

List of Measuring Instrument Drivers

The measuring instrument driver is in the VI library “MS9740B.llb”.  
When opening “MS974X VI Tree.vi” in this library, instrument drivers can be seen as below,



Figure 1 MS9740X VI Tree.vi

The measuring instrument driver file name is assigned as follows:

MS974X (card name);(function key name).vi

or

MS974X (name corresponding to panel key or function).vi

Icons resemble the keys on the main unit.

You can select drivers according to the main unit key operation. In more case, you can select the drivers to be used by imagining the main unit key operations.

## Driver for Front Card Functions

### Wavelength Setting

| Card Name  | ;Function key name | Function  |
|------------|--------------------|---|
| Wavelength | Start/Stop         | Set a start wavelength, stop wavelength                 |
| Wavelength | Center/Span        | Set a center wavelength, sweep span                     |
| Wavelength | Set Span           | Set a sweep span  |
| Wavelength | Air/Vacuum         | Switch between wavelength display modes (in Air/Vacuum) |

### Level Setting

| Card Name   | ;Function key name | Function                                    |
|-------------|--------------------|---|
| Level Scale | Log/Linear         | Set a log/linear scale                      |
| Level Scale | REF Level          | Set a reference level.                      |
| Level Scale | Opt.ATT Off/On     | Turn on/off the internal optical attenuator |

### Resolution and Average Setting

| Card Name  | ;Function key name | Function   |
|------------|--------------------|--|
| Res/BW/Avg | Res/BW/SmplPt      | Set resolution, video bandwidth, or number of sampling points. |
| Res/BW/Avg | Actual Resolution  | Switch between actual resolution display modes.                |
| Res/BW/Avg | Average            | Set Point/Sweep Average or Smooth.                             |

### Peak and Dip Detection

| Card Name | ;Function key name       | Function  |
|-----------|--------------------------|---|
| Peak/Dip  | Peak/DipSearch(1)        | Detect a peak/dip whose level is highest.   |
| Peak/Dip  | Peak/DipSearch(2)        | Detect a peak/dip whose level is second lowest/highest or a peak/dip whose wavelength is right/left shortest/longest. |
| Peak/Dip  | Set Search Threshold     | Set search threshold Auto or Manual.  |
| Peak/Dip  | Search Threshold         | Set search threshold value.   |
| Peak/Dip  | Peak to Peak Calculation | Set Peak to Peak calculation.   |
| Peak/Dip  | Peak to Peak Query       | Get value of Peak to Peak   |

**Waveform Analysis**

| Card Name | ;Function key name | Function                    |
|-----------|--------------------|-----------------------------|
| Analysis  | Threshold          | Threshold analysis          |
| Analysis  | ndB-Loss           | ndB-Loss analysis           |
| Analysis  | SMSR               | SMSR analysis               |
| Analysis  | Envelope           | Envelope analysis           |
| Analysis  | RMS                | RMS analysis                |
| Analysis  | Spectrum Power     | Power integration           |
| Analysis  | Analysis Off       | Terminate the Analysis mode |

**Trace setting**

| Card Name | ;Function key name | Function                                   |
|-----------|--------------------|--|
| Trace     | Set Storage/Trace  | Set the storage/Trace type.                |
| Trace     | Display Trace      | Set the display trace.                     |
| Trace     | Active Trace       | Set the active trace.                      |
| Trace     | Set Graph Mode     | Switch the graph display normal/normalize. |
| Trace     | Erase Overlap      | Erase overlap graph data.                  |

**Applicable measurement function**

| Card Name | ;Function key name  | Function  |
|-----------|---------------------|---|
| Appli     | DFB-LD Test         | Evaluate DFB-LD.  |
| Appli     | FP-LD Test          | Evaluate FP-LD.   |
| Appli     | LED Test            | Evaluate LED.   |
| Appli     | PMD Test            | Evaluate PMD.   |
| Appli     | LD-Module Test      | Evaluate LD Module.   |
| Appli     | Opt.Amp Mode        | Evaluate Optical Amplifier. Set the “Opt.Amp mode”                          |
| Appli     | Opt.Amp Result      | Evaluate Optical Amplifier. Output the measurement results                  |
| Appli     | Opt.Amp-Parameter   | Evaluate Optical Amplifier. Set parameters.                                 |
| Appli     | Opt.Amp-Pin/Pout    | Evaluate Optical Amplifier. Switches between signal light types (Pin/Pout). |
| Appli     | Opt.Amp-Pout to ase | Evaluate Optical Amplifier. Copy Pout data to the Pase trace.               |
| Appli     | Opt.Amp-Res.cal     | Evaluate Optical Amplifier. calibrate                                       |

|       |                     |   |
|-------|---------------------|---|
|       |                     | resolution.   |
| Appli | WDM Test Multi Peak | Evaluate WDM-Multi peak measurement. Set parameters and output results. |
| Appli | WDM Test Relative   | Evaluate WDM-Relative measurement. Set parameters and output results.   |
| Appli | WDM Test SNR        | Evaluate WDM-SNR measurement. Set parameters and output results.        |
| Appli | WDM Test Table      | Evaluate WDM-Table measurement. Set parameters and output results.      |
| Appli | Application Off     | Terminate the Applicable measurement mode.                              |

### Special measurement modes

| Card Name   | ;Function key name | Function  |
|-------------|--------------------|---|
| MeasureMode | D.Range Norm/High  | Switch between High-dynamic range measurement/normal-dynamic range mode |
| MeasureMode | Ext.Trigger        | External synchronization measurement                                    |
| MeasureMode | Power Monitor      | Power monitor measurement   |
| MeasureMode | MM_Mode            | Multi-mode fiber measurement  |
| MeasureMode | MeasureMode Off    | Terminate the measurement mode  |

### Calibration function

| Card Name | ;Function key name | Function   |
|-----------|--------------------|--|
| Cal       | Offset             | Set a wavelength or level offset                                     |
| Cal       | Wl Calibration     | Calibrate a wavelength or initialize calibration data.               |
| Cal       | Auto Alignment     | Aligns the optical axis automatically.                               |
| Cal       | Zero Calibration   | Execute the internal mechanical/power level zero-offset calibrating. |
| Cal       | Auto Offset        | Execute the offset adjustment automatically when VBW is switched.    |

**Markers**

| Card Name | ;Function key name | Function                      |
|-----------|--------------------|-------------------------------|
| Marker    | Wl Marker          | Set/read a wavelength marker. |
| Marker    | Lvl Marker         | Set/read a level marker.      |
| Marker    | Trace Marker       | Set/read a trace marker.      |
| Marker    | Delta Marker       | Set/read a delta marker.      |
| Marker    | Marker Erase       | Erase a marker.               |

**Zone Makers**

| Card Name   | ;Function key name | Function                                 |
|-------------|--------------------|--|
| Zone Marker | Set/Erase          | Set/erase zone markers.                  |
| Zone Marker | Zone to Span       | Set the center and span of zone markers. |
| Zone Marker | Zoom Out/In        | Zoom in/out the zone markers.            |

**Other functions**

| Card Name | ;Function key name | Function   |
|-----------|--------------------|--|
| Others    | Opt.Out Off/On     | Turn on/off the Light source for calibration<br>(available for option 002) |
| Others    | Title              | Input the title  |

**Front Panel Keys function**

| Panel Key Function     | Function   |
|------------------------|--|
| Peak To Center         | Set the peak wavelength to the center wavelength.      |
| Peak To Ref Level      | Set the peak power level to the reference level.       |
| Sweep Start            | Start single/repeat sweep.                             |
| Sweep Stop             | Stop sweep.  |
| Auto Measurement Start | Start automatic measurement.                           |
| Save/Recall/Copy       | Save, recall, copy, delete data.                       |
| Data Condition         | Read the measurement condition data of selected trace. |

**Utilities**

| Panel Key Function     | Function                           |
|------------------------|------------------------------------|
| Initialize             | Start communication.               |
| Close                  | Terminate communication.           |
| Error Message          | Display error messages             |
| Error Message Japanese | Display error messages (Japanese). |
| Reset                  | Reset the MS9740B.                 |

**Others**

| Panel Key Function     | Function                           |
|------------------------|------------------------------------|
| Initialize             | Start communication.               |
| Close                  | Terminate communication.           |
| Error Message          | Display error messages             |
| Error Message Japanese | Display error messages (Japanese). |
| Reset                  | Reset the MS9740B                  |