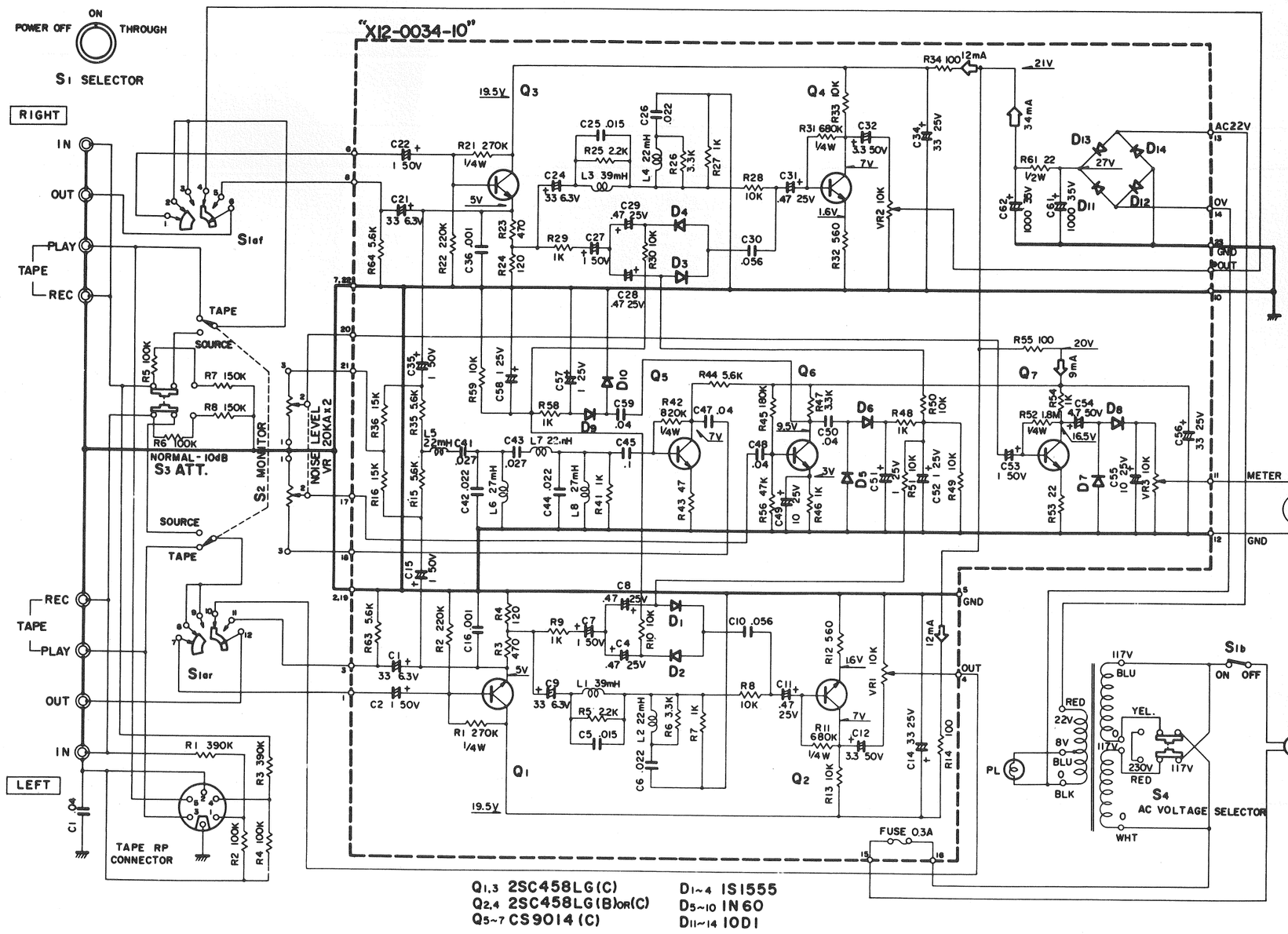


SPECIFICATIONS

Frequency Response	10 Hz ~ 80 kHz ±0.5 dB (100 mV input)	
Noise Blocking Characteristics	**Input Level**	**Noise Blocking Amt. (S/N Improving Ratio)**
	0 dB	0 dB
	−30 dB	0 dB
	−40 dB	2 dB
	−45 dB	6 dB
	−50 dB	10 dB
Noise Blocking Filter Frequency Characteristics	5 ~ 10 kHz −6 dB (0 dB 1 kHz) 7 kHz −15 dB (0 dB 1 kHz)	
Gain	0 dB ± 1 dB (1 kHz)	
Maximum Input	Normal 2.0V, −10 dB 6.3V	
Distortion	Less than 0.1% (7 kHz 100 mV input)	
Level Difference of Counter-Channel	Within ± 1 dB (1 kHz)	
S/N	Better than 75 dB (1 kHz 0 dB = 1V)	
Channel Separation	Better than 55 dB	
Input and Output Terminals	Input × 2 Output × 2 Tape Play × 2 RP Connecotr × 1 Tape Rec × 2	
Switch and Controls	Tape Monitor Switch, Level Meter, Input Attenuator Switch (−10 dB), Level Control	
Power Voltage	110 ~ 120V/220 ~ 240V, 50/60 Hz	
Power Consumption	3 watts	
Dimensions	140 (W) × 141 (H) × 310 (D) mm 5-1/2 (W) × 5-1/2 (H) × 12-3/16 (H) inches	
Weight	3.0 kg or 6.6 lbs.	

The Effective Use of the Denoiser

KF-6011

The dip frequency previously mentioned is set at about 7 kHz, which is the most effective frequency selected through experiments. Please refer to the Interconnecting Diagram. In this model, the panel controls are few and simple. The Noise Level Control is used to control the signal level which commences the dip reaction and to regulate the depth of dip. For good results, it is advisable to set the signal's average level at the OVU vicinity. However, in this case, it might fail to eliminate the sufficient amount of noise on the one hand or it might cause the reduction of the music source's sound values on the other. If this happens, better results may be obtained by the following adjustments:

1) When the Noise Level Control is moved to the left, the vibration of the VU meter needle is reduced. The amount of noise eliminated and the reduction in the music source's sound values become larger.
2) When the Noise Level Control is moved to the right, the vibration of the VU meter needle is increased. The amount of noise eliminated and the reduction in the music source's sound values become smaller.
3) Using the values obtained by either 1 or 2 and switching the Power Switch between ON and THROUGH, the Noise Level may be regulated to eliminate noise and prevent a lowering of sound values.

KF-8011

Unlike the KF-6011, the KF-8011's front panel is more complicated. The following points are the differences between the two:

1. The eliminating frequency is not fixed, but may be selected from among 4 frequency ranges. Careful selection gives you maximum denoising performance.
2. The built-in Defeat Switch permits checking of the denoising condition during recording. (Since power does not leave the REC OUT when the Power Switch is at the THROUGH Position, this is a convenient switch.)
3. Five program sources (A, B, C, D, Tape Play) may be connected to it.
4. The VU meters may be used for their original purpose.
   The KF-6011 has only 1 VU meter, which is used in setting the noise level. The KF-8011's VU meter is an entirely independent meter which also measures the amp's power and incorporates the functions of the Audio Lab Meter (KC-6050).
5. Automatic circuit switching during recording.
   In the case of KF-6011, it is necessary to reconnect the wire circuitry for recording, but in the case of KF-8011, just a flick of the De-Noiser Mode from Normal to Recording automatically switches the circuitry.

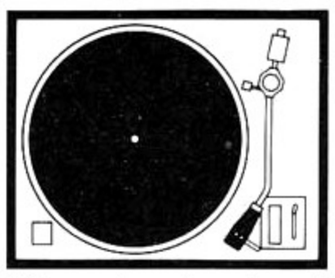
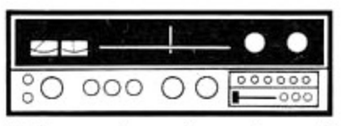
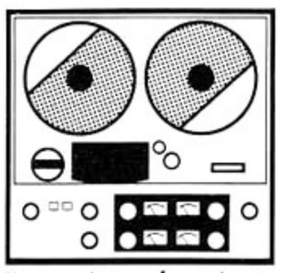
As mentioned previously, the Noise Level of the 8011 is not set with the use of the VU meters. By adjusting the Noise Level Control, selecting the appropriate frequency range, and flicking the Defeat Switch to either ON or OFF, you can get minimum sound value reduction and maximum denoising performance.

THE MERITS AND USES OF THE AUDIO DENOISER

Like the Dolby Noise Reduction Unit, the Audio Denoiser reduces noises included in the program sources. But these two equipments are two different things. Here's how.

Dolby works only with program sources which have been recorded in a Dolby system. The Audio Denoiser works with all types of program sources.

Dolby cannot eliminate previously included noises. The Audio Denoiser can.

AUDIO DENOISER		DOLBY
"OK" The Denoiser works!	 When there's a lot of hiss from that Glenn Miller sound track record.....	No Good. Dolby won't reduce that noise.
"OK" The Denoiser works!	 When there's a lot of noise during FM stereo reception.....	No Good Dolby won't reduce that noise.
"OK" The Denoiser works!	 When there's a lot of hiss from your tape..	No Good. Dolby won't eliminate previously included noise

Let's put it this way. At present, there are neither FM nor AM Dolby broadcasts being conducted. This means that no matter how famous or effective Dolby is reputed to be, its range of noise reduction function is limited to pre-recorded music tapes or home recordings and dubbings in which a Dolby system has been used. But with the Audio Denoiser, anything goes (FM, AM Records, Tapes). And like the Dolby, it suppresses noise increase during recording and dubbing. That's how the Denoiser gives you a wider range of use values!

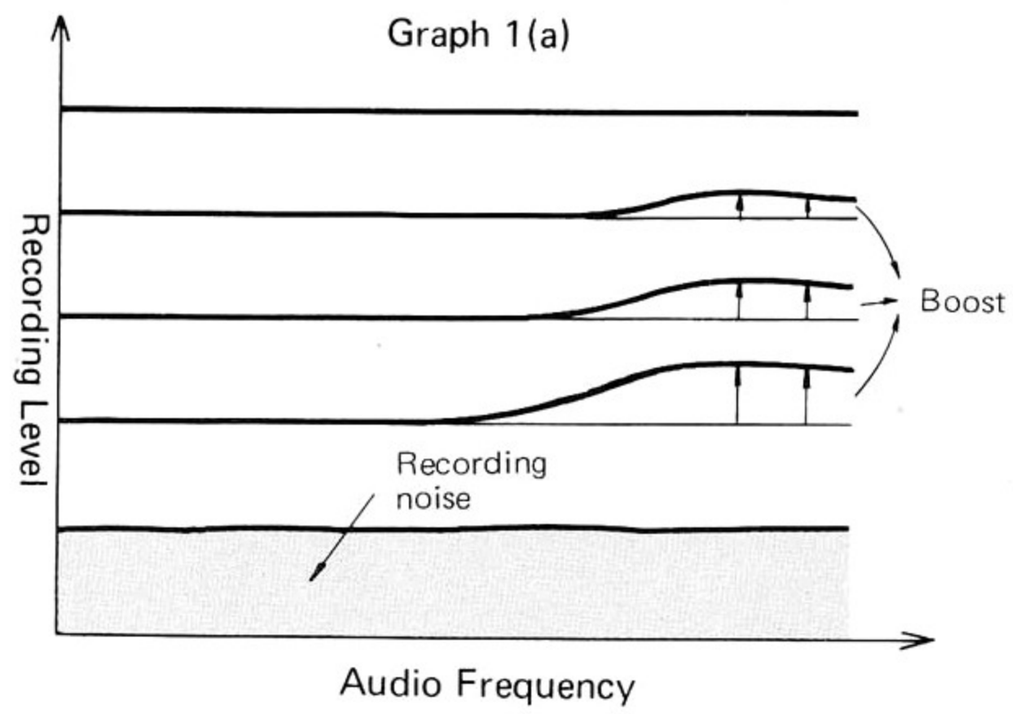
Take a look at the following chart showing various points of comparison:

Source	Denoiser	Dolby	Availability of Source
FM Broadcasts	Effective	Ineffective	Widespread
AM Broadcasts	Effective	Ineffective	Widespread
Record Reproduction	Effective	Ineffective	Widespread
Tape Reproduction	Effective	Ineffective	Widespread
Ordinary Recording	Effective	Effective	
Dubbing	Effective	Effective	
FM(Dolbyized)	Ineffective	Effective	Inexistent
Tape (Dolbyized)	Ineffective	Effective	Extremely limited

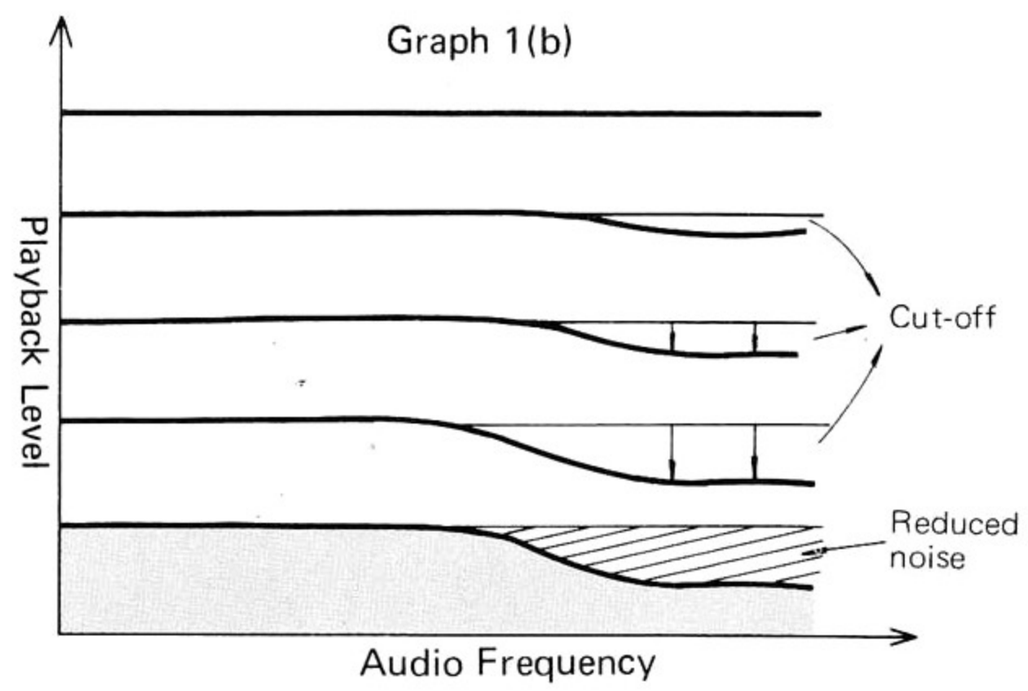
Dolby has one big demerit.

"It can't take away previously included noise."

A Graphic Representation of How a Dolby Unit Works



Take a look at Graph 1(a). To put it simpler, when recording is done using a Dolby unit, the higher frequencies are boosted. However, the amount of boost changes automatically with the recording level. When the level is high, flat frequency characteristics are obtained. But when the level is low, the middle frequencies are boosted, and the amount of boost grows larger as the level goes lower. During recording, noise is increased by the hiss. Since hiss is internally derived noise, even if the frequency characteristics are boosted, the noise is not. It remains fixed throughout all frequencies.



Take a look now at Graph 1(b) showing conditions during reproduction. During reproduction, an operation opposite to that during recording occurs. This time, the higher frequencies undergo a cut-off, the amount of which changes with the reproduction level. The Dolby is automatically controlled to cut off less when the level is high and more when the level is low. As shown in the graph, during reproduction, noise introduced during recording are cut off by an amount indicated by the downward curve. If during both recording and reproduction processes, the amount of boost and the amount of cut-off are set at the same level, the flatness of the frequency characteristics is preserved. Likewise, there is no lowering of sound values and noise is suppressed. (At approximately 10 dB). When the levels during recording and reproduction do not match, the lowering of sound values becomes conspicuous (Dolby level). This is the big problem with regard to Dolby bothering various audio makers today. The Peak Level Indicator and the DL Level (Kenwood) are among the various devices designed to match the levels at the appropriate point.

※Dolby is the trademark of Dolbly Lab. Inc.