

## PCMCIA Recording Format

Presented below is a definition of the exact format in which data is stored in the PCMCIA cartridge and in the internal cartridge memory. Memory is separated into 64 byte partitions. All functions use 1 partition, except data recording for greater than 10 channels, which uses 2 partitions.

### Strobes

CRWS06	WCMDEQU 0C9DH	WR CMD REG
CRWS07	WADR EQU 0C9EH	WR ADDRESS REG
CRWS08	WDAT EQU 0C9FH	WRITE DATA
CRRS06	RDST EQU 0C9DH	RD STATUS
CRRS07	RDCU EQU 0C9EH	RD DATA, INC ADR
CRRS08	RDCD EQU 0C9FH	DEC ADR
WCMD	LOADS CMD REG	
WADR	LOADS ADR, DEC CMD REG	
WDAT	WRITE DATA, INC ADR	
RDST	READS STATUS	
RDCU	READS DATA, INC ADR	
RDCD	DEC ADR	

Status Bit 1 = Cart installed  
 Bit2 = Wrt protected  
 Bit 3,4 = Cart Batt Voltage  
 Bits 4-7 = Dip Switch

00 01 00 00/01	CARTIN/CARTIN2
00 01 00 02/03	FORMATTED CODE
00 01 00 04/05	NEXT ADDRESS
00 01 00 06/07	" "
00 01 00 08/09	ADD CS
00 01 00 0A/0B	LAST ADDRESS
00 01 00 0C/0D	" "
00 01 00 0E/0F	
00 01 00 16-34	HEADER

RamPack first data recording location is 00 01 00 40  
 CartRam first recording location is CSR B/A040H  
 CartRam ending location is CSE B/FF80H

### Store Header

Hhmdyhms\_XXXXXXXXXXXXXXXXXXXXIII\_C

Where:

S...S = 21 bytes station name - ASCII  
III = station ID - ASCII

### Store Data

PpmdyhmsA#C<sub>S</sub>X<sub>S</sub>S<sub>2</sub>ED<sub>1</sub>D<sub>2</sub>S<sub>1</sub>S<sub>2</sub>ED<sub>1</sub>D<sub>2</sub> . . . T<sub>1</sub>T<sub>2</sub>T<sub>3</sub>W<sub>1</sub>W<sub>2</sub>W<sub>3</sub>C

Where;

Time & date in BCD  
Pp, Ii, Ff = prelim, interim, final  
A = Averaging interval in binary  
# = Number of channels - binary  
C<sub>S</sub> = Channel start, 01 = ch 01-10, 02 = ch 01-20, 21 = ch 21-40 binary  
X = bytes that follow up to checksum - binary  
S<sub>1</sub>S<sub>2</sub> = data status  
E = sign exponent  
D<sub>1</sub>D<sub>2</sub> = data point in hex  
T<sub>1</sub>T<sub>2</sub>T<sub>3</sub> = chan # of sigma theta's  
W<sub>1</sub>W<sub>2</sub>W<sub>3</sub> = chan # of sigma W's  
T's & W's not stored with 10 channels  
C = checksum

### Store Calibrations

Ccmdyhms\_#\_ZS\_\_XNNNNNN\_mdyhmsmdyhms\_ED<sub>1</sub>D<sub>2</sub>TED<sub>1</sub>D<sub>2</sub>C

Where:

# = channel # in binary  
Underscore = space  
Z = 1 = zero, 2-7 = span #1 - 6  
S = # of global spans enabled  
X = bytes that follow, up to checksum = 27  
N's = Ch Name  
1<sup>st</sup> mdyhms = start time - BCD  
2<sup>nd</sup> mdyhms = stop time - BCD  
1<sup>st</sup> ED<sub>1</sub>D<sub>2</sub> = cal value  
2<sup>nd</sup> ED<sub>1</sub>D<sub>2</sub> = expected value  
T = type, A = auto, M = manual, I = internal  
E = external, B = aborted  
C = checksum  
Two spaces before X

### Store I/O - Events

Oomdyhms\_\_\_\_\_X\_0000000000\_IIIIIIIIII\_C

Where:

X = number of bytes that follow = 3+(4\*NGOE)  
0 = digital output (01-48)  
I = digital input (01-48)  
Oo = Ee for events  
Seven spaces before X

### Store Alarms

Aamdyhms\_#\_\_\_\_\_XNNNNNNN\_ED<sub>1</sub>D<sub>2</sub>\_A<sub>1</sub>A<sub>2</sub>A<sub>3</sub>A<sub>4</sub>\_ED<sub>1</sub>D<sub>2</sub>\_C

Where:

# = Channel #  
X = bytes that follow = 21  
N's = Ch Name  
ED<sub>1</sub>D<sub>2</sub> = data value  
A<sub>1</sub> = S, P, I, F  
A<sub>2</sub> = H = High, L = Low  
A<sub>3</sub> = A = Alarm, W = warning  
A<sub>4</sub> = E = Entering, L = leaving  
ED<sub>1</sub>D<sub>2</sub> = set point  
Five spaces before X

### Store Power Fails/Time Changes

Ttmdyhms\_\_\_\_\_XT\_mdyhms\_mdyhms\_C

Where:

X = bytes that follow = 16  
T = Type, F = pwr fail, T = time chng  
O = off line, B = brownout  
1<sup>st</sup> mdyhms = from time - BCD  
2<sup>nd</sup> mdyhms = to time - BCD  
Seven spaces before X

### Store Max/Min Values

Mmmdyhms\_\_\_\_\_C<sub>1</sub>\_ED<sub>1</sub>D<sub>2</sub>\_S<sub>1</sub>\_\_ED<sub>1</sub>D<sub>2</sub>\_S<sub>2</sub>\_C

Where:

C<sub>1</sub> = CPP channel #  
ED<sub>1</sub>D<sub>2</sub> = Max value  
S<sub>1</sub> = seconds for max value  
ED<sub>1</sub>D<sub>2</sub> = Min value  
S<sub>2</sub> = seconds for min value  
C = checksum