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EEEEEEEEEE XX XX AAAAAA MM MM PPPPPPPP LL EEEEEEEEE SSSSSSSS
EEEEEEEEEE XX XX AAAAAA MM MM PPPPPPPP LL EEEEEEEEE SSSSSSSS
EEEEEEEEEE XX XX AAAAAA MM MM PPPPPPPP LL EEEEEEEEE SSSSSSSS
EE XX XX AA AA MMMM MMMM PP PP LL EE SS
EE XX XX AA AA MMMM MMMM PP PP LL EE SS
EE XX XX AA AA MMMM MMMM PP PP LL EE SS
EE XX XX AA AA MM MM MM PP PP LL EE SS
EE XX XX AA AA MM MM MM PP PP LL EE SS
EEEEEEEE XX XX AA AA MM MM PPPPPPPP LL EEEEEEEEE SSSSSSS
EEEEEEEE XX XX AA AA MM MM PPPPPPPP LL EEEEEEEEE SSSSSSS
EEEEEEEE XX XX AA AA MM MM PPPPPPPP LL EEEEEEEEE SSSSSSS
EE XX XX AAAAAAAAAA MM MM PP LL EE SS
EE XX XX AAAAAAAAAA MM MM PP LL EE SS
EE XX XX AAAAAAAAAA MM MM PP LL EE SS
EE XX XX AA AA MM MM PP LL EE SS
EE XX XX AA AA MM MM PP LL EE SS
EE XX XX AA AA MM MM PP LL EE SS
EEEEEEEEEE XX XX AA AA MM MM PP LLLLLLLLLL EEEEEEEEE SSSSSSSS
EEEEEEEEEE XX XX AA AA MM MM PP LLLLLLLLLL EEEEEEEEE SSSSSSSS
EEEEEEEEEE XX XX AA AA MM MM PP LLLLLLLLLL EEEEEEEEE SSSSSSSS

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File: LABIOSAMP.FOR
Version 'V04-000'

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Program LABIO_SAMPLE

This program samples channel #2 once every 10 seconds.
It acquires 10 points at 1/tic, averages them and then
Reports the date, time, and average value on logical device
LABIO_SAMPLE_DATA

Include 'LABCHNDEF.FOR'

Parameter MBX_NAME = 'LABIO_SAMPLE'
Character*130 RETURN
Character*15 COMMAND
Character*24 DATE_TIME
Logical*4 SUCCESS,SYSSCREMBX
Integer*4 DELTA_TIME(2),NEXT_TIME(2)
Integer*4 AVERAGE

Parameter AD_CHANNEL = 2 ! Channel
Parameter AD_RATE = 1 !
Parameter AD_BUF_SIZE = 10
Parameter SAMPLE_RATE = '0 0:0:10'
Parameter MAX_SAMPLE = 10 000 ! Maximum # samples

Map To the Global Data Base and the event flags

Call LABIO_INIT(0)

```
! Open Mailbox to LABIO_CONNECT
!   Open ( Unit = 1, Name = 'LABIO_CONNECT' , Type = 'OLD' )
! Create Mailbox for response from LABIO_CONNECT
!   SUCCESS = SYSSCREMBX(,MBX_CHANNEL,,%Val('FDOO'x), MBX_NAME)
!   If (.not. SUCCESS ) Call FATAL_ERROR( SUCCESS, 'CREATING MAILBOX')
! Open via FORTRAN
!   Open ( Unit = 2, Name = MBX_NAME, Type = 'Old' )
! Deassign the channel assigned when we created it
!   Call SYSSDASSGN( %Val(MBX_CHANNEL) )
! Open A Data File
!   Open( Unit = 3, Name = 'LAB_SAMPLE_DATA', Type = 'New' )
! Connect to the LABIO system
!   COMMAND = 'CONNECT'
!   Write(1,100) COMMAND,MBX_NAME
! Wait for Response from LABIO system
!   Read(2,200) RETURN_CODE,RETURN
!   If( RETURN_CODE .ne. 0 ) Go To 99          !Failed to connect!
! Allocate Channel AD_CHANNEL
!   Rate = AD_RATE
!   Buffer size = AD_BUF_SIZE
!   Collect 1 buffer at a time
!
!   COMMAND = 'ALLOCATE'
!   Write(1,400) COMMAND,AD_CHANNEL,AD_RATE,AD_BUF_SIZE,1
!   If( RETURN_CODE .ne. 0 ) Go To 99          !Failed to allocate!
!
! Every SAMPLE_RATE secs. we will collect one buffer of data
!
! Convert ASCII delta time to binary
!   Call SYSSBINTIM( SAMPLE_RATE, DELTA_TIME )
! Schedule wake-ups every delt time interval
! But first cancel any previous wake-ups
!   Call SYSSCANWAK(,)
!   Call SYSSSCHDWK(,DELTA_TIME,DELTA_TIME)
! Wait for scheduled time interval
!0   Call SYSSHIBER()
! Enable data acquisition by setting event flag ACTIVITY and NOTIFY
```


