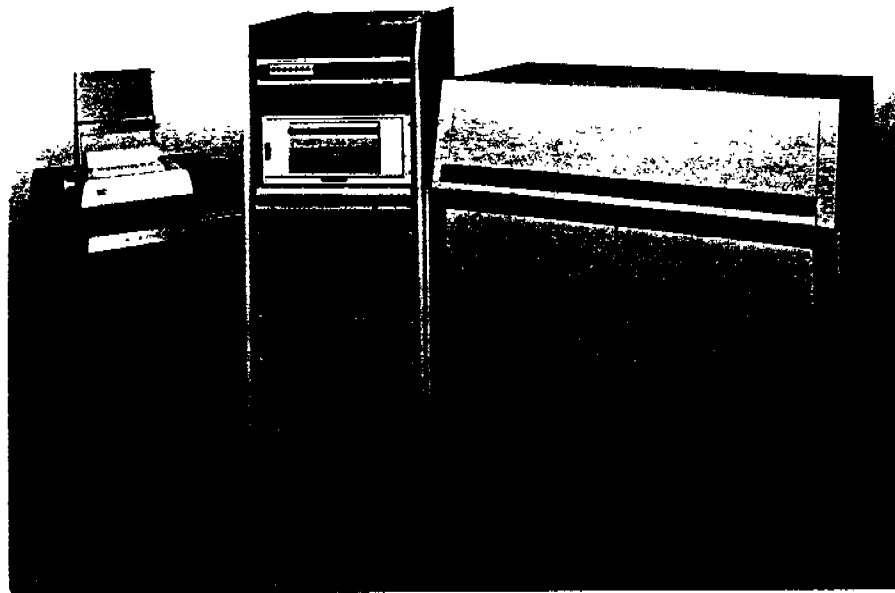


EOCOM FMSTM 7200

*An Industrial Instrument System
For
Real Time Multi-Gas Monitoring & Analysis*



EOCOM's FMS 7200 is the first laboratory quality IR Fourier Multiplex Spectrometer industrial monitor-analyzer on the market with field-proven results.

Consider the Versatility

- HIGH RESOLUTION IR GAS PHASE SPECTROMETER
- A MULTI-GAS MONITORING AND CONTROL FUNCTION
- A MOBILE FIELD TEST SYSTEM
- A TOXIC GAS DETECTION AND CONTROL AREA MONITOR
- A ROUTINE RESEARCH LABORATORY IR SPECTRAL ANALYZER
- A MANAGEMENT INFORMATION SYSTEM INCLUDING DATA RECORDERS AND REAL TIME DISPLAY WITH UP TO 50 REMOTE SAMPLE SENSORS

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SYSTEM FEATURES

The basic FMS 7200 Gas Analyzer consists of the EOCOM rapid scanning Michelson interferometer modulator with beamsplitter, and infrared source, infrared detector, Wilks 40 meter sample cell and the required optics in its own free standing optical bench and electronics console housing the system controller, data acquisition unit, mini computer and recorder, audio alarm and a teletype model 33 for programming, systems diagnostics and printing the eight hour averages. The concentration results are recorded on a multi-channel recorder, capable of plotting values from each monitored contaminant. The EOCOM System is truly a TURN KEY system with EOCOM-supplied provisions for:

- Easy Maintenance
- Complete Operator Training
- Service and Spare Parts Complement
- Full Installation at Your Plant
- Complete Documentation (Service & Maintenance Manuals)
- One Year Warranty

This is the first application of Fourier techniques to the

SPECIFIC ANALYSIS OF MULTIPLE GASES IN REAL TIME

The new proprietary software in our FMS 7200 analyzer, when combined with the Fourier Infrared Modulator, offers one of the most specific as well as the most powerful analytical tools available today.

The EOCOM FMS 7200 System can be programmed to monitor one or more of most any of the gaseous substances listed by OSHA in the regulations outlined in the Federal Register 1910.70, Volume 39, Number 125, dated June 27, 1974. In most cases, it can monitor with sensitivity, WELL BELOW THE CURRENT THRESHOLD VALUE LIMITS.

The EOCOM FMS 7200 System is specifically designed with the resolution, sensitivity and speed to provide full compliance with the above OSHA regulations. It is a total system incorporating output display and alarm devices along with capability for hard copy records of concentration levels from multiple sampling locations. The system includes automatic calibration procedures and system diagnostic procedures for ease of calibration and maintenance.

The FMS 7200 System is a field proven system with demonstrated reputation for high reliability (better than 99 percent uptime) and extremely stable measurement performance combined with high sensitivity. Due to the unique higher resolution and hence high specificity capabilities, the system is virtually immune to interference from other constituents.

There is no other available system that can offer you the on-line protection as well as the off-line high performance capabilities of the FMS 7200 System. Consider the Versatility.

APPLICATION CAPABILITIES

THE HIGHEST IR SPECTRAL RESOLUTION GAS PHASE SPECTROMETER

The EOCOM FMS 7200 Gas Analyzer employs new and unique IR techniques to trace gas detection. It specifically provides:

- Spectral resolution up to 0.07cm^{-1} (to discriminate against interferents)
- Analytical sensitivity of low parts per billion in 30 to 60 seconds measurement time for most air contaminants outlined by OSHA
- The ability to change resolution and location of the IR spectral line monitored (to discriminate against new or changing interferents). In fact the device can provide full spectrum data in tabular form.

A MULTI-GAS MONITOR

Because the FMS 7200 system employs the well-known and field-proven EOCOM interferometer modulator, it has the capability of monitoring multiple compounds simultaneously from the same air sample. To accomplish multi-gas monitoring, the system is provided with:

- Expanded data analysis capability to monitor the additional spectral lines required
- Additional recorder capability to plot from multiple points the concentration of two (or more) contaminants

As an example of this multi-gas feature, the FMS 7200 is being used by the semiconductor industry to monitor arsine and phosphine. This system will monitor the two compounds simultaneously in less than one minute per measurement. Its specifications are:

	TLV	7200 SENSITIVITY	MEASUREMENT TIME
Arsine	50ppb	10ppb	less than one minute
Phosphine	300ppb	50ppb	

Similar specifications can be supplied, upon request, for other multiple gases of interest. By using one analyzer for multi-gases, significant savings are realized over utilizing multiple conventional single gas instruments. Since no reagents, span gases, calibration gases and their related plumbing lines are required, the FMS 7200 represents an attractive, cost effective method for multi-gas monitoring. The only consumables required are electricity and air (for the air bearing).

A RELOCATABLE FIELD MEASUREMENT SYSTEM

We can insure that the system can be relocated readily with minimum downtime or installed in a mobile van for complete mobility. To operate in this mode, we:

- Provide the FMS 7200 system totally self-contained in the main optical cabinet instead of three separate units as shown on the cover
- Provide modifications to the interferometer to insure ease of relocatability. The system is also shock mounted for additional vibration isolation and a strong servo-loop is provided in the mirror drive system. The system is also mounted on shock absorbing pneumatic wheels
- Provide the system in a sealed unit for protection against plant dust and/or corrosive industrial environment.

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AN EXTREMELY SPECIFIC SINGLE GAS MONITOR

As a single gas monitor the FMS 7200 System is programmed to provide:

- Measurements virtually immune from interferences and hence accurate monitoring without either false low readings or false alarms from false high readings
- Monitoring of excursions as well as eight hour time weighted averages of the particular monitored contaminant
- Permanent hard copy records in an easy-to-read and maintain format of excursion levels as well as eight hour averages
- Field proven performance of high reliability with ease of calibration

LABORATORY RESEARCH GRADE IR SPECTROMETER FOR ROUTINE SPECTRAL ANALYSIS

Since the heart of the FMS 7200 instrumentation package is the interferometer modulator, and the Fourier technique for data analysis, we have expanded the system to produce infrared spectra (on a periodic basis) from air samples presented to the instrument. As an accessory to the FMS 7200 we include:

- A 9-track magnetic tape recorder. With this accessory interferometric data of the spectral range of interest is recorded in digital form on magnetic tape
- A fully operational Fortran software package, complete with source deck. This package performs the fast Fourier transform and has a highly sophisticated plotting routine. Since Fortran language is used, the spectra can be produced utilizing most mainframe computers, such as an IBM 360 or 370 or CDC 6700 with appropriate plotters.

This accessory significantly expands the capability of the EOCOM system. You can then produce high resolution spectra of the monitored air sample and thus analyze for all components present. Additionally, water vapor and other interferences can easily be subtracted out of the sample to provide a much cleaner look at the spectral signatures of the various constituents of the sample.

You can use data produced in the above manner for:

- Adjusting the spectral lines on the system
- Quantitative analysis of additional compounds
- Verifying results obtained with the monitor
- Doing routine research on bag samples brought to the instrument

Let Us Compare The EOCOM FMS 7200 System
Against Your Requirements



Leaders in Performance

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