

## OPT & BOX 401

# Operating Instructions

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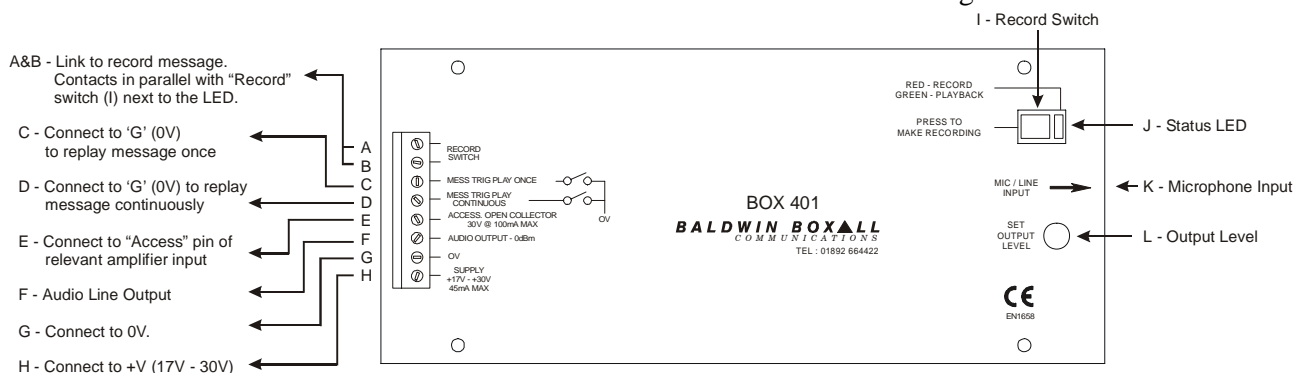
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**BALDWIN BOXALL**  
COMMUNICATIONS

## Digital Message Repeater with Record & Playback facilities

The unit can record and playback a single message of up to 1 minute duration. Recordings can be made on site using the microphone supplied, and the method of playback (either once or continuous) can be selected by contacts on the input connector.

As supplied from the factory, the unit is configured to use the microphone supplied (phantom powered and unbalanced output). If a different microphone is to be used then the lid should be removed and the switches altered to suit. See table 2 for details of the internal DIL Switch settings.



**Fig 1:** Connections to external equipment to record and playback a recorded message.

### To Record a Message

To make a recording plug in the microphone supplied to the MIC/LINE input and either press and hold the "Record" button or connect pins A & B together on the connector block.

To indicate that recording is in progress the LED will turn red.

Speak clearly into the microphone at a distance of approximately 15 cm.

At the end of the message release the button (or pair of contacts) and the LED will go out to indicate that recording has finished.

To prevent accidental erasure of the message it is recommended that the microphone be removed from the socket after the recording has been made.

### To Playback the Message

The unit will either play the recorded message once or continually depending on how the playback is initiated.

To play the message once, pin 'C' should be connected to 0V.

The Status LED will illuminate Green until the message has finished.

To play the message continuously, pin 'D' should be connected to 0V.

The Status LED will illuminate Green and the message will be repeated until the connection is removed. Once removed, the module will not stop immediately but will play to the end of the message.

The volume control can be adjusted using a small screwdriver to provide the output level required to a maximum level of 0dB (775mv).

## Internal Settings and Controls

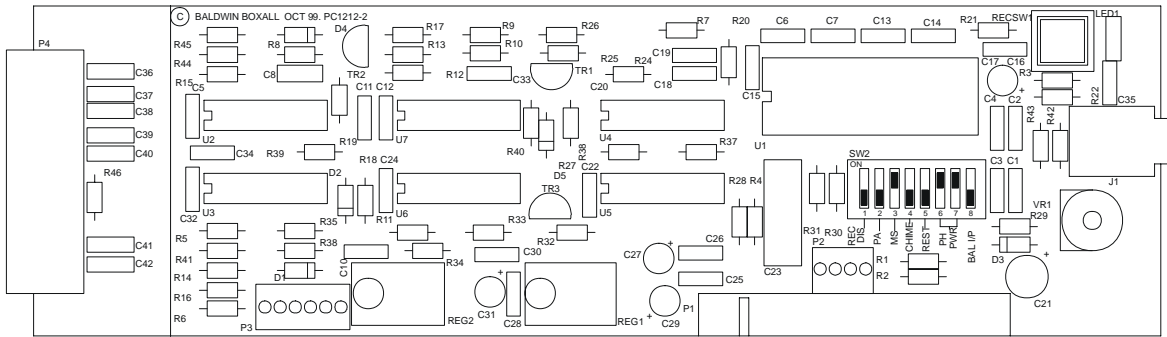


Fig 2: PCB layout and DIL switches

The unit has a bank of eight switches that enable various functions as follows:

Switch	PCB Ident	Option
1.	REC DIS	When switched ON recordings cannot be made, even when a microphone is plugged into the unit. Can be used to prevent accidental deletion of the recorded message
2.	PA	N/A – must be set to OFF*
3.	MS	Must be set to ON* to enable the audio output
4.	CHIME	N/A – must be set to OFF*
5.	REST	N/A – must be set to OFF*
6.	PH POWER	When switched ON* phantom power is provided on pin 2 of the jack socket.
7.	PH POWER	When switched ON* phantom power is provided on pin 3 of the jack socket.
8.	BAL I/P	When switched ON the audio input should be a balanced signal.

\* Default settings as supplied from the factory.

**Table 1**

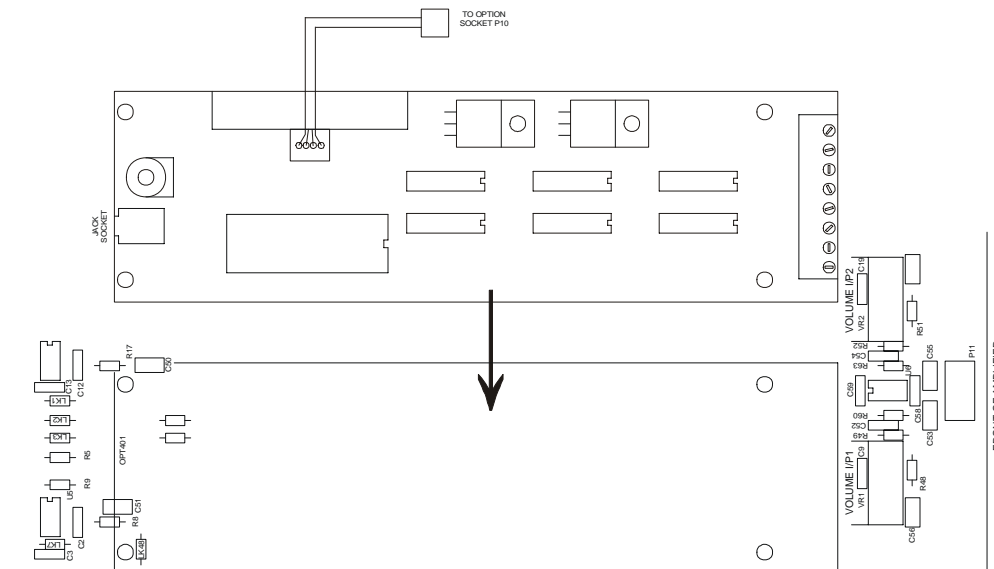
### OPT401 Fitting and Connection Details.

This unit can be supplied as either a BOX401 or an OPT401.

The units are identical except that the OPT401 is not mounted in a box and is designed to fit internally in an M2120E amplifier.

A four way connector is attached to ‘P2’ of the OPT401.

This connector should only be used with an M2120E amplifier and the unit should be fitted as follows:



## BOX/OPT401 Specification

Overall frequency response, record to playback -3dB	:	300 Hz to 3.4 kHz
Sampling frequency	:	8 kHz
Maximum message duration	:	60 seconds one message
Signal to noise ratio	:	Better than 45dB
Audio output level	:	0dB
Controls	:	Volume Record Dual in line switches to select facilities
Indicators	:	Record / Playback LED
Message initialisation	:	Normally open contacts.
Power consumption	:	45 mA
Supply voltage	:	17-30Vdc



Low Voltage Directive  
73/23/EEC as amended  
by 93/68/EEC

EMC Directive  
89/336/EEC as amended  
by 92/31/EEC and 93/68/EEC

Applies only when the items  
are correctly fitted and operated  
in or with products of our  
manufacture and are installed  
in a recommended enclosure.