Left side — XLR / MOSFET section

J?
XLR3_Ground

R? 100

GND

J?
XLR3_Ground

R? 10k

CONTROL

Q? IRLZ44N

Q? IRLZ44N

R? 100

Power regulator section

9V

U?
SPX2920U-5.0_TO220

VI GND VO

BT? 9V

C? 0.1uF

5V

GND

Top right — DC jack / transistor

9V

J?
Jack-DC

R? 3.9k

EXT

Q? 2N3904

GND

Microcontroller section

5V

U?
ATtiny85-20P

VCC

AREF/PB0 5
PB1 6
PB2 7
XTAL1/PB3 2
XTAL2/PB4 3
RESET/PB5 1

GND 4

CONTROL

EXT

RV? 10k

R? 200

D? LED

GND

Notes (lower left):

Typical impedance: mic 150-200ohm, mixer/preamp 1.5-2kOhm.
Matching impedance is not used between a mic and preamp.
Usually the receiving end must have a very high impedance of almost 10x the source.
This means that loading the mic -> mixer with a small resistor has no impact.
Thus mixer side after resistor can be shorted as it has a large impedance.

Muting is done by short-circuiting the audio signals.
Mosfets are pulled down so the signal is passed through if power fails.
Attiny85 will enter deep sleep after period of no sound.
Thresholds changed with potentiometer.
Led lit up automatically.
Jack for external use: buzzer.

XLR is most certainly mic-level not line-level: https://producerhive.com/ask-the-hive/line-in-vs-mic-in/
XLR is balanced aka differential: https://www.boxcast.com/blog/balanced-vs.-unbalanced-audio-whats-the-difference
XLR has 4 pins:
    1   Audio ground reference
    2   Positive
    3   Negative
    4   Shell of connector - safety feature; should be connected to metal frame
XLR voltages are around 0.001V

Notes (lower middle):

Power Details:
    Led must be of 2V, 15mA.
    Jack is powered by 9v, 200mA max.

Title block:

Aeindus
Sheet: /
File: AutoMicrophone.kicad_sch
Title: AutoMicrophone
Size: A4   Date: 2022-09-24   Rev: 1
KiCad E.D.A. kicad (6.0.7)   Id: 1/1