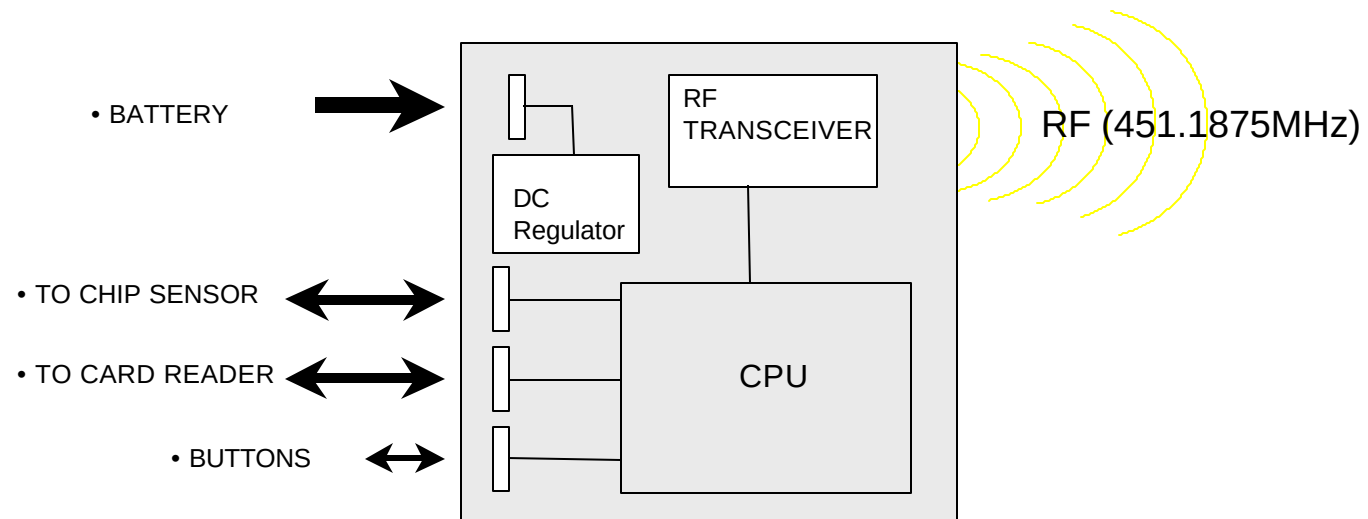
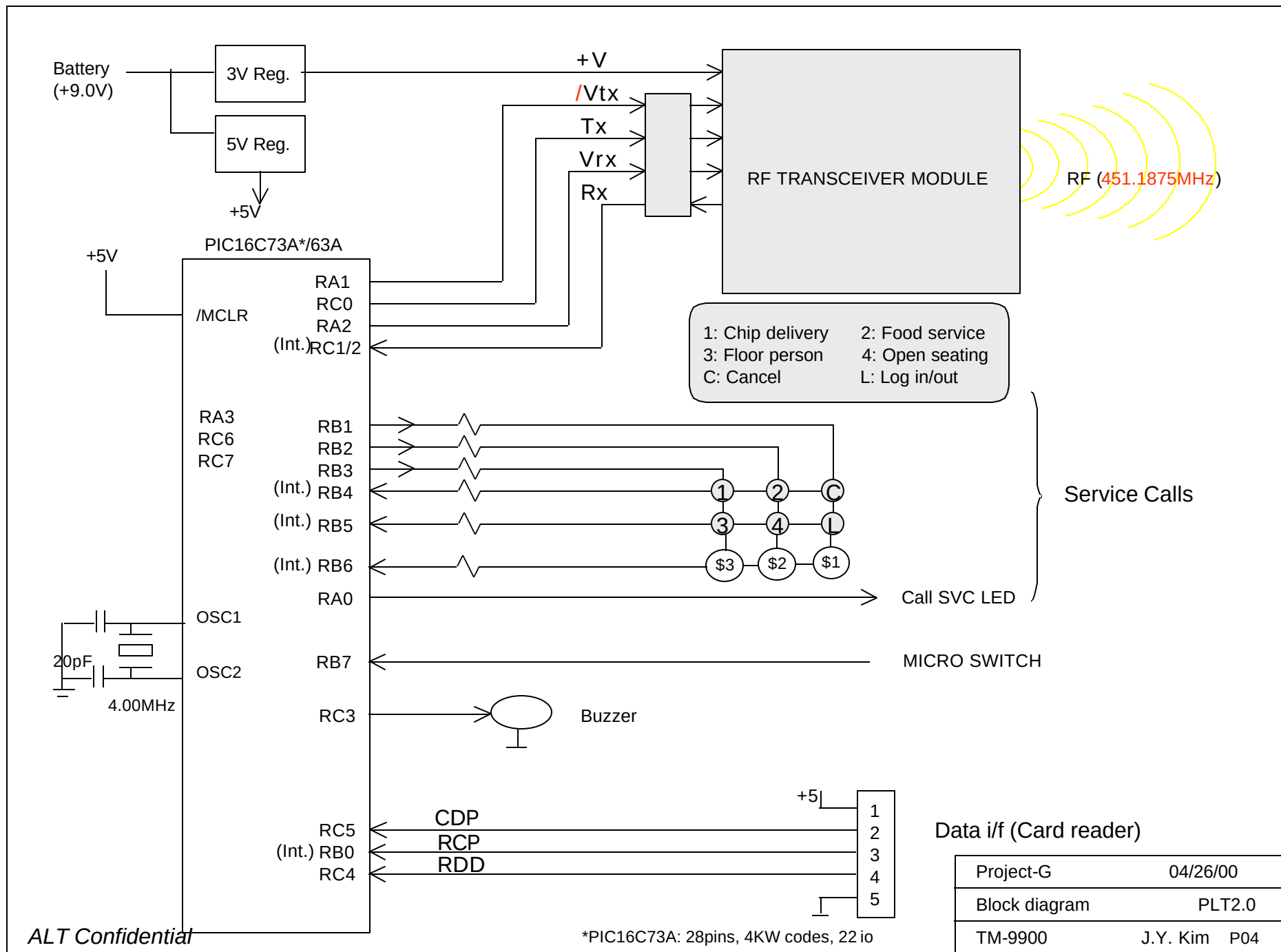




- The battery type is selected to provide power to the device for six months.
- To save power, manually sliding magnetic card reader is used.
- A micro-switch is used to detect a chip drop.
- MAC protocol will be developed such that minimum power consumption is also considered.
- MAC will handle data collision.
- The CPU with A/D, I/O ports, RAM and ROM will be used.

Project-G	01/20/00
Overall	PLT2.0
TM-9900	J.Y. Kim P03



connector1 (CNT1)

pin 1 : GND

pin 2 : Tx Data (Tx)

pin 3 : Tx Power1 (Vtx1)

pin 4 : Tx Power2 (Vtx2)

pin 5 : Carrier Sense

pin 6 : Antenna (ANT)

Vtx 1.5 - 5.0V

connector2 (CNT2)

pin 12 : GND

pin 11 : Rx Power ctrl(BS)

pin 10 : Rx data (Rx)

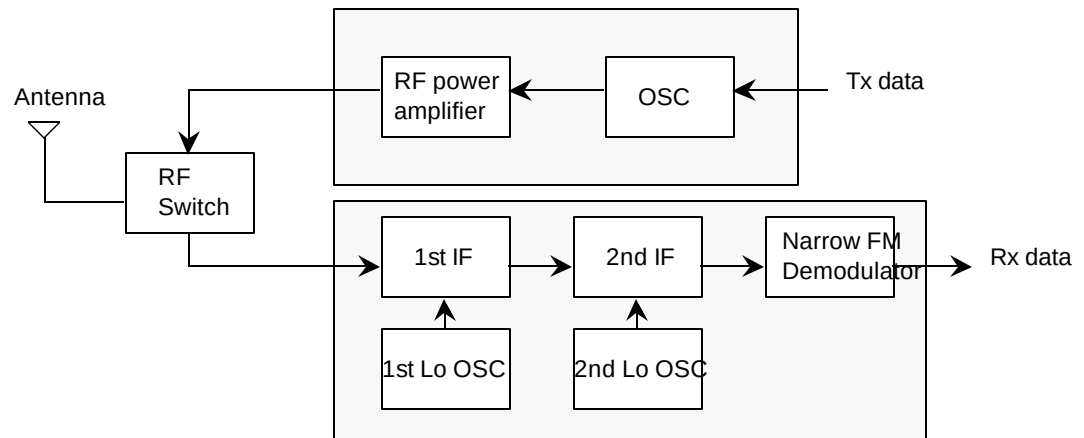
pin 9 : NC (AF)

pin 8 : Rx Power (Vrx)

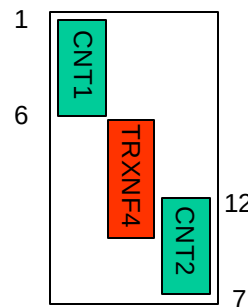
pin 7 : NC (AL)

Rx open collector out
(10K pull-up).

Vrx 1.5 - 4.0V



RF transceiver



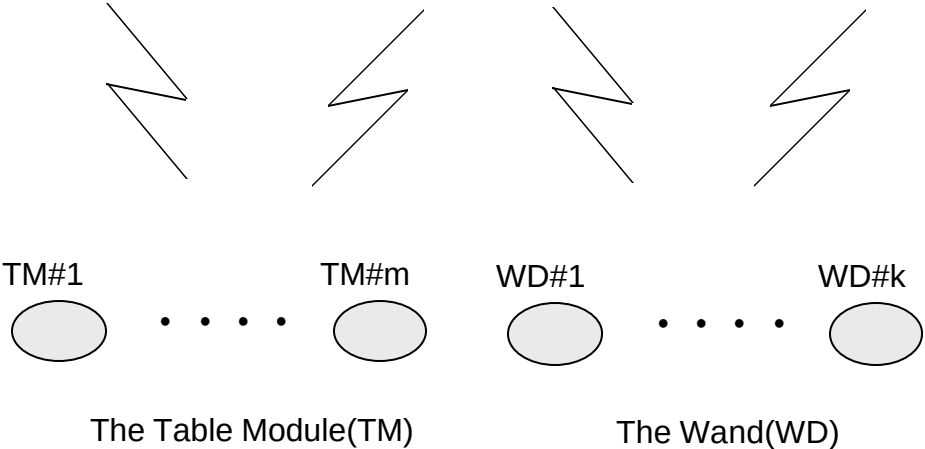
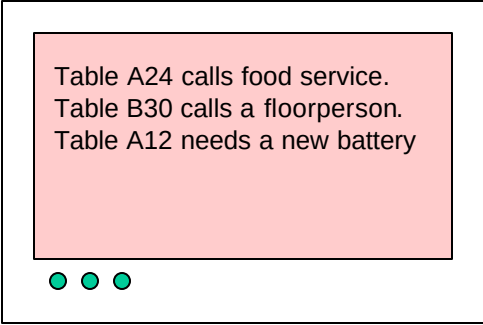
Top view of
Automan RF module

Project-G	04/26/00
RF transceiver	PLT2.0
RF Module	J.Y. Kim P05

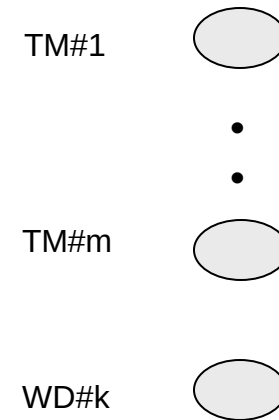
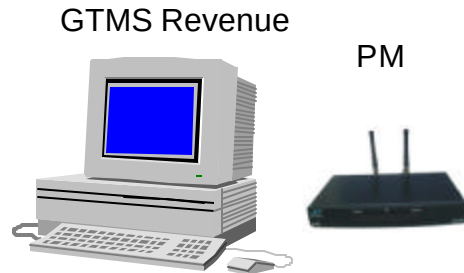
- GTMS Revenue
- GTMS Guest's Comp



- GTMS Service Call



Project-G	04/26/00
Overall	PLT2.0
Protocols	J.Y. Kim P06



- PC Module is a master and Table Modules are slaves.
- Collision may happen due to multiple TM's.
- CA (collision avoidance) is needed.
- TM sends a packet first, then TM waits for confirm packet from the PM.
- If confirm packet doesn't arrive for predefined time, collision happened.
- GTMS Revenue PC s/w downloads TM & WD id table and a list of [appl], here this is {0x11, 0x12}

From TM to PM:

MAC format

```
[tm0]..[tm2][cmd][lng][d0]..[dn][chk]
  [tm0]..[tm2] 23 bits with b7 of tm0=0
  [cmd] 0x11 for TM, 0x12 for wand
  [lng] length of application packet
```

PHY format

<Preamble><SIF><MAC data>

From PM to TM:

MAC format

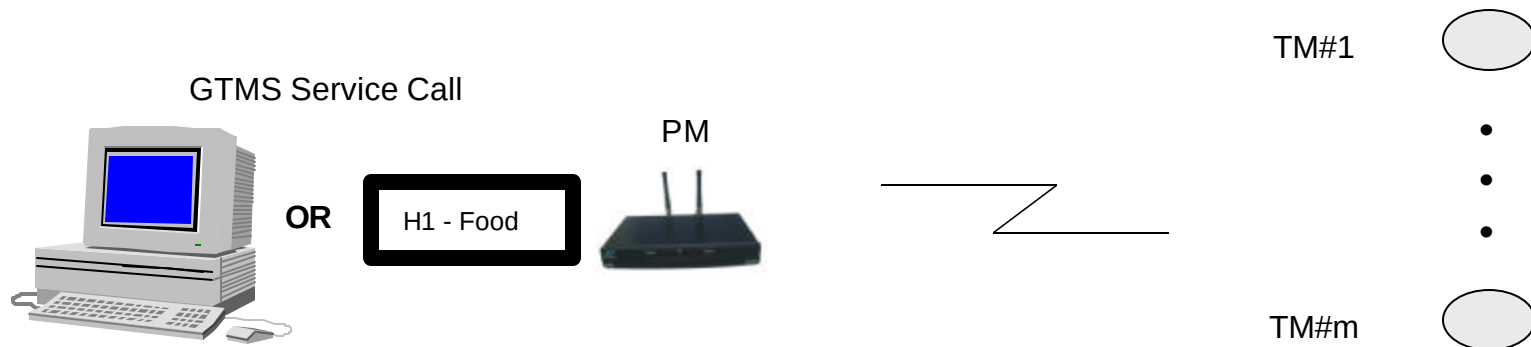
```
[tm0]..[tm2][cmd][0][chk]
```

PHY format

<Preamble><SIF><MAC data>

Preamble = 0011001100110001 = 0x3331

Project-G	01/29/00
Protocol-Revenue	PLT2.0
Protocols	J.Y. Kim P07



- PM receives call service information.
- PM responds by sending confirm packet.
- Collision may happen due to multiple TM's.
- CA (collision avoidance) is needed.
- TM sends a packet first, then TM waits for confirm packet from the PM.
- If confirm packet doesn't arrive for predefined time, collision happened.
- GTMS Service Call PC s/w downloads TM id table and a list of [appl], here this is {0x12}
- PM supports 'Simple Display' mode where dummy terminal or LED display can be used.

DATA:

0x1 : Chip delivery
 0x2 : Food service
 0x4 : Change battery
 0x8 : Open seating
 0x10: Cancel
 0x20 : Floor person call

From TM to PM:

MAC format

[tm0]..[tm2][cmd][1][data][chk]
 [tm0]..[tm2] 23 bits with b7 of tm0=0
 [cmd] 0x12 for GTMS Service Call
 [lng=1] length of application packet

PHY format

<Preamble><SIF><MAC data>

From PM to TM:

MAC format

[tm0]..[tm2][cmd][0x0][chk]

PHY format

<Preamble><SIF><MAC data>

