



## Rek-O-Kut *ULTRA* Preamplifier

The *Rek-O-Kut ULTRA* is designed for modern, audiophile, 33 rpm records, and also for old 33 and 78 rpm records from anywhere in the world. Its RIAA accuracy, low distortion, and high input level capacity make it suitable for even very expensive systems. It can compensate for records of different vintages and manufacture. Its totally flat setting can facilitate those who may prefer to implement record compensation with computer software (not supplied).

The *ULTRA* can be used to connect one or two turntables to a Hi-Fi system that has no phono input, or for adding another turntable to an amplifier that has only one phono input. It is designed to be used with any magnetic phono cartridge and is not suitable for most of the less common, moving coil variety of pickup devices.

It can also be used with the line input of a computer's sound card to facilitate phono playback through PC multimedia systems, for recording onto hard disc and editing, as well as producing CD copies and MP3s.

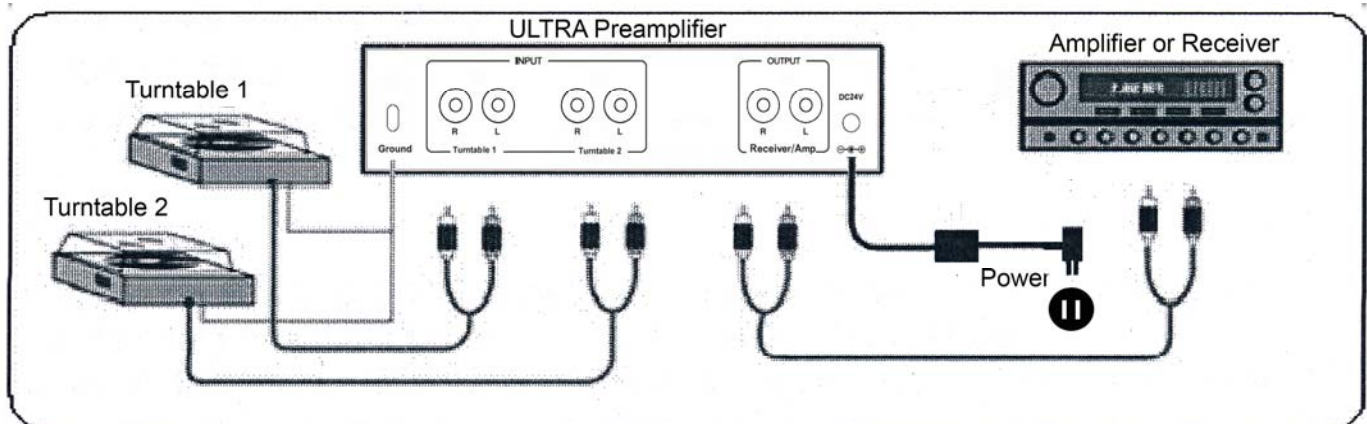
It is very small in size and, if necessary, can be hidden behind other components. It will operate on almost any power available anywhere in the world. One need only change the power cord, or use a plug adapter.

### FEATURES:

- Audiophile audio performance
- Quality OFC gold plated RCA cable included
- Input and output via gold plated RCA connectors
- Compensation for both US and non-US vintage records
- Sub-sonic filter to reduce deep rumble and wasted amplifier power
- Highly accurate equalization for either modern RIAA records or old 78 RPM records
- Powered by an in-line power adapter that works anywhere In the world – no cumbersome wall transformer

### CONNECTIONS::

- 1) Do not plug the power cord into a power source before connecting it to the amplifier.
- 2) Connect the turntable(s) output RCA cable(s) to the *ULTRA* input connectors marked "TT1" or "TT2."
- 3) Connect the turntable(s) earth/ground wire(s) to the preamp's chassis ground terminal.
- 4) Use an RCA cable to connect the left and right outputs of the preamp to a line level input of your amp, receiver, (labeled as "CD, aux, tuner" etc), or to your computer's sound card input.
- 5) Plug the preamp's power cord into either a wall power outlet or a switched accessory power outlet of your control amplifier. The panel pilot light will illuminate. The preamp consumes very little power when not in use.



### OPERATION:

Set the *TT Select* switch to the desired turntable.

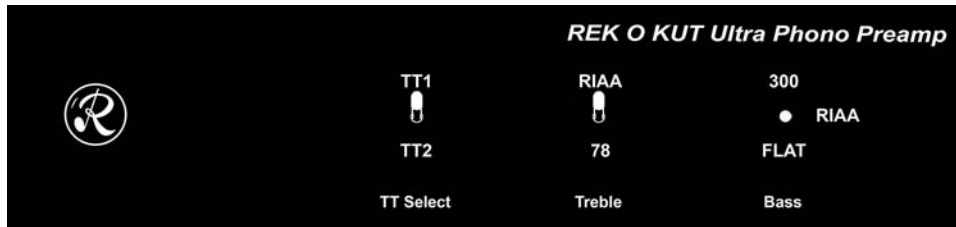
For audiophile 33 rpm LP listeners, set the switches as per illustration number 1. You need do nothing further.

To play common 78 rpm records, set the *Treble* switch to the 78 position as show in illustration number 2.

For 1925-1935, Columbia-made and European 78s, and very early LP records, consult the table. For very noisy records, you may want to set the *Treble* switch to the RIAA position regardless of its make or vintage.

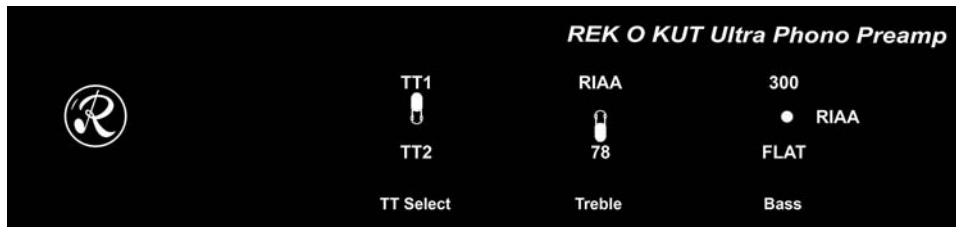
**PLAYING RECORDS – SHOWN FOR TT1. SET TT SELECT TO APPROPRIATE TURNABLE USED**

**1. 33 RPM STEREO AND MOST MONO LP RECORDS, NAB RADIO TRANSCRIPTIONS:**



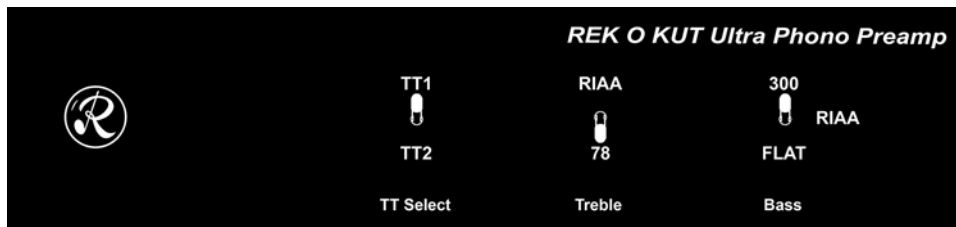
Set the switches as above, the *Treble* (Rolloff) to RIAA, and the *Bass* to RIAA (500 Hz Turnover)

**2. MOST US, POST 1935, 78 RPM RECORDS. MOST PRE 1950 RADIO TRANSCRIPTIONS:**



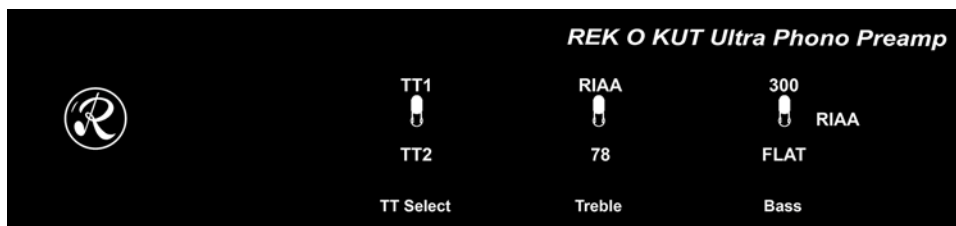
Set the switches as above, the *Treble* (Rolloff) to 78, and the *Bass* to RIAA (500 Hz Turnover)

**3. MOST US PRE-1935, AFTER-1935 COLUMBIA, AND MOST NON-US 78 RPM RECORDS:**



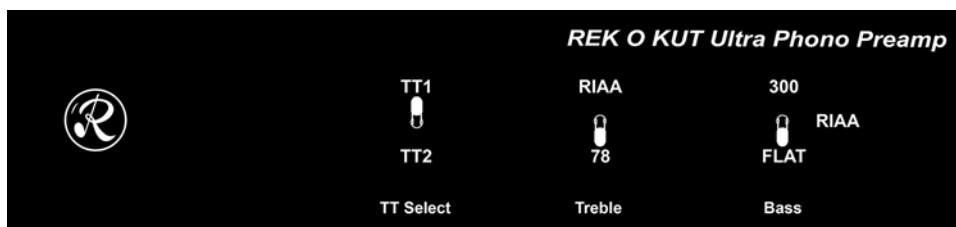
Set the switches as above, the *Treble* (Rolloff) to 78, and the *Bass* to 300 (300 Hz Turnover)

**4. LATER 1947 - 1952 COLUMBIA 78 RPM RECORDS:**



Set the switches as above, the *Treble* (Rolloff) to RIAA, and the *Bass* to 300 (300 Hz Turnover)

**5. TOTALLY FLAT, FOR PERFORMING PLAY COMPENSATION WITH COMPUTER SOFTWARE:**



Set the switches as above, the *Treble* (Rolloff) to 78, and the *Bass* to FLAT (No Turnover)

Technical information from record companies was rarely disclosed, and could change with time. If a small company's record is pressed by a big name, follow the EQ for the big name. Below are some suggested settings for a variety of records. Let your ears also guide you.

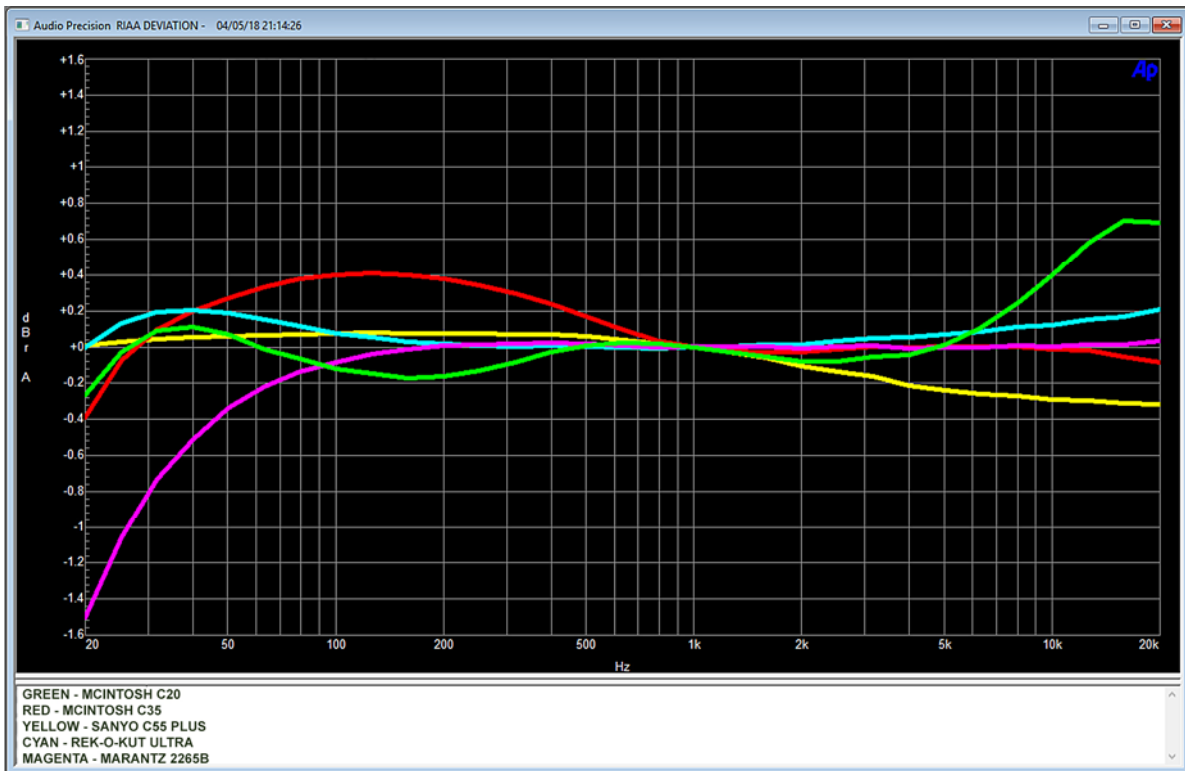
RECORD TYPE OR COMPANY	SPEED	TREBLE	BASS	FIGURE
Acoustic 78s	78	78	300	3
AFRS & most pre 1950 transcriptions	33	78	RIAA	2
Audiophile Records (brand)	33	RIAA	RIAA	1
	78	78	300	3
BBC Radio Transcriptions 1930-53	33/78	78	300	3
Columbia				
1925-1947	78	78	300	3
1947-1952	78	RIAA	300	4
1947-up	33/45	RIAA	RIAA	1
DECCA (US) up to MG4400 matrix	33	78	RIAA	2
DECCA/LONDON (Eng)				
FFRR 1944	78	78	300	3
FFRR 1950	33	78	RIAA	2
FFRR after ARL1186-1B	33	RIAA	RIAA	1
DGG 1952-1955	33	RIAA	300	4
Electrical 78s (most US)				
1925-35	78	78	300	3
1935-1947	78	78	RIAA	2
1947-up	78	RIAA	RIAA	1
Electrical 78s (most non-US)	78	78	300	3
EMI, HMV, English COL. 1949-53	33	78	RIAA	2
Home recordings	33/78	78	RIAA	2
RCA				
1925-35	33/78	78	300	3
1935-1948	78	78	RIAA	2
1949-up	33/45/78	RIAA	RIAA	1
Telefunken 1954-1962	33	RIAA	300	4
Most pre 1935, 78 RPM reissues on LP	33	78	300	3
Most post 1935, 78 RPM reissues on LP	33	78	RIAA	2
New Ortho, Ortho, NAB transcriptions, AES	33/45/78	RIAA	RIAA	1

If you want more information on this subject, you can consult the manual for the Rek-O-Kut Re-Equalizer at: [www.esotericisound.com/Electronics/REQ3MAN061416.pdf](http://www.esotericisound.com/Electronics/REQ3MAN061416.pdf) Set the ULTRA as best possible to those recommendations as you can. Yes, there will be some significant compromises you must make.

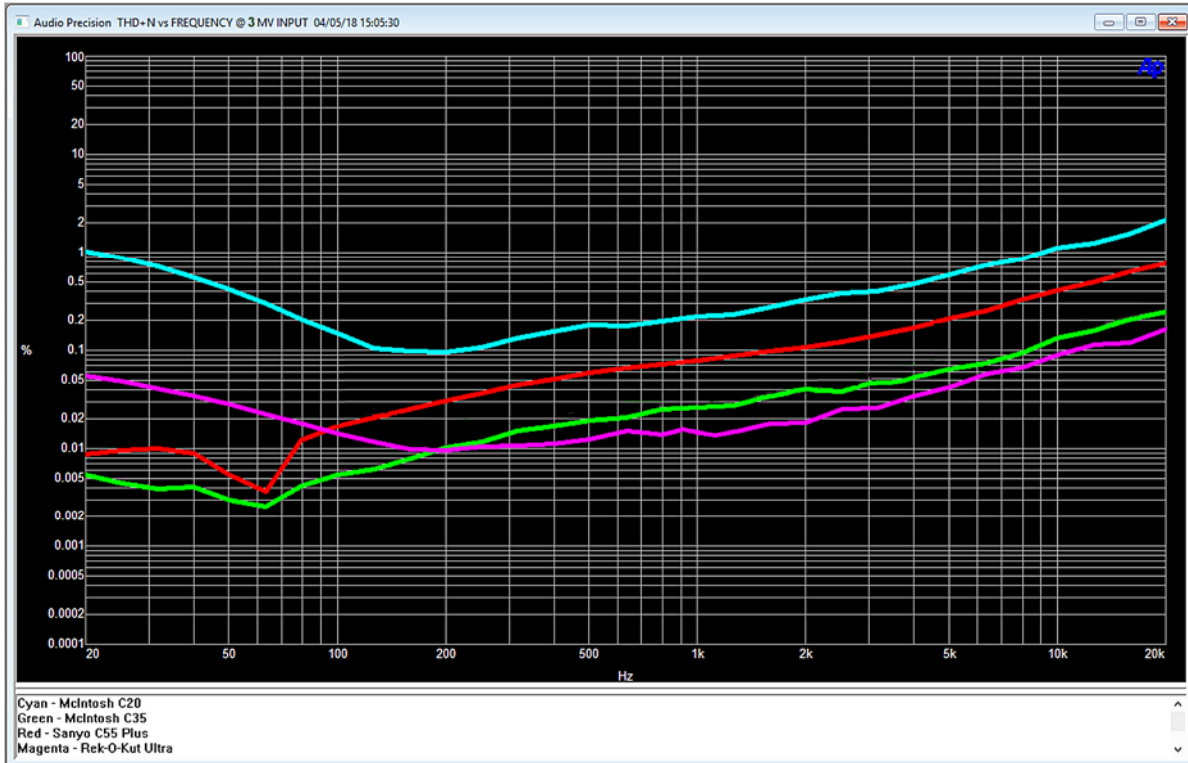
## SPECIFICATIONS

RIAA Frequency Response:	20 - 25 kHz, +/- 1/8 dB
Turnovers:	0 Hz (FLAT), 300 Hz, 500 Hz (RIAA)
Rolloffs @ 10 kHz:	0 dB (78), 13.7 dB (RIAA)
Sub Sonic Filter:	6 Hz
Signal-To-Noise Ratio:	>80 dB (others might call it 90)
THD (1 kHz @ 300mV):	0.015%
Input Impedance:	47 kOhms / 200 pF
Gain:	39 dB (37dB at TOTALLY FLAT)
Sensitivity (300 mV):	3.4 mV
Input Overload:	60 mV
Maximum Output:	4.5 Volts
Crosstalk:	45 dB
Power:	100-240VAC, 50/60Hz (automatic – no switch)

Below are RIAA frequency response curves comparing the ULTRA (cyan) to some other available fine preamps.



Here are Total Harmonic Distortion curves comparing the ULTRA (magenta) to a number of fine preamps.



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On the WEB at [www.esotericsound.com](http://www.esotericsound.com)