EZICOM

Headset Intercom System

User Manual

JANDS

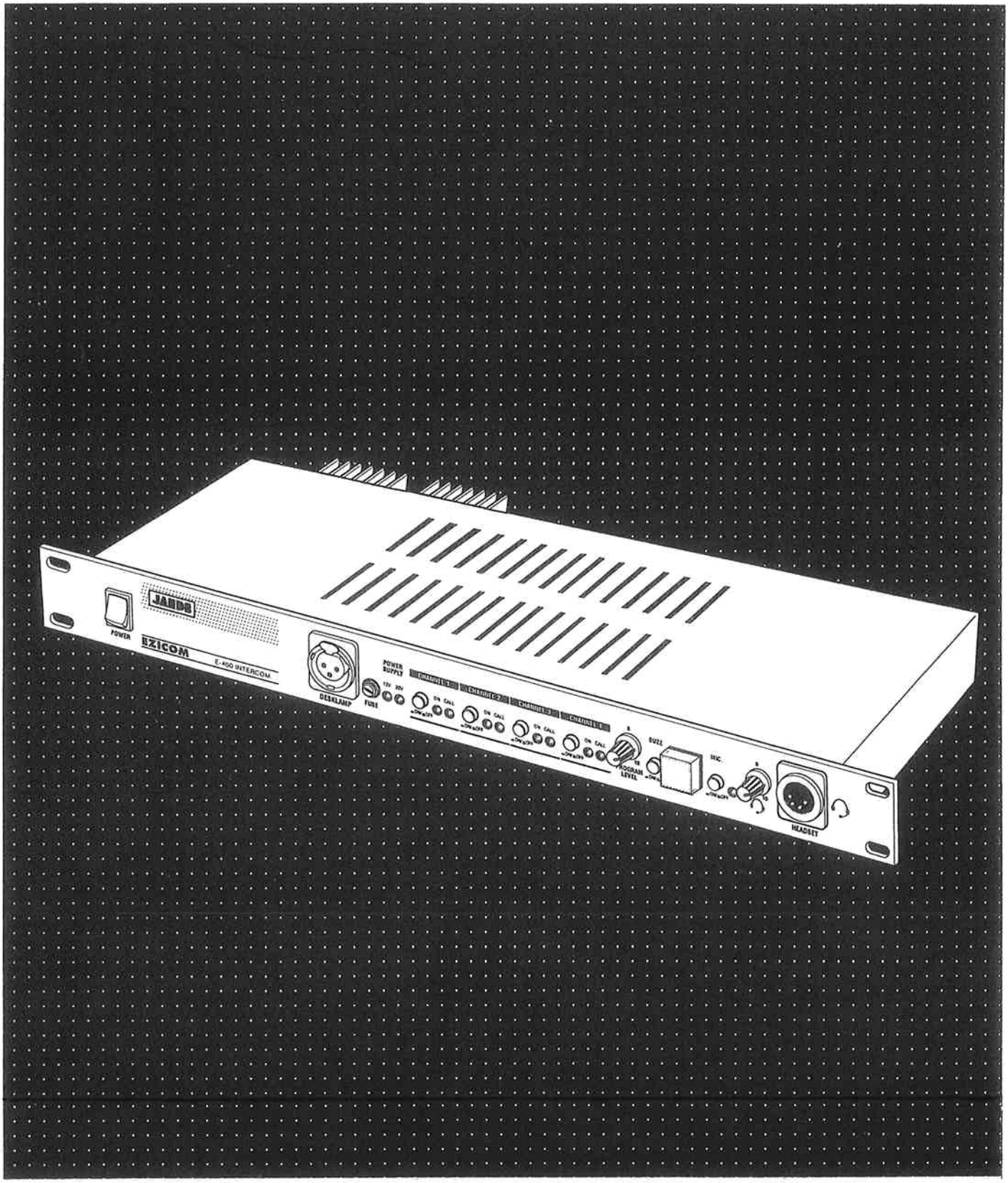


TABLE OF CONTENTS

GENERAL INFORMATION

IMPORTANT INFORMATION:

- Before connecting the EZICOM talkback/intercom system, please read the "Installation" section.
- Any accident or impact severe enough to cause visible external damage will require checking by a qualified service agent, to ensure your safety.
- Do not let liquids spill into the EZICOM units, or subject it to rain.
- Make all connections, with power OFF.
- Don't remove the EZICOM's covers. There are potentially lethal voltages inside, but no user-serviceable parts. It may also void your warranty.

SPECIFICATIONS:

E-400 EZICOM MASTER STATION

CONTROLS

1 x "Headset Level" Control
1 x "Programme Input" Attenuator
4 x "Channel Select" Switches
1 x "Call" Switch
1 x "Mic On" Switch
1 x "Buzzer On" Switch
1 x "Power On" Switch

INDICATORS

4 x "Channel On" Green LEDs
4 x "Channel Call" Red LEDs
1 x "Master Call" Red Lamp
2 x "Power On" Green LEDs

DIMENSIONS

Height	44.5 mm (1.75")
Width	482 mm (19")
Depth	150 mm (6")

WEIGHT 4.5 kg

POWER REQUIREMENTS

Nominal	100/115/240 V AC 50/60 Hz
Limits	88-110/100-127/210-265 V AC
	100 VA Max

NOMINAL MICROPHONE IMPEDANCE
50-600 Ohms

NOMINAL HEADPHONE IMPEDANCE
8-2000 Ohms

HEADPHONE POWER
1 kHz, 0.1% THD

8 ohm Load	200mW
200 ohm Load	1300mW
600 ohm Load	450mW

SIGNAL TO NOISE RATIO (Electronic)
>80 dB

E-200 EZICOM MASTER STATION

CONTROLS

1 x "Headset Level" Control
2 x "Channel Select" Switches
1 x "Call" Switch
1 x "Mic On" Switch
1 x "Power On" Switch

INDICATORS

2 x "Channel On" Green LEDs
2 x "Channel Call" Red LEDs
1 x "Master Call" Red Lamp
1 x "Power On" Green LEDs

DIMENSIONS

Height	44.5 mm (1.75")
Width	482 mm (19")
Depth	150 mm (6")

WEIGHT 4.5 kg

POWER REQUIREMENTS

Nominal	240 V AC 50 Hz
Limits	210-265 V AC 50/60 Hz
	60 VA Max

NOMINAL MICROPHONE IMPEDANCE
50-600 Ohms

NOMINAL HEADPHONE IMPEDANCE
8-2000 Ohms

HEADPHONE POWER
1 kHz, 0.1% THD

8 ohm Load	200mW
200 ohm Load	1300mW
600 ohm Load	450mW

SIGNAL TO NOISE RATIO (Electronic)
>80 dB

E-100 EZICOM BELTPACK/REMOTE STATION

CONTROLS
1 x Headset Level Control
1 x Mic On/Off Switch
1 x Call Switch

INDICATORS
1 x "Mic On" Green LED
1 x "Call" Red LED

DIMENSIONS

Height	43 mm (1.75")
Width	85 mm (3.5")
Depth	120 mm(4")

WEIGHT
.5 kg

POWER REQUIREMENTS
30 V DC Supplied by EZICOM Master
50 mA Typically

NOMINAL MICROPHONE IMPEDANCE
50-600 Ohms

NOMINAL HEADPHONE IMPEDANCE
8-2000 Ohms

HEADPHONE POWER
1 kHz, 0.1% THD

8 ohm Load	200mW
200 ohm Load	1300mW
600 ohm Load	450mW

SIGNAL TO NOISE RATIO (Electronic)
>80 dB

NOTES ON SPECIFICATIONS:

All measurements were made at a mains supply voltage of 240 +/- 1%.

All parameters are measured under either worst-case conditions, or conditions closely approximating real use.

The Signal to Noise Ratio specification does not include any component generated either by acoustic noise or by cable induced noise.

DESCRIPTION and DESIGN PHILOSOPHY:

THE JANDS EZICOM SYSTEM:

The Jands EZICOM is a closed circuit headset intercom system which provides two-way communications with high intelligibility even in high-noise environments. A basic EZICOM system consists of one master station connected to a number of remote stations.

EZICOM stations are interconnected with standard two-conductor shielded microphone cable fitted with three-pin XLR style connectors. One wire in the cable carries 30 volt DC power from the master station to the remote stations; the other wire carries audio signals and superimposed "call" signals for visual signalling. The cable shield acts as the common ground-return.

The EZICOM cable transmission system is fully compatible with "Clear-Com" headset intercom systems, allowing master stations and beltpacks to be freely interchanged without degrading performance.

Each station contains its own microphone preamplifier, headset amplifier and visual signalling circuits. These stations appear as very high impedance loads on the line, which is terminated by a low impedance at the master station. The audio level remains constant when stations join or leave the line.

Up to twenty beltpacks may be run from one EZICOM Master Station; up to 100 beltpacks may be run in a system which uses multiple master stations to supply power. Cable lengths of over a kilometre may be used without problems.

The audio circuits in the stations are designed to give low-noise performance even in the presence of dimmer noise and strong RF fields. The mic pre-amp is muted when the headset is disconnected, reducing the noise build-up from unused (but on-line) stations. The headset amplifiers give high output with high quality into a large range of impedances.

The Jands EZICOM headset intercom system is a totally new design based upon 15 years experience of building intercom systems. It was designed from the ground up to include a wide variety of features to suit today's intercom requirements. There are two versions of the EZICOM Master Station, two channel and four channel, and both can also be used as a rack mounting remote station. Input and Output connectors are based on the internationally accepted standard.

EZICOM E-200 and E-400 MASTER STATIONS:

The Jands EZICOM E-200 and E-400 are two channel/four channel master stations with regulated power supplies capable of supporting up to twenty beltpacks. Each is in a one unit rack mounting chassis. The E-200 contains all functions necessary for a basic two channel intercom system; the E-400 has four channels and additional user facilities such as a Program Input, Desklamp Power Supply and a Call Buzzer.

The EZICOM Master Stations are a multi-purpose device which can function not only as a system master station, but also as a rack mounting remote station, or even just as a backup power supply for increased security in critical applications.

EZICOM E-100 BELTPACK/REMOTE STATION:

The EZICOM E-100 is a beltpack headset remote station for closed-circuit terminated-line two-way speech communication with visual signalling.

Connection to the master station, and to any other remote stations, is by male and female three-pin connectors using two-core screened "microphone" type cable. The headset is connected at a four-pin socket. The front holds the Mic On/Off switch and LED, Volume Control, Call Switch and Call LED.

INSTALLATION AND MAINTENANCE

WARRANTY AND UNPACKING:

Each and every JANDS Product is guaranteed against defects in material and workmanship for a period of one year. JANDS will replace defective parts and make necessary repairs under this warranty if our examination reveals evidence of faulty workmanship or material. The warranty does not cover:

1/ Products subjected to abnormal strain, neglect, abuse, modification or accidental damage.

2/ Products from which the name or serial number have been defaced or removed.

3/ The result of normal wear.

A warranty card is included with each option panel which sets out the conditions of the warranty. There is no need to return this card. Your bill of sale is sufficient to establish warranty. Should there be a need to ship the option panel to JANDS factory for repair, the unit should be shipped in its original package (or a replacement which is available at a small cost) and all freight charges must be pre-paid. If a warranty claim is established the option panel will be repaired and returned freight collect.

CLEANING:

To keep the EZICOM stations clean use a mild detergent and water with a soft cloth or paper towel, taking care to avoid water entering the units.

INSTALLATION:

MOUNTING THE E-200 OR E-400 MASTER STATIONS:

The EZICOM Master Stations occupy one unit of a standard 482 mm (19") rack. Although they are only 150 mm (6") deep, allow at least 250 mm (10") depth for rear panel connectors and wiring.

The EZICOM Master Stations have a rear panel heatsink for their internal 30 volt, 1 amp power supplies. The heatsink temperature depends on the number of remote stations connected to the master station, and on the amount of ventilation at the back of the master station. Since the heatsink may have to transfer up to 15 watts of heat to the air, don't sandwich the master station between larger overhanging pieces of equipment. Mount it at the top of the rack, where the E-400's desklight may best be used, or allow a blank rack-unit above or below the master station.

MOUNTING THE E-100 BELTPACK/REMOTE STATION:

The E-100 Beltpack is designed to be used as a beltpack and in most cases it can be clipped directly onto the users belt. However, should there be a requirement to mount the beltpack, care should be given as to its location. There are two main factors to consider, the first is the possibility of earth loops and contamination by "dirty" earths, and the second is Radio Frequency Interference (RFI) or Electro Magnetic Interference.

EARTH LOOP CONSIDERATIONS:

In order to prevent the possibility of establishing earth loops, the E-100 should NOT be clipped or taped directly to the side of followspots or other rigging. Lighting earths can have quite a significant quantity of noise superimposed onto them, and even though the chassis of the E-100 is raised above ground it is still good practice to ensure electrical separation between the intercom earthing system and any other earthing systems.

RFI AND EMI CONSIDERATIONS:

The E-100 Beltpack is constructed from sheet aluminium; this provides a screen around the electronic circuit whilst maintaining minimum weight. It is advisable to mount the E-100 away from areas of high RFI and EMI. Do not therefore, place the E-100 on top of dimmer racks, or against the ballasts of discharge followspots, also keep it away from large coils of heavy current power cabling such as the three phase supply cables to dimmer racks.

It should be noted, however, that most interference is picked up by the microphone cable which on most headsets is unbalanced.

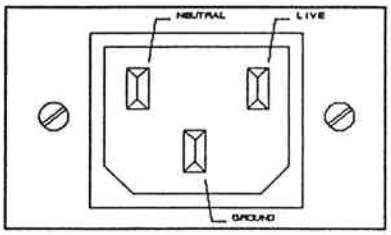
CONNECTING THE EZICOM COMPONENTS:

MAINS POWER:

The EZICOM E-400 and E-200 Master Stations are intended to operate from a 240 volt, 50 hertz mains supply (The E-400 is also available in 100 volt and 115 volt versions for export). Since mains supply voltages may vary (different supply grids, line resistance etc.) the EZICOM is designed to tolerate voltages within +/- 10%. The desk light brightness may vary slightly with the mains voltage, but all other specifications will be unaffected.

Voltages greater than +10% may cause excessive temperature on the heatsink and may cause permanent damage. CAREFULLY! - Check the mains supply with a good digital voltmeter if any doubt exists. At supply voltages greater than -10%, the DC rail will lose regulation and start humming. This may be irritating, but harmless and non-destructive.

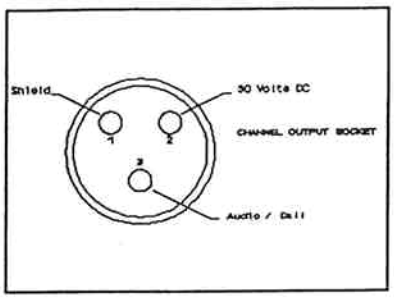
The mains inlet is a three-pin IEC plug. A 1.5 metre cord is supplied to suit local power outlets. This removable mains cord allows easy packing of the unit, and easy rack installation cabling. The EZICOM Master Station must be run from a correctly grounded outlet. Since outlet testers are freely available, it should be common practice to check outlets before use. It is unsafe to defeat the Mains Earth wire. There are better and safer methods of hum reduction - see "INSTALLATION" and "WIRING".



VIEW OF IEC SOCKET
LOOKING AT REAR
OF UNIT

The IEC power inlet also contains the mains fuse. The fuse is a M205, 2 Amp, (4 Amp - 100 and 115 volt versions) slow-blow type. The "M205" indicates the fuse size - Metric, 20 mm x 5 mm. The fuse carriage holds a spare fuse . Replacement fuses must be of the same rating to correctly protect the EZICOM Master Station, and slow-blow type to tolerate the brief current surge at turn-on without fatigue. If the fuse blows immediately after replacement, return the unit for servicing. There are no user serviceable parts inside.

CHANNEL OUTPUT CONNECTORS:



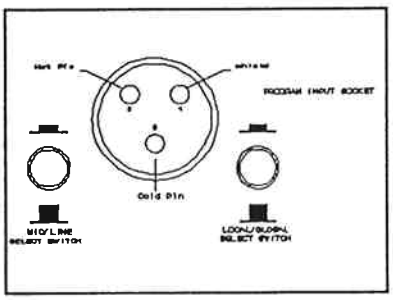
Male XLR style three-pin.

Pin 1 :	Shield (common ground).
Pin 2 :	Power (+30 volts).
Pin 3 :	Audio/Call signals.

The rear panel of the EZICOM Master Station is fitted with four XLR style three-pin male connectors (E-200 fitted with only 2). There is one for each channel. The ground (pin 1) and power (pin 2) of all channels are paralleled internally. Only the audio/call line (pin 3) is switched in the master station.

The EZICOM E-100 Beltpack has one female three-pin XLR style connector for the incoming signal from the EZICOM Master Station. In addition the E-100 is fitted with one Male three-pin XLR style connector to enable the connection of additional beltpacks to the same channel. As both connectors are connected together within the E-100 the connectors can be used backwards if required; i.e. the male connector can be used for the incoming signal.

PROGRAM INPUT CONNECTOR:



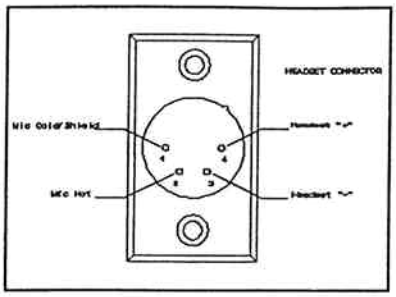
Female XLR style three-pin.

Pin 1 :	Shield (10 ohms to chassis).
Pin 2 :	Audio Hot Input.
Pin 3 :	Audio Cold Input.

The Program Input is electronically balanced, on a three-pin XLR style female connector. Since the input is balanced, and absolute phase integrity is not generally required, the signal source may be either "pin 2 hot" or "pin 3 hot", and/or unbalanced, without ill effects. The 10 ohm resistor provides the shield of the incoming cable with an electrostatic drain without the risk of hum loop formation.

The Mic/Line switch selects the sensitivity of the input to suit either line level signals (-15 to +5 dBu) or mic level signals (-55 to -35 dBu). The bridging input impedance is 200 K ohms (Line) or 2 K ohms (Mic).

HEADSET CONNECTOR:



Male XLR style four-pin.

Pin 1 :	Mic Cold/Shield
Pin 2 :	Mic Hot
Pin 3 :	Phones "-"
Pin 4 :	Phones "+"

The Jands EZICOM Master Stations and Beltpacks use male four-pin XLR style headset outlets. Care should be taken to avoid a reversal of pins 1 & 2 as this will cause hum and buzz to be picked up by the microphone circuit, and oscillation may occur. A reversal of pins 3 & 4 only will normally be tolerated. The EZICOM's headphone amplifier will also tolerate intermittent short circuits in the headphones.

Care should be taken to avoid shorting either of the EZICOM's headset connections to ground, such as the shell of the headset connector, as both connections are active.

The quality of the headsets is an important element in achieving good performance from the system. The headsets should be light and comfortable to minimise fatigue during extended hours of operation, and should provide high audio quality (with good isolation against external noise for high noise environments) to minimise aural fatigue. The microphone should be a "noise-cancelling" type, which is designed to reject background noise (the rejection is quite effective at lower frequencies) while accepting close-up speech. The microphone should also be insensitive to vibrations from the headset which may otherwise cause acoustic feedback.

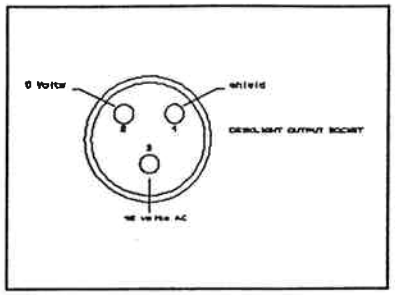
The microphone must be a dynamic type, with a nominal impedance of 50 to 600 ohms. The headphone impedance should be between 8 and 2000 ohms.

Jands recommend the Beyer DT-109 (dual ear) and DT-108 (single ear) headsets for use with the EZICOM system, these headsets are available with a headset impedance of 200 ohms and a microphone impedance of 200 ohms.

REAR HEADSET CONNECTOR - E-400 ONLY:

The E-400 has a second four-pin male connector on the rear panel. This connector is wired in parallel with the front panel headset outlet. The headphone amplifier will drive two headsets, but care should be taken with parallel microphone wiring. The success or otherwise of this will depend on the headset, and as a rule is not recommended.

DESKLIGHT OUTPUT CONNECTOR - E-400 ONLY:



Female XLR style three-pin.

Pin 1 :	No Connection.
Pin 2 :	Cold.
Pin 3 :	12 volts DC.

The EZICOM E-400 Master Station has a fuse-protected three-pin female XLR style outlet for 12 volt desk-lamps on the front panel. This outlet is intended to run gooseneck lamps of up to 12 watts at 12 volts AC such as the Littlite™ 12X or 12X right angle; (Note:- other brands may be wired incorrectly). The E-400 should be rack mounted at the top of signal processing racks and patchbays, in order for it to eliminate the necessity for additional rack lighting.

This outlet is fully isolated and floating. The fuse adjacent to the three-pin outlet is a 2 Amp slow-blow M205 type. A LED next to the fuse indicates whether this fuse is intact. The most common cause of fuse failure is a short in the lamps' gooseneck wiring or incorrectly wired gooseneck lamp. Desklamp problems will have no effect on the talkback system.

WIRING THE EZICOM SYSTEM:

CABLE REQUIREMENTS:

The Jands EZICOM system is designed to use standard two core shielded microphone cable with three-pin XLR style connectors. The line outputs of EZICOM Master Stations are on a male connector; each EZICOM Beltpack has a female inlet and parallel male outlet, which allows daisy chain wiring using conventional microphone leads.

Jands recommend the use of Belden 8412, Hartland HC2522 or Mogami 2582 for flexible applications and Belden 8761, Hartland HC2747 or Mogami 2944 for fixed installations. For exceptionally long runs heavier gauges may be required - see below.

The location of the wiring will influence the noise performance of the system. Magnetic fields from machinery, transformers, and high current mains and speaker cables are the main offenders. Keep the talkback cables well clear of these items. The talkback lines should be treated in the same way as microphone cables - and may be run with microphone cables with no ill effects to the mic cables. Avoid running the lines parallel to mains and speaker cables; cross such cables at right angles when they must pass each other. Try to bypass motors and installation transformers by at least a metre or so.

The maximum cable length for the EZICOM system is limited by individual line resistance and by total line capacitance. The EZICOM system will tolerate up to 100,000 pF of line capacitance before high frequency roll-off becomes excessive. Since most good microphone cable has a capacitance of 50 to 100 pF per metre (combined line-screen and line-line capacitance), total cable lengths of 1000 to 2000 metres may be used.

The cable resistance will determine the supply voltage loss at distant stations. Since a single E-100 Beltpack requires 50 mA, and a voltage loss of over 5 volts is undesirable, a maximum cable resistance of 100 ohms is dictated. Lines with more than one beltpack require a correspondingly lower resistance. As a rough guide, ten beltpacks spread at equal distances on a line would require under 20 ohms of cable resistance measured at the far end. The cable resistance may be measured with a meter at one end of the cable with the other end shorted. Since most good cables have typical resistances of 10 to 20 metres per ohm, a single beltpack may be operated at distances of 1000 to 2000 metres from the nearest master station.

POWERING THE EZICOM SYSTEM:

BASIC CONSIDERATIONS:

Each EZICOM system component operates from 28-30 V DC which is available on pin 2 of the three-pin interconnect cable. The EZICOM E-200 and E-400 Master Stations can each support up to twenty E-100 Beltpacks. Each E-200 or E-400 Master Station used as an un-powered remote station has a current draw equivalent to 1.2 E-100 Beltpacks. Therefore one E-400 can support 16 E-200 or E-400 as un-powered remote stations.

ADDITIONAL POWER:

Systems which use more than 20 beltpacks, or which require redundant additional power supplies, may have the extra power supplied by connecting additional master stations on any line, in any position. The power supplies in the masters are designed for multiple parallel operation.

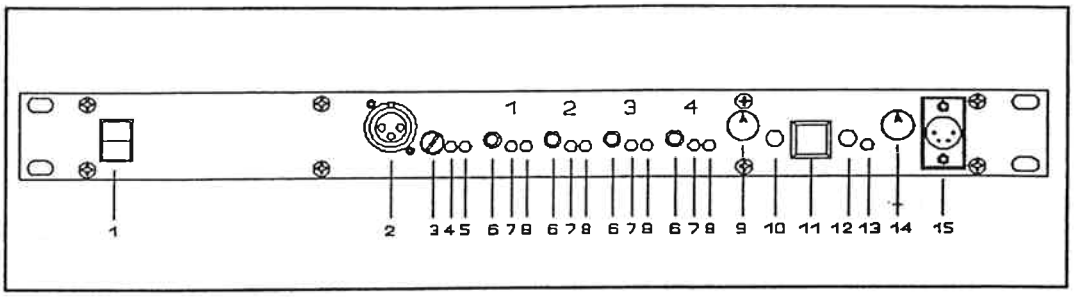
Each power supply is protected against short-circuits and overloads. An overload will cause the supply voltage to drop, and will dim the "Intercom Power Supply" LED.

Many beltpacks may be run from a channel; each master will provide power for up to 20 beltpacks, but up to 100 beltpacks may be run on one channel if multiple masters are used to provide power. Power is provided continuously to all channels.

The system shown on page 18 should be powered from at least two locations to provide the required current (20 beltpacks and 10 master stations) and additionally one or two further locations to ensure full redundant backup.

It is good practice to power the communications system from either a separate clean power circuit or from the audio power circuit. It is usually most convenient therefore to power the FOH Audio Operators station, the Communications System Engineers station, the Monitor Engineers station and Audio Amp Rack stations.

Thus the system is powered from at least 4 locations, ensuring that the system will not fail even in the event of any two stations failing. The JANDS EZICOM series has been especially developed to ensure minimum possibility of failure.



9:- PROGRAM INPUT VOLUME CONTROL (E-400 ONLY):

The "Program Level" control adjusts how much of the signal fed into the rear panel "Program Input" connector is fed directly to the E-400 operators' headset. When the rear panel "Local/Global Select" switch is set to "Global" the "Program Level" control adjusts how much of the signal is fed into the overall talkback system.

10:- CALL BUZZER SWITCH (E-400 ONLY):

The "Call Buzzer" switch next to the "Master Call" switch/lamp engages an internal buzzer which aurally mimics the "Master Call" lamp. It will sound for any calls from channels which have been turned on. Calls from OFF channels will light the individual "Channel Call" LEDs as usual. The buzzer calls the operators' attention when busy with other tasks.

11:- CALL SWITCH:

The illuminated "Master Call" switch allows visual signalling to users who have removed their headsets or turned their volume controls off. Pushing the "Master Call" switch will illuminate itself and the "Call" LEDs of beltpacks on channels which are turned on at the master station. The "Channel Call" LEDs will also indicate which channels are being called.

The call facility does not interfere with normal speech operation. The call circuits deliberately extend the duration of call signals by 10 seconds, so that even brief signals may be clearly visible at other stations.

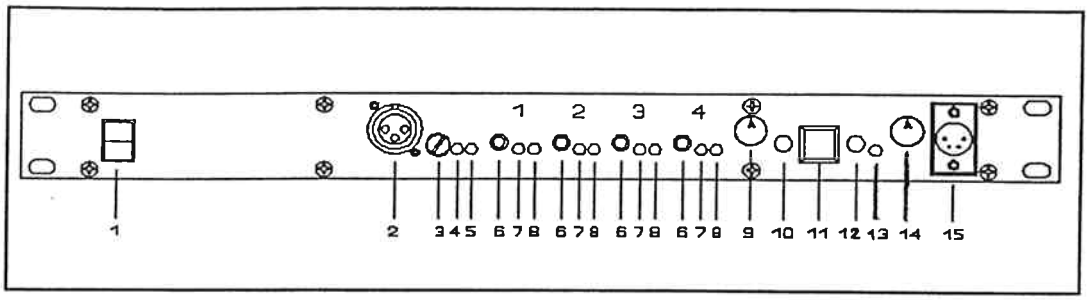
Incoming calls will light the "Channel Call" LEDs. The "Master Call" lamp will only be lit if the channel making the call is selected "on".

12:- MIC ON/OFF SWITCH:

The "Mic Switch" should be turned off if you don't expect to be talking, to reduce the level of acoustic background noise on the line. The mic pre-amp is automatically muted if the headset is unplugged.

13:- MIC ON/OFF INDICATOR:

The green "Mic On" LED adjacent to the "Mic On" switch will illuminate whenever the "Mic On" switch is turned on.



14:- HEADSET VOLUME CONTROL:

The "Headset Volume" control will typically be set between the "11 o'clock" and "3 o'clock" position. Excessive headphone level should be avoided for two reasons: ear damage and feedback. The phones amplifier has sufficient output capacity to cause long term hearing loss, particularly when used with high sensitivity headphones. Feedback can occur in some headsets due to headphone noise reaching the boom microphone by mechanical vibration in the headset. Levels just below the point of feedback can still spoil the quality for other users on the line.

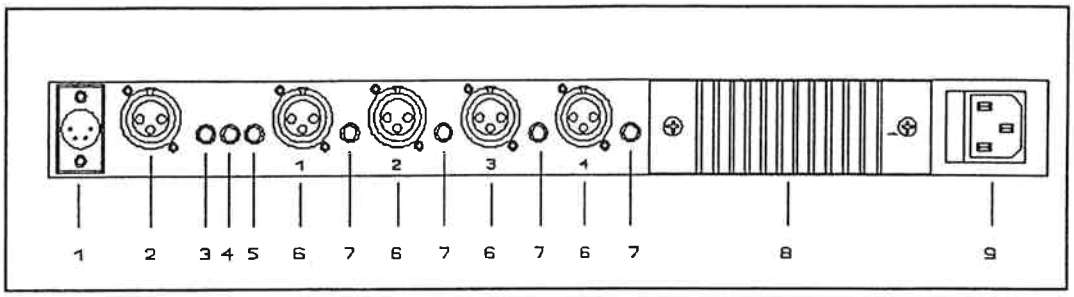
15:- HEADSET CONNECTOR:

A four-pin male XLR style outlet is provided for the connection of a headset system. Please refer to the section in Part 2 of this manual titled "HEADSET CONNECTOR" for wiring information.

The correct selection of headset will depend on application. For loud environments Beyer DT-109 headsets are recommended for their high rejection of surrounding noise from the microphone and their high isolation of surrounding noise from the earpieces.

Optionally headsets such as the Sony DR-100 cameraman's headset can be used. These are comfortable when used for extended periods, and are suitable for lower noise environments.

REAR PANEL FACILITIES:



1:- REAR HEADSET CONNECTOR - E-400 ONLY:

The E-400 has a second four-pin male connector on the rear panel. This connector is wired in parallel with the front panel headset outlet. It is intended for use in fixed installations where the operators' headset is to be extended to another outlet point. It may also be used for headphone monitoring by a second operator. Please refer to the section in Part 2 of this manual titled "Headset Connector" for wiring information.

2:- PROGRAM INPUT CONNECTOR - E-400 ONLY:

The "Program Input" connector is a three-pin XLR style connector which will accept a balanced or unbalanced program input. Two possible applications are detailed in the following, however, there are also many other such applications.

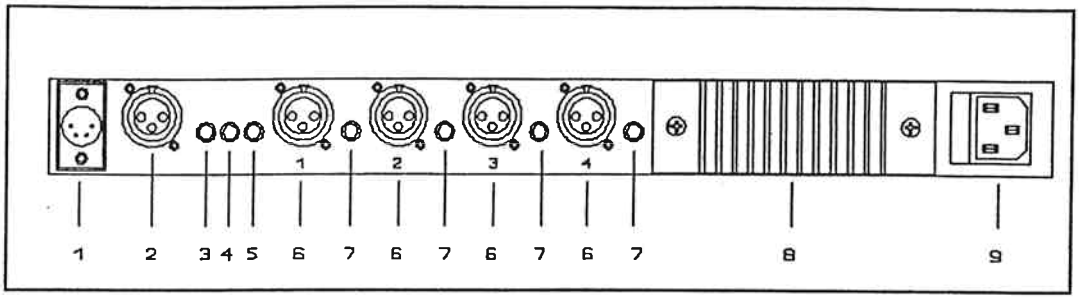
Some theatrical productions require the "Show" mixed into the intercom system to enable good audibility of the show's progress by all operators. To achieve this, install a microphone on the Front Of House lighting bar, or other suitable location. Connect this "Production Mic" to the "Program Input", select the "Mic/Line" switch to "Mic" and the "Local/Global" Switch to "Global".

Audio console operators are often faced with trying to wear an intercom headset in addition to a pair of headphones to monitor the mixing console. This cumbersome arrangement is solved by the EZICOM. The PFL/CUE signal from the audio console is connected to the "Program Input" connector, select the "Mic/Line" switch to "Line" and the "Local/Global" Switch to "Local". The front panel "Program Level" control now controls the level of PFL/CUE heard by the operator.

Please refer to the section in Part 2 of this manual titled "Program Input Connector" for further information.

3:- MIC/LINE SWITCH - E-400 ONLY:

The "Mic/Line" switch selects the sensitivity of the input to suit either line level signals (-15 to +5 dBu) or mic level signals (-55 to -35 dBu). The bridging input impedance is 200 K ohms (Line) or 2 K ohms (Mic). Please refer to above paragraph for further information.



4:- LOCAL/GLOBAL SWITCH - E-400 ONLY:

The "Local/Global" destination switch, and the front panel "Program Input" level control allow either the EZICOM Master's operator or ALL users to hear program material or announcements from a mixing console or production microphone.

5:- MASTER TERMINATION SWITCH:

The "Master Termination" switch should be set to "ON" if the EZICOM E-400 or E-200 is being used as a "Master Station" and "OFF" if it is being used as a rack mount remote station. Please refer to the section in Part 2 of this manual titled "Terminating the EZICOM System" for further information.

6:- CHANNEL OUTPUT CONNECTOR:

There are four "Channel Output" connectors on the rear of the EZICOM E-400 Master Station (E-200 - two), EZICOM E-100 Beltpacks should be connected to the "Channel Output" connector. Each E-400 or E-200 Master can supply power for up to a total of 20 beltpacks. Please refer to the section in Part 2 of this manual titled "Channel Output Connectors" for further information.

7:- CHANNEL TERMINATION SWITCH:

There are four "Channel Termination" switches, one of each of the four channels. These should be set to "ON" if the EZICOM E-400 or E-200 is being used as a "Master Station" and "OFF" if it is being used as a rack mount remote station. Please refer to the sections in Part 2 of this manual titled "Wiring the EZICOM System" and "Terminating the EZICOM System" for further information.

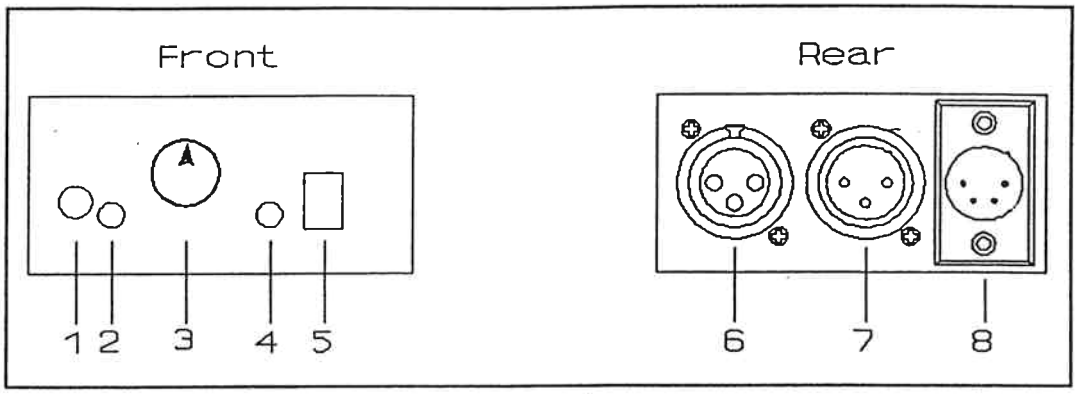
8:- REGULATOR HEATSINK:

This heatsink provides cooling for the internal voltage regulators For reliable performance the user should ensure that good airflow is maintained around the heatsink.

9:- POWER CONNECTOR:

The EZICOM E-200 and E-400 Master Stations are supplied with a 1.5 m cable fitted with an IEC socket for connection to the EZICOM Master Station. Please refer to the sections in Part 2 of this manual titled "POWER" for further information.

EZICOM E-100 BELTPACK/REMOTE STATION:



1:- MIC ON/OFF SWITCH:

The "Mic Switch" should be turned off if you don't expect to be talking, to reduce the level of acoustic background noise on the line. The mic pre-amp is automatically muted if the headset is unplugged.

2:- MIC ON/OFF INDICATOR:

The green "Mic On" LED adjacent to the "Mic On" switch will illuminate whenever the "Mic On" switch is turned on.

3:- HEADSET VOLUME CONTROL:

The "Headset Volume" control will typically be set between the "11 o'clock" and "3 o'clock" position.

4:- CALL INDICATOR:

The red LED indicates visual signalling from other users, and this units, "Call Switch".

5:- CALL SWITCH:

The "Call Switch" enables visual signalling to other users who have removed their headsets or turned their volume controls off.

6:- INPUT CONNECTOR:

A three-pin female XLR style connector is provided to connect the cable from the EZICOM Master Station's "Channel Output" connector.

7:- LOOP THRU CONNECTOR:

A three-pin male XLR style connector is provided for the connection of additional beltpacks.

8:- HEADSET CONNECTOR:

A four-pin male XLR style outlet is provided for the connection of a headset system.

APPENDIX

SYSTEM COMPATIBILITY:

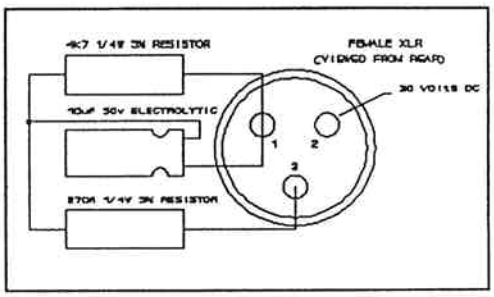
CLEAR-COM RS-500 SYSTEM:

The JANDS EZICOM system is generally compatible with Clear-Com systems, however whilst the EZICOM microphone pre-amps do include equalisation they do not include the dynamic control featured in the current Clear-Com units and this may cause some discrepancy in level to become apparent in loud environments. Clear-Com Beltpacks will operate from an EZICOM Master Station and visa versa.

JANDS TBM/TBS SYSTEM:

The EZICOM system works on a different DC rail voltage, different signal levels and a different termination practice to the TBM/TBS system. It is possible to operate up to 10 TBS Beltpacks from the EZICOM master with a tolerable mismatch in audio levels and some what obscure signalling. However, it is not generally recommended to run all EZICOM Beltpacks from a TBM Master Station without the following modification.

TB/M TALK BACK TERMINATOR - Allows EZICOM Clear-Com subs to be run from Jands TB/M Master.



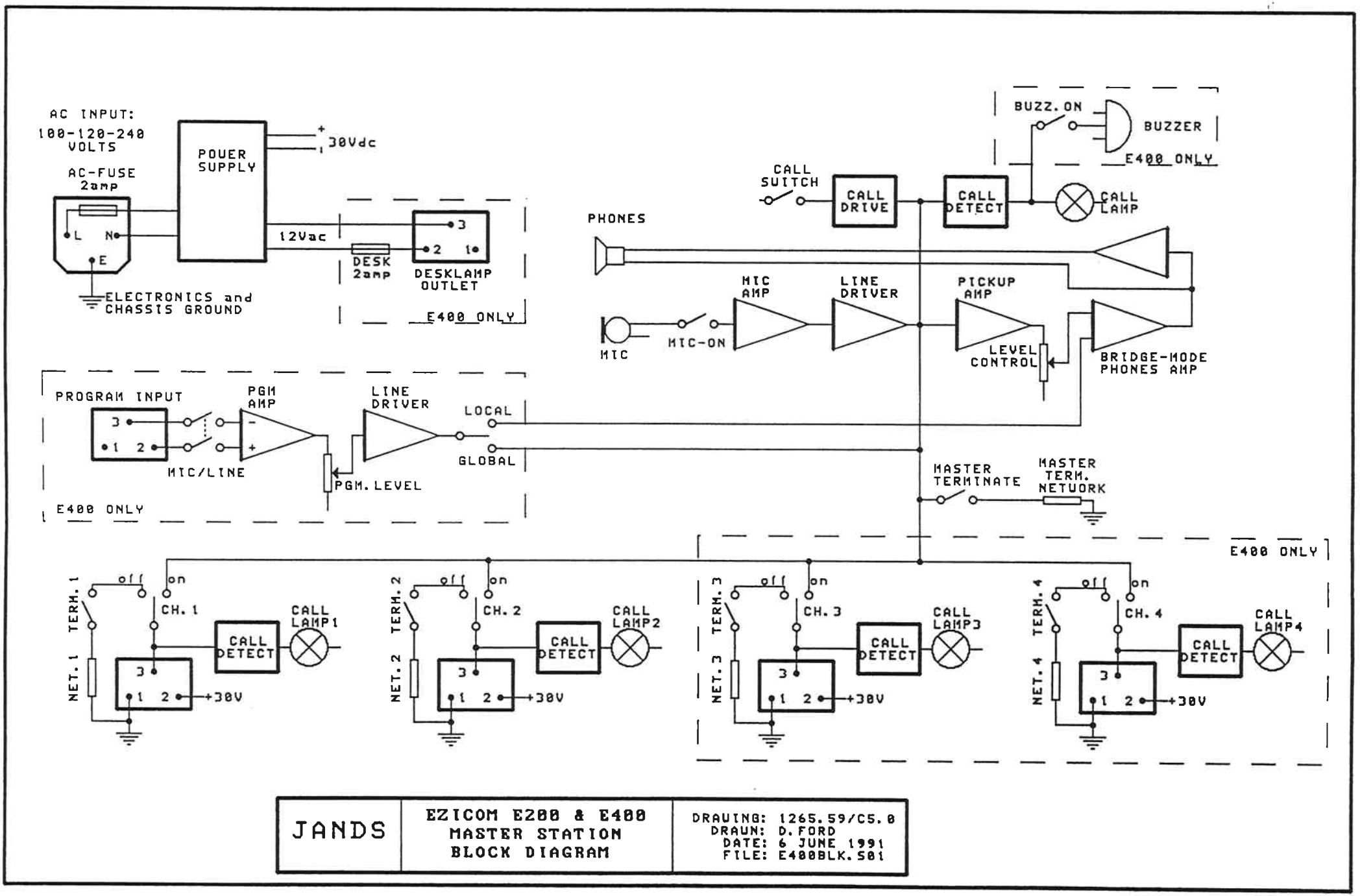
- Assemble these components inside the shell of an XLR type connector ensure that all leads are insulated from the shell of the connector.
- Plug one of these dummy plugs into the second outlet of each channel on the back of the TB/M.
- When channels 1 and 2 are both selected by TB/M, levels will drop 6 dB due to double termination occurring.
- If both lines are unselected at TB/M, master phones-level will be very high.
- Call by subs will be seen at subs and master; audio will be unaffected.
- Calls by master will be seen at all subs and master; audio will be muted; DC thump will be heard.
- Audio at subs will be normal in level except when two lines are selected; audio level at master is somewhat reduced except when both lines (and thus termination) are unselected.

HEADSET WIRING

It should be noted that the pin wiring of the headset for the EZICOM system is different to that of the TB/M System. The microphone wiring remains the same while the headphone wiring is reversed phase. This will not cause any problems with the headsets recommended however it could possibly cause detrimental effects with other types.

JANDS DBM/DBS SYSTEM:

The DBM/DBS system has been out of production for over 10 years, and is only marginally compatible with the EZICOM System. Please contact JANDS for further information if required.



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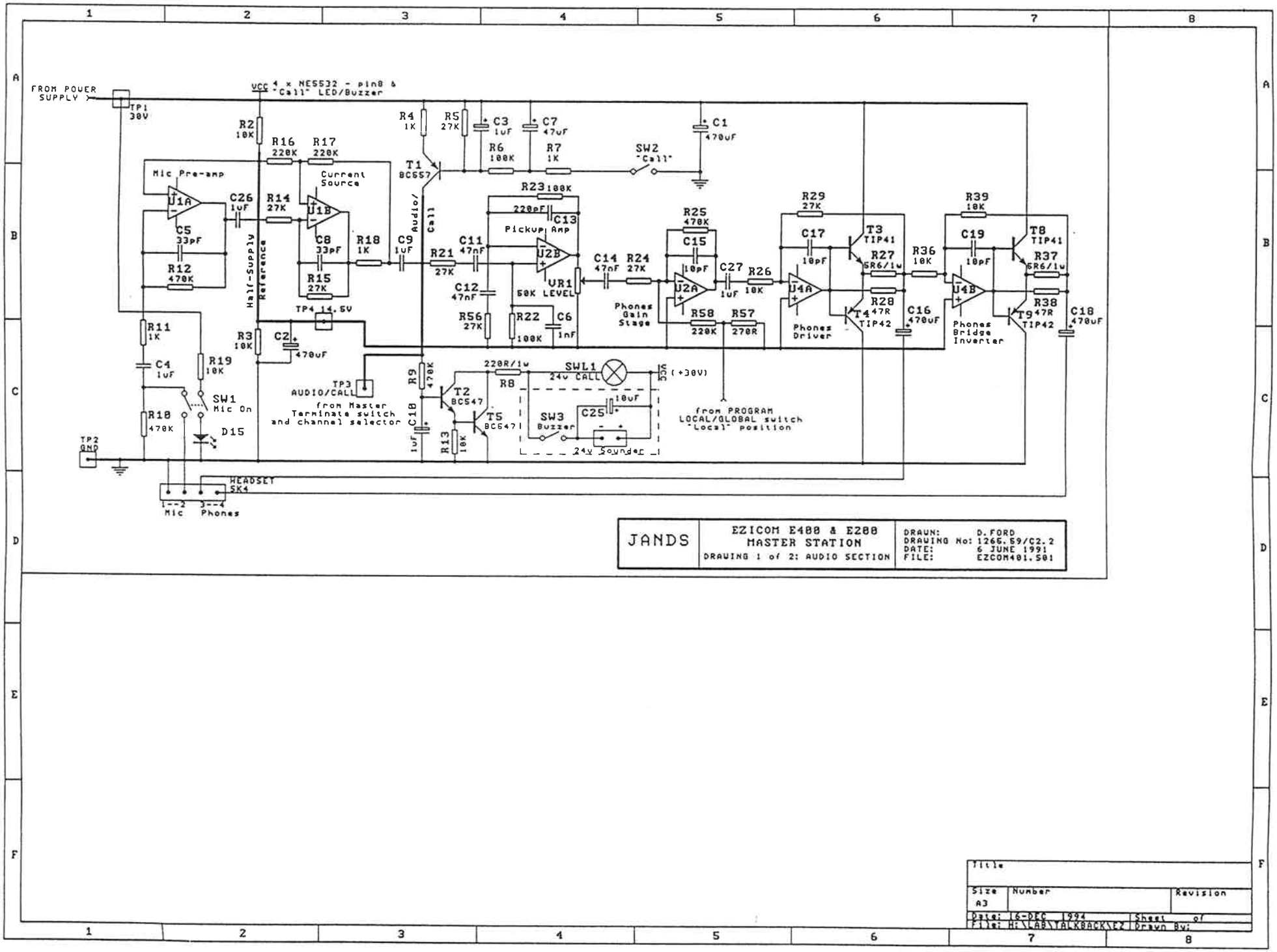

JANDS	EZICOM E400 & E200 MASTER STATION DRAWING 1 of 2: AUDIO SECTION	DRAWN: D.FORD DRAWING No: 1265.59/C2.2 DATE: 6 JUNE 1991 FILE: EZCOM401.SCH

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