```
INCLUDE ZSYS

DEFINE CIRCLE 1
DEFINE SQUARE 2

SET(AUTOREF_MODE,0)
SET(AUTOREF_TIMEOUT,30)
SET(DETECTOR_THRESHOLD,1)
SET(SEARCH_DISTANCE,50)
SET(SEARCH_STEP,7)
SET(FILTER_RADIUS,25)
SET(TILE_SIZE,10

DEFINE TRIALS 80
DEFINE HABITUATION_TIME 4 #300
DEFINE INTERTRIAL_TIME 10
DEFINE LIGHT_TIME 20
DEFINE FEED_TIME 20

ACTION MAIN

    SET(COUNTER1,COUNTER_ZERO)
    SET(COUNTER2,COUNTER_ZERO)
    SET(COUNTER3,COUNTER_ZERO)
    SET(COUNTER6,COUNTER_ZERO)

    SETLIGHT(LIGHT1,SQUARE,1475,100,140)
    SETLIGHT(LIGHT2,SQUARE,1475,300,140)
    SETLIGHT(LIGHT3,SQUARE,1475,500,140)
    SETLIGHT(LIGHT4,SQUARE,1475,700,140)
    SETLIGHT(LIGHT5,SQUARE,1475,900,140)
    SETLIGHT(LIGHT6,SQUARE,325,500,140)
    SETLIGHT(LIGHT7,SQUARE,150,500,140)
    SETLIGHT(LIGHT8,SQUARE,295,910,180)
    SETLIGHT(LIGHT9,SQUARE,295,90,180)

    LOAD(DETECTORS,"operant5hole.bmp")
        LIGHTS(ALL,OFF)

    LOGCREATE("TEXT:")
    LOGRUN()

    LOGCREATE("RUNTIME|TEXT:|TEXT:|TEXT:TRIAL")
    LOGAPPEND("TEXT:TIME_OF_INITIATOR_ON|TEXT:INITIATOR_TRIGGERED")
    LOGAPPEND("TEXT:TIME_OF_INI_VISIT|TEXT:STIMULUS_TRIGGERED")
    LOGAPPEND("TEXT:TIME_OF_STIM_VISIT|TEXT:FEEDER_TRIGGERED")
    LOGAPPEND("TEXT:TIME_OF_FEEDER_VISIT")
    LOGRUN()

        AUTOREFERENCE(0)
    #WAIT(HABITUATION_TIME)
        INVOKE(STIMULUSLIGHTTRAINING,TRIALS)
        LIGHTS(ALL,OFF)

        LOGCREATE("TEXT:")
    LOGRUN()

        LOGCREATE("TEXT:|TEXT:|TEXT:SUMMARY")
    LOGRUN()

    LOGCREATE("TEXT:|TEXT:|TEXT:TOTAL_TRIALS|COUNTER1")
    LOGAPPEND("TEXT:TOTAL_OF_INITIATOR_VISITS|COUNTER2")
    LOGAPPEND("TEXT:TOTAL_STIMULUS_VISITS|COUNTER3")
    LOGAPPEND("TEXT:TOTAL_FEEDER_VISITS|COUNTER6")
    LOGRUN()

    LOGCREATE("TEXT:")
```

```
    LOGRUN()

COMPLETE


ACTION STIMULUSLIGHTTRAINING

    SET(COUNTER1,COUNTER_INC)
    LIGHTS(LIGHT6,WHITE)

    LOGFIELD(1," ")
    LOGFIELD(2,COUNTER1)
        LOGFIELD(3,RUNTIME)
        LOGFIELD(4,"INI_OMISSION")
        LOGFIELD(5," ")
        LOGFIELD(6,"STIM_OMISSION")
        LOGFIELD(7," ")
        LOGFIELD(8," ")
        DETECTOR(DETECTOR6,INITIATOR_CORRECT)

        WAIT(LIGHT_TIME)
    LIGHTS(LIGHT6,OFF)
        WAIT(INTERTRIAL_TIME)
        LOGFIELD(COMMIT)

COMPLETE


ACTION INITIATOR_CORRECT

    LOGFIELD(5,RUNTIME)
        LIGHTS(LIGHT6,OFF)
        SET(COUNTER2,COUNTER_INC)
        LOGFIELD(4,"INI_TRIGGERED")
    LIGHTS(LIGHT3,GREEN)
    DETECTOR(DETECTOR3,CORRECT)

        WAIT(FEED_TIME)
        LIGHTS(ALL,OFF)
    LOGFIELD(COMMIT)

COMPLETE


ACTION CORRECT

    SET(COUNTER3,COUNTER_INC)
        LOGFIELD(7,RUNTIME)
        LIGHTS(ALL,OFF)
        SET(COUNTER5,COUNTER_INC)
        LOGFIELD(6,"STIM_TRIGGERED")
        LOGFIELD(8,"FEED_TRIGGERED")
        LOGFIELD(9,"FEED_OMISSION")
        LIGHTS(LIGHT7,WHITE)
        FEEDER(1)
        DETECTOR(DETECTOR7,AT_FEEDER)
        WAIT(FEED_TIME)
        LIGHTS(ALL,OFF)


COMPLETE


ACTION AT_FEEDER

    LOGFIELD(9,RUNTIME)
    LOGFIELD(8,"FEED_TRIGGERED")
        SET(COUNTER6,COUNTER_INC)
```

```
    WAIT(FEED_TIME)
        LIGHTS(ALL,OFF)

COMPLETE
```