

| M4R: Resistors for NINO card in position #1 |       |                     |      |                    |      |
|---|-------|---------------------|------|--------------------|------|
| Card  | Pixel | R even ( $\Omega$ ) |      | R odd ( $\Omega$ ) |      |
|   | 1     | R2                  | 600  | R1                 | 140  |
|   | 2     | R4                  | 600  | R3                 | 200  |
|   | 3     | R6                  | WIRE | R5                 | WIRE |
|   | 4     | R8                  | 600  | R7                 | 250  |
|   | 5     | R10                 | 600  | R9                 | 400  |
|   | 6     | R12                 | 600  | R11                | 195  |
|   | 7     | R14                 | 600  | R13                | 330  |
|   | 8     | R16                 | 600  | R15                | 185  |
|   | 9     | R2                  | 600  | R1                 | 125  |
|   | 10    | R4                  | 400  | R3                 | 430  |
|   | 11    | R6                  | WIRE | R5                 | WIRE |
|   | 12    | R8                  | 600  | R7                 | 350  |
|   | 13    | R10                 | 600  | R9                 | 210  |
|   | 14    | R12                 | 600  | R11                | 280  |
|   | 15    | R14                 | 600  | R13                | 250  |
|   | 16    | R16                 | 600  | R15                | 125  |

| M4R: Resistors for NINO card in position #2 |       |                     |      |                    |      |
|---|-------|---------------------|------|--------------------|------|
| Card  | Pixel | R even ( $\Omega$ ) |      | R odd ( $\Omega$ ) |      |
|   | 1     | R2                  | 500  | R1                 | 365  |
|   | 2     | R4                  | wire | R3                 | wire |
|   | 3     | R6                  | 300  | R5                 | 280  |
|   | 4     | R8                  | 500  | R7                 | 470  |
|   | 5     | R10                 | 300  | R9                 | 525  |
|   | 6     | R12                 | 500  | R11                | 305  |
|   | 7     | R14                 | 500  | R13                | 350  |
|   | 8     | R16                 | 500  | R15                | 430  |
|   | 9     | R2                  | 500  | R1                 | 470  |
|   | 10    | R4                  | 500  | R3                 | 295  |
|   | 11    | R6                  | wire | R5                 | wire |
|   | 12    | R8                  | 350  | R7                 | 350  |
|   | 13    | R10                 | 500  | R9                 | 490  |
|   | 14    | R12                 | 500  | R11                | 80   |
|   | 15    | R14                 | 500  | R13                | 75   |
|   | 16    | R16                 | 500  | R15                | 75   |

| M4R: Resistors for NINO card in position #3 |       |                     |      |                    |      |
|---|-------|---------------------|------|--------------------|------|
| Card  | Pixel | R even ( $\Omega$ ) |      | R odd ( $\Omega$ ) |      |
|   | 1     | R2                  | WIRE | R1                 | WIRE |
|   | 2     | R4                  | 300  | R3                 | 430  |
|   | 3     | R6                  | 500  | R5                 | 375  |
|   | 4     | R8                  | 500  | R7                 | 325  |
|   | 5     | R10                 | 300  | R9                 | 285  |
|   | 6     | R12                 | 500  | R11                | 475  |
|   | 7     | R14                 | 500  | R13                | 330  |
|   | 8     | R16                 | 500  | R15                | 175  |
|   | 9     | R2                  | 500  | R1                 | 270  |
|   | 10    | R4                  | 500  | R3                 | 515  |
|   | 11    | R6                  | 100  | R5                 | 850  |
|   | 12    | R8                  | 500  | R7                 | 255  |
|   | 13    | R10                 | 500  | R9                 | 125  |
|   | 14    | R12                 | WIRE | R11                | WIRE |
|   | 15    | R14                 | 500  | R13                | 285  |
|   | 16    | R16                 | 500  | R15                | 155  |

| M4R: Resistors for NINO card in position #4 |       |                     |      |                    |      |
|---|-------|---------------------|------|--------------------|------|
| Card  | Pixel | R even ( $\Omega$ ) |      | R odd ( $\Omega$ ) |      |
|   | 1     | R2                  | 700  | R1                 | 150  |
|   | 2     | R4                  | 200  | R3                 | 410  |
|   | 3     | R6                  | 700  | R5                 | 295  |
|   | 4     | R8                  | 700  | R7                 | 475  |
|   | 5     | R10                 | WIRE | R9                 | WIRE |
|   | 6     | R12                 | 350  | R11                | 440  |
|   | 7     | R14                 | 350  | R13                | 385  |
|   | 8     | R16                 | 700  | R15                | 330  |
|   | 9     | R2                  | 700  | R1                 | 265  |
|   | 10    | R4                  | 700  | R3                 | 125  |
|   | 11    | R6                  | 700  | R5                 | 370  |
|   | 12    | R8                  | 400  | R7                 | 330  |
|   | 13    | R10                 | 700  | R9                 | 405  |
|   | 14    | R12                 | 350  | R11                | 405  |
|   | 15    | R14                 | 700  | R13                | 150  |
|   | 16    | R16                 | WIRE | R15                | WIRE |

| M4R: Resistors for NINO card in position #5 |       |                     |      |                    |      |
|---|-------|---------------------|------|--------------------|------|
| Card  | Pixel | R even ( $\Omega$ ) |      | R odd ( $\Omega$ ) |      |
|   | 1     | R2                  | 300  | R1                 | 400  |
|   | 2     | R4                  | 250  | R3                 | 470  |
|   | 3     | R6                  | 300  | R5                 | 375  |
|   | 4     | R8                  | WIRE | R7                 | WIRE |
|   | 5     | R10                 | 500  | R9                 | 335  |
|   | 6     | R12                 | 700  | R11                | 450  |
|   | 7     | R14                 | 700  | R13                | 360  |
|   | 8     | R16                 | 700  | R15                | 410  |
|   | 9     | R2                  | 700  | R1                 | 180  |
|   | 10    | R4                  | 700  | R3                 | 125  |
|   | 11    | R6                  | 700  | R5                 | 175  |
|   | 12    | R8                  | 700  | R7                 | 185  |
|   | 13    | R10                 | 700  | R9                 | 125  |
|   | 14    | R12                 | WIRE | R11                | WIRE |
|   | 15    | R14                 | 700  | R13                | 315  |
|   | 16    | R16                 | 700  | R15                | 175  |

| M4R: Resistors for NINO card in position #6 |       |                     |      |                    |      |
|---|-------|---------------------|------|--------------------|------|
| Card  | Pixel | R even ( $\Omega$ ) |      | R odd ( $\Omega$ ) |      |
|   | 1     | R2                  | 350  | R1                 | 410  |
|   | 2     | R4                  | 450  | R3                 | 140  |
|   | 3     | R6                  | 100  | R5                 | 695  |
|   | 4     | R8                  | 450  | R7                 | 445  |
|   | 5     | R10                 | 450  | R9                 | 200  |
|   | 6     | R12                 | 450  | R11                | 255  |
|   | 7     | R14                 | 450  | R13                | 125  |
|   | 8     | R16                 | 450  | R15                | 125  |
|   | 9     | R2                  | 450  | R1                 | 100  |
|   | 10    | R4                  | 450  | R3                 | 260  |
|   | 11    | R6                  | 450  | R5                 | 140  |
|   | 12    | R8                  | 450  | R7                 | 100  |
|   | 13    | R10                 | WIRE | R9                 | WIRE |
|   | 14    | R12                 | 450  | R11                | 50   |
|   | 15    | R14                 | 450  | R13                | 440  |
|   | 16    | R16                 | WIRE | R15                | WIRE |

| M4R: Resistors for NINO card in position #7 |       |                     |      |                    |      |
|---|-------|---------------------|------|--------------------|------|
| Card  | Pixel | R even ( $\Omega$ ) |      | R odd ( $\Omega$ ) |      |
|   | 1     | R2                  | 750  | R1                 | 270  |
|   | 2     | R4                  | 575  | R3                 | 125  |
|   | 3     | R6                  | 575  | R5                 | 125  |
|   | 4     | R8                  | 750  | R7                 | 275  |
|   | 5     | R10                 | 575  | R9                 | 125  |
|   | 6     | R12                 | 750  | R11                | 400  |
|   | 7     | R14                 | 750  | R13                | 318  |
|   | 8     | R16                 | 750  | R15                | 269  |
|   | 9     | R2                  | 750  | R1                 | 266  |
|   | 10    | R4                  | 750  | R3                 | 413  |
|   | 11    | R6                  | 750  | R5                 | 129  |
|   | 12    | R8                  | 575  | R7                 | 100  |
|   | 13    | R10                 | WIRE | R9                 | WIRE |
|   | 14    | R12                 | 750  | R11                | 137  |
|   | 15    | R14                 | 575  | R13                | 125  |
|   | 16    | R16                 | WIRE | R15                | WIRE |

| M4R: Resistors for NINO card in position #8 |       |                     |      |                    |      |
|---|-------|---------------------|------|--------------------|------|
| Card  | Pixel | R even ( $\Omega$ ) |      | R odd ( $\Omega$ ) |      |
|   | 1     | R2                  | 425  | R1                 | 191  |
|   | 2     | R4                  | 425  | R3                 | 85   |
|   | 3     | R6                  | 425  | R5                 | 85   |
|   | 4     | R8                  | 425  | R7                 | 85   |
|   | 5     | R10                 | 425  | R9                 | 85   |
|   | 6     | R12                 | 425  | R11                | 119  |
|   | 7     | R14                 | 425  | R13                | 85   |
|   | 8     | R16                 | 425  | R15                | 85   |
|   | 9     | R2                  | 425  | R1                 | 102  |
|   | 10    | R4                  | 425  | R3                 | 156  |
|   | 11    | R6                  | 425  | R5                 | 85   |
|   | 12    | R8                  | 425  | R7                 | 126  |
|   | 13    | R10                 | WIRE | R9                 | WIRE |
|   | 14    | R12                 | 425  | R11                | 85   |
|   | 15    | R14                 | 425  | R13                | 85   |
|   | 16    | R16                 | WIRE | R15                | WIRE |



| M4R: Resistors for NINO card in position #9 |       |                     |      |                    |      |
|---|-------|---------------------|------|--------------------|------|
| Card  | Pixel | R even ( $\Omega$ ) |      | R odd ( $\Omega$ ) |      |
|   | 1     | R2                  | WIRE | R1                 | WIRE |
|   | 2     | R4                  | 500  | R3                 | 150  |
|   | 3     | R6                  | 500  | R5                 | 128  |
|   | 4     | R8                  | 500  | R7                 | 268  |
|   | 5     | R10                 | 500  | R9                 | 298  |
|   | 6     | R12                 | 500  | R11                | 150  |
|   | 7     | R14                 | WIRE | R13                | WIRE |
|   | 8     | R16                 | 800  | R15                | 150  |
|   | 9     | R2                  | 500  | R1                 | 449  |
|   | 10    | R4                  | 800  | R3                 | 400  |
|   | 11    | R6                  | 800  | R5                 | 450  |
|   | 12    | R8                  | 800  | R7                 | 400  |
|   | 13    | R10                 | 800  | R9                 | 650  |
|   | 14    | R12                 | 800  | R11                | 650  |
|   | 15    | R14                 | 800  | R13                | 650  |
|   | 16    | R16                 | 150  | R15                | 825  |

| M4R: Resistors for NINO card in position #10 |       |                     |      |                    |      |
|--|-------|---------------------|------|--------------------|------|
| Card   | Pixel | R even ( $\Omega$ ) |      | R odd ( $\Omega$ ) |      |
|  | 1     | R2                  | 375  | R1                 | 50   |
|  | 2     | R4                  | 375  | R3                 | 75   |
|  | 3     | R6                  | 375  | R5                 | 75   |
|  | 4     | R8                  | 375  | R7                 | 85   |
|  | 5     | R10                 | 375  | R9                 | 105  |
|  | 6     | R12                 | 375  | R11                | 75   |
|  | 7     | R14                 | 375  | R13                | 120  |
|  | 8     | R16                 | 375  | R15                | 75   |
|  | 9     | R2                  | 375  | R1                 | 50   |
|  | 10    | R4                  | 375  | R3                 | 50   |
|  | 11    | R6                  | 375  | R5                 | 50   |
|  | 12    | R8                  | 375  | R7                 | 75   |
|  | 13    | R10                 | 375  | R9                 | 235  |
|  | 14    | R12                 | 375  | R11                | 235  |
|  | 15    | R14                 | WIRE | R13                | WIRE |
|  | 16    | R16                 | WIRE | R15                | WIRE |

| M4R: Resistors for NINO card in position #11 |       |                     |      |                    |      |
|--|-------|---------------------|------|--------------------|------|
| Card   | Pixel | R even ( $\Omega$ ) |      | R odd ( $\Omega$ ) |      |
|  | 1     | R2                  | 575  | R1                 | 173  |
|  | 2     | R4                  | WIRE | R3                 | WIRE |
|  | 3     | R6                  | 575  | R5                 | 246  |
|  | 4     | R8                  | 575  | R7                 | 153  |
|  | 5     | R10                 | 575  | R9                 | 238  |
|  | 6     | R12                 | 350  | R11                | 500  |
|  | 7     | R14                 | 350  | R13                | 500  |
|  | 8     | R16                 | 350  | R15                | 500  |
|  | 9     | R2                  | 575  | R1                 | 135  |
|  | 10    | R4                  | 575  | R3                 | 528  |
|  | 11    | R6                  | 575  | R5                 | 175  |
|  | 12    | R8                  | 350  | R7                 | 654  |
|  | 13    | R10                 | 575  | R9                 | 389  |
|  | 14    | R12                 | WIRE | R11                | WIRE |
|  | 15    | R14                 | 575  | R13                | 363  |
|  | 16    | R16                 | 575  | R15                | 200  |

| M4R: Resistors for NINO card in position #12 |       |                     |      |                    |      |
|--|-------|---------------------|------|--------------------|------|
| Card   | Pixel | R even ( $\Omega$ ) |      | R odd ( $\Omega$ ) |      |
|  | 1     | R2                  | 400  | R1                 | 410  |
|  | 2     | R4                  | 400  | R3                 | 316  |
|  | 3     | R6                  | 400  | R5                 | 110  |
|  | 4     | R8                  | WIRE | R7                 | WIRE |
|  | 5     | R10                 | 400  | R9                 | 413  |
|  | 6     | R12                 | 400  | R11                | 110  |
|  | 7     | R14                 | 400  | R13                | 100  |
|  | 8     | R16                 | 400  | R15                | 339  |
|  | 9     | R2                  | 400  | R1                 | 119  |
|  | 10    | R4                  | 400  | R3                 | 100  |
|  | 11    | R6                  | 400  | R5                 | 100  |
|  | 12    | R8                  | 400  | R7                 | 243  |
|  | 13    | R10                 | 400  | R9                 | 316  |
|  | 14    | R12                 | 400  | R11                | 151  |
|  | 15    | R14                 | 400  | R13                | 163  |
|  | 16    | R16                 | WIRE | R15                | WIRE |

| M4R: Resistors for NINO card in position #13 |       |                     |      |                    |      |
|--|-------|---------------------|------|--------------------|------|
| Card   | Pixel | R even ( $\Omega$ ) |      | R odd ( $\Omega$ ) |      |
|  | 1     | R2                  | WIRE | R1                 | WIRE |
|  | 2     | R4                  | 800  | R3                 | 201  |
|  | 3     | R6                  | 800  | R5                 | 190  |
|  | 4     | R8                  | 450  | R7                 | 465  |
|  | 5     | R10                 | 800  | R9                 | 155  |
|  | 6     | R12                 | 500  | R11                | 399  |
|  | 7     | R14                 | 500  | R13                | 103  |
|  | 8     | R16                 | 500  | R15                | 100  |
|  | 9     | R2                  | 800  | R1                 | 134  |
|  | 10    | R4                  | 500  | R3                 | 100  |
|  | 11    | R6                  | 500  | R5                 | 100  |
|  | 12    | R8                  | 500  | R7                 | 301  |
|  | 13    | R10                 | 800  | R9                 | 190  |
|  | 14    | R12                 | WIRE | R11                | WIRE |
|  | 15    | R14                 | 500  | R13                | 100  |
|  | 16    | R16                 | 425  | R15                | 476  |

| M4R: Resistors for NINO card in position #14 |       |                     |      |                    |      |
|--|-------|---------------------|------|--------------------|------|
| Card   | Pixel | R even ( $\Omega$ ) |      | R odd ( $\Omega$ ) |      |
|  | 1     | R2                  | WIRE | R1                 | WIRE |
|  | 2     | R4                  | 450  | R3                 | 100  |
|  | 3     | R6                  | 450  | R5                 | 292  |
|  | 4     | R8                  | 450  | R7                 | 125  |
|  | 5     | R10                 | 450  | R9                 | 190  |
|  | 6     | R12                 | 450  | R11                | 405  |
|  | 7     | R14                 | 450  | R13                | 341  |
|  | 8     | R16                 | 450  | R15                | 351  |
|  | 9     | R2                  | 450  | R1                 | 100  |
|  | 10    | R4                  | 450  | R3                 | 125  |
|  | 11    | R6                  | 450  | R5                 | 177  |
|  | 12    | R8                  | 450  | R7                 | 189  |
|  | 13    | R10                 | 450  | R9                 | 237  |
|  | 14    | R12                 | 450  | R11                | 125  |
|  | 15    | R14                 | 450  | R13                | 125  |
|  | 16    | R16                 | WIRE | R15                | WIRE |