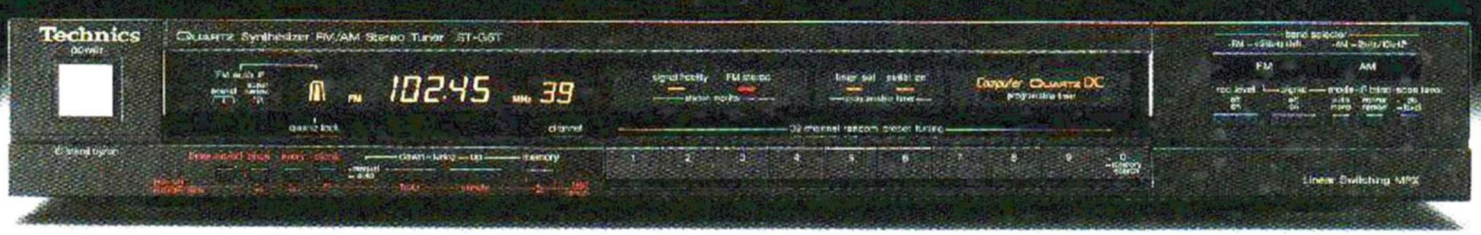
Technics

ST-G6T

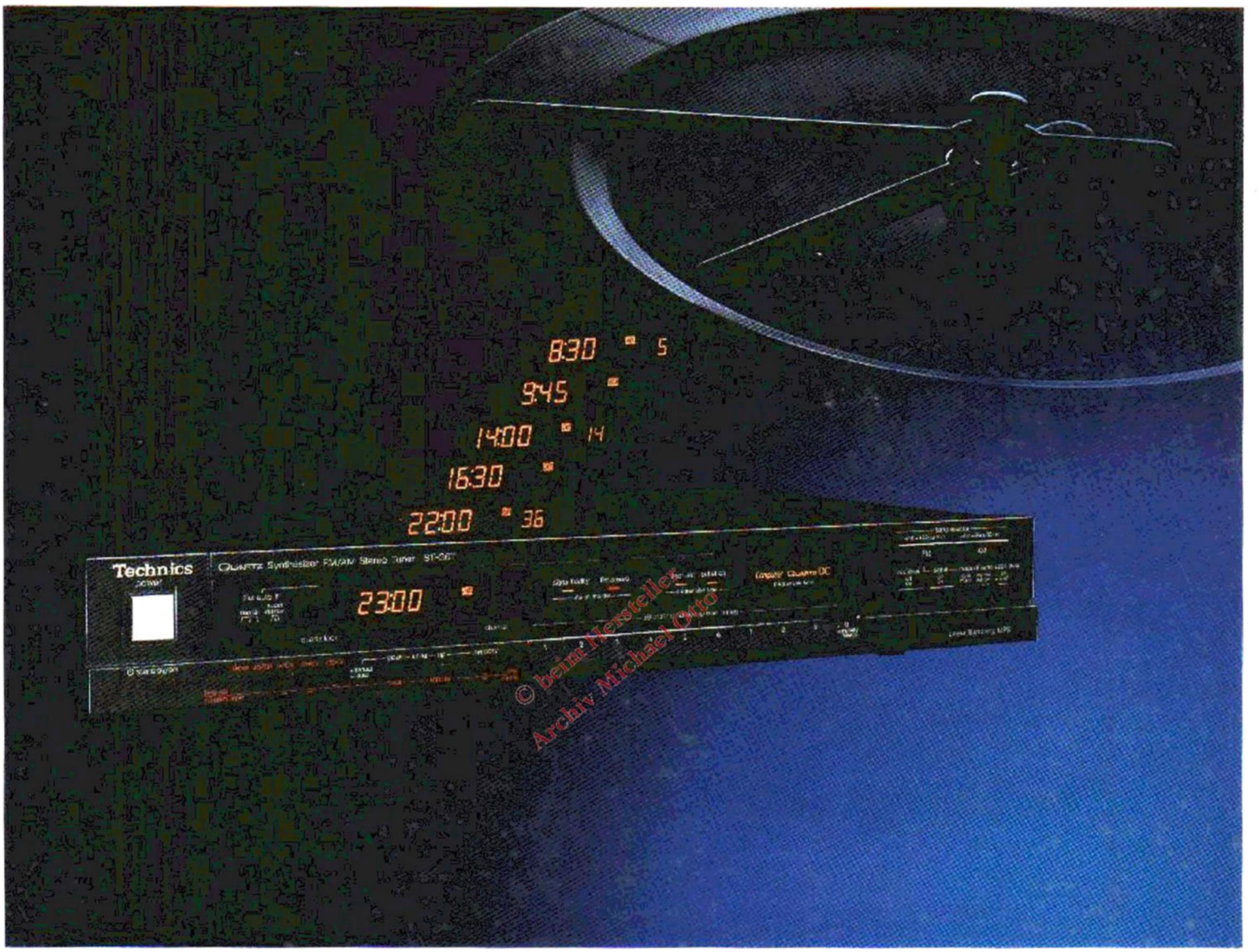
Quartz Synthesizer AM/FM Stereo Tuner

39-Channel Random Access Preset Memory
Built-in Programmable Timer



Computer
QUARTZ DC

1. World's First DC Twin-Quartz Circuitry.
2. DC Linear Switching MPX.
3. 39-Channel Random Access Preset Memory.



COMPUTERIZED TUNER WITH 39 AM/FM PRESETS AND TIMER CONTROLLED ON/OFF AC SWITCHING.

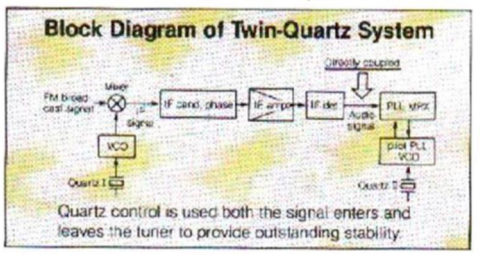
Introducing a tuner like no other. The ST-G6T is bursting with digital ready innovations that improve sound quality and performance.
The Technics Twin-Quartz system brings a new staibility and accuracy to reception.
The original Technics Linear Switching MPX circuit and DC construction widen stereo separation and extend frequency response.
You can put all of your favorite AM and FM stations into memory, now and in the future with the 39 AM/FM presets.
There is also a built-in audio timer.
Even when you are not at home you can tune in desired stations and switch power on and off to a cassette deck or other component.

World's First DC Twin-Quartz Circuitry

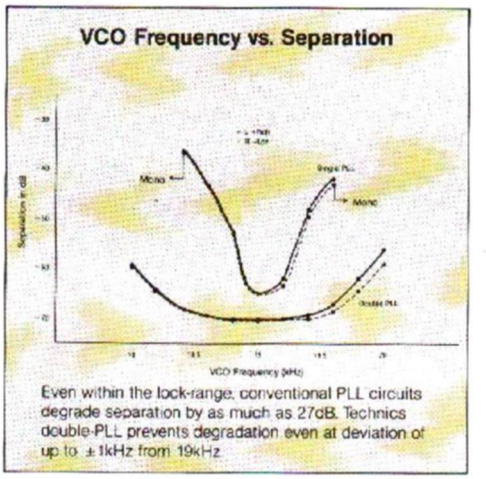
Twin-Quartz control—the highest precision in the front end and MPX

Ordinary quartz synthesizer tuners use the precision of quartz for the tuning process alone. The Technics ST-G6T boasts quartz accuracy in the MPX stereo decoding stage as well. Here's how.

In a conventional PLL decoder the VCO (voltage controlled oscillator) frequency is set so that the error voltage based on the phase difference with the 19kHz pilot signal is zero. But in reality there exists a 19kHz ±600Hz allowance (lock range) which, depending on temperature and humidity, seriously harms the separation characteristics. Now Technics has developed a double PLL system consisting of the conventional phase locked loop "PLL1" based on the 19kHz pilot signal, to which has been added a second loop "PLL2" based on a quartz crystal oscillator frequency. Here the VCO frequency is always quartz locked with PLL2 to 19kHz. By upgrading the quality of the switching signal used for decoding, this stabilizes performance and delivers the full waveform fidelity of the tuner's DC circuitry at all times. What you see in the specs is what you hear in your listening room.



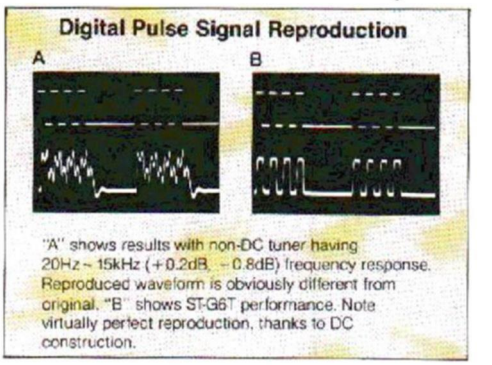
Quartz control is used both the signal enters and leaves the tuner to provide outstanding stability.



Even within the lock-range, conventional PLL circuits degrade separation by as much as 27dB. Technics double-PLL prevents degradation even at deviation of up to ±1kHz from 19kHz.

Unique all DC circuitry

All DC circuitry sets Technics tuners apart in the audio world. This circuit configuration is truly unique as it extends DC construction from input to output, with DC amplification in the RF and other stages, DC detection, and DC stereo decoding. Waveform fidelity is excellent with frequency response all the way down to 4Hz. At last, you can hear the most subtle musical nuances of FM broadcasts. Today, it has to be DC for the serious music listening.

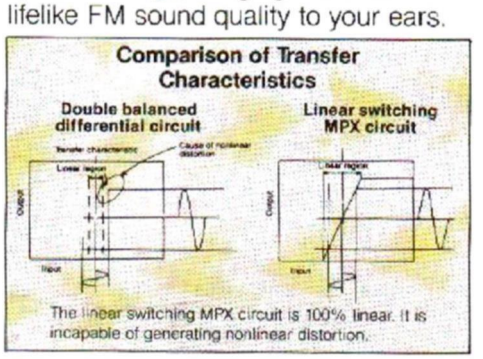


"A" shows results with non-DC tuner having 20Hz ~ 15kHz (+0.2dB, −0.8dB) frequency response. Reproduced waveform is obviously different from original. "B" shows ST-G6T performance. Note virtually perfect reproduction, thanks to DC construction.

DC Linear Switching MPX for Lower Distortion and a Wider Dynamic Range

There is another valuable benefit of quartz control in the MPX circuit of the Technics ST-G6T. This derives from Technics' newly developed dynamic DC linear switching circuit.

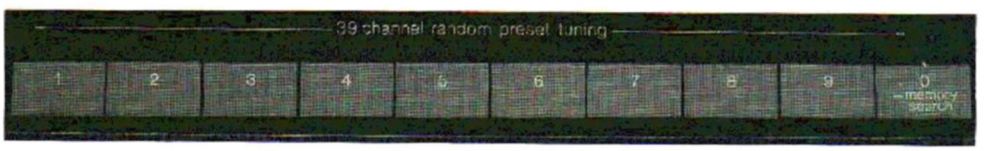
Ordinary tuners use a double balanced differential circuit to divide the demodulated audio signal into left and right stereo channels. However, the electronic components of this kind of circuit inherently cause nonlinearities. These translate into nonlinear phase characteristics in the left and right signal components, a direct cause of reduced dynamic range and distortion. Quartz control makes possible a more logical yet simpler circuit design which extends the range of linear transmission in the ST-G6T. This naturally means lower distortion and significantly wider dynamic range, bringing the most lifelike FM sound quality to your ears.



The linear switching MPX circuit is 100% linear. It is incapable of generating nonlinear distortion.

Huge AM/FM 39-Channel Random Access Preset Memory

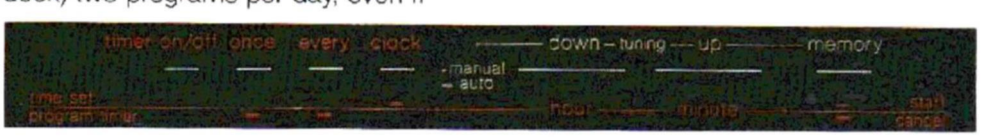
Now you can handle the ever increasing number of broadcast stations. You can preset any AM and FM stations in any combination and in any order up to a total of 39. (So you could use all 39 for FM stations if you so desired.) Once a station is put in memory, you can tune it in again instantly. You don't need to select the band to recall a station. The selected preset channel number is shown on the display. Ten keys numbered 0 through 9 are used for preset operation. To select station number 3, you simply press the number 3 button. To select station number 39, you press 3, then 9. To check memory contents, press and hold the memory search key. The display will show the frequencies and channel numbers of each preset station in order from 1 through 39.



Built-in 2-Way Programmable Timer

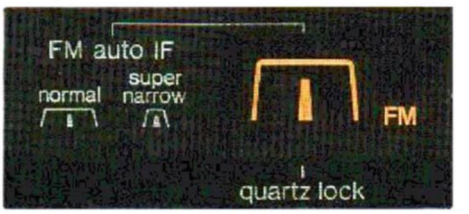
Built into the ST-G6T is a precision audio timer that you can program in two ways to tune in stations and turn power on and off. In the "every" mode, the timer operates at the same selected time every day. In the "once" mode, it can be set to operate for a particular broadcast on that particular day. If you use both of these modes, then you can automatically tune in and record (using a connected cassette deck) two programs per day, even if you are away from home.

- Time setting is easily performed with the tuning up/down keys. Hour and minute are set independently.
- Time can be shown while listening by pressing the clock button.
- Timer on/off button enables manual operation while preserving memory contents.
- Outlet indicator confirms AC supply to deck or other component.



Computer Controlled Auto IF Bandwidth Selector

A new computer controlled method of optimizing reception. As you tune, a microcomputer checks for interference from strong stations on neighboring frequencies. A narrower IF filter bandwidth is inserted automatically to minimize interference if necessary. A wider filter bandwidth is used for maximum sound quality if no strong interfering station is detected. In other words, the system is designed to select the optimum filter bandwidth according to reception conditions for each station. This is particularly valuable if you have many stations to choose from.



Multi-Function Low-Noise LCD Readout

Liquid Crystal Displays need only a very small current to operate. By using less power, the LCD minimizes the chance of electrical disturbance in other tuner circuitry. This sophisticated display shows the tuned-in frequency, preset channel number (if one has been selected), and IF bandwidth selection. But that's not all. The display can show signal strength, scan level, and time; and it can confirm timer setting operation and recording level check operation.

Frequency and channel number indication

Signal strength indication

Scan level indication

Automatic Preset Tuning Memory and Auto-Scan Tuning

Instead of deciding yourself which stations to preset, you can leave it up to the tuner to preset AM and FM stations automatically. More convenience is provided by auto-scan which automatically finds and tunes in the next station on the band.

Quartz Signal Generator for Recording Level Setting

The ST-G6T has a built-in, quartz-referenced, 333Hz square wave signal generator rated at 99.999% accuracy. This is convenient for setting your tape deck's recording level before taping broadcasts.

Other Features

- FM signal strength digital display. Signal strength is shown digitally in 2dB steps up to about 54dB.
- Signal fidelity monitor.
- 19kHz pilot signal automatic canceller.
- Scanning level selector. Allows you to select one of three signal strength levels, 30dB, 40dB or 50dB, above which the auto preset memory function will place stations in the memory.
- +25kHz FM frequency shift switch.
- 9kHz/10kHz AM allocation switch.
- FM wing antenna terminal for automatic antenna tuning.
- Detachable AM loop antenna.

Technical Specifications (DIN 45 500)

FM TUNER SECTION

Frequency range	
87.50 ~ 108.00MHz (50kHz step)	
87.525 ~ 108.00MHz (+25kHz shift)	
Sensitivity	1.5μV (IHF '58)
S/N 30dB	1.3μV (75Ω)
S/N 26dB	1.2μV (75Ω)
S/N 20dB	0.9μV (75Ω)
IHF S/N 46dB stereo quieting sensitivity	28μV (75Ω)
Total harmonic distortion (normal)	
MONO	0.02%
STEREO	0.03%
S/N	
MONO	72dB (80dB, IHF)
STEREO	68dB (73dB, IHF)
Frequency response	4Hz ~ 18kHz, +0.5dB, −1.5dB
Alternate channel selectivity	
normal ±400kHz	50dB
super narrow ±200kHz	25dB
Capture ratio	1.0dB
Image rejection at 98MHz	100dB
IF rejection at 98MHz	100dB
Spurious response rejection at 98MHz	110dB
AM suppression	55dB
Stereo separation	
1kHz	60dB
10kHz	45dB
Carrier leak	
19kHz	−55dB (−60dB, IHF)
38kHz	−45dB (−45dB, IHF)
Channel balance (250Hz ~ 6300Hz)	±1.0dB
Limiting point	0.85μV
Bandwidth	
IF amplifier	180kHz
FM demodulator	1000kHz
Antenna terminal	75Ω (unbalanced)

AM TUNER SECTION

Frequency range	
522 ~ 1611kHz (9kHz step)	
531 ~ 1620kHz (9kHz step)*	
530 ~ 1610kHz (10kHz step)	
Sensitivity (S/N 20dB)	20μV, 300μV/m
Selectivity (±9kHz)	55dB
Image rejection at 999kHz	40dB
IF rejection at 999kHz	60dB

TIMER SECTION

Clock	Quartz-lock type 24-hour indication
Precision	Within ±10sec monthly (at 25°C)
Function	24-hour programmable everyday: 1 time once: 1 time
Programmable content	Program source (AM/FM) Power on/off timing Designation of preset station
Setting intervals	1 min. ~ 23 hours 59 min. (at 1 minute intervals)
Priority order	once, everyday

GENERAL

Output voltage	0.3V (0.6V, IHF)
Power consumption	9.5W (8W for operation of timer)
Power supply	AC 110/127/220/240V, or 240V for Australia, 50/60Hz
Dimensions (W x H x D)	430 x 64 x 241mm (16 15/16" x 2 17/32" x 9 1/2")
Weight	2.3kg (5.1 lb)

* For Saudi Arabia only.

Technics
Matsushita Electric