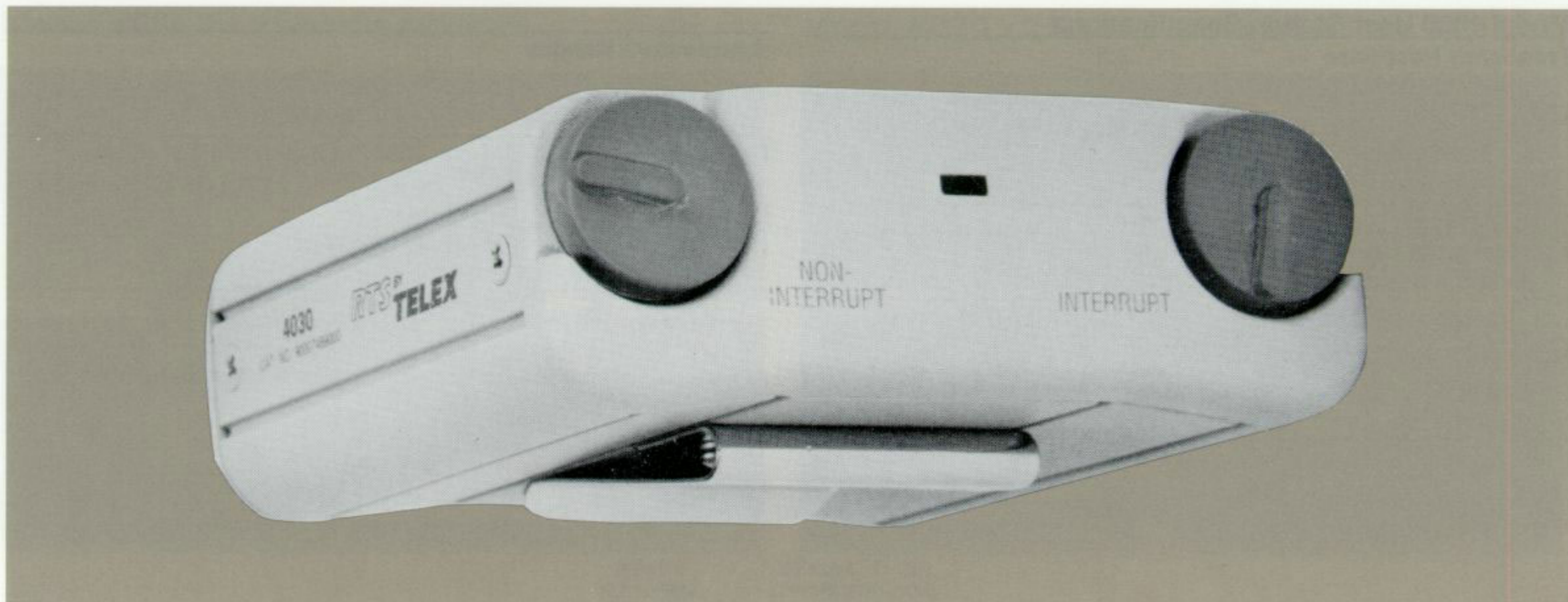


MODEL 4030 PORTABLE USER STATION / TALENT ELECTRONICS



INTRODUCTION

The Model 4030 User Station, a small "belt pack" package, allows the user to receive audio signals as designated by the central electronics unit. It is the electronics package typically used by personnel such as newscasters, sportscasters, musicians, etc.

Each 4030 User Station contains the necessary electronics to provide a stereo audio signal to the user. Two power amplifiers rated at 1/2 watt each are capable of driving almost any set of headphones, earphones, or even small loudspeakers. Hence the IFB can be conveniently extended to dressing rooms or other off-camera areas where communications with or without headphones are desirable.

In many operations, it is convenient to have one announcer on a given IFB channel. This is easily accomplished with a Model TW5W 1x5 Splitter Assembly or a pair of XLR-type "Y" cords. The line is split at the end location and fed to the 4030's. Since each 4030 is bridging to the line, up to three stations can be paralleled across a single output of the 4010 Central Electronics Unit.

SIGNALS

The line input to the belt pack is driven from the central electronics unit. This signal contains two discreet channels of audio information as well as the DC voltage necessary to power the 4030 circuitry.

Separate connectors are provided for either mono or stereo headphones. The interrupt channel feeds the mono headphone jack and the left ear output of the stereo headphone jack. Individual channel volume controls enable the user to adjust the interrupt and non-interrupt listening levels for personal comfort.

Since the balance between program and voice is set at the 4010 Central Electronics unit, the volume controls at the 4030 adjust the composite mix only, preventing the user from upsetting the balance between the two signals.

Also, each user station may easily be modified to limit the volume range so that it may not be turned down all the way.

LONG LINES

The outputs from the 4010 Central Electronics to the user stations are unbalanced, very low impedance line-level signals that may conveniently be sent over standard two-conductor shielded microphone cable. If unavailable, almost any type of cable will work, including telephone cable, multi-cable, etc. However, three conductors are necessary for two channels of audio while two conductors are necessary for one channel of audio.

Since the signals are approximately line-level they can be juxtaposed with other standard broadcast line-level signals without fear of crosstalk. The 5 ohm output impedance of the 4010 resists RFI and noise problems over almost any length of cable. In fact, the user station can work at a distance of up to 2500 feet (22 gauge wire) and with an optional battery adapter, this range can be extended to 5000 feet. The 4010 supplies 32 volts DC while the 4030 requires only 18 volts DC for optimum performance; a 14 volt loss may be incurred over some cables before performance degrades.

RETURN-SEND

A return-send function may be incorporated with some small modifications. This feature allows the talent at the user station to talk privately with the control station(s) via a closed-circuit loop.

A user-installed switch at the user station applies a heavy load (typically a small lamp) across the left channel line. In turn a sensor circuit in the 4010 allows an external relay to switch the announcers "on air" microphone off-the-air and directly to a separate amplifier and loudspeaker near the control station.

Model 4030 User Station Specifications

Frequency Response	+1, -3dB
75 Hz to 10 kHz	
Noise*	
Interrupt channel	-60 dBV
Non-interrupt channel	-60 dBV
Total Harmonic Distortion	0.95%
Nominal Input Level	
Interrupt channel	-10 dBV/input Z = 50,000 ohms
Non-interrupt channel	-10 dBV/input Z = 50,000 ohms
Nominal Output Level	+7 dBV/Unbalanced, Z = 10 ohms
Crosstalk	-60 dBV
Between left & right channels	

Temperature Ranges

Operating	0° C to +50°
Storage	-40° C to +80° C

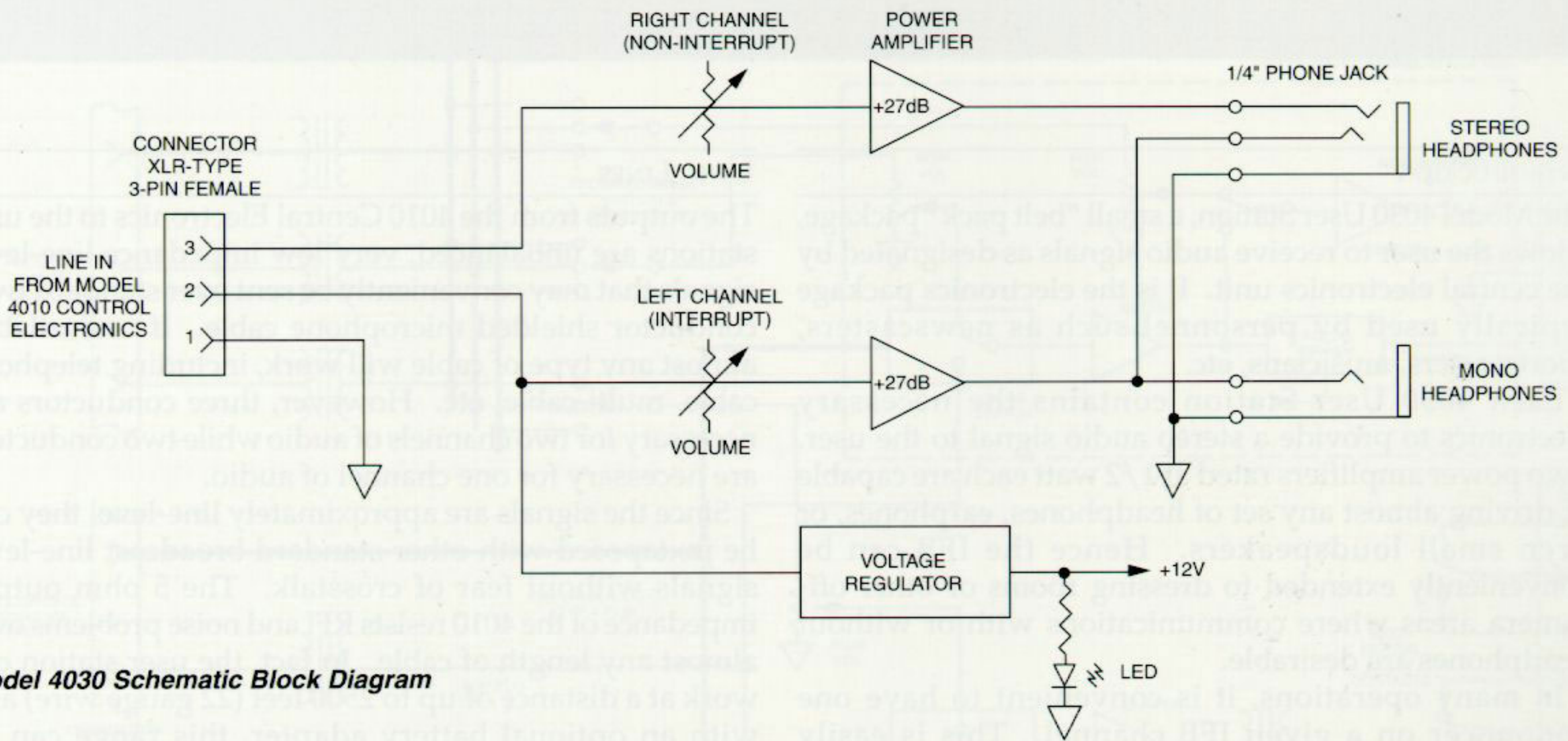
Dimensions/Weight

3.25" (82.6 mm) H x 3.5" (88.9 mm) W x 1.8" (45.7 mm) D, 1 lb (0.45 kg)

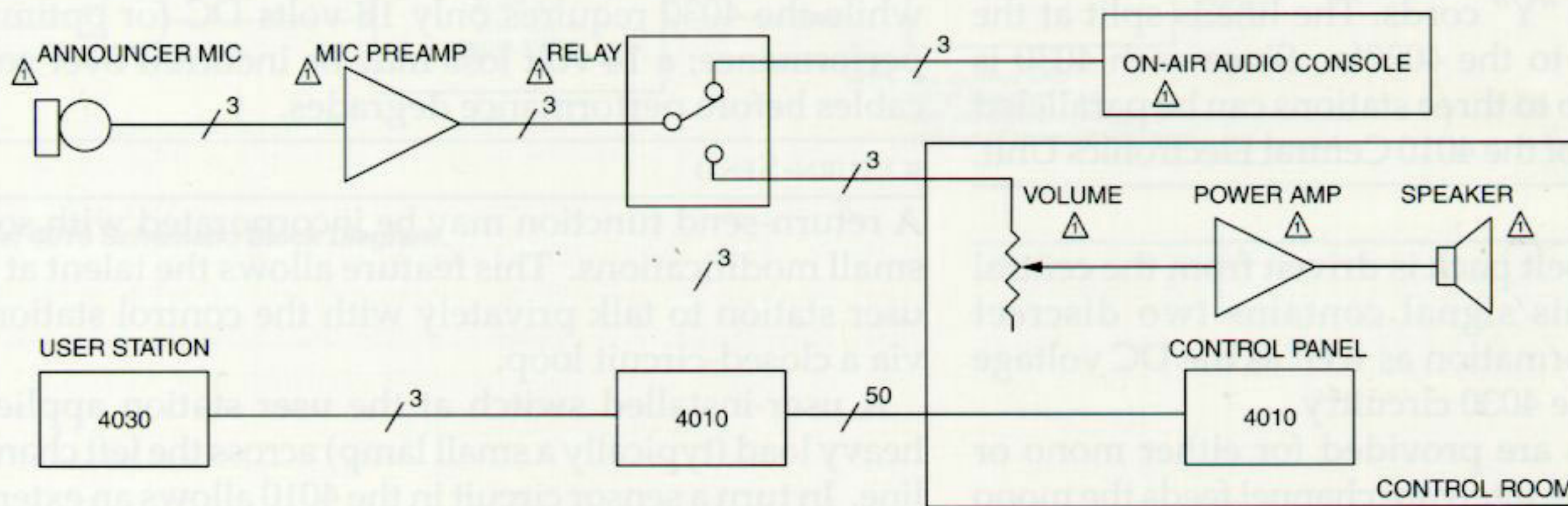
Power

Operating range:	18 to 32 VDC
Consumption:	150 mA

*Ref: 0.5 V @ 1 kHz, measured at output terminal terminated into 600 ohms @ +10 dBV, 20 Hz to 20 kHz, average responding meter.
All product information and specifications subject to change without notice.



Model 4030 Schematic Block Diagram



△ USER SUPPLIED ITEMS

Return Send Block Diagram