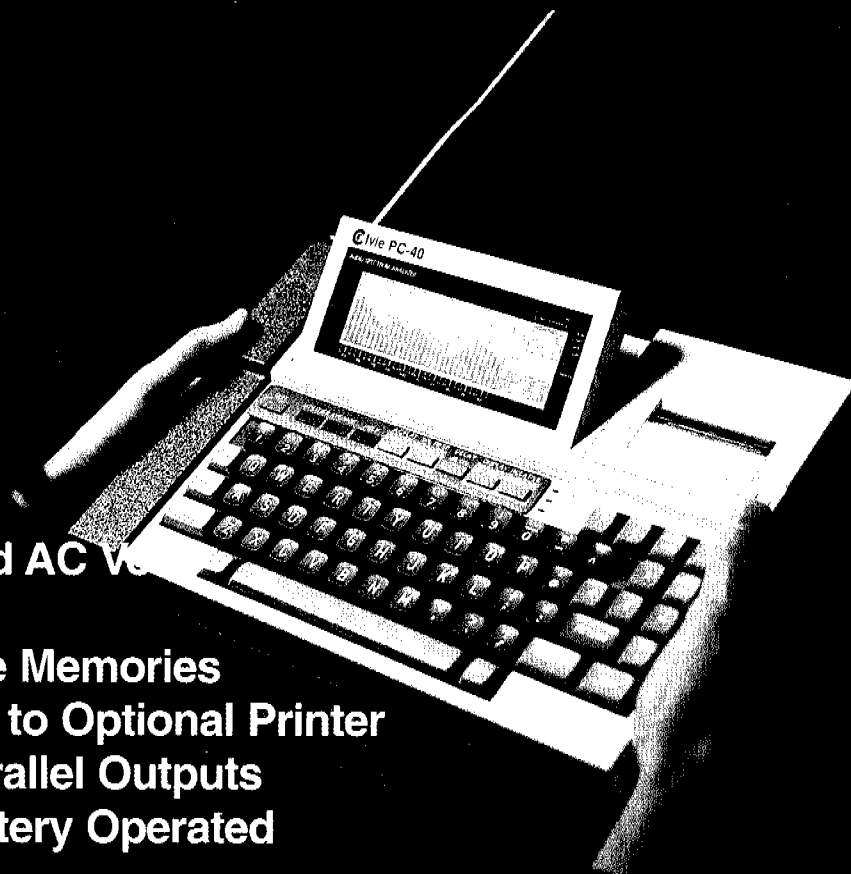


PC-40 Computer Controlled Spectrum Analysis System & Precision Sound Level Meter

- 1/3 Octave Analysis
- Class III Filter Selectivity
- Octave Analysis
- Precision Preamp and
Air Condenser Microphone



- dBm, dBV and AC Voltage
Measurement
- 20 Nonvolatile Memories
- Screen Dump to Optional Printer
- Serial and Parallel Outputs
- Portable - Battery Operated

**Power, accuracy, flexibility...
on the bench or in the field.**

The computer based Ivie PC-40 represents a significant advancement in spectrum analyzer technology. Capable of making a variety of measurements both quickly and accurately, the PC-40 will handle the most demanding requirements with ease. Its 20 nonvolatile memories, and parallel and serial outputs make saving and storing data simple.

Precision low noise preamp
and air condenser microphone

Up to 64 dB display range
with resolutions of 1, 2,
or 3 dB per step

Tilt up screen with selectable
octave, 1/3 octave and weighted
1/3 octave displays

Highly selective
Class III Filters

Can display 2 or more
curves simultaneously

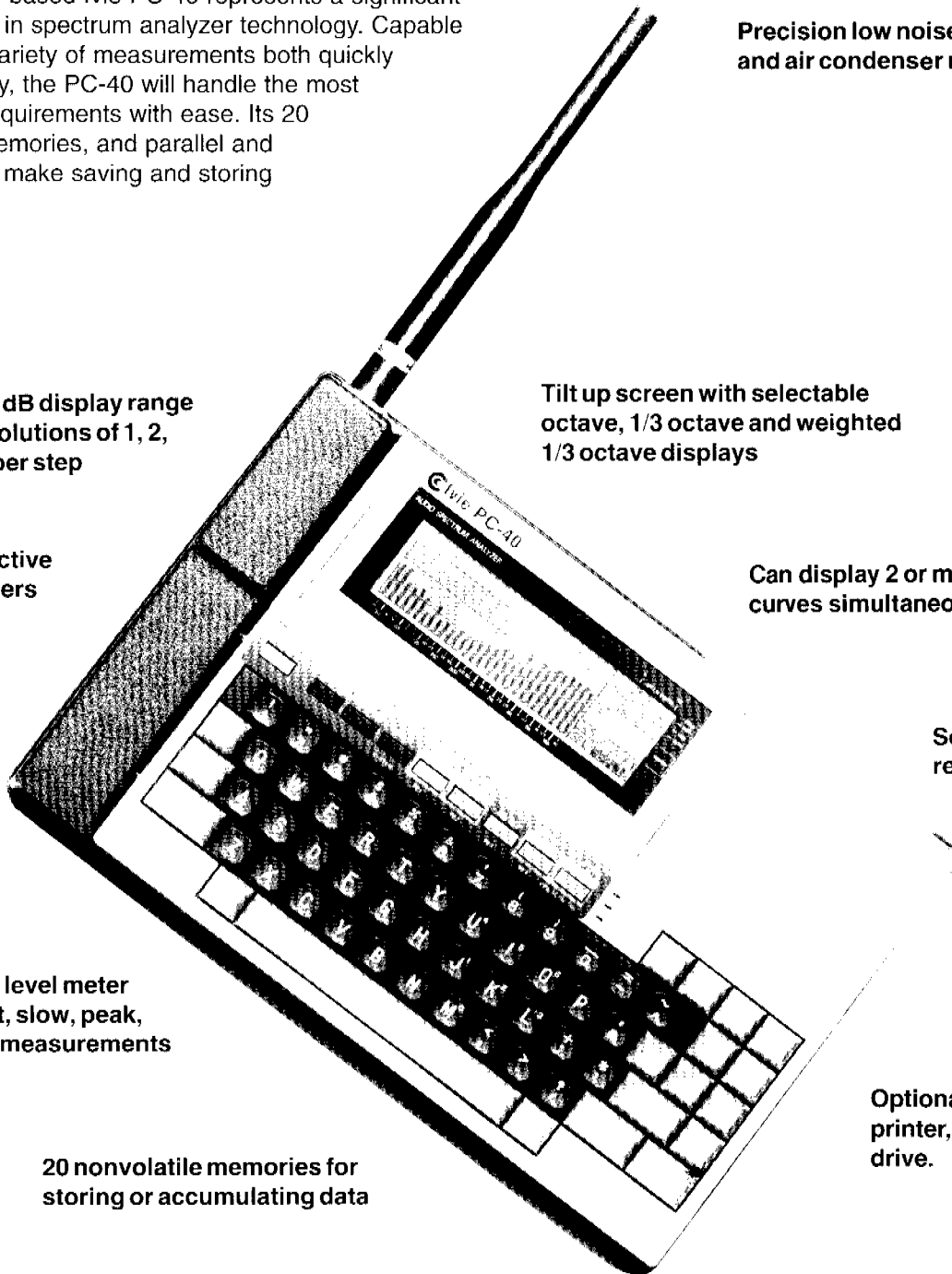
Selectable detector
response time

Type I sound level meter
provides fast, slow, peak,
and impulse measurements

Serial and
Parallel Outputs

20 nonvolatile memories for
storing or accumulating data

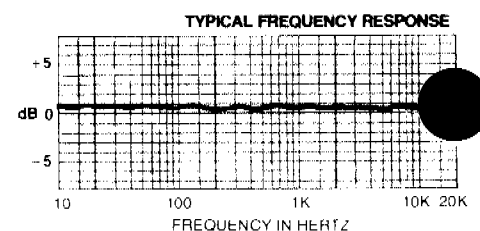
Optional Plug-in cartridge
printer, AC volt meter or tape
drive.

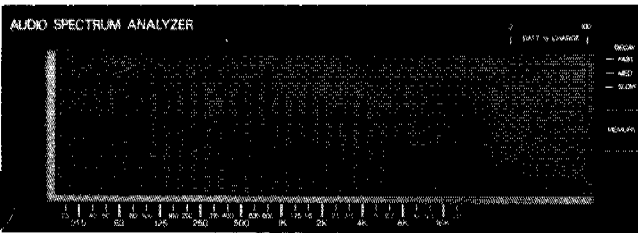


IE-2P Precision Preamp and
1133 and 1134 mic cartridges.

The PC-40 comes standard with the IE-2P precision preamplifier, and your choice of the 1133 free field response microphone, or the 1134 random response microphone. Both mics are laboratory quality, air condenser microphones. The IE-2P is also compatible with other high quality, air condenser microphones such as Brüel and Kjaer.

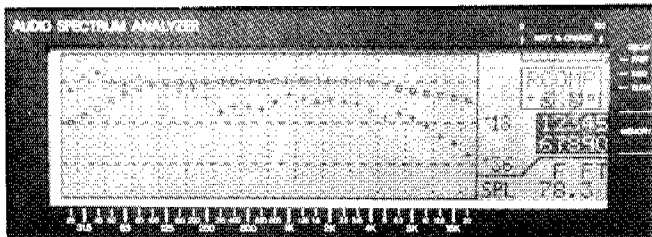
The typical frequency response of the 1133 or 1134 microphone is shown below.





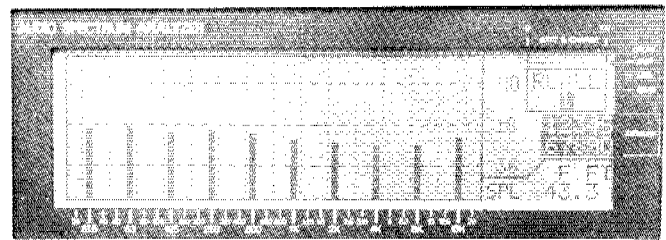
STANDARD 1/3 OCTAVE DISPLAY

The PC-40 is capable of making a wide variety of 1/3 octave measurements and storing them in memory for later analysis. In this illustration, the first ten memories are shown in standard video. In addition to its twenty memories, the PC-40 is capable of "snapshot" entry of screens into memory (472 screens expandable to 8100 screens). The sample rate is also variable from 1 to 100 screens per second.



DISPLAYING MULTIPLE MEMORIES

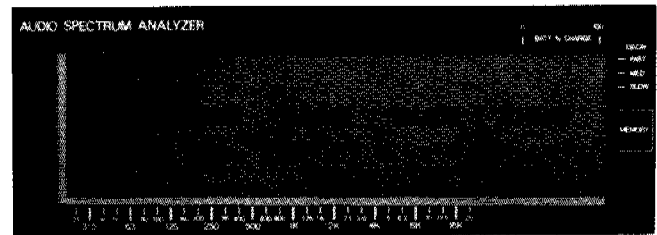
In this illustration, two memories are being displayed; in this case a "before" equalization and an "after" equalization curve. Multiple curves may also be displayed to show an envelope. An "offset" curve can also be entered, and other curves shown as a comparison against that offset. Memory information can be subjected to the PC-40's averaging capability.



OCTAVE DISPLAY

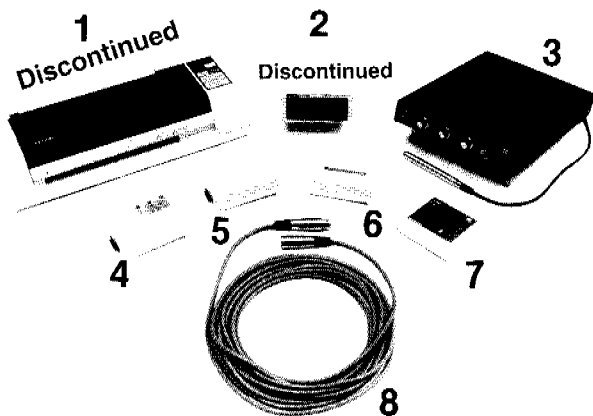
In this illustration, the PC-40 is being used in the octave mode to generate an NC curve. With the 1133 or 1134 microphone cartridges supplied with the PC-40, curves as low as NC 30 can be measured. By using other microphones with lower noise floors, such as the 1 inch B&K 4164 microphone, curves as low as NC 15 can be measured.

Notice that the second ten memories are shown in this illustration as indicated by the reverse video.



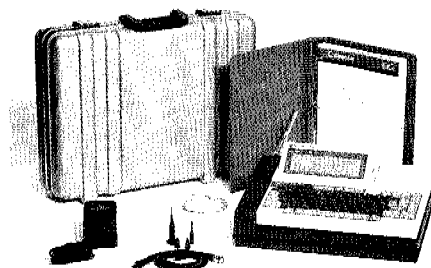
THE UTILITIES MENU

The Utilities Menu should help give you a feel for how many of the options mentioned in the three illustrations can be initiated. This menu allows functions to be performed such as saving data to a disk or cartridge, or loading data from these sources. An offset curve may be entered, or a printer selected. Screen sample rate can be selected, and the probe or the mic can be chosen as the input. The "Record" function allows successive screens to be stored into a buffer - selectable from 1 to 100 screens per second, with up to 8100 screens being stored. In "Playback," those screens can be played back one at a time, if desired.



OPTIONAL ACCESSORIES FOR THE PC-40

1. Discontinued
2. Discontinued
3. Ivie Model 1200 Preamp and Model 1300 Power Supply & Low Noise Amplifier. Provides ultra low-noise front end for PC-40 or any other system using condenser microphones. The 1200 is a low-noise preamp which can be used with the 1300 only. The 1300 provides microphone bias voltage of 0, 28, and 200 VDC. Among its many features are filtering capabilities, and an 800 VDC output for use in electrostatic sweeping of condenser microphones.
4. Digital Multimeter. Multimeter is computer controlled by BASIC.
5. Modem Cartridge.
6. Printer Cartridge. Provides 40 column, hard copy for documentation purposes.
7. Cassette Cartridge. Provides data storage and retrieval on micro-cassette tapes.
8. MC-25 Microphone Extension Cable. Also comes in 50 foot (MC-50), 75 foot, 100 foot, 150 foot, and 200 foot lengths. The microphone on the PC-40 can be remoted up to several hundred feet without effecting system accuracy or performance.



STANDARD ACCESSORIES

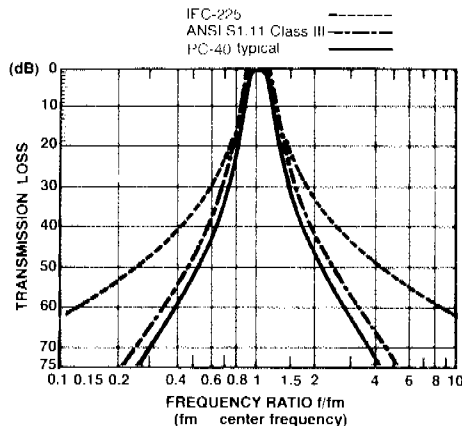
The Ivие PC-40 comes with

- "Fast Charge" nickel cadmium batteries.
- Manual with instructions and illustrations.
- AC adaptor/charger
- IE-2P Precision Preamp.
- 1133 or 1134 microphone
- IE-1036B Test Probe
- PC-40 Carrying Case

TECHNICAL DATA:

REAL TIME ANALYZER

- 1/3-octave operation provided from 25 Hz to 20kHz in thirty ISO bands.
- Highly selective three pole-pair filters exceed ANSI S1.11-1966 Class III, B.S. 2475-1964 DIN 45652, and IEC225-1966.
- Relative filter flatness ± 0.5 dB.
- 1/3-octave filter display can be "weighted" with A,C, or Flat filters.



- One-octave operation provided from 25Hz to 20kHz in ten ISO bands.
- Octave filter skirt selectively satisfies ANSI S1.11-1966 Class II, BS 2475-1964, DIN 45652, and IEC225-1966.

SOUND LEVEL METER

- Response modes: *Fast, Slow, Impulse, and Peak.*
- Instrument Range 10dBA SPL to 149dBA SPL re 20 μ N M²
- Microphone Noise Floor: 22 dBA using the standard IE-2P and either the 1133 or 1134 microphones.
- Selectable true rms or peak detectors.
- 20 dB crest factor for full scale reading.
- Four digit LCD readout with 0.1 dB SLM resolution.
- Digital display modes for continuous sample or display hold.
- Overload and underrange indicators.
- Filter weights A,C and Flat.
- Flat filter bandwidth 7Hz-35KHz.
- Calibration microphone is remoteable.
- Meets requirements of:
 ANSI SI.4-1971 TYPE S1A, S1C
 BS 4197-1967
 DIN 45633 B1.1, B1.2 (Impulse)
 IEC 651-1979

MICROPHONE

- Element: Air Condenser.
- 200 VDC Polarization.
- Directional Pattern: Omnidirectional.
- Dynamic Range: Greater than 120 dB with supplied electronics.
- Response: Either Free Field or Random Response is available.
- Frequency Response: 10Hz to 20kHz, as illustrated.

PREAMPLIFIER/ATTENUATOR

- 100K ohm input impedance.
- Headroom: + 40dB (above display screen) with sine wave input.
- Selectable filter weighting A,C or Flat
- Bandwidth 7Hz-35KHz.
- Flatness ± 0.5 dB (20Hz-20KHz).
- THD $\leq 0.3\%$ @ 2.0V output level.
- Input damage level + 100 VDC or 300 VAC (above 20 Hz.)
- Output short circuit protected.

DISPLAY

- 240 by 64 pixel LCD display.
- Display ranges of 16, 32, and 64 dB are selectable with resolutions of 1, 2, or 3 dB per step (.25, .5, or 1 dB per pixel).
- Screen viewing angle is adjustable.

MECHANICAL

- All modular construction provides dependable operation with ease of maintenance.
- Dimensions: 13 1/4 x 8 1/2 x 3 1/4 inches.
- Aluminum chasis with ABS outer shell.
- Hardshell, foam padded travel case included.
- Weight: Net 10 lbs., shipping: 21 lbs.

ENVIRONMENTAL

- All circuits temperature compensated.
- Operating temperature + 5°C to + 35° C.
- Nonoperating tem - 25°C to + 60°C.
- Operating humidity 10 to 80%.

POWER

- Battery operation; nickel cadmium, rechargeable.
- Operating time approximately 4 1/2 hours.
- Fast charge cycle of 5 1/2 hours.
- Battery level indicator.
- AC line operation from AC adaptor/charger.
- 115 VAC or 230 VAC operation from 50 to 60 Hz.
- Charge indicator light.

WARRANTY

The PC-40 is warranted against defects in materials and workmanship for one (1) year from the date of shipment. During the warranty period, Ivие will repair or, at its option replace, components which prove to be defective provided the unit is returned, shipping prepaid to an authorized Ivие service facility. Defects caused by modifications, misuse or accidents are not covered by this warranty. No other warranties are expressed or implied. Ivие is not liable for consequential damages. All requests for repairs and information should include the instrument serial number to assure rapid service.