

Double Hauteur (1/2)

par André C.

Avec la disparition des attributs série, la possibilité d'afficher des caractères en double hauteur (DH) manque cruellement aux Oriciens que nous sommes. Mais c'est un manque facile à réparer.

Que fait l'ULA des Oric classiques quand elle rencontre un attribut DH? Si le n° de ligne est impair, elle envoie deux fois chacune des 4 premières lignes de définition du caractère. Si le n° de ligne est pair, elle envoie deux fois chacune des 4 dernières lignes de définition du caractère. Ceci double donc la hauteur du caractère, (quoique de manière visiblement pas toujours bien "lissée"). Inconvénient: Il faut toujours écrire le caractère sur une ligne impaire, puis juste en dessous, sur la ligne suivante. La solution que nous vous proposons s'affranchira de cet inconvénient.

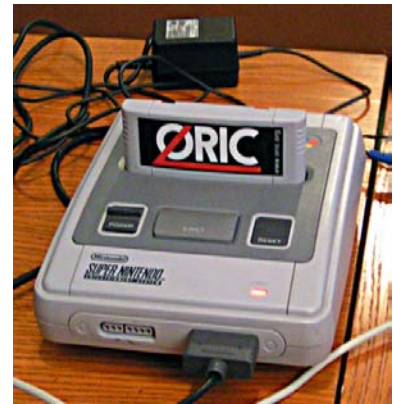
Il nous faut donc redéfinir les 96 caractères de l'Oric (de Ascii 32 à 127) en utilisant ce principe. Cela nécessitera donc 192 nouveaux caractères (ce qui n'est rien, puisque notre Super-Oric peut en accueillir 1024). Dans un premier temps, je me suis décidé à loger les 96 moitiés hautes dans les ASCII homologue, mais avec un décalage de +128 et les 96 moitiés basses dans les ASCII homologue, mais avec un décalage de +256. Ainsi c'est le caractère de code $32+128=160$ qui logera la moitié haute de l'ASCII 32 (espace), tandis que le caractère de code $32+256=288$ recevra la moitié basse. A l'autre bout du jeu de caractères, les deux moitiés du caractère 127 (bloc carré) se retrouveront dans les caractères $127+128=255$ et $127+256=383$.

En résumé, les caractères natifs vont de 32 à 127, les caractères en DH vont de 160 à 255 (pour les moitiés hautes) et de 288 à 383 (pour les moitiés basses). C'est assez pratique, car pour afficher un "A" en DH on affichera l'ASCII $65+128$, puis juste en dessous l'ASCII $65+256$.

Hélas, la Rom Super-Oric actuelle porte une bogue, qui doit dater du dernier changement de mode de rafraîchissement de la RAM vidéo: Seuls

les caractères dynamiques (ASCII 0 à 255) sont automatiquement actualisés. Je n'ai pas réussi à valider les caractères "statiques" (ASCII 256 à 1023). Par conséquent, en attendant que la bogue soit corrigée, je ne peux redéfinir que 48 caractères à la fois et loger les 48 moitiés hautes de 160 à 207 et les 48 moitiés basses de 208 à 255. Heureusement, d'une part, on utilise rarement tous les caractères en DH, d'autre part la commande DEF CHAR peut être utilisée à tout moment pour modifier facilement les caractères définis.

Dans le premier programme ci-dessous, on redéfinira l'intervalle des ASCII de 43 ("+") à 90 ("Z"), ce qui inclura les lettres et les chiffres, plus quelques signes. On profitera de l'occasion pour redéfinir ces nouveaux caractères en couleurs 2 et 3, afin de pouvoir afficher ces caractères avec une encre de couleur donnée différente de INK, sur un fond de couleur donnée différente de PAPER. Mais attention, le caractère "espace" (Ascii 32) ne fait pas partie du set que nous avons choisi. Or il est défini dans les couleurs 0 et 1 et ne sera donc pas affiché comme le reste du set. On peut facilement contourner le problème par exemple en remplaçant dans ce "set" de 48 caractères, le "/" (ASCII 47) par "espace". Ceci est illustré dans le programme ci-dessous. Cette mini démo affiche la chaîne de caractères "DOUBLE HAUTEUR" en double hauteur (voir le résultat en page 30). Le listing aurait été infiniment plus court si seules les lettres nécessaires avaient été redéfinies. Mais j'ai donné la redéfinition de toutes les lettres pour que vous puissiez en disposer à vos fins personnelles.



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100 \ *** Test du S/P d'affichage en Double Hauteur
110 \ Code PA pour No de Palette, priorite etc.
120 GOSUB 61230: \ Def caracteres DH en couleurs 2 et 3
130 GOSUB 63010: \ Redefinition des couleurs
140 CLS: \ Ecran noir
150 S$=>DOUBLE HAUTEUR»:PA=#2000:X=9:Y=10:GOSUB 22020
160 END
22000 \ *** Affichage de chaines+attribut avec PLOT
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22010 ` En entrée S$, PA, X et Y
22020 L=LEN(S$)
22030 FOR I=1 TO L
22040 C$=MID$(S$,I,1)
22050 GOSUB 33020
22060 X=X+1
22070 NEXT
22080 RETURN
33000 ` *** Affichage d'un caractère+attribut avec PLOT
33010 ` En entrée C$, PA, X et Y
33020 AS=ASC(C$):IF AS=32 THEN AS=47
33030 PLOT X,Y,AS+117+PA
33040 PLOT X,Y+1,AS+165+PA
33050 RETURN
61000 ` Definition des caracteres DH en couleurs 2 et 3
61010 `DEF CHAR 32+117,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF:'ESPh
61020 `DEF CHAR 32+165,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF:'ESPb
61030 `DEF CHAR 33+117,#FFF7,#FFF7,#FFF7,#FFF7,#FFF7,#FFF7,#FFF7,#FFF7:'!h
61040 `DEF CHAR 33+165,#FFF7,#FFF7,#FFF7,#FFF7,#FFF7,#FFF7,#FFF7,#FFF7:'!b
61050 `DEF CHAR 34+117,#FFEB,#FFEB,#FFEB,#FFEB,#FFEB,#FFEB,#FFEB,#FFEB:'>h
61060 `DEF CHAR 34+165,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF:'>b
61070 `DEF CHAR 35+117,#FFEB,#FFEB,#FFEB,#FFEB,#FFC1,#FFC1,#FFEB,#FFEB:'#h
61080 `DEF CHAR 35+165,#FFC1,#FFC1,#FFEB,#FFEB,#FFEB,#FFEB,#FFFF,#FFFF:'#b
61090 `DEF CHAR 36+117,#FFF7,#FFF7,#FFE1,#FFE1,#FFD7,#FFD7,#FFE3,#FFE3:'$h
61100 `DEF CHAR 36+165,#FFF5,#FFF5,#FFC3,#FFC3,#FFF7,#FFF7,#FFFF,#FFFF:'$b
61110 `DEF CHAR 37+117,#FFCF,#FFCF,#FFCD,#FFCD,#FFFB,#FFFB,#FFF7,#FFF7:'%h
61120 `DEF CHAR 37+165,#FFEF,#FFEF,#FFD9,#FFD9,#FFF9,#FFF9,#FFFF,#FFFF:'%b
61130 `DEF CHAR 38+117,#FFEF,#FFEF,#FFD7,#FFD7,#FFD7,#FFD7,#FFEF,#FFEF:'&h
61140 `DEF CHAR 38+165,#FFD5,#FFD5,#FFDB,#FFDB,#FFE5,#FFE5,#FFFF,#FFFF:'&b
61150 `DEF CHAR 39+117,#FFF7,#FFF7,#FFF7,#FFF7,#FFF7,#FFF7,#FFF7,#FFF7:' 'h
61160 `DEF CHAR 39+165,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF:' 'b
61170 `DEF CHAR 40+117,#FFF7,#FFF7,#FFEF,#FFEF,#FFDF,#FFDF,#FFDF,#FFDF:' (h
61180 `DEF CHAR 40+165,#FFDF,#FFDF,#FFEF,#FFEF,#FFF7,#FFF7,#FFFF,#FFFF:' (b
61190 `DEF CHAR 41+117,#FFF7,#FFF7,#FFFB,#FFFB,#FFFD,#FFFD,#FFFD,#FFFD:')h
61200 `DEF CHAR 41+165,#FFFD,#FFFD,#FFFB,#FFFB,#FFF7,#FFF7,#FFFF,#FFFF:')b
61210 `DEF CHAR 42+117,#FFF7,#FFF7,#FFD5,#FFD5,#FFE3,#FFE3,#FFF7,#FFF7:'*h
61220 `DEF CHAR 42+165,#FFE3,#FFE3,#FFD5,#FFD5,#FFF7,#FFF7,#FFFF,#FFFF:'*b
61230 DEF CHAR 43+117,#FFFF,#FFFF,#FFF7,#FFF7,#FFF7,#FFF7,#FFC1,#FFC1:' +h
61240 DEF CHAR 43+165,#FFF7,#FFF7,#FFF7,#FFF7,#FFFF,#FFFF,#FFFF,#FFFF:' +b
61250 DEF CHAR 44+117,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF:' ,h
61260 DEF CHAR 44+165,#FFFF,#FFFF,#FFF7,#FFF7,#FFF7,#FFF7,#FFEF,#FFEF:' ,b
61270 DEF CHAR 45+117,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF,#FFC1,#FFC1:' -h
61280 DEF CHAR 45+165,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF:' -b
61290 DEF CHAR 46+117,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF:' .h
61300 DEF CHAR 46+165,#FFFF,#FFFF,#FFFB,#FFFB,#FFFF,#FFFF,#FFFF,#FFFF:' .b
61310 `DEF CHAR 47+117,#FFFF,#FFFF,#FFFD,#FFFD,#FFFB,#FFFB,#FFF7,#FFF7:' /h
61320 `DEF CHAR 47+165,#FFEF,#FFEF,#FFDF,#FFDF,#FFFF,#FFFF,#FFFF,#FFFF:' /b
61321 DEF CHAR 47+117,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF:'ESPh
61322 DEF CHAR 47+165,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF,#FFFF:'ESPb
61330 DEF CHAR 48+117,#FFE3,#FFE3,#FFDD,#FFDD,#FFD9,#FFD9,#FFD5,#FFD5:' 0h
61340 DEF CHAR 48+165,#FFCD,#FFCD,#FFDD,#FFDD,#FFE3,#FFE3,#FFFF,#FFFF:' 0b
61350 DEF CHAR 49+117,#FFF7,#FFF7,#FFE7,#FFE7,#FFF7,#FFF7,#FFF7,#FFF7:' 1h
61360 DEF CHAR 49+165,#FFF7,#FFF7,#FFF7,#FFF7,#FFE3,#FFE3,#FFFF,#FFFF:' 1b
61370 DEF CHAR 50+117,#FFE3,#FFE3,#FFDD,#FFDD,#FFFD,#FFFD,#FFFB,#FFFB:' 2h
61380 DEF CHAR 50+165,#FFF7,#FFF7,#FFEF,#FFEF,#FFC1,#FFC1,#FFFF,#FFFF:' 2b
61390 DEF CHAR 51+117,#FFC1,#FFC1,#FFFD,#FFFD,#FFFB,#FFFB,#FFF3,#FFF3:' 3h
61400 DEF CHAR 51+165,#FFFD,#FFFD,#FFDD,#FFDD,#FFE3,#FFE3,#FFFF,#FFFF:' 3b
61410 DEF CHAR 52+117,#FFFB,#FFFB,#FFF3,#FFF3,#FFEB,#FFEB,#FFDB,#FFDB:' 4h
61420 DEF CHAR 52+165,#FFC1,#FFC1,#FFFB,#FFFB,#FFFB,#FFFB,#FFFF,#FFFF:' 4b
61430 DEF CHAR 53+117,#FFC1,#FFC1,#FFDF,#FFDF,#FFC3,#FFC3,#FFFD,#FFFD:' 5h
61440 DEF CHAR 53+165,#FFFD,#FFFD,#FFDD,#FFDD,#FFE3,#FFE3,#FFFF,#FFFF:' 5b
61450 DEF CHAR 54+117,#FFF3,#FFF3,#FFEF,#FFEF,#FFDF,#FFDF,#FFC3,#FFC3:' 6h
61460 DEF CHAR 54+165,#FFDD,#FFDD,#FFDD,#FFDD,#FFE3,#FFE3,#FFFF,#FFFF:' 6b
61470 DEF CHAR 55+117,#FFC1,#FFC1,#FFFD,#FFFD,#FFFB,#FFFB,#FFF7,#FFF7:' 7h
61480 DEF CHAR 55+165,#FFEF,#FFEF,#FFEF,#FFEF,#FFEF,#FFEF,#FFFF,#FFFF:' 7b
61490 DEF CHAR 56+117,#FFE3,#FFE3,#FFDD,#FFDD,#FFDD,#FFDD,#FFE3,#FFE3:' 8h
61500 DEF CHAR 56+165,#FFDD,#FFDD,#FFDD,#FFDD,#FFE3,#FFE3,#FFFF,#FFFF:' 8b

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61510 DEF CHAR 57+117, #FFE3, #FFE3, #FFDD, #FFDD, #FFDD, #FFDD, #FFE1, #FFE1: '9h
61520 DEF CHAR 57+165, #FFFD, #FFFD, #FFFB, #FFFB, #FFE7, #FFE7, #FFFF, #FFFF: '9b
61530 DEF CHAR 58+117, #FFFF, #FFFF, #FFFF, #FFFF, #FFF7, #FFF7, #FFFF, #FFFF: ':h
61540 DEF CHAR 58+165, #FFFF, #FFFF, #FFF7, #FFF7, #FFFF, #FFFF, #FFFF, #FFFF: ':b
61550 DEF CHAR 59+117, #FFFF, #FFFF, #FFFF, #FFFF, #FFF7, #FFF7, #FFFF, #FFFF: ';h
61560 DEF CHAR 59+165, #FFFF, #FFFF, #FFF7, #FFF7, #FFF7, #FFF7, #FFEF, #FFEF: ';b
61570 DEF CHAR 60+117, #FFFB, #FFFB, #FFF7, #FFF7, #FFEF, #FFEF, #FFDF, #FFDF: '<h
61580 DEF CHAR 60+165, #FFEF, #FFEF, #FFF7, #FFF7, #FFFB, #FFFB, #FFFF, #FFFF: '<b
61590 DEF CHAR 61+117, #FFFF, #FFFF, #FFFF, #FFFF, #FFC1, #FFC1, #FFFF, #FFFF: '=h
61600 DEF CHAR 61+165, #FFC1, #FFC1, #FFFF, #FFFF, #FFFF, #FFFF, #FFFF, #FFFF: '=b
61610 DEF CHAR 62+117, #FFEF, #FFEF, #FFF7, #FFF7, #FFFB, #FFFB, #FFFD, #FFFD: '>h
61620 DEF CHAR 62+165, #FFFB, #FFFB, #FFF7, #FFF7, #FFEF, #FFEF, #FFFF, #FFFF: '>b
61630 DEF CHAR 63+117, #FFE3, #FFE3, #FFDD, #FFDD, #FFFB, #FFFB, #FFF7, #FFF7: '?h
61640 DEF CHAR 63+165, #FFF7, #FFF7, #FFFF, #FFFF, #FFF7, #FFF7, #FFFF, #FFFF: '?b
61650 DEF CHAR 64+117, #FFE3, #FFE3, #FFDD, #FFDD, #FFD5, #FFD5, #FFD1, #FFD1: '@h
61660 DEF CHAR 64+165, #FFD3, #FFD3, #FFDF, #FFDF, #FFE1, #FFE1, #FFFF, #FFFF: '@b
61670 DEF CHAR 65+117, #FFF7, #FFF7, #FFEB, #FFEB, #FFDD, #FFDD, #FFDD, #FFDD: 'Ah
61680 DEF CHAR 65+165, #FFC1, #FFC1, #FFDD, #FFDD, #FFDD, #FFDD, #FFFF, #FFFF: 'Ab
61690 DEF CHAR 66+117, #FFC3, #FFC3, #FFDD, #FFDD, #FFDD, #FFDD, #FFC3, #FFC3: 'Bh
61700 DEF CHAR 66+165, #FFDD, #FFDD, #FFDD, #FFDD, #FFDD, #FFDD, #FFC3, #FFC3: 'Bb
61710 DEF CHAR 67+117, #FFE3, #FFE3, #FFDD, #FFDD, #FFDF, #FFDF, #FFDF, #FFDF: 'Ch
61720 DEF CHAR 67+165, #FFDF, #FFDF, #FFDD, #FFDD, #FFE3, #FFE3, #FFFF, #FFFF: 'Cb
61730 DEF CHAR 68+117, #FFC3, #FFC3, #FFDD, #FFDD, #FFDD, #FFDD, #FFDD, #FFDD: 'Dh
61740 DEF CHAR 68+165, #FFDD, #FFDD, #FFDD, #FFDD, #FFC3, #FFC3, #FFFF, #FFFF: 'Db
61750 DEF CHAR 69+117, #FFC1, #FFC1, #FFDF, #FFDF, #FFDF, #FFDF, #FFC3, #FFC3: 'Eh
61760 DEF CHAR 69+165, #FFDF, #FFDF, #FFDF, #FFDF, #FFC1, #FFC1, #FFFF, #FFFF: 'Eb
61770 DEF CHAR 70+117, #FFC1, #FFC1, #FFDF, #FFDF, #FFDF, #FFDF, #FFC3, #FFC3: 'Fh
61780 DEF CHAR 70+165, #FFDF, #FFDF, #FFDF, #FFDF, #FFDF, #FFDF, #FFFF, #FFFF: 'Fb
61790 DEF CHAR 71+117, #FFE1, #FFE1, #FFDF, #FFDF, #FFDF, #FFDF, #FFDF, #FFDF: 'Gh
61800 DEF CHAR 71+165, #FFD9, #FFD9, #FFDD, #FFDD, #FFE1, #FFE1, #FFFF, #FFFF: 'Gb
61810 DEF CHAR 72+117, #FFDD, #FFDD, #FFDD, #FFDD, #FFDD, #FFDD, #FFC1, #FFC1: 'Hh
61820 DEF CHAR 72+165, #FFDD, #FFDD, #FFDD, #FFDD, #FFDD, #FFDD, #FFDD, #FFDD: 'Hb
61830 DEF CHAR 73+117, #FFE3, #FFE3, #FFF7, #FFF7, #FFF7, #FFF7, #FFF7, #FFF7: 'Ih
61840 DEF CHAR 73+165, #FFF7, #FFF7, #FFF7, #FFF7, #FFE3, #7FE3, #FFFF, #FFFF: 'Ib
61850 DEF CHAR 74+117, #FFFD, #FFFD, #FFFD, #FFFD, #FFFD, #FFFD, #FFFD, #FFFD: 'Jh
61860 DEF CHAR 74+165, #FFFD, #FFFD, #FFDD, #FFDD, #FFE3, #7FE3, #FFFF, #FFFF: 'Jb
61870 DEF CHAR 75+117, #FFDD, #FFDD, #FFDB, #FFDB, #FFD7, #FFD7, #FFCF, #FFCF: 'Kh
61880 DEF CHAR 75+165, #FFD7, #FFD7, #FFDB, #FFDB, #FFDD, #FFDD, #FFFF, #FFFF: 'Kb
61890 DEF CHAR 76+117, #FFDF, #FFDF, #FFDF, #FFDF, #FFDF, #FFDF, #FFDF, #FFDF: 'Lh
61900 DEF CHAR 76+165, #FFDF, #FFDF, #FFDF, #FFDF, #FFC1, #FFC1, #FFFF, #FFFF: 'Lb
61910 DEF CHAR 77+117, #FFDD, #FFDD, #FFC9, #FFC9, #FFD5, #FFD5, #FFD5, #FFD5: 'Mh
61920 DEF CHAR 77+165, #FFDD, #FFDD, #FFDD, #FFDD, #FFDD, #FFDD, #FFFF, #FFFF: 'Mb
61930 DEF CHAR 78+117, #FFDD, #FFDD, #FFDD, #FFDD, #FFDD, #FFDD, #FFD5, #FFD5: 'Nh
61940 DEF CHAR 78+165, #FFD9, #FFD9, #FFDD, #FFDD, #FFDD, #FFDD, #FFFF, #FFFF: 'Nb
61950 DEF CHAR 79+117, #FFE3, #FFE3, #FFDD, #FFDD, #FFDD, #FFDD, #FFDD, #FFDD: 'Oh
61960 DEF CHAR 79+165, #FFDD, #FFDD, #FFDD, #FFDD, #FFE3, #FFE3, #FFFF, #FFFF: 'Ob
61970 DEF CHAR 80+117, #FFC3, #FFC3, #FFDD, #FFDD, #FFDD, #FFDD, #FFC3, #FFC3: 'Ph
61980 DEF CHAR 80+165, #FFDF, #FFDF, #FFDF, #FFDF, #FFDF, #FFDF, #FFFF, #FFFF: 'Pb
61990 DEF CHAR 81+117, #FFE3, #FFE3, #FFDD, #FFDD, #FFDD, #FFDD, #FFDD, #FFDD: 'Qh
62000 DEF CHAR 81+165, #FFD5, #FFD5, #FFDB, #FFDB, #FFE5, #FFE5, #FFFF, #FFFF: 'Qb
62010 DEF CHAR 82+117, #FFC3, #FFC3, #FFDD, #FFDD, #FFDD, #FFDD, #FFC3, #FFC3: 'Rh
62020 DEF CHAR 82+165, #FFD7, #FFD7, #FFDB, #FFDB, #FFDD, #FFDD, #FFFF, #FFFF: 'Rb
62030 DEF CHAR 83+117, #FFE3, #FFE3, #FFDD, #FFDD, #FFDF, #FFDF, #FFE3, #FFE3: 'Sh
62040 DEF CHAR 83+165, #FFFD, #FFFD, #FFDD, #FFDD, #FFDD, #FFDD, #FFFF, #FFFF: 'Sb
62050 DEF CHAR 84+117, #FFC1, #FFC1, #FFF7, #FFF7, #FFF7, #FFF7, #FFF7, #FFF7: 'Th
62060 DEF CHAR 84+165, #FFF7, #FFF7, #FFF7, #FFF7, #FFF7, #FFF7, #FFF7, #FFF7: 'Tb
62070 DEF CHAR 85+117, #FFDD, #FFDD, #FFDD, #FFDD, #FFDD, #FFDD, #FFDD, #FFDD: 'Uh
62080 DEF CHAR 85+165, #FFDD, #FFDD, #FFDD, #FFDD, #FFE3, #FFE3, #FFFF, #FFFF: 'Ub
62090 DEF CHAR 86+117, #FFDD, #FFDD, #FFDD, #FFDD, #FFDD, #FFDD, #FFDD, #FFDD: 'Vh
62100 DEF CHAR 86+165, #FFDD, #FFDD, #FFEB, #FFEB, #FFF7, #FFF7, #FFFF, #FFFF: 'Vb
62110 DEF CHAR 87+117, #FFDD, #FFDD, #FFDD, #FFDD, #FFDD, #FFDD, #FFD5, #FFD5: 'Wh
62120 DEF CHAR 87+165, #FFD5, #FFD5, #FFC9, #FFC9, #FFDD, #FFDD, #FFFF, #FFFF: 'Wb
62130 DEF CHAR 88+117, #FFDD, #FFDD, #FFDD, #FFDD, #FFEB, #FFEB, #FFF7, #FFF7: 'Xh
62140 DEF CHAR 88+165, #FFEB, #FFEB, #FFDD, #FFDD, #FFDD, #FFDD, #FFFF, #FFFF: 'Xb
62150 DEF CHAR 89+117, #FFDD, #FFDD, #FFDD, #FFDD, #FFEB, #FFEB, #FFF7, #FFF7: 'Yh
62160 DEF CHAR 89+165, #FFF7, #FFF7, #FFF7, #FFF7, #FFF7, #FFF7, #FFFF, #FFFF: 'Yb
62170 DEF CHAR 90+117, #FFC1, #FFC1, #FFFD, #FFFD, #FFFB, #FFFB, #FFF7, #FFF7: 'Zh

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62180 DEF CHAR 90+165,#FFEF,#FFEF,#FFDF,#FFDF,#FFC1,#FFC1,#FFFF,#FFFF:' Zb
62185 RETURN
62190 `DEF CHAR 91+117,#FFE1,#FFE1,#FFEF,#FFEF,#FFEF,#FFEF,#FFEF,#FFEF:' [h
62200 `DEF CHAR 91+165,#FFEF,#FFEF,#FFEF,#FFEF,#FFE1,#FFE1,#FFFF,#FFFF:' [b
62210 `DEF CHAR 92+117,#FFFF,#FFFF,#FFDF,#FFDF,#FFEF,#FFEF,#FFF7,#FFF7:' \h
62220 `DEF CHAR 92+165,#FFFB,#FFFB,#FFFD,#FFFD,#FFFF,#FFFF,#FFF7,#FFF7:' \b
62230 `DEF CHAR 93+117,#FFC3,#FFC3,#FFFB,#FFFB,#FFFB,#FFFB,#FFFB,#FFFB:' ]h
62240 `DEF CHAR 93+165,#FFFB,#FFFB,#FFFB,#FFFB,#FFC3,#FFC3,#FFFF,#FFFF:' ]b
62250 `DEF CHAR 94+117,#FFF7,#FFF7,#FFEB,#FFEB,#FFD5,#FFD5,#FFF7,#FFF7:' ^h
62260 `DEF CHAR 94+165,#FFF7,#FFF7,#FFF7,#FFF7,#FFF7,#FFF7,#FFFF,#FFFF:' ^b
62270 `DEF CHAR 95+117,#FFF1,#FFF1,#FFEF,#FFEF,#FFEF,#FFEF,#FFEF,#FFEF:' £h
62280 `DEF CHAR 95+165,#FFC3,#FFC3,#FFEF,#FFEF,#FFC1,#FFC1,#FFFF,#FFFF:' £b
62290 `DEF CHAR 96+117,#FFF3,#FFF3,#FFED,#FFED,#FFD2,#FFD2,#FFD6,#FFD6:' (c)h
62300 `DEF CHAR 96+165,#FFD2,#FFD2,#FFED,#FFED,#FFF3,#FFF3,#FFFF,#FFFF:' (c)b
62310 `DEF CHAR 97+117,#FFFF,#FFFF,#FFFF,#FFFF,#FFE3,#FFE3,#FFFD,#FFFD:' ah
62320 `DEF CHAR 97+165,#FFE1,#FFE1,#FFDD,#FFDD,#FFE1,#FFE1,#FFFF,#FFFF:' ab
62330 `DEF CHAR 98+117,#FFDF,#FFDF,#FFDF,#FFDF,#FFC3,#FFC3,#FFDD,#FFDD:' bh
62340 `DEF CHAR 98+165,#FFDD,#FFDD,#FFDD,#FFDD,#FFC3,#FFC3,#FFFF,#FFFF:' bb
62350 `DEF CHAR 99+117,#FFFF,#FFFF,#FFF7,#FFF7,#FFE1,#FFE1,#FFDF,#FFDF:' ch
62360 `DEF CHAR 99+165,#FFDF,#FFDF,#FFDF,#FFDF,#FFE1,#FFE1,#FFFF,#FFFF:' cb
62370 `DEF CHAR100+117,#FFFD,#FFFD,#FFFD,#FFFD,#FFE1,#FFE1,#FFDD,#FFDD:' dh
62380 `DEF CHAR100+165,#FFDD,#FFDD,#FFDD,#FFDD,#FFE1,#FFE1,#FFFF,#FFFF:' db
62390 `DEF CHAR101+117,#FFFF,#FFFF,#FFFF,#FFFF,#FFE3,#FFE3,#FFDD,#FFDD:' eh
62400 `DEF CHAR101+165,#FFC1,#FFC1,#FFDF,#FFDF,#FFE1,#FFE1,#FFFF,#FFFF:' eb
62410 `DEF CHAR102+117,#FFF3,#FFF3,#FFED,#FFED,#FFEF,#FFEF,#FFC3,#FFC3:' fh
62420 `DEF CHAR102+165,#FFEF,#FFEF,#FFEF,#FFEF,#FFEF,#FFEF,#FFFF,#FFFF:' fb
62430 `DEF CHAR103+117,#FFFF,#FFFF,#FFFF,#FFFF,#FFE3,#FFE3,#FFDD,#FFDD:' gh
62440 `DEF CHAR103+165,#FFDD,#FFDD,#FFE1,#FFE1,#FFFD,#FFFD,#FFE3,#FFE3:' gb
62450 `DEF CHAR104+117,#FFDF,#FFDF,#FFDF,#FFDF,#FFC3,#FFC3,#FFDD,#FFDD:' hh
62460 `DEF CHAR104+165,#FFDD,#FFDD,#FFDD,#FFDD,#FFDD,#FFDD,#FFFF,#FFFF:' hb
62470 `DEF CHAR105+117,#FFF7,#FFF7,#FFF7,#FFF7,#FFE7,#FFE7,#FFF7,#FFF7:' ih
62480 `DEF CHAR105+165,#FFF7,#FFF7,#FFF7,#FFF7,#FFE3,#FFE3,#FFFF,#FFFF:' ib
62490 `DEF CHAR106+117,#FFFB,#FFFB,#FFFF,#FFFF,#FFF3,#FFF3,#FFEB,#FFEB:' jh
62500 `DEF CHAR106+165,#FFFB,#FFFB,#FFFB,#FFFB,#FFDB,#FFDB,#FFE7,#FFE7:' jb
62510 `DEF CHAR107+117,#FFDF,#FFDF,#FFDF,#FFDF,#FFDD,#FFDD,#FFDB,#FFDB:' kh
62520 `DEF CHAR107+165,#FFC7,#FFC7,#FFDB,#FFDB,#FFDD,#FFDD,#FFFF,#FFFF:' kb
62530 `DEF CHAR108+117,#FFE7,#FFE7,#FFF7,#FFF7,#FFF7,#FFF7,#FFF7,#FFF7:' lh
62540 `DEF CHAR108+165,#FFF7,#FFF7,#FFF7,#FFF7,#FFE3,#FFE3,#FFFF,#FFFF:' lb
62550 `DEF CHAR109+117,#FFFF,#FFFF,#FFFF,#FFFF,#FFC9,#FFC9,#FFD5,#FFD5:' mh
62560 `DEF CHAR109+165,#FFD5,#FFD5,#FFD5,#FFD5,#FFDD,#FFDD,#FFFF,#FFFF:' mb
62570 `DEF CHAR110+117,#FFFF,#FFFF,#FFFF,#FFFF,#FFC3,#FFC3,#FFDD,#FFDD:' nh
62580 `DEF CHAR110+165,#FFDD,#FFDD,#FFDD,#FFDD,#FFDD,#FFDD,#FFFF,#FFFF:' nb
62590 `DEF CHAR111+117,#FFFF,#FFFF,#FFFF,#FFFF,#FFE3,#FFE3,#FFDD,#FFDD:' oh
62600 `DEF CHAR111+165,#FFDD,#FFDD,#FFDD,#FFDD,#FFE3,#FFE3,#FFFF,#FFFF:' ob
62610 `DEF CHAR112+117,#FFFF,#FFFF,#FFFF,#FFFF,#FFC3,#FFC3,#FFDD,#FFDD:' ph
62620 `DEF CHAR112+165,#FFDD,#FFDD,#FFC3,#FFC3,#FFDF,#FFDF,#FFDF,#FFDF:' pb
62630 `DEF CHAR113+117,#FFFF,#FFFF,#FFFF,#FFFF,#FFE1,#FFE1,#FFDD,#FFDD:' qh
62640 `DEF CHAR113+165,#FFDD,#FFDD,#FFE1,#FFE1,#FFFD,#FFFD,#FFFD,#FFFD:' qb
62650 `DEF CHAR114+117,#FFFF,#FFFF,#FFFF,#FFFF,#FFD1,#FFD1,#FFCF,#FFCF:' rh
62660 `DEF CHAR114+165,#FFDF,#FFDF,#FFDF,#FFDF,#FFDF,#FFDF,#FFFF,#FFFF:' rb
62670 `DEF CHAR115+117,#FFFF,#FFFF,#FFFF,#FFFF,#FFE1,#FFE1,#FFDF,#FFDF:' sh
62680 `DEF CHAR115+165,#FFE3,#FFE3,#FFFD,#FFFD,#FFC3,#FFC3,#FFFF,#FFFF:' sb
62690 `DEF CHAR116+117,#FFEF,#FFEF,#FFEF,#FFEF,#FFC3,#FFC3,#FFEF,#FFEF:' th
62700 `DEF CHAR116+165,#FFEF,#FFEF,#FFED,#FFED,#FFF3,#FFF3,#FFFF,#FFFF:' tb
62710 `DEF CHAR117+117,#FFFF,#FFFF,#FFFF,#FFFF,#FFDD,#FFDD,#FFDD,#FFDD:' uh
62720 `DEF CHAR117+165,#FFDD,#FFDD,#FFD9,#FFD9,#FFE5,#FFE5,#FFFF,#FFFF:' ub
62730 `DEF CHAR118+117,#FFFF,#FFFF,#FFFF,#FFFF,#FFDD,#FFDD,#FFDD,#FFDD:' vh
62740 `DEF CHAR118+165,#FFDD,#FFDD,#FFEB,#FFEB,#FFF7,#FFF7,#FFFF,#FFFF:' vb
62750 `DEF CHAR119+117,#FFFF,#FFFF,#FFFF,#FFFF,#FFDD,#FFDD,#FFDD,#FFDD:' wh
62760 `DEF CHAR119+165,#FFD5,#FFD5,#FFD5,#FFD5,#FFC9,#FFC9,#FFFF,#FFFF:' wb
62770 `DEF CHAR120+117,#FFFF,#FFFF,#FFFF,#FFFF,#FFDD,#FFDD,#FFEB,#FFEB:' xh
62780 `DEF CHAR120+165,#FFF7,#FFF7,#FFEB,#FFEB,#FFDD,#FFDD,#FFFF,#FFFF:' xb
62790 `DEF CHAR121+117,#FFFF,#FFFF,#FFFF,#FFFF,#FFDD,#FFDD,#FFDD,#FFDD:' yh
62800 `DEF CHAR121+165,#FFDD,#FFDD,#FFE1,#FFE1,#FFFD,#FFFD,#FFE3,#FFE3:' yb
62810 `DEF CHAR122+117,#FFFF,#FFFF,#FFFF,#FFFF,#FFC1,#FFC1,#FFFB,#FFFB:' zh
62820 `DEF CHAR122+165,#FFF7,#FFF7,#FFEF,#FFEF,#FFC1,#FFC1,#FFFF,#FFFF:' zb
62830 `DEF CHAR123+117,#FFF1,#FFF1,#FFE7,#FFE7,#FFE7,#FFE7,#FFCF,#FFCF:' {h

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62840 `DEF CHAR123+165,#FFE7,#FFE7,#FFE7,#FFE7,#FFF1,#FFF1,#FFF7,#FFF7:'{b
62850 `DEF CHAR124+117,#FFF7,#FFF7,#FFF7,#FFF7,#FFF7,#FFF7,#FFF7,#FFF7:'|h
62860 `DEF CHAR124+165,#FFF7,#FFF7,#FFF7,#FFF7,#FFF7,#FFF7,#FFF7,#FFF7:'|b
62870 `DEF CHAR125+117,#FFC7,#FFC7,#FFF3,#FFF3,#FFF3,#FFF3,#FFF9,#FFF9:'}h
62880 `DEF CHAR125+165,#FFF3,#FFF3,#FFF3,#FFF3,#FFC7,#FFC7,#FFF7,#FFF7:'}b
62890 `DEF CHAR126+117,#FFD5,#FFD5,#FFEA,#FFEA,#FFD5,#FFD5,#FFEA,#FFEA:'damierh
62900 `DEF CHAR126+165,#FFD5,#FFD5,#FFEA,#FFEA,#FFD5,#FFD5,#FFEA,#FFEA:'damierb
62910 `DEF CHAR127+117,#FFC0,#FFC0,#FFC0,#FFC0,#FFC0,#FFC0,#FFC0,#FFC0:'bloch
62920 `DEF CHAR127+165,#FFC0,#FFC0,#FFC0,#FFC0,#FFC0,#FFC0,#FFC0,#FFC0:'blocb
62930 `RETURN
62940 `
63000 ` *** Definition des couleurs
63010 DEF INK 0,#0000:'Palette 0 Couleur 0 Noir PA=#2000
63020 DEF INK 1,#7FFF:'Palette 0 Couleur 1 Blanc
63030 DEF INK 2,#001F:'Palette 0 Couleur 2 Rouge
63040 DEF INK 3,#03FF:'Palette 0 Couleur 3 Jaune
63050 DEF INK 4,#0000:'Palette 1 Couleur 0 Noir PA=#2400
63060 DEF INK 5,#7C00:'Palette 1 Couleur 1 Bleu
63070 DEF INK 6,#7C1F:'Palette 1 Couleur 2 Magenta
63080 DEF INK 7,#03E0:'Palette 1 Couleur 3 Vert
63090 DEF INK 8,#0000:'Palette 2 Couleur 0 Noir PA=#2800
63100 DEF INK 9,#03FF:'Palette 2 Couleur 1 Jaune
63110 DEF INK10,#7C00:'Palette 2 Couleur 2 Bleu
63120 DEF INK11,#7FE0:'Palette 2 Couleur 3 Cyan
63130 DEF INK12,#0000:'Palette 3 Couleur 0 Noir PA=#2C00
63140 DEF INK13,#03E0:'Palette 3 Couleur 1 Vert
63150 DEF INK14,#7C1F:'Palette 3 Couleur 2 Magenta
63160 DEF INK15,#7FFF:'Palette 3 Couleur 3 Blanc
63170 DEF INK16,#0000:'Palette 4 Couleur 0 Noir PA=#3000
63180 DEF INK17,#001F:'Palette 4 Couleur 1 Rouge
63190 DEF INK18,#7FE0:'Palette 4 Couleur 2 Cyan
63200 DEF INK19,#7C00:'Palette 4 Couleur 3 Bleu
63298 RETURN
63299 `

```

Résultat:

DOUBLE HAUTEUR

