

IQMPAR MPEG Picture Quality Monitor



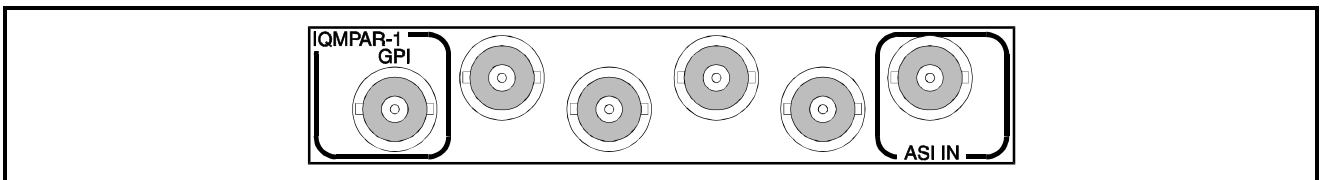
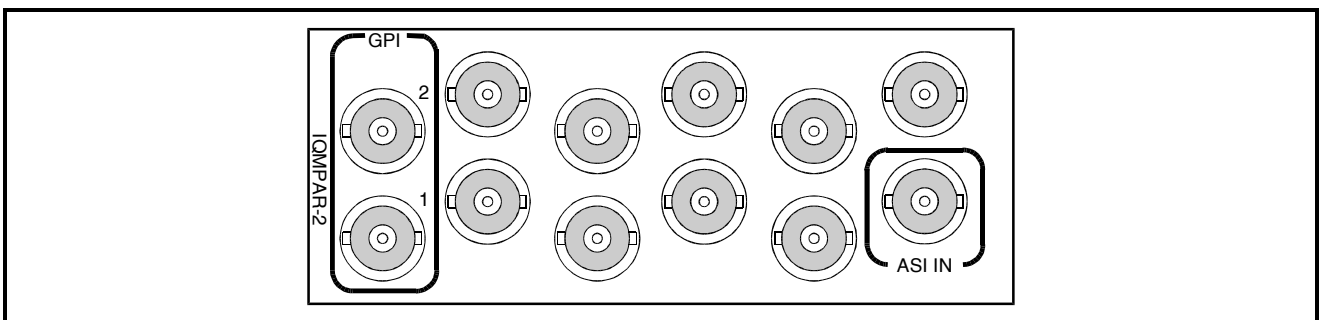
Module Description

The Picture Appraisal Rating is a single ended monitoring system for artefacts introduced by MPEG compression systems. Requiring no knowledge of the source material it can be placed anywhere in a broadcast chain where compressed signals are present. Three Programs may be monitored simultaneously, though the maximum total bit-rate must not exceed 14 Mbits/sec. Due to the nature of video processing, the unit works with unscrambled streams only. Scrambled streams are flagged and no attempt of processing will be made.

The input is ASI, transformer coupled and equalised to > 200 m of high quality cable. The status of the input is indicated by carrier presence and a transport stream sync check.

All monitored parameters are available for access over the RollCall remote control network. The RollCall logging utility enables selected events to be logged on a remote server(s). Two GPI outputs are also provided. These may be configured to report input loss and PAR errors.

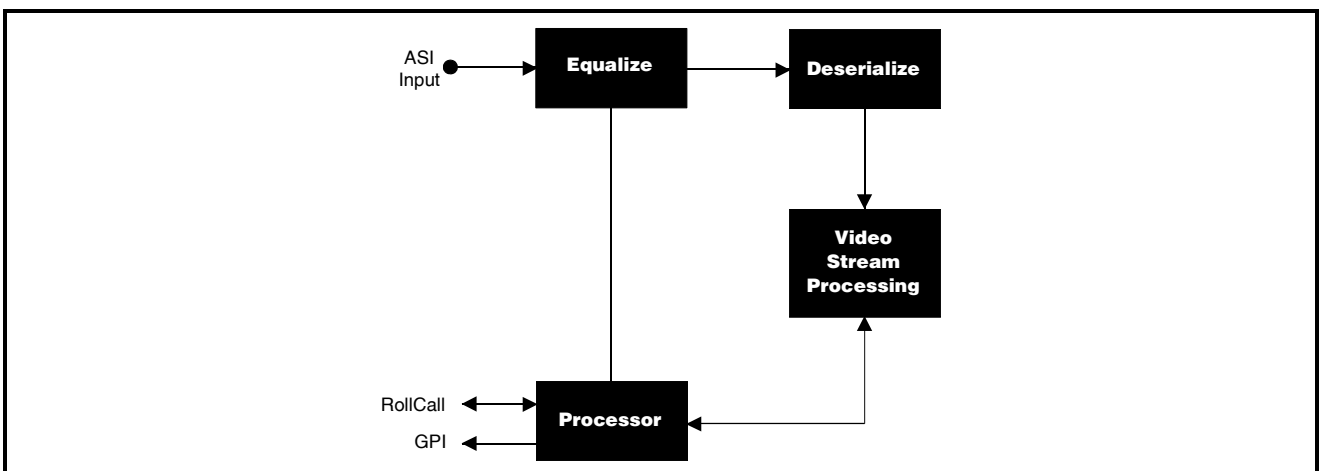
REAR PANEL VIEW



Versions of the module cards available are:

- | | | |
|----------|----------------------------|---------------------|
| IQMPAR-2 | MPEG 2 PAR Quality Monitor | Double width module |
| IQMPAR-1 | MPEG 2 PAR Quality Monitor | Single width module |

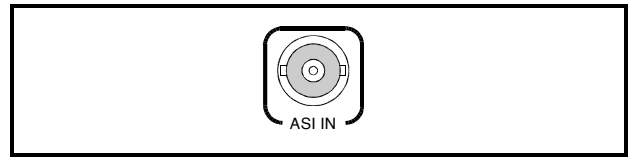
BLOCK DIAGRAM



INPUTS AND OUTPUTS

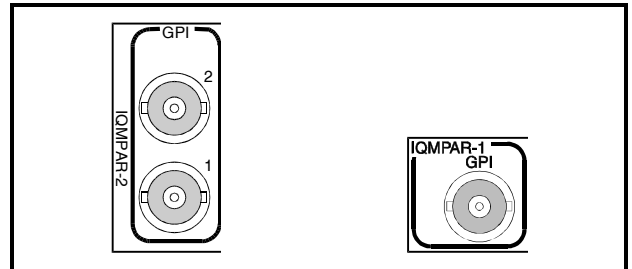
ASI INPUT

The ASI input to the unit is made via this BNC connector which terminates in 75 Ohms.

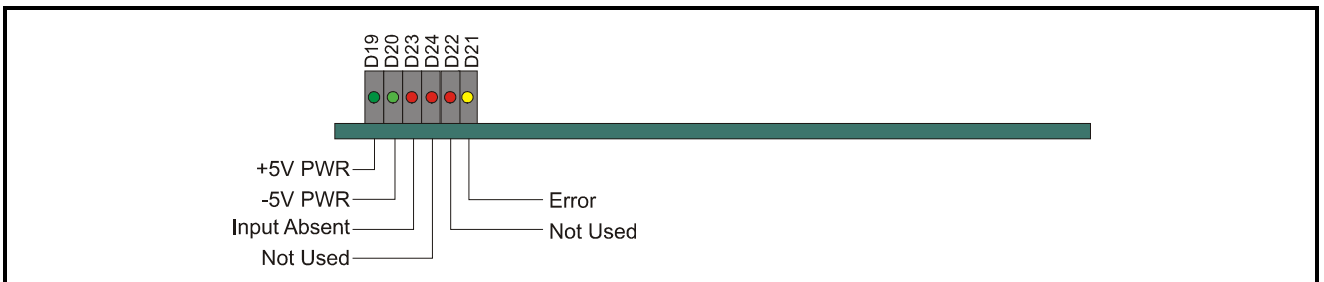


GPI OUTPUTS 1 and 2 (-2 version only)

These GPI ports are a closed contact type. When enabled they are configurable to report input loss and PAR errors.



CARD EDGE CONTROLS



LED INDICATORS

D19

When illuminated, D19 indicates that the +5 V power supply is present.

D20

When illuminated, D20 indicates that the -5 V power supply is present.

D21

When illuminated, D21 indicates that the Input signal is not present.

D22

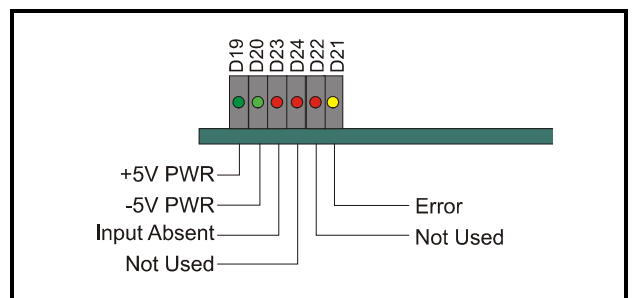
This LED has no function and is permanently illuminated.

D23

This LED has no function

D24

When illuminated, D24 indicates that an error is present.



MENU DETAILS via PC RollCall REMOTE CONTROL

Errors Menu

This menu gives a summary of all the errors that the module is capable of monitoring.

Each category has:

A Status window

This indicates if the category of error is currently in error or not. The status can be either **“FAIL”** or **“OK”**

A Show Stats (statistics) check box

Checking this box will cause the current status and number of errors flagged to be shown in the **Information** window in the top right-hand corner. If more than one box is checked the information window will cycle through the selected items.

A Reset Stats (statistics) button

Pressing this button will cause the error count to be zeroed.

The following error categories are listed:

All Errors

This is the logical OR of all the other categories.

ASI RVS Errors

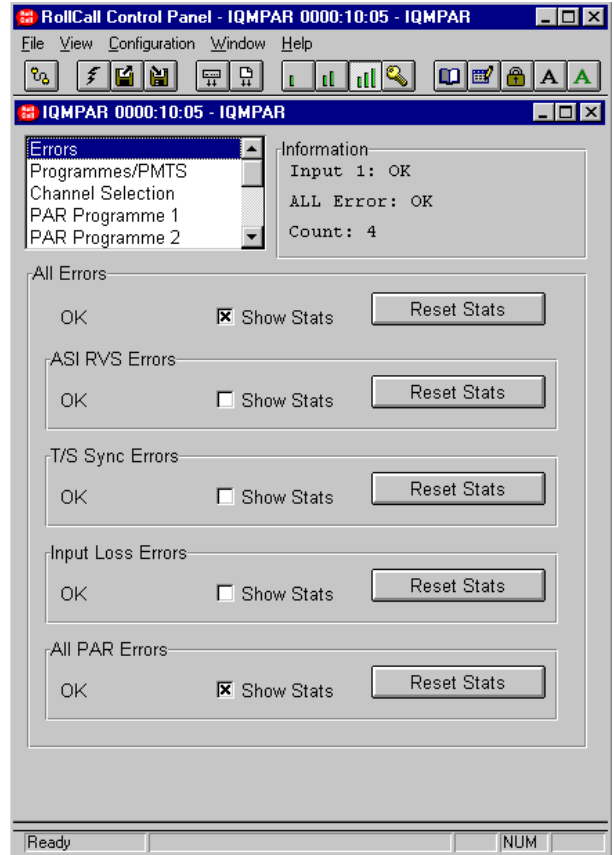
Receive Violation Signal. This error occurs when illegal characters are detected on the input stream, which means that the 10B/8B conversion cannot be done correctly.

T/S Sync Errors

This error occurs if a TS Sync word character (i.e. 0x47 hex) has not been found at the beginning of a Transport packet.

Input Loss Errors

This error occurs if the data carrier disappears on the input.



ALL PAR Errors

Any of the PAR channel has reported a violation of the programmed PAR thresholds.

NOTE:

If Rollcall is not operated in user levels of engineer and above access to some menu structures is not possible.

Programs/PMTS Menu

This menu shows the services present in the transport stream and the components that comprise each one.

The menu has the following fields:

Transport Stream ID

This field shows the Transport Stream ID for the input being monitored.

Programs

This window displays information extracted from the PAT indicating which Programs (services) are contained in the transport stream being monitored. The format of the information is determined by the option selected in the **Service Labels** field (see below). When a Program is selected, by clicking on it with the cursor, the components comprising it are displayed in the **ES PIDs** window.

ES PIDS

This window shows the PID and type of all the Elementary Streams which make up the Program selected in the **Programs** window.

PCR PID

This field shows the PID on which the PCR can be found for the currently selected Program.

Service Labels

This item allows the Service Labels (wherever they are used) to be displayed in two ways.

The options are:

a) Service Names

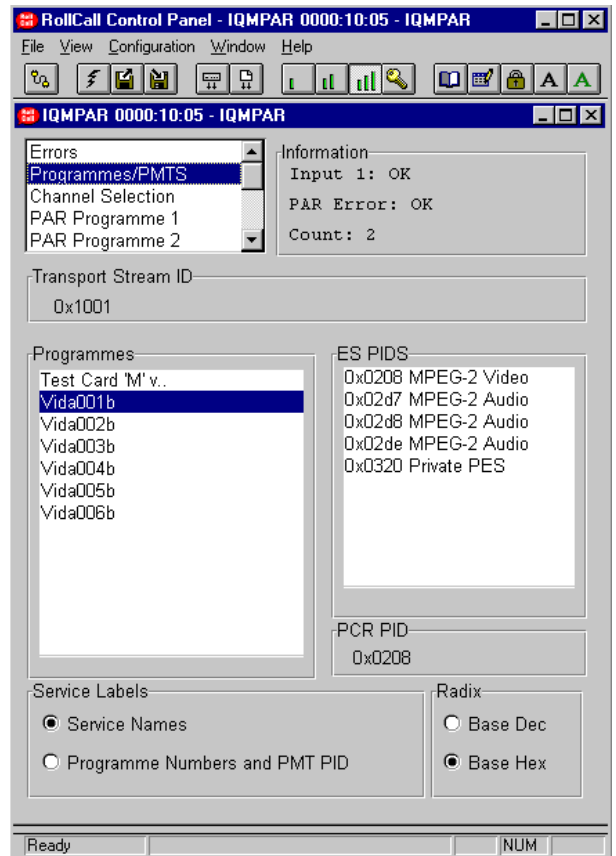
This causes the program descriptors, as found in the Service Descriptor Table (SDT) to be shown (see illustration)

b) Program Numbers and PMT PID

This causes the Program numbers to be displayed, each together with the Packet ID on which the Program Map Table (PMT) for the Program should be found. This information is extracted from the Program Association Table (PAT).

Radix

This field allows the user to select the number base for the display of program numbers and PIDs, in decimal (Base 10 or Dec) or in hexadecimal (Base 16 or Hex)




Channel Selection


This menu allows Programs to be selected for monitoring.

Available Programs

This field lists the Programs available for monitoring.

The Program should be selected using the cursor causing the name to be highlighted. e.g. Vida005b in the example opposite.

Click on the  button to select the Program. The name will then appear in the Selected Program field.

To remove a Program from the Selected Program list, select the name and use the  button.

Selected Programs

This field will display the Programs selected for monitoring.

Set Selection

Click on this button to accept the Program(s) in the Selected Programs field. The name(s) will then disappear from the Selected Program field and will be shown in the PAR Program 1, 2 and 3 fields. The PAR measurement will start for the corresponding channel.

PAR Program 1, 2 and 3

Each of the three windows display the following information for a particular video program:

Program name

This field indicates the Program name as defined in the Program Allocation Table (PAT). "not found in SI" indicates there is no valid program detected on that channel.

PAR measurement state


Running – Indicates the measurement is processed.

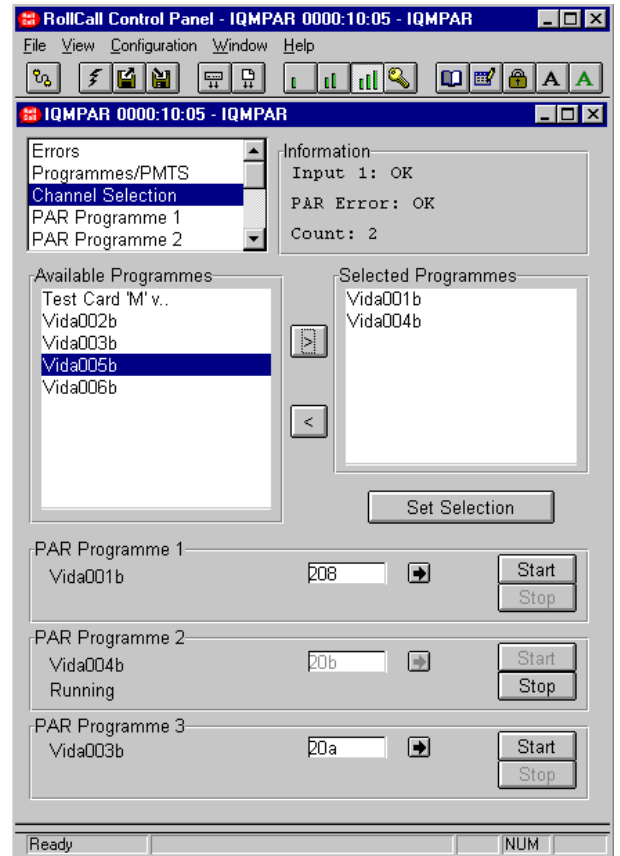
Start

Clicking on this button will start the PAR measure.

Stop

Clicking on this button will stop the PAR measure.

Direct selection field: Enter the program number and click on the button  to validate the program to be measured. Note that this function is disabled when the measurement is "Running". Click on Stop before changing it. The radix of the Program number depends on the setting in the "Programmes/PTS" menu.



PAR Program 1, 2, 3.

These items will display the monitoring parameters of the selected PAR Program.

Program name (Vida004b in example opposite)
 This field indicates the Program name as defined in the Program Allocation Table (PAT).
 "not found in SI" indicates there is no valid program detected on that channel.

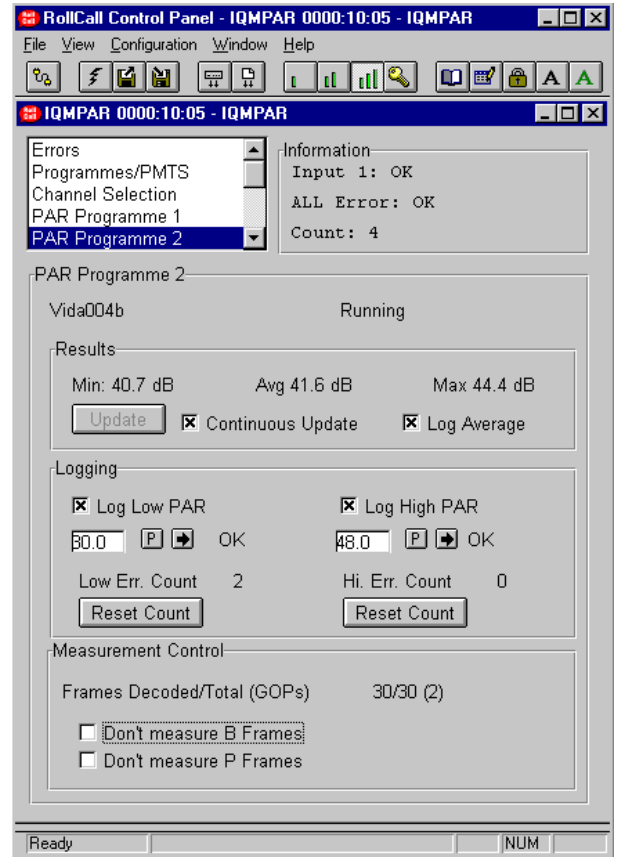
PAR measurement state
 Running (in example opposite) – Indicates the measurement is processed.

Results
 The minimum, average and maximum values of PAR will be indicated.

Update
 Selecting this item will update the above values.
*Note that this function toggles with the **Continuous Update** function.*

Continuous Update
 When this item is selected the above values will be continuously updated.
*Note that this function toggles with the **Update** function.*

Log Average
 When selected the average values of PAR will be available for logging over the RollCall network.



Logging


This field allows the selection of the following:


Log Low PAR

When this box is checked and the PAR value falls below the value shown in the numeric window, this error, expressed as Time in seconds will be logged over the RollCall network.

A value may be entered in the numeric window that represents the lower threshold of the PAR value.

A value between 0 (lowest quality) and 48 (highest quality) may be entered.

 Selecting this button will enable the new value entered.


 Selecting this button will return the value to the Preset (default) setting.


Log High PAR

When this box is checked and the PAR value rises above the value shown in the numeric window, this error, expressed as Time in seconds will be logged over the RollCall network.

A value may be entered in the numeric window that represents the upper threshold of the PAR value.

A value between 0 (lowest quality) and 48 (highest quality) may be entered.

 Selecting this button will enable the new value entered.

 Selecting this button will return the value to the Preset (default) setting.

Low Err. Count

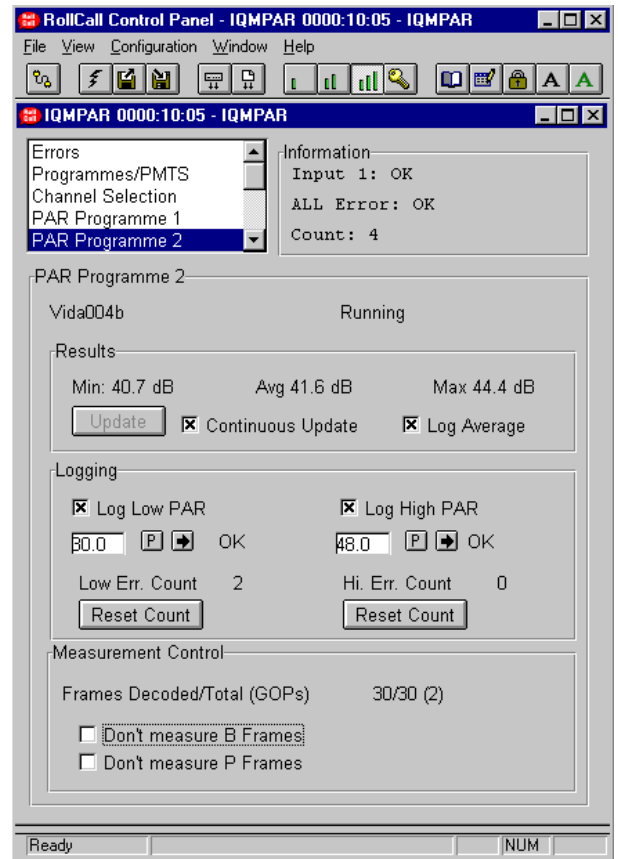
This error count is the number of seconds where one or more frames have gone below the low threshold setting.

Hi Err. Count

This error count is the number of seconds where one or more frames have gone above the high threshold setting.

Reset Count

Resets the appropriate count to zero.



Measurement Control

Decoded Frames/Total (GOP)

The display shows the number of frames processed during a display refresh period. It is grouped by GOPs and is displayed as a/b(c) with:

- a = number of frames decoded in this group
- b = number of frames present in this group
- c = number of GOP's present in this group

The display is usually refreshed once per second. If there is no GOP start within a second it may take up to 5 seconds before it is refreshed again. The frame count is only reset at the GOP start.

If the processor is overloaded (i.e. the sum of video ES bitrates exceeds the maximum bitrate of 14 Mbits/s), not all received frames may be processed and some frames may be dropped. This is indicated by the number of decoded frames being less than the number of total frames (eg 20/24(2)). You than may choose to drop either P or B frames.

Don't Measure P / B Frames

Normally both the B and P frames are measured. This field allows the measurement of the B and P frames to be turned OFF by checking the **Don't Measure B Frames** or the **Don't Measure P Frames** boxes. We advise not to measure P frames before B frames as more problems generally occur in the B frames. *Note that I-frames cannot be dropped as they are used in the PAR process.*

Input Menu

Input Label

This field allows the user to assign a name to the input and to view its status.

GPI Menu

This menu controls the configuration of the GPI ports available.

The menu has the following fields:

Configure GPI1 and GPI2

Note that for the single width version only GPI1 is available.

The options are:

Off – This will disable the GPI port.

Output – When checked this will configure the GPI port as an output controlled by the options selected in the **GPI Output Trigger** field below.

If the invert box is *not* checked then GPI 1 will give a **LOW** output with no error and a **HIGH** output when an error occurs. Checking the invert box will give the opposite behaviour

GPI Output Trigger 1 and 2

This field controls which errors can change the state of the GPI port when it is configured as an output.

The options are:

Input Loss

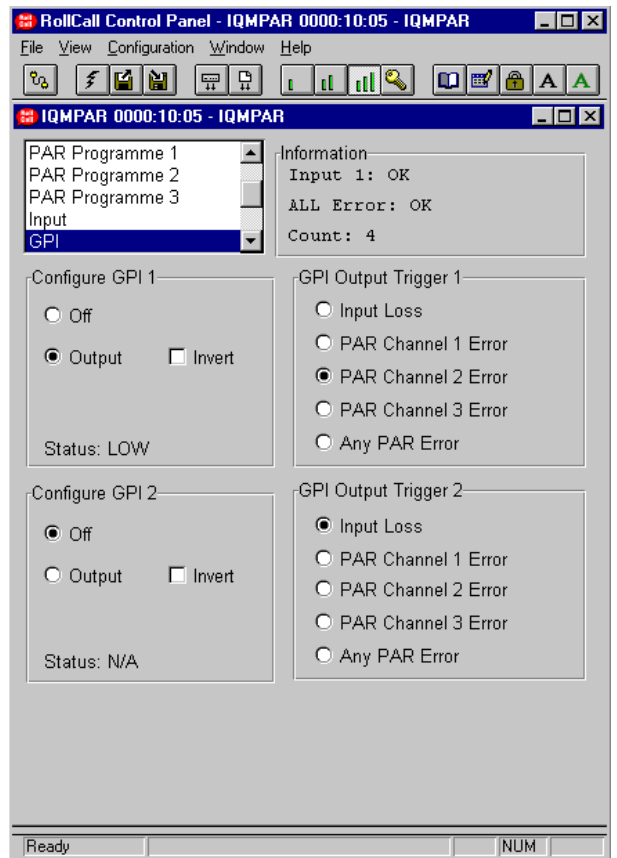
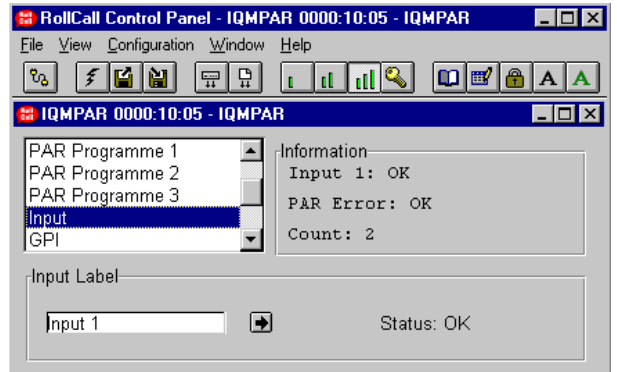
When checked, this will signal an error on the GPI output when no data carrier is detected on input A.

PAR Channel 1, 2, 3 Error

The selected PAR channel has reported an violation of the programmed thresholds

Any PAR Error

Logical OR of all enabled PAR channels threshold violation.



Logging Menu

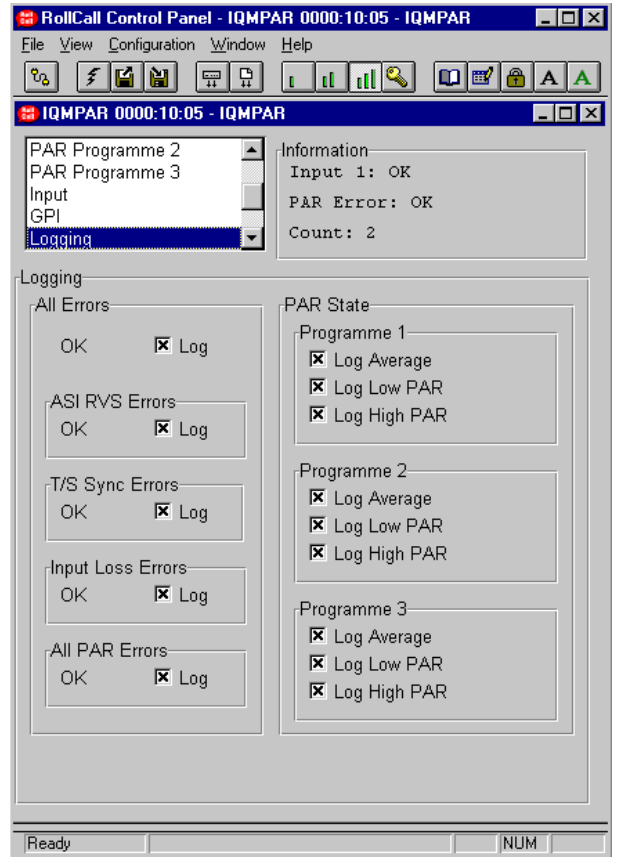
This menu summarises all Logging options of the module.

All Errors

Any Error described in the ERRORS MENU will be logged to the RollCall Network by selecting the Checkbox.

PAR State

This section is a collection of the Log functions distributed over the three PAR programs 1, 2 and 3 menus.



Memories Menu

This menu allows the complete configuration of the module to be stored or retrieved in one of 8 locally held configuration memories.

The menu has the following fields:

Load From Memory

This field contains one button for each of the 8 locally stored configuration memories. Pressing one of these buttons causes all of the control parameters of the module to be set from the selected memory.

N.B. Loading from one of the configuration memories will cause all of the current parameter settings to be lost. No warning is given when this happens. If you wish to return to the current state the settings must first be saved in another of the configuration memories (see Save To Memory).

Save To Memory

This field contains one button for each of the 8 locally stored configuration memories. Pressing one of these buttons causes the current state of all the control parameters of the module to be saved to the selected configuration memory.

Restore Default Configuration


Pressing this button causes all of the control parameters of the module to be set to the factory default settings.

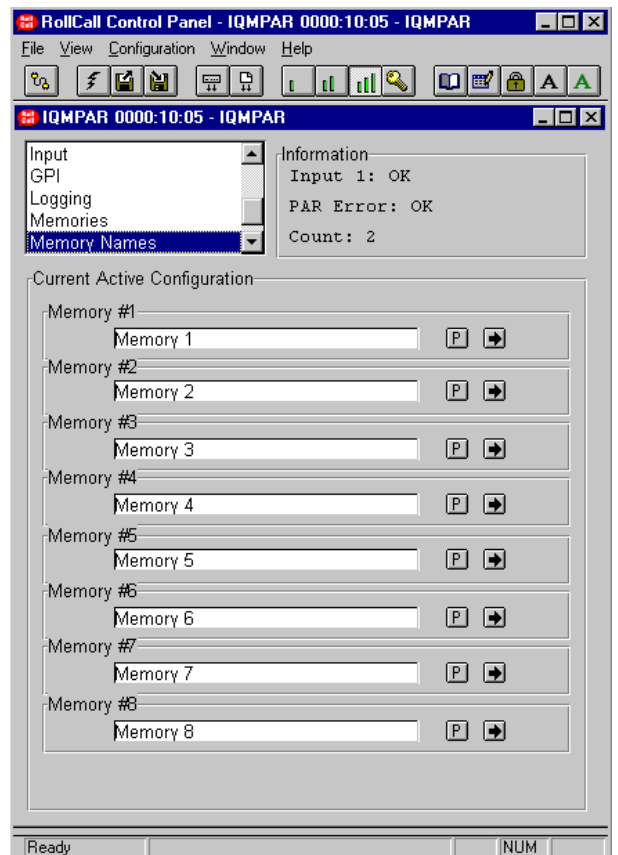
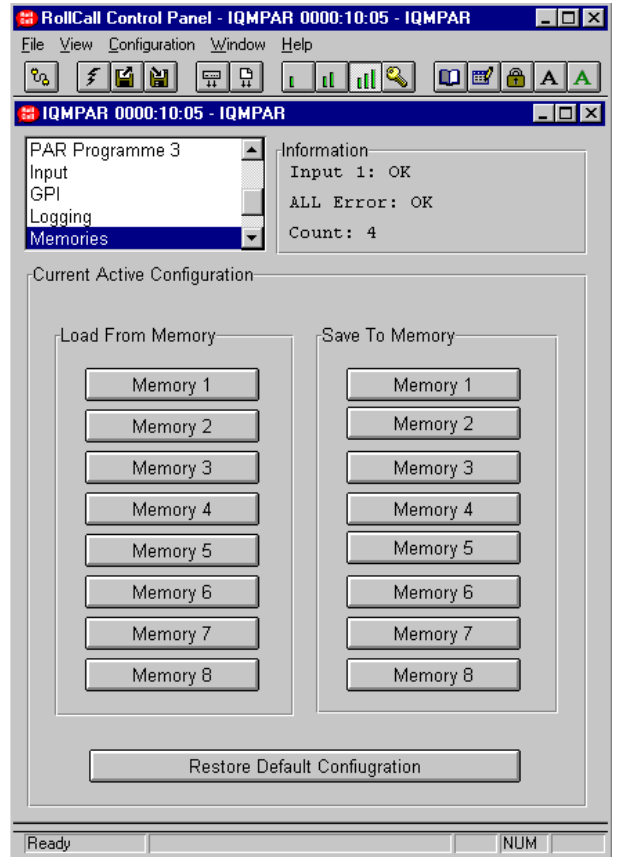
Memory Names

This allows the naming of the four memory locations.

To change a name type the new name in the text

area and select  (return)

Selecting  (Preset) returns to the default names.

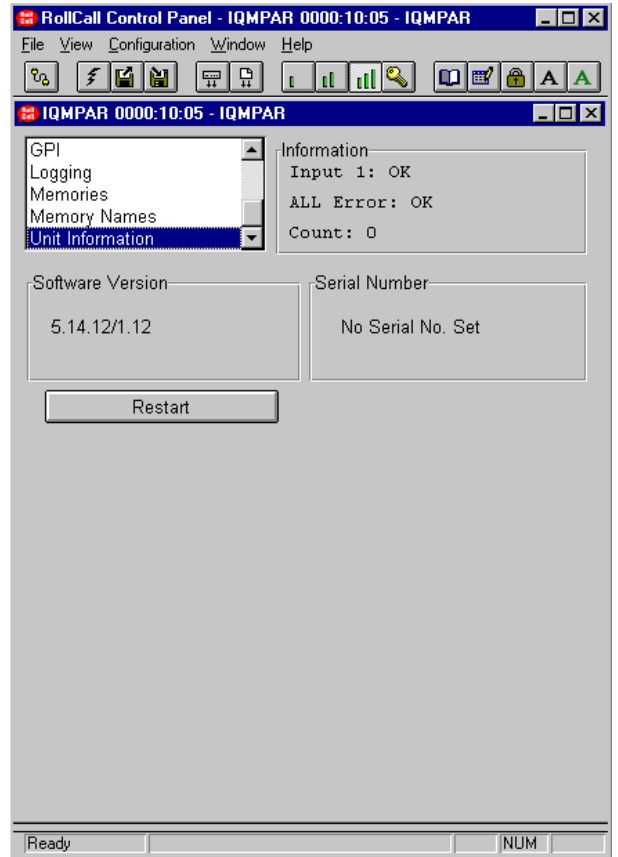


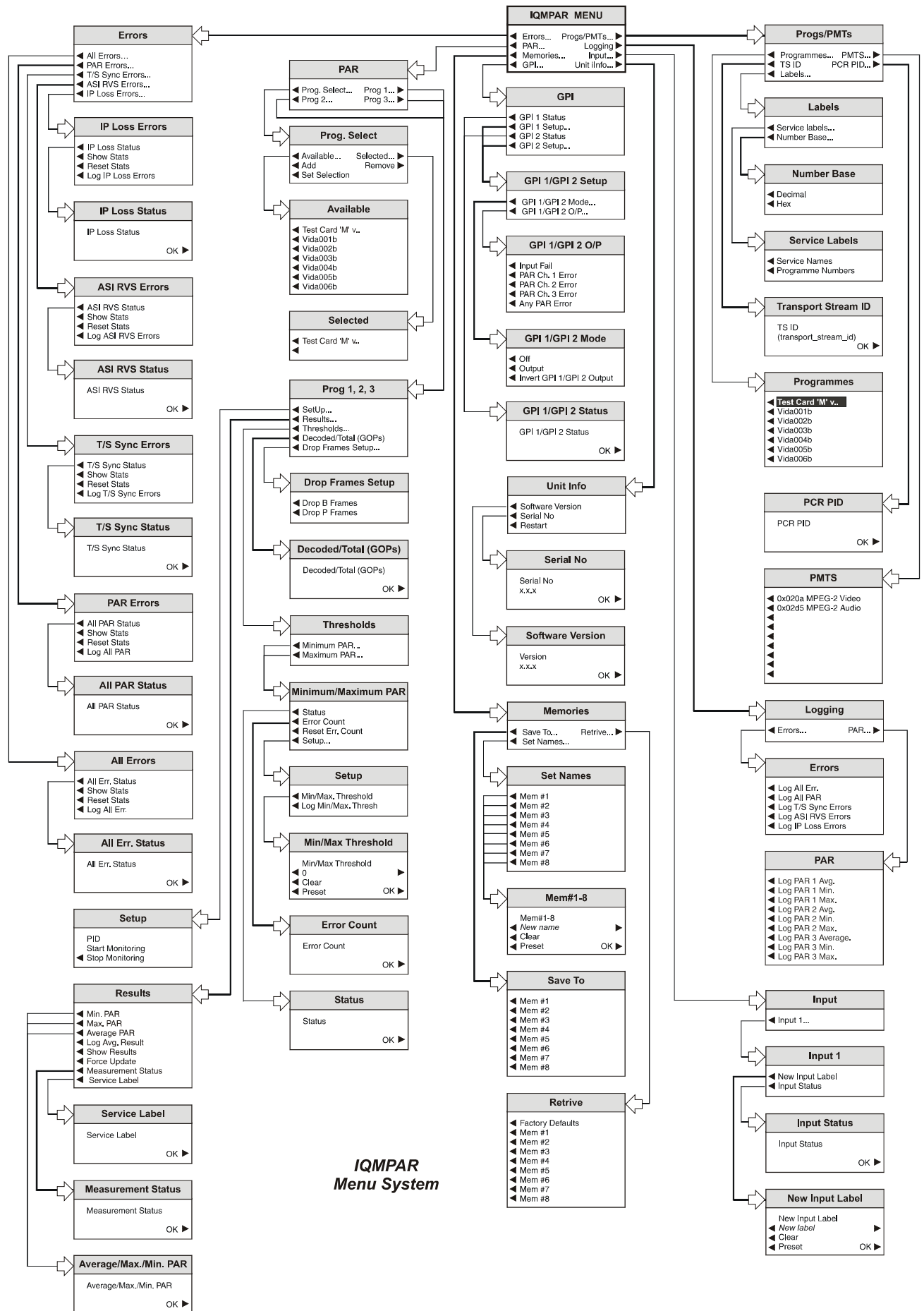
Unit Information

This menu shows the serial number of the module and the version of software that is loaded.

Restart

Selecting this button will reboot the module.





IQMPAR Menu System

Operating the IQMPAR from an IQ Modular Active Front Panel via Rollcall

MENU DETAILS

(see IQMPAR Menu System on previous pages)

MAIN MENU

The main or top level menu allows various sub-menus to be selected by pressing the button adjacent to the required text line.

Note that where a menu item is followed by three dots (...) this indicates that a further sub-menu may be selected.

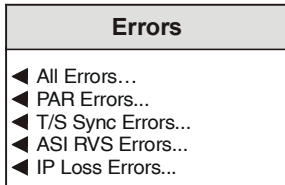
Whenever a menu item is selected the parameters of that selection will be displayed in the Information window of the front panel. Where the selection is purely a mode selection and does not enable a sub-menu, the text will become reversed (white-on-black) indicating that the mode is active. If the mode is not available for selection the text will remain normal.

The IQMPAR may be operated using an **IQ MODULAR** Active Front Panel via Rollcall™ system. The functionality will be the same as using the Template menus.

IQMPAR MENU	
◀ Errors...	Progs/PMTs... ▶
◀ PAR...	Logging ▶
◀ Memories...	Input... ▶
◀ GPI...	Unit info... ▶

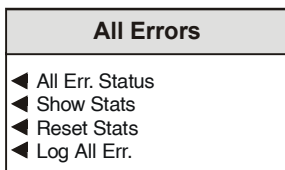
◀ **Errors...**

The errors menu has a list of the categories of error which can be displayed in the information window.

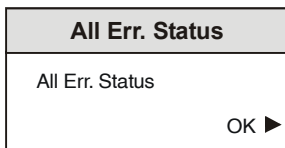


◀ **All Errors**

This is the logical OR of all the other categories



◀ **All Err. Status**



This indicates if the category of error is currently in error or not. The status can be either "FAIL" or "OK"

◀ **Show Stats**

This item will cause the current status and number of errors flagged to be shown in the **Information** window.

◀ **Reset Stats**

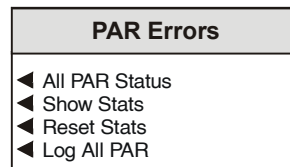
This item will cause the error count for all the error categories to be zeroed.

◀ **Log All Err**

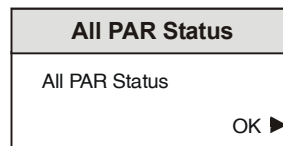
Any Error described in the Errors Menu will be logged to the RollCall Network by selecting the Checkbox.

◀ **PAR Errors**

This item allows information about any of the PAR channels that has reported a violation of the programmed PAR thresholds.



◀ **All PAR Status**



This indicates if the category of error is currently in error or not. The status can be either "FAIL" or "OK"

◀ **Show Stats**

This item will cause the current status and number of errors flagged to be shown in the **Information** window.

◀ **Reset Stats**

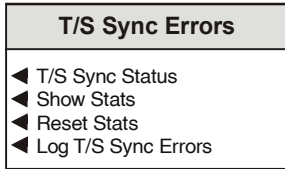
This item will cause the error count to be zeroed.

◀ **Log All PAR**

By selecting this item any PAR error will be logged to the RollCall network.

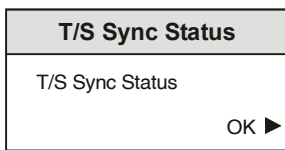
◀ T/S Sync Errors

This error occurs if a TS Sync word character (i.e. 0x47 hex) has not been found at the beginning of a Transport packet.



This menu allows information about T/S Sync Errors to be displayed.

◀ T/S Sync Status



This indicates if the category of error is currently in error or not. The status can be either "FAIL" or "OK"

◀ Show Stats

This item will cause the current status and number of errors flagged to be shown in the **Information** window.

◀ Reset Stats

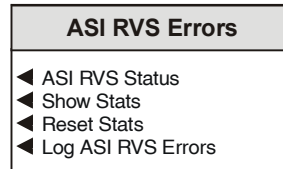
This item will cause the error count to be zeroed.

◀ Log T/S Sync Errors

By selecting this item any T/S Sync error will be logged to the RollCall network.

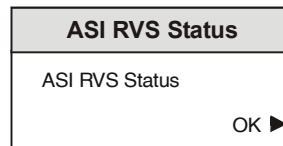
ASI RVS Errors

Receive Violation Signal. This error occurs when illegal characters are detected on the input stream, which means that the 10B/8B conversion cannot be done correctly.



This menu allows information about ASI RVS Errors to be displayed.

◀ ASI RVS Status



This indicates if the category of error is currently in error or not. The status can be either "FAIL" or "OK"

◀ Show Stats

This item will cause the current status and number of errors flagged to be shown in the **Information** window.

◀ Reset Stats

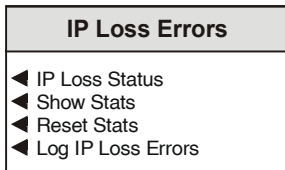
This item will cause the error count to be zeroed.

◀ Log ASI RVS Errors

By selecting this item any ASI RVS error will be logged to the RollCall network.

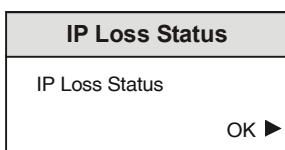
◀ Input Loss Errors

This error occurs if the data carrier disappears on the input.



This menu allows information about Input Loss Errors to be displayed.

◀ IP Loss Status



This indicates if the category of error is currently in error or not. The status can be either "FAIL" or "OK"

◀ Show Stats

This item will cause the current status and number of errors flagged to be shown in the **Information** window.

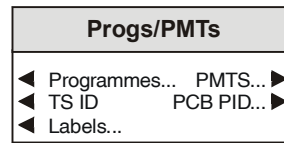
◀ Reset Stats

This item will cause the error count to be zeroed.

◀ Log Input Loss Errors

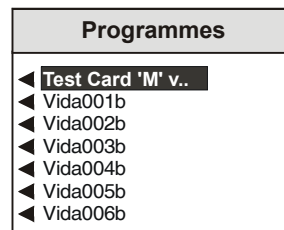
By selecting this item any Input Loss error will be logged to the RollCall network.

◀ Progs/PMTs

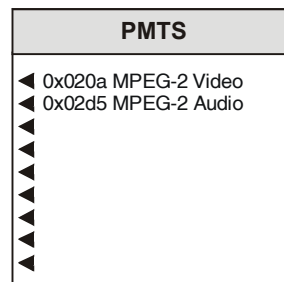


This menu shows the services present in the transport stream and the components that comprise each one.

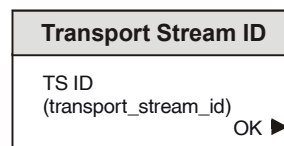
◀ Programmes



This menu displays information extracted from the PAT indicating which Programs (services) are contained in the transport stream being monitored. When a programme is selected the components comprising it are displayed in the **PMTS** menu.

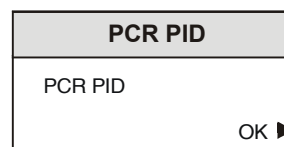


◀ TS ID



This item shows the Transport Stream ID for the input being monitored

◀ PCR PID



This item shows the PID on which the PCR can be found for the currently selected Program.

◀ Labels

Labels
◀ Service labels... ◀ Number Base...

Service Labels
◀ Service Names ◀ Programme Numbers

◀ Service Names

This causes the program descriptors, as found in the Service Descriptor Table (SDT) to be shown.

◀ Programme Numbers

This causes the Program numbers to be displayed, each together with the Packet ID on which the Program Map Table (PMT) for the Program should be found. This information is extracted from the Program Association Table (PAT).

◀ Number Base

Number Base
◀ Decimal ◀ Hex

This menu allows the user to select the number base for the display of program numbers and PIDs, in decimal (Decimal or Base 10) or in hexadecimal (Hex or Base 16)

◀ PAR

This function allows the selection of the program for the PAR system.

PAR
◀ Prog. Select... Prog 1... ▶ ◀ Prog 2... Prog 3... ▶

◀ Prog. Select

Prog. Select
◀ Available... Selected... ▶ ◀ Add Remove ▶ ◀ Set Selection

This menu allows Programs to be selected for monitoring.

To select a program proceed as follows:

Select: ◀ Available

Available
◀ Test Card 'M' v.. ◀ Vida001b ◀ Vida002b ◀ Vida003b ◀ Vida004b ◀ Vida005b ◀ Vida006b

This menu lists the Programs available for monitoring.

The desired program should be selected and the name will be highlighted.

Press Return.

Select: ◀ Add

This will add the selected program to the list. It will now appear in the display when the ◀ Selected item is selected.

Selected
◀ Test Card 'M' v.. ◀

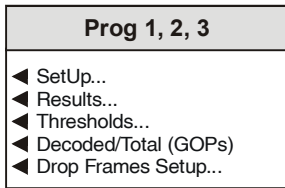
Other programs may be added in the same way and will be added to the list.

To validate the selected programs select
 ◀ Set Selection.

To view the selected programs select ◀ Selected.

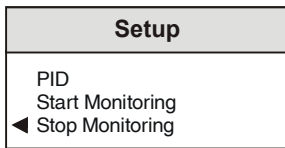
To remove a program select the program from the selected list (name now highlighted) press return. and select

- ◀ Remove
- ◀ Prog 1, 2, 3



This item allows the monitoring parameters of the selected PAR Programme (from the menu below) to be displayed.

- ◀ Setup



PID

The packet Identifier value will appear here. This value can be edited to provide direct selection but only when monitoring has been stopped.

- ◀ Start Monitoring

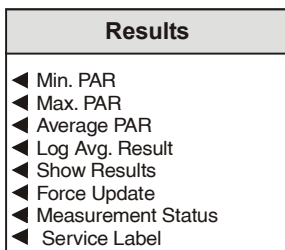
Selecting this item will start the PAR measure.

- ◀ Stop Monitoring

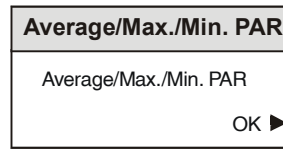
Selecting this item will stop the PAR measure.

- ◀ Results

This menu allows the results of the measurement to be displayed.



- ◀ Average/Max/Min PAR



The minimum, average and maximum values of PAR will be indicated appropriate to the selection.

- ◀ Log Avg. Results

Selecting this item will allow the average values of PAR to be logged to the RollCall Network.

- ◀ Show Results

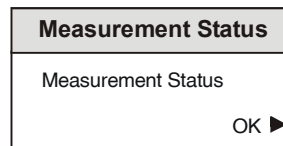
When this item is selected the PAR result for the selected program will be shown in the display and will be continually updated.

- ◀ Force Update

Selecting this item will show a snapshot of the PAR result in the display. This will update each time this function is activated.

- ◀ Measurement Status

This will indicate the state of the measurement process.



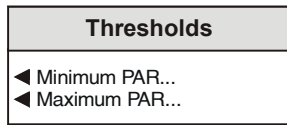
Running – This indicates the measurement is processed.

- ◀ Service Label



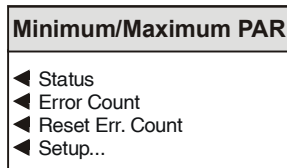
This item will display the Service Label see template

◀ Thresholds

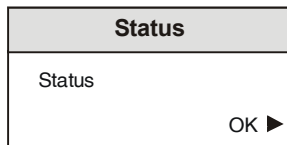


This menu allows information about the PAR measurements and settings to be made for the PAR measurement.

◀ Minimum/Maximum PAR



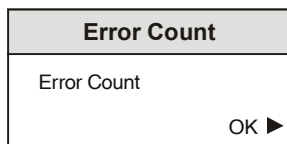
◀ Status



This indicates if the category of error is currently in error or not. The status can be either “**FAIL**” or “**OK**”

◀ Error Count

Selecting this item will cause the error count for the error category to be displayed.



Error Count (Minimum PAR selected)

This error count is the number of seconds where one or more frames have gone below the low threshold setting.

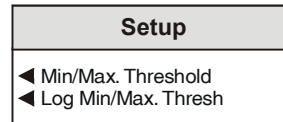
Error Count (Maximum PAR selected)

This error count is the number of seconds where one or more frames have gone above the high threshold setting.

◀ Reset Error Count

Selecting this item will cause the error count to be zeroed.

◀ Setup



This menu allows the minimum and maximum threshold levels to be set and to be made available for logging to the RollCall Network.

Min/Max Threshold



◀ Minimum Threshold

When the PAR value falls below the value shown in the in this display, this error, expressed as Time in seconds will be logged over the RollCall network.

A value may be entered in the display that represents the lower threshold of the PAR value.

A value between 0 (lowest quality) and 48 (highest quality) may be entered.

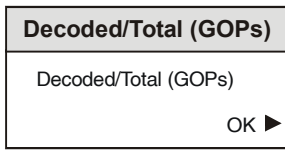
◀ Maximum Threshold

When the PAR value rises above the value shown in the display, this error, expressed as Time in seconds will be logged over the RollCall network.

A value may be entered in the display that represents the upper threshold of the PAR value.

A value between 0 (lowest quality) and 48 (highest quality) may be entered.

◀ Decoded /Total (GOPs)



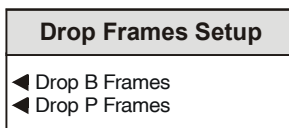
The display shows the number of frames processed during a display refresh period. It is grouped by GOPs and is displayed as a/b(c) with:

- a = number of frames decoded in this group
- b = number of frames present in this group
- c = number of GOP's present in this group

The display is usually refreshed once per second. If there is no GOP start within a second it may take up to 5 seconds before it is refreshed again. The frame count is only reset at the GOP start.

If the processor is overloaded (i.e. the sum of video ES bitrates exceeds the maximum bitrate of 14 Mbits/s), not all received frames may be processed and some frames may be dropped. This is indicated by the number of decoded frames being less than the number of total frames (eg 20/24(2)). You than may choose to drop either P or B frames.

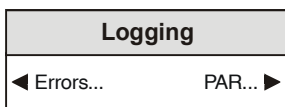
◀ Drop Frames Setup



Normally both the B and P frames are measured. This item allows the measurement of the B and P frames to be turned OFF by checking the **Drop B Frames** or the **Drop P Frames** boxes. We advise not to measure P frames before B frames as more problems generally occur in the B frames.

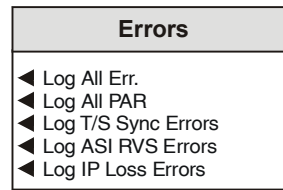
Note that I-frames cannot be dropped as they are used in the PAR process.

◀ Logging



This menu allows all Logging options of the module to be accessed and applied.

◀ Errors



This item allows errors described in the Errors menu to be logged to the RollCall Network.

◀ Log All Err.

Selecting this item will allow all errors described in the Errors Menu to be logged to the RollCall Network.

◀ Log All PAR.

Selecting this item will allow all PAR errors to be logged to the RollCall Network.

◀ Log T/S Sync Errors.

Selecting this item will allow T/S Sync Errors to be logged to the RollCall Network.

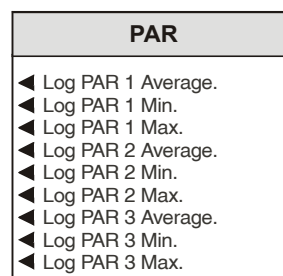
◀ Log ASI RVS Errors.

Selecting this item will allow ASI RVS Errors to be logged to the RollCall Network.

◀ Log IP Errors.

Selecting this item will allow input errors to be logged to the RollCall Network.

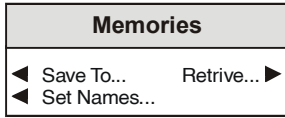
◀ PAR



This item will allow the average, minimum and maximum values of PAR for programmes 1, 2 and 3 to be logged to the RollCall Network.

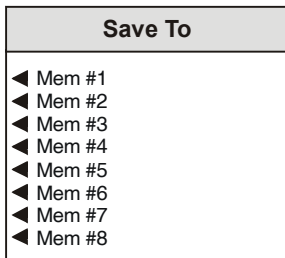
◀ **Memories**

This item allows the complete configuration of the module to be stored or retrieved in one of 8 locally held configuration memories.



◀ **Save To**

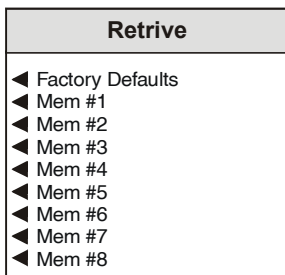
This menu reveals a sub menu showing the 8 configuration memories.



Selecting one of these locations will cause the current state of all the control parameters of the module to be saved to the selected configuration memory.

◀ **Retrive**

This menu reveals a sub menu showing the 8 locally stored configuration memories.

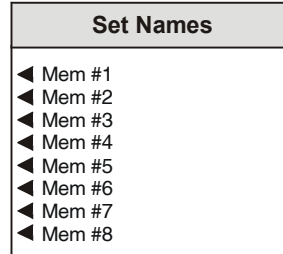


Selecting one of these locations will cause the current state of all the control parameters of the module to be set from the selected memory.

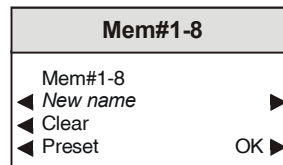
N.B. Retrieving from one of the configuration memories will cause all of the current parameter settings to be lost. No warning is given when this happens. If a return to the current state of the settings is desired they must first be saved in another of the configuration memories (see Save To)

◀ **Set Names**

This will reveal a list of the memory locations and allows the renaming of the selected memory location.



To compile/edit the text the right ▶ and left ◀ buttons adjacent to the upper text line in the menu should be used to select the character position in the text and the spinwheel used to select the character.

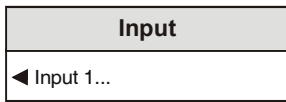


The ◀ **Clear** function blanks out the selected character.

The ◀ **Preset** function loads the default text, for example, Mem #1.

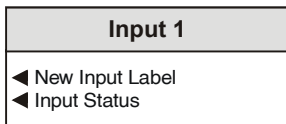
O.K. ▶ saves the caption text and returns to the main menu.

◀ **Input**



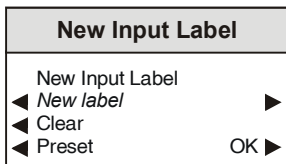
This item allows the input to be selected.

◀ **Input 1**



This item allows the input label to be changed and the input status displayed.

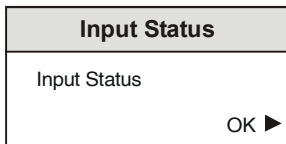
◀ **New Input Label**



This item allows the input label to be changed.

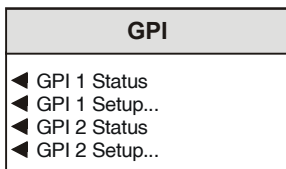
The text may be edited in a similar way as the Memories/Set Names function.

◀ **Input Status**



Selecting this item will display the status of the input.

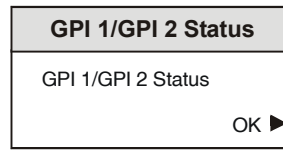
◀ **GPI**



This menu controls the configuration and status of the GPI ports available.

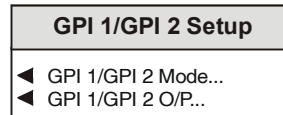
Note that for the single width version only GPI1 is available.

◀ **GPI 1 and GPI 2 Status**



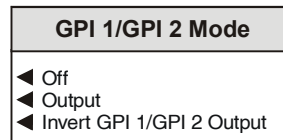
This will display the status of the selected GPI port.

◀ **GPI 1 and GPI 2 Setup**



This menu will allow control of the configuration of the GPI ports.

◀ **GPI 1 and GPI 2 Mode**



This controls functionality and the direction of the GPI port.

◀ **Off**

When selected the GPI port will be disabled.

◀ **Output**

When selected this will configure the GPI port as an output controlled by the options selected in the **GPI Output Trigger** menu below.

◀ **Invert GPI 1 (or GPI 2) Output**

When unselected then the selected GPI port will give a **LOW** output with no error and a **HIGH** output when an error occurs.

When selected then the selected GPI port will give a **HIGH** output with no error and a **LOW** output when an error occurs.

◀ **GPI 1 and GPI 2 O/P**

This item controls which errors can change the state of the GPI port when it is configured as an output.

GPI 1/GPI 2 O/P
<ul style="list-style-type: none"> ◀ Input Fail ◀ PAR Ch. 1 Error ◀ PAR Ch. 2 Error ◀ PAR Ch. 3 Error ◀ Any PAR Error

◀ **Input Fail**

When selected this will signal an error on the GPI output when no data carrier is detected on input A.

◀ **PAR Ch 1, 2, 3 Error**

The selected PAR channel has reported a violation of the programmed thresholds.

◀ **Any PAR Error**

Logical OR of all enabled PAR channels threshold violation.

◀ **Unit Info**

This item allows information about the unit to be displayed.

Unit Info
<ul style="list-style-type: none"> ◀ Software Version ◀ Serial No ◀ Restart

◀ **Software Version**

Software Version
Version x.x.x OK ▶

This item shows the version of the software fitted in the module.

◀ **Serial Number**

Serial No
Serial No x.x.x OK ▶

This item shows the serial number of the module

◀ **Restart**

This will reboot the unit simulating a power-down power-up cycle restoring power-up settings.

Glossary

ES	Elementary Stream.	A bit stream that includes video, audio or data representing the preliminary stage to the Packetized Elementary Stream (PES)
GOP	Group of Pictures	
GPI	General Purpose Interface	
PAR	Picture Appraisal Rating	
PAT	Program Association Table.	Lists all the programs contained in the transport stream and shows the PID value for the PMT associated with each program. It is always found on PID 0x0000
PCR	Programme Clock Reference.	A time stamp in the transport stream the sets the timing of the decoder. This is transmitted at least every 100 ms
PES	Packetized Elementary Stream	
PID	Packet Identifier.	This unique integer value identified elements in the transport stream such as tables, data, or the audio for a specific program.
PMT	Program Map Table.	This table specifies PID values for components of programs and also references the packets that contain the PCR.
RVS	Receive Violation Signal.	This error occurs when illegal characters are detected on the input stream
SDT	Service Descriptor Table.	This describes the characteristics of available services and is located on PID 0x0011.
Service	A collection of one or more events under the control of a single broadcaster; also known as Program.	
TS	Transport Stream	

