In[1]:=
```
(* Thermal dist. population expression *)
```

In[2]:=
```
P[nbar_] := nbar^n / (nbar + 1)^(n+1)
```

In[3]:=

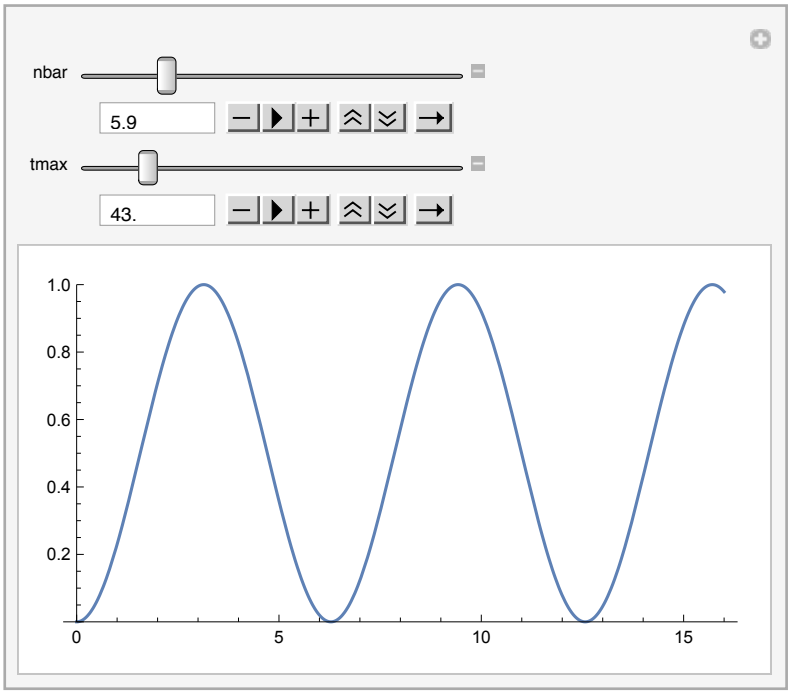
In[4]:=
```
(* Assume Ω = 1 and η = 0.06 *)

Ω = 1;
η = 0.07;
```

In[5]:=
```
(* Carrier flops as function of nbar -- sum truncated at n = 500. *)
```

In[6]:=
```
Manipulate[
 Plot[
          Sum[  P[nbar] * Sin[  1/2 Ω (1 - η^2 n) t ]^2  , {n, 0, 500}  ],
  {t, 0, tmax}, AspectRatio → 1/2 , PlotRange → {0, 1}],
 {nbar, 0.01, 30}, {tmax, 1, 300} ]
```

Out[6]=



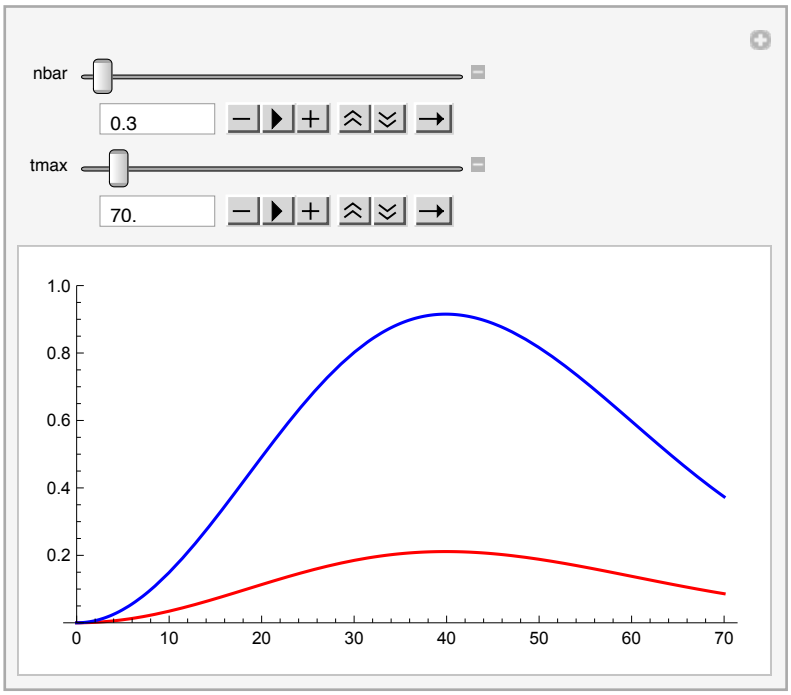
In[7]:=

```
(* Red and Blue sideband flops as function of nbar *)
```

In[8]:=

```
Manipulate[
 Plot[ {
          Sum[  P[nbar] * Sin[  1/2 Ω η Sqrt[n] t ]^2  , {n, 0, 500}  ],
   Sum[  P[nbar] * Sin[  1/2 Ω η Sqrt[n + 1] t ]^2  , {n, 0, 500}  ]
      },
  {t, 0, tmax}, AspectRatio → 1/2 , PlotRange → {0, 1}, PlotStyle → {Red, Blue}],
 {nbar, 0.01, 30}, {tmax, 1, 1200} ]
```

Out[9]=



In[10]:=

```
(* A look at the Fock state distribution as a function of nbar *)
```

In[11]:=
```
Manipulate[
 Plot[ P[nbar], {n, 0, 25} , PlotRange → {0, 1}, AspectRatio → 1 / 1.5],
 {nbar, 0.01, 30}
]
```

Out[11]=