Appendix B: Sample Robots

The following code segments are the programs for the four sample robots distributed with this disk, Stationary, DumBot, TimBot, and MoveBot:

```
# Robot Stationary
# 12/30/89 By David Harris

main:
    aim 10 + aim' store
    main jump
```

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```
    DumBot
    Created 12/27/89 by David Harris

    This robot maintains shields, rotates its
    turret, and fires when it finds a target.


Main:
    50 shield' store
    aim 7 + aim' store
    range 0 >
        missilesub if
    main jump

MissileSub:
    50 missile' store
    return
```

••••••••••••••••••••••••••••••••••••

```
#   Tim's Robot
#
#    Designed by the same person
#    Who, at the present, due to the presence
#    of altogether too many Electric Monks,
#    believes that he is a banana and that Dodo
#    is more powerful than Mac II, thereby
#    causing his programming ability to
#    deteriorate.   Oh well.

    random aim' store

Main:
    range 0 = rotate shoot ife
    main jump

rotate:
    aim 17 + aim' store
    return

shoot:
```

```
    energy 20 > reallyshoot if
    return

reallyshoot:
    energy fire' store
    return

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 MoveBot
   Created 11/21/89 by David Harris.

    This robot moves about the screen,
    maintaining shields and searching for a
    target.   It fires when it sights anything.


START:

1 speedx' store




1 speedy' store

25 shield' store

MAIN:

aim 5 + aim' store


# Rotate Turret

x 50 < xmin if


# X minimum

y 50 < ymin if


# Y minimum

x 250 > xmax if


# X maximum

y 250 > ymax if
```

```
# Y maximum

range 0 > shoot if


# Shoot if range >0

25 shield' store

main jump

XMIN:

random 3 mod 1 + speedx' store

return

YMIN:
        random 3 mod 1 + speedy' store

return

XMAX:

-1 random 3 mod - speedx' store

return

YMAX:

-1 random 3 mod - speedy' store

return

SHOOT:

energy 2 / missile' store

return
```