

VI 30 90minute

\ #R1-ACTIVE LEVER (RETRACTABLE)  
 \ #R2-INACTIVE LEVER  
 \ #R3-photocells

\--OUTPUTS:  
 ^ACTIVE=1           \SET TO 1 TO EXTEND RETRACTABLE LEVER

^feeder=2  
 ^PUMP=8  
 ^CUELIGHT=4  
 ^SPEAKER=6  
 ^HOUSELIGHT=5

^LEVER = 1  
 ^INACTIVE = 2  
 ^FOODCUP = 3

\ List Data Variables Here

\A is the active response counter in the session  
 \B is the number of inactive presses in the session  
 \C is the number of food cup responses in the session  
 \D is the number of rewards  
 \E is the number of responses during each 5 minute block  
 \F is the number of inactive lever presses during each 5 minute block  
 \G is the number of food cup responses during each 5 minute block  
 \H is the timer  
 \J is the number of free rewards  
 \K is the session period (5 min) counter  
 \T is the counter for times (in case we decide to go state based, which I doubt)  
 \U is the time a reward will be given  
 \V is the list of possible VI ITIs  
 \X is the time (in seconds and undisplayable) until the next reward availability  
 \Y is the time until the next reward availability  
 \Z is the counter(?) for the VI intervals

LIST V = 3,	32,	58,	17,	56,	35,	17,	51,	22,	53,
53,	1,	10,	23,	31,	58,	7,	49,	27,	9,
47,	29,	24,	41,	5,	25,	35,	14,	12,	27,
41,	45,	39,	37,	48,	54,	20,	53,	52,	51,
53,	7,	10,	40,	48,	8,	18,	23,	27,	22,
38,	41,	31,	50,	46,	46,	56,	27,	5,	55,
11,	10,	40,	19,	22,	26,	19,	27,	52,	34,
8,	30,	51,	2,	46,	23,	41,	31,	9,	30,
38,	45,	4,	50,	6,	19,	56,	26,	4,	9,
59,	31,	39,	14,	2,	41,	47,	45,	43,	33,
42,	29,	13,	43,	55,	18,	24,	51,	34,	9,
7,	33,	34,	37,	31,	56,	57,	56,	15,	27,
11,	1,	49,	30,	33,	34,	18,	59,	27,	6,
1,	55,	39,	42,	7,	8,	39,	30,	23,	45,
7,	52,	24,	45,	46,	6,	7,	11,	53,	22,
34,	26,	20,	28,	28,	19,	19,	7,	24,	56,
41,	16,	31,	6,	47,	40				51,

DIM P = 10 \Session parameters  
 DIM E = 20  
 DIM F = 20  
 DIM G = 20  
 DISKVAR = A, B, C, D, K, E, F, G

VI 30 90minute

\ Starts the houselight and run the VI program with VI displays and reward displays (also delivers pellets).

S. S. 1,

S1,

0.01": SET P(0) = 90; \session length  
SET P(1) = 300; \number of seconds in the first data block (in this case, contextual pressing)  
SET B = 0;  
SHOW 1, W, 0 ----> S2

S2,

#START: ON ^HOUSELIGHT; ON ^ACTIVE ----> S3

S3,

0.01": LIST Y = V(Z); SET U = Y + H; SET X = Y\*1"; SHOW 1, RF TM, U ----> S4  
\ this sets the VI timer

S4,

X#T: SHOW 1, RF TM, 0 ----> S5

\this waits until the time is up and then awaits a response

S5,

#R^LEVER: ADD D; SHOW 5, Rewards, D; ON ^feeder; Z1 ----> S3

0.01": SHOW 1, RF TM, 0 ----> SX

\this delivers a reward after a press and it also zeros out the reward timer so you know reward is available

\need to define time, z1 in addition to the other things not mentioned  
\also, this state set has that pesky thing you don't understand (although page 55 might help if you study it)  
\see page 26, second part of S. S. 1, S1 for the FI counter (this may be omitted in your program)

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\ Response Counter & Screen Update

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S. S. 2,

S1,

#START: SHOW 4, Responses, A, 5, Rewards, D ----> S2

S2,

#R^LEVER: ADD A; SHOW 4, Responses, A ----> SX

#R^INACTIVE: ADD B ----> SX

#R^FOODCUP: ADD C; ; SHOW 3, APPROACH, C ----> SX

\This is meant to store the data for the first 5 minutes

S. S. 3,

S1,

#START: SET P(1) = P(1)\*1" ----> S2

S2,

P(1)#T: ADD K ----> SX

#R^INACTIVE: ADD F(K) ----> SX

#R^LEVER: ADD E(K) ----> SX

#R^FOODCUP: ADD G(K) ----> SX

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\ PELLET CONTROL TIMER

\ (Includes K1-pulse for delivering a free pellet)

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VI 30 90mi nute

S. S. 4,  
S1,

#Z1: ----> S2  
#K1: ADD J; ON ^feeder ----> S2

S2,

0.5": OFF ^feeder ----> S1

S. S. 5, \ Increment time "T" with resolution 1 seconds

S1,

#START: ----> S2

S2,

1": ADD H; SHOW 2, Present, H ----> SX

S. S. 10,

S1,

#START: SET P(0) = P(0)\*1' ----> S2

S2,

P(0)#T: OFF ^HOUSELIGHT; OFF ^ACTIVE----> STOPABORTFLUSH