UPDATING LIST

Version	Date	Modifications	Writer	Checker	Approver
0	2007-21-02	Creation	V.G.	S.M.	P.G.
1	2007-16-04	Modifications for HM PRO	V.G.	S.M.	P.G.
A	2007-19-09	RTC adding	V.G.	S.M.	P.G.
B	2007-18-10	Serial Number adding	V.G.	S.M.	P.G.
C	2008-07-02	HM PRO functionnality suppression	S.C.	V.G.	P.G.

SUMMARY

1 Subject

The purpose of this document is to specify the functions and characteristics of the electronic product "base HYPERMASTER HM CAMPUS", for the electronic voting system RF HM CAMPUS.

2 Glossary
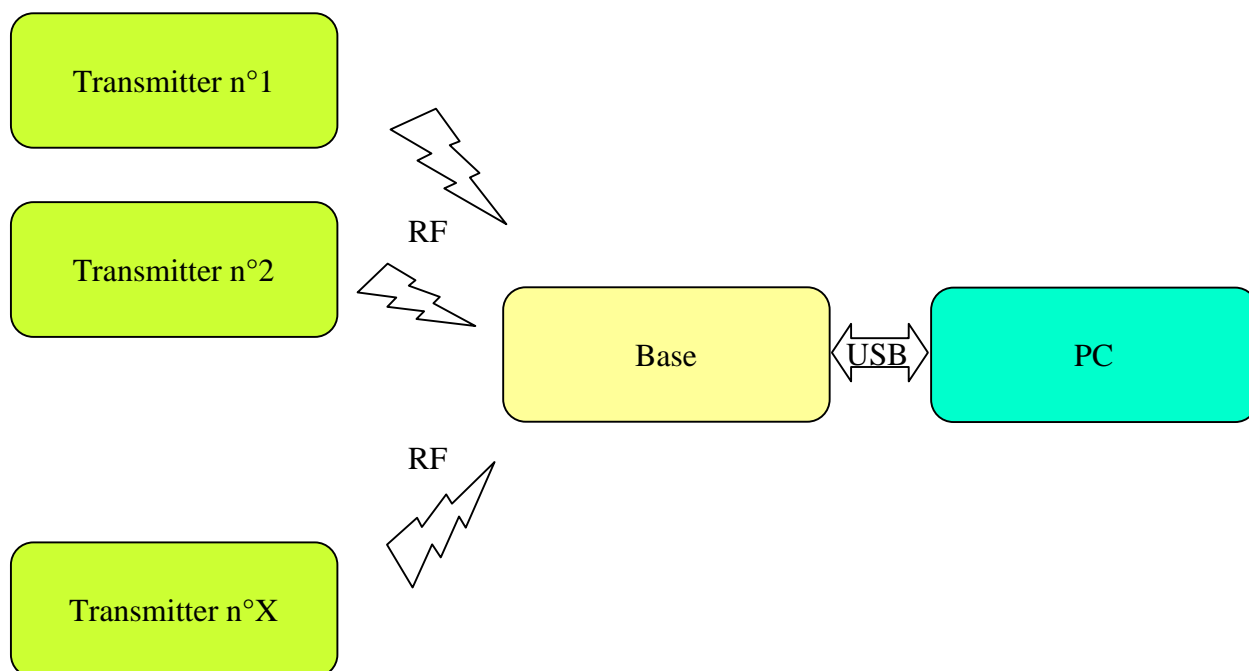
CRC : Cyclic Redundancy Check,
PC : Personnal Computer,
RF : Radio Frequency,
USB : Universal Serial Bus,
TBD : To Be Define,
TBC : To Be Confirme.

3 Applicable Standart

FCC Part 15.

4 Base HM CAMPUS introduction

The base is composed of :

Requirement n°1. one USB 2.0 full speed (12 Mbits/s) interface.

Requirement n°2. three signals led :
- one yellow led for radio transmission,
- one yellow led for radio reception,
- one green led for USB connection with the PC.

Requirement n°3. one dipole antenna 2.4 GHz connectorisable on a plate.

5 Product description

5.1 Base functionnality

Requirement n°4. the base is in reception mode, and is waiting for a radion transmission on its channel. On each radio reception, the corresponding yellow led is flashing for 200 ms.

Requirement n°5. on each radio reception, the base checks the frame integrity and retransmits data to the PC without modification. The USB link is used to communicate with the PC. No response is retransmitted to the transmitter.

Requirement n°6. the base sends the software PC commands to the transmitters without modification. On each radio transmission, the corresponding yellow led is flashing for 200 ms.

Requirement n°7. the green led of the USB connection lights up when the equipment is properly recognized by the PC.

Requirement n°8. a real-time clock is used for informing the date and GMT time thanks to a command PC.

5.2 Radio features

Requirement n°9. the product can communicate up to 60 m in overall directions.

Requirement n°10. the radio baudrate is 250 Kbits/s.

Requirement n°11. the radio channel can be configured from 01 to 82 thanks to a command PC. This channel is stored in a hard memory.

Requirement n°12. the default channel is 41.

Requirement n°13. a 16 bits CRC is used for checking the frame integrity.

Requirement n°14. radio communication must be complient with the following document : AS 290 012 000 752.

Requirement n°15. PC communication must be complient with the following document : AS 290 011 000 752.

5.3 Other features

Requirement n°16. the base has got an universal radio address. Each transmitter can communicate with all the bases on the same channel.

Requirement n°17. an aluminium sticker is placed on the back :
- dimensions : 29x33 mm,
- bar code,
- serial number (5 digits),
- product reference,
- ROHS logo,
- CE label,
- FCC label,
- Web site address.

Requirement n°18. « HyperMaster Technologies » must be written on the PCB.

5.4 Mechanical features

Requirement n°19. USB connection thanks to a cable through a mini type B connector.

Requirement n°20. the electronic board is placed into a housing from a supply customer.

6 Temperature features

Requirement n°21. use temperature : 0°C / +50°C.

Requirement n°22. storage temperature : 0°C / +70°C.