

## Product Data

- **Power output ratings of 20 Watts (1870-20D) or 40 Watts (1873-40D)**
- **Page and Music channels**
- **Page channel matches Lo-Z microphone or balanced line level input**
- **Music channel fed from tuner, TAPE, or AUX inputs**
- **Tuner output for MOH**
- **PREAMP input/output**
- **4 $\Omega$ , 8 $\Omega$ , 25V, and 70.7V speaker outputs**
- **Automatic muting for voice-over-music announcements**
- **Digital AM/FM tuner with 16 station presets, auto-seek tuning**
- **Rack-mountable with RPK-2 rack mount kit**

## Specifications:

<b>Power Output</b>	20 Watts (1870-20D) 40 Watts (1873-40D)
<b>THD at rated output</b>	<1% at 1 kHz
<b>Signal-to-Noise Ratio</b>	70 dB
<b>Frequency Response</b>	50 Hz - 15 kHz, $\pm 2$ dB
<b>Tone Control</b>	0/-20 dB at 10 kHz
<b>Input Sensitivity/Impedance</b>	
Page	0.5 mV/200 $\Omega$ (balanced) or 50 mV/1k $\Omega$ (balanced)
Music	240 mV/50K $\Omega$ (unbal)
<b>Line Output Level/Impedance</b>	
Tuner Output	0.3V/3k $\Omega$ (unbalanced)
<b>Speaker Outputs</b>	4 $\Omega$ , 8 $\Omega$ , 25V, 70.7V
<b>Dimensions</b>	
Height	3.63" (9.2 cm)
Width	13.5" (34.3 cm)
Depth	11.9" (28.0 cm)
<b>Net Weight</b>	11.2 lbs. (5.1 kg)
<b>Shipping Weight</b>	12 lbs. (5.4 kg)

\* CSA approval pending

## Description

The University Sound Models 1870-20D and 1873-40D are monaural AM/FM paging receivers, both of which include an AM/FM digital tuner, microphone/line preamplifier, and power amplifier. The 1870-20D is rated at 20 Watts RMS power output, while the 1873-40D is rated at 40 Watts RMS power output. Both models have a PAGE input channel and a MUSIC input channel.

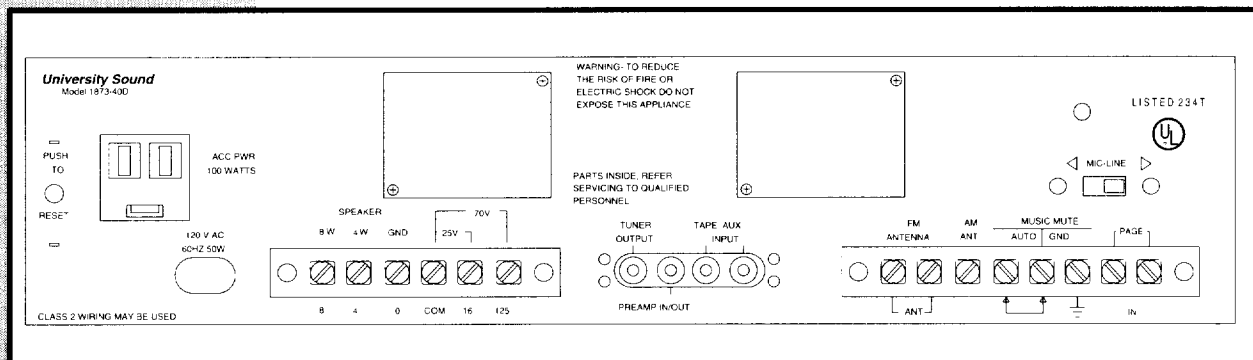
The front panel features SELECT, MUSIC, PAGE, TONE, and POWER controls. The SELECT switch allows the selection of the radio or one of two high impedance unbalanced external inputs as the source for the MUSIC channel. The MUSIC control adjusts the volume level of the input source chosen by the SELECT switch. The PAGE control adjusts the volume level of the paging source. The PAGE channel can match either a Lo-Z balanced microphone input or a balanced line input, as selected from a rear panel slide switch. The TONE control adjusts the treble response of both the music and page. The POWER switch turns the unit on and off, as well as any accessory plugged into the outlet socket on the rear of the unit.

All of the 1870-20D and 1873-40D tuner controls are also located on the front panel. The tuner itself features full AM and FM band digital tuning, FM muting, auto-seek and manual tuning, sixteen station presets, and its own power control. All controls are low-profile push-button switches.

All input and output connections are made on the rear of the units. Screw terminals are also provided for connection of external AM and FM antennas. The TAPE and AUX inputs feed to the MUSIC channel; which of these inputs is used depends on the position of the front-panel SELECT switch. The PREAMP IN/OUT jack can be used as an output to drive an external amplifier, or as an input to accept the signal from a tone generator. The TUNER OUTPUT provides a line-level output that is unaffected by the front-panel MUSIC level control. The TAPE, AUX, PREAMP IN/OUT, and TUNER OUTPUT connections are all made on standard RCA phono jacks. These units include a automatic (voice-activated) muting feature that mutes the MUSIC channel when a signal is detected on the PAGE input. Screw terminals are provided to manually mute the music by means of a contact closure if desired. All speaker outputs appear on screw terminals, and include both 4 and 8 Ohm outputs for direct speaker connections as well as 25V and 70.7V lines for speaker distribution systems.

Each of these receivers are housed in a sturdy steel cabinet measuring 13.5" x 11.9" x 3.63" (34.3cm x 28.0cm x 9.2cm) that may be rack mounted using the Model RPK-2 rack mount kit available from University Sound. These units operate from a standard 120 VAC, 60 Hz power outlet, and are protected by a push-to-reset circuit breaker.

## Rear-Panel View



## Full Specification

**Power Output** 20 Watts (1870-20D)  
40 Watts (1873-40D)

**THD at rated output** <1% at 1 kHz

**Signal-to-Noise Ratio** 70 dB

**Frequency Response**  
50 Hz - 15 kHz,  $\pm 2$  dB

**Tone Control** 0/-20 dB at 10 kHz

**Input Sensitivity/Impedance**  
Page 0.5 mV/200 $\Omega$  (balanced)  
or 50 mV/1k $\Omega$  (balanced)  
Music 240 mV/50K $\Omega$  (unbal)

**Line Output Level/Impedance**  
Tuner Output 0.3V/3k $\Omega$  (unbalanced)

**Speaker Outputs** 4 $\Omega$ , 8 $\Omega$ , 25V, 70.7V

**Dimensions**  
Height 3.63" (9.2 cm)  
Width 13.5" (34.3 cm)  
Depth 11.5" (29.2 cm)

**Tuner:**  
**Frequency Range**  
FM band 87.5 - 107.9 MHz  
AM band 520 - 1710 kHz

**Antenna Input Impedance**  
FM section 300 $\Omega$   
AM section Lo-Z

**Frequency Response (FM only)**  
100 Hz - 8 kHz  $\pm 2$  dB

**Usable Sensitivity**  
FM section Better than 8  $\mu$ V  
AM section 50  $\mu$ V

## Architect's, Engineer's, and Specifications

The unit shall be a monaural AM/FM paging receiver, and shall incorporate a digital AM/FM tuner, a microphone/line preamplifier, and a power amplifier. The preamplifier shall have a PAGE input channel and a MUSIC input channel. The PAGE channel will accommodate either a Lo-Z balanced microphone input or a balanced line input, as selected by a rear panel slide switch. The MUSIC channel shall be fed from one of two unbalanced high-impedance inputs, labeled AUX and TAPE, as selected by a front panel switch labeled SELECT. The preamplifier shall incorporate a muting circuit that will mute the MUSIC channel automatically when a signal is sensed on the PAGE channel. The user shall have the option of defeating the automatic muting and triggering the muting circuit manually via contact closure across two rear panel screw terminals. There shall be a TONE control that will attenuate the high-frequency response of both the MUSIC and PAGE channels. There shall be two connections, labeled PREAMP IN and PREAMP OUT, that provide an insertion point between the preamplifier and power amplifier. Both of these connections shall appear on standard RCA phono jacks.

The AM/FM digital tuner shall have full band AM and FM tuning, sixteen station presets, auto-seek and manual tuning, FM muting, and a separate power control that will allow the tuner to be turned

off while the rest of the unit is in operation. All controls shall be low-profile push-button switches. Screw terminals shall be provided for connection of external AM and FM antennas. There shall be a TUNER OUTPUT which provides a direct output from the tuner, bypassing the preamplifier stage. This output shall appear on a standard RCA phono jack.

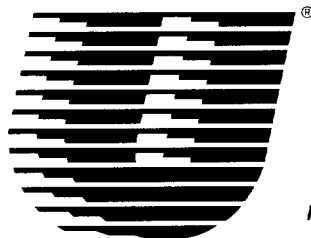
The power amplifier shall provide outputs for 4 Ohm and 8 Ohm direct speaker coil connections, as well as 25 Volt and 70.7 Volt outputs for speaker distribution lines. All power amplifier outputs shall appear on rear panel screw terminals.

[Applies to the 1873-40D only:]

The power amplifier shall provide 40 Watts RMS audio power output. The entire unit shall operate from a single grounded 120 VAC 50/60 Hz power source, and shall provide an accessory outlet on the rear panel. The University Sound Model 1873-40D has been specified.

[Applies to the 1870-20D only:]

The power amplifier shall provide 20 Watts RMS audio power output. The entire unit shall operate from a single grounded 120 VAC 50/60 Hz power source, and shall provide an accessory outlet on the rear panel. The University Sound Model 1870-20D has been specified.



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