

Activité : Mise en oeuvre du panneau lumineux

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Table des matières

Mise en oeuvre du panneau lumineux	1
Panneau Delta Electronics	1

Mise en oeuvre du panneau lumineux

Les information voyageurs à l'intérieur du bus seront affichées sur un bandeau lumineux 10 caractères RS232 (Delta Electronics).

Lien : [Delta Electronics](#)

Panneau Delta Electronics

Il se raccorde au PC via un adaptateur USB/RS232 qui sera géré comme un [port série virtuel](#).

Documentation : [panneau-delta-electronics-rs232.pdf](#)

Le trame pour afficher un message sur le panneau :

Communication takes place using packets of the following form:

packet = SOT-NUM-CMD-<OPT>-TEXT-<TEXT>-<TEXT>-EOT.

SOT = 1 byte start-of-transmission. More may be used as sync.
NUM = 2 byte Hex representation of the MCB network number = '00'..'FF'.
CMD = 1 byte command (see below).
OPT = optional 1 or more byte(s) extra command(s).
TEXT = one or more text records as explained below.
EOT = 1 byte end-of-transmission.

textrecord:

TEXT = STX-CHA-LIN-POS-STR-ETX

STX = 1 byte start-of-text
CHA = 1 byte ascii decimal channel number ('1'..'8')
LIN = 1 byte ascii decimal line number
POS = 2 byte ascii decimal string start position
STR = Any number of text bytes (\$20..\$AF, IBM set)
Characters may be preceeded by bold quotes (double width), and mixed with flash on/off quotes.
ETX = 1 byte end-of-text

Les codes spécifiques du protocole :

COMMUNIC: SOT = \$01
 STX = \$02
 ETX = \$03
 EOT = \$04

COMMANDS: \$05 = Inquiry command (No TEXT field in packet).
 An ACK or NACK is send back.
 \$06 = Send Text. Clear screen first.
 \$07 = Send Text. Do not clear screen first.

OPTIONS: \$0F = AUX command. Must be followed by two ascii
 HEX representation of byte to be written
 to auxiliairy output port U3 on the MCB.

FEATURES: BOLD quote = \$F0 (or \$5F v0.01)
 Flash begin quote = \$F1 (>= v0.02)
 Flash end quote = \$F2 (>= v0.02)

ACK/NACK: ACK = \$C0 : packet received OK
 NACK1 = \$C1 : time out (max 100 ms between bytes of
 a packet)
 NACK2 = \$C2 : invalid ascii decimal or hex value
 NACK3 = \$C3 : invalid text byte
 NACK4 = \$C4 : format error.

Exemple de fabrication d'une trame :

```
#define SOT          0x01
#define NUM          0x30
#define CMD          0x06
#define AUX          0x0F
#define F            0x46
#define Z            0x30
#define STX          0x02
#define CHAN         0x31
#define LINE         0x32
#define ETX          0x03
#define EOT          0x04
#define FIN          0x00 // fin de chaîne

#define MAX_TRADE    64
#define MAX_TEXTE    10 // on se limite à un texte de 10 caractères

...

char trame[MAX_TRADE] = {FIN};
char trameBrute[MAX_TRADE] = {SOT,NUM,NUM,CMD,AUX,F,F,AUX,Z,Z,STX,CHAN,LINE,FIN};
int position = 11; // premier caractère visible à gauche
QString message = "hello BTS";
int i = 0;

// on ajoute la position dans la trame
sprintf(trame, "%s%02d", trameBrute, position);

// on ajoute le texte dans la trame
strcat(trame, message.toLatin1());
```

```
// on termine la trame
i = strlen(trame);
trame[i] = ETX;
trame[i+1] = EOT;
trame[i+2] = FIN;

// on envoie la trame
...
```

Code source : [test-mo-bandeau.zip](#)

[Retour au sommaire](#)