The Input Output Block Diagram

OUTPUTS INPUTS Length, Quantity LCD Display LCD Display is used to display all the states and parameters entered by the user using keypad. It will ask User inputs 4x4 Keypad the user to enter the mode they need, length of the wire ,number of pieces, strip height and strip length that given by the user. Also, it will display state of the 4x4 Keypad is used to give all the user inputs to the machine. First user has to input the mode they need(If machine. they want to choose cutting mode they need to press '1' and if they need to choose stripping mode they have to Beep a sound Buzzer press '0'), then length of the wire, number of pieces they want to cut, strip height and strip length. Piezo buzzer is used to make a beep sound when user input invalid input. Also, it will make a sound when the output of IR senser 1 is 0. (when the wire is not in right position) Distance to wire Infra-red Sensor 1 **Rotate Motor** Stepper Motor 1 First Infra-red sensor is used to check whether wire roll First stepper Motor is used to rotate the timing pulley is finished or not. If it is finished it will return '0'. Rotate Motor Distance to wire Stepper Motor 2 Infra-red Sensor 2 Second stepper motor is used to move the cutting blade Second Infra-red sensor is used to check whether wire up and down is in right position before it moves to the cutting blade Rotate Motor Distance to wire Stepper Motor 3 Infra-red Sensor 3 Microcontroller 1 Third stepper motor is use for the winding wheel part to Third IR Sensor is used to detect whether the wire has rotate the wheel come into the winding part or not. If its true wire gets into the winding part. Rotate Motor Stepper Motor 4 Fourth stepper motor is used to adjust the horizontal position of the cutting blade Rotate Motor Stepper Motor 5 Distance Ultrasonic Sensor 1 Fifth stepper motor used to adjust the vertical position First ultrasonic sensor is used to measure the depth of of the cutting blade the cutting blade **Rotate Motor** Stepper Motor 6 & Distance to pallet Stepper Motor 7 Ultrasonic Sensor 2 Sixth and seventh stepper motors are used to move the Second ultrasonic sensor is used in cutting part and it used wire forward according to the length that user want to to measure the distance between the sensor and plate(B). strip. Distance **Rotate Motor** Ultrasonic Sensor 2 Servo Motor Third ultrasonic sensor is used in stripping part, and it used Servo motor is use for the small arm to measure an to measure the diameter of the wire. According to the output angle. When the wire gets into the small arm, rotate the of the sensor stripping blade will align to the center of the angle required using servo motor Rotate Motor DC Motor DC Motor is used to rotate the cutting blade for the Microcontroller 2 stripping process