PACOM 2030

Data Files Structure

 May, 1998

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PROGRAM EXECUTION

Command line

To load and execute program from dos prompt it is necessary to type “p2030 ppppp”, where ppppp is an optional command line parameter that invokes a user setup file.

COMMAND LINE PARAMETER

Command line parameter

When a command line parameter is not specified, the system uses default parameter files (2030_dft.xxx) that exist in the current directory (xxx signifies all files with same names and different extensions) . If those files are not accessible in the current directory, default system values are used by the program. User setup files are used instead of default files when specified by the command line parameter. For example: when invoking the program when typing at the DOS prompt “ P2030 YYYY” - the system looks for a user file “YYYY.xxx” instead of “2030_dft.xxx” (.xxx is the filename extension).

The following types of user setup files can be loaded at the command prompt.

TYPOGRAPHY

Example:
2222`2`111`**2222`2222`1111**`---->*1*

- Parameters written in normal font are used by P2030 ver. 6.xx.yyy
- Sections written in **bold font** are additional parameters used by P2030 ver. 7.xx.yyy
- Parameters written in *italics font* are defined as a comments.

FILE PARAMETERS

ALARM FILE - .alm

Alarm parameters

First line: The data file is stored in ASCII format, and contains fields associated with any defined alarm source, in the order of physical alarm inputs. The valid separator for each field is the quote mark ` (char 96, 60 hex). Each alarm input requires two lines containing fields in every alarm file.

The first line consists of nine fields in the following order:

- **Logical Alarm Input Number,**
- **Alarm Ident Message,**
- **Macro Logical Number** (executed when the alarm is activated),
- and six fields containing six numbers describing **Operator Access Status,**
- **comments** generated by 2040 (if applicable).

The second line contains the following fields:

- **Alarm Auto Reset Time** (in seconds),
- **Alarm Dwell Time** (in seconds for last arm monitor when Alarm Mode is set to 1 or 2),
- a series of fields containing **Logical Camera Numbers** and **Preset Numbers** associated with the alarm input (ie: cam`prst`cam`prst`... etc.),
- **Alarm Monitors Group Number** (up to 5 groups can be defined).

Example:
First line:
2222`ALM IDENT 222 `12`65535`0`0`0`0`0`----->*1*

Second line:
1`2`111`1`222`2`333`3`444`4`555`5`**3`**

CAMERA and LINKED CAMERA FILE - .cam / .lcm

Camera and Linked Camera parameters

The data file is stored in ASCII format, and contains fields associated with any defined video source, in the order of physical video inputs. The valid separator for each field is quote mark ` (char 96, 60 hex). Each video input requires a line consisting of data fields in the camera file.

The fields are in the following order:

- **Logical Camera Input Number**,
- **Ident Message**,
- **Camera Control Decoder Port Number**,
- **Camera Control Decoder Address**,
- a field **representing Auxiliary Latching Function** for this decoder,
- six fields describing **Operator Access Status**,
- an **Alarm Number** to represent video loss functions,
- a **Gpi Logical Number**,
- a field representing source of the video,
- ten fields for **Alternate Cameras**,
- three fields for **lens control** (**Zoom**, **Focus**, **Iris** respectively),
- **Unique number** for connected Pelco 6700 switcher,
- **comments** generated by 2040 (if applicable).

Example (one continuous line)

111`CAM IDENT `12`4`240`65535`0`0`0`0`0`
111`22`**0`14`32`31`789`3`7`19`9`27`1`0`1**`-----> *1*

MONITOR FILE - .mon

Monitor parameter

The data file is stored in ASCII format, and contains fields associated with any defined video destination, in the order of physical video outputs. The valid separator for each field is quote mark ` (char 96, 60 hex). Each video output requires a line consisting of data fields in the monitor file.

The fields are in the following order:

- **Logical Monitor Output Number,**
- **Ident Message**
- six fields describing **Keyboard Access Status.**

If the setup is for a **networking** port, the **Logical Monitor Number** will be 0 and two extra fields must be filled. The first field consists of

- the **External Node Number** and the next field is
- the **Input Number** on the node to which the output is connected to
- **Camera Logical Number** which will be selected upon program start ups.

If concealed text is being used, the next field is

- the **Frame Address** of the **3170 Decoder**, then
- the address of the **Amplifier**,
- a field representing destination of the video,
- a **Gpi Logical Number**,
- **Port Number** to which Video Multiplexer is connected,
- **comments** generated by 2040 (if applicable).

Example (one continuous line):

1 `IDENT 1

`0`0`65535`0`0`0`1`2`3`**11`12`1`22`4**`--->*1*

GENERAL PURPOSE INTERFACE FILE - .gpi

GPI parameters

The data file is stored in ASCII format, and contains fields associated with any defined G.P.I. The valid separator for each field is quote mark ` (char 96, 60 hex). Each G.P.I. input requires a line consisting of fields in the gpi file.

The fields are in the following order:

- **GPI Logical Number,**
- bit pattern representing the **GPI** latched or momentary state
- six fields describing **Operator Access Status**
- **comments** generated by 2040 (if applicable).

Example:
`1`170`0`65535`0`0`0`0`---> *1*

COMMS FILE - .scp

Comm parameters

The data file is stored in ASCII format, and contains fields associated with any defined serial communication ports, in the order of physical ports. The valid separator for each field is the quote mark ` (char 96, 60 hex). Each port requires two data lines consisting of fields in every scp file.

The first line consists of the following fields in the order:

- **Port Access Identification Number (Equipment or PIN number)**
- **Several Communication Parameters,**
- **Keyboard Number** for this port,
- empty field,
- **Logical Macro Number** (**Start macro** executed when operator log in),
- **Logical Macro Number** (**End macro** executed when the last alarm is cleared),
- **comments** entered by user (P2040 utility),
- **comments** generated by 2040 (if applicable).

The second line consists of several fields containing **Logical Monitor Numbers** assigned for alarm handling routines. The monitor numbers are arranged in 5 groups divided by empty field.

Example:
first line:
`100`6171`4`1`22`33`*Test Port 1*  `---> *1*

second line:
`1`2`3`4`5`6`7`8`9`10`**0`10`11`12`13`14`15`16`17`18`19`0`20`21`22`23`24`25`26`27`28`29`0`30`31`32`33`34`35`36`37`38`39`0`40`41`42`43`44`45`46`47`48`49`0`**

MACRO DEFINITIONS FILE - .mac

Macro parameters

The data file is stored in ASCII format, and contains fields associated with any defined macro. The valid separator for each field is the quote mark ` (char 96, 60 hex).

The first line consists of:

- a **Logical Macro Number,**
- six numbers representing **Operator Access,**
- **comments** entered by user (P2040 utility),
- **comments** generated by 2040 (if applicable).

The following lines consist of:

- A **Command**
- the **Associated Parameters** that are executed as steps in a program. Every macro program is completed with an **END** statement. END is followed by the next macro program (if one is defined by the user). The number of steps in any macro program cannot be greater than 130 (this includes the END statement). All statements must be in upper case format.
- **comments** generated by 2040 (if applicable).

Example:
first line:
1`0`0`0`65535`0`0`*test macro*`----> *1*

following lines:
SWT`1`111`0`0`0`----> *1*
AUX`0`0`0`0`0`----> *2*

MIMIC PANEL FILE - .mim

Mimic panel parameters

The data file is stored in ASCII format, and contains fields associated with any defined Mimic button in order of the physical position of the switch. The valid separator for each field is quote mark ` (char 96, 60 hex). Each mimic input is allocated a line consisting of a few fields in the .mim file.

The fields are in the following order:

- **Logical Macro Number,**
- a series of fields consisting of **Logical Monitor Numbers, Camera** and **Preset Numbers** respectively,
- the **Keyboard** assigned to the button,
- the **Keyboard** to be updated flag,
- **comments** generated by 2040 (if applicable).

Example:
1`11`2222`3`22`3333`4`33`4444`5`0`0`0`0`0`0`**11`1**`---> *1*

SYSTEM FILE - .sym

System parameters

The data file is stored in ASCII format, and contains parameters used during initialization of the system. The valid separator for each field is quote mark

` (char 96, 60 hex). The sym file consists of three lines. Each line in the sym file consists of fields, which contain parameters that activate or deactivate system functions.

Line 1: The fields are in the following order:

- **Diagnostics screen update** on/off,
- **Printer** on/off,
- **System Error display** yes/no,
- **Alarm Mode**,
- default **Alarm Dwell** for last monitor in alarm mode 1 and alarm mode 2,
- **Macro Number** (when last alarm registered by system is reset),
- Print Options: **Print Assignment** Option,
- **Print Alarm** Option,
- **Print System Message** Option,
- **Print Gpi** Option,
- **Print Logging Information**,
- **Print Video Loss**,
- **Video Loss Option** (report as Video Loss with monitor information or Alarm),
- **Time Format**,
- Print Option: **Print Message** Option,
- **GPI Selection** (2013 Serial, 2013 Parallel, 2012).
- **Auto Override** Option: (When ON, an operator will automatically get control of a camera if they have a higher (or equal) priority than the operator currently using the camera).
- **Network Alarm** Option: (gives the option of whether to send alarms throughout the network)
- **Print Operator Number** Option: (force the system to print out an operator number instead of the operator's PIN),
- **High Level Interface Acknowledgement** to send ACK to the port if set.

Line 2: The fields are in the following order:

- **Camera Ident Display Horizontal Position**,
- **Camera Ident Display Vertical Position**,
- Two bytes for **Camera Ident Attributes**,
- **Monitor Ident Display Horizontal Position**,
- **Monitor Ident Display Vertical Position**,
- Two bytes for **Monitor Ident Attributes**
- The last four fields are reserved for backward compatibility.

Line 3: The fields are in the following order:

- **Camera Controllability Display Horizontal Position**,
- **Camera Controllability Display Vertical Position**,
- Two bytes for **Camera Controllability Attributes**,
- **Time & Date Display Horizontal Position**,
- **Time & Date Display Vertical Position**,
- Two bytes for **Time & Date Attributes**,
- **Alarm/Special Message Display Horizontal Position**,
- **Alarm/Special Message Display Vertical Position**,

- Two bytes for **Alarm/Special Message Attributes.**
- One byte reserved for future interface.

Example:
line one:
1`1`1`3` 33`1111`0`0`0`1`1`1`A`2`0`0`1`1`0`**1`**

line two:
0`0`0`32`0`0`0`32`0`0`0`0` (last four fields are reserved)

line three:
0`0`0`32`0`0`0`32`0`0`0`32`**0`** (last byte is reserved)

MESSAGE FILE - .msg

Message parameters

The data file is stored in ASCII text format, and contains two fields. The valid separator for each field is quote mark ` (char 96, 60 hex). There can be a maximum of 50 messages in the .msg file.

The fields are in the following order:

- **Text Message** (ASCII),
- **Print Operator PIN** with the message (activate/ deactivate).
- **comments** generated by 2040 (if applicable).

Example:

```
Macro 1 Programmed '11 `---> 1
Alarm 3 Activated `1`---> 2
etc.
```

PIN FILE - .pin

PIN parameters

The data file is stored in ASCII format. Each pin is associated with several fields located in a single line of the pin file. The valid separator for each field is quote mark ` (char 96, 60 hex).

The fields are in the following order:

- **PIN Number,**
- **Operator Number,**
- **Priority** and
- **Logical Macro Number**
- **comments** generated by operator (Pacom 2040 utility).

Example:

```
111`3`1`3`OPR 1
232`3`2`2`OPR 2
```

NIU FILE - .niu

NIU parameters

The data file is stored in ASCII format, and contains fields associated with any defined serial communication ports, in the order of physical ports. The valid separator for each field is the quote mark ` (char 96, 60 hex).

The line consists of the following fields in the order:

- **Port Access Identification Number (Equipment number)**
- **Several Communication Parameters,**
- **comments** entered by user (P2040 utility),
- **comments** generated by 2040 (if applicable).

Example:

```
1 `3075`Node 1      `---->   1
2 `3075`Node 2      `---->   2
0 `3075`            `---->   3
0 `3075`            `---->   4
5 `3075`Node 5      `---->   5
40`3075`Pacom 2040  `---->   6
41`3075`Pacom 2032  `---->   7
```

MATRIX FILE - .mtx

Matrix parameters

The data file is stored in ASCII format as a floating-point number. Each line (up to 16) of the file is associated to the row of the video matrix bays. The four fields of each line specify port numbers used to connect the video matrix bay to the system. The valid separator for each field is quote mark ` (char 96, 60 hex).

The fields are in the following order:
Up to 16 lines with 4 fields in each

- **CPU port.Expander port,**

Example:

```
5.1`5.2`5.3`5.4`
5.5`5.6`5.7`5.8`
```

FILE DESCRIPTION

ALARM FILE PARAMETERS

Alarm file

The first data line is:-

Logical alarm input number:
Any integer number from 1 to 9999.

Alarm input ident:
Alphanumeric text up to 24 characters.

Macro logical number activated when alarm triggered:
Any integer number from 1 to 999.

Operator access numbers:
1st number representing bit pattern as follows;

15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 - bits
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | x - **Opr1**
| | | | | | | | | | | | | | x - **Opr2**
| | | | | | | | | | | | | x - **Opr3**
| | | | | | | | | | | | x - **Opr4**
| | | | | | | | | | | x - **Opr5**
| | | | | | | | | | x - **Opr6**
| | | | | | | | | x - **Opr7**
| | | | | | | | x - **Opr8**
| | | | | | | x - **Opr9**
| | | | | | x - **Opr10**
| | | | | x - **Opr11**
| | | | x - **Opr12**
| | | x - **Opr13**
| | x - **Opr14**
| x - **Opr15**
x - **Opr16**

2nd number represents operators 17 to 32,
3rd number represents operators 33 to 48,
4th number represents operators 49 to 64,
5th number represents operators 65 to 80,
6th number represents operators 81 to 96,

When bit is set (1) then the particular operator can access the nominated alarm structure, if the bit is reset (0) then the operator will have no access to the defined source.

The second data line is:-

Alarm auto reset time:
Any number of seconds from 1 to 9999.

Dwell time:
Any number of seconds from 1 to 9999.

Camera logical number:
Any number from 1 to 9999.

Camera preset number:
Any number from 1 to 99.

Alarm monitors group number:
Any number from 1 to 5.

CAMERA and LINKED CAMERA FILE PARAMETERS

Logical video input number:
Any integer number from 1 to 9999.

Video input ident:
Alphanumeric text up to 24 characters.

Camera control port number:
Any integer number from 1 to 36.

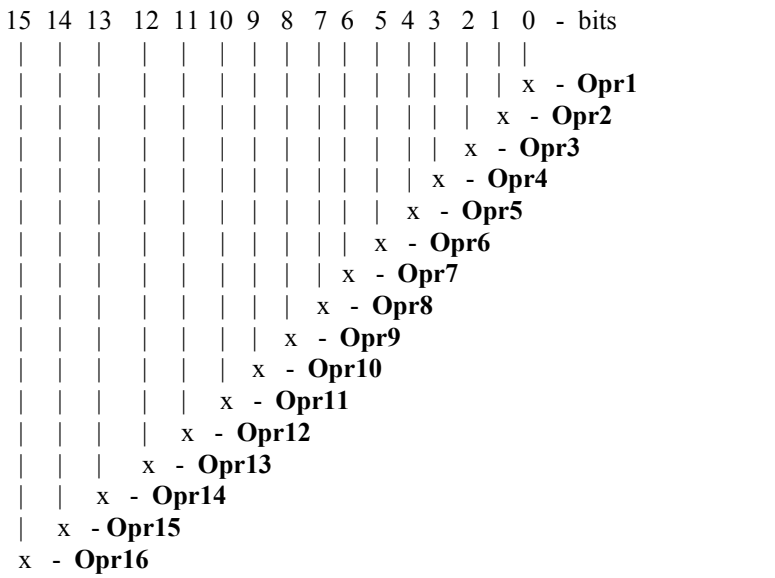
Camera control decoder address:
Any integer number from 1 to 16 (if a port expander is attached, 1 to 128).

Auxiliary latching function:
Represented by the following bit pattern.

```
 7  6  5  4 3 2  1 0  -  bit position
 |  |  |  | | |  | |
 |  |  |  | | |  | x  -  Aux 1
 |  |  |  | | |  x  - Aux2
 |  |  |  | | x  -  Aux3
 |  |  |  | x  -  Aux4
 |  |  |  x  -  Aux5
 |  |  x  -  Aux6
 |  x  -  Aux7
 x  -  Aux8
```

When bit is set (1) the selected auxiliary function has a latched action, if the bit is reset (0) then selected auxiliary function has momentary action.

Operator access numbers:
1st number representing bit pattern as follows;



2nd number represents operators 17 to 32,
3rd number represents operators 33 to 48,
4th number represents operators 49 to 64,
5th number represents operators 65 to 80,
6th number represents operators 81 to 96,

When the relevant bit is set (1) the particular operator can select the nominated video source, if the bit is reset (0) then the operator will have no access to the defined source.

Logical alarm number (representing video loss function):
Any integer number from 1 to 9999.

GPI logical number:
Any integer number from 1 to 9999.

Input source of video:
"0" is Camera
"1" is VCR
"2" is Video Multiplexer
"3" is Link Camera

Alternate cameras:
Ten fields for the logical numbers of Alternate cameras

Lens control:
(i) zoom, (ii) focus, (iii) iris.
"0" is normal, "1" is reverse

Unique number for Pelco 6700 switcher:
Any integer number from 1 to 9999.

MONITOR FILE PARAMETERS

Logical video output number:
Any integer number from 1 to 99.

Video output ident:
Alphanumeric text up to 24 characters.

Keyboard access numbers:
1st number representing bit pattern as follows;

```
15 14 13 12 11 10 9  8  7 6 5  4 3 2  1 0  - bits
 |  |  |  |  |  | |  |  | | |  | | |  | |
 |  |  |  |  |  | |  |  | | |  | | |  | | x  - Kbd1
 |  |  |  |  |  | |  |  | | |  | | |  | x  - Kbd2
 |  |  |  |  |  | |  |  | | |  | | |  x  - Kbd3
 |  |  |  |  |  | |  |  | | |  | | x  - Kbd4
 |  |  |  |  |  | |  |  | | |  | x  - Kbd5
 |  |  |  |  |  | |  |  | | |  x  - Kbd6
 |  |  |  |  |  | |  |  | | x  - Kbd7
 |  |  |  |  |  | |  |  | x  - Kbd8
 |  |  |  |  |  | |  |  x  - Kbd9
 |  |  |  |  |  | |  x  - Kbd10
 |  |  |  |  |  |  x  - Kbd11
 |  |  |  |  |  x  - Kbd12
 |  |  |  |  x  - Kbd13
 |  |  |  x  - Kbd14
 |  |  x  - Kbd15
 |  x  - Kbd16
 x  - Kbd16
```

2nd number represents keyboards 17 to 32,
3rd number represents keyboards 33 to 48,
4th number represents keyboards 49 to 64,
5th number represents keyboards 65 to 80,
6th number represents keyboards 81 to 96,

When bit is set (1) then the particular keyboard can select the nominated video output, if the bit is reset (0) then the keyboard will have no access to the defined video output.

For networking option only:-
Two extra parameters are required.

Set logical video output number to 0.

External node to be connected to:
Any integer number from 1 to 24.

Video input number on external node to which the output is connected:
Any integer number from 1 to 967.

Logical camera number to switch upon start up:
Any integer number from 1 to 9999.

For concealed text option only:-
two extra parameters are required.

Frame address of 3170 decoder:
Any integer number from 0 to 255.

Amplifier address:
Any integer number from 1 to 15.

Destination of video output:
“0” is Monitor
“1” is VCR
“2” is Video Multiplexer.

GPI logical number:
Any integer number from 1 to 9999.

Video Multiplexer control port number:
Any integer number from 1 to 36.

GENERAL PURPOSE INTERFACE PARAMETERS

GPI file

Logical gpi number:
Any integer number from **1 to 9999.**

Auxiliary latching function:
Represented by the following bit pattern.

```
 7  6  5  4 3  2  1 0  -  bit position
 |  |  |  | |  |  | |
 |  |  |  | |  |  | x  -  Aux 1
 |  |  |  | |  |  x  - Aux2
 |  |  |  | |  x  -  Aux3
 |  |  |  | x  -  Aux4
 |  |  |  x  -  Aux5
 |  |  x  -  Aux6
 |  x  -  Aux7
 x  -  Aux8
```

When bit is set (1) the selected auxiliary function has a latched action, if the bit is reset (0) then selected auxiliary function has momentary action.

Operator Access

Operator access numbers:
1st number representing bit pattern as follows;

```
15 14 13 12 11 10 9  8  7 6 5  4 3 2  1  0  - bits
 |  |  |  |  |  |  |  |  | |  |  | |  |  |  | |
 |  |  |  |  |  |  |  |  | |  |  | |  |  |  | x  - Opr1
 |  |  |  |  |  |  |  |  | |  |  | |  |  |  x  - Opr2
 |  |  |  |  |  |  |  |  | |  |  | |  |  x  - Opr3
 |  |  |  |  |  |  |  |  | |  |  | |  x  - Opr4
 |  |  |  |  |  |  |  |  | |  |  | x  - Opr5
 |  |  |  |  |  |  |  |  | |  |  x  - Opr6
 |  |  |  |  |  |  |  |  | |  x  - Opr7
 |  |  |  |  |  |  |  |  | x  - Opr8
 |  |  |  |  |  |  |  |  x  - Opr9
 |  |  |  |  |  |  |  x  - Opr10
 |  |  |  |  |  |  x  - Opr11
 |  |  |  |  |  x  - Opr12
 |  |  |  |  x  - Opr13
 |  |  |  x  - Opr14
 |  |  x  - Opr15
 |  x  - Opr16
 x  - Opr16
```

2nd number represents operators 17 to 32,
3rd number represents operators 33 to 48,
4th number represents operators 49 to 64,
5th number represents operators 65 to 80,
6th number represents operators 81 to 96,

When bit is set (1) then the particular operator can select the nominated GPI, if the bit is reset (0) then the operator will have no access to the defined GPI.

SERIAL PORTS PARAMETERS

The first data line is:-

Port identification number:
Any integer number from **1 to 9999.**

Comms parameters:
A number representing the bit pattern as follows;

```
15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 - bit position
 0  x  x  x  x  x x x 0 0 0 x x x x x
    |  |  |  |  | | |       | | | | |    Word Length
    |  |  |  |  | | |       | | | 0 0  -  5_bits
    |  |  |  |  | | |       | | | 0 1  -  6_bits
    |  |  |  |  | | |       | | | 1 0  -  7_bits
    |  |  |  |  | | |       | | | 1 1  -  8_bits
    |  |  |  |  | | |       | | |     Stop bits
    |  |  |  |  | | |       | | 0 -  1 stop_bit
    |  |  |  |  | | |       | | 1 -  2 stop_bits
    |  |  |  |  | | |       | |   Parity
    |  |  |  |  | | |       0 0   -  none
    |  |  |  |  | | |       0 1   -  odd
    |  |  |  |  | | |       1 0   -  none
    |  |  |  |  | | |       1 1   -  even
    |  |  |  |  | | |    Baud Rate
    0  0  0  0  0 1 0  - 56000
    0  0  0  0  0 1 1  - 38400
    0  0  0  0  1 1 0  - 19200
    0  0  0  1  1 0 0  - 9600
    0  0  1  0  0 0 0  - 7200
    0  0  1  1  0 0 0  - 4800
    0  1  0  0  0 0 0  - 3600
    0  1  1  0  0 0 0  - 2400
    0  1  1  1  0 1 0  - 2000
    1  0  0  0  0 0 0  - 1800
    1  1  0  0  0 0 0  - 1200
```

Keyboard number associated with this port:
Any integer number from **1 to 96.**

Empty field

Logical macro number executed on initialisation (start macro):
Any integer number from **1 to 9999.**

Logical macro number executed when the last alarm reported to this keyboard is cleared (end macro) if keyboard is attached to the port:
Any number from **1 to 9999.**

Second data line:-

Five groups of Armed monitors including reserved field:
10 logical video output numbers from **1 to 99,**
Empty field.

MACRO PARAMETERS

Macro number:-
Any integer number from **1 to 9999.**

Operator access numbers:-
1st number represents the bit pattern as follows:-

```
15 14 13 12 11 10 9  8  7 6  5 4 3  2  1 0  - bits
 |  |  |  |  |  |  |  |  | |  | | |  |  | |
 |  |  |  |  |  |  |  |  | |  | | |  |  | x  - Opr1
 |  |  |  |  |  |  |  |  | |  | | |  |  x  - Opr2
 |  |  |  |  |  |  |  |  | |  | | |  x  - Opr3
 |  |  |  |  |  |  |  |  | |  | | x  - Opr4
 |  |  |  |  |  |  |  |  | |  | x  - Opr5
 |  |  |  |  |  |  |  |  | |  x  - Opr6
 |  |  |  |  |  |  |  |  | x  - Opr7
 |  |  |  |  |  |  |  |  x  - Opr8
 |  |  |  |  |  |  |  x  - Opr9
 |  |  |  |  |  |  x  - Opr10
 |  |  |  |  |  x  - Opr11
 |  |  |  |  x  - Opr12
 |  |  |  x  - Opr13
 |  |  x  - Opr14
 |  x  - Opr15
 x  - Opr16
```

2nd number represents operators 17 to 32,
3rd number represents operators 33 to 48,
4th number represents operators 49 to 64,
5th number represents operators 65 to 80,
6th number represents operators 81 to 96,

When bit is set (1) then the particular operator can select the nominated macro, if the bit is reset (0) then the operator will have no access to the macro.

Program Statements and description

Command	Description
ARM`alm	Arm alarm input.
AUX`cam`aux`swt	Switch on/off auxiliary function.
CMC`mnum	Execute a selected macro while keeping the current one running.
DAR`alm	Disarm alarm input.
DWL`sec	Time spent in program step. Next step is executed when dwell time has elapsed.
END	Terminate macro execution (end of program mark).
GPI`gpi`aux`swt	Switch on\off GPI output.
LOP	Loop back to first statement.
MDW`cam	Tilt down camera.
MUP`cam	Tilt up camera.
MVL`cam	Pan camera left.
MVR`cam	Pan camera right.
PRS`cam`prs	Move to preset position.

RDW`lim	Execute next step when random time has elapsed.
RPR`cam`plm	Move to randomly selected preset.
SMC`mnum	Terminate current macro and execute selected one.
STP`cam	Stop decoder movements.
SWT`mon`cam	Switches a camera to a monitor.
TIM`hh:mm:ss	Go to next statement at this time.
SPM`mnum	Stop Macro execution.
DRR`frmalm`anum	Disarm range of alarms.
ARR`frmalm`anum	Arm range of alarms.
RCG	Reset global alarms for armed operators.
CCO`mon	Copy assignment of current monitor to selected one.
?GP`gpi`aux`swt	Is GPI in a selected state.
?SW`mon`cam	Is camera switched to monitor.
GTO`num	Go to step number.
COM`mon`mon	Copy monitor assignment.
DAT`yy:mm:dd	Step if date.
DOW`dnum	Step if day of week.
COC`mon	Copy monitor assignment to current monitor.
MSG`msgnum	Print selected message.
DAK`alm`opr	Disarm alarm for keyboard.
AAK`alm`opr	Arm alarm for keyboard.
TOR`mon`cam	Similar to SWT, but while this Step Command is running, the FWD and BWD buttons on the 2035 keyboard will only switch one at a time to the next/previous camera programmed into the tour.
TPR`mon`cam	Same as TOR but each camera in the tour will automatically be repositioned to preset position one. If preset position one has not been programmed the camera will remain in the current position.
RAK`kbnum	Resets all alarms on a 2035 keyboard.
SNT`mnum	Exactly the same as SMC (stops the macro currently running and starts a new macro) ["mnum" is the number of the new macro].
CSN`mnum	Exactly the same as CMC (starts another macro running. Does not stop the macro currently running)
SPS`mnum	Exactly the same as SPM (stops a macro).
KOF`kbnum	Logs off a keyboard.
PMS`cam`pmon	Same as SWT (switches a camera to a monitor). However PMS requires the physical number of the monitor, not the logical number.
GPM`gpi`aux`range	Triggers a range of relays on-and-off.
CLG`group	Clear previously defined operator group.
DGO`group`opr	Assign (define) operator to the group.
AAG`alm`group	Arm alarm for operators assigned to the group.
DAG`alm`group	Disarm alarm for operators assigned

	to the group.
RAM`alm	Reset alarm.
?AT`alm	Is alarm triggered.
CSM`pmon	Clear special message (alarm message) on monitor (physical number).
MPT`cam`num	Start execute camera pattern.
SPT`cam	Stop execute camera pattern.
?AX`cam`aux	Is AUX function activated.
MID`pmon`fnct	Control monitor (physical number) ident display fnct = 0 – toggle on/off fnct = 1 – ident on fnct = 2 – ident off.

where;

alm	- logical alarm number,
mon	- logical output number,
cam	- logical input number,
opr	- operator number from 1 to 96,
aux	- auxiliary number from 1 to 8,
swt	- number 0 for off and 1 for on,
prs	- preset number from 1 to 99,
gpi	- GPI number,
hh:mm:ss	- time format,
sec	- number of seconds,
mnum	- logical macro number,
lim	- time limit for random functions,
plm	- preset limit number,
frmalm	- from alarm number,
anum	- number of alarms to be armed,
msgnum	- the number of the message to be printed,
kbnum	- keyboard number,
dnum	- day number from 0 to 6 (0 for Sunday),
yy:mm:dd	- date format.
range	- integer number (1-31) indicating how many to be done after the logical number
pmon	- physical monitor number

MIMIC PANEL PARAMETERS

Mimic file

Logical macro number:
Any integer number from **1 to 9999.**

Up to 5 monitors and cameras with presets as follows;

Logical monitor number:
Any integer number from **1 to 99.**

Logical camera number:
Any integer from **1 to 9999.**

Preset number:
Any integer number from **1 to 99.**

Keyboard number:
Any integer number from **1 to 96.**

Flag indicating that keyboard has to follow mimic panel.

SYSTEM PARAMETERS

System file

First line:-

Diagnostics:
yes = 1, no = 0.

Printer installed:
yes = 1, no = 0.

Display system error messages:
yes = 1, no = 0.

Alarm mode:
Any number from **1 to 4.**

Default alarm dwell:
Time in seconds from **1 to 99.**

Alarm termination macro number.
Any integer number from **1 to 9999.**

Print Options:

Print monitor assignments:
yes = 1, no = 0.

Print alarm information:
yes = 1, no = 0.

Print system error messages:
yes = 1, no = 0.

Print GPI functions:
yes = 1, no = 0.

Print logging information:
yes = 1, no = 0.

Print video loss information:
yes = 1, no = 0.

Display video loss status information:
Options:- **A, C, V** followed by number from **1 to 99**
Where:-
A - Display video loss on alarm monitor.
V - Display video loss on selected monitor.
C - Display video loss on operator (current) monitor.

Time format:
Any integer number from **0 to 9.**
An example of selectable time formats are shown below.

TIME FORMATS

0 - 26/09/09 17:56:*
1 - 09/26/92 17:56:*
2 - 26/09/92 05:56:* PM
3 - 09/26/92 05:56:* PM
4 - 26th Sep 92 17:56:*
5 - 26th Sep 92 05:56 PM
6 - 26th September 92 17:56
7 - September 26th '92 17:56
8 - Tue 22nd Sep '92 17:56
9 - Tue 22nd Sep 92 05:56:PM

where, ***** - indicates seconds field included.

Print special message option:
yes = 1, no = 0.

Selection of the GPI unit:
0 - Pacom 2013 Serial communication,
1 - Pacom 2013 Parallel communication,
2 - Pacom 2012.

Auto override control:
yes = 1, no = 0.

Network alarm activated:
yes = 1, no = 0.

Print operator numbers:
yes = 1, no = 0.

High Level Acknowledgement:
yes = 1, no = 0.

Second Line:-

Camera display horizontal position:
Any integer number from **0 to 23.**

Camera display vertical position:
Any integer number from **0 to 11.**

Camera display attributes 0:
See table below.

Camera display attributes 1:
See table below.

Monitor display horizontal position:
Any integer from **1 to 23.**

Monitor display vertical position:
Any integer number from **0 to 11.**

Monitor display attributes 0:
See table below.

Monitor display attributes 1:
See table below.

Third Line:-

Camera controllability display horizontal position:
Any integer number from **0 to 23.**

Camera controllability display vertical position:
Any integer number from **0 to 11.**

Camera controllability display attributes 0:
See table below.

Camera controllability display attributes 1:
See table below.

Time & date display horizontal position:
Any integer number from **0 to 23.**

Time & date display vertical position:
Any integer number from **0 to 11.**

Time & date display attributes 0:
See table below.

Time & date display attributes 1:
See table below.

Special message and alarm display horizontal position:
Any integer number from **0 to 23.**

Special message and alarm display vertical position:
Any integer number from **0 to 11.**

Special message and alarm display attributes 0:
See table below.

Special message and alarm display attributes 1:
See table below.

Attribute 0:-

Attribute 0

```
bit   7  6  5  4  3  2  1  0
      0  0  |  |  |  |  |  |     Character brightness
            |  |  |  0  0  0  - black
            |  |  |  0  0  1
            |  |  |  0  1  0
            |  |  |  0  1  1
            |  |  |  1  0  0
            |  |  |  1  0  1
            |  |  |  1  1  0
            |  |  |  1  1  1  - white
            |  |  |    Blinking section
            |  |  0 - no blinking
            |  |  1 - blinking
            |  |    Character size
            0  0  - Size 1
            0  1  - Size 2
            1  0  - Size 3
            1  1  - Size 4
```

Attribute 1:-

Attribute 1

```
bit   7  6  5  4  3  2  1  0
      0  0  |  |  |  |  |  |     Background brightness
            |  |  |  0  0  0  - black
            |  |  |  0  0  1
            |  |  |  0  1  0
            |  |  |  0  1  1
            |  |  |  1  0  0
            |  |  |  1  0  1
            |  |  |  1  1  0
            |  |  |  1  1  1  - white
            |  |  |   Background format
            |  0  0 - no background
            |  0  1 - black overlay
            |  1  0 - square background
            |  1  1 - solid background
            |  Display On/Off
            0 - Off
            1 - On
```

MESSAGE PARAMETERS

Message file

Text Message:
Any ASCII character, up to 24 characters.

Print operator PIN number with message :
Yes = 1; No = 0.

PIN PARAMETERS

Pin file

Pin Number:
Any integer number from **100 to 9999.**

Operator number:
Any integer number from **1 to 96.**

Priority:
Any integer number from **1 to 9999.**

Logical macro number:
Any integer number from **1 to 9999.**

NIU PORTS PARAMETERS

NIU file

The data line is:-

Port identification number:
Any integer number from **1 to 9999.**

Comms parameters:
A number representing the bit pattern as follows;

```
15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 - bit position
 0  x  x  x  x  x x x 0 0 0 x x x x x
    |  |  |  |  | | |       | | | | |    Word Length
    |  |  |  |  | | |       | | | 0 0  -  5_bits
    |  |  |  |  | | |       | | | 0 1  -  6_bits
    |  |  |  |  | | |       | | | 1 0  -  7_bits
    |  |  |  |  | | |       | | | 1 1  -  8_bits
    |  |  |  |  | | |       | | |     Stop bits
    |  |  |  |  | | |       | | 0 -  1 stop_bit
    |  |  |  |  | | |       | | 1 -  2 stop_bits
    |  |  |  |  | | |       | |   Parity
    |  |  |  |  | | |       0 0   -  none
    |  |  |  |  | | |       0 1   -  odd
    |  |  |  |  | | |       1 0   -  none
    |  |  |  |  | | |       1 1   -  even
    |  |  |  |  | | |    Baud Rate
    0  0  0  0  0 1 0  - 56000
    0  0  0  0  0 1 1  - 38400
    0  0  0  0  1 1 0  - 19200
    0  0  0  1  1 0 0  - 9600
    0  0  1  0  0 0 0  - 7200
    0  0  1  1  0 0 0  - 4800
    0  1  0  0  0 0 0  - 3600
    0  1  1  0  0 0 0  - 2400
    0  1  1  1  0 1 0  - 2000
    1  0  0  0  0 0 0  - 1800
    1  1  0  0  0 0 0  - 1200
```

MATRIX PARAMETERS

Matrix file

CPU port and Expander port:
Floating-point number.