

STUDER REVOX

REVOX
B750.



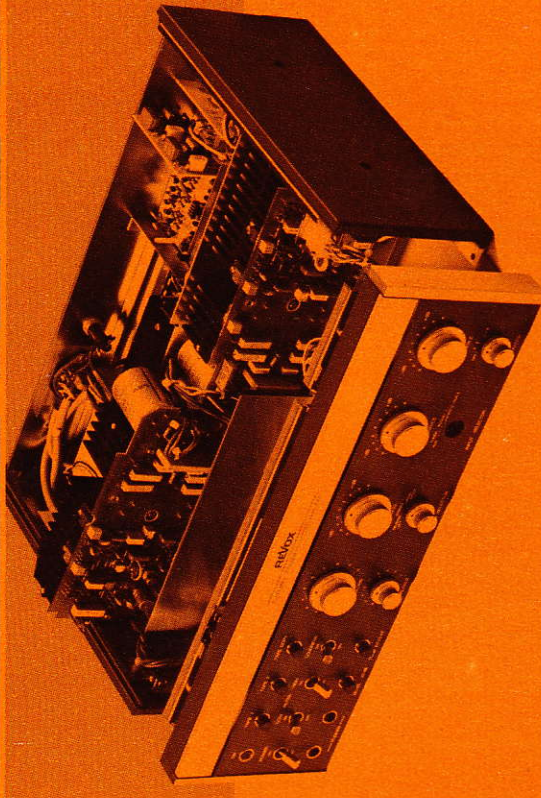
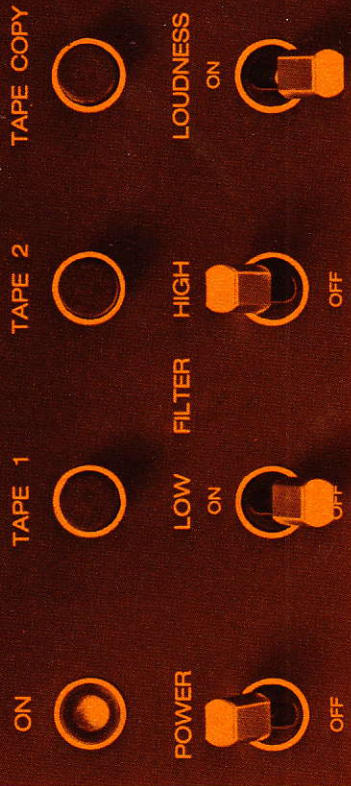
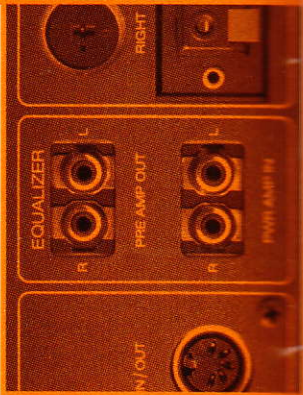
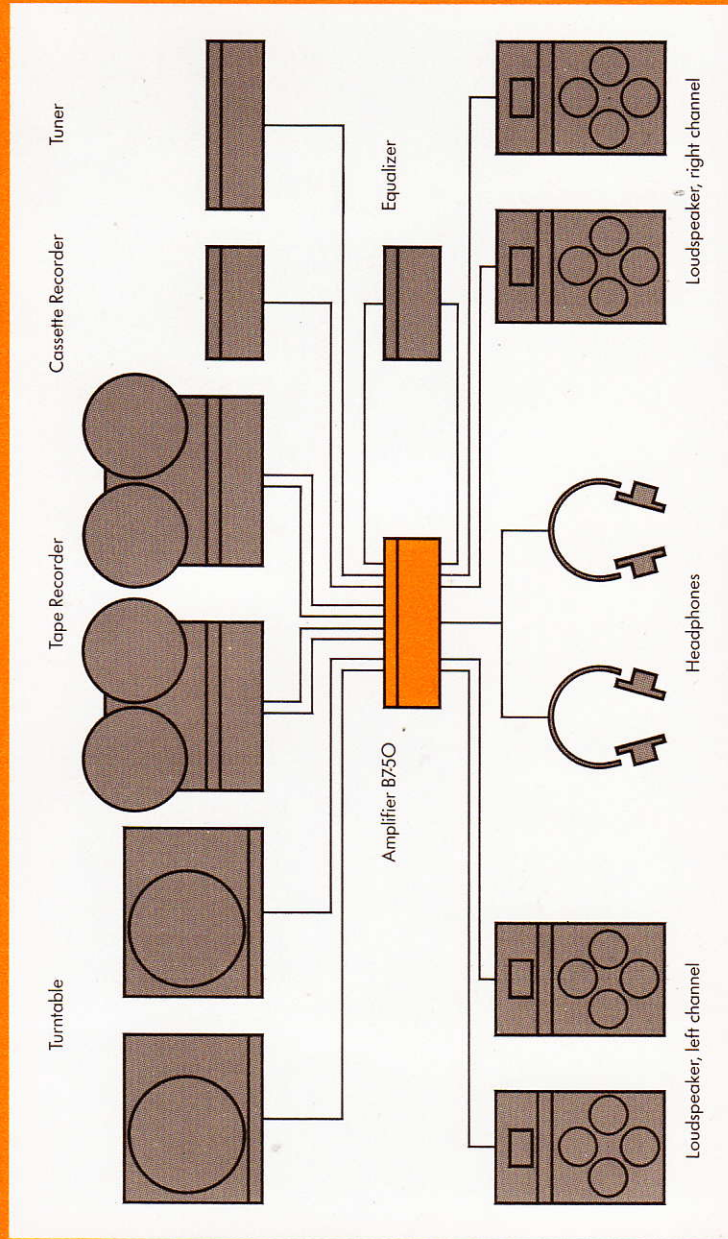
Complete, Sophisticated Control Facilities Make the B750 a Pleasure to Use

Central control console

The conservatively rated, ruggedly built B750 integrated stereo amplifier is the center-point of a Revox hi-fi system. Six music sources — a turntable, tuner, two tape decks, and two auxiliary inputs — are provided for permanent connections using standard phono jacks, and the phono input can be adjusted to maintain a compatible volume level throughout the system. Using an external RIAA preamplifier, or additional Revox Phono P.C. Card, one of the Aux inputs could easily be used for a second turntable.

Independent Pre-amp and Power Amp Access

For even greater versatility, a switch is provided, along with separate input and output jacks, that electrically separates the preamplifier from the power amplifier. This permits installation of a graphic equalizer or reverberation device. Further, if desired, the preamplifier can drive more than one power amplifier, or the output stage can be driven by another preamplifier or mixing console.

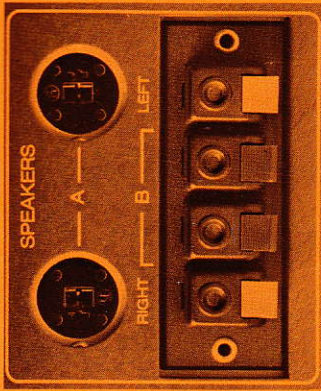


Total Tape Control

Both of the two tape monitor switches permit instant comparison (when using a 3-head tape deck) between the source being taped and the recorded tape itself, and either tape deck can copy onto the other. In addition, each of the tape circuits is provided with its own buffer (isolation) amplifier. You can copy a tape while listening to another source (FM, turntable, etc.), without fear of any cross modulation. And, if you wish to record onto a third deck, a convenient socket is provided under the flip-up front panel.

Construction and Safety Features

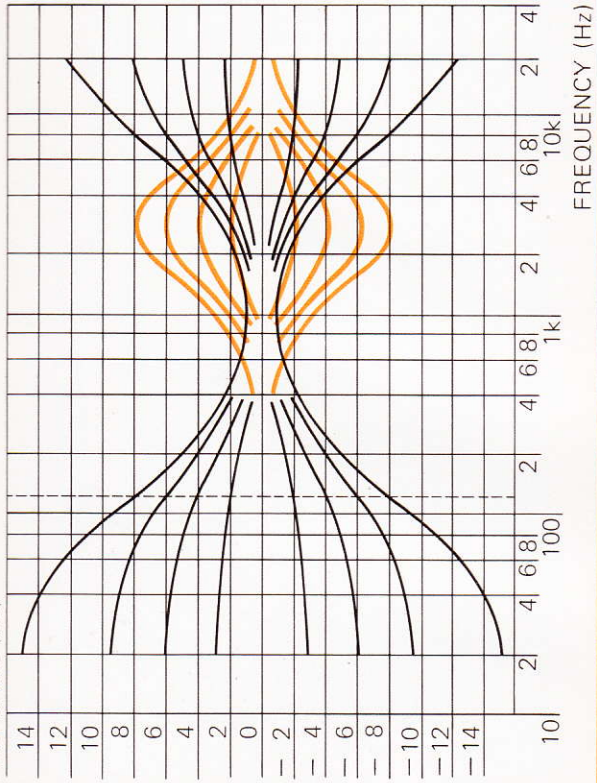
True to its professional heritage, the B750 pre-amplifier and output stages are constructed on a modular basis, with minimal cabling and solder-free plug-in boards for ease of maintenance, and for superb cross-talk and signal-to-noise specifications. Moreover, great care has been exercised to ensure that neither the B750 nor loudspeakers or headphones can be damaged through mishap. The output transistors are monitored continuously to detect overheating or any d.c.-offset that could result in speaker damage. The same protective relay that mutes the speakers and headphones in the event of component failure keeps them disconnected for a few seconds after the power is turned on, preventing thumps or clicks. Neither short circuits nor overloading can damage the equipment or speakers connected to it.



Loudspeaker Connections

Two pairs of 8-ohm loudspeakers may be connected to the B750 simultaneously, and a front switch permits you to select one or the other or both. Both DIN-type and sturdy, spring-loaded speaker connectors are provided for secure, positive contact.

RESPONSE (dB)



Versatile Tone Shaping

The Revox B750 has three independent tone controls: bass, treble, and presence which incorporate active amplifier circuits to minimize phase and TIM distortion. Each operates over a ± 8 dB range in precise, repeatable 2-dB click-stop increments. In addition, a tone-defeat switch is provided for making instant comparison between flat and modified response.

At the extreme ends of the frequency spectrum switch-controlled filters permit elimination of scratch or rumble, as needed.

Convenient and Easy to Use

To provide instant volume reduction without disturbing the setting of the volume control (to answer a telephone call, for example), a 20-dB attenuator pushbutton is incorporated. It is also useful to provide background music levels while retaining the full rotation capability of the volume control. For listening at low volume, where the ear is less sensitive to the very low and high frequencies, a switchable loudness compensation circuit is incorporated that augments the frequency extremes for more pleasant listening.

In all, for distortion-free musical satisfaction and control versatility you won't find a finer amplifier in its power class than the Revox B750.

Technical Data:

Power output:	75 watts/channel min. RMS into 8 ohms from 20 Hz-20 kHz with no more than 0.05% THD 0.04% at rated output less than 0.04% at rated output
Total harmonic distortion (1 kHz):	less than 0.08% at rated output
IHF intermodulation distortion (1.4 kHz/15 kHz):	1 dB
TIM distortion (Otala, Lowpass 100 kHz):	15 V/ μ s 30 V/ μ s
Dynamic headroom:	20 Hz ... 20 kHz ± 0.5 dB better than 80 at 8 ohms and 1 kHz
Slew rate:	limited by internal low pass filter: without low pass filter:
Frequency response:	Sensitivity for 75 watts (8 ohms)/ input impedance 200 mV/100 kohms 1.5 ... 7 mV/25, 50, 100 kohms (selectable)
Damping factor:	PHONO 1: 5 mV/50 kohms fixed 1 V/20 kohms
Inputs:	PHONO 2 (optional, in place of Aux 2): PWR AMP IN: PHONO 1, AUX 1+2, TAPE 1+2:
Input overload margin:	better than 30 dB
Outputs:	DIN connector TAPE 2/OUT: SPEAKERS A, B: TAPE 1+2 (phono sockets): TAPE 2 (lock): PRE AMP OUT: PHONES (2x):

Signal to noise ratio:

(rms value, unweighted 20 Hz ... 20 kHz, relative to 75 W/8 ohms, all inputs terminated with 1 kohms)	better than 90 dB
better than 82 dB	better than 82 dB
on all inputs better than 66 dB	on all inputs better than 66 dB
20 Hz ... 20 kHz ± 0.5 dB	20 Hz ... 20 kHz ± 0.5 dB

Phono equalization

(in accordance with IEC 98, MOD 4 1976, consistent with "new" RIAA curve):

Tone controls:	BASS: TREBLE: PRESENCE:
Filter:	LOW: HIGH:
Loudness (volume -30 dB):	100 Hz +6 dB, 10 kHz +4 dB
Semiconductor complement:	4 IC (voltage regulation), 99 transistors, 4 bridge rectifiers, 48 diodes
Current supply (voltage selector):	100, 120, 140, 200, 220, 240 V 50 ... 60 Hz
Main fuse:	100 ... 140 V: 5 A slow-blow 200 ... 240 V: 2.5 A slow-blow
Power consumption:	50 ... 550 watts
Weight:	28 lbs. 10 ozs (13 kg)
Dimensions (W x H x D):	17.8 x 6 x 13.7 inches (452 x 151 x 348 mm)

All figures quoted are minimum performance values normally exceeded by all units. Subject to change.

The Revox B760 FM Tuner

Digital Frequency Synthesizer Accuracy Superb Sensitivity and Selectivity 15-Station Memory

As easy to use as a touch-button telephone, the Revox B760 FM tuner brings all the music on the air to your fingertips. Every station, weak or strong, is locked in with quartz-crystal accuracy for crystal-clear, undistorted reception.

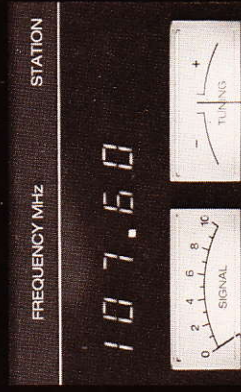
With so many stations on the air, particularly in crowded metropolitan areas, it's sometimes hard to know whether you've tuned into the station you were looking for. With the digital readout of the B760, on the other hand, you always know the exact frequency to which you are tuned, correct to two decimal places. Thus, if the desired station has an assigned frequency (which is always crystal controlled) of 101.3, just turn the tuning knob to that frequency on the display and the "frequency computer" in the B760 will automatically lock onto the station.

Because the digital synthesizer in the B760 is also crystal-controlled, tuning is far more accurate than could be achieved by hand. Further, there is no need for AFC circuits which can fail to lock onto a distant station and which add harmonic distortion.

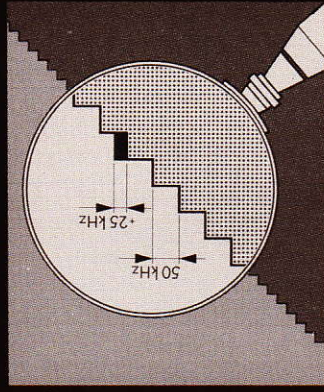
The B760 even contains a sophisticated 15-station electronic CMOS memory, eliminating the need to retune among your favorite stations. Any desired station can be stored in any of the 15 locations, and thereafter, to receive the station, you need merely press the assigned button.

The sophisticated circuitry can accommodate even the weakest signals, whose correct tuning and relative strength are shown on the wide-range meters. The signal strength meter is particularly useful in accurately orienting an antenna for best reception.

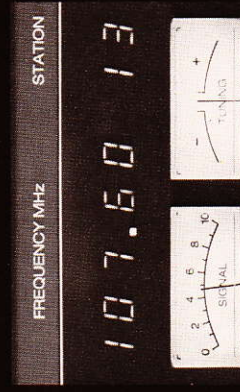
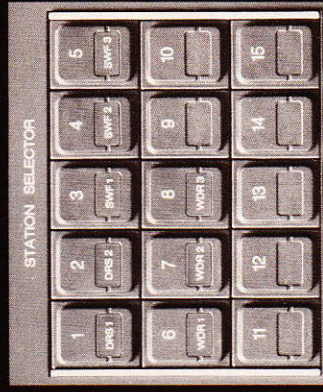
And the annoying swishing, hiss and pops between stations are eliminated by an effective muting circuit. Only if a signal meets your desired listening criteria will it be received, and the switching threshold is adjustable over a wide range with separate controls for monaural and stereophonic broadcasts.



The station is not only indicated on the digital display...



...but is received with quartz-locked accuracy thanks to its digital mode of operation.

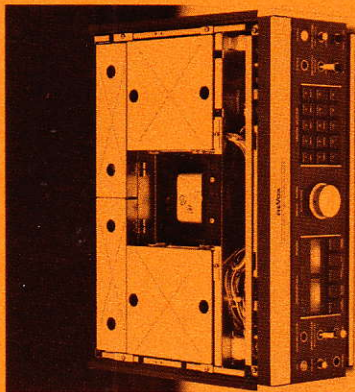


STUDDER **REVOX**

**REVOX
B760.**



The Revox B760 Stereo FM Tuner With quartz accuracy right on the station's frequency



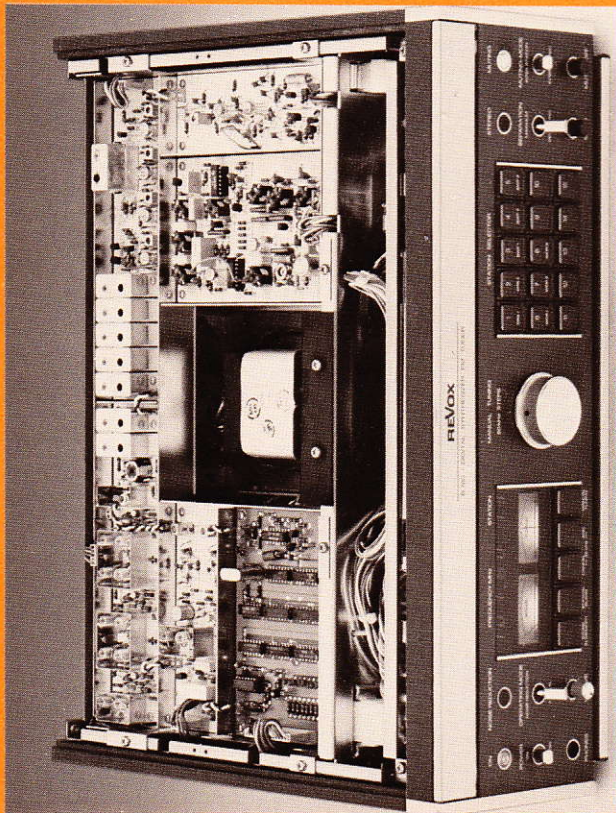
△ The RF, IF, MPX and AF electronics are thoroughly shielded.

With the shielding removed, the modular construction is visible.

Left: Synthesizer, local oscillator and RF input sections.

Center rear: Passive IF filters.

Right: IF amplifiers, demodulator and stereo decoder.

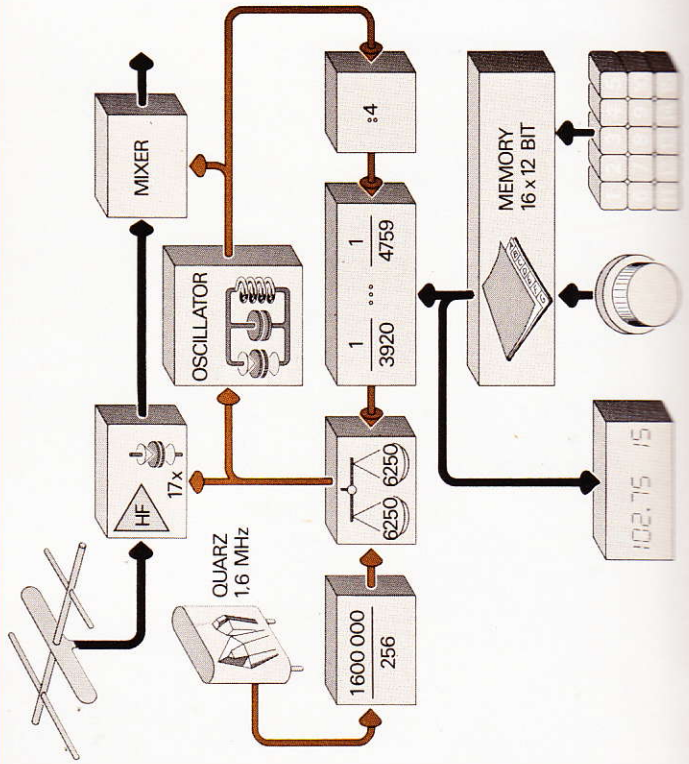


840 channels for international FM versatility

The Revox B760 is designed to receive all internationally-assigned FM channels, from 87.00 to 107.975 MHz. While the spacing between FM stations in the U.S. is currently a rather wide 200 kHz, in foreign countries it is often only 100 kHz, and sometimes less. The normal B760 tuning increments of 50 kHz provide for both situations, as well as for the fact that stations abroad are sometimes allocated frequencies that cannot be received by many digitally-controlled tuners. To ensure worldwide usability under the most congested FM channel allocations, a button on the B760 is provided that permits tuning increments of only 25 kHz. This feature may also be needed with certain community antenna systems.

Frequency synthesizer provides quartz crystal accuracy.

Even with a "center tune" meter, it is impossible to set a conventional (analog) tuner to the exact frequency of the broadcast station, yet ultra-precise tuning is necessary to achieve minimum distortion. The digital tuning system of the Revox B760, however, automatically ensures that each station received will be tuned to quartz-crystal accuracy ($\pm 0.005\%$), just as is the transmitter.



15-station protected memory

Up to 15 of your favorite stations can be assigned to its own automatic recall button in the Revox B760. The specific frequency of the station selected for each of the memory-recall positions is "remembered" in the CMOS digital logic circuit so that tuning is as exact when using the memory feature as it is when tuning manually. Should station preferences change, new selections may be substituted for previously assigned memory buttons, and an emergency, battery-operated power supply (located in a protective tray within the B760) keeps the memory selections active even in the event of a power failure.

Noiseless tuning

A sophisticated muting circuit is included in the B760 to prevent the usual whistles and swishing sounds that occur when shifting from one station to another. If it is desired to listen to an exceptionally weak (noisy) station that would normally be suppressed by the muting circuitry, a switch is provided to disable the automatic muting.

Adjustable mono/stereo reception thresholds

Stereo and monophonic broadcasts require different signal strengths for quiet reception, and for different purposes different criteria for acceptable signal quality are appropriate. For this reason, the B760 contains separate monophonic and stereophonic threshold controls that permit the user to select precisely how strong a station's signal must be in order to be received rather than being muted out as "noise".

"High-blend" stereo for weak stations

Since stereo broadcasts require ten times as much signal voltage at the antenna terminals as do monophonic transmissions, background hiss is much more frequently a problem in stereo FM reception. One solution with a weak stereo signal is simply to switch the tuner to its monaural mode, yet often this is a more drastic remedy

than is really required. The Revox B760 therefore contains a switch that reduces but does not entirely eliminate stereo channel separation by partially blending the high-frequency (hiss-causing) signals together, making it possible to enjoy stereo reception even of marginally-weak stations.

Built-in headphone amplifier

So you can listen to your tuner in privacy, the Revox B760 has a built-in headphone amplifier with its own, separately adjustable level control.



Advanced design refinements

While FM is capable of high-quality, wide bandwidth reception with virtually no background noise, nonetheless there are some potential sources of interference against which to guard. One of these is multipath reflections; another, interference from automobile ignition systems. In addition to its advanced basic design, therefore, the Revox B760 also offers a number of optional refinements.

Programmable antenna rotor control system

Antenna rotors permit orienting the antenna not only for maximum pick-up of the direct signal, but also for maximum rejection of reflected multipath interference. While a rotor is certainly not required in every receiving area, where it is, the proper antenna position code is stored in the B760 memory along with the frequency of the station corresponding to that button. In this way, using the appropriate rotor, the antenna will automatically be repositioned automatically each time the station memory is used.

Oscilloscope connection

For the proper detection and correction of multipath interference, no indicator is more sensitive than an oscilloscope. For users who wish to employ this method of optimizing antenna orientation, both vertical and horizontal scope outputs are provided in the B760.



Optional Dolby® decoding

A number of stations throughout the country are now using Dolby-B* encoding to improve the quality of their FM broadcasts. For listeners who can take advantage of this enhanced reception opportunity, an accessory plug-in board is available for the Revox B760 to provide the proper decoding.

*Registered trademark of Dolby Laboratories Inc.

Image rejection ($f_1 + [2 \times f_2]$): 106 dB ($f_1 + [2 \times f_2]$)
IF rejection f_1 : 110 dB
Spurious response ratio ($f_1 + [f_2/2]$): 106 dB
Capture ratio (at 65 dBf): 2 dB
Selectivity adjacent channel (average): 16 dB
Selectivity alternate channel (average): 78 dB
AM suppression: 70 dB
Subcarrier product rejection: 72 dB
Frequency response: 30 Hz ... 15 kHz \pm 1 dB
Deemphasis: 25, 50, 75 μ s selectable
Total harmonic distortion at 65 dBf:
 Mono: Stereo:
 100 Hz: 0.15% 0.35%
 1 kHz: 0.1% 0.25%
 6 kHz: 0.2% 0.2%

Stereo separation at:
 100 Hz: 40 dB
 1 kHz: 42 dB
 10 kHz: 33 dB

Signal to noise ratio at 65 dBf:
 mono: 78 dB
 stereo: 74 dB

Muting thresholds:
 mono: adjustable from 5 μ V (19.2 dBf) ... 25 μ V (33.2 dBf)
 stereo: adjustable from 10 μ V (25.2 dBf) ... 150 μ V (48.8 dBf)

Antenna inputs:
 60 ... 75 ohms coaxial
 240 ... 300 ohms balanced

Audio outputs:
 fixed level output: 1.2 V (R_L min. 10 kohms)
 adjustable output: 0 ... 1.2 V (R_L min. 10 kohms)

Headphone output:
 R_L = 220 ohms, R_L min. 8 ohms, stereo jack level adjustable with potentiometer VOLUME
 8 V at 400 Hz and 75 kHz deviation

Oscilloscope output
 (to analyze multipath interferences):
 vertical (Y): 50 mV/75 ohms, RF = 1 Volt
 horizontal (X): 75 kHz deviation = 2.8 Volt/pp

Component parts
 (without Dolby circuit board):
 65 IC, 63 transistors, 2 diode matrices (91 diodes), 42 diodes, 19 variable capacity double diodes, 3 bridge rectifiers, 7 seven-segment displays

Electric current supply
 (voltage selector):
 100, 120, 140, 200, 220, 240 V
 50 ... 60 Hz, 40 watts

Main fuse:
 100 ... 140 V: 0.5 A slow-blow
 200 ... 240 V: 0.25 A slow-blow
 In case of power line failure, the current supply for the electronic memory unit is maintained by three 1.5 V alkaline batteries (R6, UM3, Size AA)

Weight: 26 lbs. 7 ozs (12 kg)
Dimensions (W x H x D): 17.8 x 6 x 13.7 inches (452 x 151 x 348 mm)
 a) Dolby decoding unit: may be added after removal of the left-hand side panel, no alignments required

Technical Data: Revox B760 Stereo Digital FM-Tuner

Tuning range:
 87.00 ... 107.975 MHz
 Tuning in 840 steps with 25 kHz separation by means of a quartz referenced frequency synthesizer

Station preselection:
 15 user programmable station selector keys for quartz accurate station selection in accordance with a 25 kHz channel pattern \pm 0.005%

Tuning Accuracy:
 Signal strength: log ... 100 mV/75 ohms
 Center tuning: linear 20 kHz/mm

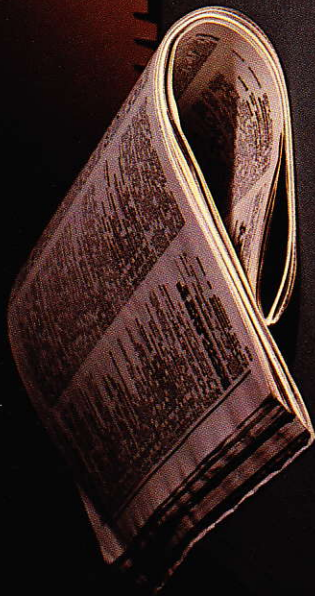
IHF (30-dB) monophonic usable sensitivity: 1.9 μ V/300 ohms (10.8 dBf)
IHF (IHF-T-200) monophonic 50 dB quieting sensitivity: 2.5 μ V/300 ohms (13.2 dBf)
IHF (IHF-T-200) stereophonic 50 dB quieting sensitivity: 30 μ V/300 ohms (34.8 dBf)

Revox B760.

All figures quoted are minimum performance values normally exceeded by all units. Subject to change.

STUDDER **REVOX**

**Revox
B780.**



The Revox B780 Receiver: A Tuner and Amplifier Joined in More Than a Marriage of Convenience

The New Revox B780 Opens Up A New World of Digital Accuracy and Ease, Coupled with the Traditional Revox Dedication to Sonic Clarity

In its B780 receiver Revox has achieved a truly symbiotic relationship between tuner and amplifier. Each retains its identity: the circuitry and performance of both the B760 Digital Frequency Synthesizer FM Tuner and the Revox B750 Integrated Amplifier are combined in the B780. Instead of trading flexibility for single-unit convenience, however, the capabilities of each unit have been enhanced by their merger into the Revox B780.

What makes the B780 more than the sum of its component parts is a microprocessor unit (picture 1) that takes over switching functions that would normally require an inordinate number of hard-wired connections and printed circuits. At the same time that it serves to increase the reliability of the B780, the microprocessor control system makes the receiver even easier to use.

The Receiver for All Seasons

As the nerve center for your entire component high-fidelity system, the Revox B780 provides connection and control facilities for two loudspeaker systems and for four stereo sources in addition to its built-in FM tuner: a phono cartridge, two tape recorders, and an auxiliary source, such as a TV set, AM tuner, or the like. Each input is fully buffered, and so, can be used independently. That is to say, if you wish, you can record an FM broadcast on your open reel deck at the same

time as you are listening to the playback of an LP. In place of the usual rotary "Selector Switch", your choice of input signals is electronically routed through the amplifier via individual pushbuttons (with lighted indicators, picture 2) that command the microprocessor to switch to the appropriate source. Even when the B780 is turned off, the microprocessor retains the last selected program source in its memory, so when you turn the unit on again, it "wakes up" properly switched to that input.

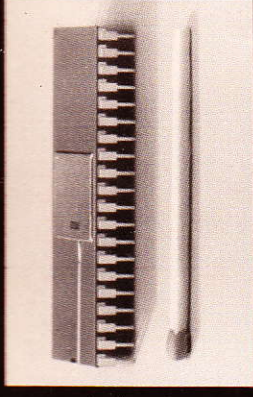
Lighted digits show which program is routed to the power amplifier, and which program source is going to the recorder circuits. These pushbutton choices are also retained in the microprocessor memory, giving you the convenience of mechanical switching with vastly improved reliability (picture 3).

18-Station Memory With Automatic Search

The same principle of all pushbutton operation is applied throughout the tuner section of the B780. There is no conventional FM dial for the selected station frequency, as it is indicated (to two decimal places) on a digital read-out. There is no conventional tuning knob, with its dial cord and pulleys; rather, pushbuttons cause the tuner to scan upward or downward in frequency in 50 kHz increments, stopping (by your choice) at each receivable station, or at each stereo station, or switching into mono when the station's signal strength is not adequate for proper stereo reception.

Because of its quartz-crystal controlled frequency synthesizer, tuning is always exact; only by using a laboratory FM generator and distortion analyzer could such precision be obtained with normal manual tuning. And the pushbutton memory system of the B780 allows you to store the frequencies of up to 18 favorite stations for instant recall.

Long awaited, the new Revox B780 receiver embodies the most up-to-date technology, in its most convenient form, in the service of the one goal that inspires all Studer Revox products: to bring you the most faithful possible reproduction of musical sound.



Under the decorative, fold-up top panel are additional, less frequently used controls for the muting threshold and memory storage.



The Revox Microprocessor controlled digital synthesizer FM receiver B780

The B780 Receiver Contains:

- A digital synthesizer with micro-processor control capable of tuning the entire FM band/ in 25 kHz increments with quartz-crystal precision.
- An easily programmable 18-station electronic memory.
- Automatic or manually-controlled station search with digital display or direct keyboard entry of desired frequency.
- A preamplifier with contactless switching between input sources.
- A cool-running, symmetrical-design power amplifier rated at 70 watts per channel, min. RMS into 8 ohm from 20 to 20,000 Hz, with no more than 0.05% total harmonic distortion and virtually no THD.

The Most Versatile Tuning Section

With the introduction of the B780 the last vestige of old-time radio broadcasting - the tuning knob - disappears. What looks like a tuning knob on the front panel is only the volume and balance control. Instead of conventional, inaccurate tuning, ten numerical and three function pushbuttons, similar (though larger) to those of an electronic calculator provide convenient, extraordinarily accurate tuning. The keyboard functions in two basic modes, as described below.

Keyboard Operation

In the first of its functions, the numbered buttons are used to enter the desired station frequency - 107.50, for example - and when this is entered the tuner instantly shifts to that frequency. A wrong order such as for frequency out of the FM band, is signalled by a blinking display. Additional buttons permit you to move upwards or downwards in frequency, in 25 kHz increments if pressed once, or continuously until released if the button is kept depressed. A signal-strength meter with a logarithmic scale shows you the exact signal strength of the incoming station and assists in antenna orientation, and a center-tuning meter indicates correct tuning.

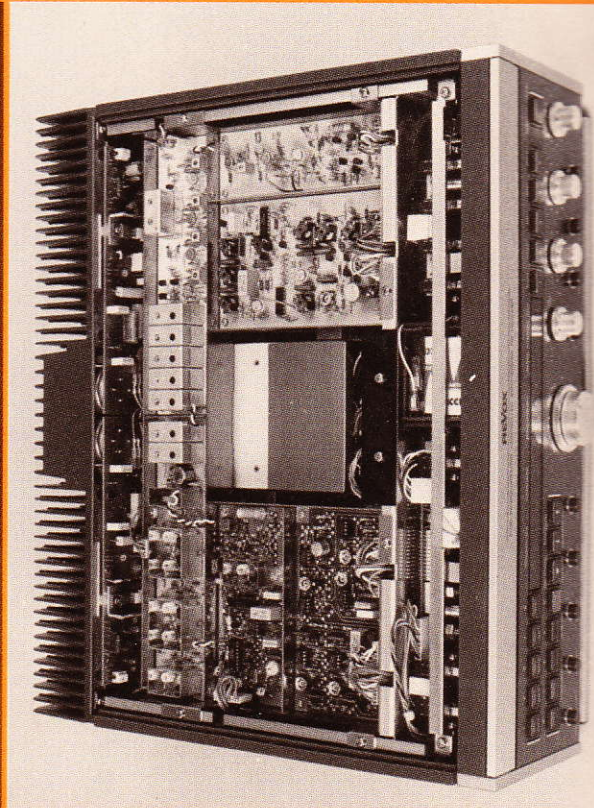
Station Memory Storage

When you desire the tuner to "remember" a specific station it is necessary only to tune it in, flip up the decorative top panel, and depress the "Store in Memory" button. There is memory space available for 18 such station selections, and, if you have the Revox antenna rator control accessory, the same memory that stores the station frequency will also store antenna orientation, automatically turning the antenna each time the station is called up.

Without reprogramming the station memory, it is also possible to shift rapidly between two different broadcasts by pressing the "Last Station" button, which automatically returns you to the station you had previously been listening to. And, just as the amplifier's microprocessor memory remembers which input mode you had selected before the unit was turned off, so also in the tuner, the B780 "wakes up" to the last station you had been listening to before turning it off. A battery-recharging circuit in the B780 keeps the internal battery supply continuously refreshed so the memories remain intact even in the event of a power outage.

REVOX

B 780 MICROCOMPUTER CONTROLLED SYNTHESIZER



B 780 MICROCOMPUTER



Other tuner features typical of Revox thoroughness include a continuously adjustable muting level control, a stereo threshold control, a stereo only selector, FM mono switch and a high blend switch that does not adversely affect the frequency response. Additionally, the Revox B780 has a wired connector for instant plug-in of the accessory FM noise-reduction system printed-circuit board.