI PL NZ NA PE NC
64AA:165C B13E4207AAAA  CMP     WORD PTR [0742],AAAA            DS:0742=DB2C
-A 1662
64AA:1662 NOP
64AA:1663 NOP
64AA:1664
-G 1673

AX=0300   BX=0742   CX=2702   DX=0000   SP=0124   BP=0010   SI=1974   DI=0942
DS=64AA   ES=64AA   SS=64AA   CS=64AA   IP=1673    NV UP EI PL NZ NA PO CY
64AA:1673 7309          JNB     167E
   F
NV UP EI PL NZ NA PO CY -NC
-T

AX=0300   BX=0742   CX=2702   DX=0000   SP=0124   BP=0010   SI=1974   DI=0942
DS=64AA   ES=64AA   SS=64AA   CS=64AA   IP=167E    NV UP EI PL NZ NA PO NC
64AA:167E 800E3002AA    OR      BYTE PTR [0230],AA             DS:0230=55
-T

AX=0300   BX=0742   CX=2702   DX=0000   SP=0124   BP=0010   SI=1974   DI=0942
DS=64AA   ES=64AA   SS=64AA   CS=64AA   IP=1683    NV UP EI NG NZ NA PE NC
64AA:1683 B80000        MOV     AX,0000
-T

AX=0000   BX=0742   CX=2702   DX=0000   SP=0124   BP=0010   SI=1974   DI=0942
DS=64AA   ES=64AA   SS=64AA   CS=64AA   IP=1686    NV UP EI NG NZ NA PE NC
64AA:1686 C3            RET
-T

AX=0000   BX=0742   CX=2702   DX=0000   SP=0126   BP=0010   SI=1974   DI=0942
DS=64AA   ES=64AA   SS=64AA   CS=64AA   IP=013F    NV UP EI NG NZ NA PE NC
64AA:013F E9DA16        JMP     181C
-A 0150
64AA:0150 PUSHF
64AA:0151 PUSH DS
64AA:0152 PUSH AX
64AA:0153 XOR AX,AX
64AA:0155 MOV DS,AX
64AA:0157 MOV WORD PTR [4],1742
64AA:015D MOV WORD PTR [6],64AA
64AA:0163 MOV WORD PTR [C],FF54
64AA:0169 MOV WORD PTR [E],64AF
64AA:016F POP AX
```