'{$STAMP BS2}

'{$PBASIC 2.5}

RcChannel6 PIN 0

BeaconLed PIN 1

LinearServo PIN 3

MastHeadlightLed PIN 7

Water1 PIN 8

Water2 PIN 9

PeriscopeDOWN PIN 14

Ptime VAR Word

PeriscopeMove VAR Byte

TimeCount VAR Word

Initialize:

 INPUT RcChannel6

 OUTPUT BeaconLed

 OUTPUT LinearServo

 OUTPUT MastHeadlightLed

 OUTPUT Water1

 INPUT Water2

 INPUT PeriscopeDOWN

 TimeCount = 0

 LinearServo = 0

 Water1 = 1

 Water2 = 0

Main:

 IF PeriscopeDOWN = 0 THEN

 GOSUB MainA

 ELSE

 GOSUB MainB

 ENDIF

 GOTO Main

MainA:

 BeaconLed = 0

 MastHeadlightLed = 0

 GOSUB Routine

 GOSUB LeakoarSignalLoss

 RETURN

MainB:

 MastHeadlightLed = 1

'\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 BeaconLed = 1

 TimeCount = 0

 FOR TimeCount = 0 TO 9 STEP 1

 GOSUB Routine

 GOSUB LeakoarSignalLoss

 PAUSE 1

 NEXT

 BeaconLed = 0

 TimeCount = 0

 FOR TimeCount = 0 TO 9 STEP 1

 GOSUB Routine

 GOSUB LeakoarSignalLoss

 PAUSE 1

 NEXT

 '\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 BeaconLed = 1

 TimeCount = 0

 FOR TimeCount = 0 TO 9 STEP 1

 GOSUB Routine

 GOSUB LeakoarSignalLoss

 PAUSE 1

 NEXT

 BeaconLed = 0

 TimeCount = 0

 FOR TimeCount = 0 TO 9 STEP 1

 GOSUB Routine

 GOSUB LeakoarSignalLoss

 PAUSE 1

 NEXT

'\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

BeaconLed = 1

 TimeCount = 0

 FOR TimeCount = 0 TO 9 STEP 1

 GOSUB Routine

 GOSUB LeakoarSignalLoss

 PAUSE 1

 NEXT

 BeaconLed = 0

 TimeCount = 0

 FOR TimeCount = 0 TO 9 STEP 1

 GOSUB Routine

 GOSUB LeakoarSignalLoss

 PAUSE 1

 NEXT

'\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

TimeCount = 0

BeaconLed=0

FOR TimeCount = 0 TO 20 STEP 1

 GOSUB Routine

 GOSUB LeakoarSignalLoss

 PAUSE 1

 NEXT

RETURN

'\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Routine:

PULSIN RcChannel6, 1, Ptime

 IF (Ptime > 0) THEN

 DEBUG HOME,

 DEC Ptime, " units ", CLREOL

 DEBUG CR,

 DEC Ptime, " us "

 ELSE

 DEBUG CLS, "Out of Range"

 ENDIF

 IF (Ptime < 490) OR (Ptime > 1000) THEN

 PeriscopeMove = 2

 ELSE

 PeriscopeMove = 0

 ENDIF

 SELECT PeriscopeMove

 CASE 0

 LinearServo = 1

 CASE 2

 LinearServo = 0

 ENDSELECT

RETURN

'\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

LeakoarSignalLoss:

IF Water2 = 1 THEN

 DO

 MastHeadlightled = 1

 Beaconled = 1

 PAUSE 250

 MastHeadlightled = 0

 Beaconled = 0

 PAUSE 250

 LOOP

 ELSE

 ENDIF

 IF Ptime<250 THEN

 Beaconled = 0

 DO

 MastHeadlightled = 1

 PAUSE 250

 MastHeadlightled = 0

 PAUSE 250

 LOOP

ELSE

ENDIF

RETURN