

## Automobile Assembly Line Kitting & Sequencing (US Patents 6,775,588 / 8,019,463)

Innovatively combines Voice, Bluetooth barcode scanning and *coupled* Light-Directed picking to improve operations in automobile assembly line manufacturing applications.

The screenshot shows a software interface for a picking system. At the top, there is a menu bar with options: Address, Trace, Statistics, Display, Speech, About. Below the menu, a large cyan box displays '11-M1' and a smaller cyan box displays '1'. To the right of these boxes are buttons for 'More', 'Contents', 'Previous', and 'Done'. The main area is a 5x5 grid of cells. Each cell contains a number (0 or 1) and is either red or grey. The grid data is as follows:

|   |   |   |   |   |
|---|---|---|---|---|
| 0 | 0 | 1 | 1 | 0 |
| 1 | 1 | 0 | 1 | 0 |
| 0 | 1 | 0 | 1 | 0 |
| 0 | 1 | 1 | 0 | 0 |
| 0 | 1 | 1 | 0 | 1 |

### Simple, Affordable Batch Kitting with Sequencing

Lights and voice tell where to pick from bays and where to put on transport vehicle. Bar code scanning ensures accuracy.

Lights on picking bays and transport cart are "coupled" to enable cluster picking

### Benefits

- **Fast:** With optional lights on picking and cart locations workers can easily find the right location with flashing light and pick accurately without consulting paper pick slips or RF displays
- **Accurate:** Scanning ensures correct products are picked and placed into correct sequence locations on cart
- **Sequencing:** Keeps parts sequenced consistent with cars on the assembly line
- **Batch Picking:** Enables picking for multiple cars on the assembly line with one trip through the picking area
- **Reduces training time:** Easy to operate by new workers, including those who are visually or hearing impaired

### Features

- **Inexpensive hardware:** Uses only an inexpensive tablet PC to control all picking
- **Secure:** Can operate on the assembly line with or without a Wi-Fi connection
- **Simple:** No interface to WMS or ERP required since scan of 2D barcode on run sheet (pick list) provides all picking data requirements
- **Clustered Batch Picking/Putting:** Workers are directed to retrieve the same SKU for multiple orders thus reducing walking time between carts and bays
- **Distributed Operation:** Unlike conventional pick-to-light systems, requires no expensive, central computer to control lights on storage bays or lights on carts
- **Configurable:** User interface is dynamically built, based on type of cart used. Administrative functions enable supervisors to configure work cells and program operational parameters
- **Flexible:** Allows a mix of lighted and non-lighted locations on carts and bays. Can operate with only a tablet PC and no lights on either picking or cart locations
- **Affordable:** ROI payback period is usually between 6 and 12 months

# Selected Clients



One of the big 3 auto manufacturers in Detroit  
Not revealed due to confidentiality restriction

