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// Guitarbot mit Simple Step Sequencer & Hotel California, V08 S.Schräbler 13.02.2014
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// Diese vier Parameter müssen an das Lied oberhalb der Zeile angepasst werden

```

int transpose = 0; // transponieren, es soll möglichst kein f# oder g# vorkommen und wenig umgebrochen werden -> probieren!
int instrument = 0; // Stimme auswählen, möglich sind nur Zahlen, die auch in instr[] vorkommen
int maxtime = 6060; // 12840; // Zeitbegrenzung, nicht größer als letzter Wert in noteon[]
int maxptr = 208; // 560; // Tabellenende, nicht größer als letzter Wert in der Kommentarzeile

```

//-----

```

int time; // Zeit, gemessen in je 10 ms
int onptr = 0; // pointer Note on
byte poly; // Polyphonie, mehrere Töne beginnen zum gleichen Zeitpunkt (ungeeignet für Gitarrenspiel)
int tune[] = {2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13}; // Magnet Pins und zugehörige Noten
//          a# h  c c# d d# e f  f#  g  g# a
int y, y1, y2 = 0; // zu spielender Magnet, alter Wert
int i, j = 0; // für die Schleifen

```

//-----

```

void setup()
{
    // Text-Ausgabe auf Serial Monitor
    Serial.begin(57600);
    // Alle Relais-Pins auf Ausgang schalten
    for (i=0; i<=12; i++) {
        pinMode(tune[i], OUTPUT);
    }
}

```

```

    }
}

//-----

void loop()
{
    /*
    // Tonleiter
    for (j=0; j<=0; j++) {
        for (i=12; i>=0; i--) { // 6 und 7 gehen nicht gut (e, f) g# und f# auch nicht.
            digitalWrite(tune[i], HIGH);
            delay(10*120);
            digitalWrite(tune[i], LOW);
            delay(0*120);
        }
    }
    */
    delay(2000);

    // Der eigentliche Sequenzer, hier wird die Musik gemacht!
    onptr=0; // Zeiger in die Tabellen zurücksetzen
    Serial.println(" "); // Leerzeile auf den Serial Monitor ausgeben
    Serial.println(" "); // Leerzeile auf den Serial Monitor ausgeben
    Serial.println("Hotel California (Eagles)");
    Serial.println(" "); // Leerzeile auf den Serial Monitor ausgeben

    for (time=0; time<maxtime ; time++) // Zeitschleife
    {
        delay(10); // timing in ms
        for (poly=0; poly<1; poly++) // 1..6 Polyphonieschleife
        {
            if ((time)>=noteon[onptr]) // wenn der Zeitpunkt erreicht ist ...
            {
                if (onptr<maxptr) // und die Liste noch nicht zu Ende ...
                {
                    // nächste Zeile auskommentieren, wenn alle Stimmen gespielt werden sollen
                    // if (instr[onptr]==instrument) // und das Instrument das ausgewählte ist ...
                    {

```

```

    y=notes[onptr]-54+transpose;// transponieren
    while(y>=12)  y-=12;// in den darstellbaren Bereich umbrechen
    while(y<0) y+=12;
    digitalWrite(tune[y1], LOW); // alte Note zurücknehmen
    digitalWrite(tune[y], HIGH); // neue Note spielen
    y1=y;// alte Note merken;

    Serial.print(time); // zur Probe: Ausgabe an Serial Monitor
    Serial.print(" ");
    Serial.print(notes[onptr]);
    Serial.print(" ");
    Serial.println(y);
  }
}
onptr+=1;// Zeiger für die Tabellen-Einträge weiterzählen
}
}
}
digitalWrite(tune[y], LOW); // letzte Note auch zurücknehmen (Gitarre spielt dann ein tiefes a)
delay(10000); // 10s warten, danach erneut beginnen
}

```