

# Application of Computer Embroidery in Home Textile Industry

Ziyi Li, Baofeng Ji, Ziwei Li

College of Information Engineering, Henan University of Science and Technology, Henan,  
China

---

## Abstract

Under the environment of large market demand for embroidery in home textile industry, the traditional manual embroidery process is time-consuming and laborious, so it cannot be mass-produced, because it cannot meet the public's demand for aesthetic feeling of home textile process. In this regard, it is very important to apply computerized embroidery which can realize automatic production to the home textile industry, and the application scope of computerized embroidery in the home textile industry is very wide, embroidery method, silk thread, cloth, can meet the different needs of the masses.

## Keywords

Computer Embroidery; Home Textile Industry; Application.

---

## 1. Introduction

Traditional manual embroidery process is time-consuming and laborious, which can not meet the masses' aesthetic needs for home textile products. Computer embroidery with high efficiency, high yield and high-speed automatic production can greatly make up for the deficiency of traditional manual embroidery and meet the increasing multiple needs of the masses. And computer embroidery is widely used in the home textile industry, which can give full play to the embroidery process.

## 2. Computer Embroidery Machine Production Principle

First, according to the pattern design, the production of the required pattern, study lofting, planning the starting point, planning the lofting path, the arrangement of color number and color order and jumping pins, etc.. Input the pattern to the computer embroidery machine again, set all kinds of required embroidery parameters, according to the color sequence, put silk and adjust the tension of the bottom line, according to the embroidery design on the stretch frame, cut, stick double-sided glue, pull paper lining, stick cloth. Catch pull rod to undertake right finally start machine embroidery, if machine head jumps red light stop to run, check whether break line, bottom line is consumed, correct, pull rod to right continues to run. Pull rod to the left is shutdown, continuous left is back needle. Excess cloth needs to be cut along the seams during embroidery. After embroidery, the staff collected the finished cloth, cut the thread wool, and tore off the excess paper lining.

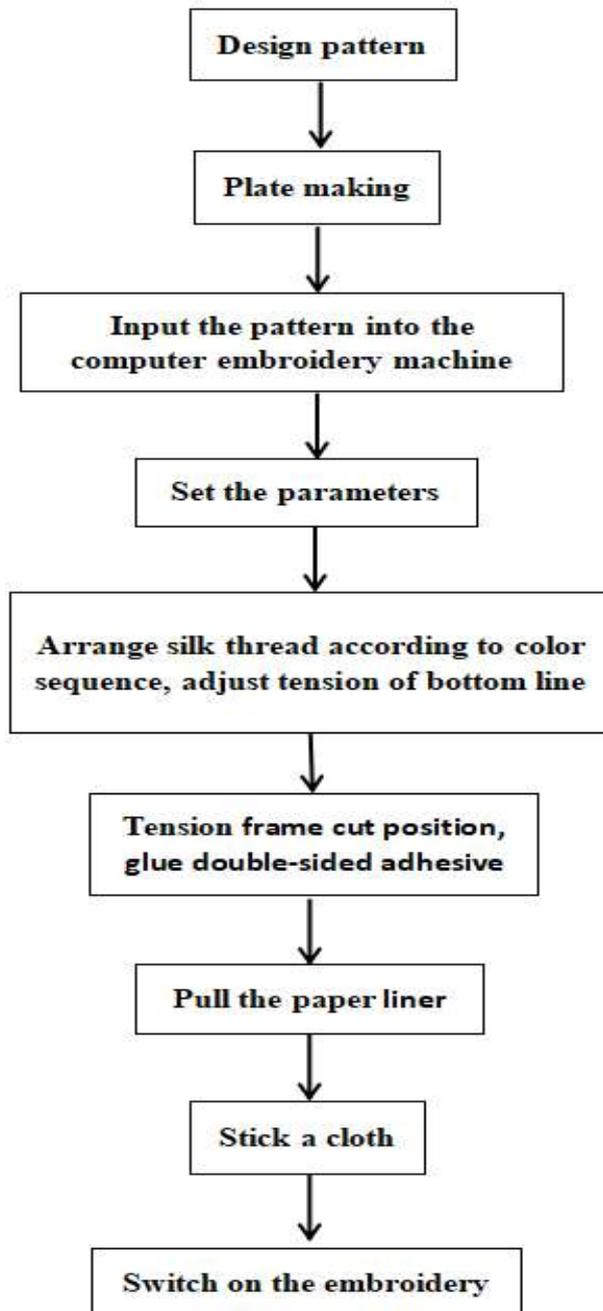


Fig. 1 Computer embroidery production process

### 3. The Advantage of Computer Embroidery

As a national intangible cultural heritage, the traditional hand embroidery embroidered delicate and exquisite, lifelike, beautiful, but it has multiple embroidery method, the stitch is complex, embroidered with a complete want embroidery requires a lot of time, and study the manual embroidery also not happen overnight, it takes a lot of energy, but also the quality of the embroidery is different from person to person, Embroider skill is superb, can embroider the high-quality goods more only accounts for a minority. Secondly, it is difficult to preserve embroidery. Most of the embroidery products preserved in the Qing Dynasty have fallen off, become discolored and rot. Handwork embroidery is exquisite and has great collection value, but it cannot be mass-produced and meet the current market requirements for aesthetic feeling of home textile process.

Through the analysis of relevant literature, summed up the computer embroidery mainly exist the following advantages: first, stitch using more abundant than traditional hand embroidery, get rid of

the traditional embroidery technology "zigzag" embroidery stitch restrictions, can be replaced and get flat bag needle, flexible stitch, facilitate innovation, design more lively and interesting, can achieve the best effect of embroidery: Second, the computer embroiders automated production more efficient, traditional hand embroidery consumption for a long time, can't mass production, can not meet the market demand, will limit the embroidery industry development, and computer embroidery after the customer select good figure, can efficiently produce the same quality of arts and crafts, time needed for short, can realize the mass production, meet the demand of industry, is conducive to timely supply. Third, computer embroidery cheaper, realize the mass production on computer embroidery, do not need to manually fine production, greatly reduce the time and human resources required, different from that of hand embroidery prices higher audience only a small part of the group, computer embroidery craft can better geared to the needs of the masses, meet the needs of the mass aesthetic feeling of home textile products, It broke through the limitations of the embroidery industry market.

#### **4. Application Scope of Computer Embroidery in Home Textile Industry**

Computer embroidery, they are widely used in home textile industry can be involved in many fields, home textile products, knit or crochet knitting products, household products, toys manufacturing, maternal and child supplies, clothing, accessories, clothing accessories and feathers (fine hair) and products, arts and crafts and etiquette supplies, there can be embroidered shoes manufacturing and processing.

The products include saliva towel, clothes, embroidered clothes, embroidered shoes, dresses, children's blankets, children's quilts, children's clothes, flat caps, hoodies, trousers, U-shaped neck pillows, scarves, sheets, quilt covers, etc.

Rich embroidery method, so that pattern design out of the single limitation. Types of embroidery include flat embroidery, gold embroidery, pearl embroidery, ribbon embroidery, towel embroidery and so on.

The variety of computer embroidery raw materials is rich and diversified, which can meet the multiple needs of different pattern designs and the masses. Types of embroidery thread include mercerized thread, cotton thread, polyester thread (polyester thread), dumb light and so on. Cloth types include towel material, cotton wool material, embroidered clothes gold silk material, chiffon material, hoodie and jeans material, etc.

#### **5. Conclusion**

Home textile industry of embroidery market demand is big, the computer embroiders because of its high efficiency, high yield, the characteristics of high speed, can realize automatic production, saving a lot of time to work time cost, and its application range is very wide, can be involved in many fields, very suitable for use in the home textile industry, computer embroidery embroidery method, there are many different kinds of silk, cloth, It can improve the decorative effect of home textile technology and meet the broad masses of aesthetic needs of home textile industry. Computer embroidery has broad prospects, is the inheritance and development of embroidery culture, can drive the progress of industrial productivity, increase employment, promote economic development, is also a good choice for the development of private enterprises in the new countryside.

#### **References**

- [1] Dai Lu. Analysis of advantages and Disadvantages of computer embroidery [J]. File,2018,8(31):217. DOI:10.3969/j.issn.1005-4669.2018.31.205.
- [2] Chen Shaofang. Computer embroidery and its Application in Clothing [J]. International Textile Herald, 2014,42(04):59-60+62.
- [3] Su Z , Ouyang X . Research on the Application of Computer Embroidery Skills in Modern Chinese Fashion Design[J]. Journal of Physics: Conference Series, 2021, 1992(3):032004 (5pp).