APPENDIX E

Standard Wiring Plans

When you install more than a few terminals, you face the problem of organizing the wiring. AT&T has devised a uniform scheme for the telephone industry to deal with large numbers of wires. The scheme uses two color codes—one for large numbers of wires organized in pairs and the other for smaller numbers that can also be organized in pairs. We recommend the use of this wiring scheme whenever possible because it is 10BaseT Ethernet compatible.

For large numbers of wires, each pair is assigned a two-color code. The colors are selected from two groups of five, resulting in what is called a *binder group* of 25 pairs. The colors used for a group are white, red, black, yellow, and violet. The colors used for a "pair within group" are blue, orange, green, brown, and slate.

Each pair must have a unique color combination. One wire within each pair has a solid background of its group color and stripes of the "pair within group" color, and the second wire has the colors reversed. Table E-1 lists the sequences. Note that red-brown and red-orange wires can be easily confused.

Table E-1 Telephone Industry 25-Pair Color Code and Pin Numbers

Pair Number	Wire Number	Solid Color	Stripe Color	Pin Number
1	1	White	Blue	26
1	2	Blue	White	1
2	1	White	Orange	27
2	2	Orange	White	2
3	1	White	Green	28

Pair Number	Wire Number	Solid Color	Stripe Color	Pin Number
3	2	Green	White	3
4	1	White	Brown	29
4	2	Brown	White	4
5	1	White	Slate	30
5	2	Slate	White	5
6	1	Red	Blue	31
6	2	Blue	Red	6
7	1	Red	Orange	32
7	2	Orange	Red	7
8	1	Red	Green	33
8	2	Green	Red	8
9	1	Red	Brown	34
9	2	Brown	Red	9
10	1	Red	Slate	35
10	2	Slate	Red	10
11	1	Black	Blue	36
11	2	Blue	Black	11
12	1	Black	Orange	37
12	2	Orange	Black	12
13	1	Black	Green	38
13	2	Green	Black	13
14	1	Black	Brown	39
14	2	Brown	Black	14
15	1	Black	Slate	40
15	2	Slate	Black	15
16	1	Yellow	Blue	41

Pair Number	Wire Number	Solid Color	Stripe Color	Pin Number
16	2	Blue	Yellow	16
17	1	Yellow	Orange	42
17	2	Orange	Yellow	17
18	1	Yellow	Green	43
18	2	Green	Yellow	18
19	1	Yellow	Brown	44
19	2	Brown	Yellow	19
20	1	Yellow	Slate	45
20	2	Slate	Yellow	20
21	1	Violet	Blue	46
21	2	Blue	Violet	21
22	1	Violet	Orange	47
22	2	Orange	Violet	22
23	1	Violet	Green	48
23	2	Green	Violet	23
24	1	Violet	Brown	49
24	2	Brown	Violet	24
25	1	Violet	Slate	50
25	2	Slate	Violet	25

Cables with more than 25 pairs of wires are constructed from 25-pair groups. Very large cables have other variations generally not encountered inside terminal wire plants.

For smaller numbers of wires, such as wires for an individual telephone station or terminal, you can use a second color code scheme. Table E-2 lists this color code and the usual correspondence with the paired-wire color code. The alternate color code is included because sometimes the station wire uses the first three pairs of the standard color code (white-blue, blue-white, and so on), and other times it uses the six alternate colored wires.

Table E-2 Second Color Code Scheme for Smaller Numbers of Wires

Pair Number	Wire Number	Solid Color	Stripe Color	Alternate Color	Pin Number
1	1	White	Blue	Green	4
1	2	Blue	White	Red	3
2	1	White	Orange	Black	2
2	2	Orange	White	Yellow	5
3	1	White	Green	White	1
3	2	Green	White	Blue	6