

L2/17-078

The current hangul sorting order defined in the Unicode Collation Algorithm (UCA) is very different from the order defined in KS X 1026-1 (or from the order Korean speakers would typically expect).

Order in the Unicode Collation Algorithm

The following is the order currently defined in the UCA.

1) Order of leading (initial) consonants (in Unicode code points):

U+1100, U+1101, U+1102, U+1103, U+1104, U+1105, U+1106, U+1107, U+1108, U+1109, U+110A,
U+110B, U+110C, U+110D, U+110E, U+110F, U+1110, U+1111, U+1112, U+1113, U+1114, U+1115,
U+1116, U+1117, U+1118, U+1119, U+111A, U+111B, U+111C, U+111D, U+111E, U+111F, U+1120,
U+1121, U+1122, U+1123, U+1124, U+1125, U+1126, U+1127, U+1128, U+1129, U+112A, U+112B,
U+112C, U+112D, U+112E, U+112F, U+1130, U+1131, U+1132, U+1133, U+1134, U+1135, U+1136,
U+1137, U+1138, U+1139, U+113A, U+113B, U+113C, U+113D, U+113E, U+113F, U+1140, U+1141,
U+1142, U+1143, U+1144, U+1145, U+1146, U+1147, U+1148, U+1149, U+114A, U+114B, U+114C,
U+114D, U+114E, U+114F, U+1150, U+1151, U+1152, U+1153, U+1154, U+1155, U+1156, U+1157,
U+1158, U+1159, U+115A, U+115B, U+115C, U+115D, U+115E, U+A960, U+A961, U+A962, U+A963,
U+A964, U+A965, U+A966, U+A967, U+A968, U+A969, U+A96A, U+A96B, U+A96C, U+A96D, U+A96E,
U+A96F, U+A970, U+A971, U+A972, U+A973, U+A974, U+A975, U+A976, U+A977, U+A978, U+A979,
U+A97A, U+A97B, U+A97C, U+115F

[illegible]

2) Order of medial vowels (in Unicode code points):

U+1160, U+1161, U+1162, U+1163, U+1164, U+1165, U+1166, U+1167, U+1168, U+1169, U+116A,
U+116B, U+116C, U+116D, U+116E, U+116F, U+1170, U+1171, U+1172, U+1173, U+1174, U+1175,
U+1176, U+1177, U+1178, U+1179, U+117A, U+117B, U+117C, U+117D, U+117E, U+117F, U+1180,
U+1181, U+1182, U+1183, U+1184, U+1185, U+1186, U+1187, U+1188, U+1189, U+118A, U+118B,
U+118C, U+118D, U+118E, U+118F, U+1190, U+1191, U+1192, U+1193, U+1194, U+1195, U+1196,
U+1197, U+1198, U+1199, U+119A, U+119B, U+119C, U+119D, U+119E, U+119F, U+11A0, U+11A1,
U+11A2, U+11A3, U+11A4, U+11A5, U+11A6, U+11A7, U+D7B0, U+D7B1, U+D7B2, U+D7B3, U+D7B4,
U+D7B5, U+D7B6, U+D7B7, U+D7B8, U+D7B9, U+D7BA, U+D7BB, U+D7BC, U+D7BD, U+D7BE, U+D7BF,
U+D7C0, U+D7C1, U+D7C2, U+D7C3, U+D7C4, U+D7C5, U+D7C6

[illegible]

3) Order of trailing (final) consonants (in Unicode code points):

U+11A8, U+11A9, U+11AA, U+11AB, U+11AC, U+11AD, U+11AE, U+11AF, U+11B0, U+11B1, U+11B2, U+11B3, U+11B4, U+11B5, U+11B6, U+11B7, U+11B8, U+11B9, U+11BA, U+11BB, U+11BC, U+11BD, U+11BE, U+11BF, U+11C0, U+11C1, U+11C2, U+11C3, U+11C4, U+11C5, U+11C6, U+11C7, U+11C8, U+11C9, U+11CA, U+11CB, U+11CC, U+11CD, U+11CE, U+11CF, U+11D0, U+11D1, U+11D2, U+11D3, U+11D4, U+11D5, U+11D6, U+11D7, U+11D8, U+11D9, U+11DA, U+11DB, U+11DC, U+11DD, U+11DE, U+11DF, U+11E0, U+11E1, U+11E2, U+11E3, U+11E4, U+11E5, U+11E6, U+11E7, U+11E8, U+11E9, U+11EA, U+11EB, U+11EC, U+11ED, U+11EE, U+11EF, U+11F0, U+11F1, U+11F2, U+11F3, U+11F4, U+11F5, U+11F6, U+11F7, U+11F8, U+11F9, U+11FA, U+11FB, U+11FC, U+11FD, U+11FE, U+11FF, U+D7CB, U+D7CC, U+D7CD, U+D7CE, U+D7CF, U+D7D0, U+D7D1, U+D7D2, U+D7D3, U+D7D4, U+D7D5, U+D7D6, U+D7D7, U+D7D8, U+D7D9, U+D7DA, U+D7DB, U+D7DC, U+D7DD, U+D7DE, U+D7DF, U+D7E0, U+D7E1, U+D7E2, U+D7E3, U+D7E4, U+D7E5, U+D7E6, U+D7E7, U+D7E8, U+D7E9, U+D7EA, U+D7EB, U+D7EC, U+D7ED, U+D7EE, U+D7EF, U+D7F0, U+D7F1, U+D7F2, U+D7F3, U+D7F4, U+D7F5, U+D7F6, U+D7F7, U+D7F8, U+D7F9, U+D7FA, U+D7FB

[illegible]

The order in the UCA solely goes by Unicode code points (with the exception of U+115F), which is very far from optimal. This is like sorting extended Latin letters (č, é, ß, þ, etc.) solely according to their Unicode code points (é (U+00E9) comes before č (U+010D) in the code point order), which is definitely not a good idea and should be avoided. Likewise, sorting hangul jamo solely according to their Unicode code points is definitely not a good idea and should be avoided.

(Document continued on the next page)

Order in KS X 1026-1

The following is the order defined in KS X 1026-1 (see <http://www.unicode.org/L2/L2008/08225-n3422.pdf#page=49>, and the tables on <http://www.unicode.org/L2/L2008/08225-n3422.pdf#page=53> and <http://www.unicode.org/L2/L2008/08225-n3422.pdf#page=54>).

1) Order of leading consonants (in Unicode code points):

U+1100, U+1101, U+115A, U+1102, U+1113, U+1114, U+1115, U+1116, U+115B, U+115C, U+115D,
U+1103, U+1117, U+1104, U+115E, U+A960, U+A961, U+A962, U+A963, U+1105, U+A964, U+A965,
U+1118, U+A966, U+A967, U+1119, U+A968, U+A969, U+A96A, U+A96B, U+A96C, U+A96D, U+A96E,
U+111A, U+111B, U+1106, U+A96F, U+A970, U+111C, U+A971, U+111D, U+1107, U+111E, U+111F,
U+1120, U+1108, U+1121, U+1122, U+1123, U+1124, U+1125, U+1126, U+A972, U+1127, U+1128,
U+A973, U+1129, U+112A, U+A974, U+112B, U+112C, U+1109, U+112D, U+112E, U+112F, U+1130,
U+1131, U+1132, U+1133, U+110A, U+A975, U+1134, U+1135, U+1136, U+1137, U+1138, U+1139,
U+113A, U+113B, U+113C, U+113D, U+113E, U+113F, U+1140, U+110B, U+1141, U+1142, U+A976,
U+1143, U+1144, U+1145, U+1146, U+1147, U+1148, U+1149, U+114A, U+114B, U+A977, U+114C,
U+110C, U+114D, U+110D, U+A978, U+114E, U+114F, U+1150, U+1151, U+110E, U+1152, U+1153,
U+1154, U+1155, U+110F, U+1110, U+A979, U+1111, U+1156, U+A97A, U+1157, U+1112, U+A97B,
U+1158, U+1159, U+A97C, U+115F

[illegible]

2) Order of medial vowels (in Unicode code points):

U+1160, U+1161, U+1176, U+1177, U+11A3, U+1162, U+1163, U+1178, U+1179, U+11A4, U+1164,
U+1165, U+117A, U+117B, U+117C, U+1166, U+1167, U+11A5, U+117D, U+117E, U+1168, U+1169,
U+116A, U+116B, U+11A6, U+11A7, U+117F, U+1180, U+D7B0, U+1181, U+1182, U+D7B1, U+1183,
U+116C, U+116D, U+D7B2, U+D7B3, U+1184, U+1185, U+D7B4, U+1186, U+1187, U+1188, U+116E,
U+1189, U+118A, U+116F, U+118B, U+1170, U+D7B5, U+118C, U+118D, U+1171, U+D7B6, U+1172,
U+118E, U+D7B7, U+118F, U+1190, U+1191, U+1192, U+D7B8, U+1193, U+1194, U+1173, U+D7B9,
U+D7BA, U+D7BB, U+D7BC, U+1195, U+1196, U+1174, U+1197, U+1175, U+1198, U+1199, U+D7BD,
U+D7BE, U+D7BF, U+D7C0, U+119A, U+D7C1, U+D7C2, U+119B, U+D7C3, U+119C, U+D7C4, U+119D,
U+119E, U+D7C5, U+119F, U+D7C6, U+11A0, U+11A1, U+11A2

(HJF, 𐎧, 𐎡, 𐎢, 𐎣, 𐎤, 𐎥, 𐎦, 𐎧, 𐎨, 𐎩, 𐎪, 𐎫, 𐎬, 𐎭, 𐎮, 𐎯, 𐎰, 𐎱, 𐎲, 𐎳, 𐎴, 𐎵, 𐎶, 𐎷, 𐎸, 𐎹, 𐎺, 𐎻, 𐎼, 𐎽, 𐎾, 𐎿, 𐏀, 𐏁, 𐏂, 𐏃, 𐏄, 𐏅, 𐏆, 𐏇, 𐏈, 𐏉, 𐏊, 𐏋, 𐏌, 𐏍, 𐏎, 𐏏, 𐏐, 𐏑, 𐏒, 𐏓, 𐏔, 𐏕, 𐏖, 𐏗, 𐏘, 𐏙, 𐏚, 𐏛, 𐏜, 𐏝, 𐏞, 𐏟, 𐏠, 𐏡, 𐏢, 𐏣, 𐏤, 𐏥, 𐏦, 𐏧, 𐏨, 𐏩, 𐏪, 𐏫, 𐏬, 𐏭, 𐏮, 𐏯, 𐏰, 𐏱, 𐏲, 𐏳, 𐏴, 𐏵, 𐏶, 𐏷, 𐏸, 𐏹, 𐏺, 𐏻, 𐏼, 𐏽, 𐏾, 𐏿, 𐐀, 𐐁, 𐐂, 𐐃, 𐐄, 𐐅, 𐐆, 𐐇, 𐐈, 𐐉, 𐐊, 𐐋, 𐐌, 𐐍, 𐐎, 𐐏, 𐐐, 𐐑, 𐐒, 𐐓, 𐐔, 𐐕, 𐐖, 𐐗, 𐐘, 𐐙, 𐐚, 𐐛, 𐐜, 𐐝, 𐐞, 𐐟, 𐐠, 𐐡, 𐐢, 𐐣, 𐐤, 𐐥, 𐐦, 𐐧, 𐐨, 𐐩, 𐐪, 𐐫, 𐐬, 𐐭, 𐐮, 𐐯, 𐐰, 𐐱, 𐐲, 𐐳, 𐐴, 𐐵, 𐐶, 𐐷, 𐐸, 𐐹, 𐐺, 𐐻, 𐐼, 𐐽, 𐐾, 𐐿, 𐑀, 𐑁, 𐑂, 𐑃, 𐑄, 𐑅, 𐑆, 𐑇, 𐑈, 𐑉, 𐑊, 𐑋, 𐑌, 𐑍, 𐑎, 𐑏, 𐑐, 𐑑, 𐑒, 𐑓, 𐑔, 𐑕, 𐑖, 𐑗, 𐑘, 𐑙, 𐑚, 𐑛, 𐑜, 𐑝, 𐑞, 𐑟, 𐑠, 𐑡, 𐑢, 𐑣, 𐑤, 𐑥, 𐑦, 𐑧, 𐑨, 𐑩, 𐑪, 𐑫, 𐑬, 𐑭, 𐑮, 𐑯, 𐑰, 𐑱, 𐑲, 𐑳, 𐑴, 𐑵, 𐑶, 𐑷, 𐑸, 𐑹, 𐑺, 𐑻, 𐑼, 𐑽, 𐑾, 𐑿, 𐒀, 𐒁, 𐒂, 𐒃, 𐒄, 𐒅, 𐒆, 𐒇, 𐒈, 𐒉, 𐒊, 𐒋, 𐒌, 𐒍, 𐒎, 𐒏, 𐒐, 𐒑, 𐒒, 𐒓, 𐒔, 𐒕, 𐒖, 𐒗, 𐒘, 𐒙, 𐒚, 𐒛, 𐒜, 𐒝, 𐒞, 𐒟, 𐒠, 𐒡, 𐒢, 𐒣, 𐒤, 𐒥, 𐒦, 𐒧, 𐒨, 𐒩, 𐒪, 𐒫, 𐒬, 𐒭, 𐒮, 𐒯, 𐒰, 𐒱, 𐒲, 𐒳, 𐒴, 𐒵, 𐒶, 𐒷, 𐒸, 𐒹, 𐒺, 𐒻, 𐒼, 𐒽, 𐒾, 𐒿, 𐓀, 𐓁, 𐓂, 𐓃, 𐓄, 𐓅, 𐓆, 𐓇, 𐓈, 𐓉, 𐓊, 𐓋, 𐓌, 𐓍, 𐓎, 𐓏, 𐓐, 𐓑, 𐓒, 𐓓, 𐓔, 𐓕, 𐓖, 𐓗, 𐓘, 𐓙, 𐓚, 𐓛, 𐓜, 𐓝, 𐓞, 𐓟, 𐓠, 𐓡, 𐓢, 𐓣, 𐓤, 𐓥, 𐓦, 𐓧, 𐓨, 𐓩, 𐓪, 𐓫, 𐓬, 𐓭, 𐓮, 𐓯, 𐓰, 𐓱, 𐓲, 𐓳, 𐓴, 𐓵, 𐓶, 𐓷, 𐓸, 𐓹, 𐓺, 𐓻, 𐓼, 𐓽, 𐓾, 𐓿, 𐔀, 𐔁, 𐔂, 𐔃, 𐔄, 𐔅, 𐔆, 𐔇, 𐔈, 𐔉, 𐔊, 𐔋, 𐔌, 𐔍, 𐔎, 𐔏, 𐔐, 𐔑, 𐔒, 𐔓, 𐔔, 𐔕, 𐔖, 𐔗, 𐔘, 𐔙, 𐔚, 𐔛, 𐔜, 𐔝, 𐔞, 𐔟, 𐔠, 𐔡, 𐔢, 𐔣, 𐔤, 𐔥, 𐔦, 𐔧, 𐔨, 𐔩, 𐔪, 𐔫, 𐔬, 𐔭, 𐔮, 𐔯, 𐔰, 𐔱, 𐔲, 𐔳, 𐔴, 𐔵, 𐔶, 𐔷, 𐔸, 𐔹, 𐔺, 𐔻, 𐔼, 𐔽, 𐔾, 𐔿, 𐕀, 𐕁, 𐕂, 𐕃, 𐕄, 𐕅, 𐕆, 𐕇, 𐕈, 𐕉, 𐕊, 𐕋, 𐕌, 𐕍, 𐕎, 𐕏, 𐕐, 𐕑, 𐕒, 𐕓, 𐕔, 𐕕, 𐕖, 𐕗, 𐕘, 𐕙, 𐕚, 𐕛, 𐕜, 𐕝, 𐕞, 𐕟, 𐕠, 𐕡, 𐕢, 𐕣, 𐕤, 𐕥, 𐕦, 𐕧, 𐕨, 𐕩, 𐕪, 𐕫, 𐕬, 𐕭, 𐕮, 𐕯, 𐕰, 𐕱, 𐕲, 𐕳, 𐕴, 𐕵, 𐕶, 𐕷, 𐕸, 𐕹, 𐕺, 𐕻, 𐕼, 𐕽, 𐕾, 𐕿, 𐖀, 𐖁, 𐖂, 𐖃, 𐖄, 𐖅, 𐖆, 𐖇, 𐖈, 𐖉, 𐖊, 𐖋, 𐖌, 𐖍, 𐖎, 𐖏, 𐖐, 𐖑, 𐖒, 𐖓, 𐖔, 𐖕, 𐖖, 𐖗, 𐖘, 𐖙, 𐖚, 𐖛, 𐖜, 𐖝, 𐖞, 𐖟, 𐖠, 𐖡, 𐖢, 𐖣, 𐖤, 𐖥, 𐖦, 𐖧, 𐖨, 𐖩, 𐖪, 𐖫, 𐖬, 𐖭, 𐖮, 𐖯, 𐖰, 𐖱, 𐖲, 𐖳, 𐖴, 𐖵, 𐖶, 𐖷, 𐖸, 𐖹, 𐖺, 𐖻, 𐖼, 𐖽, 𐖾, 𐖿, 𐗀, 𐗁, 𐗂, 𐗃, 𐗄, 𐗅, 𐗆, 𐗇, 𐗈, 𐗉, 𐗊, 𐗋, 𐗌, 𐗍, 𐗎, 𐗏, 𐗐, 𐗑, 𐗒, 𐗓, 𐗔, 𐗕, 𐗖, 𐗗, 𐗘, 𐗙, 𐗚, 𐗛, 𐗜, 𐗝, 𐗞, 𐗟, 𐗠, 𐗡, 𐗢, 𐗣, 𐗤, 𐗥, 𐗦, 𐗧, 𐗨, 𐗩, 𐗪, 𐗫, 𐗬, 𐗭, 𐗮, 𐗯, 𐗰, 𐗱, 𐗲, 𐗳, 𐗴, 𐗵, 𐗶, 𐗷, 𐗸, 𐗹, 𐗺, 𐗻, 𐗼, 𐗽, 𐗾, 𐗿, 𐘀, 𐘁, 𐘂, 𐘃, 𐘄, 𐘅, 𐘆, 𐘇, 𐘈, 𐘉, 𐘊, 𐘋, 𐘌, 𐘍, 𐘎, 𐘏, 𐘐, 𐘑, 𐘒, 𐘓, 𐘔, 𐘕, 𐘖, 𐘗, 𐘘, 𐘙, 𐘚, 𐘛, 𐘜, 𐘝, 𐘞, 𐘟, 𐘠, 𐘡, 𐘢, 𐘣, 𐘤, 𐘥, 𐘦, 𐘧, 𐘨, 𐘩, 𐘪, 𐘫, 𐘬, 𐘭, 𐘮, 𐘯, 𐘰, 𐘱, 𐘲, 𐘳, 𐘴, 𐘵, 𐘶, 𐘷, 𐘸, 𐘹, 𐘺, 𐘻, 𐘼, 𐘽, 𐘾, 𐘿, 𐙀, 𐙁, 𐙂, 𐙃, 𐙄, 𐙅, 𐙆, 𐙇, 𐙈,

3) Order of trailing consonants (in Unicode code points):

(none), U+11A8, U+11A9, U+11FA, U+11C3, U+11FB, U+11AA, U+11C4, U+11FC, U+11FD, U+11FE, U+11AB, U+11C5, U+11FF, U+11C6, U+D7CB, U+11C7, U+11C8, U+11AC, U+D7CC, U+11C9, U+11AD, U+11AE, U+11CA, U+D7CD, U+D7CE, U+11CB, U+D7CF, U+D7D0, U+D7D1, U+D7D2, U+D7D3, U+D7D4, U+11AF, U+11B0, U+D7D5, U+11CC, U+D7D6, U+11CD, U+11CE, U+11CF, U+11D0, U+D7D7, U+11B1, U+11D1, U+11D2, U+D7D8, U+11B2, U+D7D9, U+11D3, U+D7DA, U+11D4, U+11D5, U+11B3, U+11D6, U+11D7, U+D7DB, U+11D8, U+11B4, U+11B5, U+11B6, U+11D9, U+D7DC, U+D7DD, U+11B7, U+11DA, U+D7DE, U+D7DF, U+11DB, U+D7E0, U+11DC, U+D7E1, U+11DD, U+11DE, U+11DF, U+D7E2, U+11E0, U+11E1, U+11E2, U+11B8, U+D7E3, U+11E3, U+D7E4, U+D7E5, U+D7E6, U+11B9, U+D7E7, U+D7E8, U+D7E9, U+11E4, U+11E5, U+11E6, U+11BA, U+11E7, U+11E8, U+11E9, U+D7EA, U+11EA, U+D7EB, U+11BB, U+D7EC, U+D7ED, U+D7EE, U+D7EF, U+D7F0, U+D7F1, U+D7F2, U+11EB, U+D7F3, U+D7F4, U+11BC, U+11F0, U+11EC, U+11ED, U+D7F5, U+11F1, U+11F2, U+11EE, U+11EF, U+D7F6, U+11BD, U+D7F7, U+D7F8, U+D7F9, U+11BE, U+11BF, U+11C0, U+11C1, U+11F3, U+D7FA, U+D7FB, U+11F4, U+11C2, U+11F5, U+11F6, U+11F7, U+11F8, U+11F9

[illegible]

(Document continued on the next page)

Proposed changes

(Note: The two tables below are also available as separate text files (attached in this document).)

As the starting key value of hangul jamo in the <http://www.unicode.org/Public/UCA/latest/allkeys.txt> file (defines Default Unicode Collation Element Table (DUCET)) of the UCA is subject to change (3BF5 in Unicode 9.0, 3D0C in Unicode 10.0 (d1, as of this writing), and probably something else in Unicode 11.0), I list the offsets from the starting value instead. Please add the appropriate starting value to every key offset below.

The key assignments need to be changed as follows:

Table 1: Key offset to hangul jamo (pages 5–10)

Key offset	Old (current)		New	
0000	U+1100	ㄱ	U+1100	ㄱ
0001	U+1101	ㄴ	U+1101	ㄴ
0002	U+1102	ㄷ	U+115A	ㄷ
0003	U+1103	ㄹ	U+1102	ㄹ
0004	U+1104	ㅁ	U+1113	ㄴ
0005	U+1105	ㅂ	U+1114	ㄴ
0006	U+1106	ㅅ	U+1115	ㄴ
0007	U+1107	ㅇ	U+1116	ㄴ
0008	U+1108	ㅈ	U+115B	ㄴ
0009	U+1109	ㅊ	U+115C	ㄴ
000A	U+110A	ㅋ	U+115D	ㄴ
000B	U+110B	ㆁ	U+1103	ㄷ
000C	U+110C	ㅊ	U+1117	ㄷ
000D	U+110D	ㅊ	U+1104	ㄷ
000E	U+110E	ㅊ	U+115E	ㄷ
000F	U+110F	ㅋ	U+A960	ㄷ
0010	U+1110	ㅌ	U+A961	ㄷ
0011	U+1111	ㅍ	U+A962	ㄷ
0012	U+1112	ㅑ	U+A963	ㄷ
0013	U+1113	ㄴ	U+1105	ㅌ
0014	U+1114	ㄴ	U+A964	ㄴ
0015	U+1115	ㄴ	U+A965	ㄴ
0016	U+1116	ㄴ	U+1118	ㄴ
0017	U+1117	ㄷ	U+A966	ㄴ
0018	U+1118	ㄴ	U+A967	ㄴ
0019	U+1119	ㄴ	U+1119	ㄴ
001A	U+111A	ㄴ	U+A968	ㄴ

Key offset	Old (current)		New	
001B	U+111B	ㄴ	U+A969	ㄴ
001C	U+111C	ㅅ	U+A96A	ㄴ
001D	U+111D	ㅅ	U+A96B	ㄴ
001E	U+111E	ㅅ	U+A96C	ㄴ
001F	U+111F	ㅅ	U+A96D	ㄴ
0020	U+1120	ㅅ	U+A96E	ㄴ
0021	U+1121	ㅅ	U+111A	ㄴ
0022	U+1122	ㅅ	U+111B	ㄴ
0023	U+1123	ㅅ	U+1106	ㄷ
0024	U+1124	ㅅ	U+A96F	ㄷ
0025	U+1125	ㅅ	U+A970	ㄷ
0026	U+1126	ㅅ	U+111C	ㅅ
0027	U+1127	ㅅ	U+A971	ㅅ
0028	U+1128	ㅅ	U+111D	ㅅ
0029	U+1129	ㅅ	U+1107	ㅅ
002A	U+112A	ㅅ	U+111E	ㅅ
002B	U+112B	ㅅ	U+111F	ㅅ
002C	U+112C	ㅅ	U+1120	ㅅ
002D	U+112D	ㅅ	U+1108	ㅅ
002E	U+112E	ㅅ	U+1121	ㅅ
002F	U+112F	ㅅ	U+1122	ㅅ
0030	U+1130	ㅅ	U+1123	ㅅ
0031	U+1131	ㅅ	U+1124	ㅅ
0032	U+1132	ㅅ	U+1125	ㅅ
0033	U+1133	ㅅ	U+1126	ㅅ
0034	U+1134	ㅅ	U+A972	ㅅ
0035	U+1135	ㅅ	U+1127	ㅅ

Key offset	Old (current)		New	
0036	U+1136	ㄱ	U+1128	ㅅ
0037	U+1137	ㄴ	U+A973	ㅆ
0038	U+1138	ㄷ	U+1129	ㅈ
0039	U+1139	ㄹ	U+112A	ㅊ
003A	U+113A	ㅍ	U+A974	ㅌ
003B	U+113B	ㅎ	U+112B	ㄱ
003C	U+113C	ㅏ	U+112C	ㅑ
003D	U+113D	ㅓ	U+1109	ㅕ
003E	U+113E	ㅗ	U+112D	ㅛ
003F	U+113F	ㅜ	U+112E	ㅝ
0040	U+1140	ㅡ	U+112F	ㅟ
0041	U+1141	ㅣ	U+1130	ㅠ
0042	U+1142	ㅢ	U+1131	ㅣ
0043	U+1143	ㅤ	U+1132	ㅥ
0044	U+1144	ㅦ	U+1133	ㅧ
0045	U+1145	ㅨ	U+110A	ㅩ
0046	U+1146	ㅪ	U+A975	ㅫ
0047	U+1147	ㅬ	U+1134	ㅭ
0048	U+1148	ㅮ	U+1135	ㅯ
0049	U+1149	ㅰ	U+1136	ㅱ
004A	U+114A	ㅲ	U+1137	ㅳ
004B	U+114B	ㅵ	U+1138	ㅶ
004C	U+114C	ㅷ	U+1139	ㅸ
004D	U+114D	ㅹ	U+113A	ㅺ
004E	U+114E	ㅻ	U+113B	ㅼ
004F	U+114F	ㅽ	U+113C	ㅿ
0050	U+1150	ㅿ	U+113D	ㅾ
0051	U+1151	ㅿ	U+113E	ㅿ
0052	U+1152	ㅿ	U+113F	ㅿ
0053	U+1153	ㅿ	U+1140	ㅿ
0054	U+1154	ㅿ	U+110B	ㅿ
0055	U+1155	ㅿ	U+1141	ㅿ
0056	U+1156	ㅿ	U+1142	ㅿ
0057	U+1157	ㅿ	U+A976	ㅿ
0058	U+1158	ㅿ	U+1143	ㅿ

Key offset	Old (current)		New	
0059	U+1159	ㅿ	U+1144	ㅿ
005A	U+115A	ㅿ	U+1145	ㅿ
005B	U+115B	ㅿ	U+1146	ㅿ
005C	U+115C	ㅿ	U+1147	ㅿ
005D	U+115D	ㅿ	U+1148	ㅿ
005E	U+115E	ㅿ	U+1149	ㅿ
005F	U+A960	ㅿ	U+114A	ㅿ
0060	U+A961	ㅿ	U+114B	ㅿ
0061	U+A962	ㅿ	U+A977	ㅿ
0062	U+A963	ㅿ	U+114C	ㅿ
0063	U+A964	ㅿ	U+110C	ㅿ
0064	U+A965	ㅿ	U+114D	ㅿ
0065	U+A966	ㅿ	U+110D	ㅿ
0066	U+A967	ㅿ	U+A978	ㅿ
0067	U+A968	ㅿ	U+114E	ㅿ
0068	U+A969	ㅿ	U+114F	ㅿ
0069	U+A96A	ㅿ	U+1150	ㅿ
006A	U+A96B	ㅿ	U+1151	ㅿ
006B	U+A96C	ㅿ	U+110E	ㅿ
006C	U+A96D	ㅿ	U+1152	ㅿ
006D	U+A96E	ㅿ	U+1153	ㅿ
006E	U+A96F	ㅿ	U+1154	ㅿ
006F	U+A970	ㅿ	U+1155	ㅿ
0070	U+A971	ㅿ	U+110F	ㅿ
0071	U+A972	ㅿ	U+1110	ㅿ
0072	U+A973	ㅿ	U+A979	ㅿ
0073	U+A974	ㅿ	U+1111	ㅿ
0074	U+A975	ㅿ	U+1156	ㅿ
0075	U+A976	ㅿ	U+A97A	ㅿ
0076	U+A977	ㅿ	U+1157	ㅿ
0077	U+A978	ㅿ	U+1112	ㅿ
0078	U+A979	ㅿ	U+A97B	ㅿ
0079	U+A97A	ㅿ	U+1158	ㅿ
007A	U+A97B	ㅿ	U+1159	ㅿ
007B	U+A97C	ㅿ	U+A97C	ㅿ

Key offset	Old (current)		New	
007C	U+115F	HCF	U+115F	HCF
007D	U+1160	HJF	U+1160	HJF
007E	U+1161	Ტ	U+1161	Ტ
007F	U+1162	Უ	U+1176	ᲡᲢ
0080	U+1163	Ფ	U+1177	ᲡᲣ
0081	U+1164	Ქ	U+11A3	ᲡᲤ
0082	U+1165	Ღ	U+1162	Უ
0083	U+1166	Ყ	U+1163	Ფ
0084	U+1167	Შ	U+1178	ᲡᲥ
0085	U+1168	Ჩ	U+1179	ᲡᲦ
0086	U+1169	Ც	U+11A4	ᲡᲧ
0087	U+116A	Ძ	U+1164	Ქ
0088	U+116B	Წ	U+1165	Ღ
0089	U+116C	Ჭ	U+117A	ᲡᲨ
008A	U+116D	Ხ	U+117B	ᲡᲩ
008B	U+116E	Ჯ	U+117C	ᲡᲪ
008C	U+116F	Ჰ	U+1166	Ყ
008D	U+1170	Ჱ	U+1167	Შ
008E	U+1171	Ჲ	U+11A5	ᲡᲫ
008F	U+1172	Ჳ	U+117D	ᲡᲬ
0090	U+1173	Ჴ	U+117E	ᲡᲭ
0091	U+1174	Ჵ	U+1168	Ჩ
0092	U+1175	Ჶ	U+1169	Ც
0093	U+1176	Ჷ	U+116A	Ძ
0094	U+1177	Ჸ	U+116B	Წ
0095	U+1178	Ჹ	U+11A6	ᲡᲮ
0096	U+1179	Ჺ	U+11A7	ᲡᲯ
0097	U+117A	᲻	U+117F	ᲡᲰ
0098	U+117B	᲼	U+1180	ᲡᲱ
0099	U+117C	Ჽ	U+D7B0	ᲡᲲ
009A	U+117D	Ჾ	U+1181	ᲡᲳ
009B	U+117E	Ჿ	U+1182	ᲡᲴ
009C	U+117F	Რ	U+D7B1	ᲡᲵ
009D	U+1180	Ს	U+1183	ᲡᲶ
009E	U+1181	Ტ	U+116C	Ჭ

Key offset	Old (current)		New	
009F	U+1182	Უ	U+116D	Ხ
00A0	U+1183	Ფ	U+D7B2	ᲡᲰ
00A1	U+1184	Ქ	U+D7B3	ᲡᲱ
00A2	U+1185	Ღ	U+1184	ᲡᲲ
00A3	U+1186	Ყ	U+1185	ᲡᲳ
00A4	U+1187	Შ	U+D7B4	ᲡᲴ
00A5	U+1188	Ჩ	U+1186	ᲡᲤ
00A6	U+1189	Ც	U+1187	ᲡᲶ
00A7	U+118A	Ძ	U+1188	ᲡᲷ
00A8	U+118B	Წ	U+116E	Ჯ
00A9	U+118C	Ჭ	U+1189	ᲡᲸ
00AA	U+118D	Ხ	U+118A	ᲡᲹ
00AB	U+118E	Ჯ	U+116F	Ჰ
00AC	U+118F	Ჰ	U+118B	Ჱ
00AD	U+1190	Ჱ	U+1170	Ჲ
00AE	U+1191	Ჲ	U+D7B5	ᲡᲳ
00AF	U+1192	Ჳ	U+118C	Ჲ
00B0	U+1193	Ჴ	U+118D	Ჴ
00B1	U+1194	Ჵ	U+1171	Ჲ
00B2	U+1195	Ჶ	U+D7B6	ᲡᲴ
00B3	U+1196	Ჷ	U+1172	Ჴ
00B4	U+1197	Ჸ	U+118E	Ჴ
00B5	U+1198	Ჹ	U+D7B7	ᲡᲥ
00B6	U+1199	Ჺ	U+118F	Ჲ
00B7	U+119A	᲻	U+1190	Ჲ
00B8	U+119B	᲼	U+1191	Ჲ
00B9	U+119C	Ჽ	U+1192	Ჲ
00BA	U+119D	Ჾ	U+D7B8	ᲡᲦ
00BB	U+119E	Ჿ	U+1193	Ჴ
00BC	U+119F	Რ	U+1194	Ჲ
00BD	U+11A0	Ს	U+1173	Ჴ
00BE	U+11A1	Ტ	U+D7B9	ᲡᲧ
00BF	U+11A2	Უ	U+D7BA	ᲡᲨ
00C0	U+11A3	Ფ	U+D7BB	ᲡᲩ
00C1	U+11A4	Ქ	U+D7BC	ᲡᲪ

Key offset	Old (current)		New	
00C2	U+11A5	𐎠	U+1195	𐎡
00C3	U+11A6	𐎡	U+1196	𐎢
00C4	U+11A7	𐎢	U+1174	𐎣
00C5	U+D7B0	𐎣	U+1197	𐎤
00C6	U+D7B1	𐎤	U+1175	𐎥
00C7	U+D7B2	𐎥	U+1198	𐎦
00C8	U+D7B3	𐎦	U+1199	𐎧
00C9	U+D7B4	𐎧	U+D7BD	𐎨
00CA	U+D7B5	𐎨	U+D7BE	𐎩
00CB	U+D7B6	𐎩	U+D7BF	𐎪
00CC	U+D7B7	𐎪	U+D7C0	𐎫
00CD	U+D7B8	𐎫	U+119A	𐎬
00CE	U+D7B9	𐎬	U+D7C1	𐎭
00CF	U+D7BA	𐎭	U+D7C2	𐎮
00D0	U+D7BB	𐎮	U+119B	𐎯
00D1	U+D7BC	𐎯	U+D7C3	𐎰
00D2	U+D7BD	𐎰	U+119C	𐎱
00D3	U+D7BE	𐎱	U+D7C4	𐎲
00D4	U+D7BF	𐎲	U+119D	𐎳
00D5	U+D7C0	𐎳	U+119E	𐎴
00D6	U+D7C1	𐎴	U+D7C5	𐎵
00D7	U+D7C2	𐎵	U+119F	𐎶
00D8	U+D7C3	𐎶	U+D7C6	𐎷
00D9	U+D7C4	𐎷	U+11A0	𐎸
00DA	U+D7C5	𐎸	U+11A1	𐎹
00DB	U+D7C6	𐎹	U+11A2	𐎺
00DC	U+11A8	𐎻	U+11A8	𐎻
00DD	U+11A9	𐎼	U+11A9	𐎼
00DE	U+11AA	𐎽	U+11FA	𐎾
00DF	U+11AB	𐎿	U+11C3	𐎿
00E0	U+11AC	𐏀	U+11FB	𐏁
00E1	U+11AD	𐏁	U+11AA	𐏂
00E2	U+11AE	𐏂	U+11C4	𐏃
00E3	U+11AF	𐏃	U+11FC	𐏄
00E4	U+11B0	𐏄	U+11FD	𐏅

Key offset	Old (current)		New	
00E5	U+11B1	𐏅	U+11FE	𐏆
00E6	U+11B2	𐏆	U+11AB	𐏇
00E7	U+11B3	𐏇	U+11C5	𐏈
00E8	U+11B4	𐏈	U+11FF	𐏉
00E9	U+11B5	𐏉	U+11C6	𐏊
00EA	U+11B6	𐏊	U+D7CB	𐏋
00EB	U+11B7	𐏋	U+11C7	𐏌
00EC	U+11B8	𐏌	U+11C8	𐏍
00ED	U+11B9	𐏍	U+11AC	𐏎
00EE	U+11BA	𐏎	U+D7CC	𐏏
00EF	U+11BB	𐏏	U+11C9	𐏐
00F0	U+11BC	𐏐	U+11AD	𐏑
00F1	U+11BD	𐏑	U+11AE	𐏒
00F2	U+11BE	𐏒	U+11CA	𐏓
00F3	U+11BF	𐏓	U+D7CD	𐏔
00F4	U+11C0	𐏔	U+D7CE	𐏕
00F5	U+11C1	𐏕	U+11CB	𐏖
00F6	U+11C2	𐏖	U+D7CF	𐏗
00F7	U+11C3	𐏗	U+D7D0	𐏘
00F8	U+11C4	𐏘	U+D7D1	𐏙
00F9	U+11C5	𐏙	U+D7D2	𐏚
00FA	U+11C6	𐏚	U+D7D3	𐏛
00FB	U+11C7	𐏛	U+D7D4	𐏜
00FC	U+11C8	𐏜	U+11AF	𐏝
00FD	U+11C9	𐏝	U+11B0	𐏞
00FE	U+11CA	𐏞	U+D7D5	𐏟
00FF	U+11CB	𐏟	U+11CC	𐏠
0100	U+11CC	𐏠	U+D7D6	𐏡
0101	U+11CD	𐏡	U+11CD	𐏡
0102	U+11CE	𐏢	U+11CE	𐏢
0103	U+11CF	𐏣	U+11CF	𐏣
0104	U+11D0	𐏤	U+11D0	𐏤
0105	U+11D1	𐏥	U+D7D7	𐏦
0106	U+11D2	𐏧	U+11B1	𐏨
0107	U+11D3	𐏩	U+11D1	𐏪

Key offset	Old (current)		New	
014E	U+D7E5	ㅅㅓ	U+11F1	ㅇㅅ
014F	U+D7E6	ㅅㅅ	U+11F2	ㅇㅈ
0150	U+D7E7	ㅅㅅ	U+11EE	ㅇㅊ
0151	U+D7E8	ㅅㅈ	U+11EF	ㅇㅋ
0152	U+D7E9	ㅅㅊ	U+D7F6	ㅇㅋ
0153	U+D7EA	ㅅㅊ	U+11BD	ㅈㅅ
0154	U+D7EB	ㅈㅅ	U+D7F7	ㅈㅅ
0155	U+D7EC	ㅈㅈ	U+D7F8	ㅈㅈ
0156	U+D7ED	ㅈㅈ	U+D7F9	ㅈㅈ
0157	U+D7EE	ㅈㅈ	U+11BE	ㅈㅈ
0158	U+D7EF	ㅈㅈ	U+11BF	ㅈㅈ
0159	U+D7F0	ㅈㅈ	U+11C0	ㅈㅈ

Key offset	Old (current)		New	
015A	U+D7F1	ㅈㅈ	U+11C1	ㅈㅈ
015B	U+D7F2	ㅈㅈ	U+11F3	ㅈㅈ
015C	U+D7F3	ㅈㅈ	U+D7FA	ㅈㅈ
015D	U+D7F4	ㅈㅈ	U+D7FB	ㅈㅈ
015E	U+D7F5	ㅇㅓ	U+11F4	ㅈㅈ
015F	U+D7F6	ㅇㅓ	U+11C2	ㅈㅈ
0160	U+D7F7	ㅈㅈ	U+11F5	ㅇㅈ
0161	U+D7F8	ㅈㅈ	U+11F6	ㅇㅈ
0162	U+D7F9	ㅈㅈ	U+11F7	ㅇㅈ
0163	U+D7FA	ㅈㅈ	U+11F8	ㅇㅈ
0164	U+D7FB	ㅈㅈ	U+11F9	ㅇㅈ

(Document continued on the next page)

Here is another table in the Unicode code point order, with the changes in key offset values.

This table will be more useful when modifying allkeys.txt, as one can simply replace “[.0002.” with “[.0003.”, “[.0003.” with “[.000B.”, “[.0004.” with “[.000D.” (after adding the appropriate starting value, of course), and so on.

Table 2: Hangul jamo to key offset (pages 11–16)

U+	Char	Old key offset	New key offset
U+1100	ㄱ	0000	0000
U+1101	ㄴ	0001	0001
U+1102	ㄷ	0002	0003
U+1103	ㄹ	0003	000B
U+1104	ㅁ	0004	000D
U+1105	ㅂ	0005	0013
U+1106	ㅅ	0006	0023
U+1107	ㅈ	0007	0029
U+1108	ㅊ	0008	002D
U+1109	ㅋ	0009	003D
U+110A	ㆁ	000A	0045
U+110B	ㅇ	000B	0054
U+110C	ㅊ	000C	0063
U+110D	ㅊ	000D	0065
U+110E	ㅊ	000E	006B
U+110F	ㅊ	000F	0070
U+1110	ㅊ	0010	0071
U+1111	ㅊ	0011	0073
U+1112	ㅊ	0012	0077
U+1113	ㅊ	0013	0004
U+1114	ㅊ	0014	0005
U+1115	ㅊ	0015	0006
U+1116	ㅊ	0016	0007
U+1117	ㅊ	0017	000C
U+1118	ㅊ	0018	0016
U+1119	ㅊ	0019	0019
U+111A	ㅊ	001A	0021
U+111B	ㅊ	001B	0022
U+111C	ㅊ	001C	0026
U+111D	ㅊ	001D	0028

U+	Char	Old key offset	New key offset
U+111E	ㅊ	001E	002A
U+111F	ㅊ	001F	002B
U+1120	ㅊ	0020	002C
U+1121	ㅊ	0021	002E
U+1122	ㅊ	0022	002F
U+1123	ㅊ	0023	0030
U+1124	ㅊ	0024	0031
U+1125	ㅊ	0025	0032
U+1126	ㅊ	0026	0033
U+1127	ㅊ	0027	0035
U+1128	ㅊ	0028	0036
U+1129	ㅊ	0029	0038
U+112A	ㅊ	002A	0039
U+112B	ㅊ	002B	003B
U+112C	ㅊ	002C	003C
U+112D	ㅊ	002D	003E
U+112E	ㅊ	002E	003F
U+112F	ㅊ	002F	0040
U+1130	ㅊ	0030	0041
U+1131	ㅊ	0031	0042
U+1132	ㅊ	0032	0043
U+1133	ㅊ	0033	0044
U+1134	ㅊ	0034	0047
U+1135	ㅊ	0035	0048
U+1136	ㅊ	0036	0049
U+1137	ㅊ	0037	004A
U+1138	ㅊ	0038	004B
U+1139	ㅊ	0039	004C
U+113A	ㅊ	003A	004D
U+113B	ㅊ	003B	004E

U+	Char	Old key offset	New key offset
U+113C	⤴	003C	004F
U+113D	⤵	003D	0050
U+113E	⤶	003E	0051
U+113F	⤷	003F	0052
U+1140	⤸	0040	0053
U+1141	ᄠ	0041	0055
U+1142	ᄡ	0042	0056
U+1143	ᄢ	0043	0058
U+1144	ᄣ	0044	0059
U+1145	ᄤ	0045	005A
U+1146	ᄥ	0046	005B
U+1147	ᄦ	0047	005C
U+1148	ᄧ	0048	005D
U+1149	ᄨ	0049	005E
U+114A	ᄩ	004A	005F
U+114B	ᄪ	004B	0060
U+114C	ᄫ	004C	0062
U+114D	ᄬ	004D	0064
U+114E	ᄭ	004E	0067
U+114F	ᄮ	004F	0068
U+1150	ᄯ	0050	0069
U+1151	ᄰ	0051	006A
U+1152	ᄱ	0052	006C
U+1153	ᄲ	0053	006D
U+1154	ᄳ	0054	006E
U+1155	ᄴ	0055	006F
U+1156	ᄵ	0056	0074
U+1157	ᄶ	0057	0076
U+1158	ᄷ	0058	0079
U+1159	ᄸ	0059	007A
U+115A	ᄹ	005A	0002
U+115B	ᄺ	005B	0008
U+115C	ᄻ	005C	0009
U+115D	ᄼ	005D	000A
U+115E	ᄽ	005E	000E

U+	Char	Old key offset	New key offset
U+115F	HCF	007C	007C
U+1160	HJF	007D	007D
U+1161	ᄾ	007E	007E
U+1162	ᄿ	007F	0082
U+1163	ᅀ	0080	0083
U+1164	ᅁ	0081	0087
U+1165	ᅂ	0082	0088
U+1166	ᅃ	0083	008C
U+1167	ᅄ	0084	008D
U+1168	ᅅ	0085	0091
U+1169	ᅆ	0086	0092
U+116A	ᅇ	0087	0093
U+116B	ᅈ	0088	0094
U+116C	ᅉ	0089	009E
U+116D	ᅊ	008A	009F
U+116E	ᅋ	008B	00A8
U+116F	ᅌ	008C	00AB
U+1170	ᅍ	008D	00AD
U+1171	ᅎ	008E	00B1
U+1172	ᅏ	008F	00B3
U+1173	ᅐ	0090	00BD
U+1174	ᅑ	0091	00C4
U+1175	ᅒ	0092	00C6
U+1176	ᅓ	0093	007F
U+1177	ᅔ	0094	0080
U+1178	ᅕ	0095	0084
U+1179	ᅖ	0096	0085
U+117A	ᅗ	0097	0089
U+117B	ᅘ	0098	008A
U+117C	ᅙ	0099	008B
U+117D	ᅚ	009A	008F
U+117E	ᅛ	009B	0090
U+117F	ᅜ	009C	0097
U+1180	ᅝ	009D	0098
U+1181	ᅞ	009E	009A

U+	Char	Old key offset	New key offset
U+1182	±	009F	009B
U+1183	≠	00A0	009D
U+1184	≡	00A1	00A2
U+1185	≡	00A2	00A3
U+1186	≡	00A3	00A5
U+1187	≡	00A4	00A6
U+1188	≡	00A5	00A7
U+1189	≡	00A6	00A9
U+118A	≡	00A7	00AA
U+118B	≡	00A8	00AC
U+118C	≡	00A9	00AF
U+118D	≡	00AA	00B0
U+118E	≡	00AB	00B4
U+118F	≡	00AC	00B6
U+1190	≡	00AD	00B7
U+1191	≡	00AE	00B8
U+1192	≡	00AF	00B9
U+1193	≡	00B0	00BB
U+1194	≡	00B1	00BC
U+1195	≡	00B2	00C2
U+1196	≡	00B3	00C3
U+1197	≡	00B4	00C5
U+1198	≡	00B5	00C7
U+1199	≡	00B6	00C8
U+119A	≡	00B7	00CD
U+119B	≡	00B8	00D0
U+119C	≡	00B9	00D2
U+119D	!	00BA	00D4
U+119E	·	00BB	00D5
U+119F	·	00BC	00D7
U+11A0	÷	00BD	00D9
U+11A1	·	00BE	00DA
U+11A2	·	00BF	00DB
U+11A3	—	00C0	0081
U+11A4	—	00C1	0086

U+	Char	Old key offset	New key offset
U+11A5	≡	00C2	008E
U+11A6	≡	00C3	0095
U+11A7	≡	00C4	0096
U+11A8	≡	00DC	00DC
U+11A9	≡	00DD	00DD
U+11AA	≡	00DE	00E1
U+11AB	≡	00DF	00E6
U+11AC	≡	00E0	00ED
U+11AD	≡	00E1	00F0
U+11AE	≡	00E2	00F1
U+11AF	≡	00E3	00FC
U+11B0	≡	00E4	00FD
U+11B1	≡	00E5	0106
U+11B2	≡	00E6	010A
U+11B3	≡	00E7	0110
U+11B4	≡	00E8	0115
U+11B5	≡	00E9	0116
U+11B6	≡	00EA	0117
U+11B7	≡	00EB	011B
U+11B8	≡	00EC	012A
U+11B9	≡	00ED	0130
U+11BA	≡	00EE	0137
U+11BB	≡	00EF	013E
U+11BC	○	00F0	0149
U+11BD	≡	00F1	0153
U+11BE	≡	00F2	0157
U+11BF	≡	00F3	0158
U+11C0	≡	00F4	0159
U+11C1	≡	00F5	015A
U+11C2	≡	00F6	015F
U+11C3	≡	00F7	00DF
U+11C4	≡	00F8	00E2
U+11C5	≡	00F9	00E7
U+11C6	≡	00FA	00E9
U+11C7	≡	00FB	00EB

U+	Char	Old key offset	New key offset
U+11C8	ㄴΔ	00FC	00EC
U+11C9	ㄴE	00FD	00EF
U+11CA	ㄴㄱ	00FE	00F2
U+11CB	ㄴㄹ	00FF	00F5
U+11CC	ㄹㄱ	0100	00FF
U+11CD	ㄹL	0101	0101
U+11CE	ㄹC	0102	0102
U+11CF	ㄹㄷ	0103	0103
U+11D0	ㄹㄹ	0104	0104
U+11D1	ㄹㄱㄱ	0105	0107
U+11D2	ㄹㄱㄴ	0106	0108
U+11D3	ㄹㄱㄴ	0107	010C
U+11D4	ㄹㄱㄷ	0108	010E
U+11D5	ㄹㄱㄹ	0109	010F
U+11D6	ㄹㄴㄴ	010A	0111
U+11D7	ㄹΔ	010B	0112
U+11D8	ㄹㄱ	010C	0114
U+11D9	ㄹㄷ	010D	0118
U+11DA	ㄱㄱ	010E	011C
U+11DB	ㄱㄹ	010F	011F
U+11DC	ㄱㅁ	0110	0121
U+11DD	ㄱㄴ	0111	0123
U+11DE	ㄱㄴㄴ	0112	0124
U+11DF	ㄱΔ	0113	0125
U+11E0	ㄱㅈ	0114	0127
U+11E1	ㄱㄷ	0115	0128
U+11E2	ㄷ	0116	0129
U+11E3	ㅁㄹ	0117	012C
U+11E4	ㅁㅁ	0118	0134
U+11E5	ㅁㄷ	0119	0135
U+11E6	ㄷ	011A	0136
U+11E7	ㄴㄱ	011B	0138
U+11E8	ㄴC	011C	0139
U+11E9	ㄴㄹ	011D	013A
U+11EA	ㄴㅁ	011E	013C

U+	Char	Old key offset	New key offset
U+11EB	Δ	011F	0146
U+11EC	ㅇㄱ	0120	014B
U+11ED	ㅇㅁ	0121	014C
U+11EE	ㅇㅇ	0122	0150
U+11EF	ㅇㄴ	0123	0151
U+11F0	ㅇ	0124	014A
U+11F1	ㅇㄴ	0125	014E
U+11F2	ㅇΔ	0126	014F
U+11F3	ㅁㅁ	0127	015B
U+11F4	ㅁ	0128	015E
U+11F5	ㅎL	0129	0160
U+11F6	ㅎㄹ	012A	0161
U+11F7	ㅎㅁ	012B	0162
U+11F8	ㅎㅁ	012C	0163
U+11F9	ㅁ	012D	0164
U+11FA	ㄱL	012E	00DE
U+11FB	ㄱㅁ	012F	00E0
U+11FC	ㄱㅈ	0130	00E3
U+11FD	ㄱㄴ	0131	00E4
U+11FE	ㄱㄷ	0132	00E5
U+11FF	LL	0133	00E8
U+A960	ㅁㅁ	005F	000F
U+A961	ㅁㅁ	0060	0010
U+A962	ㅁㄴ	0061	0011
U+A963	ㅁㅈ	0062	0012
U+A964	ㄹㄱ	0063	0014
U+A965	ㄹㅁ	0064	0015
U+A966	ㄹC	0065	0017
U+A967	ㄹㄹ	0066	0018
U+A968	ㄹㅁ	0067	001A
U+A969	ㄹㅁ	0068	001B
U+A96A	ㄹㅁㅁ	0069	001C
U+A96B	ㄹㅁ	006A	001D
U+A96C	ㄹㄴ	006B	001E
U+A96D	ㄹㅈ	006C	001F

U+	Char	Old key offset	New key offset
U+A96E	ㄹ	006D	0020
U+A96F	ㅁ	006E	0024
U+A970	ㅂ	006F	0025
U+A971	ㅅ	0070	0027
U+A972	ㅈ	0071	0034
U+A973	ㅊ	0072	0037
U+A974	ㅋ	0073	003A
U+A975	ㅌ	0074	0046
U+A976	ㄴ	0075	0057
U+A977	ㅇ	0076	0061
U+A978	ㅍ	0077	0066
U+A979	ㅑ	0078	0072
U+A97A	ㅓ	0079	0075
U+A97B	ㅕ	007A	0078
U+A97C	ㅗ	007B	007B
U+D7B0	ㅛ	00C5	0099
U+D7B1	ㅜ	00C6	009C
U+D7B2	ㅠ	00C7	00A0
U+D7B3	ㅡ	00C8	00A1
U+D7B4	ㅝ	00C9	00A4
U+D7B5	ㅞ	00CA	00AE
U+D7B6	ㅟ	00CB	00B2
U+D7B7	ㅠ	00CC	00B5
U+D7B8	ㅠ	00CD	00BA
U+D7B9	ㅡ	00CE	00BE
U+D7BA	ㅢ	00CF	00BF
U+D7BB	ㅣ	00D0	00C0
U+D7BC	ㅤ	00D1	00C1
U+D7BD	ㅥ	00D2	00C9
U+D7BE	ㅦ	00D3	00CA
U+D7BF	ㅧ	00D4	00CB
U+D7C0	ㅨ	00D5	00CC
U+D7C1	ㅩ	00D6	00CE
U+D7C2	ㅪ	00D7	00CF
U+D7C3	ㅫ	00D8	00D1

U+	Char	Old key offset	New key offset
U+D7C4	ㅬ	00D9	00D3
U+D7C5	ㅭ	00DA	00D6
U+D7C6	ㅮ	00DB	00D8
U+D7CB	ㅯ	0134	00EA
U+D7CC	ㅰ	0135	00EE
U+D7CD	ㅱ	0136	00F3
U+D7CE	ㅲ	0137	00F4
U+D7CF	ㅳ	0138	00F6
U+D7D0	ㅴ	0139	00F7
U+D7D1	ㅵ	013A	00F8
U+D7D2	ㅶ	013B	00F9
U+D7D3	ㅷ	013C	00FA
U+D7D4	ㅸ	013D	00FB
U+D7D5	ㅹ	013E	00FE
U+D7D6	ㅺ	013F	0100
U+D7D7	ㅻ	0140	0105
U+D7D8	ㅼ	0141	0109
U+D7D9	ㅽ	0142	010B
U+D7DA	ㅾ	0143	010D
U+D7DB	ㅿ	0144	0113
U+D7DC	ㅿ	0145	0119
U+D7DD	ㅿ	0146	011A
U+D7DE	ㅿ	0147	011D
U+D7DF	ㅿ	0148	011E
U+D7E0	ㅿ	0149	0120
U+D7E1	ㅿ	014A	0122
U+D7E2	ㅿ	014B	0126
U+D7E3	ㅿ	014C	012B
U+D7E4	ㅿ	014D	012D
U+D7E5	ㅿ	014E	012E
U+D7E6	ㅿ	014F	012F
U+D7E7	ㅿ	0150	0131
U+D7E8	ㅿ	0151	0132
U+D7E9	ㅿ	0152	0133
U+D7EA	ㅿ	0153	013B

U+	Char	Old key offset	New key offset
U+D7EB	ㄱㅞ	0154	013D
U+D7EC	ㄱㅟ	0155	013F
U+D7ED	ㄱㅠ	0156	0140
U+D7EE	ㄱㅡ	0157	0141
U+D7EF	ㄱㅢ	0158	0142
U+D7F0	ㄱㅣ	0159	0143
U+D7F1	ㄱㅤ	015A	0144
U+D7F2	ㄱㅦ	015B	0145
U+D7F3	ㄱㅧ	015C	0147

U+	Char	Old key offset	New key offset
U+D7F4	ㄱㅨ	015D	0148
U+D7F5	ㄱㅩ	015E	014D
U+D7F6	ㄱㅪ	015F	0152
U+D7F7	ㄱㅫ	0160	0154
U+D7F8	ㄱㅬ	0161	0155
U+D7F9	ㄱㅭ	0162	0156
U+D7FA	ㄱㅰ	0163	015C
U+D7FB	ㄱㅱ	0164	015D

Basically, the key assignments of almost all hangul jamo will need to be changed. There are 13 hangul jamo characters that happen to have the same key assignments even after the change:

Key offset	U+	Char
0000	U+1100	ㄱ
0001	U+1101	ㄴ
0019	U+1119	ㄹ
007B	U+A97C	ㅍ
007C	U+115F	HCF

Key offset	U+	Char
007D	U+1160	HJF
007E	U+1161	ㅑ
00DC	U+11A8	ㅓ
00DD	U+11A9	ㅕ
0101	U+11CD	ㄷ

Key offset	U+	Char
0102	U+11CE	ㄹ
0103	U+11CF	ㄹㅞ
0104	U+11D0	ㄹㅟ

(Document continued on the next page)

Some things that need to be considered

Symbol	Meaning	Code point range(s)
L	Leading consonant (choseong) character	U+1100–U+115E, U+A960–U+A97C
Lf	Choseong filler	U+115F
V	Vowel (jungseong) character	U+1161–U+11A7, U+D7B0–U+D7C6
Vf	Jungseong filler	U+1160
T	Trailing consonant (jongseong) character (optional)	U+11A8–U+11FF, U+D7CB–U+D7FB

A single hangul syllable consists of LV, LVT, LfV, LfVT, LVf, LVfT, or LfVfT (theoretically LfVf can be included, it is not needed as it is nothing more than a blank).

Note that combinations such as LLV, LVVT or LVTT are not allowed for a single hangul syllable. Multiple code positions of atomic jamo (simple jamo in the English version of KS X 1026-1) cannot be combined to represent a single compound jamo (complex jamo in the English version of KS X 1026-1). For example, ^ㄴ has to be represented by U+1113 only; it should NOT be represented by ^ㄴ ^ㄷ (U+1102 U+1100). (In particular, this is one of the reasons that the Korean National Body proposed to add 117 additional jamo characters years ago (encoded in Unicode 5.2; U+115A–U+115E, U+11A3–U+11A7, U+11FA–U+11FF, U+A960–U+A97C, U+D7B0–U+D7C6, and U+D7CB–U+D7FB).)

Therefore, the following need to be taken care of before sorting:

1. If an L is not followed by a V, it needs to be followed by Vf. Even if the Vf is not physically inserted, the sorting algorithm needs to work in the same way (that is, the algorithm needs to assume that there is a Vf following the L).
2. If a V is not preceded by an L, it needs to be preceded by Lf. Even if the Lf is not physically inserted, the sorting algorithm needs to work in the same way (that is, the algorithm needs to assume that there is an Lf preceding the V).
3. If a T is not preceded by (L and) V, it needs to be preceded by (Lf and) Vf. Even if (Lf and) Vf is/are not physically inserted, the sorting algorithm needs to work in the same way (that is, the algorithm needs to assume that there is/are (Lf and) Vf preceding the T).

That is, LLV needs to be changed to LVf·LV (“·” indicates syllable boundary), LVVT needs to be changed to LV·LfVT, LVTT needs to be changed to LVT·LfVfT, and so on.

(End of document, without appendices)

Appendix A: Auxiliary hangul jamo decompositions

(Also available as a separate xlsx file (attached in this document))

1. Order and names of atomic hangul consonant letters

(Note: Ones whose names start with “kapyeoun- (가벼운-)” (the ones with ○ below) are also considered atomic consonant letters.

They may be decomposed further when making an input method for archaic hangul (e.g. 뽕 can be input by pressing ㅂ + ○), but not for sorting.)

Order (continuous)*	Order (absolute)†	Leading		Trailing		Name	
1	01	ㄱ	U+1100	ㄱ	U+11A8	kiyeok	기억
12	02	ㄴ	U+1102	ㄴ	U+11AB	nieun	니은
24	03	ㄷ	U+1103	ㄷ	U+11AE	tikeut	디귄
36	04	ㄹ	U+1105	ㄹ	U+11AF	rieul	리을
69	05	ㄹ	U+111B	ㄹ	U+D7DD	kapyeounrieul	가벼운리을
70	06	ㅁ	U+1106	ㅁ	U+11B7	mieum	미음
85	07	ㅁ	U+111D	ㅁ	U+11E2	kapyeounmieum	가벼운미음
86	08	ㅂ	U+1107	ㅂ	U+11B8	pieup	비읍
107	09	ㅂ	U+112B	ㅂ	U+11E6	kapyeounpieup	가벼운비읍
108	10	뽕	U+112C		—	kapyeounssangpieup	가벼운쌍비읍
109	11	ㅅ	U+1109	ㅅ	U+11BA	sios	시옷
131	12	ㅅ	U+113C		—	chitueumsios	치두음시옷
133	13	ㅅ	U+113E		—	ceongchieumsios	정치음시옷
135	14	ㅅ	U+1140	ㅅ	U+11EB	pansios	반시옷
138	15	ㅇ	U+110B	ㅇ	U+11BC	ieung	이응
152	16	ㅇ	U+114C	ㅇ	U+11F0	yesieung	옛이응
161	17	ㅈ	U+110C	ㅈ	U+11BD	cieuc	지읒
167	18	ㅈ	U+114E		—	chitueumcieuc	치두음지읒
169	19	ㅈ	U+1150		—	ceongchieumcieuc	정치음지읒
171	20	ㅊ	U+110E	ㅊ	U+11BE	chieuch	치읓
174	21	ㅊ	U+1154		—	chitueumchieuch	치두음치읓
175	22	ㅊ	U+1155		—	ceongchieumchieuch	정치음치읓
176	23	ㅋ	U+110F	ㅋ	U+11BF	khieukh	키읔
177	24	ㅌ	U+1110	ㅌ	U+11C0	thieuth	티을
179	25	ㅍ	U+1111	ㅍ	U+11C1	phieuph	피읖
184	26	ㅍ	U+1157	ㅍ	U+11F4	kapyeounphieuph	가벼운피읖
185	27	ㅎ	U+1112	ㅎ	U+11C2	hieuh	히읇
192	28	ㅎ	U+1159	ㅎ	U+11F9	yeorinhieuh	여린히읇

* These numbers are subject to change if a new compound jamo is found and added to Unicode.

† These numbers are invariable; they will not change (unless a new atomic jamo is found and added to Unicode, which is highly unlikely to happen).

2. Order and names of atomic hangul vowel letters

Order (continuous)	Order (absolute)	Vowel		Name	
1	01	ㅏ	U+1161	a	아
6	02	ㅑ	U+1163	ya	야
11	03	ㅓ	U+1165	eo	어
16	04	ㅕ	U+1167	yeo	여
21	05	ㅗ	U+1169	o	오
34	06	ㅛ	U+116D	yo	요
43	07	ㅜ	U+116E	u	우
54	08	ㅠ	U+1172	yu	유
64	09	ㅡ	U+1173	eu	으
73	10	ㅣ	U+1175	i	이
88	11	·	U+119E	araea	아래아

(Document continued on the next page)

3. Order and auxiliary decompositions of all hangul consonant letters (pages 20–26)

(Atomic consonant letters are highlighted in yellow)

Order (cont.)	Order (absolute)	Leading		Auxiliary decomposition		Trailing		Auxiliary decomposition		Atomic/compound?
1	01	ᳵ	U+1100	ᳵ	U+1100	ᳵ	U+11A8	ᳵ	U+11A8	atomic
2	01-01	ᳶ	U+1101	ᳵ + ᳵ	U+1100 + U+1100	ᳶ	U+11A9	ᳵ + ᳵ	U+11A8 + U+11A8	compound
3	01-02		–		–	᳷	U+11FA	ᳵ + ᳶ	U+11A8 + U+11AB	compound
4	01-03	᳸	U+115A	ᳵ + ᳸	U+1100 + U+1103		–		–	compound
5	01-04		–		–	᳹	U+11C3	ᳵ + ᳹	U+11A8 + U+11AF	compound
6	01-08		–		–	ᳺ	U+11FB	ᳵ + ᳺ	U+11A8 + U+11B8	compound
7	01-11		–		–	᳻	U+11AA	ᳵ + ᳻	U+11A8 + U+11BA	compound
8	01-11-01		–		–	᳼	U+11C4	ᳵ + ᳻ + ᳵ	U+11A8 + U+11BA + U+11A8	compound
9	01-20		–		–	᳽	U+11FC	ᳵ + ᳽	U+11A8 + U+11BE	compound
10	01-23		–		–	᳾	U+11FD	ᳵ + ᳾	U+11A8 + U+11BF	compound
11	01-27		–		–	᳿	U+11FE	ᳵ + ᳿	U+11A8 + U+11C2	compound
12	02	᳠	U+1102	᳠	U+1102	᳠	U+11AB	᳠	U+11AB	atomic
13	02-01	᳡	U+1113	᳠ + ᳵ	U+1102 + U+1100	᳡	U+11C5	᳠ + ᳵ	U+11AB + U+11A8	compound
14	02-02	᳢	U+1114	᳠ + ᳠	U+1102 + U+1102	᳢	U+11FF	᳠ + ᳠	U+11AB + U+11AB	compound
15	02-03	᳣	U+1115	᳠ + ᳸	U+1102 + U+1103	᳣	U+11C6	᳠ + ᳸	U+11AB + U+11AE	compound
16	02-04		–		–	᳤	U+D7CB	᳠ + ᳹	U+11AB + U+11AF	compound
17	02-08	᳥	U+1116	᳠ + ᳺ	U+1102 + U+1107		–		–	compound
18	02-11	᳦	U+115B	᳠ + ᳻	U+1102 + U+1109	᳦	U+11C7	᳠ + ᳻	U+11AB + U+11BA	compound
19	02-14		–		–	᳧	U+11C8	᳠ + ᳼	U+11AB + U+11EB	compound
20	02-17	᳨	U+115C	᳠ + ᳽	U+1102 + U+110C	᳨	U+11AC	᳠ + ᳽	U+11AB + U+11BD	compound
21	02-20		–		–	ᳩ	U+D7CC	᳠ + ᳽	U+11AB + U+11BE	compound
22	02-24		–		–	ᳪ	U+11C9	᳠ + ᳾	U+11AB + U+11C0	compound
23	02-27	ᳫ	U+115D	᳠ + ᳿	U+1102 + U+1112	ᳫ	U+11AD	᳠ + ᳿	U+11AB + U+11C2	compound
24	03	ᳬ	U+1103	ᳬ	U+1103	ᳬ	U+11AE	ᳬ	U+11AE	atomic
25	03-01	᳭	U+1117	ᳬ + ᳵ	U+1103 + U+1100	᳭	U+11CA	ᳬ + ᳵ	U+11AE + U+11A8	compound
26	03-03	ᳮ	U+1104	ᳬ + ᳬ	U+1103 + U+1103	ᳮ	U+D7CD	ᳬ + ᳬ	U+11AE + U+11AE	compound

Order (cont.)	Order (absolute)	Leading		Auxiliary decomposition		Trailing		Auxiliary decomposition		Atomic/ compound?
27	03-03-08		—		—	U+D7CE	U+D7CE	U+11AE + U+11AE + U+11B8	U+11AE + U+11AE + U+11B8	compound
28	03-04	U+115E	U+115E	U+1103 + U+1105	U+1103 + U+1105	U+11CB	U+11CB	U+11AE + U+11AF	U+11AE + U+11AF	compound
29	03-06	U+A960	U+A960	U+1103 + U+1106	U+1103 + U+1106	—	—	—	—	compound
30	03-08	U+A961	U+A961	U+1103 + U+1107	U+1103 + U+1107	U+D7CF	U+D7CF	U+11AE + U+11B8	U+11AE + U+11B8	compound
31	03-11	U+A962	U+A962	U+1103 + U+1109	U+1103 + U+1109	U+D7D0	U+D7D0	U+11AE + U+11BA	U+11AE + U+11BA	compound
32	03-11-01	—	—	—	—	U+D7D1	U+D7D1	U+11AE + U+11BA + U+11A8	U+11AE + U+11BA + U+11A8	compound
33	03-17	U+A963	U+A963	U+1103 + U+110C	U+1103 + U+110C	U+D7D2	U+D7D2	U+11AE + U+11BD	U+11AE + U+11BD	compound
34	03-20	—	—	—	—	U+D7D3	U+D7D3	U+11AE + U+11BE	U+11AE + U+11BE	compound
35	03-24	—	—	—	—	U+D7D4	U+D7D4	U+11AE + U+11C0	U+11AE + U+11C0	compound
36	04	U+1105	U+1105	U+1105	U+1105	U+11AF	U+11AF	U+11AF	U+11AF	atomic
37	04-01	U+A964	U+A964	U+1105 + U+1100	U+1105 + U+1100	U+11B0	U+11B0	U+11AF + U+11A8	U+11AF + U+11A8	compound
38	04-01-01	U+A965	U+A965	U+1105 + U+1100 + U+1100	U+1105 + U+1100 + U+1100	U+D7D5	U+D7D5	U+11AF + U+11A8 + U+11A8	U+11AF + U+11A8 + U+11A8	compound
39	04-01-11	—	—	—	—	U+11CC	U+11CC	U+11AF + U+11A8 + U+11BA	U+11AF + U+11A8 + U+11BA	compound
40	04-01-27	—	—	—	—	U+D7D6	U+D7D6	U+11AF + U+11A8 + U+11C2	U+11AF + U+11A8 + U+11C2	compound
41	04-02	U+1118	U+1118	U+1105 + U+1102	U+1105 + U+1102	U+11CD	U+11CD	U+11AF + U+11AB	U+11AF + U+11AB	compound
42	04-03	U+A966	U+A966	U+1105 + U+1103	U+1105 + U+1103	U+11CE	U+11CE	U+11AF + U+11AE	U+11AF + U+11AE	compound
43	04-03-03	U+A967	U+A967	U+1105 + U+1103 + U+1103	U+1105 + U+1103 + U+1103	—	—	—	—	compound
44	04-03-27	—	—	—	—	U+11CF	U+11CF	U+11AF + U+11AE + U+11C2	U+11AF + U+11AE + U+11C2	compound
45	04-04	U+1119	U+1119	U+1105 + U+1105	U+1105 + U+1105	U+11D0	U+11D0	U+11AF + U+11AF	U+11AF + U+11AF	compound
46	04-04-23	—	—	—	—	U+D7D7	U+D7D7	U+11AF + U+11AF + U+11BF	U+11AF + U+11AF + U+11BF	compound
47	04-06	U+A968	U+A968	U+1105 + U+1106	U+1105 + U+1106	U+11B1	U+11B1	U+11AF + U+11B7	U+11AF + U+11B7	compound
48	04-06-01	—	—	—	—	U+11D1	U+11D1	U+11AF + U+11B7 + U+11A8	U+11AF + U+11B7 + U+11A8	compound
49	04-06-11	—	—	—	—	U+11D2	U+11D2	U+11AF + U+11B7 + U+11BA	U+11AF + U+11B7 + U+11BA	compound
50	04-06-27	—	—	—	—	U+D7D8	U+D7D8	U+11AF + U+11B7 + U+11C2	U+11AF + U+11B7 + U+11C2	compound
51	04-08	U+A969	U+A969	U+1105 + U+1107	U+1105 + U+1107	U+11B2	U+11B2	U+11AF + U+11B8	U+11AF + U+11B8	compound
52	04-08-03	—	—	—	—	U+D7D9	U+D7D9	U+11AF + U+11B8 + U+11AE	U+11AF + U+11B8 + U+11AE	compound
53	04-08-08	U+A96A	U+A96A	U+1105 + U+1107 + U+1107	U+1105 + U+1107 + U+1107	—	—	—	—	compound
54	04-08-11	—	—	—	—	U+11D3	U+11D3	U+11AF + U+11B8 + U+11BA	U+11AF + U+11B8 + U+11BA	compound

Order (cont.)	Order (absolute)	Leading		Auxiliary decomposition		Trailing		Auxiliary decomposition		Atomic/ compound?
55	04-08-25		—		—	ㄷ	U+D7DA	ㄹ + ㅁ + ㅂ	U+11AF + U+11B8 + U+11C1	compound
56	04-08-27		—		—	ㄷ	U+11D4	ㄹ + ㅁ + ㅅ	U+11AF + U+11B8 + U+11C2	compound
57	04-09	ㄹ	U+A96B	ㄹ + ㅁ	U+1105 + U+112B	ㄹ	U+11D5	ㄹ + ㅁ	U+11AF + U+11E6	compound
58	04-11	ㄹ	U+A96C	ㄹ + ㅂ	U+1105 + U+1109	ㄹ	U+11B3	ㄹ + ㅂ	U+11AF + U+11BA	compound
59	04-11-11		—		—	ㄹ	U+11D6	ㄹ + ㅂ + ㅂ	U+11AF + U+11BA + U+11BA	compound
60	04-14		—		—	ㄹ	U+11D7	ㄹ + ㅅ	U+11AF + U+11EB	compound
61	04-16		—		—	ㄹ	U+D7DB	ㄹ + ㅇ	U+11AF + U+11F0	compound
62	04-17	ㄹ	U+A96D	ㄹ + ㅈ	U+1105 + U+110C		—		—	compound
63	04-23	ㄹ	U+A96E	ㄹ + ㅊ	U+1105 + U+110F	ㄹ	U+11D8	ㄹ + ㅊ	U+11AF + U+11BF	compound
64	04-24		—		—	ㄹ	U+11B4	ㄹ + ㅊ	U+11AF + U+11C0	compound
65	04-25		—		—	ㄹ	U+11B5	ㄹ + ㅊ	U+11AF + U+11C1	compound
66	04-27	ㄹ	U+111A	ㄹ + ㅊ	U+1105 + U+1112	ㄹ	U+11B6	ㄹ + ㅊ	U+11AF + U+11C2	compound
67	04-28		—		—	ㄹ	U+11D9	ㄹ + ㅊ	U+11AF + U+11F9	compound
68	04-28-27		—		—	ㄹ	U+D7DC	ㄹ + ㅊ + ㅊ	U+11AF + U+11F9 + U+11C2	compound
69	05	ㄹ	U+111B	ㄹ	U+111B	ㄹ	U+D7DD	ㄹ	U+D7DD	atomic
70	06	ㅁ	U+1106	ㅁ	U+1106	ㅁ	U+11B7	ㅁ	U+11B7	atomic
71	06-01	ㅁ	U+A96F	ㅁ + ㅂ	U+1106 + U+1100	ㅁ	U+11DA	ㅁ + ㅂ	U+11B7 + U+11A8	compound
72	06-02		—		—	ㅁ	U+D7DE	ㅁ + ㅂ	U+11B7 + U+11AB	compound
73	06-02-02		—		—	ㅁ	U+D7DF	ㅁ + ㅂ + ㅂ	U+11B7 + U+11AB + U+11AB	compound
74	06-03	ㅁ	U+A970	ㅁ + ㅂ	U+1106 + U+1103		—		—	compound
75	06-04		—		—	ㅁ	U+11DB	ㅁ + ㅂ	U+11B7 + U+11AF	compound
76	06-06		—		—	ㅁ	U+D7E0	ㅁ + ㅂ	U+11B7 + U+11B7	compound
77	06-08	ㅁ	U+111C	ㅁ + ㅂ	U+1106 + U+1107	ㅁ	U+11DC	ㅁ + ㅂ	U+11B7 + U+11B8	compound
78	06-08-11		—		—	ㅁ	U+D7E1	ㅁ + ㅂ + ㅂ	U+11B7 + U+11B8 + U+11BA	compound
79	06-11	ㅁ	U+A971	ㅁ + ㅂ	U+1106 + U+1109	ㅁ	U+11DD	ㅁ + ㅂ	U+11B7 + U+11BA	compound
80	06-11-11		—		—	ㅁ	U+11DE	ㅁ + ㅂ + ㅂ	U+11B7 + U+11BA + U+11BA	compound
81	06-14		—		—	ㅁ	U+11DF	ㅁ + ㅂ	U+11B7 + U+11EB	compound
82	06-17		—		—	ㅁ	U+D7E2	ㅁ + ㅂ	U+11B7 + U+11BD	compound

Order (cont.)	Order (absolute)	Leading		Auxiliary decomposition		Trailing		Auxiliary decomposition		Atomic/ compound?
83	06-20		—		—	ㄱ	U+11E0	ㄱ + ㅈ	U+11B7 + U+11BE	compound
84	06-27		—		—	ㄴ	U+11E1	ㄱ + ㅊ	U+11B7 + U+11C2	compound
85	07	ㄹ	U+111D	ㄹ	U+111D	ㄹ	U+11E2	ㄹ	U+11E2	atomic
86	08	ㅁ	U+1107	ㅁ	U+1107	ㅁ	U+11B8	ㅁ	U+11B8	atomic
87	08-01	ㅂ	U+111E	ㅂ + ㅏ	U+1107 + U+1100		—		—	compound
88	08-02	ㅃ	U+111F	ㅂ + ㅑ	U+1107 + U+1102		—		—	compound
89	08-03	ㅄ	U+1120	ㅂ + ㅓ	U+1107 + U+1103	ㅄ	U+D7E3	ㅂ + ㅕ	U+11B8 + U+11AE	compound
90	08-04		—		—	ㅅ	U+11E3	ㅂ + ㅗ	U+11B8 + U+11AF	compound
91	08-04-25		—		—	ㅆ	U+D7E4	ㅂ + ㅗ + ㅛ	U+11B8 + U+11AF + U+11C1	compound
92	08-06		—		—	ㅈ	U+D7E5	ㅂ + ㅛ	U+11B8 + U+11B7	compound
93	08-08	ㅊ	U+1108	ㅂ + ㅜ	U+1107 + U+1107	ㅊ	U+D7E6	ㅂ + ㅝ	U+11B8 + U+11B8	compound
94	08-11	ㅋ	U+1121	ㅂ + ㅠ	U+1107 + U+1109	ㅋ	U+11B9	ㅂ + ㅞ	U+11B8 + U+11BA	compound
95	08-11-01	ㆁ	U+1122	ㅂ + ㅟ + ㅏ	U+1107 + U+1109 + U+1100		—		—	compound
96	08-11-03	ㆂ	U+1123	ㅂ + ㅟ + ㅑ	U+1107 + U+1109 + U+1103	ㆂ	U+D7E7	ㅂ + ㅟ + ㅕ	U+11B8 + U+11BA + U+11AE	compound
97	08-11-08	ㆃ	U+1124	ㅂ + ㅟ + ㅓ	U+1107 + U+1109 + U+1107		—		—	compound
98	08-11-11	ㆄ	U+1125	ㅂ + ㅟ + ㅕ	U+1107 + U+1109 + U+1109		—		—	compound
99	08-11-17	ㆅ	U+1126	ㅂ + ㅟ + ㅗ	U+1107 + U+1109 + U+110C		—		—	compound
100	08-11-24	ㆆ	U+A972	ㅂ + ㅟ + ㅛ	U+1107 + U+1109 + U+1110		—		—	compound
101	08-17	ㆇ	U+1127	ㅂ + ㅞ	U+1107 + U+110C	ㆇ	U+D7E8	ㅂ + ㅟ	U+11B8 + U+11BD	compound
102	08-20	ㆈ	U+1128	ㅂ + ㅠ	U+1107 + U+110E	ㆈ	U+D7E9	ㅂ + ㅡ	U+11B8 + U+11BE	compound
103	08-23	ㆉ	U+A973	ㅂ + ㅢ	U+1107 + U+110F		—		—	compound
104	08-24	ㆊ	U+1129	ㅂ + ㅣ	U+1107 + U+1110		—		—	compound
105	08-25	ㆋ	U+112A	ㅂ + ㅤ	U+1107 + U+1111	ㆋ	U+11E4	ㅂ + ㅦ	U+11B8 + U+11C1	compound
106	08-27	ㆌ	U+A974	ㅂ + ㅧ	U+1107 + U+1112	ㆌ	U+11E5	ㅂ + ㅨ	U+11B8 + U+11C2	compound
107	09	ㆍ	U+112B	ㆍ	U+112B	ㆍ	U+11E6	ㆍ	U+11E6	atomic
108	10	ㆎ	U+112C	ㆎ	U+112C		—		—	atomic
109	11	㆏	U+1109	㆏	U+1109	㆏	U+11BA	㆏	U+11BA	atomic
110	11-01	㆑	U+112D	㆏ + ㅏ	U+1109 + U+1100	㆑	U+11E7	㆏ + ㅏ	U+11BA + U+11A8	compound

Order (cont.)	Order (absolute)	Leading		Auxiliary decomposition		Trailing		Auxiliary decomposition		Atomic/ compound?
111	11-02	$\wedge_L$	U+112E	$\wedge + \neg$	U+1109 + U+1102		—		—	compound
112	11-03	$\wedge_C$	U+112F	$\wedge + \sqsubset$	U+1109 + U+1103	$\wedge_C$	U+11E8	$\wedge + \sqsubset$	U+11BA + U+11AE	compound
113	11-04	$\wedge_E$	U+1130	$\wedge + \equiv$	U+1109 + U+1105	$\wedge_E$	U+11E9	$\wedge + \equiv$	U+11BA + U+11AF	compound
114	11-06	$\wedge_D$	U+1131	$\wedge + \sqsupset$	U+1109 + U+1106	$\wedge_D$	U+D7EA	$\wedge + \sqsupset$	U+11BA + U+11B7	compound
115	11-08	$\wedge_H$	U+1132	$\wedge + \sqsupset$	U+1109 + U+1107	$\wedge_H$	U+11EA	$\wedge + \sqsupset$	U+11BA + U+11B8	compound
116	11-08-01	$\wedge_T$	U+1133	$\wedge + \sqsupset + \neg$	U+1109 + U+1107 + U+1100		—		—	compound
117	11-09		—		—	$\wedge_B$	U+D7EB	$\wedge + \sqsupset$	U+11BA + U+11E6	compound
118	11-11	$\wedge_A$	U+110A	$\wedge + \wedge$	U+1109 + U+1109	$\wedge_A$	U+11BB	$\wedge + \wedge$	U+11BA + U+11BA	compound
119	11-11-01		—		—	$\wedge_T$	U+D7EC	$\wedge + \wedge + \neg$	U+11BA + U+11BA + U+11A8	compound
120	11-11-03		—		—	$\wedge_C$	U+D7ED	$\wedge + \wedge + \sqsubset$	U+11BA + U+11BA + U+11AE	compound
121	11-11-08	$\wedge_H$	U+A975	$\wedge + \wedge + \sqsupset$	U+1109 + U+1109 + U+1107		—		—	compound
122	11-11-11	$\wedge_A$	U+1134	$\wedge + \wedge + \wedge$	U+1109 + U+1109 + U+1109		—		—	compound
123	11-14		—		—	$\wedge_\Delta$	U+D7EE	$\wedge + \Delta$	U+11BA + U+11EB	compound
124	11-15	$\wedge_O$	U+1135	$\wedge + \circ$	U+1109 + U+110B		—		—	compound
125	11-17	$\wedge_X$	U+1136	$\wedge + \times$	U+1109 + U+110C	$\wedge_X$	U+D7EF	$\wedge + \times$	U+11BA + U+11BD	compound
126	11-20	$\wedge_X$	U+1137	$\wedge + \times$	U+1109 + U+110E	$\wedge_X$	U+D7F0	$\wedge + \times$	U+11BA + U+11BE	compound
127	11-23	$\wedge_F$	U+1138	$\wedge + \equiv$	U+1109 + U+110F		—		—	compound
128	11-24	$\wedge_E$	U+1139	$\wedge + \equiv$	U+1109 + U+1110	$\wedge_E$	U+D7F1	$\wedge + \equiv$	U+11BA + U+11C0	compound
129	11-25	$\wedge_\Pi$	U+113A	$\wedge + \Pi$	U+1109 + U+1111		—		—	compound
130	11-27	$\wedge_G$	U+113B	$\wedge + \text{古}$	U+1109 + U+1112	$\wedge_G$	U+D7F2	$\wedge + \text{古}$	U+11BA + U+11C2	compound
131	12	$\wedge$	U+113C	$\wedge$	U+113C		—		—	atomic
132	12-12	$\wedge$	U+113D	$\wedge + \wedge$	U+113C + U+113C		—		—	compound
133	13	$\wedge$	U+113E	$\wedge$	U+113E		—		—	atomic
134	13-13	$\wedge$	U+113F	$\wedge + \wedge$	U+113E + U+113E		—		—	compound
135	14	Δ	U+1140	Δ	U+1140	Δ	U+11EB	Δ	U+11EB	atomic
136	14-08		—		—	Δ_H	U+D7F3	$\Delta + \sqsupset$	U+11EB + U+11B8	compound
137	14-09		—		—	Δ_B	U+D7F4	$\Delta + \sqsupset$	U+11EB + U+11E6	compound
138	15	$\circ$	U+110B	$\circ$	U+110B	$\circ$	U+11BC	$\circ$	U+11BC	atomic

Order (cont.)	Order (absolute)	Leading		Auxiliary decomposition		Trailing		Auxiliary decomposition		Atomic/ compound?
139	15-01	᠐ᠠ	U+1141	᠐ + ᠠ	U+110B + U+1100		–		–	compound
140	15-03	᠐ᠢ	U+1142	᠐ + ᠢ	U+110B + U+1103		–		–	compound
141	15-04	᠐ᠡ	U+A976	᠐ + ᠡ	U+110B + U+1105		–		–	compound
142	15-06	᠐ᠢ	U+1143	᠐ + ᠢ	U+110B + U+1106		–		–	compound
143	15-08	᠐ᠢ	U+1144	᠐ + ᠢ	U+110B + U+1107		–		–	compound
144	15-11	᠐ᠢ	U+1145	᠐ + ᠢ	U+110B + U+1109		–		–	compound
145	15-14	᠐ᠢ	U+1146	᠐ + ᠢ	U+110B + U+1140		–		–	compound
146	15-15	᠐ᠢ	U+1147	᠐ + ᠢ	U+110B + U+110B		–		–	compound
147	15-17	᠐ᠢ	U+1148	᠐ + ᠢ	U+110B + U+110C		–		–	compound
148	15-20	᠐ᠢ	U+1149	᠐ + ᠢ	U+110B + U+110E		–		–	compound
149	15-24	᠐ᠢ	U+114A	᠐ + ᠢ	U+110B + U+1110		–		–	compound
150	15-25	᠐ᠢ	U+114B	᠐ + ᠢ	U+110B + U+1111		–		–	compound
151	15-27	᠐ᠢ	U+A977	᠐ + ᠢ	U+110B + U+1112		–		–	compound
152	16	᠐	U+114C	᠐	U+114C	᠐	U+11F0	᠐	U+11F0	atomic
153	16-01		–		–	᠐ᠠ	U+11EC	᠐ + ᠠ	U+11F0 + U+11A8	compound
154	16-01-01		–		–	᠐ᠠᠠ	U+11ED	᠐ + ᠠ + ᠠ	U+11F0 + U+11A8 + U+11A8	compound
155	16-06		–		–	᠐ᠢ	U+D7F5	᠐ + ᠢ	U+11F0 + U+11B7	compound
156	16-11		–		–	᠐ᠢ	U+11F1	᠐ + ᠢ	U+11F0 + U+11BA	compound
157	16-14		–		–	᠐ᠢ	U+11F2	᠐ + ᠢ	U+11F0 + U+11EB	compound
158	16-16		–		–	᠐ᠢ	U+11EE	᠐ + ᠢ	U+11F0 + U+11F0	compound
159	16-23		–		–	᠐ᠢ	U+11EF	᠐ + ᠢ	U+11F0 + U+11BF	compound
160	16-27		–		–	᠐ᠢ	U+D7F6	᠐ + ᠢ	U+11F0 + U+11C2	compound
161	17	ᠠ	U+110C	ᠠ	U+110C	ᠠ	U+11BD	ᠠ	U+11BD	atomic
162	17-08		–		–	ᠠᠢ	U+D7F7	ᠠ + ᠢ	U+11BD + U+11B8	compound
163	17-08-08		–		–	ᠠᠢᠢ	U+D7F8	ᠠ + ᠢ + ᠢ	U+11BD + U+11B8 + U+11B8	compound
164	17-15	ᠠᠢ	U+114D	ᠠ + ᠢ	U+110C + U+110B		–		–	compound
165	17-17	ᠠᠢ	U+110D	ᠠ + ᠢ	U+110C + U+110C	ᠠᠢ	U+D7F9	ᠠ + ᠢ	U+11BD + U+11BD	compound
166	17-17-27	ᠠᠢ	U+A978	ᠠ + ᠢ + ᠢ	U+110C + U+110C + U+1112		–		–	compound

Order (cont.)	Order (absolute)	Leading		Auxiliary decomposition		Trailing		Auxiliary decomposition		Atomic/ compound?
167	18	ㄸ	U+114E	ㄸ	U+114E		—		—	atomic
168	18-18	ㄸ	U+114F	ㄸ + ㄸ	U+114E + U+114E		—		—	compound
169	19	ㄹ	U+1150	ㄹ	U+1150		—		—	atomic
170	19-19	ㄹ	U+1151	ㄹ + ㄹ	U+1150 + U+1150		—		—	compound
171	20	ㄺ	U+110E	ㄺ	U+110E	ㄺ	U+11BE	ㄺ	U+11BE	atomic
172	20-23	ㄺ	U+1152	ㄺ + ㄻ	U+110E + U+110F		—		—	compound
173	20-27	ㄺ	U+1153	ㄺ + ㄼ	U+110E + U+1112		—		—	compound
174	21	ㄻ	U+1154	ㄻ	U+1154		—		—	atomic
175	22	ㄼ	U+1155	ㄼ	U+1155		—		—	atomic
176	23	ㄽ	U+110F	ㄽ	U+110F	ㄽ	U+11BF	ㄽ	U+11BF	atomic
177	24	ㄾ	U+1110	ㄾ	U+1110	ㄾ	U+11C0	ㄾ	U+11C0	atomic
178	24-24	ㄾ	U+A979	ㄾ + ㄾ	U+1110 + U+1110		—		—	compound
179	25	ㄿ	U+1111	ㄿ	U+1111	ㄿ	U+11C1	ㄿ	U+11C1	atomic
180	25-08	ㄿ	U+1156	ㄿ + ㅁ	U+1111 + U+1107	ㄿ	U+11F3	ㄿ + ㅁ	U+11C1 + U+11B8	compound
181	25-11		—		—	ㅁ	U+D7FA	ㄿ + ㅁ	U+11C1 + U+11BA	compound
182	25-24		—		—	ㅁ	U+D7FB	ㄿ + ㅁ	U+11C1 + U+11C0	compound
183	25-27	ㅁ	U+A97A	ㅁ + ㄼ	U+1111 + U+1112		—		—	compound
184	26	ㅂ	U+1157	ㅂ	U+1157	ㅂ	U+11F4	ㅂ	U+11F4	atomic
185	27	ㅃ	U+1112	ㅃ	U+1112	ㅃ	U+11C2	ㅃ	U+11C2	atomic
186	27-02		—		—	ㅃ	U+11F5	ㅃ + ㅅ	U+11C2 + U+11AB	compound
187	27-04		—		—	ㅃ	U+11F6	ㅃ + ㅅ	U+11C2 + U+11AF	compound
188	27-06		—		—	ㅃ	U+11F7	ㅃ + ㅅ	U+11C2 + U+11B7	compound
189	27-08		—		—	ㅃ	U+11F8	ㅃ + ㅅ	U+11C2 + U+11B8	compound
190	27-11	ㅅ	U+A97B	ㅃ + ㅅ	U+1112 + U+1109		—		—	compound
191	27-27	ㅅ	U+1158	ㅃ + ㅅ	U+1112 + U+1112		—		—	compound
192	28	ㅆ	U+1159	ㅆ	U+1159	ㅆ	U+11F9	ㅆ	U+11F9	atomic
193	28-28	ㅆ	U+A97C	ㅆ + ㅆ	U+1159 + U+1159		—		—	compound
194	99	HCF	U+115F	HCF	U+115F		—		—	filler

4. Order and auxiliary decompositions of all hangul vowel letters (pages 27–29)

(Atomic vowel letters are highlighted in yellow)

Order (cont.)	Order (absolute)	Vowel		Auxiliary decomposition		Atomic/compound?
0	00	HJF	U+1160	HJF	U+1160	filler
1	01	ᳵ	U+1161	ᳵ	U+1161	atomic
2	01-05	ᳶ	U+1176	ᳵ + ᳶ	U+1161 + U+1169	compound
3	01-07	᳷	U+1177	ᳵ + ᳷	U+1161 + U+116E	compound
4	01-09	᳸	U+11A3	ᳵ + ᳸	U+1161 + U+1173	compound
5	01-10	᳹	U+1162	ᳵ + ᳹	U+1161 + U+1175	compound
6	02	ᳺ	U+1163	ᳺ	U+1163	atomic
7	02-05	᳻	U+1178	ᳺ + ᳶ	U+1163 + U+1169	compound
8	02-06	᳼	U+1179	ᳺ + ᳷	U+1163 + U+116D	compound
9	02-07	᳽	U+11A4	ᳺ + ᳷	U+1163 + U+116E	compound
10	02-10	᳾	U+1164	ᳺ + ᳹	U+1163 + U+1175	compound
11	03	᳿	U+1165	᳿	U+1165	atomic
12	03-05	᳠	U+117A	᳿ + ᳶ	U+1165 + U+1169	compound
13	03-07	᳡	U+117B	᳿ + ᳷	U+1165 + U+116E	compound
14	03-09	᳢	U+117C	᳿ + ᳸	U+1165 + U+1173	compound
15	03-10	᳣	U+1166	᳿ + ᳹	U+1165 + U+1175	compound
16	04	᳤	U+1167	᳤	U+1167	atomic
17	04-02	᳥	U+11A5	᳤ + ᳺ	U+1167 + U+1163	compound
18	04-05	᳦	U+117D	᳤ + ᳶ	U+1167 + U+1169	compound
19	04-07	᳧	U+117E	᳤ + ᳷	U+1167 + U+116E	compound
20	04-10	᳨	U+1168	᳤ + ᳹	U+1167 + U+1175	compound
21	05	ᳩ	U+1169	ᳩ	U+1169	atomic
22	05-01	ᳪ	U+116A	ᳩ + ᳵ	U+1169 + U+1161	compound
23	05-01-10	ᳫ	U+116B	ᳩ + ᳵ + ᳹	U+1169 + U+1161 + U+1175	compound
24	05-02	ᳬ	U+11A6	ᳩ + ᳺ	U+1169 + U+1163	compound
25	05-02-10	᳭	U+11A7	ᳩ + ᳺ + ᳹	U+1169 + U+1163 + U+1175	compound
26	05-03	ᳮ	U+117F	ᳩ + ᳿	U+1169 + U+1165	compound
27	05-03-10	ᳯ	U+1180	ᳩ + ᳿ + ᳹	U+1169 + U+1165 + U+1175	compound
28	05-04	ᳰ	U+D7B0	ᳩ + ᳤	U+1169 + U+1167	compound
29	05-04-10	ᳱ	U+1181	ᳩ + ᳤ + ᳹	U+1169 + U+1167 + U+1175	compound
30	05-05	ᳲ	U+1182	ᳩ + ᳶ	U+1169 + U+1169	compound
31	05-05-10	ᳳ	U+D7B1	ᳩ + ᳶ + ᳹	U+1169 + U+1169 + U+1175	compound
32	05-07	᳴	U+1183	ᳩ + ᳷	U+1169 + U+116E	compound
33	05-10	ᳵ	U+116C	ᳩ + ᳹	U+1169 + U+1175	compound
34	06	ᳶ	U+116D	ᳶ	U+116D	atomic
35	06-01	᳷	U+D7B2	ᳶ + ᳵ	U+116D + U+1161	compound

Order (cont.)	Order (absolute)	Vowel		Auxiliary decomposition		Atomic/compound?
36	06-01-10	ᳵ	U+D7B3	ᳵ + ᳴ + ᳶ	U+116D + U+1161 + U+1175	compound
37	06-02	ᳶ	U+1184	ᳵ + ᳴	U+116D + U+1163	compound
38	06-02-10	ᳵ	U+1185	ᳵ + ᳴ + ᳶ	U+116D + U+1163 + U+1175	compound
39	06-03	ᳶ	U+D7B4	ᳵ + ᳴	U+116D + U+1165	compound
40	06-04	ᳶ	U+1186	ᳵ + ᳴	U+116D + U+1167	compound
41	06-05	ᳶ	U+1187	ᳵ + ᳴	U+116D + U+1169	compound
42	06-10	ᳶ	U+1188	ᳵ + ᳴	U+116D + U+1175	compound
43	07	ᳶ	U+116E	ᳶ	U+116E	atomic
44	07-01	ᳶ	U+1189	ᳶ + ᳴	U+116E + U+1161	compound
45	07-01-10	ᳶ	U+118A	ᳶ + ᳴ + ᳶ	U+116E + U+1161 + U+1175	compound
46	07-03	ᳶ	U+116F	ᳶ + ᳴	U+116E + U+1165	compound
47	07-03-09	ᳶ	U+118B	ᳶ + ᳴ + ᳶ	U+116E + U+1165 + U+1173	compound
48	07-03-10	ᳶ	U+1170	ᳶ + ᳴ + ᳶ	U+116E + U+1165 + U+1175	compound
49	07-04	ᳶ	U+D7B5	ᳶ + ᳴	U+116E + U+1167	compound
50	07-04-10	ᳶ	U+118C	ᳶ + ᳴ + ᳶ	U+116E + U+1167 + U+1175	compound
51	07-07	ᳶ	U+118D	ᳶ + ᳴	U+116E + U+116E	compound
52	07-10	ᳶ	U+1171	ᳶ + ᳴	U+116E + U+1175	compound
53	07-10-10	ᳶ	U+D7B6	ᳶ + ᳴ + ᳶ	U+116E + U+1175 + U+1175	compound
54	08	ᳶ	U+1172	ᳶ	U+1172	atomic
55	08-01	ᳶ	U+118E	ᳶ + ᳴	U+1172 + U+1161	compound
56	08-01-10	ᳶ	U+D7B7	ᳶ + ᳴ + ᳶ	U+1172 + U+1161 + U+1175	compound
57	08-03	ᳶ	U+118F	ᳶ + ᳴	U+1172 + U+1165	compound
58	08-03-10	ᳶ	U+1190	ᳶ + ᳴ + ᳶ	U+1172 + U+1165 + U+1175	compound
59	08-04	ᳶ	U+1191	ᳶ + ᳴	U+1172 + U+1167	compound
60	08-04-10	ᳶ	U+1192	ᳶ + ᳴ + ᳶ	U+1172 + U+1167 + U+1175	compound
61	08-05	ᳶ	U+D7B8	ᳶ + ᳴	U+1172 + U+1169	compound
62	08-07	ᳶ	U+1193	ᳶ + ᳴	U+1172 + U+116E	compound
63	08-10	ᳶ	U+1194	ᳶ + ᳴	U+1172 + U+1175	compound
64	09	ᳶ	U+1173	ᳶ	U+1173	atomic
65	09-01	ᳶ	U+D7B9	ᳶ + ᳴	U+1173 + U+1161	compound
66	09-03	ᳶ	U+D7BA	ᳶ + ᳴	U+1173 + U+1165	compound
67	09-03-10	ᳶ	U+D7BB	ᳶ + ᳴ + ᳶ	U+1173 + U+1165 + U+1175	compound
68	09-05	ᳶ	U+D7BC	ᳶ + ᳴	U+1173 + U+1169	compound
69	09-07	ᳶ	U+1195	ᳶ + ᳴	U+1173 + U+116E	compound
70	09-09	ᳶ	U+1196	ᳶ + ᳴	U+1173 + U+1173	compound
71	09-10	ᳶ	U+1174	ᳶ + ᳴	U+1173 + U+1175	compound
72	09-10-07	ᳶ	U+1197	ᳶ + ᳴ + ᳴	U+1173 + U+1175 + U+116E	compound
73	10	ᳶ	U+1175	ᳶ	U+1175	atomic

Order (cont.)	Order (absolute)	Vowel		Auxiliary decomposition		Atomic/ compound?
74	10-01	𐌲	U+1198	𐌲 + 𐌲	U+1175 + U+1161	compound
75	10-02	𐌳	U+1199	𐌲 + 𐌴	U+1175 + U+1163	compound
76	10-02-05	𐌳𐌶	U+D7BD	𐌲 + 𐌴 + 𐌶	U+1175 + U+1163 + U+1169	compound
77	10-02-10	𐌳𐌺	U+D7BE	𐌲 + 𐌴 + 𐌲	U+1175 + U+1163 + U+1175	compound
78	10-04	𐌴	U+D7BF	𐌲 + 𐌴	U+1175 + U+1167	compound
79	10-04-10	𐌴𐌲	U+D7C0	𐌲 + 𐌴 + 𐌲	U+1175 + U+1167 + U+1175	compound
80	10-05	𐌴𐌶	U+119A	𐌲 + 𐌶	U+1175 + U+1169	compound
81	10-05-10	𐌴𐌶𐌲	U+D7C1	𐌲 + 𐌶 + 𐌲	U+1175 + U+1169 + U+1175	compound
82	10-06	𐌴𐌶𐌴	U+D7C2	𐌲 + 𐌶𐌴	U+1175 + U+116D	compound
83	10-07	𐌴𐌶𐌲	U+119B	𐌲 + 𐌶𐌲	U+1175 + U+116E	compound
84	10-08	𐌴𐌶𐌴𐌲	U+D7C3	𐌲 + 𐌶𐌴𐌲	U+1175 + U+1172	compound
85	10-09	𐌴𐌶𐌴	U+119C	𐌲 + 𐌶𐌴	U+1175 + U+1173	compound
86	10-10	𐌴𐌴	U+D7C4	𐌲 + 𐌲	U+1175 + U+1175	compound
87	10-11	𐌴𐌴	U+119D	𐌲 + 𐌴	U+1175 + U+119E	compound
88	11	𐌴	U+119E	𐌴	U+119E	atomic
89	11-01	𐌴𐌲	U+D7C5	𐌴 + 𐌲	U+119E + U+1161	compound
90	11-03	𐌴𐌴	U+119F	𐌴 + 𐌴	U+119E + U+1165	compound
91	11-03-10	𐌴𐌴𐌲	U+D7C6	𐌴 + 𐌴 + 𐌲	U+119E + U+1165 + U+1175	compound
92	11-07	𐌴𐌴𐌲	U+11A0	𐌴 + 𐌴𐌲	U+119E + U+116E	compound
93	11-10	𐌴𐌴	U+11A1	𐌴 + 𐌴	U+119E + U+1175	compound
94	11-11	𐌴𐌴	U+11A2	𐌴 + 𐌴	U+119E + U+119E	compound

(Document continued on the next page)

5. Complete Hangul Compatibility Jamo ↔ Hangul (conjoining) Jamo mappings

5.1. Consonants (pages 30–31)

Order (continuous)	Order (absolute)	Compatibility		Leading		Trailing	
1	01	ㄱ	U+3131	ㄱ	U+1100	ㄱ	U+11A8
2	01-01	ㄲ	U+3132	ㄲ	U+1101	ㄲ	U+11A9
7	01-11	ㄴ	U+3133		—	ㄴ	U+11AA
12	02	ㄷ	U+3134	ㄷ	U+1102	ㄷ	U+11AB
14	02-02	ㄸ	U+3165	ㄸ	U+1114	ㄸ	U+11FF
15	02-03	ㄹ	U+3166	ㄹ	U+1115	ㄹ	U+11C6
18	02-11	ㄺ	U+3167	ㄺ	U+115B	ㄺ	U+11C7
19	02-14	ㄻ	U+3168		—	ㄻ	U+11C8
20	02-17	ㄼ	U+3135	ㄼ	U+115C	ㄼ	U+11AC
23	02-27	ㄽ	U+3136	ㄽ	U+115D	ㄽ	U+11AD
24	03	ㄾ	U+3137	ㄾ	U+1103	ㄾ	U+11AE
26	03-03	ㄿ	U+3138	ㄿ	U+1104	ㄿ	U+D7CD
36	04	ㅁ	U+3139	ㅁ	U+1105	ㅁ	U+11AF
37	04-01	ㅂ	U+313A	ㅂ	U+A964	ㅂ	U+11B0
39	04-01-11	ㅃ	U+3169		—	ㅃ	U+11CC
42	04-03	ㅄ	U+316A	ㅄ	U+A966	ㅄ	U+11CE
47	04-06	ㅅ	U+313B	ㅅ	U+A968	ㅅ	U+11B1
51	04-08	ㅆ	U+313C	ㅆ	U+A969	ㅆ	U+11B2
54	04-08-11	ㅈ	U+316B		—	ㅈ	U+11D3
58	04-11	ㅊ	U+313D	ㅊ	U+A96C	ㅊ	U+11B3
60	04-14	ㅋ	U+316C		—	ㅋ	U+11D7
64	04-24	ㅌ	U+313E		—	ㅌ	U+11B4
65	04-25	ㅍ	U+313F		—	ㅍ	U+11B5
66	04-27	ㅑ	U+3140	ㅑ	U+111A	ㅑ	U+11B6
67	04-28	ㅒ	U+316D		—	ㅒ	U+11D9
70	06	ㅍ	U+3141	ㅍ	U+1106	ㅍ	U+11B7
77	06-08	ㅍ	U+316E	ㅍ	U+111C	ㅍ	U+11DC
79	06-11	ㅑ	U+316F	ㅑ	U+A971	ㅑ	U+11DD
81	06-14	ㅓ	U+3170		—	ㅓ	U+11DF
85	07	ㅕ	U+3171	ㅕ	U+111D	ㅕ	U+11E2
86	08	ㅖ	U+3142	ㅖ	U+1107	ㅖ	U+11B8
87	08-01	ㅗ	U+3172	ㅗ	U+111E		—

Order (continuous)	Order (absolute)	Compatibility		Leading		Trailing	
89	08-03	ㄷ	U+3173	ㄷ	U+1120	ㄷ	U+D7E3
93	08-08	ㅅ	U+3143	ㅅ	U+1108	ㅅ	U+D7E6
94	08-11	ㅈ	U+3144	ㅈ	U+1121	ㅈ	U+11B9
95	08-11-01	ㅊ	U+3174	ㅊ	U+1122		—
96	08-11-03	ㅋ	U+3175	ㅋ	U+1123	ㅋ	U+D7E7
101	08-17	ㅌ	U+3176	ㅌ	U+1127	ㅌ	U+D7E8
104	08-24	ㅍ	U+3177	ㅍ	U+1129		—
107	09	ㅑ	U+3178	ㅑ	U+112B	ㅑ	U+11E6
108	10	ㅓ	U+3179	ㅓ	U+112C		—
109	11	ㅕ	U+3145	ㅕ	U+1109	ㅕ	U+11BA
110	11-01	ㅗ	U+317A	ㅗ	U+112D	ㅗ	U+11E7
111	11-02	ㅛ	U+317B	ㅛ	U+112E		—
112	11-03	ㅜ	U+317C	ㅜ	U+112F	ㅜ	U+11E8
115	11-08	ㅠ	U+317D	ㅠ	U+1132	ㅠ	U+11EA
118	11-11	ㅡ	U+3146	ㅡ	U+110A	ㅡ	U+11BB
125	11-17	ㅞ	U+317E	ㅞ	U+1136	ㅞ	U+D7EF
135	14	ㅟ	U+317F	ㅟ	U+1140	ㅟ	U+11EB
138	15	ㅠ	U+3147	ㅠ	U+110B	ㅠ	U+11BC
146	15-15	ㅢ	U+3180	ㅢ	U+1147		—
152	16	ㅣ	U+3181	ㅣ	U+114C	ㅣ	U+11F0
156	16-11	ㅤ	U+3182		—	ㅤ	U+11F1
157	16-14	ㅥ	U+3183		—	ㅥ	U+11F2
161	17	ㅦ	U+3148	ㅦ	U+110C	ㅦ	U+11BD
165	17-17	ㅧ	U+3149	ㅧ	U+110D	ㅧ	U+D7F9
171	20	ㅨ	U+314A	ㅨ	U+110E	ㅨ	U+11BE
176	23	ㅩ	U+314B	ㅩ	U+110F	ㅩ	U+11BF
177	24	ㅪ	U+314C	ㅪ	U+1110	ㅪ	U+11C0
179	25	ㅫ	U+314D	ㅫ	U+1111	ㅫ	U+11C1
184	26	ㅬ	U+3184	ㅬ	U+1157	ㅬ	U+11F4
185	27	ㅭ	U+314E	ㅭ	U+1112	ㅭ	U+11C2
191	27-27	ㅮ	U+3185	ㅮ	U+1158		—
192	28	ㅯ	U+3186	ㅯ	U+1159	ㅯ	U+11F9

5.2. Vowels

Order (continuous)	Order (absolute)	Compatibility		Vowel	
1	01	┆	U+314F	┆	U+1161
5	01-10	𐌆	U+3150	𐌆	U+1162
6	02	┆	U+3151	┆	U+1163
10	02-10	𐌆	U+3152	𐌆	U+1164
11	03	┆	U+3153	┆	U+1165
15	03-10	𐌆	U+3154	𐌆	U+1166
16	04	┆	U+3155	┆	U+1167
20	04-10	𐌆	U+3156	𐌆	U+1168
21	05	┆	U+3157	┆	U+1169
22	05-01	┆	U+3158	┆	U+116A
23	05-01-10	𐌆	U+3159	𐌆	U+116B
33	05-10	┆	U+315A	┆	U+116C
34	06	┆	U+315B	┆	U+116D
37	06-02	𐌆	U+3187	𐌆	U+1184
38	06-02-10	𐌆	U+3188	𐌆	U+1185
42	06-10	┆	U+3189	┆	U+1188
43	07	┆	U+315C	┆	U+116E
46	07-03	┆	U+315D	┆	U+116F
48	07-03-10	𐌆	U+315E	𐌆	U+1170
52	07-10	┆	U+315F	┆	U+1171
54	08	┆	U+3160	┆	U+1172
59	08-04	𐌆	U+318A	𐌆	U+1191
60	08-04-10	𐌆	U+318B	𐌆	U+1192
63	08-10	┆	U+318C	┆	U+1194
64	09	—	U+3161	—	U+1173
71	09-10	┆	U+3162	┆	U+1174
73	10		U+3163		U+1175
88	11	•	U+318D	•	U+119E
93	11-10	•	U+318E	•	U+11A1

Appendix B: All 1638750 representable hangul syllables, in the correct order

(125 × 95 × 138 = 1638750)

Note: The table below is just an excerpt. To see the complete list of 1638750 syllables, please open the text file attached in this document.

Order (syllable)	Order (jamo)	String	U+
1	001-00-000	ㄱ	U+1100 U+1160
2	001-00-001	ㄲ	U+1100 U+1160 U+11A8
3	001-00-002	ㄳ	U+1100 U+1160 U+11A9
4	001-00-003	ㄴ	U+1100 U+1160 U+11FA
5	001-00-005	ㄷ	U+1100 U+1160 U+11C3
6	001-00-006	ㄸ	U+1100 U+1160 U+11FB
7	001-00-007	ㄹ	U+1100 U+1160 U+11AA
8	001-00-008	ㄺ	U+1100 U+1160 U+11C4
9	001-00-009	ㄻ	U+1100 U+1160 U+11FC
10	001-00-010	ㄼ	U+1100 U+1160 U+11FD
⋮	⋮	⋮	⋮
819371	110-47-070	ㅍ	U+112D U+118B U+11B7
819372	110-47-071	ㅑ	U+112D U+118B U+11DA
819373	110-47-072	ㅒ	U+112D U+118B U+D7DE
819374	110-47-073	ㅓ	U+112D U+118B U+D7DF
819375	110-47-075	ㅕ	U+112D U+118B U+11DB
819376	110-47-076	ㅖ	U+112D U+118B U+D7E0
819377	110-47-077	ㅗ	U+112D U+118B U+11DC
819378	110-47-078	ㅛ	U+112D U+118B U+D7E1
819379	110-47-079	ㅜ	U+112D U+118B U+11DD
819380	110-47-080	ㅠ	U+112D U+118B U+11DE
⋮	⋮	⋮	⋮
1638741	194-94-180	ㅈ	U+115F U+11A2 U+11F3
1638742	194-94-181	ㅊ	U+115F U+11A2 U+D7FA
1638743	194-94-182	ㅊ	U+115F U+11A2 U+D7FB
1638744	194-94-184	ㅋ	U+115F U+11A2 U+11F4
1638745	194-94-185	ㆁ	U+115F U+11A2 U+11C2
1638746	194-94-186	ㆁ	U+115F U+11A2 U+11F5
1638747	194-94-187	ㆁ	U+115F U+11A2 U+11F6
1638748	194-94-188	ㆁ	U+115F U+11A2 U+11F7
1638749	194-94-189	ㆁ	U+115F U+11A2 U+11F8
1638750	194-94-192	ㆁ	U+115F U+11A2 U+11F9

(End of document, with appendices)