



## Abstract

The problem this project overcomes is the barriers of sound (excessive or silent) in communication. It can be utilized in environments where these barriers cause disruption, so that the information can be transmitted.

( Through Visual means with Morse code as mediator language )

## Code:

```
void setup()
{
  Serial.begin(9600);
  pinMode(13, OUTPUT);
}

void loop()
{
  char s[]="alibaba",ch;           //MESSAGE
  char morse[100]="";

  //Encoding
  for(int i=0;s[i]!='\0';i++)
  {
    ch=s[i];
    if (ch == 'a' || ch == 'A')
    {
      strcat(morse,".- "); // morse += ".- ";
    }
    else if (ch == 'b' || ch == 'B')
    {
      strcat(morse,"-... "); // morse += "-... ";
    }
    else if (ch == 'c' || ch == 'C')
    {
      strcat(morse,"-.-. "); //morse += "-.-. ";
    }
    else if (ch == 'd' || ch == 'D')
    {
      strcat(morse,"-.. "); //morse += "-.. ";
    }
    else if (ch == 'e' || ch == 'E')
    {
      strcat(morse,". "); //morse += ". ";
    }
    else if (ch == 'f' || ch == 'F')
    {
      strcat(morse,"..-. "); //morse += "..-. ";
    }
  }
}
```

```

else if (ch == 'g' || ch == 'G')
{
    strcat(morse,"--. "); //morse += "--. ";
}
else if (ch == 'h' || ch == 'H')
{
    strcat(morse,".... "); //morse += ".... ";
}
else if (ch == 'i' || ch == 'I')
{
    strcat(morse,".. "); //morse += ".. ";
}
else if (ch == 'j' || ch == 'J')
{
    strcat(morse,"--- "); //morse += "--- ";
}
else if (ch == 'k' || ch == 'K')
{
    strcat(morse,"-.- "); //morse += "-.- ";
}
else if (ch == 'l' || ch == 'L')
{
    strcat(morse,".-. "); //morse += ".-. ";
}
else if (ch == 'm' || ch == 'M')
{
    strcat(morse,"-- "); //morse += "-- ";
}
else if (ch == 'n' || ch == 'N')
{
    strcat(morse,"-. "); //morse += "-. ";
}
else if (ch == 'o' || ch == 'O')
{
    strcat(morse,"--- "); //morse += "--- ";
}
else if (ch == 'p' || ch == 'P')
{
    strcat(morse,"-.. "); //morse += "-.. ";
}
else if (ch == 'q' || ch == 'Q')
{
    strcat(morse,"--.- "); //morse += "--.- ";
}

```

```

else if (ch == 'r' || ch == 'R')
{
    strcat(morse,".-. "); //morse += ".-. ";
}

else if (ch == 's' || ch == 'S')
{
    strcat(morse,"... "); //morse += "... ";
}
else if (ch == 'T' || ch == 't')
{
    strcat(morse,"- "); //morse += "- ";
}
else if (ch == 'u' || ch == 'U')
{
    strcat(morse,"..- "); //morse += "..- ";
}
else if (ch == 'V' || ch == 'v')
{
    strcat(morse,"...- "); //morse += "...- ";
}
else if (ch == 'w' || ch == 'W')
{
    strcat(morse,".-- "); //morse += ".-- ";
}
else if (ch == 'x' || ch == 'X')
{
    strcat(morse,"-..- "); //morse += "-..- ";
}
else if (ch == 'y' || ch == 'Y')
{
    strcat(morse,"-.- "); //morse += "-.- ";
}
else if (ch == 'z' || ch == 'Z')
{
    strcat(morse,"--.. "); //morse += "--.. ";
}
else if (ch == ' ')
{
    strcat(morse,"/"); //morse += "/";
}

}

```

## //Transmitting

```
for(int u=0;morse[u]!='\0';u++)
{
    if(morse[u]=='.')
    {
        digitalWrite(13,HIGH);
        delay(100);
        digitalWrite(13,LOW);
        if(morse[u+1]!=' ')
            delay(300);
    }

    else if(morse[u]=='-')
    {
        digitalWrite(13,HIGH);
        delay(600);
        digitalWrite(13,LOW);
        if(morse[u+1]!=' ')
            delay(300);
    }

    else if(morse[u]=='/')
    {
        delay(900);
    }

    else if(morse[u]==' ')
    {
        delay(500);
    }
}
Serial.println(morse);
delay(1000);
}
```