Let n_1 be the number of labeled samples (with label $y = 1$) and n_0 be the number of unlabeled samples, i.e. n_0 is the number of "mixed" samples, and to design a classifier we assign them the surrogate label $y = -1$ (I think $n_1 = 707$ and $n_0 = 14992$ in the data you sent). Let $n = n_1 + n_0$. The libsvm code is optimizing

$$R_{libsvm}(f) = \frac{1}{2}\|f\|_H^2 + C\sum_{i=1}^{n} I(f(x_i) \neq y_i)$$
$$= \frac{1}{2}\|f\|_H^2 + \left(w_1 C \sum_{i:y_i=1} I(f(x_i) \leq 0)\right) + \left(w_{-1} C \sum_{i:y_i=-1} I(f(x_i) > 0)\right).$$

and we want to optimize

$$R_{hemi}(f) = \lambda\|f\|_H^2 + \frac{2P_1}{1+2P_1}\left(\frac{1}{n_1}\sum_{i=1}^{n_1} I(f(x_i) \leq 0)\right) + \frac{1}{1+2P_1}\left(\frac{1}{n_0}\sum_{i=1}^{n_0} I(f(\acute{x}_i) > 0)\right)$$
$$= 2\lambda\left(\frac{1}{2}\|f\|_H^2 + \frac{2P_1}{(2\lambda)(1+2P_1)(n_1)}\left(\sum_{i=1}^{n_1} I(f(x_i) \leq 0)\right) + \frac{1}{(2\lambda)(1+2P_1)(n_0)}\left(\sum_{i=1}^{n_0} I(f(\acute{x}_i) > 0)\right)\right)$$

so we want

$$w_1 C = \frac{2P_1}{(2\lambda)(1+2P_1)(n_1)}$$
$$w_{-1} C = \frac{1}{(2\lambda)(1+2P_1)(n_0)}$$

There are many ways to do this. Suppose we set

$$C = \frac{1}{(2\lambda)(1+2P_1)n}.$$

Then we want

$$w_1 = \frac{2P_1 n}{n_1}$$
$$w_{-1} = \frac{n}{n_0}$$

or ... any (w_1, w_{-1}) pair that maintains their ratio will work, i.e. the values in the example I sent to you were roughly

$$w_1 = \frac{2P_1 n_0}{n_1}$$
$$w_{-1} = 1$$

Also, with this parameterization the values of λ that I use typically fall in the range

$$\frac{0.00001}{\sqrt{n}} \leq \lambda \leq \frac{1000}{\sqrt{n}}$$

and as a default I use $\lambda = \frac{100}{\sqrt{n}}$. And the values of γ for the libsvm radial basis kernel fall in the range

$$\frac{0.0001\sqrt{n}}{d} \leq \gamma \leq \frac{\sqrt{n}}{d}$$

where d is the data dimension ($d = 24$ for the data you sent).