



中华人民共和国国家标准

GB/T 16960.1—1997

信息技术 藏文编码字符集(基本集) 24×48 点阵字型 第1部分:白体

**Information technology—Tibetan coded character
set (basic set)—24×48 dots matrix font—Part 1: Bai Ti**

1997-09-02 发布

1998-01-01 实施

国家技术监督局 发布

前 言

本标准依据 GB 16959—1997 所提供的藏文字符,以我国藏文规范字形为基础并按照整理藏文字形的原则,具体地设计和规定了藏文信息系统用 24×48 点阵字型。

本标准的附录 A 是标准的附录。

本标准的附录 B 是提示的附录。

本标准由中华人民共和国电子工业部提出。

本标准由电子工业部标准化研究所归口。

本标准起草单位:西藏自治区藏语文工作指导委员会办公室、西北民族学院、西藏自治区技术监督局、西藏大学、青海师范大学。

本标准主要起草人:于洪志、熊涛、尼玛扎西、赵晨星、许寿椿、次仁罗布、贾捷华、次仁顿珠。

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Information technology—Tibetan coded character
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1 范围

本标准规定了信息处理和信息交换用藏文 24×48 点阵(横行点数×纵列点数)字型——白体。本标准适用于藏文信息系统,也适用于其他有关设备。

2 引用标准

下列标准所包含的条文,通过在本标准中引用而构成为本标准的条文。本标准出版时,所示版本均为有效。所有标准都会被修订,使用本标准的各方应探讨使用下列标准最新版本的可能性。

GB 16959—1997 信息技术 信息交换用藏文编码字符集 基本集

3 定义

本标准采用下列定义。

3.1 字形 glyph

一个可辨认的抽象的图形符号,它不依赖于任何特定的设计。

3.2 字型 font

具有同一基本设计的字形图像的集合,如白体。

3.3 点阵字型 dot matrix font

以点的集合来表示图形字符的形状。

3.4 字序 character order

藏文在一定的集合中按一定规则排列的次序。

4 藏文图形字符

本标准依据 GB 16959 提供的图形字符 168 个。包括:

- a) 藏文字母:30 个;
- b) 梵音藏文字母:11 个;
- c) 藏文组合用字符:58 个;
- d) 藏文数字符:20 个;
- e) 其他图形符号:49 个。

5 点阵字型的表示方法

5.1 栅格

国家技术监督局 1997-09-02 批准

1998-01-01 实施

栅格由若干条等距离的垂直与水平线相交叉而形成。

本标准规定的是 24×48 点阵字型,其栅格是横向 24 格,纵向 48 格。每个方格的中心定为点的中心位置。

栅格仅对构成点阵字型各点进行字位,24×48 点阵栅格图如图 1 所示:

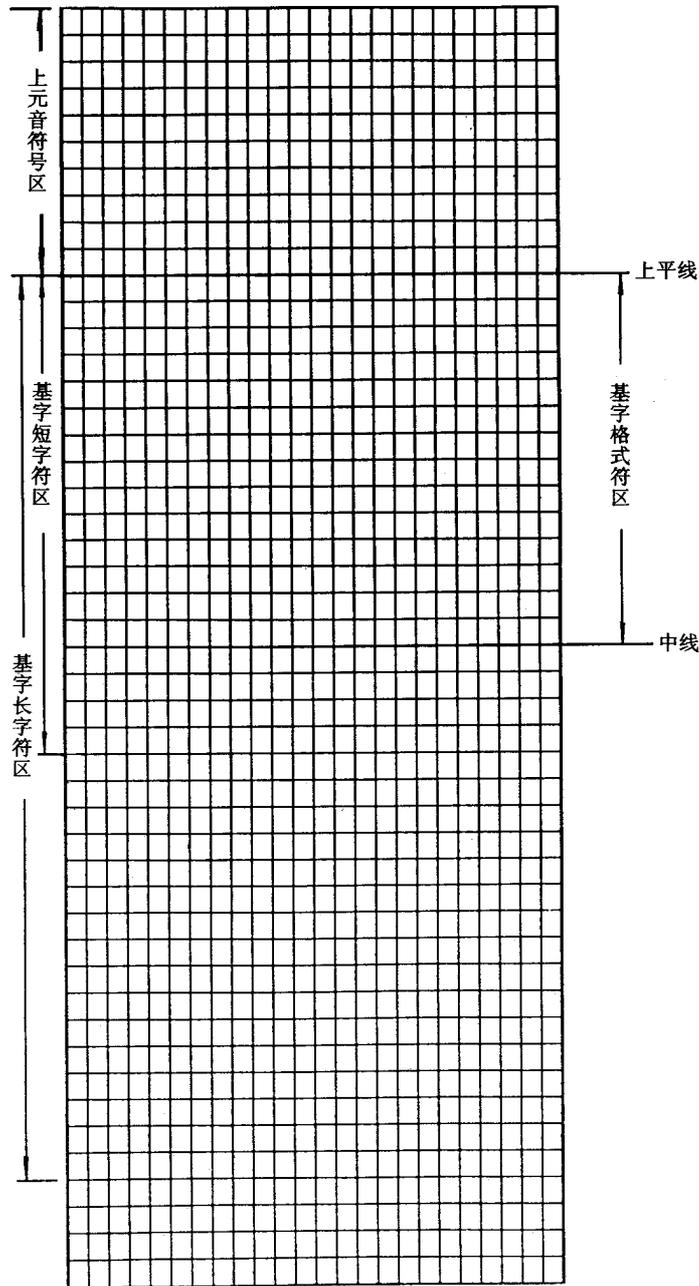


图 1 栅格图

5.2 点

点是构成点阵字型的最小单位,位于方格内的黑色区域。

5.3 字样

藏文点阵字型的字样,由置于栅格内的若干个点的集合来表示。藏文点阵字样示例如图 2 所示:

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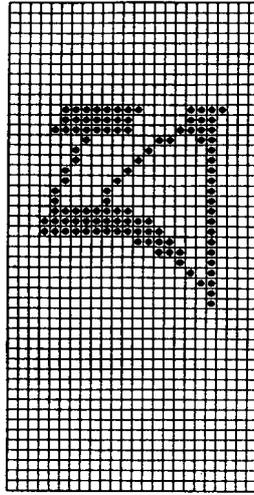


图 2 藏文字母 PHA 式样

6 藏文点阵字型

6.1 字数

本标准包含了 168 个藏文图形字符的点阵字型。

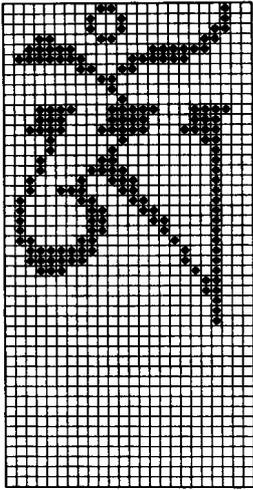
6.2 藏文字型数据

藏文 24×48 点阵字型数据的表示,见附录 A。

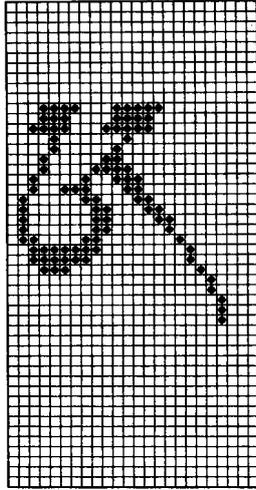
6.3 点阵字型式样

本标准给出藏文 24×48 点阵字型的式样如下:

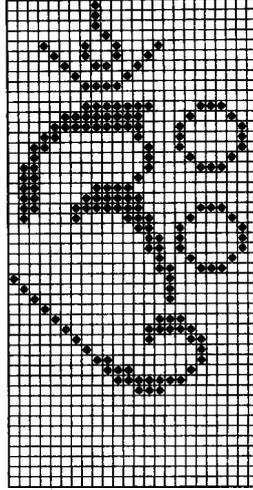
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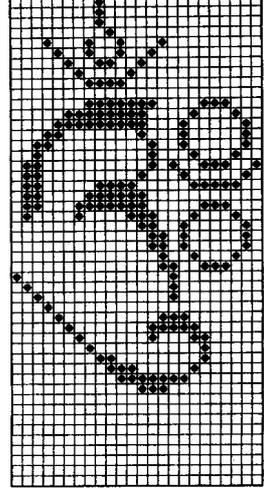
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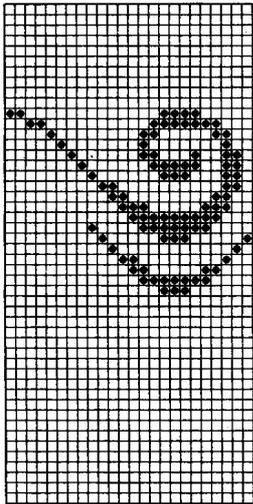
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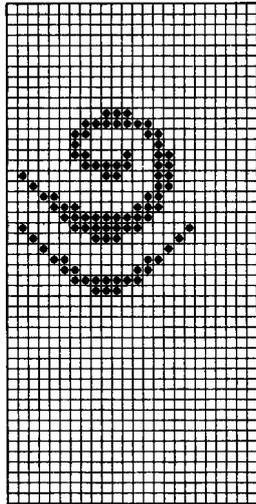
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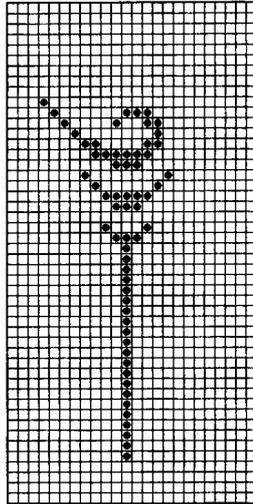
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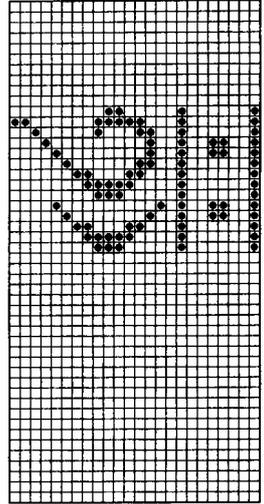
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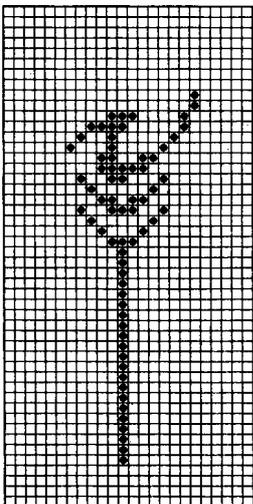
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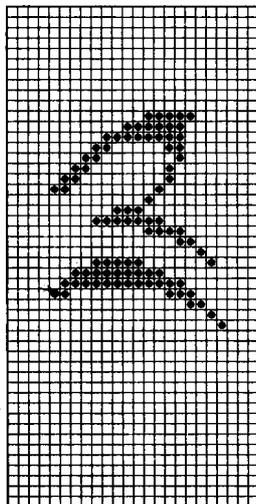
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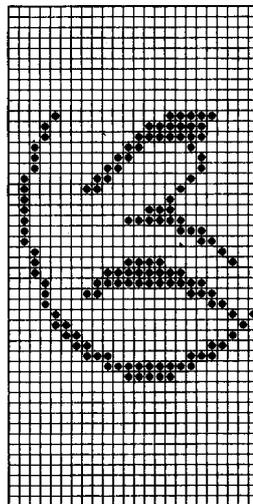
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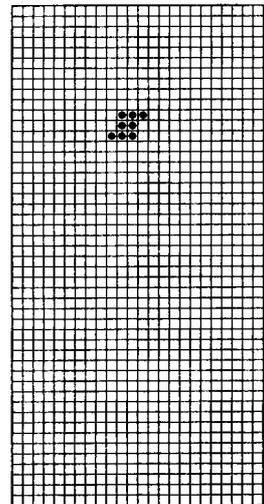
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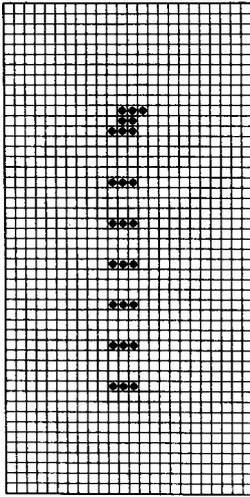
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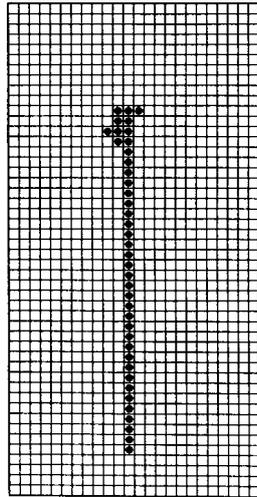
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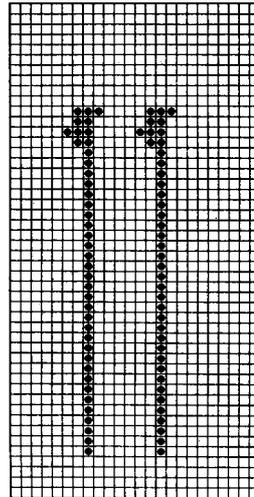
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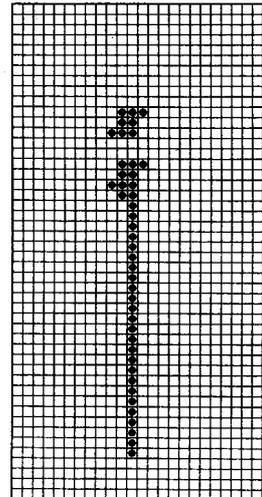
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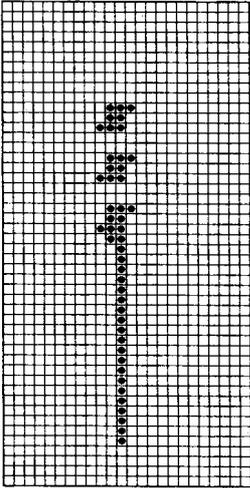
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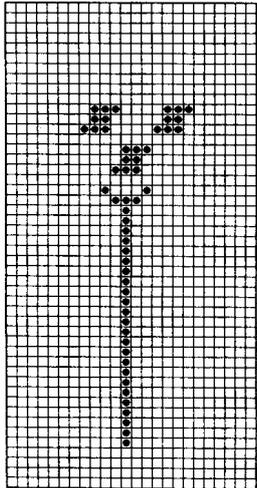
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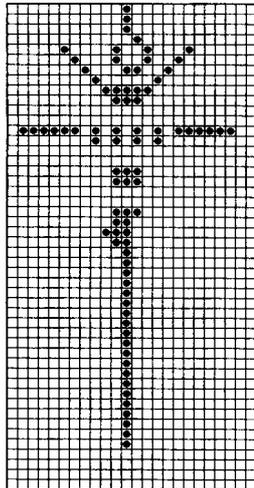
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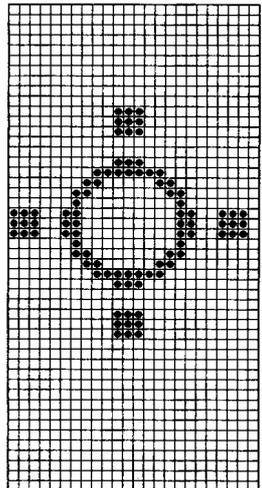
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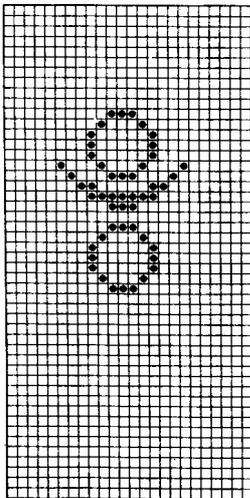
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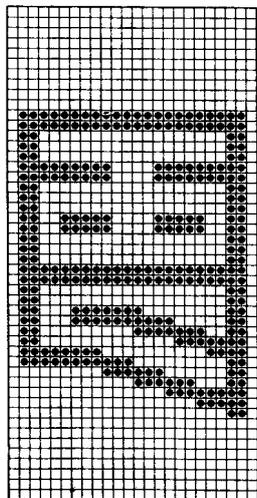
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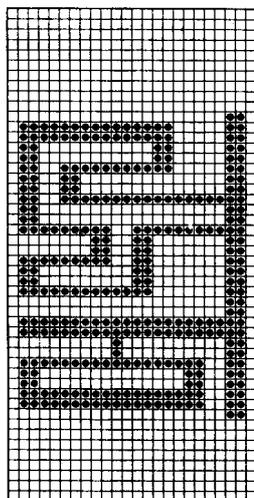
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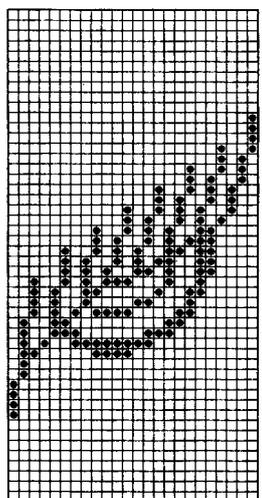
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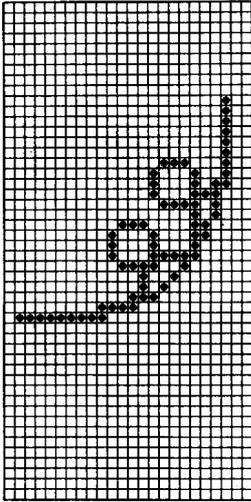
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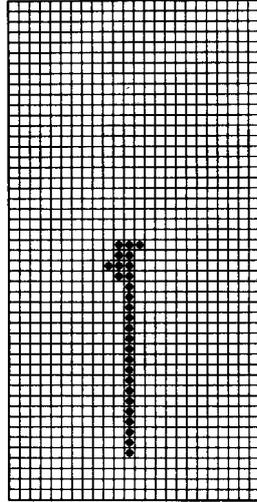
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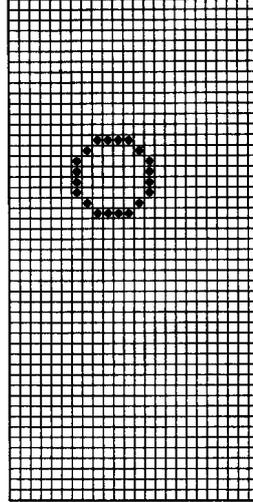
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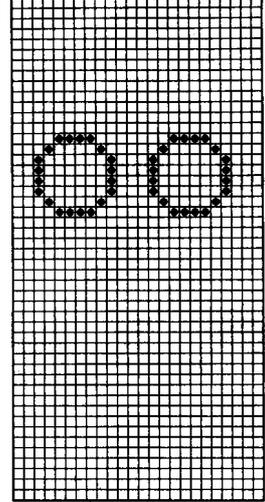
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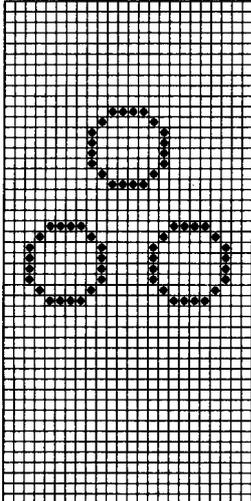
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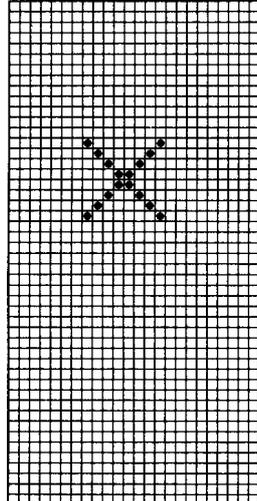
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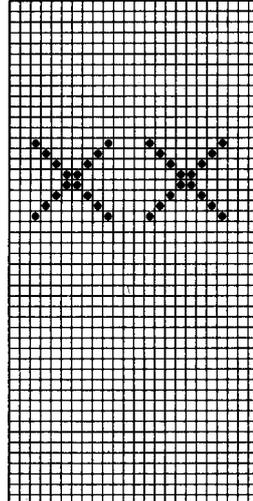
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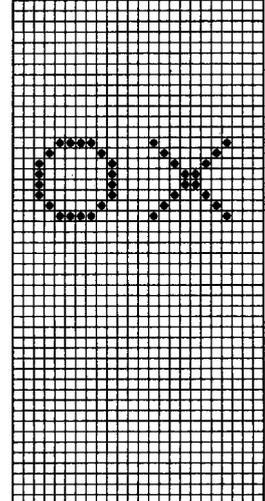
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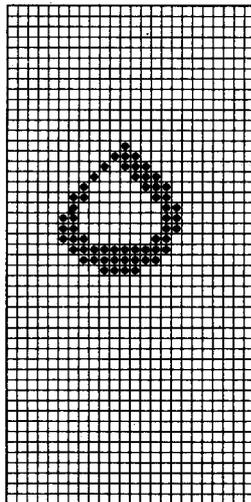
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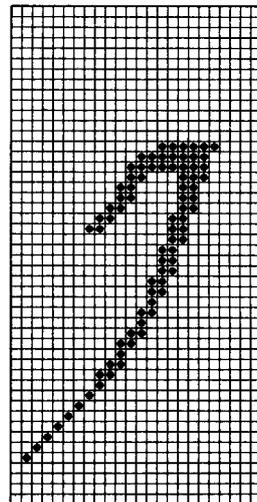
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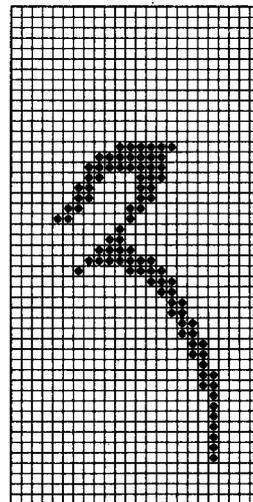
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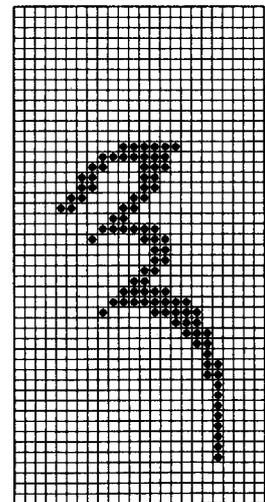
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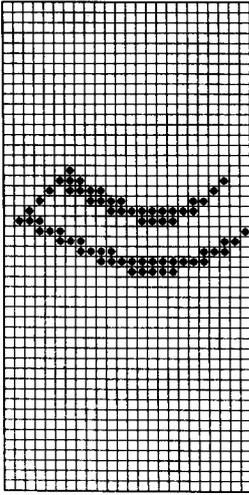
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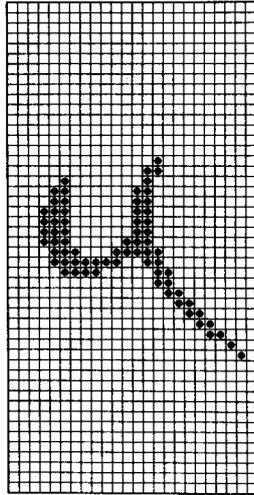
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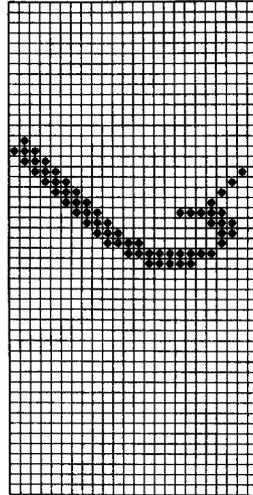
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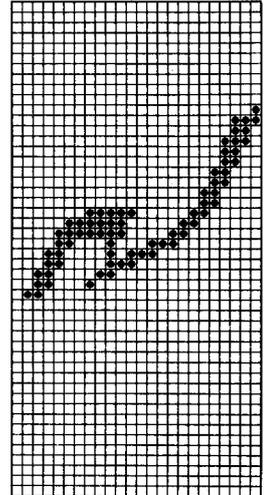
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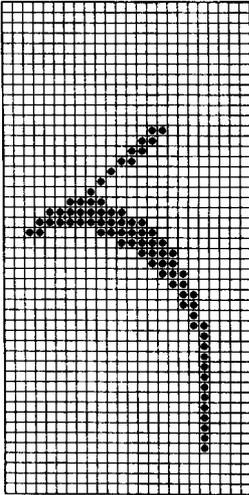
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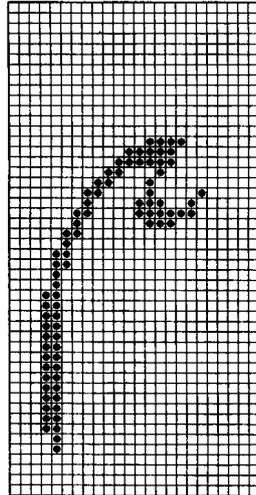
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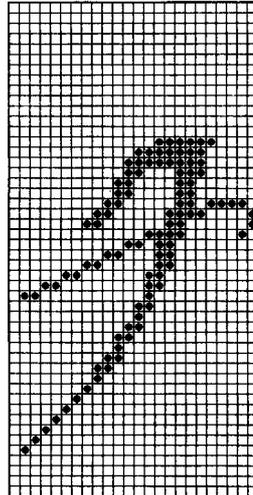
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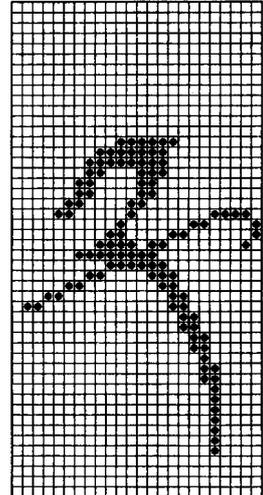
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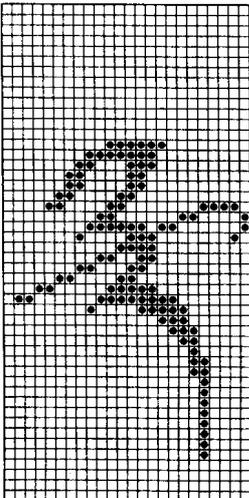
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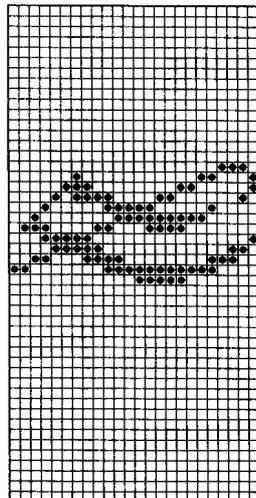
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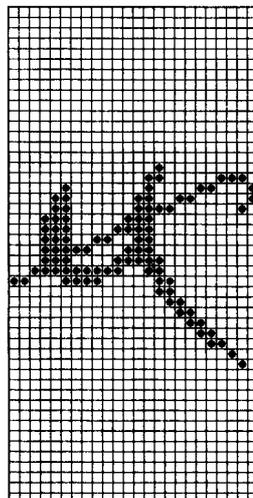
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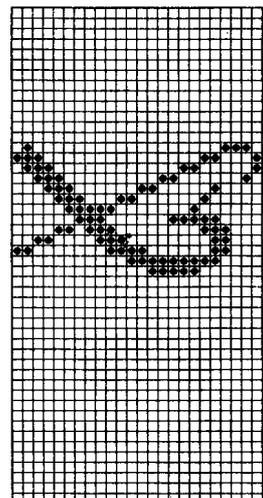
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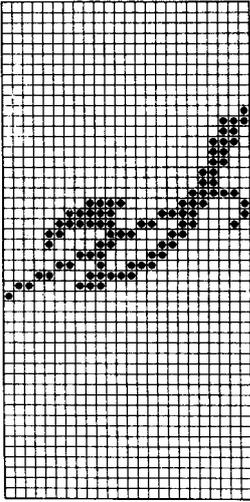
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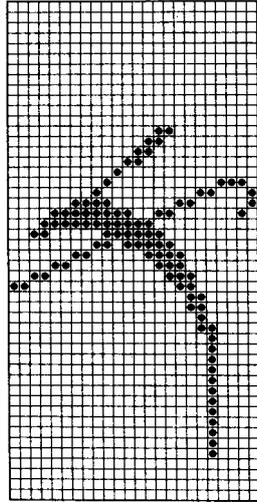
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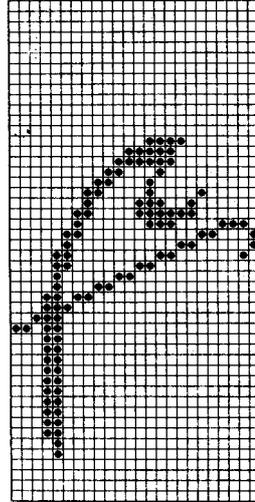
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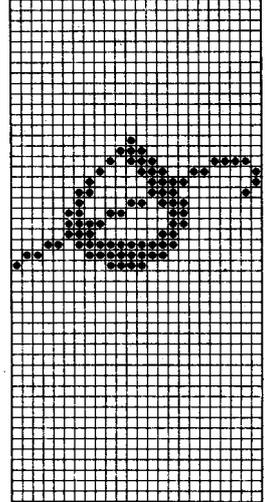
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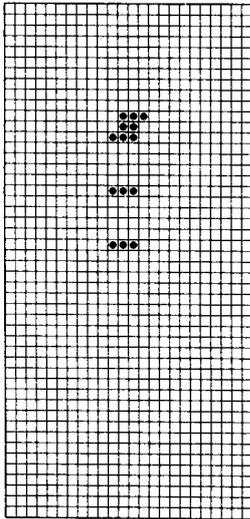
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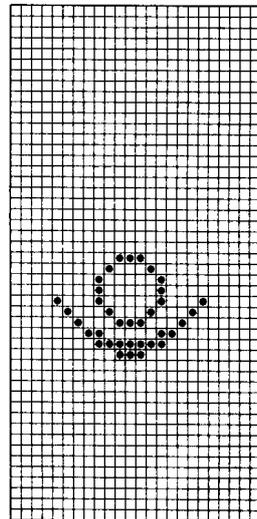
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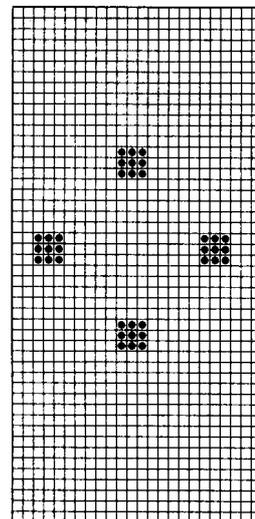
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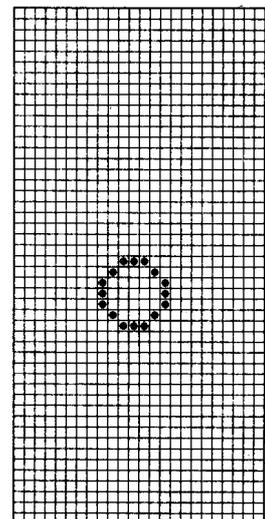
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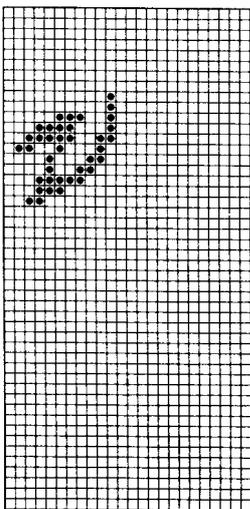
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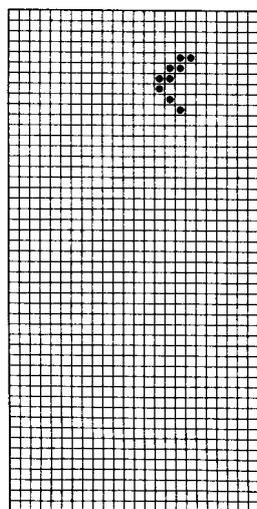
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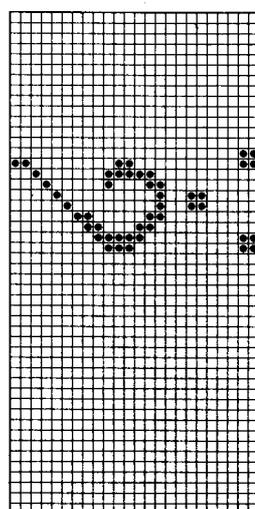
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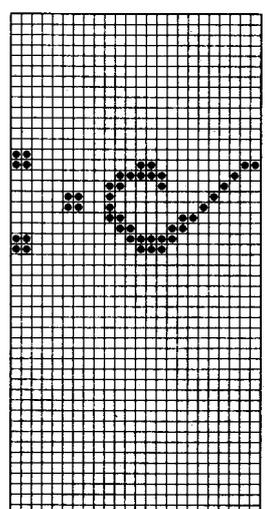
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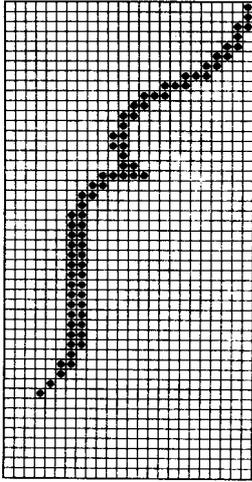


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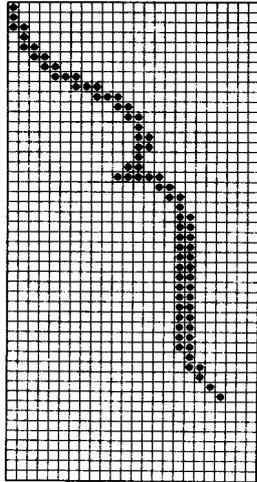
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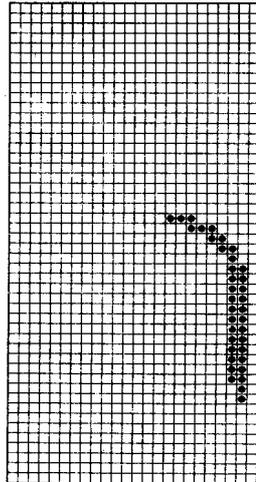
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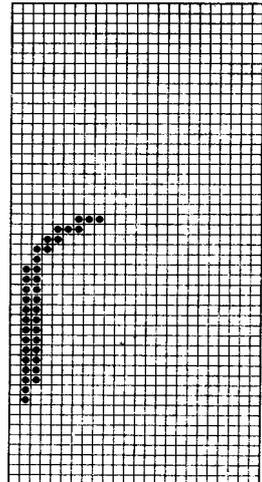
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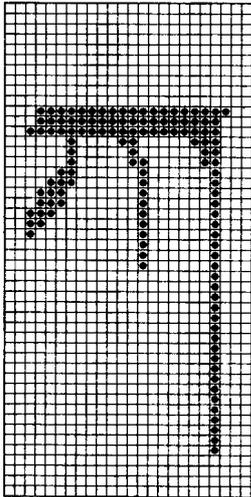
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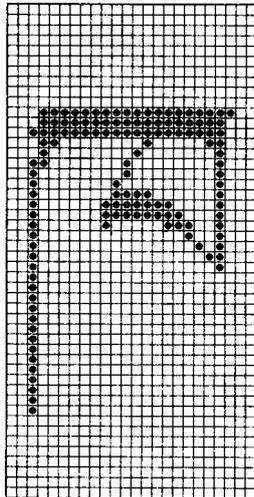
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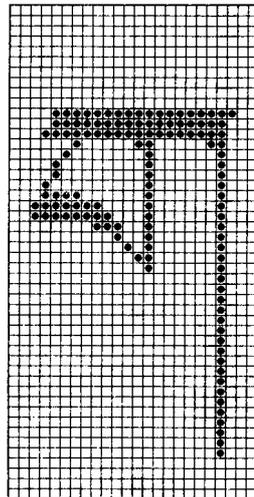
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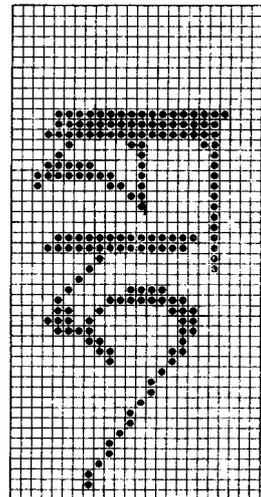
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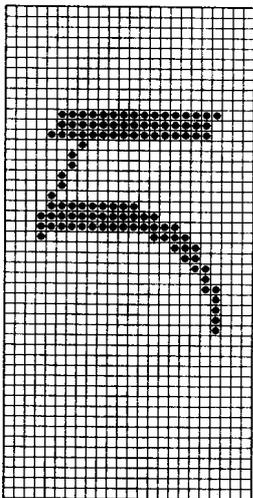
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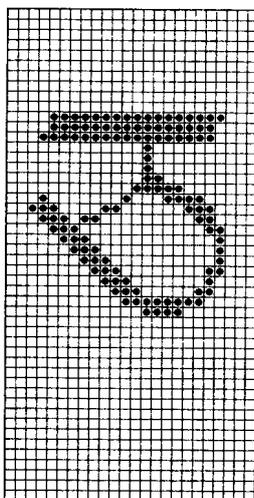
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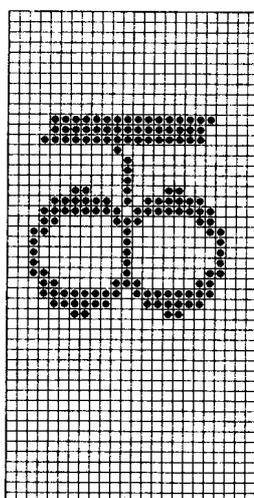
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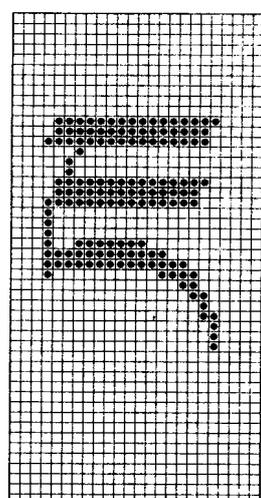
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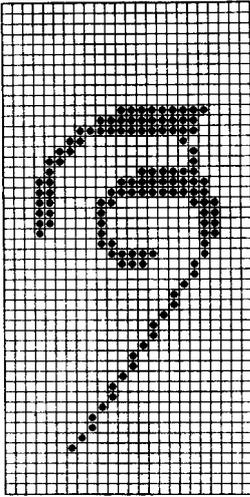


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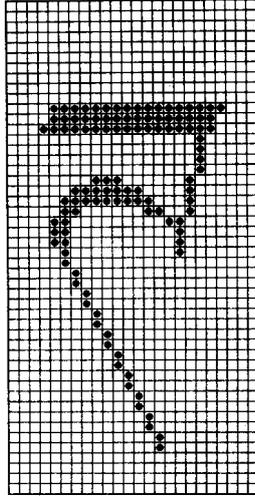
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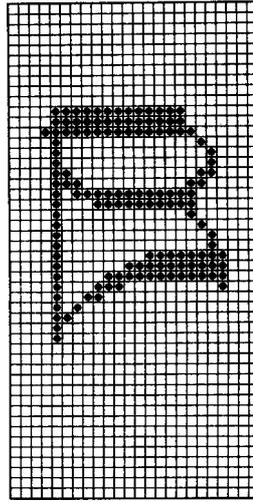
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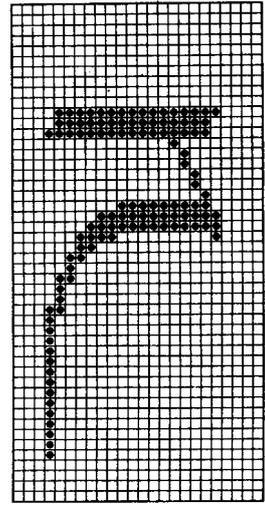
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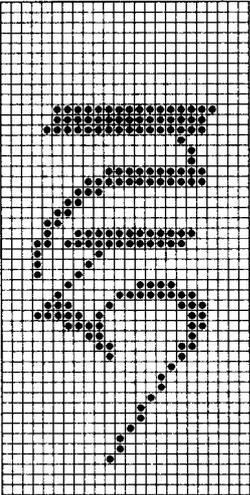
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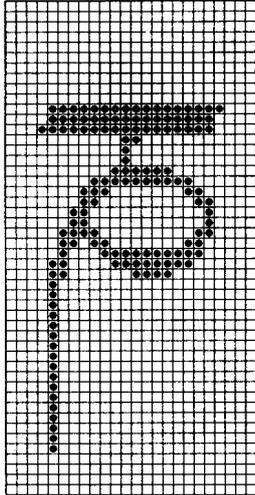
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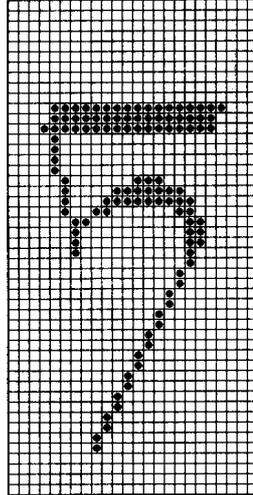
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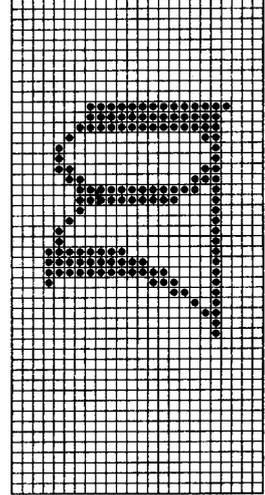
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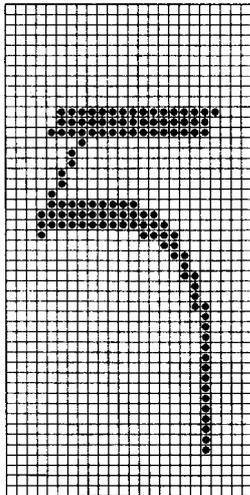
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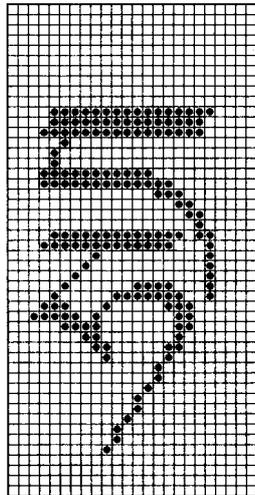
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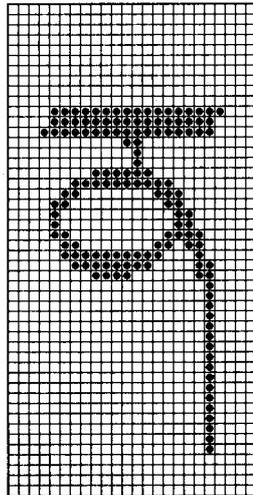
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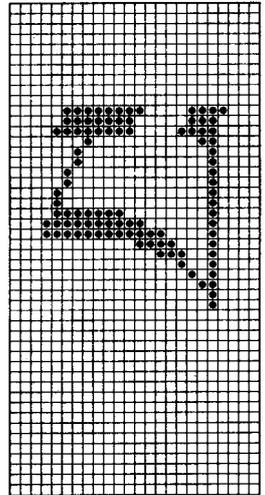
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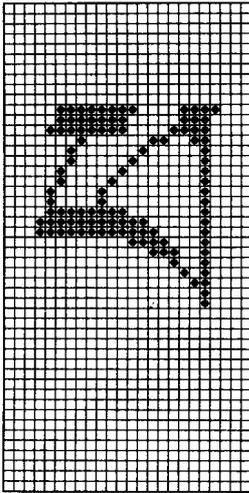
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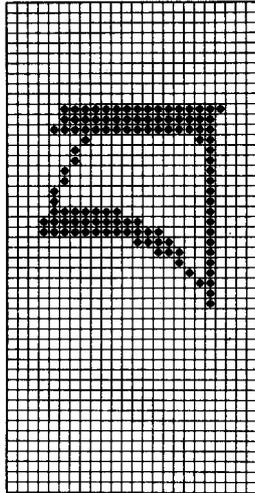
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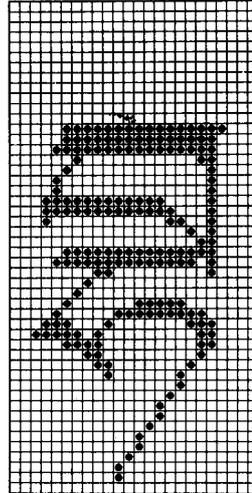
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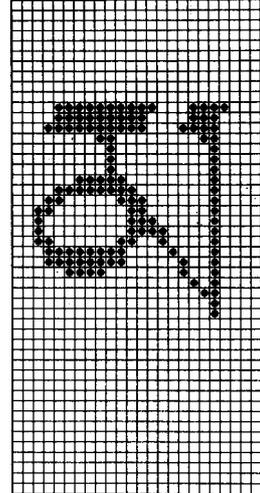
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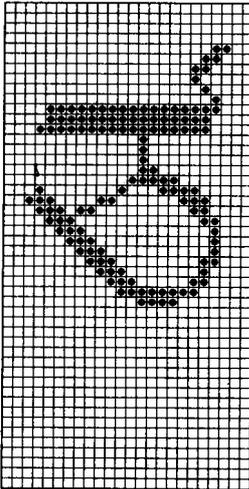
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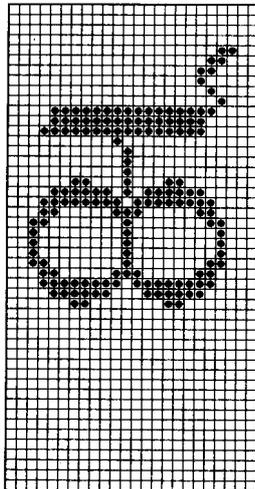
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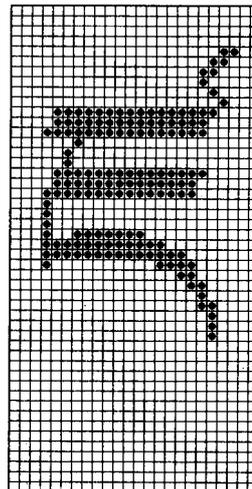
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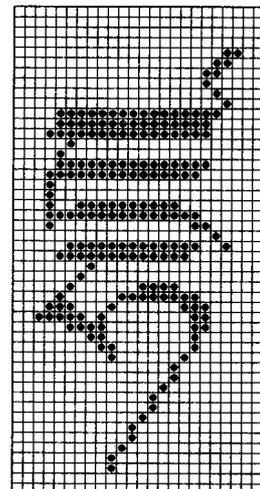
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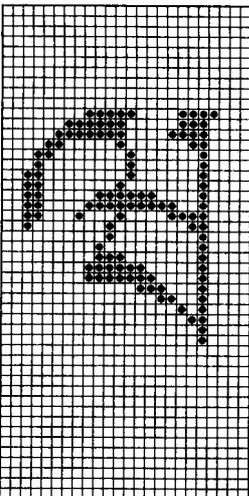
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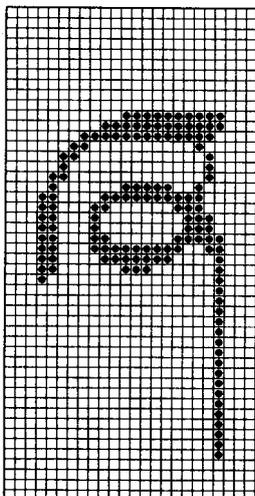
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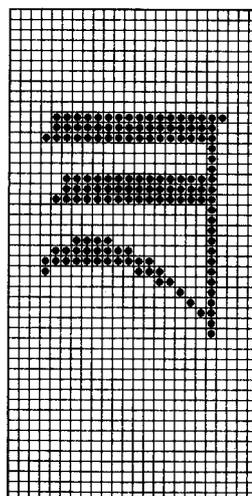
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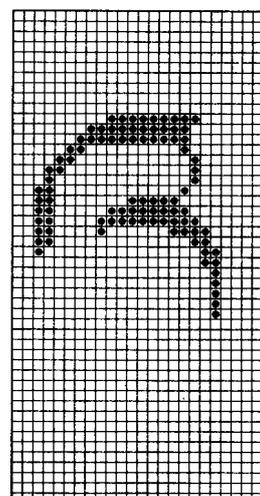
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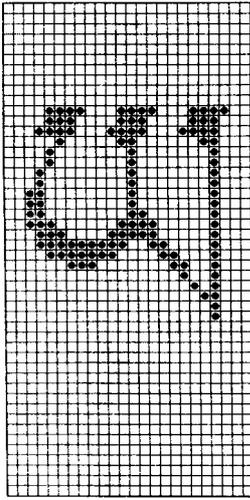
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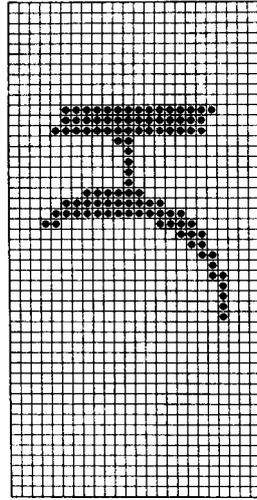
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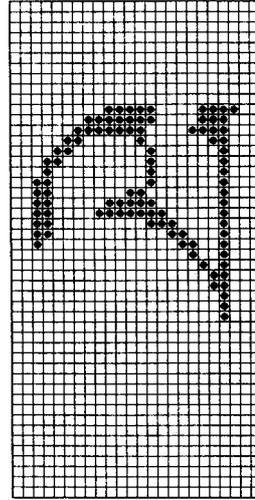
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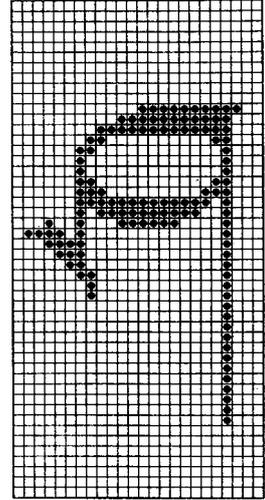
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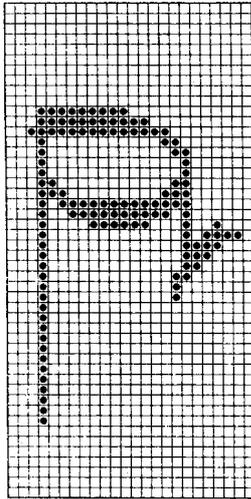
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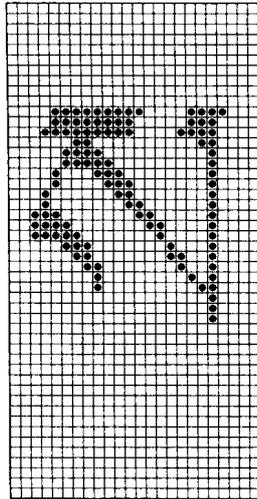
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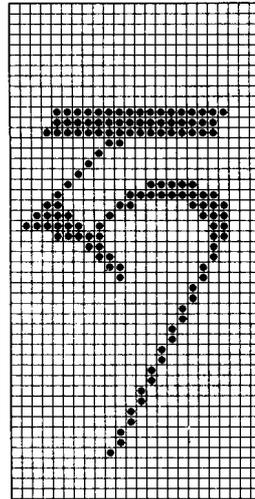
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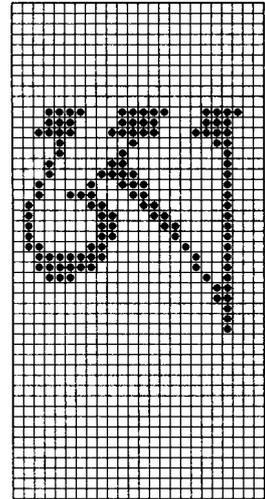
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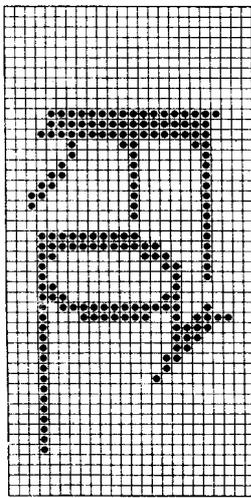
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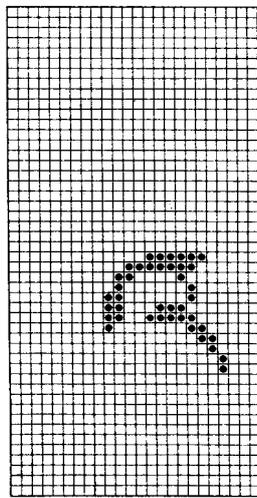
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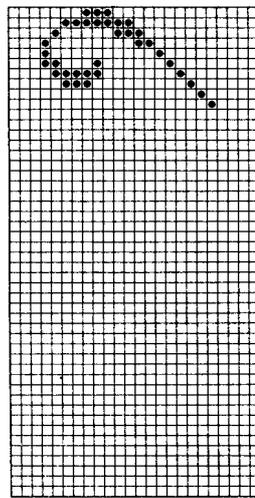
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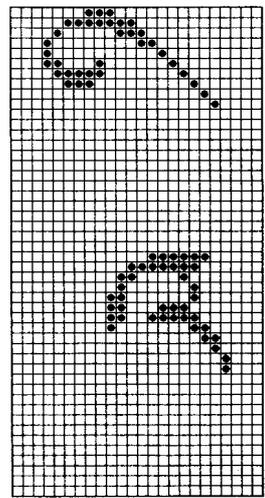
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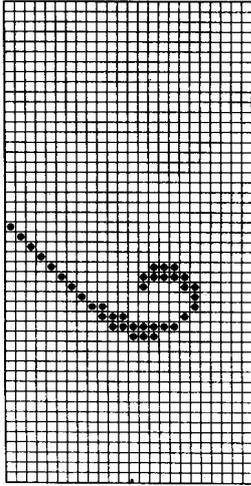
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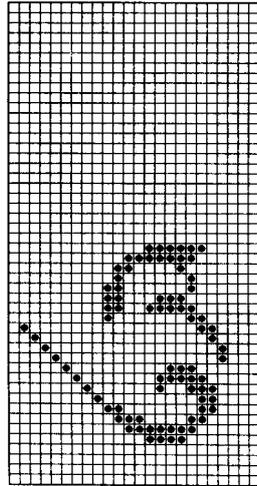
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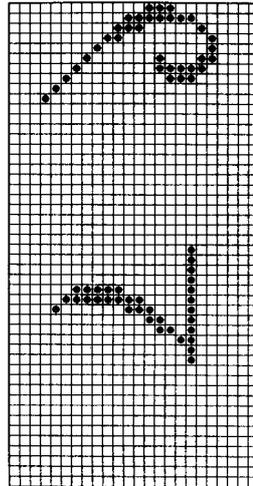
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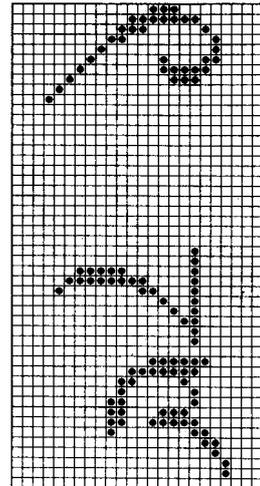
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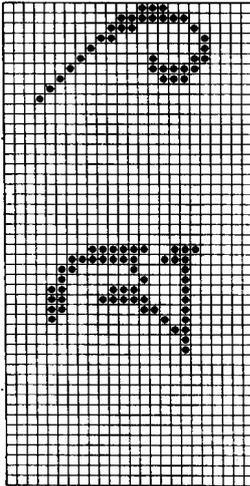
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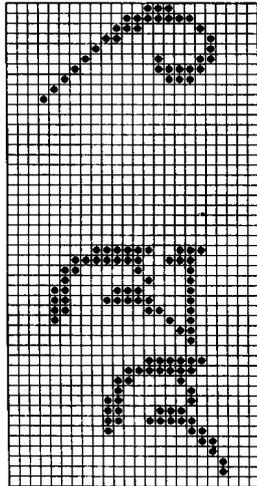
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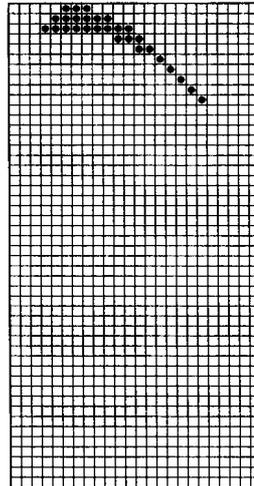
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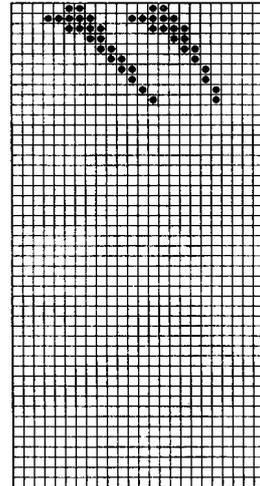
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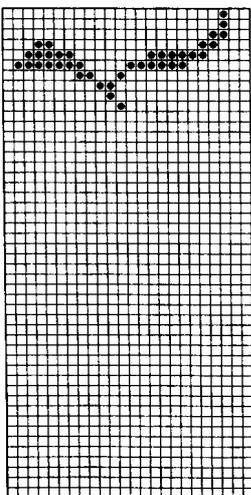
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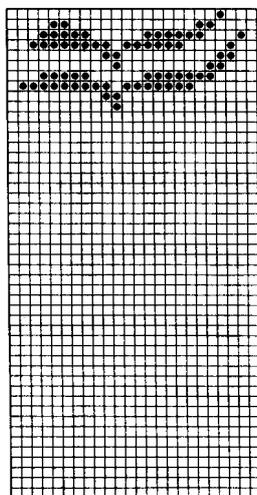
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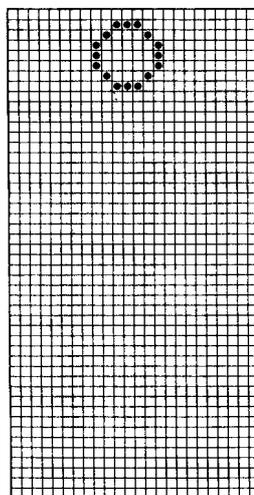
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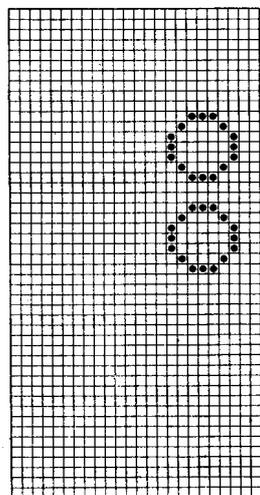
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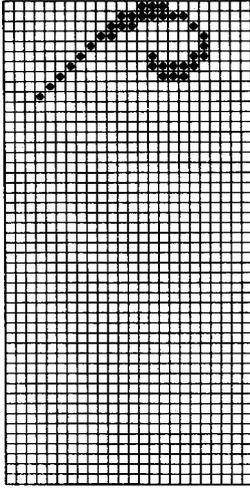
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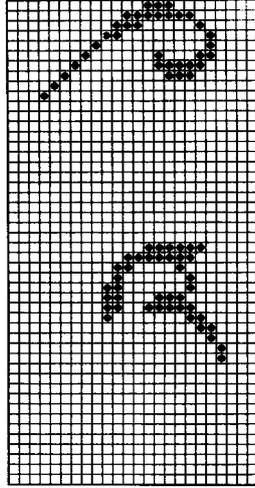
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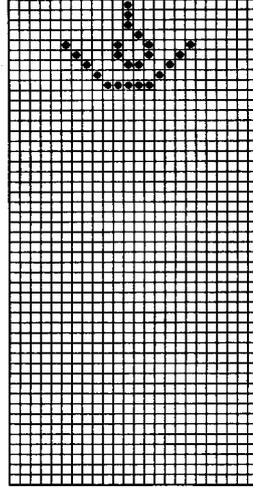
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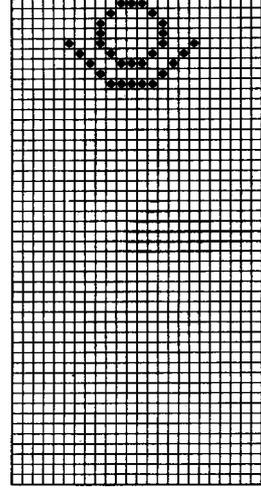
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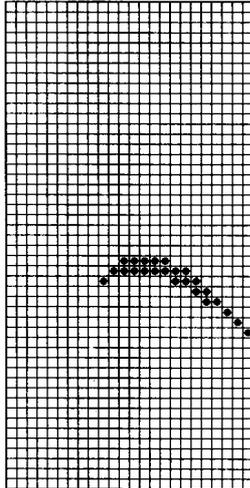
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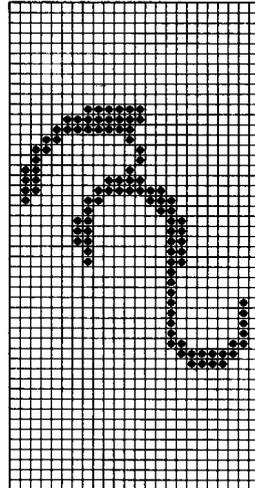
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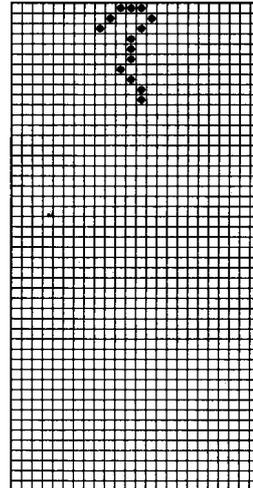
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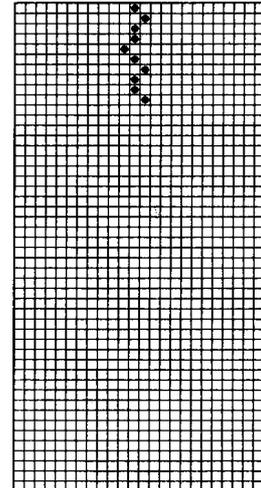
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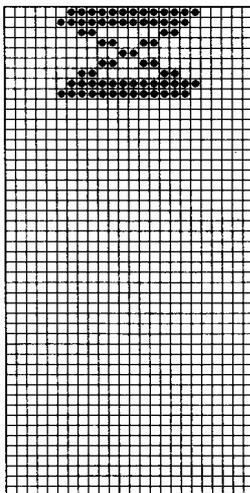
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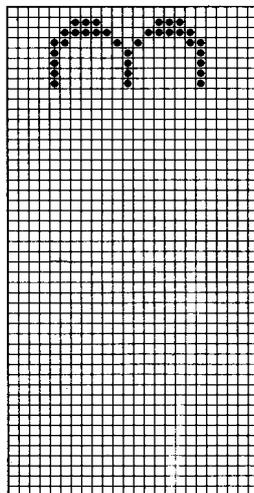
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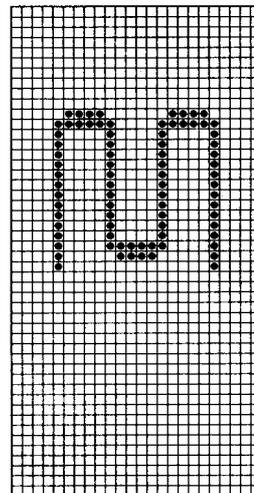
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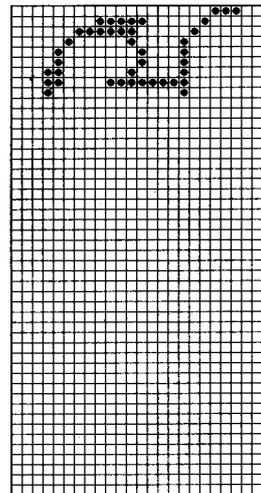
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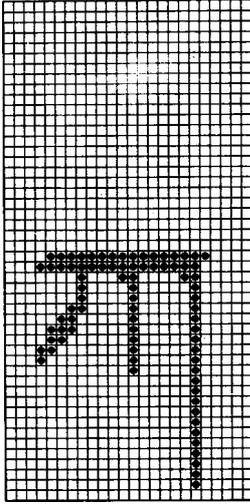
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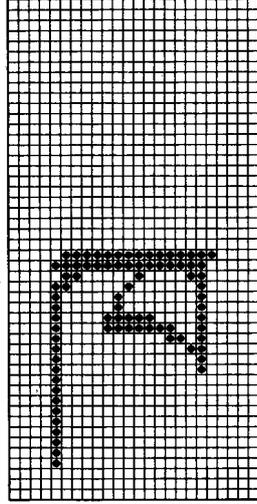
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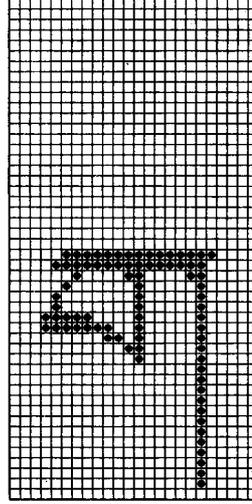
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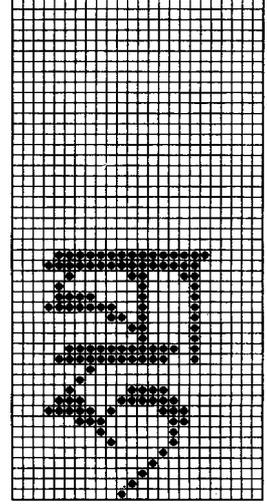
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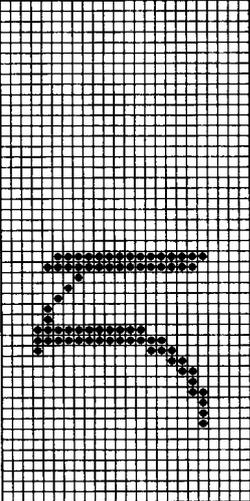
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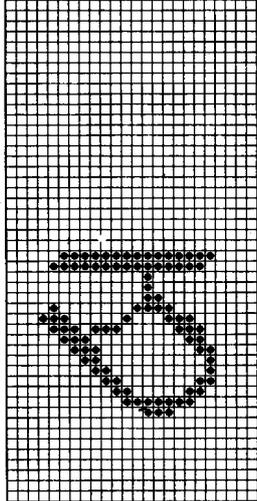
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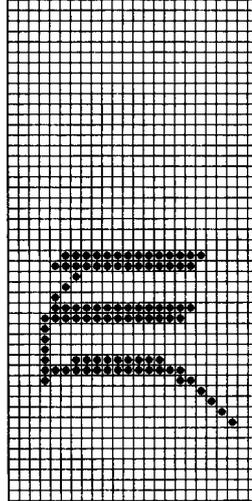
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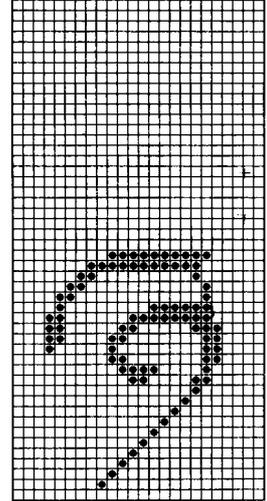
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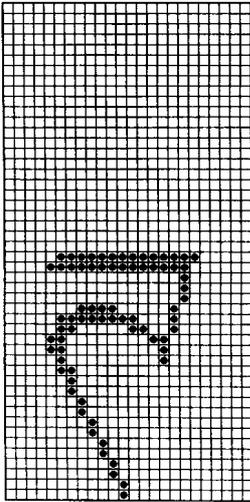
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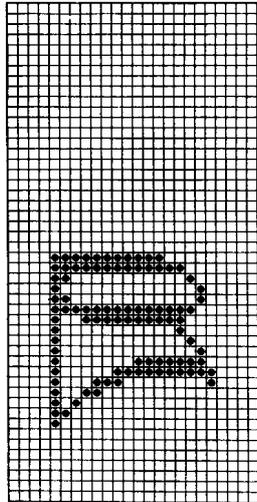
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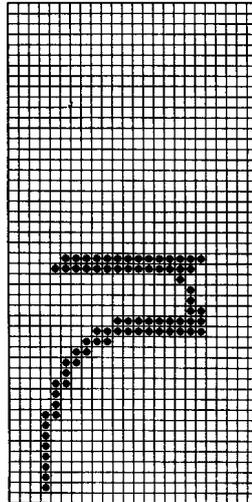
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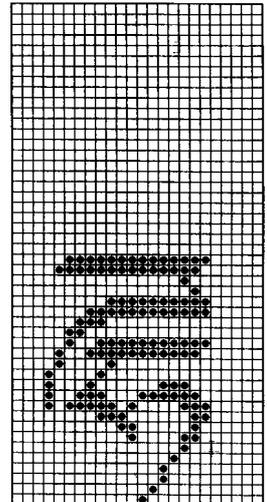
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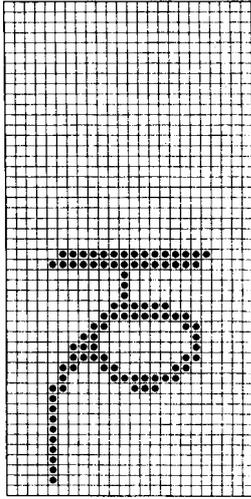
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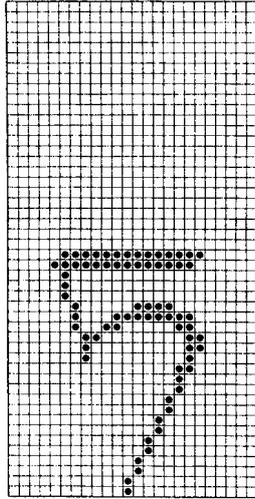
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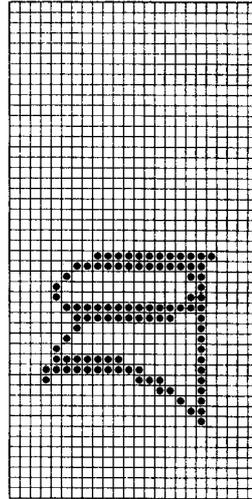
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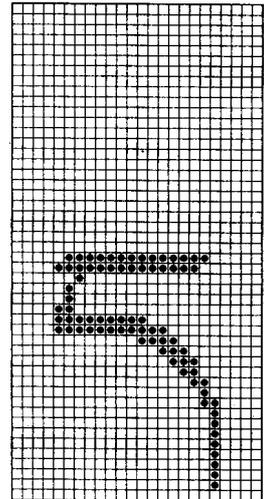
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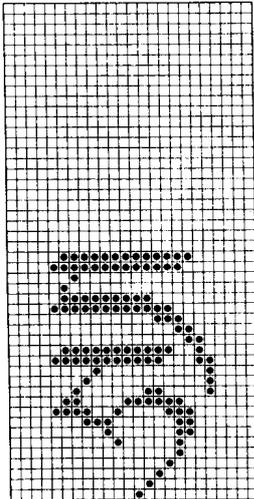
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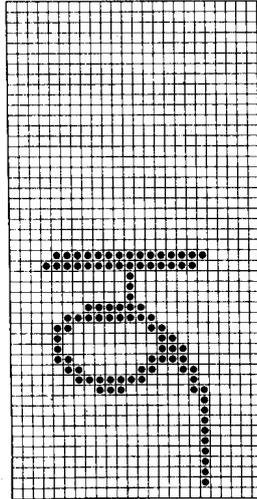
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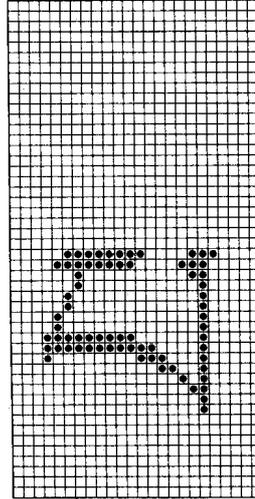
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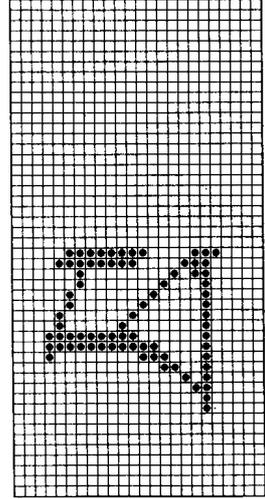
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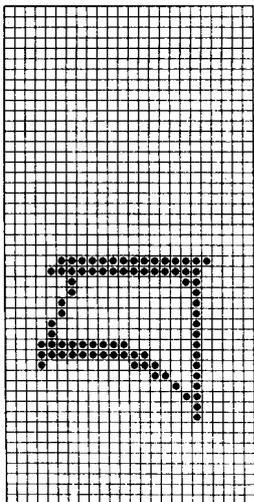
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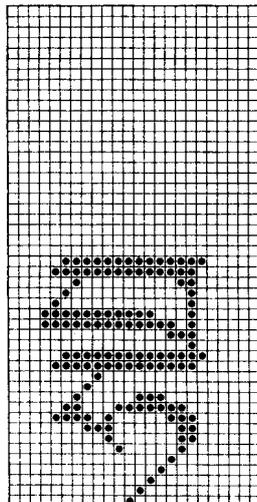
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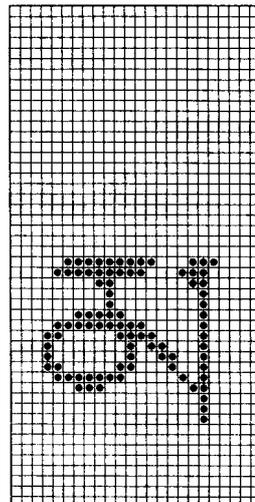
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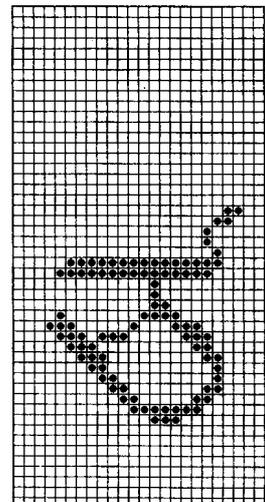
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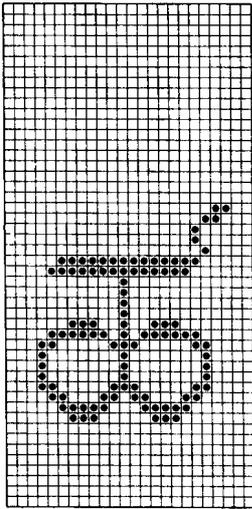
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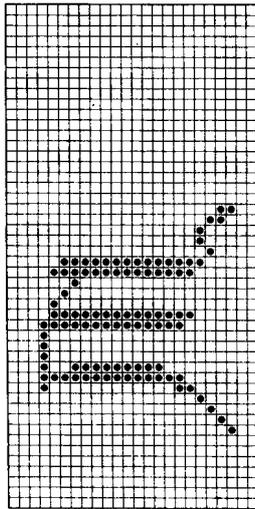
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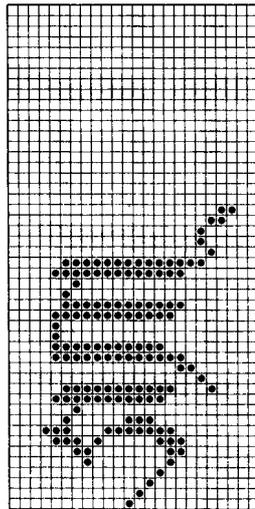
0FAA 𑀀



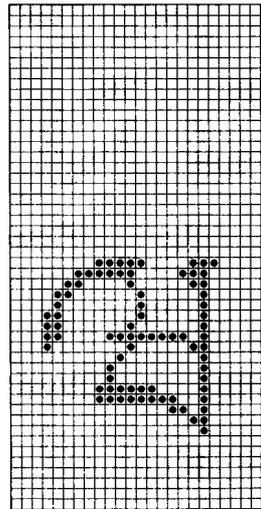
0FAB 𑀁



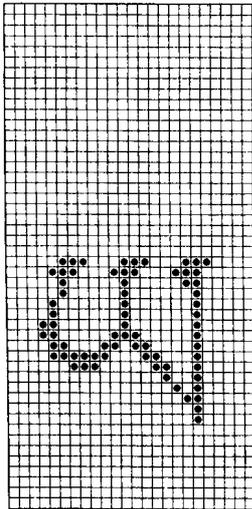
0FAC 𑀂



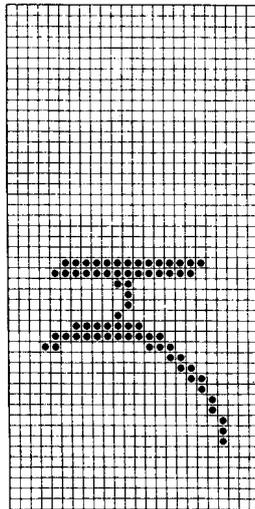
0FAD 𑀃



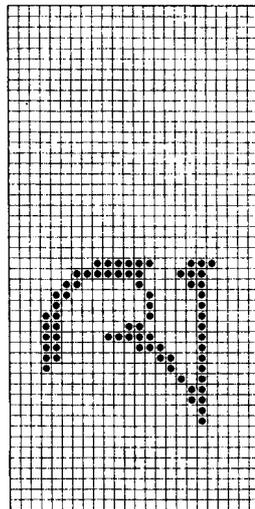
0FB1 𑀄



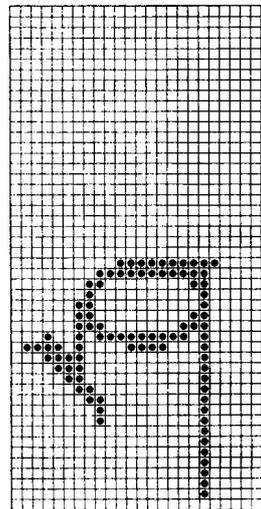
0FB2 𑀅



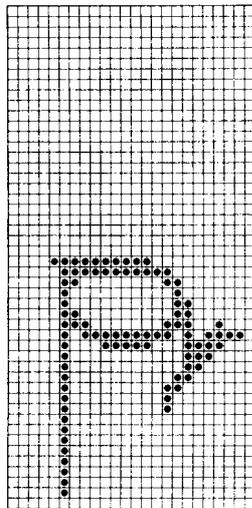
0FB3 𑀆



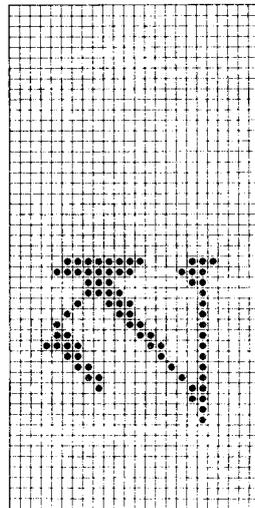
0FB4 𑀇



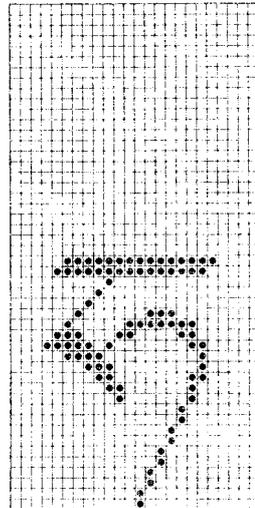
0FB5 𑀈



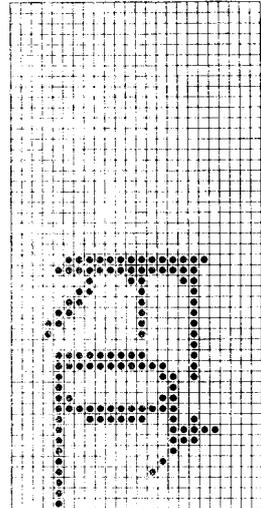
0FB6 𑀉



0FB7 𑀊



0FB9 𑀌



附录 A
(标准的附录)
藏文 24×48 点阵字型数据

A1 藏文点阵字型数据的表示

本标准中,藏文的字符的字型可由其点阵数据来表示。每个字型的点阵数据为 24×48(横行点数×纵列点数),共 1 152 个二进制位、144 个字节。

A2 藏文点阵字型数据的记录格式

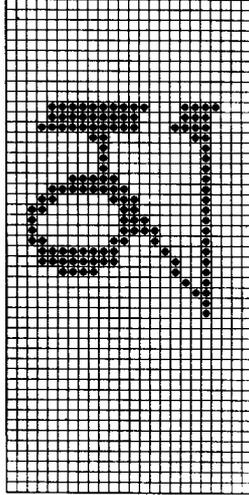
藏文 24×48 点阵字型数据的 144 个字节,排列次序是从 0 字节开始至 143 字节结束,均用十六进制表示,其记录格式如下:

列数 / 行数	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
0	0 字节							1 字节							2 字节									
1	:							:							:									
2	:							:							:									
3	:							:							:									
:	:							:							:									
:	:							:							:									
:	:							:							:									
47	141 字节							142 字节							143 字节									

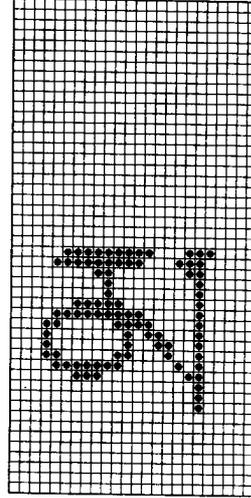
A3 藏文 24×48 点阵字型数据

藏文 24×48 点阵字型数据举例如下：

0F58 ལྷ



0FA8 ལྷ



```

00 00 00      1f e1 10
00 00 00      1f e0 90
00 00 00      07 80 90
00 00 00      00 00 50

00 00 00      00 00 00
00 00 00      00 00 10
00 00 00      00 00 10
00 00 00      00 00 00

00 00 00      00 00 00
00 00 00      00 00 00
0f fc 78      00 00 00
0f f8 70      00 00 00

1f f8 f0      00 00 00
00 c0 30      00 00 00
00 40 10      00 00 00
00 40 10      00 00 00

00 40 10      00 00 00
03 10 10      00 00 00
0f f0 10      00 00 00
18 38 10      00 00 00

30 18 10      00 00 00
20 1c 10      00 00 00
20 1e 10      00 00 00
30 32 10      00 00 00
    
```

```

00 00 00      07 fc 70
00 00 00      0f f8 e0
00 00 00      00 c0 60
00 00 00      00 40 20

00 00 00      00 40 20
00 00 00      03 e0 20
00 00 00      0f f8 20
00 00 00      18 3c 20

00 00 00      10 16 20
00 00 00      10 13 20
00 00 00      18 31 20
00 00 00      0f e0 a0

00 00 00      03 80 60
00 00 00      00 00 20
00 00 00      00 00 20
00 00 00      00 00 20

00 00 00      00 00 00
00 00 00      00 00 00
00 00 00      00 00 00
00 00 00      00 00 00

00 00 00      00 00 00
00 00 00      00 00 00
00 00 00      00 00 00
00 00 00      00 00 00
    
```

附录 B
(提示的附录)
藏文变形字符

为了在实际应用系统中实现藏文字母变形输出显示,因此规定了四个藏文变形字符的点阵字型。

B1 藏文变形字符

藏文字母 རྩ་ 作为上加字变形为 རྩ་,藏文字母 ལྷ་、ཡ་、རྩ་ 作为下加字时变形为 ལྷ་、ཡ་、རྩ་。

B2 藏文变形字符推荐编码

藏文变形字符推荐编码为 0F8C~0F8F

B3 藏文变形字符 24×48 点阵字型建议如下

