

```

80 REM + + + + + + + + + + + + + + + + + + + + + + + + + + + +
90 REM + + + + + + + + + + + + + + + + + + + + + + + + + + + +
100 REM + + + + + P R O C E S O   H E R M E S + + + + +
110 REM + + + + + + + + + + + + + + + + + + + + + + + + + + + +
120 REM + + + + + + + + + + + + + + + + + + + + + + + + + + + +
125 REM
126 REM          * MAPA *
127 REM
128 REM ----- Gral. Captura de signals      Add. 220
129 REM ----- Gral. Visualizar memoria      Add. 705
130 REM ----- Gral. Opciones                  Add. 950
131 REM ----- Gral. Pgm. Sucesos              Add.1200
132 REM ----- Gral. Archivo                    Add. 600
133 REM ----- Gral. DSP                        Add. 280
134 REM ----- Gral. PCtools                    Add. 240
135 REM ----- Gral. Salida                      Add. 250
179 REM
180 REM - - - INICIAL - - -
181 REM
182 AA=4:BB=0:CC=0:OUT 890,0:DIM C(20):C(1)=3:C(2)=5:C(3)=3:C(4)=2:C(5)=2:C(6)=2
:C(7)=3:C(8)=5:C(9)=3:C(10)=5:C(11)=2:C(12)=3:C(13)=4:C(14)=14:C(15)=14:C(16)=5:
C(17)=1:C(18)=4:C(19)=4:C(20)=3
183 REM timer
184 DATA 13,10,13,10,13,2,10,10,13,2,5,5,12,15,10,13,10,13,10,13,10,13,7
185 REM scan
186 DATA 2,2,2,2,2,2,2,2,2,2,2,2,2,2,12,14,14,14,7,2,13,2,2,2,2,15
187 REM ppi
188 DATA 3,3,3,3,3,3,3,3,3,3,3,3,3,3,15,3,3,3,3,3,3,3,3,3,3,3,3
189 REM driver
190 DATA 13,13,13,13,13,13,13,13,13,13,13,13,13,14,13,13,13,13,13,13,13,13,13,13
,13
191 REM comunicaciones
192 DATA 13,11,11,11,11,11,11,11,11,11,13,11,13,15,3,3,3,3,3,3,3,3,10,7,7,7
193 REM key-display
194 DATA 15,13,13,13,13,13,13,13,13,13,13,13,13,13,7,7,7,10,10,10,10,13,13,13,13,13
195 REM a/d
196 DATA 2,2,2,2,15,2,2,2,2
197 DIM D(159)
198 RESTORE:FOR Z=1 TO 159:READ D(Z):NEXT Z
200 REM
201 REM * * * MENU PRINCIPAL * * *
202 REM
204 CLS:CAP=1:SCREEN 0,1:COLOR 1,15:PRINT"P R O C E S O   H E R M E S":PRINT:CO
LOR 2,0:PRINT"1 Captura de señales":PRINT"2 Visualizar memoria":PRINT"3 Opciones
"
206 PRINT"4 Pgm. Sucesos":PRINT"5 Archivo":PRINT"6 DSP":PRINT"7 PCtools":PRINT"8
Salida":PRINT
210 COLOR 7:INPUT"Entrar valor 1-7 ";VALOR:ON VALOR GOTO 220,704,950,1200,600,28
0,240,250
220 REM + + + CAPTURA DE SIGNAL + + +
221 REM
225 CLS:COLOR 1,7:PRINT"Captura de signals":PRINT:COLOR 12,0:PRINT"1 Captura Len
ta a/d":PRINT"2 Captura Rapida Scan":PRINT"3 Capturas Continuas":PRINT"4 PRINCI
PAL":PRINT
226 COLOR 7:INPUT"SELECT.";VALOR:ON VALOR GOTO 730,1015,230,200
227 GOTO 200
230 REM - - - Captura Continua - - -
231 REM
232 CLS:COLOR 12:PRINT"Captura Continua":COLOR 7:PRINT:INPUT"Entrar Nro. de Capt
uras (1-500) ";CAP:IF CAP>500 OR CAP<1 THEN 232
233 GOTO 220
239 REM
240 REM - - - PCTOOLS - - -
241 SHELL. "pctools.exe"

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243 SCREEN 0,1
245 GOTO 198
250 REM
251 REM * * SALIDA * *
252 REM
253 SYSTEM
254 CHAIN "HERMES"
255 REM * * * INPUT PORTS * * *
256 CLS:COLOR 12:PRINT"ENTRADA POR PUERTOS":COLOR 7:PRINT"Encender el Hermes y p
oner Add 8018=00 y 8019=88":PRINT:OUT 890,0:DEF SEG=&H4000:BLOAD"pgm\rat",0
257 PRINT"P 00 = Pw.Sup.3A P 01 = Rx-Tx d P 02 = Rx-Tx f P 03 = PPI. C
.W.":PRINT"P 04 = Disp.Seg. P 05 = Disp.Dig. P 06 = Key-Disp. P 07 = PPI.
C.W.":PRINT"P 08 = Pw.Dr.1A P 09 = Pw.Dr.1B P 0A = Pw.Dr.1C P 0B = PPI.
C.W."
258 PRINT"P 0C = Pw.Dr.2A P 0D = Pw.Dr.2B P 0E = Pw.Dr.2C P 0F = PPI. C
.W.":PRINT"P 10 = L.i/o 1A P 11 = L.i/o 1B P 12 = L.i/o 1C P 13 = PPI.
C.W.":PRINT"P 14 = L.i/o 2A P 15 = L.i/o 2B P 16 = L.i/o 2C P 17 = PPI.
C.W."
259 PRINT"P 18 = L.i/o 3A P 19 = L.i/o 3B P 1A = L.i/o 3C P 1B = PPI. C
.W.":PRINT"P 1C = Pw.Sup.1A P 1D = Pw.Sup.1A P 1E = A/D Lines P 1F = PPI.
C.W.":PRINT"P E4 = I.T. 1o1 P E5 = I.T. 1o2 P E6 = I.T. 1o3 P E7 = I.T.
C.W."
260 PRINT"P E8 = I.T. 2o1 P E9 = I.T. 2o2 P EA = I.T. 2o3 P EB = I.T. C
.W.":PRINT"P EC = I.T. 3o1 P ED = I.T. 3o2 P EE = I.T. 3o3 P EF = I.T.
C.W.":PRINT"P F0 = Scan Data P F1 = Scan Ctrol P F2 = Scan End P F3 = Scan
C.W."
261 PRINT"P E0-3 = Com.Out P F4-7 = Com.Out P FC-F = A/D conv. P F8-B = nc
"
262 BLOAD"pgm\iport",32768!:PRINT:COLOR 6:INPUT"Nro.Puerto (H) ";A$:CLS:COLOR 12
:PRINT" ENTRADA PUERTO":CA=0:COLOR 7:GOSUB 360:POKE 32785!,VAL("&H"+A$)
263 POKE 32785!,VAL("&H"+A$):POKE 32769!,AA:POKE 32773!,CC:POKE 32774!,BB:POKE 0
,120:POKE 1,0:OUT 890,1:OUT 890,0:ADD=2:CALL ADD
264 POKE 163,64:POKE 251,128:ADD=160:CALL ADD
265 A$=HEX$(PEEK(32768!)):PRINT"Valor ";A$:GOSUB 442:GOSUB 422:PRINT:INPUT"Ok ?
";K$:GOTO 198
270 REM -----PRUEBAS-----
271 CLS:INPUT"Nro Samples 2-16384 ";A:INPUT"Amplitud 1-255";B:SCREEN 2:FOR Z=1
TO A:PSET(Z,130+INT(.25*B*SIN(Z/(A*.16)))):NEXT:INPUT"OK ";A$:SCREEN 0,1:GOTO 2
100
272 CLS:INPUT"Sampl.2-16384 ";F:INPUT"Ampl.0-127";M:INPUT"Porc.In 0.001 - 99.999
";Q:SCREEN 2:FOR Z=0 TO F*Q*.01:PSET(Z,100+INT(M*Z/(F*Q*.01))):NEXT Z:FOR Y=0
TO F-(F*Q*.01):PSET(Z+Y,100+M-INT(M*Y/(F-(F*Q*.01))):NEXT Y:INPUT"OK";A$:SCREEN
0,1:GOTO 2110
273 CLS:INPUT"Sampl.2-16384 ";F:INPUT"Ampl.0-127";M:INPUT"Porc.In 0.001 - 99.999
";Q:SCREEN 2:FOR Z=0 TO F*Q*.01:PSET(Z,100+M):NEXT Z:FOR Y=0 TO F-(F*Q*.01):PS
ET(Z+Y,100):NEXT Y:INPUT"OK";A$:SCREEN 0,1:GOTO 2120
280 REM - - - D S P - - -
285 SHELL "DSP.BAT"
287 SCREEN 0,1
290 GOTO 198
300 REM - - - Dibujos - - - VISTA Trasera
302 COLOR 7:PRINT"
304 PRINT"1 1";" ";GOSUB 440
308 PRINT"1 ";:COLOR C(1):PRINT"xxxxxx";" ";:COLOR C(2):PRINT"o";" ";:COLOR C(
3):PRINT"o";" ";:COLOR C(4):PRINT"o";:COLOR 7:PRINT" 1"
310 PRINT"1 ";:COLOR C(5):PRINT"xxxxxx";:COLOR 7:PRINT" 1"
312 PRINT"1-----1"
314 PRINT"1 ";:COLOR C(6):PRINT"xxx";" ";:COLOR C(7):PRINT"xxxxxx";" ";:COLO
R C(8):PRINT"o";:COLOR 7:PRINT" 1"
316 PRINT"1 ";:COLOR C(9):PRINT"xxxxxx";" ";:COLOR C(10):PRINT"o";:COLOR
7:PRINT" 1"
318 PRINT"1 ";:COLOR C(11):PRINT"o";" ";:COLOR C(12):PRINT"xxxxxx";" ";:CO
LOR C(13):PRINT"o";:COLOR 7:PRINT" 1"
320 PRINT"1 1":PRINT:RETURN

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322 REM          VISTA Lateral
324 COLOR 7:PRINT"          "
326 PRINT"1          1";"          ";GOSUB 440
328 PRINT"1          ";:COLOR C(14):PRINT"x";"          ";:COLOR C(15):PRINT"
x";:COLOR 7:PRINT"      1"
330 PRINT"1          ";:COLOR C(14):PRINT"x";"          ";:COLOR C(15):PRINT"
x";:COLOR 7:PRINT"      1"
332 PRINT"1          ";:COLOR C(14):PRINT"x";"          ";:COLOR C(15):PRINT"
x";:COLOR 7:PRINT"      1"
334 PRINT"1          ";:COLOR C(14):PRINT"x";"          ";:COLOR C(15):PRINT"
x";:COLOR 7:PRINT"      1"
336 PRINT"1          1"
338 PRINT"1          1":PRINT:RETURN
340 REM          VISTA Delantera
342 COLOR 7:PRINT"          "
344 PRINT"1          1";"          ";GOSUB 440
346 PRINT"1          1"
348 PRINT"1          1"
350 PRINT"1-----1"
352 PRINT"1 ";:COLOR C(16):PRINT"o";"          ";:COLOR C(17):PRINT"xxxxxx";:COLOR 7:
PRINT" # : 1"
354 PRINT"1 ";:COLOR C(18):PRINT"o";:COLOR 7:PRINT"          1"
356 PRINT"1 ";:COLOR C(19):PRINT"o";"          ";:COLOR C(20):PRINT"xxxxxx";:COLOR 7:
PRINT" , 1"
358 PRINT"1          1":PRINT:RETURN
359 REM - - - Valor del Puerto - - -
360 P=1+VAL("&H"+A$):IF P<33 THEN ON P GOTO 365,366,367,368,369,370,371,372,373,
374,375,376,377,378,379,380,381,382,383,384,385,386,387,388,389,390,391,392,393,
394,395,396
361 IF P>252 THEN LET C(6)=26:C(11)=26:GOSUB 300:C(6)=2:C(11)=2:PRINT"Puerto ";A
$;:COLOR 6:PRINT"      Conversor A/D":COLOR 7:RETURN
362 IF P>244 THEN LET C(17)=25:GOSUB 340:C(17)=1:PRINT"Puerto ";A$;:COLOR 6:PRIN
T"      Com. Rx-Tx":COLOR 7:CA=101:RETURN
363 IF P>224 THEN LET P=P-224:ON P GOTO 397,397,397,397,403,404,405,398,406,407,
408,398,409,410,411,398,399,400,401,402
364 RETURN
365 C(16)=29:GOSUB 340:C(16)=5:PRINT"Puerto ";A$;:COLOR 6:PRINT"      Pw.Supply 3
A h=00-7F":COLOR 7:RETURN
366 C(17)=25:GOSUB 340:C(17)=1:PRINT"Puerto ";A$;:COLOR 6:PRINT"      Rx-Tx Data"
:COLOR 7:CA=101:D(CA+1)=41:D(CA+2)=42:D(CA+3)=43:D(CA+5)=44:D(CA+6)=45:D(CA+7)=4
6:D(CA+8)=47:D(CA+10)=48:FOR Z=13 TO 20 :D(CA+Z)=28+Z:NEXT:RETURN
367 C(17)=25:GOSUB 340:C(17)=1:PRINT"Puerto ";A$;:COLOR 6:PRINT"      Rx-Tx Contr
ol":COLOR 7:CA=101:D(CA)=29:D(CA+4)=26:RETURN
368 C(17)=25:C(16)=29:GOSUB 340:C(17)=1:C(16)=5:PRINT"Puerto ";A$;:COLOR 6:PRINT
"      Ctrol.Word PPI":COLOR 7:RETURN
369 C(20)=27:GOSUB 340:C(20)=3:PRINT"Puerto ";A$;:COLOR 6:PRINT"      Display Segm
ento":COLOR 7:CA=126:D(CA+2)=48:D(CA+4)=47:D(CA+6)=42:D(CA+9)=46:D(CA+11)=45:D(C
A+20)=41:D(CA+22)=43:D(CA+24)=44:RETURN
370 C(20)=27:GOSUB 340:C(20)=3:PRINT"Puerto ";A$;:COLOR 6:PRINT"      Display Digi
to":COLOR 7:CA=126:D(CA+3)=48:D(CA+5)=47:D(CA+7)=46:D(CA+8)=45:D(CA+10)=44:D(CA+
12)=43:D(CA+21)=41:D(CA+23)=42:RETURN
371 C(20)=27:GOSUB 340:C(20)=3:PRINT"Puerto ";A$;:COLOR 6:PRINT"      Display Key-
Board":COLOR 7:CA=126:D(CA+1)=48:RETURN
372 C(20)=27:GOSUB 340:C(20)=3:PRINT"Puerto ";A$;:COLOR 6:PRINT"      Ctrol.Word D
isp-key":COLOR 7:RETURN
373 C(14)=30:GOSUB 322:C(14)=14:PRINT"Puerto ";A$;:COLOR 6:PRINT"      PW.Dr. 24 1
ines 1A":COLOR 7:CA=76:D(CA+4)=48:D(CA+5)=47:D(CA+6)=46:D(CA+7)=45:D(CA+8)=44:D(
CA+9)=43:D(CA+10)=42:D(CA+11)=41:RETURN
374 C(14)=30:GOSUB 322:C(14)=14:PRINT"Puerto ";A$;:COLOR 6:PRINT"      PW.Dr. 24 1
ines 1B":COLOR 7:CA=76:D(CA)=44:D(CA+1)=43:D(CA+2)=42:D(CA+3)=41:D(CA+13)=45:D(C
A+14)=46:D(CA+15)=47:D(CA+16)=48:RETURN
375 C(14)=30:GOSUB 322:C(14)=14:PRINT"Puerto ";A$;:COLOR 6:PRINT"      PW.Dr. 24 1
ines 1C":COLOR 7:CA=76:FOR Z=17 TO 24:D(CA+Z)=24+Z:NEXT:RETURN
376 C(14)=30:GOSUB 322:C(14)=14:PRINT"Puerto ";A$;:COLOR 6:PRINT"      Ctrol.Word

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PW.Dr 1":COLOR 7:RETURN
377 C(15)=30:GOSUB 322:C(15)=14:PRINT"Puerto ";A$;:COLOR 6:PRINT" PW.Dr. 24 l
ines 2A":COLOR 7:CA=76:D(CA+4)=48:D(CA+5)=47:D(CA+6)=46:D(CA+7)=45:D(CA+8)=44:D(
CA+9)=43:D(CA+10)=42:D(CA+11)=41:RETURN
378 C(15)=30:GOSUB 322:C(15)=14:PRINT"Puerto ";A$;:COLOR 6:PRINT" PW.Dr. 24 l
ines 2B":COLOR 7:CA=76:D(CA)=44:D(CA+1)=43:D(CA+2)=42:D(CA+3)=41:D(CA+13)=45:D(C
A+14)=46:D(CA+15)=47:D(CA+16)=48:RETURN
379 C(15)=30:GOSUB 322:C(15)=14:PRINT"Puerto ";A$;:COLOR 6:PRINT" PW.Dr. 24 l
ines 2C":COLOR 7:CA=76:FOR Z=17 TO 24:D(CA+Z)=24+Z:NEXT:RETURN
380 C(15)=30:GOSUB 322:C(15)=14:PRINT"Puerto ";A$;:COLOR 6:PRINT" Ctrol.Word
PW.Dr 2":COLOR 7:RETURN
381 C(12)=27:GOSUB 300:C(12)=3:PRINT"Puerto ";A$;:COLOR 6:PRINT" Logic i/o 1A
":COLOR 7:CA=51:FOR Z=17 TO 24:D(CA+Z)=65-Z:NEXT Z:RETURN
382 C(12)=27:GOSUB 300:C(12)=3:PRINT"Puerto ";A$;:COLOR 6:PRINT" Logic i/o 1B
":COLOR 7:CA=51:D(CA)=45:D(CA+1)=46:D(CA+2)=47:D(CA+3)=48:D(CA+13)=44:D(CA+14)=4
3:D(CA+15)=42:D(CA+16)=41:RETURN
383 C(12)=27:GOSUB 300:C(12)=3:PRINT"Puerto ";A$;:COLOR 6:PRINT" Logic i/o 1C
":COLOR 7:CA=51:FOR Z=4 TO 11:D(CA+Z)=37+Z:NEXT Z:RETURN
384 C(12)=27:GOSUB 300:C(12)=3:PRINT"Puerto ";A$;:COLOR 6:PRINT" Ctrol.Word L
ogic 1":COLOR 7:PRINT:GOSUB 430:PRINT:RETURN
385 C(9)=27:GOSUB 300:C(9)=3:PRINT"Puerto ";A$;:COLOR 6:PRINT" Logic i/o 2A":
COLOR 7:CA=51:FOR Z=17 TO 24:D(CA+Z)=65-Z:NEXT Z:RETURN
386 C(9)=27:GOSUB 300:C(9)=3:PRINT"Puerto ";A$;:COLOR 6:PRINT" Logic i/o 2B":
COLOR 7:CA=51:D(CA)=45:D(CA+1)=46:D(CA+2)=47:D(CA+3)=48:D(CA+13)=44:D(CA+14)=43:
D(CA+15)=42:D(CA+16)=41:RETURN
387 C(9)=27:GOSUB 300:C(9)=3:PRINT"Puerto ";A$;:COLOR 6:PRINT" Logic i/o 2C":
COLOR 7:CA=51:FOR Z=4 TO 11:D(CA+Z)=37+Z:NEXT Z:RETURN
388 C(9)=27:GOSUB 300:C(9)=3:PRINT"Puerto ";A$;:COLOR 6:PRINT" Ctrol.Word Log
ic 2":COLOR 7:PRINT:GOSUB 430:PRINT:RETURN
389 C(7)=27:GOSUB 300:C(7)=3:PRINT"Puerto ";A$;:COLOR 6:PRINT" Logic i/o 3A":
COLOR 7:CA=51:FOR Z=17 TO 24:D(CA+Z)=65-Z:NEXT Z:RETURN
390 C(7)=27:GOSUB 300:C(7)=3:PRINT"Puerto ";A$;:COLOR 6:PRINT" Logic i/o 3B":
COLOR 7:CA=51:D(CA)=45:D(CA+1)=46:D(CA+2)=47:D(CA+3)=48:D(CA+13)=44:D(CA+14)=43:
D(CA+15)=42:D(CA+16)=41:RETURN
391 C(7)=27:GOSUB 300:C(7)=3:PRINT"Puerto ";A$;:COLOR 6:PRINT" Logic i/o 3C":
COLOR 7:CA=51:FOR Z=4 TO 11:D(CA+Z)=37+Z:NEXT Z:RETURN
392 C(7)=27:GOSUB 300:C(7)=3:PRINT"Puerto ";A$;:COLOR 6:PRINT" Ctrol.Word Log
ic 3":COLOR 7:PRINT:GOSUB 430:PRINT:RETURN
393 C(10)=29:GOSUB 300:C(10)=5:PRINT"Puerto ";A$;:COLOR 6:PRINT" Pw.Supply 1A
h=80-FF":COLOR 7:RETURN
394 C(8)=29:GOSUB 300:C(8)=5:PRINT"Puerto ";A$;:COLOR 6:PRINT" Pw.Supply 1A h
=80-FF":COLOR 7:RETURN
395 C(6)=26:GOSUB 300:C(6)=2:PRINT"Puerto ";A$;:COLOR 6:PRINT" A/D Lines Inpu
t":COLOR 7:RETURN
396 C(6)=26:C(10)=29:C(8)=29:GOSUB 300:C(6)=2:C(10)=5:C(8)=5:PRINT"Puerto ";A$;:
COLOR 6:PRINT" Ctrol.Word Pw & A/D":COLOR 7:RETURN
397 C(17)=25:GOSUB 340:C(17)=1:PRINT"Puerto ";A$;:COLOR 6:PRINT" Communic.Lin
e Out":COLOR 7:CA=101:RETURN
398 C(1)=27:GOSUB 300:C(1)=3:PRINT"Puerto ";A$;:COLOR 6:PRINT" Int.Timer Ctro
l.Word":COLOR 7:PRINT:GOSUB 434:PRINT:RETURN
399 C(5)=26:GOSUB 300:C(5)=2:PRINT"Puerto ";A$;:COLOR 6:PRINT" Scanner Data I
nput":COLOR 7:CA=26:RETURN
400 C(5)=26:GOSUB 300:C(5)=2:PRINT"Puerto ";A$;:COLOR 6:PRINT" Scanner Contro
l Input":COLOR 7:CA=26:PRINT:GOSUB 438:PRINT:RETURN
401 C(5)=26:GOSUB 300:C(5)=2:PRINT"Puerto ";A$;:COLOR 6:PRINT" Scanner Contro
l End":COLOR 7:CA=26:RETURN
402 C(5)=26:GOSUB 300:C(5)=2:PRINT"Puerto ";A$;:COLOR 6:PRINT" Ctrol.Word Sca
nner":COLOR 7:RETURN
403 C(1)=27:GOSUB 300:C(1)=3:PRINT"Puerto ";A$;:COLOR 6:PRINT" Int.Timer 1 Co
unter 1":COLOR 7:CA=1:D(CA+2)=29:D(CA+3)=26:D(CA+11)=21:RETURN
404 C(1)=27:GOSUB 300:C(1)=3:PRINT"Puerto ";A$;:COLOR 6:PRINT" Int.Timer 1 Co
unter 2":COLOR 7:CA=1:D(CA+4)=29:D(CA+5)=18:D(CA+6)=26:RETURN
405 C(1)=27:GOSUB 300:C(1)=3:PRINT"Puerto ";A$;:COLOR 6:PRINT" Int.Timer 1 Co
unter 3":COLOR 7:CA=1:D(CA+7)=26:D(CA+8)=29:D(CA+9)=18:RETURN

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406 C(1)=27:GOSUB 300:C(1)=3:PRINT"Puerto ";A$;:COLOR 6:PRINT"      Int.Timer 2 Co
unter 1":COLOR 7:CA=1:D(CA+16)=26:D(CA+17)=29:RETURN
407 C(1)=27:GOSUB 300:C(1)=3:PRINT"Puerto ";A$;:COLOR 6:PRINT"      Int.Timer 2 Co
unter 2":COLOR 7:CA=1:D(CA+14)=26:D(CA+15)=29:RETURN
408 C(1)=27:GOSUB 300:C(1)=3:PRINT"Puerto ";A$;:COLOR 6:PRINT"      Int.Timer 2 Co
unter 3":COLOR 7:CA=1:D(CA)=29:D(CA+1)=26:RETURN
409 C(1)=27:GOSUB 300:C(1)=3:PRINT"Puerto ";A$;:COLOR 6:PRINT"      Int.Timer 3 Co
unter 1":COLOR 7:CA=1:D(CA+22)=26:D(CA+23)=29:RETURN
410 C(1)=27:GOSUB 300:C(1)=3:PRINT"Puerto ";A$;:COLOR 6:PRINT"      Int.Timer 3 Co
unter 2":COLOR 7:CA=1:D(CA+20)=26:D(CA+21)=29:RETURN
411 C(1)=27:GOSUB 300:C(1)=3:PRINT"Puerto ";A$;:COLOR 6:PRINT"      Int.Timer 3 Co
unter 3":COLOR 7:CA=1:D(CA+18)=26:D(CA+19)=29:RETURN
420 REM + + + DIBUJO CANON 25 Pines + + +
421 REM
422 IF CA=0 THEN RETURN
423 COLOR 7:PRINT"                                ";:COLOR 11:PRINT"L  ";:
COLOR 12:PRINT"H  ";:COLOR 5:PRINT"ck";:COLOR 2:PRINT"ck  ";:COLOR 15:PRINT"GN
D  ";:COLOR 10:PRINT "In  ";:COLOR 13:PRINT"Out  ";:COLOR 14:PRINT"Vpp  ";:COLO
R 7:PRINT"nc"
424 PRINT"\  ";:FOR X=0 TO 12:COLOR D(CA+X):PRINT"o ";:NEXT X:COLOR 7:PRINT" /"
425 PRINT" \  ";:FOR X=13 TO 24:COLOR D(CA+X):PRINT"o ";:NEXT X:COLOR 7:PRINT" /
"
426 PRINT" \_____/" :RETURN
430 REM Ctr0l Word PPI
431 COLOR 6:PRINT"Nro.bit    7      6      5      4      3      2      1      0":
COLOR 7:PRINT"      ---      ---      ---      ---      ---      ---      ---":COL
OR 3:PRINT"Word Ctrl=1      Mi/o=00      Ai=1 Chi=1 Mi/o=0 Bi=1 cli=1"
432 PRINT"      1      Si/o=01      Ao=0 Cho=0 Si/o=1 Bo=0 clo=0":PRINT"
1      Bidr=1X":COLOR 7
433 PRINT"      ---      ---      ---      ---      ---      ---      ---":COLOR 2
:PRINT"Bit Ctrl=0      X      X      X      Port C bit sel.=000      set=1":PRINT"
0      Position      111 reset=0":COLOR 7:RETURN
434 REM Ctr0l Word I.Timer
435 COLOR 6:PRINT"Nro.bit    7      6      5      4      3      2      1      0":
COLOR 7:PRINT"      ---      ---      ---      ---      ---      ---      ---":COL
OR 3:PRINT"      Sel.Counter      Read/Load      Count Interrup 000      Bin=0"
436 PRINT"      Count 0= 00      LatchCont=00      Pgm.OneShot      001      BCD=1":PRINT
"      Count 1= 01      R/L MSB = 10      Rate Generator X10":PRINT"      Count 2=
10      R/L LSB = 01      SquaveWave Gen.X11"
437 PRINT"      Illegal= 11      LSB & MSB=11      Soft.Trig.Strb.100":PRINT"
Hard.Trig.Strb.101":COLOR 7:RETURN
438 REM Ctr0l Scanner
439 COLOR 6:PRINT"P.Fl bit    7      6      5      4      3      2      1      0":
COLOR 7:PRINT"      ---      ---      ---      ---      ---      ---      ---":COL
OR 3:PRINT"      End=1      Start=1 Gen=1      Scan=0      Osc=hl      Ck=00-11      CkEna=0":COLO
R 7:RETURN
440 REM Pins Help
441 COLOR 11:PRINT"i/o  ";:COLOR 13:PRINT"OUT  ";:COLOR 10:PRINT"IN  ";:COLOR
15:PRINT"GND  ";:COLOR 12:PRINT"VCC  ";:COLOR 14:PRINT"PW%  ";:COLOR 7:PRINT
"nc":RETURN
442 REM hex-bin display
443 FOR Z=1 TO 8: LET E(Z)=27+SGN(VAL("&H"+A$) AND (2^(8-Z))):NEXT Z
444 FOR Z=0 TO 24:IF D(CA+Z)>40 THEN D(CA+Z)=E((D(CA+Z))-40)
445 NEXT Z:RETURN
446 REM - - - Conector I.Timer - - -
447 CLS:COLOR 6:PRINT"INTERVAL TIMER":COLOR 7:PRINT"Encender el Hermes y Add 801
8=00 y 8019=88":PRINT:C(1)=27:GOSUB 300:C(1)=3:PRINT"Timer ";TIM;"      Contador
";CON:CA=1:ON TIM GOTO 448,449,450
448 ON CON GOTO 451,452,453
449 ON CON GOTO 454,455,456
450 ON CON GOTO 457,458,459
451 D(CA+11)=21:D(CA+2)=29:D(CA+3)=26:GOSUB 422:GOTO 460
452 D(CA+4)=29:D(CA+5)=18:D(CA+6)=26:GOSUB 422:GOTO 460
453 D(CA+7)=26:D(CA+8)=29:D(CA+9)=18:GOSUB 422:GOTO 460

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454 D(CA+16)=26:D(CA+17)=29:GOSUB 422:GOTO 460
455 D(CA+14)=26:D(CA+15)=29:GOSUB 422:GOTO 460
456 D(CA)=29:D(CA+1)=26:GOSUB 422:GOTO 460
457 D(CA+22)=26:D(CA+23)=29:GOSUB 422:GOTO 460
458 D(CA+20)=26:D(CA+21)=29:GOSUB 422:GOTO 460
459 D(CA+18)=26:D(CA+19)=29:GOSUB 422:GOTO 460
460 IF TIM=1 AND CON>1 THEN 956
461 GOTO 955
463 REM - - - Borrar Archivo - - -
464 CLS:COLOR 10:PRINT"BORRAR ARCHIVO":COLOR 12:PRINT:PRINT"1 Archivo de Señal":
PRINT"2 Pgm. Datos de control":PRINT"3 PRINCIPAL":PRINT:COLOR 7:INPUT"Select. ";
VALOR:ON VALOR GOTO 465,466,200
465 FILES"archi\*.*":INPUT"Nombre de Señal ";SIG$:SIG$="ARCHI\"+SIG$:KILL SIG$:GO
TO 200
466 FILES"datos\*.bas":INPUT"Nombre de Señal ";SIG$:SIG$="DATOS\"+SIG$:KILL SIG$
:GOTO 200
489 REM
490 REM + + + Reset Memoria + + +
491 REM
492 CLS:COLOR 12:PRINT"R E S E T   M E M O R I A":COLOR 7:PRINT:INPUT"Dato a in
troducir 00-FF ";A$:D=VAL("&H"+A$):DEF SEG=&H3000:BLOAD"pgm\mclear",32768!
493 PRINT:INPUT"Sector Mem.(4000 - 7000) (H) ";A$:B=VAL("&H"+A$):INPUT"Comienzo
Mem.(0000 - FFFF) (H) ";B$:A=VAL("&H"+B$):INPUT"Longitud (0 - FFFF) (H) ";B$:F
=VAL("&H"+B$):IF A<0 THEN LET A=65536!+A
494 IF F<0 THEN LET F=65536!+F
495 POKE 32770!,B-(256*INT(B/256)):POKE 32771!,INT(B/256):POKE 32781!,D:POKE 327
78!,A-(256*INT(A/256)):POKE 32779!,INT(A/256):POKE 32783!,F-(256*INT(F/256)):POK
E 32784!,INT(F/256):ADD=32768!:CALL ADD
496 GOTO 200
499 REM
500 REM + + + GRAFICA + + +
510 REM
520 CLS:COLOR 12:PRINT"* * * GRAFICA * * *":COLOR 7:PRINT:INPUT"Sector a/d=7000
, scan=5-6000 H ";A$:B=VAL("&H"+A$):DEF SEG=(B):INPUT"Comienzo a/d, scan= 0 H
";B$:A=VAL("&H"+B$):INPUT"Longitud 0-131071 ";F:L=F/K=1:IF F>640 THEN GO
TO 530
521 IF A<0 THEN LET A=65536!+A
522 IF A+F>131071! THEN GOTO 520
525 CLS:SCREEN 2:T=0:FOR Z=A TO A+F:PSET (T,50+INT(PEEK(Z)/4)):T=T+1:NEXT Z:GOTO
540
530 CLS:J=0:K=1+INT(F/640):SCREEN 2:T=0:FOR Z=A TO A+F STEP K:IF Z>65535! THEN D
EF SEG=&H6000:F=F-65535!-A:GOTO 534
532 FOR Y=Z TO Z+K-1:J=J+PEEK(Z):NEXT Y:J=J/K:PSET (T,50+INT(J/4)):T=T+1:NEXT Z:
GOTO 540
534 FOR Z=0 TO F STEP K:FOR Y=Z TO Z+K-1:J=J+PEEK(Z):NEXT Y:J=J/K:PSET (T,50+IN
T(J/4)):T=T+1:NEXT Z
540 PRINT"Sect.Mem.=";A$;"H Comienzo=";B$;"H Long.=";L;"bytes Inter.=";
O;"useg":PRINT"Escala=";K;" Segmento=";500*O;"usg":FOR Z=1 TO INT(5
00/K):PSET(Z,30):NEXT:INPUT"ok ";A$:GOTO 200
547 REM
548 REM + + + Envio / Recepcion de Datos o Pgm. del remoto / disco + + +
549 REM
550 REM - - - Pgm/datos al disco - - -
551 REM
552 PRINT:INPUT"Nombre de Pgm/datos: ";PGM$:PGM$="datos\"+PGM$:PRINT:INPUT"Secto
r Mem.(4000 - 9000) (H) ";A$:B=VAL("&H"+A$):DEF SEG=(B):INPUT"Comienzo Mem.(000
0 - FFFF) (H) ";B$:A=VAL("&H"+B$):INPUT"Longitud n. ";F:IF A<0 THEN LET A=65536!
+A
553 BSAVE PGM$,A,F:GOTO 200
559 REM
560 REM - - - Pgm/datos a memoria - - -
561 REM
562 PRINT:COLOR 9:PRINT"Archivo de Datos":COLOR 7:FILES "datos\*.bas":INPUT"Nomb
re de Pgm/datos: ";PGM$:PGM$="datos\"+PGM$:PRINT:INPUT"Sector Mem.(4000 - 9000)

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(H) ";A$:B=VAL("&H"+A$):DEF SEG=(B):INPUT"Comienzo Mem.(0000 - FFFF) (H) ";B$:A
=VAL("&H"+B$)
563 IF A<0 THEN LET A=65536!+A
564 BLOAD PGM$,A:GOTO 200
569 REM
570 REM - - - PGM/datos al Remoto - - -
571 REM
572 CLS:PRINT"Encender el Hermes y poner Add 8018=00 y 8019=88":PRINT:OUT 890,0:
DEF SEG=&H3000:BLOAD"pgm\rat",0
573 INPUT"Sector Mem.(4000 - 9000) (H) ";A$:B=VAL("&H"+A$):INPUT"Comienzo Mem.(
0000 - FFFF) (H) ";B$:A=VAL("&H"+B$):INPUT"Longitud n. ";F:IF A<0 THEN LET A=6553
6!+A
574 POKE 0,F-(256*INT(F/256)):POKE 1,INT(F/256):POKE 4,B-(256*INT(B/256)):POKE 5
,INT(B/256):POKE 92,A-(256*INT(A/256)):POKE 93,INT(A/256):OUT 890,1:OUT 890,0:AD
D=2:CALL ADD
575 GOTO 200
579 REM
580 REM - - - PGM/datos del Remoto - - -
581 REM
582 CLS:PRINT"Encender el Hermes":PRINT"Poner en Add 8018=LL y 8019=HH del HERME
S el Add. de los datos a enviar":PRINT"Poner en Add 8016=LL y 8017=HH del HERMES
el nro. de datos a enviar":PRINT:OUT 890,0:DEF SEG=&H3000:BLOAD"pgm\rat",0
583 PRINT:INPUT"Sector Mem.(4000 - 9000) (H) ";A$:B=VAL("&H"+A$):INPUT"Comienzo
Mem.(0000 - FFFF) (H) ";B$:A=VAL("&H"+B$):IF A<0 THEN LET A=65536!+A
584 POKE 162,B-(256*INT(B/256)):POKE 163,INT(B/256):POKE 250,A-(256*INT(A/256)):
POKE 251,INT(A/256):PRINT:INPUT"PULSAR -ENTER- y enviar los datos desde el Remot
o":ADD=160:CALL ADD
585 GOTO 200
589 REM
590 REM - - - Envio / Recepcion de PGM/datos al remoto - - -
591 REM
592 CLS:PRINT"Encender el Hermes y poner Add 8018=00 y 8019=88":PRINT:OUT 890,0:
DEF SEG=&H3000:BLOAD"pgm\rat",0
593 PRINT:COLOR 5:PRINT"DATOS del PGM de Envio":COLOR 7:INPUT"Sector Mem. Tx (40
00 - 9000) (H) ";A$:B=VAL("&H"+A$):INPUT"Comienzo Mem. Tx (0000 - FFFF) (H) ";B
$:A=VAL("&H"+B$):INPUT"Longitud n. ";F:IF A<0 THEN LET A=65536!+A
594 POKE 0,F-(256*INT(F/256)):POKE 1,INT(F/256):POKE 4,B-(256*INT(B/256)):POKE 5
,INT(B/256):POKE 92,A-(256*INT(A/256)):POKE 93,INT(A/256)
595 PRINT:COLOR 2:PRINT"DATOS para la Recepcion":COLOR 7:INPUT"Sector Mem. Rx (4
000 - 9000) (H) ";A$:B=VAL("&H"+A$):INPUT"Comienzo Mem. Rx (0000 - FFFF) (H) ";
B$:A=VAL("&H"+B$):IF A<0 THEN LET A=65536!+A
596 POKE 162,B-(256*INT(B/256)):POKE 163,INT(B/256):POKE 250,A-(256*INT(A/256)):
POKE 251,INT(A/256)
597 OUT 890,1:OUT 890,0:FOR Z=1 TO 100:NEXT:ADD=2:CALL ADD
598 ADD=160:CALL ADD:GOTO 200
599 REM
600 REM * * * ARCHIVO * * *
601 REM
602 CLS:COLOR 1,7:PRINT"ARCHIVO DE SEÑAL":COLOR 12,0:PRINT:PRINT"1 Guardar señal
en disco":PRINT"2 Cargar señal desde disco":PRINT"3 Guardar PGM/datos en disco"
:PRINT"4 Cargar PGM/datos desde disco"
603 PRINT"5 Enviar PGM al remoto":PRINT"6 Recibir PGM del remoto":PRINT"7 Envio/
Recepcion de PGM/datos al remoto":PRINT"8 Borrar Archivo":PRINT"9 PRINCIPAL":PRI
NT:COLOR 7:INPUT"Select. ";VALOR:ON VALOR GOTO 604,610,550,560,570,580,590,463,2
00
604 PRINT:PRINT"Guardar Signal: ";SIG$:PRINT:INPUT"Sector Mem.(a/d=7000 , scan=5
000) (H) ";A$:B=VAL("&H"+A$):DEF SEG=(B):INPUT"Comienzo Mem.(a/d=0000 , scan=00
00) (H) ";B$:A=VAL("&H"+B$):INPUT"Longitud n. ";F:OPEN "A",#1,SIG$:IF A<0 THEN L
ET A=65536!+A
605 FOR Z=A TO F+A:K$=STR$(.02*PEEK(Z)):PRINT #1,K$:NEXT:CLOSE #1
606 GOTO 200
610 PRINT:COLOR 9:PRINT"Archivos de Señales":COLOR 7:FILES"archi\*":INPUT"Carga
r signal: ";SIG$:SIG$="ARCHI\"+SIG$:OPEN "I",#1,SIG$:INPUT"Sector Mem.(a/d=7000
, scan=5000) (H) ";A$:B=VAL("&H"+A$)

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B (Sector)
A. A. A.
F. L.

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611 DEF SEG=(B):INPUT"Comienzo Mem.(a/d=0000 , scan=0000) (H) ";B$:Z=VAL("&H"+B$):IF Z<0 THEN LET Z=65536!+Z
612 IF EOF(1) THEN 620
614 INPUT #1,K$:IF K$<>"DATA" THEN 612
616 IF EOF(1) THEN 620
618 INPUT #1,K$:POKE Z,50*VAL(K$):Z=Z+1:GOTO 616
620 CLOSE #1:GOTO 200
649 REM
650 REM + + + ESPECTRO + + +
651 REM
652 DEF SEG=&H4000:BLOAD"pgm\rat",0
653 BLOAD"pgm\espectr",32768!:POKE 0,0
654 POKE 1,1:OUT 890,1:OUT 890,0:ADD=2:CALL ADD
655 FOR Z=1 TO 700:NEXT
656 POKE 251,128:POKE 163,112:ADD=160:CALL ADD
657 CLS:COLOR 12:PRINT"Grafica Espectro":COLOR 7:PRINT:INPUT"Sector a/d=7000, scan=5-6000 H ";A$:B=VAL("&H"+A$):DEF SEG=(B):INPUT"Comienzo a/d,scan=0 ";B$:A=VAL("&H"+B$):INPUT"Long. 0-131071 ";F:L=F:K=1:IF F>640 THEN GOTO 662
658 INPUT"Espectro comienzo 0-8191 ";CO:INPUT"Long. 1-8192 ";LO:INPUT"Atenuacion 1-1000 ";AT:INPUT"lin/log ";L$
659 IF A<0 THEN LET A=65536!+A
660 IF A+F>131071! THEN GOTO 657
661 CLS:SCREEN 2:T=0:FOR Z=A TO A+F:PSET (T,50+INT(PEEK(Z)/4)):T=T+1:NEXT Z:GOTO 666
662 IF A<0 THEN LET A=65536!+A
663 CLS:J=0:K=1+INT(F/640):SCREEN 2:T=0:FOR Z=A TO A+F STEP K:IF Z>65535! THEN DEF SEG=&H6000:F=F-65535!-A:GOTO 665
664 FOR Y=Z TO Z+K-1:J=J+PEEK(Z):NEXT Y:J=J/K:PSET (T,50+INT(J/4)):T=T+1:NEXT Z:GOTO 666
665 FOR Z=0 TO F STEP K :FOR Y=Z TO Z+K-1:J=J+PEEK(Z):NEXT Y:J=J/K:PSET (T,50+INT(J/4)):T=T+1:NEXT Z
666 PRINT"GRAFICA - ESPECTRO":PRINT"Sector=";A$;"H Add=";B$;"H Long.=";L;"bytes Step=";O;"useg":PRINT"Escala=";K;" Segmento=";500*O;"usg";"Signal=";SIG$:FOR Z=1 TO INT(500/K):PSET(Z,37):NEXT:DEF SEG=&H7000
667 IF L$="lin" THEN 675
668 IF L$<>"log" THEN 200
669 A=PEEK(43006!)+(256*PEEK(43007!)):PRINT" min/max=";A:FOR Z=32768!+CO TO 32768!+CO+LO:IF PEEK(Z)>0 THEN LET V=INT((75.464*LOG(Z-32767))-50):PSET(V,200):F=INT(PEEK(Z)/AT):DRAW"U=F;"
670 NEXT
671 FOR Z=40960! TO 43005!:PSET(Z-40960!,45+INT(PEEK(Z)/20))
672 IF PEEK(Z)=0 AND PEEK(Z+1)=0 THEN INPUT"ok..";A$:GOTO 200
673 NEXT Z:INPUT"ok..";A$:GOTO 200
675 A=PEEK(43006!)+(256*PEEK(43007!)):PRINT" min/max=";A:FOR Z=32768!+CO TO 32768!+CO+LO:IF PEEK(Z)>0 THEN LET V=Z-32767:PSET(V,200):F=INT(PEEK(Z)/AT):DRAW"U=F;"
676 NEXT:GOTO 671
688 REM
689 REM - - - Cambio Direccion / Contenido en Memoria - - -
690 REM
691 CLS:INPUT"Segmento (HHHH) ";A$:INPUT"Direccion (HHHH) ";B$:PRINT:SEG=VAL("&H"+A$):DEF SEG=SEG:ADD=VAL("&H"+B$):IF ADD<0 THEN LET ADD=65536!+ADD
692 CLS:PRINT"Seg= ";SEG;" ";HEX$(SEG);" H":PRINT:PRINT"Add= ";ADD;" ";F:OR Z=ADD TO 15+ADD:PRINT HEX$(PEEK(Z));" ";:NEXT Z:PRINT:PRINT:PRINT"Data=";PEEK(ADD);" ";HEX$(PEEK(ADD));" H":PRINT
693 INPUT"Nuevo dato (H) ";C$:IF VAL("&H"+C$)>255 OR VAL("&H"+C$)<0 THEN GOTO 200
694 POKE ADD,VAL("&H"+C$):ADD=ADD+1:GOTO 692
695 STOP
703 REM + + + VISUALIZAR PORCION DE MEMORIA + + +
704 REM
705 CLS:COLOR 1,7:PRINT"Volcar Porcion de Memoria":PRINT:COLOR 12,0:PRINT"1 Volcar Proceso SCAN":PRINT"2 Volcar Proceso A/D Converter":PRINT"3 Volcar segmento y direccion Memoria"

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706 PRINT"4 Cambio Add./Data Memoria":PRINT"5 Borrar Memoria":PRINT"6 Grafica":P
RINT"7 Espectro":PRINT"8 PRINCIPAL":PRINT
707 COLOR 7:INPUT"Select.? ";Z:ON Z GOTO 713,720,708,690,490,500,657,200
708 CLS:INPUT"Segmento (HHHH) ";A$:INPUT"Direccion (HHHH) ";B$:INPUT"Nro.Muestr
as ";F:PRINT"Intervalo = ";O;" useg":PRINT:DEF SEG=VAL("&H"+A$):A=VAL("&H"+B
$):IF A<0 THEN LET A=65536!+A
709 FOR Z=A TO F+A STEP 16:PRINT Z;HEX$(Z);" ";
710 FOR Y=0 TO 7:PRINT USING"\\";HEX$(PEEK(Z+Y));" ";:NEXT Y:PRINT " ";:FOR W=0 T
O 7:PRINT USING"\\";HEX$(PEEK(Z+Y+W));" ";:NEXT W
711 PRINT:NEXT Z:INPUT"OK ?";B$:GOTO 200
713 CLS:INPUT"Nro.Muestras 1 - 131072 ";F:K=&H5000:M=1+INT(F/16384):N=16384:IF
M=1 THEN LET N=F
714 FOR Y=1 TO M:IF Y>4 THEN LET K=&H6000
715 DEF SEG=K:PRINT"Segmento de memoria = ";K;" Intervalo = ";O;" useg":
PRINT
716 FOR Z=0 TO N STEP 16:PRINT Z;" ";
717 FOR X=0 TO 15:PRINT HEX$(PEEK(Z+X));" ";:NEXT X
718 PRINT:NEXT Z
719 NEXT Y:INPUT"OK ?";B$:GOTO 200
720 CLS:INPUT"Nro.Muestras 1-25000 ";F:DEF SEG=&H7000:PRINT"Segmento de Memoria
= 7000 H Intervalo = ";O;" useg":PRINT
722 FOR Z=0 TO F STEP 16:PRINT Z;" ";
724 FOR Y=0 TO 15:PRINT HEX$(PEEK(Z+Y));" ";
726 NEXT Y
728 PRINT:NEXT Z:INPUT"OK ?";B$:GOTO 200
729 REM
730 REM * * * CAPTURA SIGNAL (a/d) via NMI * * *
731 REM
740 CLS:COLOR 12:PRINT"CAPTURA ANALOGICA LENTA":COLOR 7:PRINT"Encender el Hermes
y poner Add 8018=00 y 8019=88":PRINT:INPUT "Nombre de la señal ";A$: OUT 890,0:
DEF SEG=&H4000:BLOAD"pgm\rat",0:SIG$="ARCHI\ "+A$:OPEN "O",#1,SIG$
745 C(6)=26:C(11)=26:GOSUB 300:C(6)=2:C(11)=2:PRINT:BLOAD"pgm\borr",32768!:POKE
0,50:POKE 1,0:OUT 890,1:OUT 890,0:ADD=2:CALL ADD
750 INPUT"Nro. canal(es) de entrada (00-FF) ";D$:G=VAL("&H"+D$)
760 PRINT #1,"DATASET IMPORTED":PRINT #1,"VERSION 1":K$="SIGNAL "+A$:PRINT #1,K$
:K$="CHAN_NUM "+D$:PRINT #1,K$:K$="DATE "+DATE$:PRINT #1,K$:K$="TIME "+TIME$:PRI
NT #1,K$
770 INPUT"Nro.Muestras 1 - 24575 ";F:K$="NUM_SAMPS "+STR$(F):PRINT #1,K$
780 INPUT "Intervalo (0.1msg - 125660msg) ";I:O=1000*I:K$="INTERVAL "+STR$(I):J=
INT(((SQR(.2542+(120*I)))-.504)/.0592)-50:IF J>65535! OR J<0 THEN 780
790 PRINT #1,K$:PRINT #1,"MAX_VAL 5.2"
800 PRINT #1,"MIN_VAL 0"
810 PRINT #1,"VERT_UNITS millivolts"
820 INPUT "Valor de Disparo 0 - 255 , >76 ";H
830 INPUT "Valor de Retraso 0 - 65535 ";L
850 INPUT"Comentarios ";D$:K$="COMMENT "+D$:PRINT #1,K$:PRINT #1,"DATA":CLOSE #1
860 FOR Y=1 TO CAP
870 BLOAD "pgm\tdsrnmi",32768!:POKE 32790!,INT(F/256):POKE 32789!,(F-(256*INT(F/
256))):POKE 32809!,G:POKE 32821!,H:POKE 32803!,INT(J/256):POKE 32802!,1+(J-(256*
INT(J/256))):POKE 32826!,INT(L/256):POKE 32825!,(L-(256*INT(L/256)))
875 POKE 32769!,AA:POKE 32773!,CC:POKE 32774!,BB
880 POKE 0,130:POKE 1,0:OUT 890,1:OUT 890,0:ADD=2:CALL ADD
890 POKE 163,112:POKE 251,0:ADD=160:CALL ADD
897 REM seg (20) ↑ Add
898 REM + + + MUESTREO + + +
899 REM
900 CLS:SCREEN 2:DEF SEG=&H7000:T=0:FOR Z=0 TO F STEP (1+INT(F/640)):PSET (T,50+
INT(PEEK(1+Z)/4)):T=T+1:NEXT Z
910 PRINT"Signal ";A$;" Cuenta :";Y;" de";CAP:PRINT"Nr.Muestras ";F;
" Nivel Disparo ";H:PRINT"Intervalo msg. ";I;" Periodo ";J;" Retraso
";L
911 DEF SEG=&H4000
912 IF Y=CAP-1 THEN 921
913 IF Y=CAP THEN 923

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915 NEXT Y
920 INPUT " Ok ....";SS:GOTO 200
921 BLOAD"pgm\borr",32768!:POKE 0,50:POKE 1,0:OUT 890,1:OUT 890,0:ADD=2:CALL ADD
922 FOR Z=1 TO 1500:NEXT:GOTO 915
923 BLOAD"pgm\espectr",32768!:POKE 0,0:POKE 1,1:OUT 890,1:OUT 890,0:ADD=2:CALL A
DD
924 FOR Z=1 TO 700:NEXT
925 POKE 251,128:POKE 163,112:ADD=160:CALL ADD
926 DEF SEG=&H7000:CO=0:LO=8191:AT=1:L$="log":PRINT"ESPECTRO: Start=";CO;" Lon
g.=";LO;" Att.=";AT;" Tipo=";L$;GOTO 667
927 REM
928 REM + + + FUENTES FIJAS + + +
929 REM
930 C(18)=28:GOSUB 340:C(18)=4:PRINT:COLOR 6:INPUT"Fuente Fija de 32 Vcc";A$:COL
OR 7:GOTO 200
931 C(19)=28:GOSUB 340:C(19)=4:PRINT:COLOR 6:INPUT"Fuente Fija de 13 Vcc";A$:COL
OR 7:GOTO 200
932 C(13)=28:GOSUB 300:C(13)=4:PRINT:COLOR 6:INPUT"Fuente Fija de 5 Vcc";A$:COL
OR 7:GOTO 200
944 REM
945 REM + + + TIEMPO DE EJECUCION + + + EJEC
946 REM
947 CLS:INPUT"Tiempo de ejecucion de Comandos (10 - 16.000.000 useg.) ";EJEC:AA=
INT(EJEC/65536!):CC=EJEC-(AA*65536!):BB=INT(CC/256):CC=CC-(256*BB):AA=1+AA:GOTO
200
948 REM
949 REM + + + OPCIONES + + +
950 REM
951 CLS:COLOR 1,7:PRINT"OPCIONES":COLOR 12,0:PRINT:PRINT"1 Interval TIMERS":PRIN
T"2 OUT PORTS":PRINT"3 IN PORTS":PRINT"4 Fuentes":PRINT"5 Generar Signals via Fu
entes":PRINT"6 Tiempo de Ejecucion":PRINT"7 PRINCIPAL":COLOR 7:PRINT
952 INPUT"Select.";VALOR:ON VALOR GOTO 953,960,255,970,982,945,200
953 CLS:COLOR 6:PRINT"INTERVAL TIMER":COLOR 7:PRINT"Encender el Hermes y Add 801
8=00 y 8019=88":OUT 890,0:DEF SEG=&H4000:BLOAD"pgm\rat",0:C(1)=27:GOSUB 300:C(1)
=3:BLOAD"pgm\ntim",32768!:INPUT"Nro.TIMER 1-3 ";TIM:IF TIM>3 OR TIM<1 THEN 200
954 POKE 32791!,(227+(4*TIM)):PRINT:GOSUB 434:INPUT"Ctrol.Word Osc= 36h ";CTR$:P
OKE 32789!,VAL("&H"+CTR$):INPUT"Nro.Contador 1-3 ";CON:POKE 32795!,(223+CON+(4*T
IM)):POKE 32799!,(223+CON+(4*TIM)):IF CON>3 OR CON<1 THEN 200 ELSE 446
955 PRINT:INPUT "Frecuencia (39 Hz - 633000 Hz) ";FR:J=INT(2536000!/FR):IF J>655
34! OR J<2 THEN 955
956 POKE 32769!,AA:POKE 32773!,CC:POKE 32774!,BB:POKE 32797!,INT(J/256):POKE 327
93!,J-(256*INT(J/256)):POKE 0,130
957 POKE 1,0:OUT 890,1:OUT 890,0:ADD=2:CALL ADD
958 GOTO 198
959 REM
960 REM + + + PORTS + + +
961 CLS:COLOR 12:PRINT"CONFIGURAR PUERTOS":COLOR 7:PRINT"Encender el Hermes y po
ner Add 8018=00 y 8019=88":PRINT:OUT 890,0:DEF SEG=&H4000:BLOAD"pgm\rat",0
962 PRINT"P 00 = Pw.Sup.3A P 01 = Rx-Tx d P 02 = Rx-Tx f P 03 = PPI. C
.W.":PRINT"P 04 = Disp.Seg. P 05 = Disp.Dig. P 06 = Key-Disp. P 07 = PPI.
C.W.":PRINT"P 08 = Pw.Dr.1A P 09 = Pw.Dr.1B P 0A = Pw.Dr.1C P 0B = PPI.
C.W."
963 PRINT"P 0C = Pw.Dr.2A P 0D = Pw.Dr.2B P 0E = Pw.Dr.2C P 0F = PPI. C
.W.":PRINT"P 10 = L.i/o 1A P 11 = L.i/o 1B P 12 = L.i/o 1C P 13 = PPI.
C.W.":PRINT"P 14 = L.i/o 2A P 15 = L.i/o 2B P 16 = L.i/o 2C P 17 = PPI.
C.W."
964 PRINT"P 18 = L.i/o 3A P 19 = L.i/o 3B P 1A = L.i/o 3C P 1B = PPI. C
.W.":PRINT"P 1C = Pw.Sup.1A P 1D = Pw.Sup.1A P 1E = A/D Lines P 1F = PPI.
C.W.":PRINT"P E4 = I.T. 1o1 P E5 = I.T. 1o2 P E6 = I.T. 1o3 P E7 = I.T.
C.W."
965 PRINT"P E8 = I.T. 2o1 P E9 = I.T. 2o2 P EA = I.T. 2o3 P EB = I.T. C
.W.":PRINT"P EC = I.T. 3o1 P ED = I.T. 3o2 P EE = I.T. 3o3 P EF = I.T.
C.W.":PRINT"P F0 = Scan Data P F1 = Scan Ctrol P F2 = Scan End P F3 = Scan
C.W."

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966 PRINT"P E0-3 = Com.Out   P F4-7 = Com.Out   P FC-F = A/D conv. P F8-B = nc
"
967 BLOAD"pgm\nport",32768!:PRINT:COLOR 6:INPUT"Nro.Puerto (H) ";A$:CLS:COLOR 12
:PRINT" CONFIGURAR  PUERTOS":CA=0:COLOR 7:GOSUB 360:POKE 32787!,VAL("&H"+A$):INP
UT"Contenido (H) ";A$:IF VAL("&H"+A$)>255 OR VAL("&H"+A$)<0 THEN 198
968 GOSUB 442:GOSUB 422:PRINT:INPUT"Es correcto s/n ? ";K$:IF K$="s" OR K$="S" T
HEN POKE 32785!,VAL("&H"+A$):POKE 32769!,AA:POKE 32773!,CC:POKE 32774!,BB:POKE 0
,50:POKE 1,0:OUT 890,1:OUT 890,0:ADD=2:CALL ADD
969 GOTO 198
970 REM + + + Power Sources + + +
971 REM
972 CLS:COLOR 6:PRINT"FUENTES de ALIMENTACION":COLOR 7:PRINT"Encender el Hermes
y poner Add 8018=00 y 8019=88":PRINT:OUT 890,0:DEF SEG=&H4000:BLOAD"pgm\rat",0
973 BLOAD"pgm\nport",32768!:PRINT"FUENTE Nro. 1 = Pw 3A      2.5 - 30 Vcc  PORT
00 h":PRINT"      Nro. 2 = Pw 1A      2.5 - 30 Vcc  PORT 1C h":PRINT"      Nro
. 3 = Pw 1A      2.5 - 30 Vcc  PORT 1D h"
974 PRINT:PRINT"      Nro. 4 = Pw 3A      32 Vcc  Fuente fija":PRINT"      Nro
. 5 = Pw 2A      13 Vcc  Fuente fija":PRINT"      Nro. 6 = Pw 1A      5 Vcc  F
uente fija":PRINT:INPUT"NRO.FUENTE 1-6 ";A:ON A GOTO 975,976,977,930,931,932
975 C(16)=29:GOSUB 340:C(16)=5:PRINT:INPUT"Voltaje 2.5 - 30 Vcc = ";A:A=INT((A-2
.5)*4.62):POKE 32787!,0:IF A>127 OR A<0 THEN LET A=128:GOTO 978 ELSE GOTO 978
976 C(10)=29:GOSUB 300:C(10)=5:PRINT:INPUT"Voltaje 2.5 - 30 Vcc = ";A:A=128+INT(
(A-2.5)*4.62):POKE 32787!,28:IF A<128 THEN LET A=0:GOTO 978 ELSE GOTO 978
977 C(8)=29:GOSUB 300:C(8)=5:PRINT:INPUT"Voltaje 2.5 - 30 Vcc = ";A:A=128+INT((A
-2.5)*4.62):POKE 32787!,29:IF A<128 THEN LET A=0
978 IF A<0 OR A>255 THEN GOTO 200
979 POKE 32785!,A:POKE 32769!,AA:POKE 32773!,CC:POKE 32774!,BB:POKE 0,50
980 POKE 1,0:OUT 890,1:OUT 890,0:ADD=2:CALL ADD
981 GOTO 200
982 REM + + + Generar Signals via Fuentes + + +
983 REM
984 CLS:COLOR 6:PRINT"SEÑALES VIA FUENTES":COLOR 7:PRINT"Encender el Hermes y po
ner Add 8018=00 y 8019=88":PRINT:OUT 890,0:DEF SEG=&H4000:BLOAD"pgm\rat",0:BLOAD
"pgm\pwgen",32768!
985 PRINT"Fuente 1= Pw 3A  Port 00 h":PRINT"      2= Pw 1A  Port 1C h":PRINT"
      3= Pw 1A  Port 1D h":PRINT:INPUT"NRO.Fuente 1-3 ";AN:ON AN GOTO 986,987,98
8
986 C(16)=29:GOSUB 340:C(16)=5:POKE 32860!,0:POKE 32900!,0:POKE 32898!,128:K=64:
GOTO 989
987 C(10)=29:GOSUB 300:C(10)=5:POKE 32860!,28:POKE 32900!,28:POKE 32898!,0:K=192
:GOTO 989
988 C(8)=29:GOSUB 300:C(8)=5:POKE 32860!,29:POKE 32900!,29:POKE 32898!,0:K=192
989 PRINT:PRINT"1 Onda Seno":PRINT"2 Onda Triangular":PRINT"3 Onda Cuadrada":PRI
NT"4 Onda desde Memoria":PRINT:INPUT"TIPO de Onda 1-4 ";A:IF A>4 OR A<1 THEN 200
990 INPUT"Nro samples 2 - 16384 ";F:INPUT"Intervalo 0 - 4.294,967.296 ";I:J
=INT(I/65536!):INPUT"Nro. Ciclos 0 - 4.294,967.296 ";N
991 POKE 32814!,INT(J/256):POKE 32813!,J-(256*INT(J/256)):J=I-(J*65536!):POKE 32
820!,INT(J/256):POKE 32819!,J-(256*INT(J/256)):J=INT(N/65536!):POKE 32802!,INT(J
/256):POKE 32801!,J-(256*INT(J/256)):J=N-(J*65536!):POKE 32808!,INT(J/256)
992 POKE 32807!,J-(256*INT(J/256)):POKE 32769!,AA:POKE 32773!,CC:POKE 32774!,BB:
POKE 0,242:POKE 1,0:OUT 890,1:OUT 890,0:ADD=2:CALL ADD:IF A=4 THEN 1004
993 INPUT "Amplitud 1 - 127 "M:ON A GOTO 994,995,996
994 FOR Z=32768! TO 32768!+F:POKE Z,K+INT(.5*M*SIN(Z/(F*.16))):NEXT:GOTO 997
995 K=K-64:INPUT"Porcentaje Entrada 0.001 - 99.999 ";Q:FOR Z=0 TO F*Q*.01:POKE
32768!+Z,K+INT(M*Z/(F*Q*.01)):NEXT Z:FOR Y=0 TO F-(F*Q*.01):POKE 32768!+Z+Y,K+M-
INT(M*Y/(F-(F*Q*.01))):NEXT Y:GOTO 997
996 K=K-64:INPUT"Porcentaje Entrada 0.001 - 99.999 ";Q:FOR Z=0 TO F*Q*.01:POKE
32768!+Z,K+M:NEXT Z:FOR Y=0 TO F-(F*Q*.01):POKE 32768!+Z+Y,K:NEXT Y
997 POKE 1,INT(F/256):POKE 0,F-(256*INT(F/256)):ADD=2:CALL ADD
999 ON A GOTO 1000,1001,1002,1003
1000 CLS:SCREEN 2:PRINT"Nro.Samples = ";F;"      Amplitud = ";M;"      Intervalo =
";I:FOR Z=1 TO F:PSET(Z,90+INT(.25*M*SIN(Z/(F*.16)))):NEXT:INPUT"OK ";A$:SCREEN
0,1:GOTO 200
1001 CLS:SCREEN 2:PRINT"Nro.Sampl= ";F;"      Ampl= ";M;"      Porc.In= ";Q;"      Interv

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= ";I:FOR Z=0 TO F*Q*.01:PSET(Z,70+(.5*INT(M*Z/(F*Q*.01))):NEXT Z:FOR Y=0 TO F-
(F*Q*.01):PSET(Z+Y,70+.5*(M-INT(M*Y/(F-(F*Q*.01)))):NEXT Y:INPUT"OK";A$:SCREEN
0,1:GOTO 200
1002 CLS:SCREEN 2:PRINT"Nro.Sampl=";F;"      Ampl=";M;"      Porc.In=";Q;"
Interv=";I:FOR Z=0 TO F*Q*.01:PSET(Z,50+(.5*M)):NEXT Z:FOR Y=0 TO F-(F*Q*.01):P
SET(Z+Y,50):NEXT Y:INPUT"OK";A$:SCREEN 0,1:GOTO 200
1003 CLS:SCREEN 2:DEF SEG=VAL("&H"+A$):PRINT"Nro.Sampl. ";F;"      Sector ";A$;"
Add. ";B$;"      Interv. ";I:FOR Z=0 TO F:PSET(Z,20+.5*PEEK(Z+M)):NEXT Z:INPU
T"OK";A$:SCREEN 0,1:DEF SEG=&H4000:GOTO 200
1004 INPUT"Sector Memoria 0-8000 (H) ";A$:L=VAL("&H"+A$):INPUT "Add. Comienzo 2
-FFFF (H) ";B$:P=VAL("&H"+B$):IF P<0 THEN LET P=65536!+P
1005 POKE 5,INT(L/256):POKE 93,INT(P/256):POKE 92,P-(256*INT(P/256)):ON AN GOTO
1006,1007,1007
1006 DEF SEG=L:FOR Z=P TO P+F:POKE Z,INT(PEEK(Z)/2):NEXT:POKE 1,INT(F/256):POKE
0,F-(256*INT(F/256)):DEF SEG=&H4000:GOTO 997
1007 DEF SEG=L:FOR Z=P TO P+F:POKE Z,128+INT(PEEK(Z)/2):NEXT:POKE 1,INT(F/256):P
OKE 0,F-(256*INT(F/256)):DEF SEG=&H4000:GOTO 997
1010 REM
1011 REM          + + + SCAN TIMER + + +
1012 REM
1015 CLS:COLOR 12:PRINT"CAPTURA ANALOGICA RAPIDA":COLOR 7:PRINT"Encender el Herm
es y poner Add 8018=00 y 8019=88":PRINT:INPUT "Nombre de la signal ";A$: OUT 890
,0:DEF SEG=&H4000:BLOAD"pgm\rat",0:SIG$="ARCHI\"+A$:OPEN "O",#1,SIG$
1020 C(5)=26:C(4)=26:GOSUB 300:C(5)=2:C(4)=2:PRINT:BLOAD"pgm\borr",32768!:POKE 0
,50:POKE 1,0:OUT 890,1:OUT 890,0:ADD=2:CALL ADD
1030 PRINT #1,"DATASET IMPORTED":PRINT #1,"VERSION 1":K$="SIGNAL "+A$:PRINT #1,K
$:K$="CHAN_NUM 01":PRINT #1,K$:K$="DATE "+DATE$:PRINT #1,K$:K$="TIME "+TIME$:PR
INT #1,K$
1032 INPUT"Nro.Muestras 1 - 131072 ";F:K$="NUM_SAMPS "+STR$(F):PRINT #1,K$
1034 M=1+INT(F/16384):N=16384:IF M=1 THEN LET N=F
1036 IF M=9 THEN LET M=8
1040 BLOAD "pgm\stnmi",32768!:POKE 32833!,M+1:POKE 32854!,INT(N/256):POKE 32853!
,N-(256*INT(N/256))
1045 POKE 32769!,AA:POKE 32773!,CC:POKE 32774!,BB
1050 INPUT "Intervalo ( 1.6usg - 50000usg) ";I:J=INT(I/.76):IF J>65535! THEN GOT
O 1050
1051 IF I<1.6 THEN 1054
1052 IF J>=2 THEN POKE 32801!,INT(J/256):POKE 32797!,J-(256*INT(J/256)):GOTO 108
0
1053 GOTO 1050
1054 INPUT "Intervalo ( 0.25 , 0.5 , 1 , 2 usg ) ";I:K$="INTERVAL "+STR$(I):IF I
=.25 THEN POKE 32809!,72:J=72:K=8:GOTO 1064
1056 IF I=.5 THEN POKE 32809!,74:J=74:K=10:GOTO 1064
1058 IF I=1 THEN POKE 32809!,76:J=76:K=12:GOTO 1064
1060 IF I=2 THEN POKE 32809!,78:J=78:K=14:GOTO 1064
1062 CLS:GOTO 1050
1064 O=I:POKE 32805!,54:POKE 32807!,231:POKE 32809!,J:POKE 32813!,K
1080 O=I:K$="INTERVAL "+STR$(I):PRINT #1,K$:PRINT #1,"MAX_VAL 5.2":PRINT #1,"MIN
_VAL 0":PRINT #1,"VERT_UNITS Volts":PRINT #1,"HORZ_UNITS MicroSec"
1110 INPUT"Comentarios ";D$:K$="COMMENT "+D$:PRINT #1,K$:PRINT #1,"DATA":CLOSE #
1
1120 POKE 0,160
1130 POKE 1,0:OUT 890,1:OUT 890,0:ADD=2:CALL ADD
1135 K=80
1140 FOR Y=1 TO M
1142 IF Y>4 THEN LET K=96
1144 PRINT "BLOQUE ";Y;"      ";K;"      ";((Y-1)*64)-(256*SGN(K-80))
1150 POKE 163,K:POKE 251,((Y-1)*64)-(256*SGN(K-80)):ADD=160:CALL ADD
1160 NEXT
1162 BLOAD"pgm\espectr",32768!:POKE 0,0:POKE 1,1:OUT 890,1:OUT 890,0:ADD=2:CALL
ADD
1163 FOR Z=1 TO 700:NEXT
1164 POKE 251,128:POKE 163,112:ADD=160:CALL ADD
1165 SCREEN 2:DEF SEG=&H5000:T=0:FOR Z=0 TO F STEP (1+INT(F/640)):PSET (T,60+INT

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(PEEK(1+Z)/4)):T=T+1:NEXT Z
1166 PRINT"GRAFICA  Signal  '";A$;"'      Samples ";F;"      Intervalo usg. ";I
1167 DEF SEG=&H7000:CO=0:LO=8191:AT=1:L$="log":PRINT"ESPECTRO: Start=";CO;"      Lo
ng.=";LO;"      Att.=";AT;"      Tipo=";L$;:GOTO 667
1199 REM
1200 REM + + + PROGRAMAR SUCESOS + + +
1210 CHAIN"SUCESOS"
```