



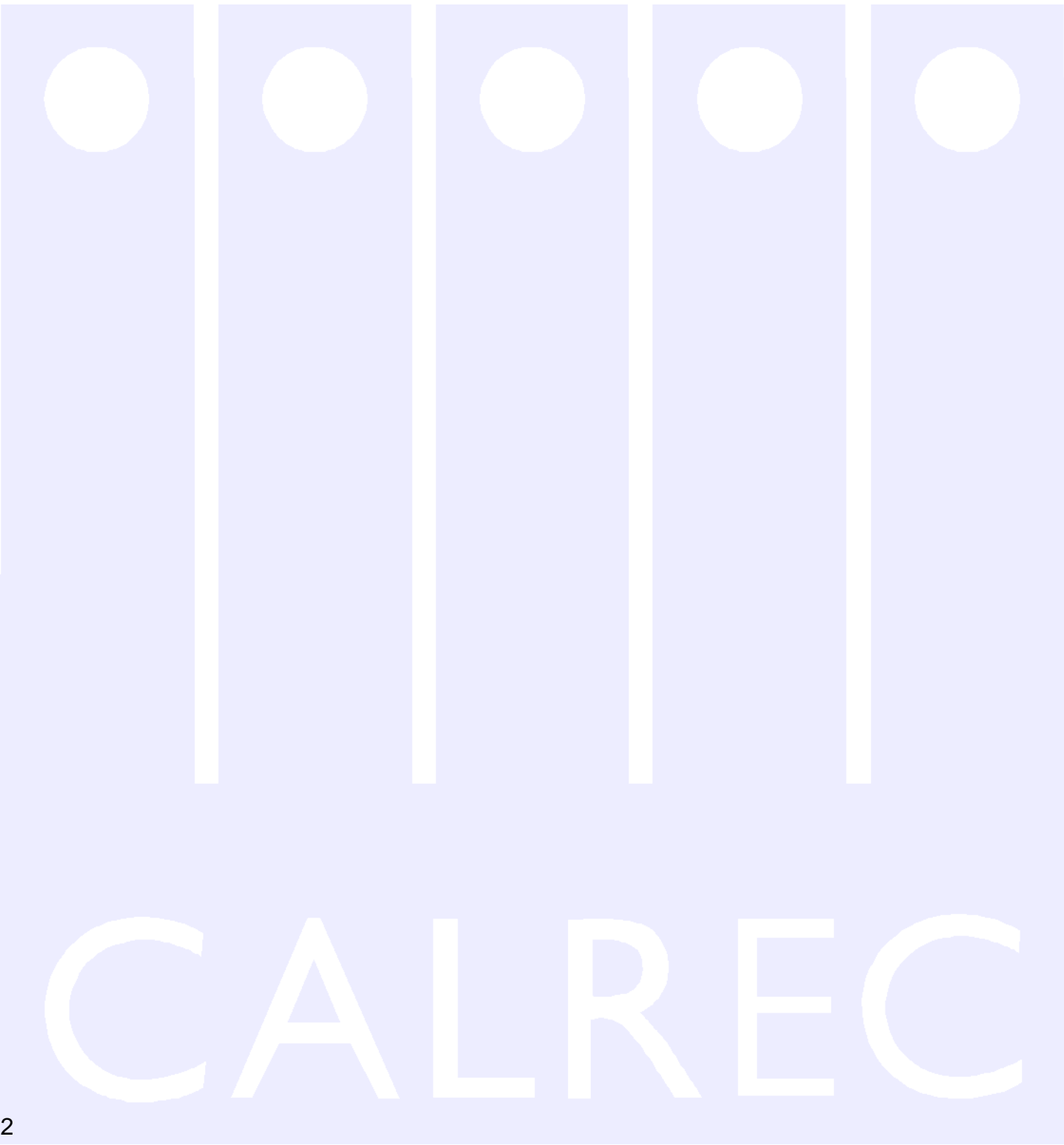
Lip Stick™

OPERATORS MANUAL

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CALREC



Please observe the following:-

After Sales Modifications.

Modifications to this equipment by any party other than Calrec Audio Limited may invalidate EMC and safety features designed into this equipment. Calrec Audio Limited can not be liable for any legal proceedings or problems that may arise relating to such modifications.

If in doubt, please contact Calrec Audio Limited for guidance prior to commencing any such work.

ESD (Static) Handling Procedures.

In its completed form, this equipment has been designed to have a high level of immunity to static discharges. However, when handling individual boards and modules, many highly static sensitive parts are exposed, therefore in order to protect these devices from damage and to protect your warranty, please observe static handling procedures (e.g. use an appropriately grounded anti-static wrist band).

All modules and cards should be returned to Calrec Audio Limited in anti-static wrapping. Calrec Audio Limited can supply these items upon request, should you require assistance.

This applies particularly to digital products due to the types of devices and very small geometries used in their fabrication, analogue parts can, however, still be affected.

Important Health and Safety Information

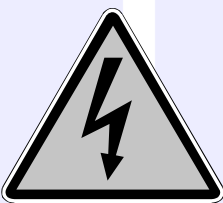
- *This equipment must be EARTHED.**
- *Only suitably trained personnel should service this equipment.**
- *Please read and take note of all warning and informative labels.**
- *Before starting any servicing operation, this equipment must be isolated from the AC supply (mains) by removing the incoming IEC mains connector.**
- *Fuses should only be replaced with ones of the same type and rating as that indicated.**
- *Operate only in a clean, dry and pollutant-free environment.**
- *Do not operate in an explosive atmosphere.**
- *Do not allow any liquid or solid objects to enter the equipment. Should this accidentally occur then immediately switch off the unit and contact your service agent.**
- *Do not allow ventilation slots to be blocked.**
- *Do not leave the equipment powered up with the dust cover fitted (where provided).**

Please refer to the installation section of the manual for further details.

Cleaning

For cleaning the front panels of the equipment we recommend anti-static screen cleaner sprayed onto a soft cloth to dampen it only.

Explanation of Warning Symbols



The lightning flash with arrow head symbol within an equilateral triangle is intended to alert the user to the presence of dangerous voltages and energy levels within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock or injury.



The exclamation mark within an equilateral triangle is intended to prompt the user to refer to important operating or maintenance (servicing) instructions in the documentation supplied with the product.

Technical Customer Support

Should you require any technical assistance with your Calrec product then please contact your local distributor, if outside the U.K. and Ireland. For a list of Worldwide distributors please see the Calrec Web site at **WWW.CALREC.COM** or contact Calrec UK.

If you do not have a local distributor, then please contact Calrec UK.

For Technical assistance within the UK and Ireland, please contact a member of the Calrec Customer Support Team at :-

Customer Support

Calrec Audio Ltd

Nutclough Mill

Hebden Bridge

HX7 8EZ

U.K.

Tel. +44 (0) 1422 842159

Fax +44 (0) 1422 845244

Email support@calrec.com

We can deal with all technical after sales issues, such as :-

Arrange repairs

Supply of replacement or loan units while repairs are being carried out.

Service / commissioning site visits

Operational training courses

Maintenance training courses

Supply of replacement components

Supply of documentation

Technical advice by telephone

If you have any other issues regarding your Calrec purchase, then please contact us and we will do our best to help. Calrec welcomes all Customer feedback.

Stephen Brant

Senior Customer Support Engineer

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INTRODUCTION

This publication is for International usage.

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No part of this manual may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying & scanning, for any purpose other than for use by the registered purchaser, without the prior written consent of Calrec Audio Ltd.

UPDATED INFORMATION

Whilst the Company take the utmost care in ensuring that all details in the publication are correct at the time of publication, we are constantly striving for improvement & therefore reserve the right to alter specifications & equipment without notice.

Please also refer to the User Registration page.

PRODUCT WARRANTY

A full list of our conditions & warranties relating to Goods & Services is contained in the Company's standard 'Terms & Conditions'. A copy of this is available on request.

CUSTOMER SUPPORT

If you have a problem which cannot be solved without the reference to this user manual or the full technical handbook, then please contact either the distributor from whom you bought this console or the Customer Support team at the factory. A full list of all the Calrec distributors is available on the Company website at www.calrec.com

Factory based customer support engineers can be contacted by telephone during normal office hours, or outside hours, a message can be left on the answering machine.

All messages are dealt with promptly on the next working day. Alternatively a message can be sent to them by email at: support@calrec.com

REPAIRS

If you need to return goods to Calrec, for whatever reason, please contact the Company beforehand in order that you can receive advice on the best method of returning the goods & that a repair order reference number can be issued.

STANDARD OF SERVICE

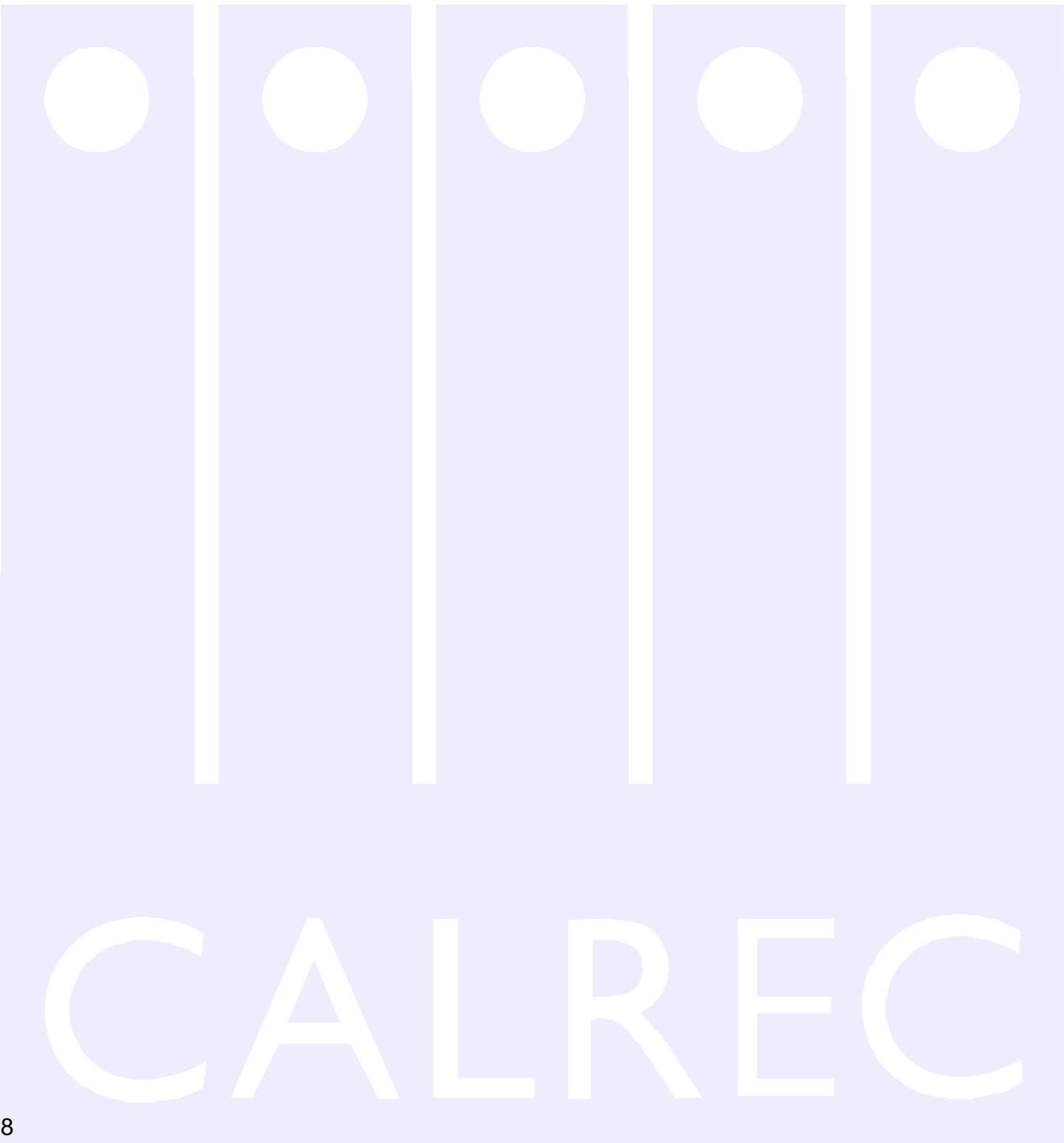
Ensuring high standards is a priority & if you have any comments on the level of service, product quality or documentation offered to you by Calrec, then the Customer Support team would be pleased to receive your comments through any of the normal contact numbers, the email address listed earlier or on the customer registration form.

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Lip Stick™ - Introduction

Thank you for your interest in Lip Stick™. In order for us to better understand your requirements we have included a questionnaire which we would be grateful if you could complete and return to us once you have installed and gained operational experience of the units.

This publication is for International use.

Copyright

No part of this manual may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying & scanning, for any purpose other than for use by the registered equipment purchaser, without the prior written consent of Calrec Communications.

Updated Information

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Product warranty

A full list of our conditions & warranties relating to Goods & Services is contained in the Company's standard 'Terms & Conditions'. A copy of this is available on request. If the serial number is removed from the unit, the warranty becomes invalid.

What is Lip Stick™

The Lip Stick™ system enables you to synchronise audio & video signals by accurately measuring the amount of delay between video & audio signals. A delay of only 20-40ms can cause obvious loss of lip-sync and program impairment for the viewing audience.

Lip Stick™ can be used with a variety of transmission mediums for the distribution of either internally or externally generated audio & video signals.

How does Lip Stick™ work

The Transmitter unit inserts an Ident onto the audio & video signals every 7 seconds, this allows the Receiver to compare the incoming signal Idents, measure the timing delay between the video and each of the two audio channels and indicate the difference on the appropriate display panel. No direct contact is needed between the transmission and receiving sites during operation. The two audio channels can be used as either two mono circuits, a single stereo circuit or a simultaneous satellite audio & ISDN line to a satellite video path.

When can I use Lip Stick™

The Lip Stick™ system can be used in any non-transmission period. The Identing System works by inserting a test marker into the top of the active picture and an audible tone burst onto the audio paths. During the test the active picture source can be either: black, colour bars (100% / 75%), colour bars with burnt in ident or studio output. The active audio sources can be either silence (no signal), standard line-up tone (e.g. 1kHz sinusoidal tone) or most types of program output material. All necessary line-up checks can occur whilst the Lip Stick™ Ident System is active.

This equipment will accept unbalanced Input signals if pins 1 & 3 are linked together on the AUDIO IN XLR connector/s. The audio outputs from the unit must not be used to directly drive unbalanced audio inputs of any other equipment, unless sent via an isolation transformer.

How do I start to use Lip Stick™

After carefully unpacking the unit/s and IEC mains lead, check that all items are undamaged. Complete the User Registration Form on page 7 of the Operators Guide. Connect up the incoming and outgoing video and audio feeds for the correct situation in which the units are to be used. The DC restore switch must be set to the on position for AC coupled video, but can be switched to either the on or off positions for DC coupled video operation. Check that the mains cable has been terminated correctly at the distribution end and connect the IEC plug into the mains power inlet on the back panel/s. Switch on the power to both units and follow the Line Up Procedure, shown below. Once this is completed, the Identing process can be started by pressing the ENABLE switch on the front of the Transmitter unit.

How do I line up the Lip Stick™ units

Before commencing the Lip Stick™ Identing process the circuits must be lined up within acceptable limits, which are:

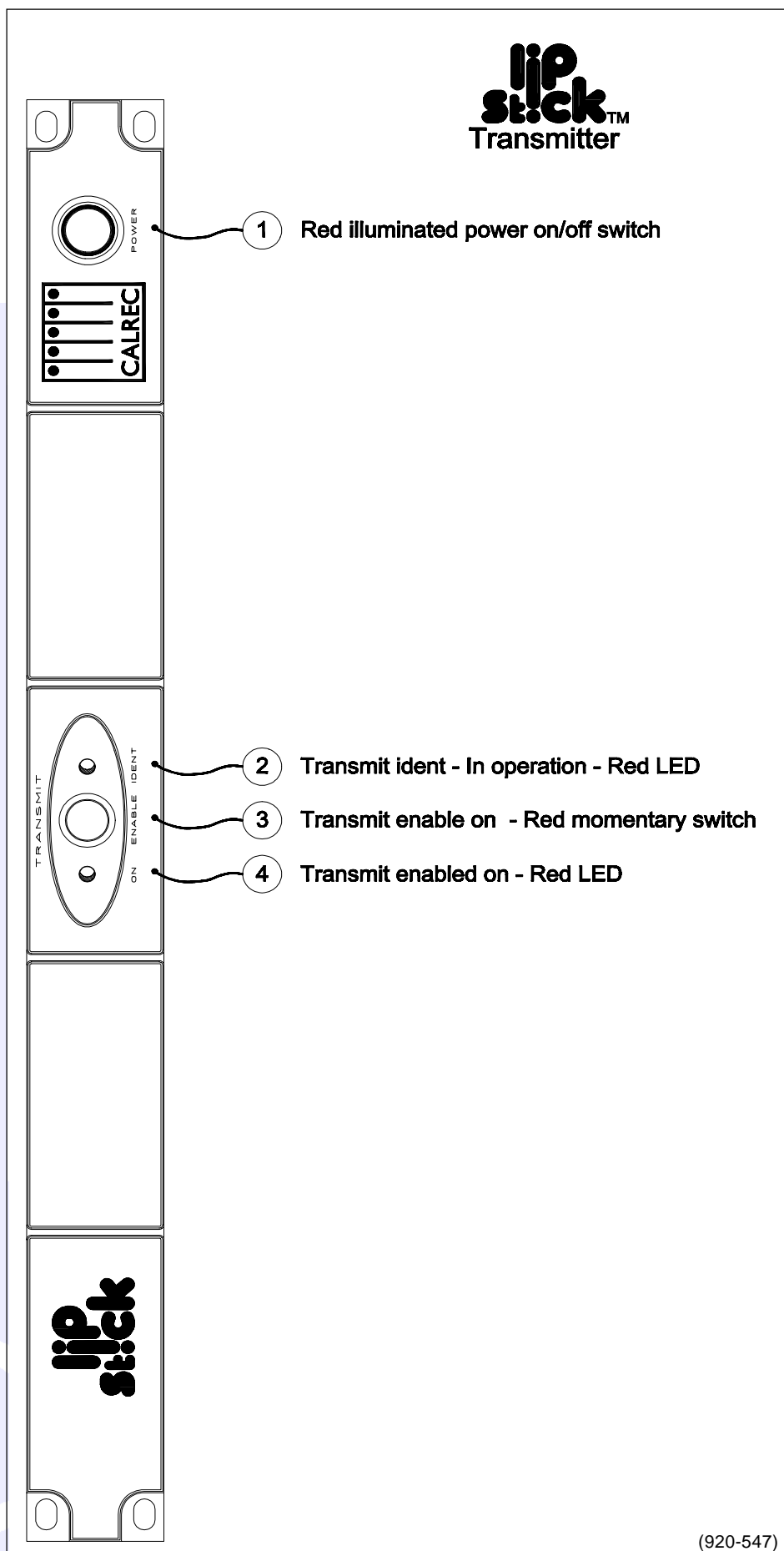
- The video level within 85% and 110% with respect to 0.7V
- The audio level must be within 10dB of 0dBu (775mV RMS)

To test a pair of Lip Stick™ units, supply the correct signals to the inputs, turn the test mode on by pressing the 'transmit enable ON' switch in the centre of the Transmitter unit front panel. The audio timing error displays on the Receiver unit will show a reading within approximately 10 seconds.

What happens if the power fails

In the event of power failure or the units being accidentally switched off, the unit goes to direct bypass mode with audio & video inputs being hard-linked to their respective outputs.

The video loop output will also be disconnected from the incoming video signal.



What do the Lip Stick™ controls & displays indicate

Transmitter

Power switch - illuminates red when the unit is switched on.

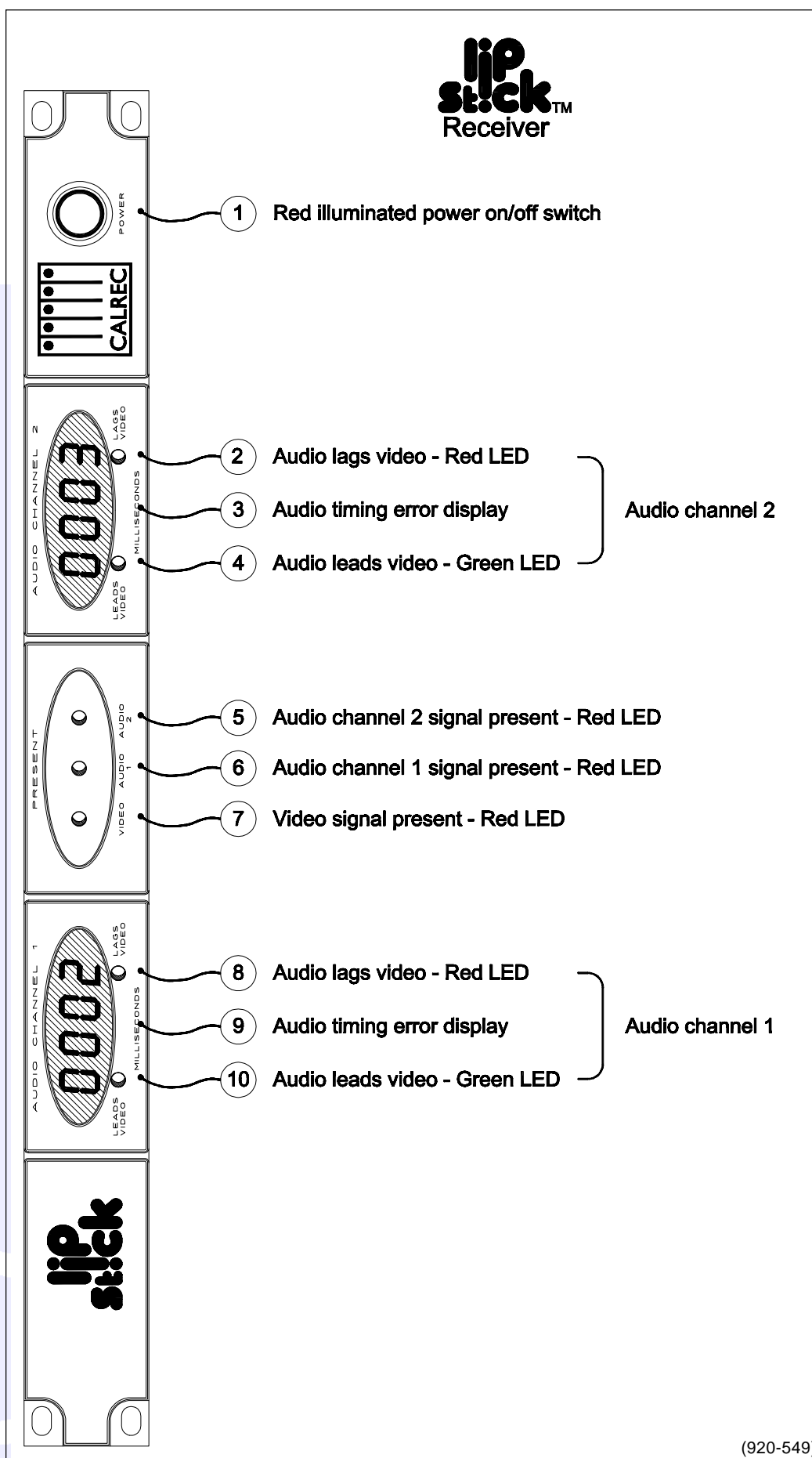
Transmit ENABLE switch - press to enable or disable the Identing process.

Transmit Enable ON LED - illuminates red when the transmit switch has been enabled.

Transmit IDENT LED - flashes when Ident is being inserted (unit must be in enable mode).

A valid video signal input is required to enable the transmitter to operate.

A large, light blue watermark of the word "CALREC" is positioned at the bottom of the page, spanning most of its width.



What do the Lip Stick™ controls & displays indicate

Receiver

Power switch - illuminates red when the unit is switched on.

Signal 'PRESENT' LEDs - three red LEDs which light up for 6.5 seconds of the 7 second cycle when each of the respective audio & video signals are present. In operation the LEDs are not influenced by the amount of delay in any or all of the circuits.

Audio Channel 1 and Audio Channel 2 Sections of the unit:

Audio LEADS VIDEO LED - Green LED illuminates when audio signal is in advance of the video*. This indicates that an audio delay can be used to correct the error.

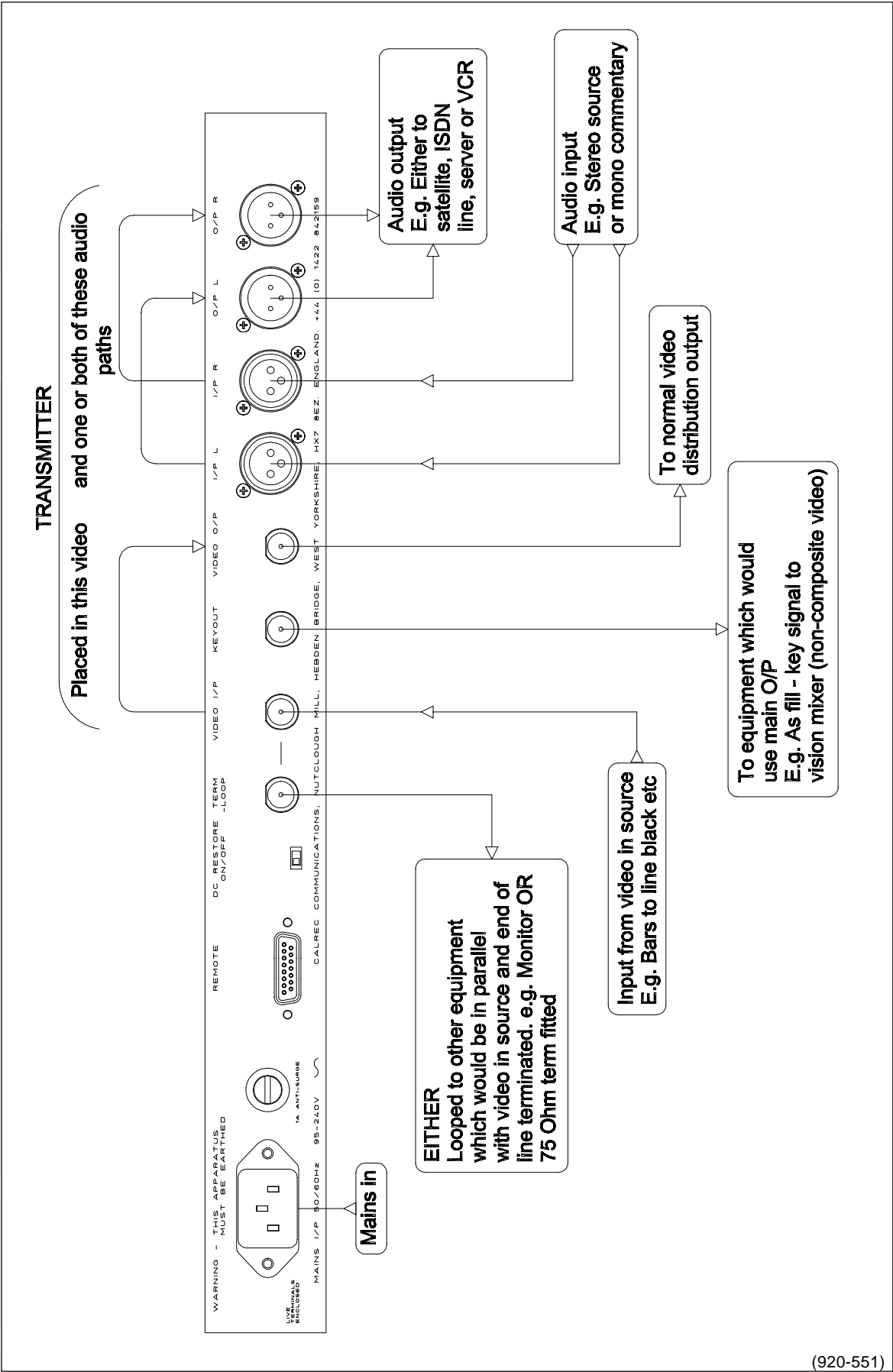
Audio LAGS VIDEO LED - Red LED illuminates when video signal is in advance of the audio.

Audio Timing Error Display - Amount of time displacement (in milliseconds) between the audio & video signals*.

* If the audio & video signals are in-sync, the audio timing display will read 0000 and the audio lags video (green LED) will be lit.

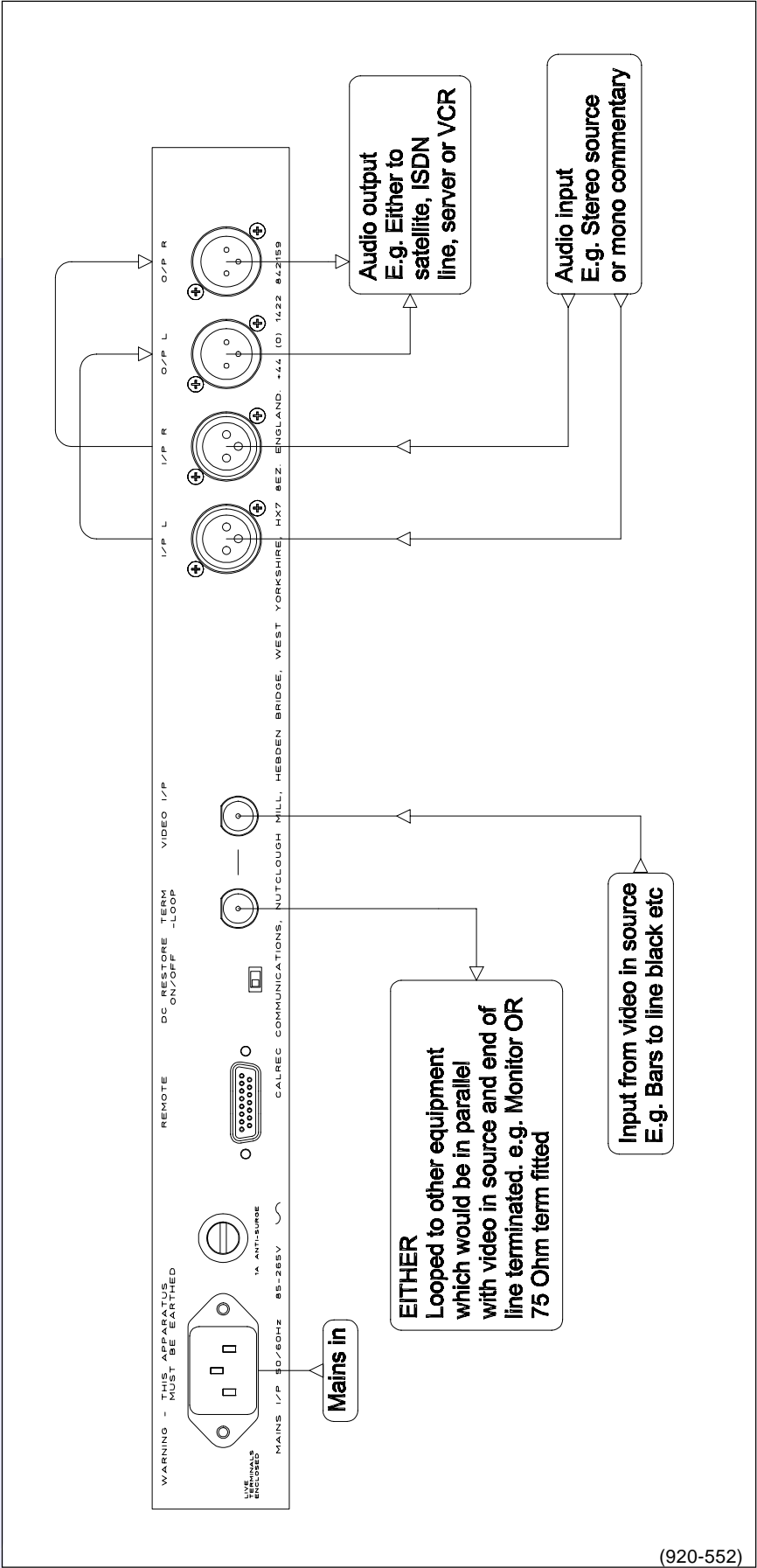
How do I connect the Lip Stick™ units

Transmitter

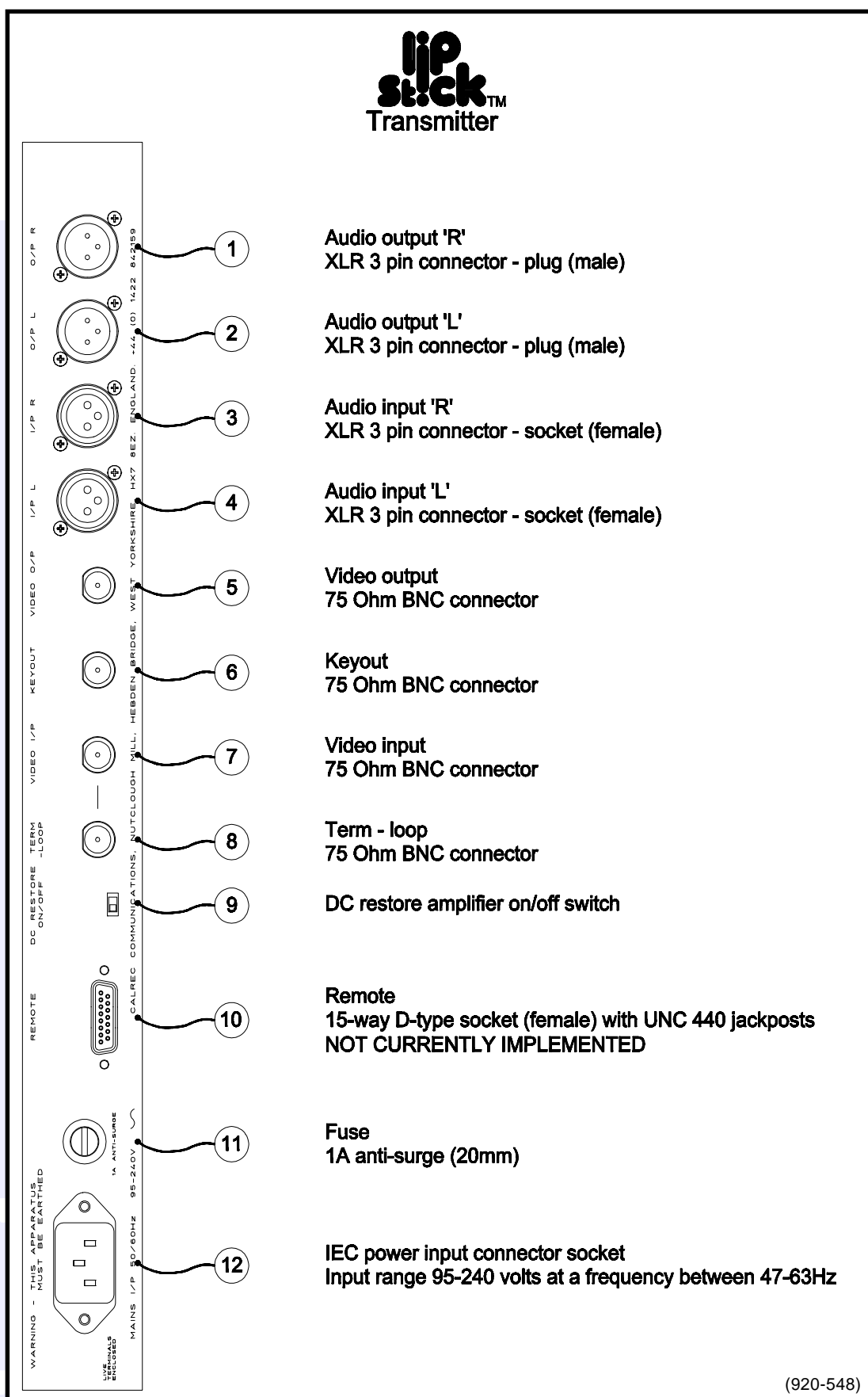


How do I connect the Lip Stick™ units

Receiver

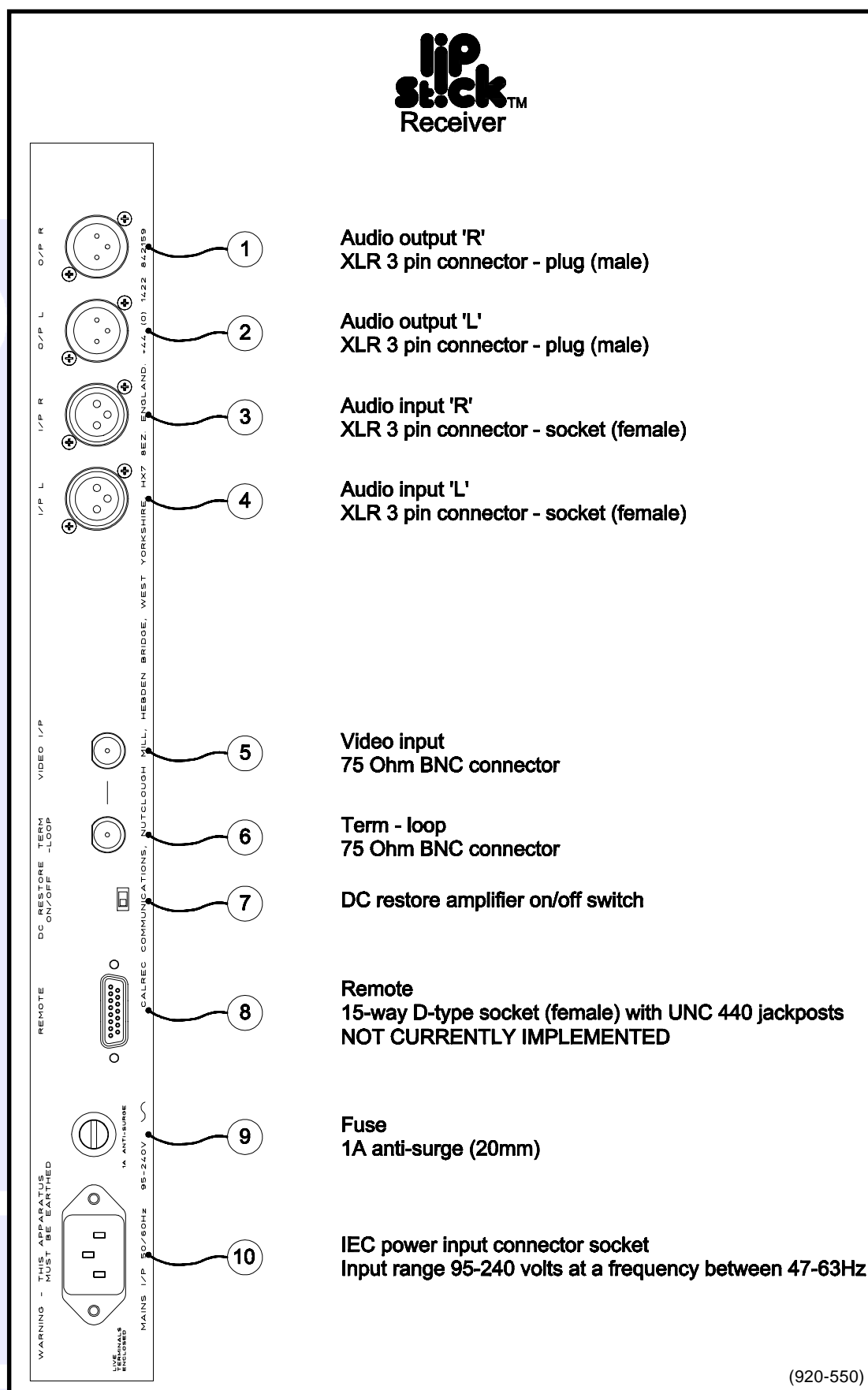


Transmitter - Rear view and connector detail



(920-548)

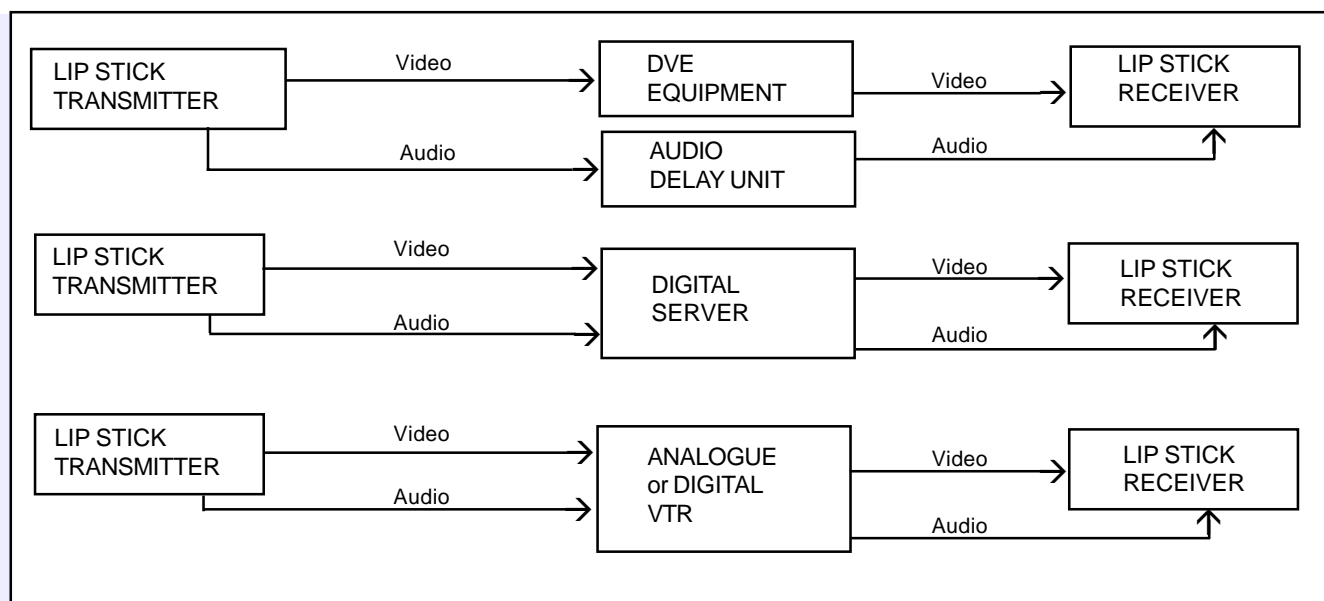
Receiver - Rear view and connector detail



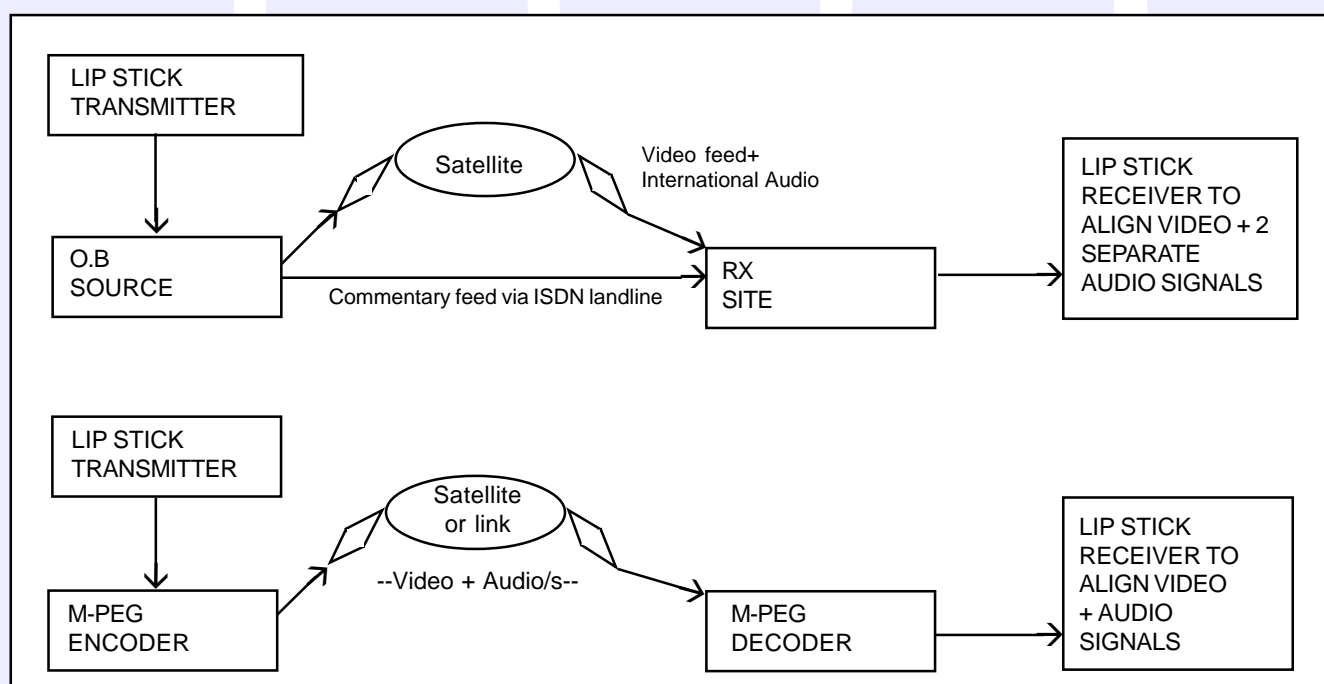
Where can I use Lip Stick™

The Lip Stick™ system comprises of two separate units, a transmitter and a receiver, which may be placed at separate locations. These locations can include:

- Across fixed studio installations



- Between OB trucks and studios or on signals sent via satellite, link or ISDN lines



Technical Specifications

- Inputs
 - Video connectors : 75 Ohms Dual Standard - 625 PAL or 525 NTSC
 - Audio 1&2 connectors : 10k Ohms electronic balanced (nominal)
 - Mains power : nominal 95 to 240 Volts AC at a frequency between 47 to 63 Hz
: limit 85 to 265 Volts AC at a frequency between 47 to 63Hz
: 10 Watts maximum
- Outputs
 - Key video connectors : 0.7 Volt Non-composite
 - Audio 1 & 2 connectors : 40 Ohms electronic balanced
- The error readout display is accurate to +/- 2 milliseconds (nominal), +/-6 milliseconds (worst case)
- Dimensions : Transmitter & Receiver : 19" x 1U x 115 mm (4.5ins)
Weight: Transmitter : 1.25Kg (2.76lbs) Receiver : 1.2Kg (2.65lbs)
- Remotes : *pin out to be advised* - NOT CURRENTLY IMPLEMENTED
- XLR pin connections : The audio outputs from the unit must not be used to directly drive unbalanced audio inputs of any other equipment, unless sent via an isolation transformer.
Pin 2 hot or phase, pin 3 cold or anti-phase, pin 1 chassis or earth

N.B. Video Connections

Lip Stick™ is designed to be able to be used in the main transmission path, and therefore pass video signals with minimum degradation. To this end, the video path of Lip Stick™ can be used in DC coupled mode. However, if an AC coupled distribution amplifier, or other AC coupled source is used, the internal DC restore amplifier will have to be switched into circuit. The DC restore amplifier is also designed in such a way that it maintains signal integrity, and so could be left in circuit all the time.

Lip Stick™ Remotes

Further on-going developments on the 'REMOTES' connector include connections for:

- Remote transmit operation
- Remote LED indication of Ident ON status
- Red light / Transmission Interlock
- Remote Audio Delay Unit Time Control

These are not currently implemented.



REGISTRATION

Please complete this end user registration form as soon as you receive this manual. This will allow us to not only provide you with any manual update sheets &/or modification information, but also with information on new product developments which may be of interest to you. Completion of this registration form will ensure that we send all technical correspondence directly to you at the address you have indicated.

The form, once completed should be returned, along with the questionnaire, to Calrec at the following address.

User Registrations
Calrec Communications
Nutclough Mill
Hebden Bridge
West Yorkshire
HX7 8EZ
England
UK

Or alternately it can be faxed back to us on +44 (0) 1422 845244

Product Type: Lip Stick™

Serial Number (located on the back panel):.....

Date Received:

Name:

Department:

Company:

Address:

Post/Zipcode:

Tel No:

Fax No:

Email:

Customer comments:.....

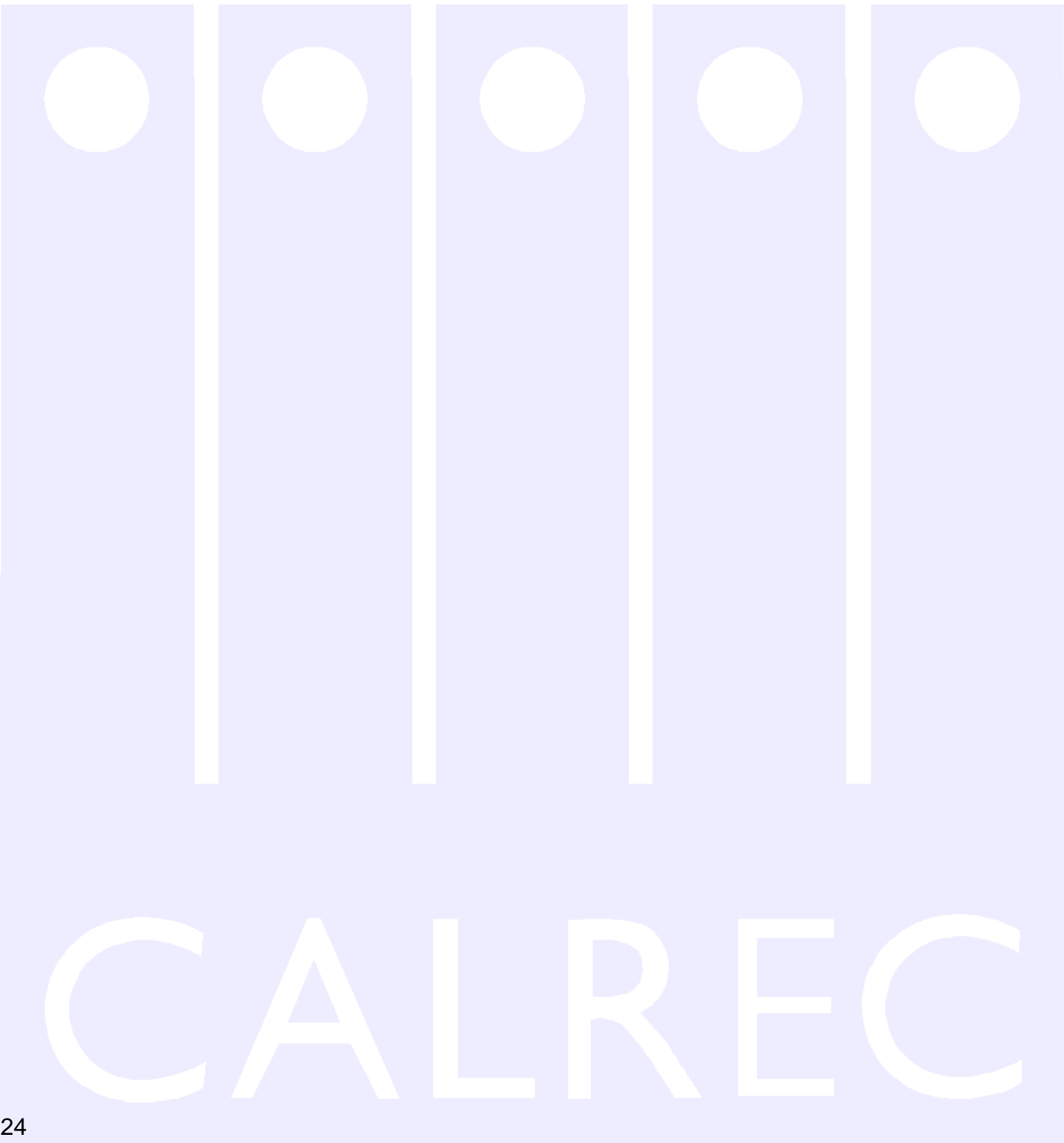
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Questionnaire

In order for us to better understand your requirements please could we ask you to complete this questionnaire and return it to Calrec, along with the user registration form.

- How easy were the units to install (Please tick only one)
 Very easy ☐ Easy ☐ Slightly complicated ☐ Very Complicated ☐
 Was there any particular aspect that you'd like to comment further on

- How easy are the units to operate (Please tick only one)
 Very easy ☐ Easy ☐ Slightly complicated ☐ Very Complicated ☐
 Was there any particular aspect that you'd like to comment further on

- How much time does using the system save you per transmission (approx.)

- Make & model of audio delay unit/s used with your Lip Stick unit.
 Make..... Model.....
- Do you have any other pieces of equipment that the system will be used with regularly & if YES, please could you list the make/s & model/s.
 Make..... Model.....
 Make..... Model.....
- Is this product used in any of the following situations (please tick all that are applicable)
 truck to truck ☐ within studio complex ☐ satellite links ☐ other (please explain) ☐

- Do you have any other general comments that you would like to make about the units?

Questionnaire completed by (name):.....

(Company):

(Telephone): (E-mail):

Return to: Calrec Communications, Nutclough Mill, Hebden Bridge, West Yorkshire, HX7 8EZ, England.

Tel: +44 (0) 1422 842159 Fax: +44 (0) 1422 845244

E-mail: lipstick@calrec.com

Website: www.calrec.com





Notes

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