

1 MR MIDI System Exclusive Specification  
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22 This manual is copyrighted and all rights are reserved by ENSONIQ Corp. Thi  
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24 Although every effort has been made to ensure the accuracy of the text and  
25  
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85		
86	1.0	Introduction and Overview
87		
88		This document describes the MIDI System Exclusive (SysEx) communication pro
89		
90	1.1	Data Type Definitions
91		
92		The following internal data types are used within the MR:
93		
94	Unsigned Long Word	Positive Integer (4-bytes) ranging from 0 to 429496
95	Long Word	Two's Complement Signed Integer (4-bytes) ranging f
96	Unsigned Short Word	Positive Integer (2-bytes) ranging from 0 to 65535
97	Short Word	Two's Complement Signed Integer (2-bytes) ranging f
98	Unsigned Byte	Positive Integer ranging from 0 to 255
99	Byte	Two's Complement Signed Integer ranging from -128 t
100	ASCII Character	Positive Integer (1-byte) ranging from 0 to 127
101		
102		Unless otherwise specified, all data types are in Motorola big-endian byte
103		
104	1.2	4 to 5 Bulk SysEx Data Encoding
105		
106		Where specified, the MR will encode/interpret a consecutive group of 4-byte
107		
108	Byte #0	b31b30b29b28b27b26b25b24
109	Byte #1	b23b22b21b20b19b18b17b16
110	Byte #2	b15b14b13b12b11b10b09b08

```
111         Byte #3          b07b06b05b04b03b02b01b00
112
113 as the following 5 consecutive SysEx bytes:
114
115         Byte #0          0  b06b05b04b03b02b01b00
116         Byte #1          0  b13b12b11b10b09b08b07
117         Byte #2          0  b20b19b18b17b16b15b14
118         Byte #3          0  b27b26b25b24b23b22b21
119         Byte #4          0  0  0  0  b31b30b29b28
```

```
120
121 In the event that less than 4 bytes need to be encoded, the remaining bytes
122
```

### 123 1.3 Data Block Size

```
124
125 The Data Block Size parameter, which is found in certain Ensoniq specific S
126
```

### 127 1.4 Checksum Calculation

```
128
129 Unless otherwise specified, checksum values are to be calculated by perform
130
```

### 131 1.5 Reserved/Not Defined Data

```
132
133 Any data that is denoted as Reserved or Not Defined should NEVER be modifie
134
```

### 135 1.6 MR-Rack and MR-61/76 Model ID Code

```
136
137 The Model ID Code for the MR-Rack is defined as the value 00h, while the MR
138
```

### 139 1.7 Error Messages

```
140
141 The following SysEx error message will be generated in response to an impro
142
```

```
143         F0          System Exclusive Status Byte
144         0F          Ensoniq Manufacturer Code
145         09          MR Family ID Code
146
147         00          MR-Rack Model ID Code
148         or
149         01/02       MR-61/76 Model ID Code
150
151         nn          Device ID Number (0 to 127)
152
153         7F          Error Reply
154         01          Bad Message Error Code
155
156         F7          End of System Exclusive
```

### 158 2.0 Universal System Exclusive Messages

```
159
160 The following Universal Real-Time and Non-Real-Time System Exclusive messag
161
```

### 162 2.1 Universal System Exclusive Device Inquiry Message

```
163
164 The MR supports the MIDI Device Inquiry message which allows instruments an
165
```

```

166      F0      System Exclusive Status Byte
167      7E      Non Real Time Message Code
168
169      nn      Device ID Number (0 to 127)
170          or
171      7F      All Channel Broadcast Code
172
173      06      General Information Message Code
174      01      Identity Request Message Code
175
176      F7      End of System Exclusive
177
178 2.2      Universal System Exclusive Device Identity Reply Message
179
180 The following Identity Reply message contains information about the MR, and
181
182      F0      System Exclusive Status Byte
183      7E      Non Real Time Message Code
184      nn      Device ID Number (0 to 127)
185
186      06      General Information Message Code
187      02      Identity Reply Message Code
188
189      0F      Ensoniq Manufacturer's Code
190      09      MR Product Family ID Code (LSByte)
191      00      MR Product Family ID Code (MSByte)
192      mm      MR Family Member ID Code (LSByte)
193      00      MR Family Member ID Code (MSByte)
194      rr      Software Revision Information
195      00      Reserved
196      ii      Major Version Number (Integer Portion)
197      nn      Minor Version Number (Decimal Fraction Portion)
198
199      F7      End of System Exclusive
200
201 2.3      Universal System Exclusive General MIDI ON Message
202
203 The following message will cause the MR-Rack to select the General MIDI per
204
205      F0      System Exclusive Status Byte
206      7E      Non Real Time Message Code
207
208      nn      Device ID Number (0 to 127)
209          or
210      7F      All Channel Broadcast Code
211
212      09      General MIDI Message Code
213      01      General MIDI "ON" Message Code
214
215      F7      End of System Exclusive
216
217 2.4      Universal System Exclusive General MIDI OFF Message
218
219 Upon the reception of this message, the MR will conclude General MIDI opera
220

```

```

221      F0      System Exclusive Status Byte
222      7E      Non Real Time Message Code
223
224      nn      Device ID Number (0 to 127)
225          or
226      7F      All Channel Broadcast Code
227
228      09      General MIDI Message Code
229      02      General MIDI "OFF" Message Code
230
231      F7      End of System Exclusive
232
233 2.5      Universal MIDI Bulk Tuning Dump Reply Message
234
235 As a recent addition to the MIDI Specification and the Ensoniq product line
236
237      F0      System Exclusive Status Byte
238      7E      Non Real Time Message Code
239
240      nn      Device ID Number (0 to 127)
241          or
242      7F      All Channel Broadcast Code
243
244      08      MIDI Tuning Standard Message Code
245      01      Bulk Dump Reply Message Code
246
247      tt      Tuning Program Number (0 to 127)
248              (This is currently ignored by the MR)
249      [aa] x 16 Tuning Program Name - 16 ASCII Characters
250              (This is currently ignored by the MR)
251
252      xx      Semitone Frequency Data for MIDI Key #0
253      yy      MSB Fraction of Semitone Data for MIDI Key #0
254      zz      LSB Fraction of Semitone Data for MIDI Key #0
255
256      Repeat [xx,yy,zz] 127 More Times For MIDI Keys #1 to 127
257
258      cc      Checksum = XOR of
259              7E (Non Real Time Message Code)
260              08 (MIDI Tuning Standard Message Code)
261              01 (Bulk Dump Reply Message Code)
262              tt (Tuning Program Number)
263              All 128 sets of [xx,yy,zz]
264
265      F7      End of System Exclusive
266
267 2.6      Universal MIDI Single Note Tuning Change Message
268
269 This message allows real-time, performance oriented adjustments to be made
270
271 In addition, the MR's response to this message has been extended to allow a
272
273      F0      System Exclusive Status Byte
274      7F      Real Time Message Code
275

```

```

276      nn          Device ID Number (0 to 127)
277          or
278      7F          All Channel Broadcast Code
279
280      08          MIDI Tuning Standard Message Code
281      02          Note Change Message Code
282
283      tt          Tuning Program Number (0 to 127)
284                  (This is currently ignored by the MR)
285
286      cc          Number of Note Changes
287
288      kk          MIDI Key Number (0 to 127)
289      xx          Semitone Frequency Data for MIDI Key kk
290      yy          MSB Fraction of Semitone Data for MIDI Key kk
291      zz          LSB Fraction of Semitone Data for MIDI Key kk
292
293      Repeat [kk,xx,yy,zz] to Equal Number of Note Changes Minus One
294
295      F7          End of System Exclusive
296
297 3.0      Ensoniq MR Specific System Exclusive Messages
298
299 This section describes the entire set of Ensoniq specific SysEx messages th
300
301 3.1      Single Item Transmit Request
302
303 This multi-context command will initiate a dump of a single Sound Program,
304
305 3.1.1    System Parameter Transmit Request
306
307      F0          System Exclusive Status Byte
308      0F          Ensoniq Manufacturer Code
309      09          MR Family ID Code
310
311      00          MR-Rack Model ID Code
312          or
313      01/02       MR-61/76 Model ID Code
314
315      nn          Device ID Number (0 to 127)
316
317      03          Transmit Request Command
318      00          System Parameter Dump Request
319      00          Reserved
320      00          Reserved
321
322      F7          End of System Exclusive
323
324 The MR will respond to this command with the following SysEx message string
325
326      F0          System Exclusive Status Byte
327      0F          Ensoniq Manufacturer Code
328      09          MR Family ID Code
329
330      00          MR-Rack Model ID Code

```

```

331                or
332      01/02      MR-61/76 Model ID Code
333
334      nn        Device ID Number (0 to 127)
335
336      43        Transmit Request Reply Command
337      00        System Parameter Dump Request
338      00        Reserved
339      00        Reserved
340
341      bb        Data Block Size - 0  b06b05b04b03b02b01b00
342      bb        Data Block Size - 0  b13b12b11b10b09b08b07
343      bb        Data Block Size - 0  b20b19b18b17b16b15b14
344      bb        Data Block Size - 0  b27b26b25b24b23b22b21
345      0b        Data Block Size - 0  0  0  0  b31b30b29b28
346
347      Start of Data Block
348
349      [Section 4.0 Data Structure] ( 4-to-5 Bulk SysEx Data Encoded
350
351      End of Data Block
352
353      kk        14-Bit Checksum - LSByte
354      kk        14-Bit Checksum - MSByte
355
356      F7        End of System Exclusive
357
358  3.1.2      Single Sound Program Transmit Request
359
360      F0        System Exclusive Status Byte
361      0F        Ensoniq Manufacturer Code
362      09        MR Family ID Code
363
364      00        MR-Rack Model ID Code
365                or
366      01/02      MR-61/76 Model ID Code
367
368      nn        Device ID Number (0 to 127)
369
370      03        Transmit Request Command
371      01        Single Sound Program Dump Request
372
373      pp        Program Number (0 to 127)
374      bb        Bank Number (0 to 127)
375
376      F7        End of System Exclusive
377
378  The MR will respond to this command with the following SysEx message string
379
380      F0        System Exclusive Status Byte
381      0F        Ensoniq Manufacturer Code
382      09        MR Family ID Code
383
384      00        MR-Rack Model ID Code
385                or

```

```

386      01/02      MR-61/76 Model ID Code
387
388      nn        Device ID Number (0 to 127)
389
390      43        Transmit Request Reply Command
391      01        Single Sound Program Dump Request
392
393      pp        Program Number (0 to 127)
394      bb        Bank Number (0 to 127)
395
396      bb        Data Block Size - 0  b06b05b04b03b02b01b00
397      bb        Data Block Size - 0  b13b12b11b10b09b08b07
398      bb        Data Block Size - 0  b20b19b18b17b16b15b14
399      bb        Data Block Size - 0  b27b26b25b24b23b22b21
400      0b        Data Block Size - 0  0  0  0  b31b30b29b28
401

```

402 Start of Data Block

403 [Section 4.1 Data Structure] ( 4-to-5 Bulk SysEx Data Encoded

404

405 End of Data Block

406

407 kk 14-Bit Checksum - LSByte

408 kk 14-Bit Checksum - MSByte

409

410 F7 End of System Exclusive

411

412 3.1.3 Single Performance Transmit Request

413

414 The MR-61/76 does not allow for Performance dumps because the sequencer has

415

416 F0 System Exclusive Status Byte

417 0F Ensoniq Manufacturer Code

418 09 MR Family ID Code

419 00 MR-Rack Model ID Code

420 nn Device ID Number (0 to 127)

421

422 03 Transmit Request Command

423 02 Single Performance Dump Request

424

425 pp Program Number (0 to 127)

426 bb Bank Number (0 to 127)

427

428 F7 End of System Exclusive

429

430 The MR-Rack will respond to this command with the following SysEx message s

431

432 F0 System Exclusive Status Byte

433 0F Ensoniq Manufacturer Code

434 09 MR Family ID Code

435 00 MR-Rack Model ID Code

436 nn Device ID Number (0 to 127)

437

438 43 Transmit Request Reply Command

439 02 Single Performance Dump Request

440

```

441
442     pp           Program Number (0 to 127)
443     bb           Bank Number (0 to 127)
444
445     bb           Data Block Size - 0  b06b05b04b03b02b01b00
446     bb           Data Block Size - 0  b13b12b11b10b09b08b07
447     bb           Data Block Size - 0  b20b19b18b17b16b15b14
448     bb           Data Block Size - 0  b27b26b25b24b23b22b21
449     0b           Data Block Size - 0  0  0  0  b31b30b29b28
450
451     Start of Data Block
452
453     [Section 8 Data Structure] ( 4-to-5 Bulk SysEx Data Encoded
454
455     End of Data Block
456
457     kk           14-Bit Checksum - LSByte
458     kk           14-Bit Checksum - MSByte
459
460     F7           End of System Exclusive
461
462 3.1.4 Single Drum Kit Program Transmit Request
463
464     F0           System Exclusive Status Byte
465     0F           Ensoniq Manufacturer Code
466     09           MR Family ID Code
467
468     00           MR-Rack Model ID Code
469           or
470     01/02       MR-61/76 Model ID Code
471
472     nn           Device ID Number (0 to 127)
473
474     03           Transmit Request Command
475     03           Single Drum Kit Program Dump Request
476
477     pp           Program Number (0 to 127)
478     bb           Bank Number (0 to 127)
479
480     F7           End of System Exclusive
481
482 The MR will respond to this command with the following SysEx message string
483
484     F0           System Exclusive Status Byte
485     0F           Ensoniq Manufacturer Code
486     09           MR Family ID Code
487
488     00           MR-Rack Model ID Code
489           or
490     01/02       MR-61/76 Model ID Code
491
492     nn           Device ID Number (0 to 127)
493
494     43           Transmit Request Reply Command
495     03           Single Drum Kit Program Dump Request

```

```

496
497     pp           Program Number (0 to 127)
498     bb           Bank Number (0 to 127)
499
500     bb           Data Block Size - 0  b06b05b04b03b02b01b00
501     bb           Data Block Size - 0  b13b12b11b10b09b08b07
502     bb           Data Block Size - 0  b20b19b18b17b16b15b14
503     bb           Data Block Size - 0  b27b26b25b24b23b22b21
504     0b           Data Block Size - 0  0  0  0  b31b30b29b28
505
506     Start of Data Block
507
508     [Section 7 Data Structure] ( 4-to-5 Bulk SysEx Data Encoded )
509
510     End of Data Block
511
512     kk           14-Bit Checksum - LSByte
513     kk           14-Bit Checksum - MSByte
514
515     F7           End of System Exclusive
516
517 3.2           Parameter Change Request
518
519 This multi-context command will allow for a consecutive group of one to fou
520
521 3.2.1         Sound Program Parameter Change Request
522
523     F0           System Exclusive Status Byte
524     0F           Ensoniq Manufacturer Code
525     09           MR Family ID Code
526
527     00           MR-Rack Model ID Code
528     or
529     01/02        MR-61/76 Model ID Code
530
531     nn           Device ID Number (0 to 127)
532     05           Parameter Change Request Command
533
534     01           Sound Program Parameter
535
536     pp           Program Number (0 to 127)
537     bb           Bank Number (0 to 127)
538
539     01           Program Parameter (See Section 5.0)
540     or
541     02           Layer Parameter (See Section 6)
542
543     yy           Layer Number minus 1 (LSByte)
544     zz           Layer Number minus 1 (MSByte)
545
546     bb           Parameter Offset - 0  b06b05b04b03b02b01b00
547     bb           Parameter Offset - 0  b13b12b11b10b09b08b07
548     bb           Parameter Offset - 0  b20b19b18b17b16b15b14
549     bb           Parameter Offset - 0  b27b26b25b24b23b22b21
550     0b           Parameter Offset - 0  0  0  0  b31b30b29b28

```

```

551
552      0b          Parameter Byte Size (1 to 4)
553      00
554      00
555      00
556      00
557
558      bb          Parameter Value - 0  b06b05b04b03b02b01b00
559      bb          Parameter Value - 0  b13b12b11b10b09b08b07
560      bb          Parameter Value - 0  b20b19b18b17b16b15b14
561      bb          Parameter Value - 0  b27b26b25b24b23b22b21
562      0b          Parameter Value - 0  0  0  0  b31b30b29b28
563
564      F7          End of System Exclusive
565
566 3.2.2 Performance Parameter Change Request
567
568 The MR-61/76 does not allow for Performance parameter changes because the s
569
570      F0          System Exclusive Status Byte
571      0F          Ensoniq Manufacturer Code
572      09          MR Family ID Code
573      00          MR-Rack Model ID Code
574      nn          Device ID Number (0 to 127)
575      05          Parameter Change Request Command
576
577      02          Performance Parameter (See Section 8)
578
579      pp          Program Number (0 to 127)
580      bb          Bank Number (0 to 127)
581
582      00          Reserved
583      00          Reserved
584      00          Reserved
585
586      bb          Parameter Offset - 0  b06b05b04b03b02b01b00
587      bb          Parameter Offset - 0  b13b12b11b10b09b08b07
588      bb          Parameter Offset - 0  b20b19b18b17b16b15b14
589      bb          Parameter Offset - 0  b27b26b25b24b23b22b21
590      bb          Parameter Offset - 0  0  0  0  b31b30b29b28
591
592      0b          Parameter Byte Size (1 to 4)
593      00
594      00
595      00
596      00
597
598      bb          Parameter Value - 0  b06b05b04b03b02b01b00
599      bb          Parameter Value - 0  b13b12b11b10b09b08b07
600      bb          Parameter Value - 0  b20b19b18b17b16b15b14
601      bb          Parameter Value - 0  b27b26b25b24b23b22b21
602      bb          Parameter Value - 0  0  0  0  b31b30b29b28
603
604      F7          End of System Exclusive
605

```

```

606 3.2.3   Drum Kit Program Parameter Change Request
607
608         F0           System Exclusive Status Byte
609         0F           Ensoniq Manufacturer Code
610         09           MR Family ID Code
611
612         00           MR-Rack Model ID Code
613         or
614         01/02       MR-61/76 Model ID Code
615
616         nn           Device ID Number (0 to 127)
617         05           Parameter Change Request Command
618
619         03           Drum Kit Program Parameter (See Section 7)
620
621         pp           Program Number (0 to 127)
622         bb           Bank Number (0 to 127)
623
624         00           Reserved
625         00           Reserved
626         00           Reserved
627
628         bb           Parameter Offset - 0   b06b05b04b03b02b01b00
629         bb           Parameter Offset - 0   b13b12b11b10b09b08b07
630         bb           Parameter Offset - 0   b20b19b18b17b16b15b14
631         bb           Parameter Offset - 0   b27b26b25b24b23b22b21
632         bb           Parameter Offset - 0   0 0 0 b31b30b29b28
633
634         0b           Parameter Byte Size (1 to 4)
635         00
636         00
637         00
638         00
639
640         bb           Parameter Value - 0    b06b05b04b03b02b01b00
641         bb           Parameter Value - 0    b13b12b11b10b09b08b07
642         bb           Parameter Value - 0    b20b19b18b17b16b15b14
643         bb           Parameter Value - 0    b27b26b25b24b23b22b21
644         bb           Parameter Value - 0    0 0 0 b31b30b29b28
645
646         F7           End of System Exclusive
647
648 3.3         Waveform Information Request
649
650 The following command string will request a dump of all the waveform names,
651
652         F0           System Exclusive Status Byte
653         0F           Ensoniq Manufacturer Code
654         09           MR Family ID Code
655
656         00           MR-Rack Model ID Code
657         or
658         01/02       MR-61/76 Model ID Code
659
660         nn           Device ID Number (0 to 127)

```

```

661
662      06      Waveform Information Request Message
663
664      00      Query Expansion Board Slot #1
665      or
666      01      Query Expansion Board Slot #2
667      or
668      02      Query Expansion Board Slot #3
669
670      F7      End of System Exclusive
671
672 The MR will respond to a properly formatted command with the following SysE
673
674      F0      System Exclusive Status Byte
675      0F      Ensoniq Manufacturer Code
676      09      MR Family ID Code
677
678      00      MR-Rack Model ID Code
679      or
680      01/02   MR-61/76 Model ID Code
681
682      nn      Device ID Number (0 to 127)
683
684      46      Waveform Information Reply Message
685
686      00      Query Expansion Board Slot #1
687      or
688      01      Query Expansion Board Slot #2
689      or
690      02      Query Expansion Board Slot #3
691
692      bb      Number of Waveform Information Blocks - 0   b06b05b0
693      bb      Number of Waveform Information Blocks - 0   b13b12b1
694      bb      Number of Waveform Information Blocks - 0   b20b19b1
695      bb      Number of Waveform Information Blocks - 0   b27b26b2
696      0b      Number of Waveform Information Blocks - 0   0   0   0
697
698      Start of Waveform Information Block #1
699
700      4-to-5 Bulk SysEx Data Encoded:
701      [Waveform Number   (MSByte)]
702      [Waveform Number   (LSByte)]
703      [Waveform Checksum (LSByte)]
704      [Waveform Checksum (MSByte)]
705
706      Waveform Name ( NULL Terminated ASCII String )
707
708      End of Waveform Information Block #1
709
710      The Waveform Information Block Is Repeated For The Remaining Wavefo
711
712      F7      End of System Exclusive
713
714 3.4      Initialize RAM Request
715

```

```

716 The function of this command is to erase, or nullify, a range of RAM Sound
717
718     F0           System Exclusive Status Byte
719     0F           Ensoniq Manufacturer Code
720     09           MR Family ID Code
721
722     00           MR-Rack Model ID Code
723           or
724     01/02       MR-61/76 Model ID Code
725
726     nn           Device ID Number (0 to 127)
727
728     07           Initialize RAM Request
729     01           Sound Program RAM
730
731     pp           Starting Program Number (0 to 127)
732     bb           Bank Number (0 to 127)
733
734     cc           Number of Programs to Clear - LSByte
735     cc           Number of Programs to Clear - MSByte
736
737     F7           End of System Exclusive
738
739 Note:  If the Starting Program Number added to the Number of Programs to C
740 the MR will wrap around to Program #0, and continue within the SAME bank, a
741 Program #127.
742
743 3.5      Transmit Display/LED Request
744
745 The following command string will request a dump of the current LCD screen
746
747     F0           System Exclusive Status Byte
748     0F           Ensoniq Manufacturer Code
749     09           MR Family ID Code
750
751     00           MR-Rack Model ID Code
752           or
753     01/02       MR-61/76 Model ID Code
754
755     nn           Device ID Number (0 to 127)
756
757     09           Transmit Display/LED Request Message
758
759     F7           End of System Exclusive
760
761 The MR will send the following SysEx message in response to the previous co
762
763     F0           System Exclusive Status Byte
764     0F           Ensoniq Manufacturer Code
765     09           MR Family ID Code
766
767     00           MR-Rack Model ID Code
768           or
769     01/02       MR-61/76 Model ID Code
770

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771      nn          Device ID Number (0 to 127)
772
773      49          Transmit Display/LED Reply Message
774
775      [Section 4.2 Data Structure]
776
777      F7          End of System Exclusive
778
779  3.6          Receive Display/LED Request
780
781  This command will temporarily display a user specified ASCII text string on
782
783      F0          System Exclusive Status Byte
784      0F          Ensoniq Manufacturer Code
785      09          MR Family ID Code
786
787      00          MR-Rack Model ID Code
788      or
789      01/02       MR-61/76 Model ID Code
790
791      nn          Device ID Number (0 to 127)
792
793      0A          Receive Display/LED Request Message
794
795      [Section 4.3 Data Structure]
796
797      F7          End of System Exclusive
798
799  4.0          Global System Parameter Structure
800
801  The following is the Global System Parameter Structure for the MR-Rack:
802
803  Offset          Parameter Name          Range/Values
804
805  00-03h          Global System Parameter Size      0000001Ch, Fixed Unsigned L
806  04-07h          Global System Parameter Tag      'GBL1' In ASCII
807  08h             System Pitch Bend Down Range      See Table 5.3
808  09h             System Pitch Bend Up Range      See Table 5.2
809  0Ah             System Fine Tune Offset        See Table 4.1
810  0Bh             System Pitch Table            See Table 5.1
811  0C-0Dh         System Tempo                25 to 250, Unsigned Short W
812  0Eh             System Tempo Clock Source      00h = Internal
813                                     01h = MIDI
814  0Fh             Audition Mode                See Table 4.2
815  10h             Wake-Up Mode                  00h = Last Page
816                                     01h = Last Sound
817                                     02h = General MIDI
818                                     03h = Demo
819  11h             Write Protect                 00h = OFF
820                                     01h = Prompt
821  12h             System Stak MIDI Channel      0 to 15
822  13h             System CTRL1 Source           See Table 4.3
823  14h             System CTRL2 Source           See Table 4.3
824  15h             System CTRL3 Source           See Table 4.3
825  16h             System CTRL4 Source           See Table 4.3

```

826	17h	System MIDI Enables	01h = All Notes Off Recv
827		Bitwise Definitions	02h = System Exclusive Recv
828			04h = Bank & Prog Change Re
829			08h = Part Parameter Reset
830			10h = Perf Prog Change Recv
831			20h = Auto Select FX Bus
832			80h = Not Defined
833	18h	System Exclusive Device ID Number	0 to 127
834	19h	Stak Coherence	00h = OFF
835			01h = ON
836	1Ah	System Pitch Bend Mode	00h = As Programmed
837			01h = Normal
838			02h = Held
839	1Bh	Aux To Main Outs	00h = Never
840			01h = Always
841			02h = Auto

843 The following is the Global System Parameter Structure for the MR-61/76:

844	Offset	Parameter Name	Range/Values
845	00-03h	Global System Parameter Size	00000028h, Fixed Unsigned L
846	04-07h	Global System Parameter Tag	'GBL1' In ASCII
847	08h	System Pitch Bend Down Range	See Table 5.3
848	09h	System Pitch Bend Up Range	See Table 5.2
849	0Ah	System Fine Tune Offset	See Table 4.1
850	0Bh	System Pitch Table	See Table 5.1
851	0C-0Dh	Reserved	
852	0Eh	System Tempo Clock Source	00h = Internal
853			01h = MIDI
854	0F-10h	Reserved	
855	11h	Write Protect	00h = OFF
856			01h = Prompt
857	12h	Base MIDI Channel	0 to 15
858	13h	System CTRL1 Source	See Table 4.3
859	14h	System CTRL2 Source	See Table 4.3
860	15h	System CTRL3 Source	See Table 4.3
861	16h	System CTRL4 Source	See Table 4.3
862	17h	System MIDI Enables	01h = All Notes Off Recv
863		Bitwise Definitions	02h = Not Defined
864			04h = Bank & Prog Change Re
865			08h = Track Parameter Reset
866			10h = Not Defined
867			20h = Auto Select FX Bus
868			80h = Not Defined
869	18h	System Exclusive Device ID Number	0 to 127
870	19h	Reserved	
871	1Ah	System Pitch Bend Mode	00h = As Programmed
872			01h = Normal
873			02h = Held
874	1Bh	Aux To Main Outs	00h = Never
875			01h = Always
876			02h = Auto
877	1Ch	Touch Curve	00h = Table-1
878			01h = Table-2

881			02h = Table-3
882			03h = Table-4
883			04h = Fixed 64
884			05h = Fixed 127
885	1Dh	Pressure Threshold	00h = Soft
886			01h = Medium
887			02h = Firm
888			03h = Hard
889	1Eh	Foot Switch 1 Left Mode	See Table 4.4
890	1Fh	Foot Switch 1 Right Mode	See Table 4.4
891	20h	Foot Switch 2 Left Mode	See Table 4.4
892	21h	Foot Switch 2 Right Mode	See Table 4.4
893			
894	22h	CV Pedal Mode	00h = Foot Controller #004
895			01h = Volume #007
896			02h = SysCTRL1
897			03h = SysCTRL2
898			04h = SysCTRL3
899			05h = SysCTRL4
900	23-24h	Reserved	
901	25h	Transmit MIDI Clocks	00h = OFF
902			01h = ON
903	26h	FX Out Enables	01h = Insert FX Out
904		Bitwise Definitions	02h = Global Chorus Out
905			04h = Global Reverb Out
906			08h = Dry FX Bus Out
907			10h = Not Defined
908			20h = Not Defined
909			40h = Not Defined
910			80h = Not Defined
911	27h	Rewind Sound	00h = OFF
912			01h = ON
913			
914	4.1	Single Sound Program Dump Data Format	
915			
916	Offset	Parameter Name	Range/Values
917			
918	00-03h	Sound Program Size	Unsigned Long Word
919	04-07h	Sound Program Tag	'PRG1' In ASCII
920			
921	08-0Bh	Offset Table Size	00000018h
922	0C-0Fh	Offset Table Tag	'OFTT' In ASCII
923			
924	The following parameter is used to specify the starting offset value of the		
925			
926	10-13h	Effects Offset	00000000h ( No Insert Effec
927			00000140h ( 01 Layer Defin
928			000001F4h ( 02 Layers Defin
929			000002A8h ( 03 Layers Defin
930			0000035Ch ( 04 Layers Defin
931			00000410h ( 05 Layers Defin
932			000004C4h ( 06 Layers Defin
933			00000578h ( 07 Layers Defin
934			0000062Ch ( 08 Layers Defin
935			000006E0h ( 09 Layers Defin

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936                                     00000794h ( 10 Layers Defin
937                                     00000848h ( 11 Layers Defin
938                                     000008FCh ( 12 Layers Defin
939                                     000009B0h ( 13 Layers Defin
940                                     00000A64h ( 14 Layers Defin
941                                     00000B18h ( 15 Layers Defin
942                                     00000BCCh ( 16 Layers Defin
943
944 14-17h          Program Parameters Offset      00000020h
945 18-1Bh          Layer Offset Table Offset     00000044h
946 1C-1Fh          Reserved                       00000000h
947 20-43h          Sound Program Parameters Structure      See Section 5.0
948
949 The Layer Offset Table is used to store the starting offset value for each
950
951 44-47h          Layer Offset Table Size        00000048h
952 48-4Bh          Layer Offset Table Tag        'OFST' In ASCII
953 4C-4Fh          Layer #01 Offset              0000008Ch
954 50-53h          Layer #02 Offset              00000140h or 00000000h
955 54-57h          Layer #03 Offset              000001F4h or 00000000h
956 58-5Bh          Layer #04 Offset              000002A8h or 00000000h
957 5C-5Fh          Layer #05 Offset              0000035Ch or 00000000h
958 60-63h          Layer #06 Offset              00000410h or 00000000h
959 64-67h          Layer #07 Offset              000004C4h or 00000000h
960 68-6Bh          Layer #08 Offset              00000578h or 00000000h
961 6C-6Fh          Layer #09 Offset              0000062Ch or 00000000h
962 70-73h          Layer #10 Offset              000006E0h or 00000000h
963 74-77h          Layer #11 Offset              00000794h or 00000000h
964 78-7Bh          Layer #12 Offset              00000848h or 00000000h
965 7C-7Fh          Layer #13 Offset              000008FCh or 00000000h
966 80-83h          Layer #14 Offset              000009B0h or 00000000h
967 84-87h          Layer #15 Offset              00000A64h or 00000000h
968 88-8Bh          Layer #16 Offset              00000B18h or 00000000h
969
970 Because the MR dynamically allocates memory for a given Sound Program based
971
972 08C-13Fh        Layer #01 Parameter Structure  See Section 6
973 140-1F3h        Layer #02 Parameter Structure  See Section 6
974 1F4-2A7h        Layer #03 Parameter Structure  See Section 6
975 2A8-35Bh        Layer #04 Parameter Structure  See Section 6
976 35C-40Fh        Layer #05 Parameter Structure  See Section 6
977 410-4C3h        Layer #06 Parameter Structure  See Section 6
978 4C4-577h        Layer #07 Parameter Structure  See Section 6
979 578-62Bh        Layer #08 Parameter Structure  See Section 6
980 62C-6DFh        Layer #09 Parameter Structure  See Section 6
981 6E0-793h        Layer #10 Parameter Structure  See Section 6
982 794-847h        Layer #11 Parameter Structure  See Section 6
983 848-8FBh        Layer #12 Parameter Structure  See Section 6
984 8FC-9AFh        Layer #13 Parameter Structure  See Section 6
985 9B0-A63h        Layer #14 Parameter Structure  See Section 6
986 A64-B17h        Layer #15 Parameter Structure  See Section 6
987 B18-BCBh        Layer #16 Parameter Structure  See Section 6
988
989 The Sound Program Insert Effect Structure, as outlined in Section 5.1, will
990

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991 140-1A9h      Sound Program Insert Effect Structure ( 01 Layer Defined
992 1F4-25Dh      Sound Program Insert Effect Structure ( 02 Layers Defined
993 2A8-311h      Sound Program Insert Effect Structure ( 03 Layers Defined
994 35C-3C5h      Sound Program Insert Effect Structure ( 04 Layers Defined
995 410-479h      Sound Program Insert Effect Structure ( 05 Layers Defined
996 4C4-52Dh      Sound Program Insert Effect Structure ( 06 Layers Defined
997 578-5E1h      Sound Program Insert Effect Structure ( 07 Layers Defined
998 62C-695h      Sound Program Insert Effect Structure ( 08 Layers Defined
999 6E0-749h      Sound Program Insert Effect Structure ( 09 Layers Defined
1000 794-7FDh      Sound Program Insert Effect Structure ( 10 Layers Defined
1001 848-8B1h      Sound Program Insert Effect Structure ( 11 Layers Defined
1002 8FC-965h      Sound Program Insert Effect Structure ( 12 Layers Defined
1003 9B0-A19h      Sound Program Insert Effect Structure ( 13 Layers Defined
1004 A64-ACDh      Sound Program Insert Effect Structure ( 14 Layers Defined
1005 B18-B81h      Sound Program Insert Effect Structure ( 15 Layers Defined
1006 BCC-C35h      Sound Program Insert Effect Structure ( 16 Layers Defined

```

1007

1008 4.2 Transmit Display/LED Dump Data Format

1009

1010 The following is the Transmit Display/LED Dump data format for the MR-Rack:

1011

Offset	Parameter Name	Range/Values
1012		
1013		
1014	LCD Display - Line #1 - Page #0	ASCII Text String
1015	LCD Display - Line #2 - Page #0	ASCII Text String
1016		
1017	LCD Display - Line #1 - Page #1	ASCII Text String
1018	LCD Display - Line #2 - Page #1	ASCII Text String
1019		
1020	Performance Pushbutton LED Status	00h = OFF 01h = ON 02h = Flashing
1021		
1022		
1023	System Pushbutton LED Status	00h = OFF 01h = ON 02h = Flashing
1024		
1025		
1026	Effects Bypass LED Status	00h = OFF 01h = ON 02h = Flashing
1027		
1028		
1029	Effects Pushbutton LED Status	00h = OFF 01h = ON 02h = Flashing
1030		
1031		
1032	Sound Pushbutton LED Status	00h = OFF 01h = ON 02h = Flashing
1033		
1034		
1035	Parameter Pushbutton LED Status	00h = OFF 01h = ON 02h = Flashing
1036		
1037		
1038	Mute Pushbutton LED Status	00h = OFF 01h = ON 02h = Flashing
1039		
1040		
1041	Reserved	
1042		

1043

1043 The following is the Transmit Display/LED Dump data format for the MR-61/76

1044

1045 Offset Parameter Name Range/Values

1046			
1047	00-13h	LCD Display - Line #1 - Page #0	ASCII Text String
1048	14-27h	LCD Display - Line #2 - Page #0	ASCII Text String
1049			
1050	28-3Bh	LCD Display - Line #1 - Page #1	ASCII Text String
1051	3C-4Fh	LCD Display - Line #2 - Page #1	ASCII Text String
1052			
1053	50h	Sequencer Track 1	00h = OFF
1054		Pushbutton LED Status	01h = ON
1055			02h = Flashing
1056	51h	Sequencer Track 2	00h = OFF
1057		Pushbutton LED Status	01h = ON
1058			02h = Flashing
1059	52h	Sequencer Track 3	00h = OFF
1060		Pushbutton LED Status	01h = ON
1061			02h = Flashing
1062	53h	Sequencer Track 4	00h = OFF
1063		Pushbutton LED Status	01h = ON
1064			02h = Flashing
1065	54h	Sequencer Track 5	00h = OFF
1066		Pushbutton LED Status	01h = ON
1067			02h = Flashing
1068	55h	Sequencer Track 6	00h = OFF
1069		Pushbutton LED Status	01h = ON
1070			02h = Flashing
1071	56h	Sequencer Track 7	00h = OFF
1072		Pushbutton LED Status	01h = ON
1073			02h = Flashing
1074	57h	Sequencer Track 8	00h = OFF
1075		Pushbutton LED Status	01h = ON
1076			02h = Flashing
1077	58h	Sequencer Track 9	00h = OFF
1078		Pushbutton LED Status	01h = ON
1079			02h = Flashing
1080	59h	Sequencer Rhythm	00h = OFF
1081		Pushbutton (Right) LED Status	01h = ON
1082			02h = Flashing
1083	5Ah	Sequencer Track 11	00h = OFF
1084		Pushbutton LED Status	01h = ON
1085			02h = Flashing
1086	5Bh	Sequencer Track 12	00h = OFF
1087		Pushbutton LED Status	01h = ON
1088			02h = Flashing
1089	5Ch	Sequencer Track 13	00h = OFF
1090		Pushbutton LED Status	01h = ON
1091			02h = Flashing
1092	5Dh	Sequencer Track 14	00h = OFF
1093		Pushbutton LED Status	01h = ON
1094			02h = Flashing
1095	5Eh	Sequencer Track 15	00h = OFF
1096		Pushbutton LED Status	01h = ON
1097			02h = Flashing
1098	5Fh	Sequencer Track 16	00h = OFF
1099		Pushbutton LED Status	01h = ON
1100			02h = Flashing

1101	60h	Song Editor Intro	00h = OFF
1102		Pushbutton LED Status	01h = ON
1103			02h = Flashing
1104	61h	Song Editor Verse 1	00h = OFF
1105		Pushbutton LED Status	01h = ON
1106			02h = Flashing
1107	62h	Song Editor Chorus 1	00h = OFF
1108		Pushbutton LED Status	01h = ON
1109			02h = Flashing
1110	63h	Song Editor Verse 2	00h = OFF
1111		Pushbutton LED Status	01h = ON
1112			02h = Flashing
1113	64h	Song Editor Chorus 2	00h = OFF
1114		Pushbutton LED Status	01h = ON
1115			02h = Flashing
1116	65h	Song Editor Bridge	00h = OFF
1117		Pushbutton LED Status	01h = ON
1118			02h = Flashing
1119	66h	Song Editor Solo	00h = OFF
1120		Pushbutton LED Status	01h = ON
1121			02h = Flashing
1122	67h	Song Editor Ending	00h = OFF
1123		Pushbutton LED Status	01h = ON
1124			02h = Flashing
1125	68h	Song Editor Select Song	00h = OFF
1126		Pushbutton LED Status	01h = ON
1127			02h = Flashing
1128	69h	Song Editor Bank 1	00h = OFF
1129		Pushbutton LED Status	01h = ON
1130			02h = Flashing
1131	6Ah	Song Editor Bank 2	00h = OFF
1132		Pushbutton LED Status	01h = ON
1133			02h = Flashing
1134	6Bh	Song Editor Bank 3	00h = OFF
1135		Pushbutton LED Status	01h = ON
1136			02h = Flashing
1137	6Ch	Song Editor Song Playlist	00h = OFF
1138		Pushbutton LED Status	01h = ON
1139			02h = Flashing
1140	6Dh	Song Editor From Region	00h = OFF
1141		Pushbutton LED Status	01h = ON
1142			02h = Flashing
1143	6Eh	Song Editor To Region	00h = OFF
1144		Pushbutton LED Status	01h = ON
1145			02h = Flashing
1146	6Fh	Song Editor Loop	00h = OFF
1147		Pushbutton LED Status	01h = ON
1148			02h = Flashing
1149	70h	Song Editor Record Mode	00h = OFF
1150		Replace LED Status	01h = ON
1151			02h = Flashing
1152	71h	Song Editor Record Mode	00h = OFF
1153		Add LED Status	01h = ON
1154			02h = Flashing
1155	72h	Song Editor Record Mode	00h = OFF

1156		Step LED Status	01h = ON
1157			02h = Flashing
1158	73h	Song Editor Record Mode	00h = OFF
1159		Track Mix LED Status	01h = ON
1160			02h = Flashing
1161	74h	Song Editor Record Mode	00h = OFF
1162		Final Mix LED Status	01h = ON
1163			02h = Flashing
1164	75-77h	Reserved	
1165	78h	Sequencer Play	00h = OFF
1166		Pushbutton LED Status	01h = ON
1167			02h = Flashing
1168	79h	Sequencer Record	00h = OFF
1169		Pushbutton LED Status	01h = ON
1170			02h = Flashing
1171	7Ah	Sequencer Rhythm	00h = OFF
1172		Pushbutton (Left) LED Status	01h = ON
1173			02h = Flashing
1174	7B-7Fh	Reserved	
1175	80h	FX/Mixdown Mute	00h = OFF
1176		Pushbutton LED Status	01h = ON
1177			02h = Flashing
1178	81h	FX/Mixdown Solo	00h = OFF
1179		Pushbutton LED Status	01h = ON
1180			02h = Flashing
1181	82-87h	Reserved	
1182	88h	Drum Machine Select Rhythm	00h = OFF
1183		Pushbutton LED Status	01h = ON
1184			02h = Flashing
1185	89h	Drum Machine Start/Stop	00h = OFF
1186		Pushbutton LED Status	01h = ON
1187			02h = Flashing
1188	8Ah	Drum Machine Fill/Variation	00h = OFF
1189		Pushbutton (Left) LED Status	01h = ON
1190			02h = Flashing
1191	8Bh	Drum Machine Fill/Variation	00h = OFF
1192		Pushbutton (Right) LED Status	01h = ON
1193			02h = Flashing
1194	8C-8Fh	Reserved	
1195	90h	Sound Finder Select Sound	00h = OFF
1196		Pushbutton LED Status	01h = ON
1197			02h = Flashing
1198	91h	Sound Finder Transpose	00h = OFF
1199		Pushbutton LED Status	01h = ON
1200			02h = Flashing
1201	92h	Sound Finder Split	00h = OFF
1202		Pushbutton LED Status	01h = ON
1203			02h = Flashing
1204	93h	Sound Finder Layer	00h = OFF
1205		Pushbutton LED Status	01h = ON
1206			02h = Flashing
1207	94-97h	Reserved	
1208	98h	Idea Pad Recall Idea	00h = OFF
1209		Pushbutton LED Status	01h = ON
1210			02h = Flashing

1211	99h	Idea Pad Start/Stop	00h = OFF
1212		Pushbutton LED Status	01h = ON
1213			02h = Flashing
1214	9A-9Fh	Reserved	
1215	A0h	Enter/Yes Pushbutton LED Status	00h = OFF
1216			01h = ON
1217			02h = Flashing
1218	A1h	Exit/No Pushbutton LED Status	00h = OFF
1219			01h = ON
1220			02h = Flashing
1221	A2h	Disk/Global Save	00h = OFF
1222		Pushbutton LED Status	01h = ON
1223			02h = Flashing
1224	A3-CFh	Reserved	
1225			
1226	4.3	Receive Display/LED Dump Data Format	
1227			
1228		The following is the Receive Display/LED Dump data format for the MR-Rack:	
1229			
1230	Offset	Parameter Name	Range/Values
1231			
1232	00-13h	LCD Display - Line #1	ASCII Text String
1233	14h	Carriage Return ASCII Character	0Dh
1234	15h	Line Feed ASCII Character	0Ah
1235			
1236	16-29h	LCD Display - Line #2	ASCII Text String
1237	2Ah	NULL ASCII Character	00h
1238			
1239	2Bh	Performance Pushbutton LED Status	00h = OFF
1240			01h = ON
1241			02h = Flashing
1242	2Ch	System Pushbutton LED Status	00h = OFF
1243			01h = ON
1244			02h = Flashing
1245	2Dh	Effects Bypass LED Status	00h = OFF
1246			01h = ON
1247			02h = Flashing
1248	2Eh	Effects Pushbutton LED Status	00h = OFF
1249			01h = ON
1250			02h = Flashing
1251	2Fh	Sound Pushbutton LED Status	00h = OFF
1252			01h = ON
1253			02h = Flashing
1254	30h	Parameter Pushbutton LED Status	00h = OFF
1255			01h = ON
1256			02h = Flashing
1257	31h	Mute Pushbutton LED Status	00h = OFF
1258			01h = ON
1259			02h = Flashing
1260	32h	Reserved	
1261			
1262		The following is the Receive Display/LED Dump data format for the MR-61/76:	
1263			
1264	Offset	Parameter Name	Range/Values
1265			

1266	00-13h	LCD Display - Line #1	ASCII Text String
1267	14h	Carriage Return ASCII Character	0Dh
1268	15h	Line Feed ASCII Character	0Ah
1269			
1270	16-29h	LCD Display - Line #2	ASCII Text String
1271	2Ah	NULL ASCII Character	00h
1272			
1273	2Bh	Sequencer Track 1	00h = OFF
1274		Pushbutton LED Status	01h = ON
1275			02h = Flashing
1276	2Ch	Sequencer Track 2	00h = OFF
1277		Pushbutton LED Status	01h = ON
1278			02h = Flashing
1279	2Dh	Sequencer Track 3	00h = OFF
1280		Pushbutton LED Status	01h = ON
1281			02h = Flashing
1282	2Eh	Sequencer Track 4	00h = OFF
1283		Pushbutton LED Status	01h = ON
1284			02h = Flashing
1285	2Fh	Sequencer Track 5	00h = OFF
1286		Pushbutton LED Status	01h = ON
1287			02h = Flashing
1288	30h	Sequencer Track 6	00h = OFF
1289		Pushbutton LED Status	01h = ON
1290			02h = Flashing
1291	31h	Sequencer Track 7	00h = OFF
1292		Pushbutton LED Status	01h = ON
1293			02h = Flashing
1294	32h	Sequencer Track 8	00h = OFF
1295		Pushbutton LED Status	01h = ON
1296			02h = Flashing
1297	33h	Sequencer Track 9	00h = OFF
1298		Pushbutton LED Status	01h = ON
1299			02h = Flashing
1300	34h	Sequencer Rhythm	00h = OFF
1301		Pushbutton (Right) LED Status	01h = ON
1302			02h = Flashing
1303	35h	Sequencer Track 11	00h = OFF
1304		Pushbutton LED Status	01h = ON
1305			02h = Flashing
1306	36h	Sequencer Track 12	00h = OFF
1307		Pushbutton LED Status	01h = ON
1308			02h = Flashing
1309	37h	Sequencer Track 13	00h = OFF
1310		Pushbutton LED Status	01h = ON
1311			02h = Flashing
1312	38h	Sequencer Track 14	00h = OFF
1313		Pushbutton LED Status	01h = ON
1314			02h = Flashing
1315	39h	Sequencer Track 15	00h = OFF
1316		Pushbutton LED Status	01h = ON
1317			02h = Flashing
1318	3Ah	Sequencer Track 16	00h = OFF
1319		Pushbutton LED Status	01h = ON
1320			02h = Flashing

1321	3Bh	Song Editor Intro	00h = OFF
1322		Pushbutton LED Status	01h = ON
1323			02h = Flashing
1324	3Ch	Song Editor Verse 1	00h = OFF
1325		Pushbutton LED Status	01h = ON
1326			02h = Flashing
1327	3Dh	Song Editor Chorus 1	00h = OFF
1328		Pushbutton LED Status	01h = ON
1329			02h = Flashing
1330	3Eh	Song Editor Verse 2	00h = OFF
1331		Pushbutton LED Status	01h = ON
1332			02h = Flashing
1333	3Fh	Song Editor Chorus 2	00h = OFF
1334		Pushbutton LED Status	01h = ON
1335			02h = Flashing
1336	40h	Song Editor Bridge	00h = OFF
1337		Pushbutton LED Status	01h = ON
1338			02h = Flashing
1339	41h	Song Editor Solo	00h = OFF
1340		Pushbutton LED Status	01h = ON
1341			02h = Flashing
1342	42h	Song Editor Ending	00h = OFF
1343		Pushbutton LED Status	01h = ON
1344			02h = Flashing
1345	43h	Song Editor Select Song	00h = OFF
1346		Pushbutton LED Status	01h = ON
1347			02h = Flashing
1348	44h	Song Editor Bank 1	00h = OFF
1349		Pushbutton LED Status	01h = ON
1350			02h = Flashing
1351	45h	Song Editor Bank 2	00h = OFF
1352		Pushbutton LED Status	01h = ON
1353			02h = Flashing
1354	46h	Song Editor Bank 3	00h = OFF
1355		Pushbutton LED Status	01h = ON
1356			02h = Flashing
1357	47h	Song Editor Song Playlist	00h = OFF
1358		Pushbutton LED Status	01h = ON
1359			02h = Flashing
1360	48h	Song Editor From Region	00h = OFF
1361		Pushbutton LED Status	01h = ON
1362			02h = Flashing
1363	49h	Song Editor To Region	00h = OFF
1364		Pushbutton LED Status	01h = ON
1365			02h = Flashing
1366	4Ah	Song Editor Loop	00h = OFF
1367		Pushbutton LED Status	01h = ON
1368			02h = Flashing
1369	4Bh	Song Editor Record Mode	00h = OFF
1370		Replace LED Status	01h = ON
1371			02h = Flashing
1372	4Ch	Song Editor Record Mode	00h = OFF
1373		Add LED Status	01h = ON
1374			02h = Flashing
1375	4Dh	Song Editor Record Mode	00h = OFF

1376		Step LED Status	01h = ON
1377			02h = Flashing
1378	4Eh	Song Editor Record Mode	00h = OFF
1379		Track Mix LED Status	01h = ON
1380			02h = Flashing
1381	4Fh	Song Editor Record Mode	00h = OFF
1382		Final Mix LED Status	01h = ON
1383			02h = Flashing
1384	50-52h	Reserved	
1385	53h	Sequencer Play	00h = OFF
1386		Pushbutton LED Status	01h = ON
1387			02h = Flashing
1388	54h	Sequencer Record	00h = OFF
1389		Pushbutton LED Status	01h = ON
1390			02h = Flashing
1391	55h	Sequencer Rhythm	00h = OFF
1392		Pushbutton (Left) LED Status	01h = ON
1393			02h = Flashing
1394	56-5Ah	Reserved	
1395	5Bh	FX/Mixdown Mute	00h = OFF
1396		Pushbutton LED Status	01h = ON
1397			02h = Flashing
1398	5Ch	FX/Mixdown Solo	00h = OFF
1399		Pushbutton LED Status	01h = ON
1400			02h = Flashing
1401	5D-62h	Reserved	
1402	63h	Drum Machine Select Rhythm	00h = OFF
1403		Pushbutton LED Status	01h = ON
1404			02h = Flashing
1405	64h	Drum Machine Start/Stop	00h = OFF
1406		Pushbutton LED Status	01h = ON
1407			02h = Flashing
1408	65h	Drum Machine Fill/Variation	00h = OFF
1409		Pushbutton (Left) LED Status	01h = ON
1410			02h = Flashing
1411	66h	Drum Machine Fill/Variation	00h = OFF
1412		Pushbutton (Right) LED Status	01h = ON
1413			02h = Flashing
1414	67-6Ah	Reserved	
1415	6Bh	Sound Finder Select Sound	00h = OFF
1416		Pushbutton LED Status	01h = ON
1417			02h = Flashing
1418	6Ch	Sound Finder Transpose	00h = OFF
1419		Pushbutton LED Status	01h = ON
1420			02h = Flashing
1421	6Dh	Sound Finder Split	00h = OFF
1422		Pushbutton LED Status	01h = ON
1423			02h = Flashing
1424	6Eh	Sound Finder Layer	00h = OFF
1425		Pushbutton LED Status	01h = ON
1426			02h = Flashing
1427	6F-72h	Reserved	
1428	73h	Idea Pad Recall Idea	00h = OFF
1429		Pushbutton LED Status	01h = ON
1430			02h = Flashing

1431	74h	Idea Pad Start/Stop	00h = OFF
1432		Pushbutton LED Status	01h = ON
1433			02h = Flashing
1434	75-7Ah	Reserved	
1435	7Bh	Enter/Yes Pushbutton LED Status	00h = OFF
1436			01h = ON
1437			02h = Flashing
1438	7Ch	Exit/No Pushbutton LED Status	00h = OFF
1439			01h = ON
1440			02h = Flashing
1441	7Dh	Disk/Global Save	00h = OFF
1442		Pushbutton LED Status	01h = ON
1443			02h = Flashing
1444	7E-AAh	Reserved	
1445			
1446	Table 4.1 - Fine Tune Offset Values		
1447			
1448	80h	= -50 Cents	
1449	82h	= -49 Cents	
1450	84h	= -48 Cents	
1451	87h	= -47 Cents	
1452	89h	= -46 Cents	
1453	8Ch	= -45 Cents	
1454	8Fh	= -44 Cents	
1455	91h	= -43 Cents	
1456	94h	= -42 Cents	
1457	96h	= -41 Cents	
1458	99h	= -40 Cents	
1459	9Bh	= -39 Cents	
1460	9Eh	= -38 Cents	
1461	A0h	= -37 Cents	
1462	A3h	= -36 Cents	
1463	A6h	= -35 Cents	
1464	A8h	= -34 Cents	
1465	ABh	= -33 Cents	
1466	ADh	= -32 Cents	
1467	B0h	= -31 Cents	
1468	B2h	= -30 Cents	
1469	B5h	= -29 Cents	
1470	B8h	= -28 Cents	
1471	BAh	= -27 Cents	
1472	BDh	= -26 Cents	
1473	BFh	= -25 Cents	
1474	C2h	= -24 Cents	
1475	C4h	= -23 Cents	
1476	C7h	= -22 Cents	
1477	C9h	= -21 Cents	
1478	CCh	= -20 Cents	
1479	CFh	= -19 Cents	
1480	D1h	= -18 Cents	
1481	D4h	= -17 Cents	
1482	D6h	= -16 Cents	
1483	D9h	= -15 Cents	
1484	DBh	= -14 Cents	
1485	DEh	= -13 Cents	

1486 E0h = -12 Cents  
1487 E3h = -11 Cents  
1488 E6h = -10 Cents  
1489 E8h = -09 Cents  
1490 EBh = -08 Cents  
1491 EDh = -07 Cents  
1492 F0h = -06 Cents  
1493 F2h = -05 Cents  
1494 F5h = -04 Cents  
1495 F8h = -03 Cents  
1496 FAh = -02 Cents  
1497 FDh = -01 Cents  
1498 00h = 00 Cents  
1499 03h = +01 Cents  
1500 06h = +02 Cents  
1501 08h = +03 Cents  
1502 0Bh = +04 Cents  
1503 0Eh = +05 Cents  
1504 10h = +06 Cents  
1505 13h = +07 Cents  
1506 15h = +08 Cents  
1507 18h = +09 Cents  
1508 1Ah = +10 Cents  
1509 1Dh = +11 Cents  
1510 20h = +12 Cents  
1511 22h = +13 Cents  
1512 25h = +14 Cents  
1513 27h = +15 Cents  
1514 2Ah = +16 Cents  
1515 2Ch = +17 Cents  
1516 2Fh = +18 Cents  
1517 31h = +19 Cents  
1518 34h = +20 Cents  
1519 37h = +21 Cents  
1520 39h = +22 Cents  
1521 3Ch = +23 Cents  
1522 3Eh = +24 Cents  
1523 41h = +25 Cents  
1524 43h = +26 Cents  
1525 46h = +27 Cents  
1526 48h = +28 Cents  
1527 4Bh = +29 Cents  
1528 4Eh = +30 Cents  
1529 50h = +31 Cents  
1530 53h = +32 Cents  
1531 55h = +33 Cents  
1532 58h = +34 Cents  
1533 5Ah = +35 Cents  
1534 5Dh = +36 Cents  
1535 60h = +37 Cents  
1536 62h = +38 Cents  
1537 65h = +39 Cents  
1538 67h = +40 Cents  
1539 6Ah = +41 Cents  
1540 6Ch = +42 Cents

1541 6Fh = +43 Cents  
1542 71h = +44 Cents  
1543 74h = +45 Cents  
1544 77h = +46 Cents  
1545 79h = +47 Cents  
1546 7Ch = +48 Cents  
1547 7Eh = +49 Cents  
1548  
1549 Table 4.2 - Audition Modes  
1550  
1551 00h = Sound Type  
1552 01h = A Octaves  
1553 02h = A# Octaves  
1554 03h = B Octaves  
1555 04h = C Octaves  
1556 05h = C# Octaves  
1557 06h = D Octaves  
1558 07h = D# Octaves  
1559 08h = E Octaves  
1560 09h = F Octaves  
1561 0Ah = F# Octaves  
1562 0Bh = G Octaves  
1563 0Ch = G# Octaves  
1564 0Dh = A maj Chord  
1565 0Eh = A# maj Chord  
1566 0Fh = B maj Chord  
1567 10h = C maj Chord  
1568 11h = C# maj Chord  
1569 12h = D maj Chord  
1570 13h = D# maj Chord  
1571 14h = E maj Chord  
1572 15h = F maj Chord  
1573 16h = F# maj Chord  
1574 17h = G maj Chord  
1575 18h = G# maj Chord  
1576 19h = A maj Arpeg  
1577 1Ah = A# maj Arpeg  
1578 1Bh = B maj Arpeg  
1579 1Ch = C maj Arpeg  
1580 1Dh = C# maj Arpeg  
1581 1Eh = D maj Arpeg  
1582 1Fh = D# maj Arpeg  
1583 20h = E maj Arpeg  
1584 21h = F maj Arpeg  
1585 22h = F# maj Arpeg  
1586 23h = G maj Arpeg  
1587 24h = G# maj Arpeg  
1588 25h = All OFF Only  
1589  
1590 Table 4.3 - System Controller Sources  
1591  
1592 00h = Bank Select  
1593 01h = Mod Wheel  
1594 02h = Breath  
1595 03h = MIDI Controller #3

1596 04h = Foot Controller  
1597 05h = Glide Time  
1598 06h = Data Entry  
1599 07h = Volume  
1600 08h = Balance  
1601 09h = MIDI Controller #9  
1602 0Ah = Pan  
1603 0Bh = Expression  
1604 0Ch = FX Control 1  
1605 0Dh = FX Control 2  
1606 0Eh = MIDI Controller #14  
1607 0Fh = MIDI Controller #15  
1608 10h = General Purpose 1  
1609 11h = General Purpose 2  
1610 12h = General Purpose 3  
1611 13h = General Purpose 4  
1612 14h = MIDI Controller #20  
1613 15h = MIDI Controller #21  
1614 16h = MIDI Controller #22  
1615 17h = MIDI Controller #23  
1616 18h = MIDI Controller #24  
1617 19h = MIDI Controller #25  
1618 1Ah = MIDI Controller #26  
1619 1Bh = MIDI Controller #27  
1620 1Ch = MIDI Controller #28  
1621 1Dh = MIDI Controller #29  
1622 1Eh = MIDI Controller #30  
1623 1Fh = MIDI Controller #31  
1624 20h = Bank Select  
1625 21h = Mod Wheel  
1626 22h = Breath  
1627 23h = MIDI Controller #35  
1628 24h = Foot Controller  
1629 25h = Glide Time  
1630 26h = Data Entry  
1631 27h = Volume  
1632 28h = Balance  
1633 29h = MIDI Controller #41  
1634 2Ah = Pan  
1635 2Bh = Expression  
1636 2Ch = FX Control 1  
1637 2Dh = FX Control 2  
1638 2Eh = MIDI Controller #46  
1639 2Fh = MIDI Controller #47  
1640 30h = General Purpose 1  
1641 31h = General Purpose 2  
1642 32h = General Purpose 3  
1643 33h = General Purpose 4  
1644 34h = MIDI Controller #52  
1645 35h = MIDI Controller #53  
1646 36h = MIDI Controller #54  
1647 37h = MIDI Controller #55  
1648 38h = MIDI Controller #56  
1649 39h = MIDI Controller #57  
1650 3Ah = MIDI Controller #58

1651 3Bh = MIDI Controller #59  
1652 3Ch = MIDI Controller #60  
1653 3Dh = MIDI Controller #61  
1654 3Eh = MIDI Controller #62  
1655 3Fh = MIDI Controller #63  
1656 40h = Sustain  
1657 41h = Portamento ON/OFF  
1658 42h = Sostenuto  
1659 43h = Soft Pedal  
1660 44h = Legato Foot Switch  
1661 45h = Hold 2  
1662 46h = Patch Select  
1663 47h = Timbre  
1664 48h = Release  
1665 49h = Attack  
1666 4Ah = Brightness  
1667 4Bh = Sound Controller 6  
1668 4Ch = Sound Controller 7  
1669 4Dh = Sound Controller 8  
1670 4Eh = Sound Controller 9  
1671 4Fh = Sound Controller 10  
1672 50h = General Purpose 5  
1673 51h = General Purpose 6  
1674 52h = General Purpose 7  
1675 53h = General Purpose 8  
1676 54h = Portamento  
1677 55h = MIDI Controller #85  
1678 56h = MIDI Controller #86  
1679 57h = MIDI Controller #87  
1680 58h = MIDI Controller #88  
1681 59h = MIDI Controller #89  
1682 5Ah = MIDI Controller #90  
1683 5Bh = FX Depth 1  
1684 5Ch = FX Depth 2  
1685 5Dh = FX Depth 3  
1686 5Eh = FX Depth 4  
1687 5Fh = FX Depth 5  
1688 60h = Data Increment  
1689 61h = Data Decrement  
1690 62h = Non-Reg Parameter LSB  
1691 63h = Non-Reg Parameter MSB  
1692 64h = Reg Parameter LSB  
1693 65h = Reg Parameter MSB  
1694 66h = MIDI Controller #102  
1695 67h = MIDI Controller #103  
1696 68h = MIDI Controller #104  
1697 69h = MIDI Controller #105  
1698 6Ah = MIDI Controller #106  
1699 6Bh = MIDI Controller #107  
1700 6Ch = MIDI Controller #108  
1701 6Dh = MIDI Controller #109  
1702 6Eh = MIDI Controller #110  
1703 6Fh = MIDI Controller #111  
1704 70h = MIDI Controller #112  
1705 71h = MIDI Controller #113

1706 72h = MIDI Controller #114  
 1707 73h = MIDI Controller #115  
 1708 74h = MIDI Controller #116  
 1709 75h = MIDI Controller #117  
 1710 76h = MIDI Controller #118  
 1711 77h = MIDI Controller #119  
 1712  
 1713 Table 4.4 - Foot Switch Modes  
 1714  
 1715 00h = Unused  
 1716 01h = Sustain  
 1717 02h = Sostenuto  
 1718 03h = SysCTRL1  
 1719 04h = SysCTRL2  
 1720 05h = SysCTRL3  
 1721 06h = SysCTRL4  
 1722 07h = Up Button  
 1723 08h = Down Button  
 1724 09h = Split  
 1725 0Ah = Layer  
 1726 0Bh = Transpose  
 1727 0Ch = Recall Idea  
 1728 0Dh = IP Start  
 1729 0Eh = DM Fill Var1  
 1730 0Fh = DM Fill Var2  
 1731 10h = DM Fill Var3  
 1732 11h = DM Fill Var4  
 1733 12h = DM Fill Var5  
 1734 13h = DM Fill Var6  
 1735 14h = DM Fill Var7  
 1736 15h = DM Fill Var8  
 1737 16h = Fill/Var  
 1738 17h = DM Start  
 1739 18h = Play/Stop  
 1740 19h = PlayTop/Stop  
 1741 1Ah = RecPlay/Stop  
 1742 1Bh = Record  
 1743 1Ch = Stop  
 1744 1Dh = Rewind  
 1745 1Eh = FastForward  
 1746 1Fh = Mute  
 1747 20h = Solo  
 1748 21h = Region From  
 1749 22h = Region To  
 1750 23h = Step Advance

1751  
 1752 5.0 Sound Program Parameters Structure  
 1753

1754	Offset	Parameter Name	Range/Values
1755			
1756	00-03h	Sound Program Parameters Size	Unsigned Long Word
1757	04-07h	Sound Program Parameters Tag	'PGP1' In ASCII
1758	08-17h	Sound Program Name	ASCII Text String
1759	18h	Pitch Table	See Table 5.1
1760	19h	Pitch Bend Up Range	See Table 5.2

1761	1Ah	Pitch Bend Down Range	See Table 5.3
1762	1B-1Ch	Reserved	
1763	1Dh	Program FX Bus	00h = Default
1764			01h = Chorus
1765			02h = Light Reverb
1766			03h = Medium Reverb
1767			04h = Wet Reverb
1768			05h = Dry
1769	1E-1Fh	Reserved	
1770	20h	GM Alias	See Table 5.5
1771	21h	Program Enables	01h = Held Pitch Be
1772		Bitwise Definitions	02h = Not Defined
1773			04h = Not Defined
1774			08h = Not Defined
1775			10h = Not Defined
1776			20h = Not Defined
1777			40h = Not Defined
1778			80h = Not Defined
1779	22h	Re-Strike Limit	00h = Default
1780			01h = 01 Voice /Lay
1781			02h = 02 Voices/Lay
1782			03h = 03 Voices/Lay
1783			04h = 04 Voices/Lay
1784			05h = 05 Voices/Lay
1785			06h = 06 Voices/Lay
1786			07h = 07 Voices/Lay
1787			08h = 08 Voices/Lay
1788			09h = 09 Voices/Lay
1789			0Ah = 10 Voices/Lay
1790			0Bh = 11 Voices/Lay
1791			0Ch = 12 Voices/Lay
1792			0Dh = 13 Voices/Lay
1793			0Eh = 14 Voices/Lay
1794			0Fh = 15 Voices/Lay
1795			10h = 16 Voices/Lay
1796	23h	Sound Finder Catagory	See Table 5.4
1797			
1798	5.1	Sound Program Insert Effect Structure	
1799			
1800	Offset	Parameter Name	Range/Values
1801			
1802	00-03h	Insert Effect Structure Size	Long Word
1803	04-07h	Insert Effect Structure Tag	'IFX1' in ASCII
1804	08h	Insert Mod Source	See Table 8.7
1805	09h	Insert Mod Destination Parameter	See Appendix 5
1806	0A-0Bh	Insert Mod Source Minimum Value Source	Parameter Dependent
1807	0C-0Dh	Insert Mod Source Maximum Value Source	Parameter Dependent
1808	0E-0Fh	Insert Mod Destination	Destination
1809		Parameter Minimum Value	Parameter Dependent
1810	10-11h	Insert Mod Destination	Destination
1811		Parameter Maximum Value	Parameter Dependent
1812	12h	Insert Chorus Mix	0 to 127
1813	13h	Insert Reverb Amount	0 to 127
1814	14h	Insert Input Mix	0 to 127
1815	15h	Insert Effect Parameter Count	Algorithm Dependent

1816			See Appendix 5
1817	16-17h	FX1 Algorithm Family ID	Algorithm Dependent
1818	18-19h	FX1 Algorithm Member ID	Algorithm Dependent
1819	1A-29h	FX1 Algorithm Name	ASCII Text String
1820	2A-69h	FX1 Parameters (Insert)	See Appendix 5
1821			
1822	2A-2Bh	FX1 Parameter #00	Algorithm Dependent
1823	2C-2Dh	FX1 Parameter #01	Algorithm Dependent
1824	2E-2Fh	FX1 Parameter #02	Algorithm Dependent
1825	30-31h	FX1 Parameter #03	Algorithm Dependent
1826	32-33h	FX1 Parameter #04	Algorithm Dependent
1827	34-35h	FX1 Parameter #05	Algorithm Dependent
1828	36-37h	FX1 Parameter #06	Algorithm Dependent
1829	38-39h	FX1 Parameter #07	Algorithm Dependent
1830	3A-3Bh	FX1 Parameter #08	Algorithm Dependent
1831	3C-3Dh	FX1 Parameter #09	Algorithm Dependent
1832	3E-3Fh	FX1 Parameter #10	Algorithm Dependent
1833	40-41h	FX1 Parameter #11	Algorithm Dependent
1834	42-43h	FX1 Parameter #12	Algorithm Dependent
1835	44-45h	FX1 Parameter #13	Algorithm Dependent
1836	46-47h	FX1 Parameter #14	Algorithm Dependent
1837	48-49h	FX1 Parameter #15	Algorithm Dependent
1838	4A-4Bh	FX1 Parameter #16	Algorithm Dependent
1839	4C-4Dh	FX1 Parameter #17	Algorithm Dependent
1840	4E-4Fh	FX1 Parameter #18	Algorithm Dependent
1841	50-51h	FX1 Parameter #19	Algorithm Dependent
1842	52-53h	FX1 Parameter #20	Algorithm Dependent
1843	54-55h	FX1 Parameter #21	Algorithm Dependent
1844	56-57h	FX1 Parameter #22	Algorithm Dependent
1845	58-59h	FX1 Parameter #23	Algorithm Dependent
1846	5A-5Bh	FX1 Parameter #24	Algorithm Dependent
1847	5C-5Dh	FX1 Parameter #25	Algorithm Dependent
1848	5E-5Fh	FX1 Parameter #26	Algorithm Dependent
1849	60-61h	FX1 Parameter #27	Algorithm Dependent
1850	62-63h	FX1 Parameter #28	Algorithm Dependent
1851	64-65h	FX1 Parameter #29	Algorithm Dependent
1852	66-67h	FX1 Parameter #30	Algorithm Dependent
1853	68-69h	FX1 Parameter #31	Algorithm Dependent
1854			
1855	Table 5.1 - Pitch Table		
1856			
1857	00h	= EqualTemper	
1858	01h	= Pythagrn-C	
1859	02h	= Just Int-C	
1860	03h	= Meantone-C	
1861	04h	= Wrkmeistr-C	
1862	05h	= Vallotti-C	
1863	06h	= Grk-Diatonc	
1864	07h	= Grk-Chromat	
1865	08h	= Grk-Enharm	
1866	09h	= Turkish-A	
1867	0Ah	= Arabic-1	
1868	0Bh	= Arabic-2	
1869	0Ch	= Arabic-3	
1870	0Dh	= Arabic-4	

1871 0Eh = Java-Pelog1  
1872 0Fh = Java-Pelog2  
1873 10h = Java-Pelog3  
1874 11h = Java-Slndro  
1875 12h = Java-Combi  
1876 13h = Indian-Raga  
1877 14h = Tibetan  
1878 15h = Chinese-1  
1879 16h = Chinese-2  
1880 17h = Thailand  
1881 18h = 24-Tone-Equ  
1882 19h = 19-Tone-Equ  
1883 1Ah = 31-Tone-Equ  
1884 1Bh = 53-Tone-Equ  
1885 1Ch = Harmonic  
1886 1Dh = CarlosAlpha  
1887 1Eh = CarlosBeta  
1888 1Fh = CarlosGamma  
1889 20h = Partch-43  
1890 21h = Reverse  
1891 22h = Bagpipe  
1892 23h = ShonaMbiral  
1893 24h = ShonaMbiral2  
1894 25h = SuperJust  
1895 26h = 88CET  
1896 27h = Pierce  
1897 28h = WS1  
1898 29h = WS2  
1899 2Ah = WS3  
1900 2Bh = Stretch  
1901 2Ch = RandomDetune  
1902 2Dh = RAM  
1903  
1904 Table 5.2 - Pitch Bend Up Range  
1905  
1906 F4h = 12 Down  
1907 F5h = 11 Down  
1908 F6h = 10 Down  
1909 F7h = 09 Down  
1910 F8h = 08 Down  
1911 F9h = 07 Down  
1912 FAh = 06 Down  
1913 FBh = 05 Down  
1914 FCh = 04 Down  
1915 FDh = 03 Down  
1916 FEh = 02 Down  
1917 FFh = 01 Down  
1918 00h = OFF  
1919 01h = 01 Up  
1920 02h = 02 Up  
1921 03h = 03 Up  
1922 04h = 04 Up  
1923 05h = 05 Up  
1924 06h = 06 Up  
1925 07h = 07 Up

1926 08h = 08 Up  
1927 09h = 09 Up  
1928 0Ah = 10 Up  
1929 0Bh = 11 Up  
1930 0Ch = 12 Up  
1931  
1932 Table 5.3 - Pitch Bend Down Range  
1933  
1934 F4h = 12 Up  
1935 F5h = 11 Up  
1936 F6h = 10 Up  
1937 F7h = 09 Up  
1938 F8h = 08 Up  
1939 F9h = 07 Up  
1940 FAh = 06 Up  
1941 FBh = 05 Up  
1942 FCh = 04 Up  
1943 FDh = 03 Up  
1944 FEh = 02 Up  
1945 FFh = 01 Up  
1946 00h = OFF  
1947 01h = 01 Down  
1948 02h = 02 Down  
1949 03h = 03 Down  
1950 04h = 04 Down  
1951 05h = 05 Down  
1952 06h = 06 Down  
1953 07h = 07 Down  
1954 08h = 08 Down  
1955 09h = 09 Down  
1956 0Ah = 10 Down  
1957 0Bh = 11 Down  
1958 0Ch = 12 Down  
1959  
1960 Table 5.4 - Sound Finder Category  
1961  
1962 00h = PIANO-A  
1963 01h = PNOLYR-A  
1964 02h = PIANO-E  
1965 03h = PNOLYR-E  
1966 04h = ORGAN-A  
1967 05h = ORGAN-E  
1968 06h = ORGANLYR  
1969 07h = KEYS  
1970 08h = SYN-LEAD  
1971 09h = SYN-PAD  
1972 0Ah = SYN-COMP  
1973 0Bh = SYN-VINT  
1974 0Ch = SYNOTHER  
1975 0Dh = GUITAR-A  
1976 0Eh = GUITAR-E  
1977 0Fh = PLUCKED  
1978 10h = STRGSOLO  
1979 11h = STRGSECT  
1980 12h = BRASSOLO

1981 13h = SAX-SOLO  
1982 14h = BRASSECT  
1983 15h = WINDREED  
1984 16h = ORCHSTRA  
1985 17h = VOCALS  
1986 18h = BASS  
1987 19h = BASS-SYN  
1988 1Ah = DRUM-KIT  
1989 1Bh = DRMKITGM  
1990 1Ch = PERC-KIT  
1991 1Dh = PERCSOLO  
1992 1Eh = MALLET  
1993 1Fh = BELL  
1994 20h = HITS  
1995 21h = LOOPGRUV  
1996 22h = SOUND-FX  
1997 23h = LAYERS  
1998 24h = SPLITS  
1999 25h = \*UTILITY  
2000 26h = \*CUSTOM  
2001  
2002 Table 5.5 - GM Alias  
2003  
2004 00h = Grand Piano  
2005 01h = Bright Piano  
2006 02h = Electric Grand  
2007 03h = Honky Tonk Piano  
2008 04h = Electric Piano 1  
2009 05h = Electric Piano 2  
2010 06h = Harpsichord  
2011 07h = Clavinet  
2012 08h = Celesta  
2013 09h = Glockenspiel  
2014 0Ah = Music Box  
2015 0Bh = Vibraphone  
2016 0Ch = Marimba  
2017 0Dh = Xylophone  
2018 0Eh = Tubular Bell  
2019 0Fh = Dulcimer  
2020 10h = Drawbar Organ  
2021 11h = Perc Organ  
2022 12h = Rock Organ  
2023 13h = Church Organ  
2024 14h = Reed Organ  
2025 15h = Accordion  
2026 16h = Harmonica  
2027 17h = Bandoneon  
2028 18h = Nylon Guitar  
2029 19h = Steel Guitar  
2030 1Ah = Jazz Guitar  
2031 1Bh = Clean Guitar  
2032 1Ch = Muted Guitar  
2033 1Dh = Overdriven Guitar  
2034 1Eh = Distorted Guitar  
2035 1Fh = Guitar Harmonics

2036 20h = Acoustic Bass  
2037 21h = Fingered Bass  
2038 22h = Picked Bass  
2039 23h = Fretless Bass  
2040 24h = Slap Bass 1  
2041 25h = Slap Bass 2  
2042 26h = Synth Bass 1  
2043 27h = Synth Bass 2  
2044 28h = Violin  
2045 29h = Viola  
2046 2Ah = Cello  
2047 2Bh = Contra Bass  
2048 2Ch = Tremolo Strings  
2049 2Dh = Pizzicato  
2050 2Eh = Harp  
2051 2Fh = Tympani  
2052 30h = Strings  
2053 31h = Slow Strings  
2054 32h = Synth String 1  
2055 33h = Synth String 2  
2056 34h = Choir Ahhs  
2057 35h = Voice Ohhs  
2058 36h = Synth Voice  
2059 37h = Orchestra Hit  
2060 38h = Trumpet  
2061 39h = Trombone  
2062 3Ah = Tuba  
2063 3Bh = Mute Trumpet  
2064 3Ch = French Horn  
2065 3Dh = Brass  
2066 3Eh = Synth Brass 1  
2067 3Fh = Synth Brass 2  
2068 40h = Soprano Sax  
2069 41h = Alto Sax  
2070 42h = Tenor Sax  
2071 43h = Baritone Sax  
2072 44h = Oboe  
2073 45h = English Horn  
2074 46h = Bassoon  
2075 47h = Clarinet  
2076 48h = Piccolo  
2077 49h = Flute  
2078 4Ah = Recorder  
2079 4Bh = Pan Flute  
2080 4Ch = Bottle Blow  
2081 4Dh = Shakuhachi  
2082 4Eh = Whistle  
2083 4Fh = Ocarina  
2084 50h = Square Wave  
2085 51h = Saw Wave  
2086 52h = Synth Calliope  
2087 53h = Chiffer Lead  
2088 54h = Charang  
2089 55h = Solo Vox  
2090 56h = 5th Saw Wave

2091 57h = Bass & Lead  
 2092 58h = New Age Pad  
 2093 59h = Warm Pad  
 2094 5Ah = Poly Synth  
 2095 5Bh = Space Voice  
 2096 5Ch = Bowed Glass  
 2097 5Dh = Metal Pad  
 2098 5Eh = Halo Pad  
 2099 5Fh = Sweep Pad  
 2100 60h = Ice Rain  
 2101 61h = Soundtrack  
 2102 62h = Crystal  
 2103 63h = Atmosphere  
 2104 64h = Brightness  
 2105 65h = Goblin  
 2106 66h = Echo Drops  
 2107 67h = Star Theme  
 2108 68h = Sitar  
 2109 69h = Banjo  
 2110 6Ah = Shamisen  
 2111 6Bh = Koto  
 2112 6Ch = Kalimba  
 2113 6Dh = Badpipes  
 2114 6Eh = Fiddle  
 2115 6Fh = Shanai  
 2116 70h = Tinkle Bell  
 2117 71h = Agogo  
 2118 72h = Steel Drum  
 2119 73h = Wood Block  
 2120 74h = Taiko  
 2121 75h = Melodic Tom  
 2122 76h = Synth Drum  
 2123 77h = Reverse Cymbal  
 2124 78h = Guitar Fret Noise  
 2125 79h = Breath Noise  
 2126 7Ah = Seashore  
 2127 7Bh = Birdsong  
 2128 7Ch = Telephone  
 2129 7Dh = Helicopter  
 2130 7Eh = Applause  
 2131 7Fh = Gunshot

2132  
2133 6.0 Layer Parameter Structure

Offset	Parameter Name	Range/Values
2136		
2137 00-03h	Layer Parameter Structure Size	000000B4h, Fixed Lo
2138 04-07h	Layer Tag	'LYR1' In ASCII
2139 08-09h	Use Layer Number	0 to 15
2140 0Ah	Layer Control	00h = Layer Disable
2141		01h = Layer Enabled
2142		02h = Mute Layer
2143		03h = Solo Layer
2144 0Bh	Trigger Control	See Table 6.5
2145 0Ch	Controller High Threshold	0 to 127

2146	0Dh	Controller Low Threshold	0 to 127
2147	0Eh	Trigger Mode	80h = Key Up (Note-
2148			90h = Key Down (Not
2149	0Fh	High Keyboard Key Threshold	21 to 108 (Keyboard
2150	10h	Low Keyboard Key Threshold	21 to 108 (Keyboard
2151	11h	High Note-On Velocity	0 to 127
2152	12h	Low Note-On Velocity	0 to 127
2153	13-14h	Layer Delay	0 to 9999, Unsigned
2154	15h	Volume (dB)	-72 to +14
2155	16h	Pan	-64 to +63
2156	17h	Semi Tune	-64 to +63
2157	18h	Fine Tune	-128 to +127
2158	19h	Voice Mode	00h = Poly
2159			01h = Mono
2160	1Ah	Glide Mode	00h = OFF
2161			01h = ON
2162	1Bh	Glide Time	0 to 127
2163	1Ch	Key Group	0 (OFF), 1 to 16
2164	1D-1Fh	Reserved	
2165	20-2Fh	Layer Name	ASCII Text String
2166			
2167	6.1	Pitch Parameters	
2168			
2169	Offset	Parameter Name	Range/Values
2170			
2171	30h	ENV1 Mod Amount	-127 to +127
2172	31h	LFO Mod Amount	0 to 127
2173	32h	Key Track	See Table 6.4
2174	33h	Pitch Mod Source	See Table 6.1
2175	34h	Pitch Mod Amount	-127 to +127
2176	35h	Pitch Mod Range	0 to 64
2177	36h	Reserved	
2178			
2179	6.2	Filter Parameters	
2180			
2181	Offset	Parameter Name	Range/Values
2182			
2183	37h	Filter Mode	00h = 2LP/2HP
2184			01h = 3LP/1HP
2185			02h = 2LP/2LP
2186			03h = 3LP/1LP
2187	38h	Filter 1+2 Link	00h = OFF
2188			01h = ON
2189	39h	Filter 1 Cutoff	0 to 127
2190	3Ah	Reserved	
2191	3Bh	Filter 1 ENV2 Mod Amount	0 to 127
2192	3Ch	Filter 1 Cutoff Mod Source	See Table 6.1
2193	3Dh	Filter 1 Cutoff Mod Amount	-127 to +127
2194	3Eh	Filter 1 Cutoff Keyboard Tracking	See Table 6.4
2195	3Fh	Filter 1 Cutoff Keyboard	0 to 129
2196		Tracking Breakpoint	(Keyboard Keys C-1
2197	40-41h	Reserved	
2198	42h	Filter 2 Cutoff	0 to 127
2199	43h	Reserved	
2200	44h	Filter 2 ENV2 Mod Amount	0 to 127

2201	45h	Filter 2 Cutoff Mod Source	See Table 6.1
2202	46h	Filter 2 Cutoff Mod Amount	-127 to +127
2203	47h	Filter 2 Cutoff Keyboard Tracking	See Table 6.4
2204	48h	Filter 2 Cutoff Keyboard	0 to 129
2205		Tracking Breakpoint	(Keyboard Keys C-1
2206	49-4Ah	Reserved	
2207			
2208	6.3	Waveform Parameters	
2209			
2210	Offset	Parameter Name	Range/Values
2211			
2212	4Bh	Reserved	
2213	4Ch	Waveform Number (MSByte)	See Appendices 1 to
2214	4Dh	Waveform Number (LSByte)	See Appendices 1 to
2215	4Eh	Waveform Checksum (LSByte)	See Appendices 1 to
2216	4Fh	Waveform Checksum (MSByte)	See Appendices 1 to
2217	50h	Waveform Playback Direction	00h = Forward
2218			01h = Backward
2219	51h	Waveform Shift Amount	-64 to +63
2220	52h	Waveform Shift Mode	00h = OFF
2221			01h = Shift All
2222			02h = Stretch
2223			03h = Pick One
2224			04h = Shift Vel
2225	53h	Waveform Start Index	0 to 127
2226	54h	Waveform Mod Source	See Table 6.1
2227	55h	Waveform Mod Amount	-127 to +127
2228	56-57h	Reserved	
2229			
2230	6.4	Amplitude Parameters	
2231			
2232	Offset	Parameter Name	Range/Values
2233			
2234	58h	Amplitude Mod Source	See Table 6.1
2235	59h	Amplitude Mod Amount	-127 to +127
2236	5Ah	Panning Mod Source	See Table 6.1
2237	5Bh	Panning Mod Amount	-127 to +127
2238	5Ch	Rolloff Slope (dB/Octave)	0 to 127
2239	5Dh	Rolloff Key Number	0 to 129
2240		(Keyboard Keys C-1 to A9)	
2241	5Eh	Rolloff Mode	00h = OFF
2242			01h = Below
2243			02h = Above
2244	5F-60h	Reserved	
2245	61h	Noise Rate	0 to 127
2246	62-64h	Reserved	
2247	65h	MIDI Enables	01h = Pitch Bend
2248		Bitwise Definitions	02h = Sustain
2249			04h = Not Defined
2250			08h = Not Defined
2251			10h = Not Defined
2252			20h = Not Defined
2253			40h = Not Defined
2254			80h = Not Defined
2255	66h	Reserved	

2256	67h	Noise Sync	See Table 6.2
2257			
2258	6.5	Envelope 1 Parameters	
2259			
2260	Offset	Parameter Name	Range/Values
2261			
2262	68-6Bh	Envelope Tag	'ENV1' In ASCII
2263	6Ch	Release Mod Amount	-127 to +127
2264	6Dh	Attack Time	0 to 99
2265	6Eh	Attack Peak Level	0 to 127
2266	6Fh	Decay 1 Time	0 to 99
2267	70h	Decay 1 Break Level	0 to 127
2268	71h	Decay 2 Time	0 to 99
2269	72h	Decay 2 Break Level	0 to 127
2270	73h	Decay 3 Time	0 to 99
2271	74h	Sustain Level	0 to 127
2272	75h	Release Time	0 to 99
2273	76h	Level Velocity	0 to 99
2274	77h	Attack Velocity	0 to 99
2275	78h	Key Scale	0 to 99
2276	79h	Envelope Mode	00h = Normal
2277			01h = Finish
2278			02h = Repeat
2279	7Ah	Velocity Curve	See Table 6.3
2280	7Bh	Reserved	
2281			
2282	6.6	Envelope 2 Parameters	
2283			
2284	Offset	Parameter Name	Range/Values
2285			
2286	7C-7Fh	Envelope Tag	'ENV1' In ASCII
2287	80h	Release Mod Amount	-127 to +127
2288	81h	Attack Time	0 to 99
2289	82h	Attack Peak Level	0 to 127
2290	83h	Decay 1 Time	0 to 99
2291	84h	Decay 1 Break Level	0 to 127
2292	85h	Decay 2 Time	0 to 99
2293	86h	Decay 2 Break Level	0 to 127
2294	87h	Decay 3 Time	0 to 99
2295	88h	Sustain Level	0 to 127
2296	89h	Release Time	0 to 99
2297	8Ah	Level Velocity	0 to 99
2298	8Bh	Attack Velocity	0 to 99
2299	8Ch	Key Scale	0 to 99
2300	8Dh	Envelope Mode	00h = Normal
2301			01h = Finish
2302			02h = Repeat
2303	8Eh	Velocity Curve	See Table 6.3
2304	8Fh	Reserved	
2305			
2306	6.7	Envelope 3 Parameters	
2307			
2308	Offset	Parameter Name	Range/Values
2309			
2310	90-93h	Envelope Tag	'ENV1' In ASCII

2311	94h	Release Mod Amount	-127 to +127
2312	95h	Attack Time	0 to 99
2313	96h	Attack Peak Level	0 to 127
2314	97h	Decay 1 Time	0 to 99
2315	98h	Decay 1 Break Level	0 to 127
2316	99h	Decay 2 Time	0 to 99
2317	9Ah	Decay 2 Break Level	0 to 127
2318	9Bh	Decay 3 Time	0 to 99
2319	9Ch	Sustain Level	0 to 127
2320	9Dh	Release Time	0 to 99
2321	9Eh	Level Velocity	0 to 99
2322	9Fh	Attack Velocity	0 to 99
2323	A0h	Key Scale	0 to 99
2324	A1h	Envelope Mode	00h = Normal
2325			01h = Finish
2326			02h = Repeat
2327	A2h	Velocity Curve	See Table 6.3
2328	A3h	Reserved	
2329			
2330	6.8	LFO Parameters	
2331			
2332	Offset	Parameter Name	Range/Values
2333			
2334	A4-A7h	LFO Tag	'LFO1' In ASCII
2335	A8h	LFO Waveshape	00h = Triangle
2336			01h = Sine + Tri
2337			02h = Sine
2338			03h = Positive Tri
2339			04h = Positive Sine
2340			05h = Sawtooth
2341			06h = Square
2342	A9h	LFO Depth	0 to 127
2343	AAh	LFO Rate	0 to 99
2344	ABh	LFO Delay Time	0 to 99
2345	ACH	LFO Phase	0 to 127
2346	ADh	LFO Depth Mod Source	See Table 6.1
2347	Aeh	LFO Depth Mod Amount	-127 to +127
2348	AFh	LFO Rate Mod Source	See Table 6.1
2349	B0h	LFO Rate Mod Amount	-127 to +127
2350	B1h	LFO Retrigger	00h = OFF
2351			01h = ON
2352	B2h	LFO Timebase	See Table 6.2
2353	B3h	Reserved	
2354			
2355	Table 6.1 - Modulation Sources		
2356			
2357	00h	= OFF	
2358	01h	= Full Amount	
2359	02h	= LFO	
2360	03h	= Stepped	
2361	04h	= Smooth	
2362	05h	= ENV1	
2363	06h	= ENV2	
2364	07h	= ENV3	
2365	08h	= Velocity	

2366 09h = Vel+Press  
2367 0Ah = MIDIKey  
2368 0Bh = Keyboard  
2369 0Ch = Pressure  
2370 0Dh = Pitch Wheel  
2371 0Eh = Mod Wheel  
2372 0Fh = Whl+Press  
2373 10h = Ft Pedal  
2374 11h = Sustain  
2375 12h = Sostento  
2376 13h = SysCTRL1  
2377 14h = SysCTRL2  
2378 15h = SysCTRL3  
2379 16h = SysCTRL4  
2380  
2381 Table 6.2 - Time Divisions  
2382  
2383 00h = Normal  
2384 01h = Whole Note  
2385 02h = Whole Triplet  
2386 03h = Half Note  
2387 04h = Half Triplet  
2388 05h = Quarter Note  
2389 06h = Quarter Triplet  
2390 07h = Eighth Note  
2391 08h = Eighth Triplet  
2392 09h = Sixteenth Note  
2393 0Ah = Sixteenth Triplet  
2394 0Bh = 32nd Note  
2395  
2396 Table 6.3 - Response Curves  
2397  
2398 00h = Quick Rise  
2399 01h = Convex 1  
2400 02h = Convex 2  
2401 03h = Convex 3  
2402 04h = Linear  
2403 05h = Concave 1  
2404 06h = Concave 2  
2405 07h = Concave 3  
2406 08h = Concave 4  
2407 09h = Late Rise  
2408  
2409 Table 6.4 - Keyboard Tracking  
2410  
2411 F0h = -2  
2412 F1h = -15/8  
2413 F2h = -7/4  
2414 F3h = -13/8  
2415 F4h = -3/2  
2416 F5h = -11/8  
2417 F6h = -5/4  
2418 F7h = -9/8  
2419 F8h = -1  
2420 F9h = -7/8

2421 FAh = -3/4  
2422 FBh = -5/8  
2423 FCh = -1/2  
2424 FDh = -3/8  
2425 FEh = -1/4  
2426 FFh = -1/8  
2427 00h = OFF  
2428 01h = +1/8  
2429 02h = +1/4  
2430 03h = +3/8  
2431 04h = +1/2  
2432 05h = +5/8  
2433 06h = +3/4  
2434 07h = +7/8  
2435 08h = +1  
2436 09h = +9/8  
2437 0Ah = +5/4  
2438 0Bh = +11/8  
2439 0Ch = +3/2  
2440 0Dh = +13/8  
2441 0Eh = +7/4  
2442 0Fh = +15/8  
2443 10h = +2  
2444 11h = Pitch Table (Valid ONLY For Pitch Key Track Parameter)  
2445  
2446 Table 6.5 - Trigger Control Sources  
2447  
2448 00h = OFF (Unused)  
2449 01h = Mod Wheel  
2450 02h = Breath  
2451 03h = MIDI Controller  
2452 04h = Foot Controller  
2453 05h = Glide Time  
2454 06h = Data Entry  
2455 07h = Volume  
2456 08h = Balance  
2457 09h = MIDI Controller  
2458 0Ah = Pan  
2459 0Bh = Expression  
2460 0Ch = FX Control 1  
2461 0Dh = FX Control 2  
2462 0Eh = MIDI Controller  
2463 0Fh = MIDI Controller  
2464 10h = General Purpose 1  
2465 11h = General Purpose 2  
2466 12h = General Purpose 3  
2467 13h = General Purpose 4  
2468 14h = MIDI Controller  
2469 15h = MIDI Controller  
2470 16h = MIDI Controller  
2471 17h = MIDI Controller  
2472 18h = MIDI Controller  
2473 19h = MIDI Controller  
2474 1Ah = MIDI Controller  
2475 1Bh = MIDI Controller

2476 1Ch = MIDI Controller  
2477 1Dh = MIDI Controller  
2478 1Eh = MIDI Controller  
2479 1Fh = MIDI Controller  
2480 20h = Bank Select  
2481 21h = Mod Wheel  
2482 22h = Breath  
2483 23h = MIDI Controller  
2484 24h = Foot Controller  
2485 25h = Glide Time  
2486 26h = Data Entry  
2487 27h = Volume  
2488 28h = Balance  
2489 29h = MIDI Controller  
2490 2Ah = Pan  
2491 2Bh = Expression  
2492 2Ch = FX Control 1  
2493 2Dh = FX Control 2  
2494 2Eh = MIDI Controller  
2495 2Fh = MIDI Controller  
2496 30h = General Purpose 1  
2497 31h = General Purpose 2  
2498 32h = General Purpose 3  
2499 33h = General Purpose 4  
2500 34h = MIDI Controller  
2501 35h = MIDI Controller  
2502 36h = MIDI Controller  
2503 37h = MIDI Controller  
2504 38h = MIDI Controller  
2505 39h = MIDI Controller  
2506 3Ah = MIDI Controller  
2507 3Bh = MIDI Controller  
2508 3Ch = MIDI Controller  
2509 3Dh = MIDI Controller  
2510 3Eh = MIDI Controller  
2511 3Fh = MIDI Controller  
2512 40h = Sustain  
2513 41h = Portamento ON/OFF  
2514 42h = Sostenuto  
2515 43h = Soft Pedal  
2516 44h = Legato Foot Switch  
2517 45h = Hold 2  
2518 46h = Patch Select  
2519 47h = Timbre  
2520 48h = Release  
2521 49h = Attack  
2522 4Ah = Brightness  
2523 4Bh = Sound Controller 6  
2524 4Ch = Sound Controller 7  
2525 4Dh = Sound Controller 8  
2526 4Eh = Sound Controller 9  
2527 4Fh = Sound Controller 10  
2528 50h = General Purpose 5  
2529 51h = General Purpose 6  
2530 52h = General Purpose 7

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2531 53h = General Purpose 8
2532 54h = Portamento
2533 55h = MIDI Controller
2534 56h = MIDI Controller
2535 57h = MIDI Controller
2536 58h = MIDI Controller
2537 59h = MIDI Controller
2538 5Ah = MIDI Controller
2539 5Bh = FX Depth 1
2540 5Ch = FX Depth 2
2541 5Dh = FX Depth 3
2542 5Eh = FX Depth 4
2543 5Fh = FX Depth 5
2544 60h = Data Increment
2545 61h = Data Decrement
2546 62h = Non-Reg Parameter LSB
2547 63h = Non-Reg Parameter MSB
2548 64h = Reg Parameter LSB
2549 65h = Reg Parameter MSB
2550 66h = MIDI Controller
2551 67h = MIDI Controller
2552 68h = MIDI Controller
2553 69h = MIDI Controller
2554 6Ah = MIDI Controller
2555 6Bh = MIDI Controller
2556 6Ch = MIDI Controller
2557 6Dh = MIDI Controller
2558 6Eh = MIDI Controller
2559 6Fh = MIDI Controller
2560 70h = MIDI Controller
2561 71h = MIDI Controller
2562 72h = MIDI Controller
2563 73h = MIDI Controller
2564 74h = MIDI Controller
2565 75h = MIDI Controller
2566 76h = MIDI Controller
2567 77h = MIDI Controller
2568 78h = System CTRL 1
2569 79h = System CTRL 2
2570 7Ah = System CTRL 3
2571 7Bh = System CTRL 4
2572
2573 7.0      Drum Kit Program Parameters
2574
2575 Offset      Parameter Name      Range/Values
2576
2577 00-03h      Drum Kit Program Size      0000019Ch, Fixed Lo
2578 04-07h      Drum Kit Program Tag      'DRM1' In ASCII
2579 08-17h      Drum Kit Program Name      ASCII Text String
2580 18h         Drum Kit Catagory          26h (*CUSTOM)
2581 19h         Drum Kit Base Note          23h (Drum Key B1)
2582 1Ah         Number of Drum Keys          40h
2583 1Bh         Drum Key Definition Size     06h
2584 1C-21h      Drum Key B1 Definition
2585

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2586	1Ch	Drum Key B1 Bank	0 to 127
2587	1Dh	Drum Key B1 Program	0 to 127
2588	1Eh	Drum Key B1 Pan	-64 to +63
2589	1Fh	Drum Key B1 Volume	-50 to +14
2590	20h	Drum Key B1 Tuning Shift	-64 to +63
2591	21h	Drum Key B1 FX Bus	00h = Insert
2592			01h = Chorus
2593			02h = Light Reverb
2594			03h = Medium Reverb
2595			04h = Wet Reverb
2596			05h = Dry
2597			
2598	022-19Bh	Drum Keys C2 thru D7	See Drum Key B1 Def
2599			
2600	8.0	Performance Parameters	
2601			
2602	Offset	Parameter Name	Range/Values
2603			
2604	00-03h	Performance Size	00000576h, Long Wor
2605	04-07h	Performance Tag	'PRF1' In ASCII
2606	08-17h	Performance Name	ASCII Text String
2607	18h	Reserved	
2608	19h	Insert Control Part	0 (OFF), 1 to 16
2609	1A-2Bh	Reserved	
2610			
2611	8.1	Part 1 Performance Parameters	
2612			
2613	Offset	Parameter Name	Range/Values
2614			
2615	2Ch	Part 1 MIDI Channel	0 to 15
2616	2Dh	Part 1 Bank Number	0 to 127
2617	2Eh	Part 1 Program Number	0 to 127
2618	2Fh	Reserved	
2619	30h	Part 1 Volume	0 to 127
2620	31h	Part 1 Pan	See Table 8
2621	32h	Part 1 MIDI Enables	01h = Program Chang
2622		Bitwise Definitions	02h = Bank Select R
2623			04h = Data Entry Rc
2624			08h = Pitch Bend Rc
2625			10h = Mod Wheel Rcv
2626			20h = Foot Pedal Rc
2627			40h = Volume Rcv
2628			80h = Pan Rcv
2629	33h	Part 1 MIDI Enables	01h = Expression Rc
2630		Bitwise Defintions	02h = Sustain Rcv
2631			04h = SysCTRL1 Rcv
2632			08h = SysCTRL2 Rcv
2633			10h = SysCTRL3 Rcv
2634			20h = SysCTRL4 Rcv
2635			40h = Volume Invert
2636			80h = Not Defined
2637	34h	Part 1 Semitone Shift1	See Table 8.6
2638	35h	Part 1 Fine Tuning1	-128 to +127
2639	36h	Reserved	
2640	37h	Part 1 LFO Rate1	See Table 8.6

2641	38h	Part 1 LFO Depth1	See Table 8.6
2642	39h	Part 1 LFO Delay1	See Table 8.6
2643	3Ah	Part 1 Octave Shift1	3Eh = -2 Octaves
2644			3Fh = -1 Octaves
2645			40h = 0 Octaves
2646			41h = +1 Octaves
2647			42h = +2 Octaves
2648	3Bh	Part 1 Filter Cutoff1	See Table 8.6
2649	3Ch	Reserved	
2650	3Dh	Part 1 Amplitude Envelope	See Table 8.6
2651		Attack Time1	
2652	3Eh	Part 1 Amplitude Envelope	See Table 8.6
2653		Decay Time1	
2654	3Fh	Part 1 Amplitude Envelope	See Table 8.6
2655		Release Time1	
2656	40h	Part 1 Filter Envelope	See Table 8.6
2657		Attack Time1	
2658	41h	Part 1 Filter Envelope	See Table 8.6
2659		Decay Time1	
2660	42h	Part 1 Filter Envelope	See Table 8.6
2661		Release Time1	
2662	43h	Part 1 Amplitude & Filter	See Table 8.6
2663		Velocity Sensitivity1	
2664	44h	Part 1 Pitch Table1	See Table 8.1
2665	45h	Part 1 Pitch Bend Up Range1	See Table 8.3
2666	46h	Part 1 Pitch Bend Down Range1	See Table 8.4
2667	47h	Part 1 Delay Offset1	See Table 8.5
2668	48h	Part 1 LFO & Noise Sync1	See Table 8.2
2669	49h	Part 1 Keyboard Range Low Note	21 to 108
2670		(Keyboard Keys A0 to C8)	
2671	4Ah	Part 1 Keyboard Range High Note	21 to 108
2672		(Keyboard Keys A0 to C8)	
2673	4Bh	Part 1 Velocity Range Low Limit	0 to 127
2674	4Ch	Part 1 Velocity Range High Limit	0 to 127
2675	4Dh	Part 1 Pressure Mode	FFh = OFF
2676			00h = Auto
2677			01h = Channel
2678			02h = Key
2679	4Eh	Part 1 Glide Mode1	00h = Program
2680			01h = OFF
2681			02h = ON
2682	4Fh	Part 1 Glide Time1	See Table 8.6
2683	50h	Part 1 FX Bus1	00h = Insert
2684			01h = Chorus
2685			02h = Light Reverb
2686			04h = Wet Reverb
2687			05h = Dry
2688	51h	Part 1 Expression	0 to 127
2689	52h	Part 1 Velocity Mode	0 (Normal), 1 to 12
2690	53h	Part 1 Enable	00h = OFF
2691			01h = ON
2692			02h = Mute
2693			03h = Solo
2694	54-55h	Reserved	
2695			

2696	(1)	These Performance Parameters should be considered RESERVED when a D	
2697			
2698	8.2	Part 2 thru 16 Performance Parameters	
2699			
2700	Offset	Parameter Name	Range/Values
2701			
2702	056-07Fh	Part 02 Performance Parameters	Refer to Part 1
2703	080-0A9h	Part 03 Performance Parameters	Refer to Part 1
2704	0AA-0D3h	Part 04 Performance Parameters	Refer to Part 1
2705	0D4-0FDh	Part 05 Performance Parameters	Refer to Part 1
2706	0FE-127h	Part 06 Performance Parameters	Refer to Part 1
2707	128-151h	Part 07 Performance Parameters	Refer to Part 1
2708	152-17Bh	Part 08 Performance Parameters	Refer to Part 1
2709	17C-1A5h	Part 09 Performance Parameters	Refer to Part 1
2710	1A6-1CFh	Part 10 Performance Parameters	Refer to Part 1
2711	1D0-1F9h	Part 11 Performance Parameters	Refer to Part 1
2712	1FA-223h	Part 12 Performance Parameters	Refer to Part 1
2713	224-24Dh	Part 13 Performance Parameters	Refer to Part 1
2714	24E-277h	Part 14 Performance Parameters	Refer to Part 1
2715	278-2A1h	Part 15 Performance Parameters	Refer to Part 1
2716	2A2-2CBh	Part 16 Performance Parameters	Refer to Part 1
2717			
2718	8.3	Performance Effects Parameters	
2719			
2720	Offset	Parameter Name	Range/Values
2721			
2722	2CC-2CFh	UMTE Tag	'EFX1' In ASCII
2723	2D0h	Insert Mod Source	See Table 8.7
2724	2D1h	Insert Mod Destination Parameter	See Appendix 5
2725	2D2-2D3h	Insert Mod Source Minimum Value Source	Parameter Dependent
2726	2D4-2D5h	Insert Mod Source Maximum Value Source	Parameter Dependent
2727	2D6-2D7h	Insert Mod Destination	Destination Paramet
2728		Parameter Minimum Value	Dependent
2729	2D8-2D9h	Insert Mod Destination	Destination Paramet
2730		Parameter Maximum Value	Dependent
2731	2DA-2DDh	FX0 Offset (Shell)	000001Eh, Fixed Sh
2732	2DE-2E1h	FX1 Offset (Insert)	00000072h, Fixed Sh
2733	2E2-2E5h	FX2 Offset (Global Chorus)	000000C6h, Fixed Sh
2734	2E6-2E9h	FX3 Offset (Global Reverb)	000000EAh, Fixed Sh
2735			
2736	2EA-2EBh	FX0 Algorithm Family ID	001Ah, See Table 8.
2737	2EC-2EDh	FX0 Algorithm Member ID	0000h, See Table 8.
2738	2EE-2FDh	FX0 Name	ASCII Text String
2739	2FE-33Dh	FX0 Parameters (Shell)	
2740			
2741	2FE-2FFh	Insert Output Assignment	0000h = Main
2742			0001h = Aux
2743	300-301h	Chorus Output Assignment	0000h = Main
2744			0001h = Aux
2745	302-303h	Reverb Output Assignment	0000h = Main
2746			0001h = Aux
2747	304-305h	Dry Bus Output Assignment	0000h = Main
2748			0001h = Aux
2749	306-307h	Insert Chorus Mix	0 to 127
2750	308-309h	Chorus Input Mix	0 to 127

2751	30A-30Bh	Insert Reverb Amount	0 to 127
2752	30C-30Dh	Chorus Reverb Amount	0 to 127
2753	30E-30Fh	Light Reverb Send	0 to 63
2754	310-311h	Medium Reverb Send	32 to 95
2755	312-313h	Wet Reverb Send	64 to 127
2756	314-315h	Reserved FX0 Parameter	
2757	316-317h	Reserved FX0 Parameter	
2758	318-319h	Insert Input Mix	0 to 127
2759	31A-31Bh	Reserved FX0 Parameter	
2760	31C-31Dh	Reserved FX0 Parameter	
2761	31E-31Fh	Reserved FX0 Parameter	
2762	320-321h	Reserved FX0 Parameter	
2763	322-323h	Reserved FX0 Parameter	
2764	324-325h	Reserved FX0 Parameter	
2765	326-327h	Reserved FX0 Parameter	
2766	328-329h	Reserved FX0 Parameter	
2767	32A-32Bh	Reserved FX0 Parameter	
2768	32C-32Dh	Reserved FX0 Parameter	
2769	32E-32Fh	Reserved FX0 Parameter	
2770	330-331h	Reserved FX0 Parameter	
2771	332-333h	Reverb Return Level	0 to 127
2772	334-335h	Reserved FX0 Parameter	
2773	336-337h	Reserved FX0 Parameter	
2774	338-339h	Reserved FX0 Parameter	
2775	33A-33Bh	Reserved FX0 Parameter	
2776	33C-33Dh	Reserved FX0 Parameter	
2777	33E-33Fh	FX1 Algorithm Family ID	See Table 8.8
2778	340-341h	FX1 Algorithm Member ID	See Table 8.8
2779	342-351h	FX1 Name	ASCII Text String
2780	352-391h	FX1 Parameters (Insert)	See Appendix 5
2781			
2782	352-353h	FX1 Parameter #00	Algorithm Dependent
2783	354-355h	FX1 Parameter #01	Algorithm Dependent
2784	356-357h	FX1 Parameter #02	Algorithm Dependent
2785	358-359h	FX1 Parameter #03	Algorithm Dependent
2786	35A-35Bh	FX1 Parameter #04	Algorithm Dependent
2787	35C-35Dh	FX1 Parameter #05	Algorithm Dependent
2788	35E-35Fh	FX1 Parameter #06	Algorithm Dependent
2789	360-361h	FX1 Parameter #07	Algorithm Dependent
2790	362-363h	FX1 Parameter #08	Algorithm Dependent
2791	364-365h	FX1 Parameter #09	Algorithm Dependent
2792	366-367h	FX1 Parameter #10	Algorithm Dependent
2793	368-369h	FX1 Parameter #11	Algorithm Dependent
2794	36A-36Bh	FX1 Parameter #12	Algorithm Dependent
2795	36C-36Dh	FX1 Parameter #13	Algorithm Dependent
2796	36E-36Fh	FX1 Parameter #14	Algorithm Dependent
2797	370-371h	FX1 Parameter #15	Algorithm Dependent
2798	372-373h	FX1 Parameter #16	Algorithm Dependent
2799	374-375h	FX1 Parameter #17	Algorithm Dependent
2800	376-377h	FX1 Parameter #18	Algorithm Dependent
2801	378-379h	FX1 Parameter #19	Algorithm Dependent
2802	37A-37Bh	FX1 Parameter #20	Algorithm Dependent
2803	37C-37Dh	FX1 Parameter #21	Algorithm Dependent
2804	37E-37Fh	FX1 Parameter #22	Algorithm Dependent
2805	380-381h	FX1 Parameter #23	Algorithm Dependent

2806	382-383h	FX1 Parameter #24	Algorithm Dependent
2807	384-385h	FX1 Parameter #25	Algorithm Dependent
2808	386-387h	FX1 Parameter #26	Algorithm Dependent
2809	388-389h	FX1 Parameter #27	Algorithm Dependent
2810	38A-38Bh	FX1 Parameter #28	Algorithm Dependent
2811	38C-38Dh	FX1 Parameter #29	Algorithm Dependent
2812	38E-38Fh	FX1 Parameter #30	Algorithm Dependent
2813	390-391h	FX1 Parameter #31	Algorithm Dependent
2814			
2815	392-393h	FX2 Algorithm Family ID	0004h, See Table 8.
2816	394-395h	FX2 Algorithm Member ID	0000h, See Table 8.
2817	396-3A5h	FX2 Name	ASCII Text String
2818	3A6-3B5h	FX2 Parameters (Global Chorus)	
2819			
2820	3A6-3A7h	Chorus LFO Rate	0 to 116
2821	3A8-3A9h	Chorus Depth	0 to 250
2822	3AA-3ABh	Chorus Center	0 to 500
2823	3AC-3ADh	Chorus Spread	0 to 10
2824	3AE-3AFh	Chorus Phase	0 to 1
2825	3B0-3B1h	Reserved FX2 Parameter	
2826	3B2-3B3h	Reserved FX2 Parameter	
2827	3B4-3B5h	Reserved FX2 Parameter	
2828	3B6-3B7h	FX3 Algorithm Family ID	0001h, See Table 8.
2829	3B8-3B9h	FX3 Algorithm Member ID	0000h, See Table 8.
2830	3BA-3C9h	FX3 Name	ASCII Text String
2831	3CA-3D9h	FX3 Parameters (Global Reverb)	
2832			
2833	3CA-3CBh	Reverb Decay	0 to 100
2834	3CC-3CDh	Reverb HF Damping	0 to 127
2835	3CE-3CFh	Reverb HF Bandwidth	0 to 127
2836	3D0-3D1h	Reverb Diffusion 1	0 to 100
2837	3D2-3D3h	Reverb Diffusion 2	0 to 100
2838	3D4-3D5h	Reverb Definition	0 to 100
2839	3D6-3D7h	Reserved FX3 Parameter	
2840	3D8-3D9h	Reserved FX3 Parameter	
2841			
2842	8.4	Performance PerfEditKit Drum Kit Program Parameters	
2843			
2844	Offset	Parameter Name	Range/Values
2845			
2846	3DA-3DDh	Drum Kit Program Size	0000019Ch, Fixed Lo
2847	3DE-3E1h	Drum Kit Program Tag	'DRM1' In ASCII
2848	3E2-3F1h	Drum Kit Program Name	ASCII Text String
2849	3F2h	Drum Kit Catagory	26h (*CUSTOM)
2850	3F3h	Drum Kit Base Note	23h (Drum Key B1)
2851	3F4h	Number of Drum Keys	40h
2852	3F5h	Drum Key Definition Size	06h
2853	3F6-3FBh	Drum Key B1 Definition	
2854			
2855	3F6h	Drum Key B1 Bank	0 to 127
2856	3F7h	Drum Key B1 Program	0 to 127
2857	3F8h	Drum Key B1 Pan	-64 to +63
2858	3F9h	Drum Key B1 Volume	-50 to +14
2859	3FAh	Drum Key B1 Tuning Shift	-64 to +63
2860	3FBh	Drum Key B1 FX Bus	00h = Insert

2861 01h = Chorus  
2862 02h = Light Reverb  
2863 03h = Medium Reverb  
2864 04h = Wet Reverb  
2865 05h = Dry  
2866  
2867 3FC-575h Drum Keys C2 thru D7 See Drum Key B1 Def  
2868  
2869 Table 8.1 - Pitch Table  
2870  
2871 00h = Program  
2872 01h = System  
2873 02h = EqualTemper  
2874 03h = Pythagrn-C  
2875 04h = Just Int-C  
2876 05h = Meantone-C  
2877 06h = Wrkmeistr-C  
2878 07h = Vallotti-C  
2879 08h = Grk-Diatonc  
2880 09h = Grk-Chromat  
2881 0Ah = Grk-Enharm  
2882 0Bh = Turkish-A  
2883 0Ch = Arabic-1  
2884 0Dh = Arabic-2  
2885 0Eh = Arabic-3  
2886 0Fh = Arabic-4  
2887 10h = Java-Pelog1  
2888 11h = Java-Pelog2  
2889 12h = Java-Pelog3  
2890 13h = Java-Slndro  
2891 14h = Java-Combi  
2892 15h = Indian-Raga  
2893 16h = Tibetan  
2894 17h = Chinese-1  
2895 18h = Chinese-2  
2896 19h = Thailand  
2897 1Ah = 24-Tone-Equ  
2898 1Bh = 19-Tone-Equ  
2899 1Ch = 31-Tone-Equ  
2900 1Dh = 53-Tone-Equ  
2901 1Eh = Harmonic  
2902 1Fh = CarlosAlpha  
2903 20h = CarlosBeta  
2904 21h = CarlosGamma  
2905 22h = Partch-43  
2906 23h = Reverse  
2907 24h = Bagpipe  
2908 25h = ShonaMbiral  
2909 26h = ShonaMbira2  
2910 27h = SuperJust  
2911 28h = 88CET  
2912 29h = Pierce  
2913 2Ah = WS1  
2914 2Bh = WS2  
2915 2Ch = WS3

2916 2Dh = Stretch  
2917 2Eh = RandomDetune  
2918 2Fh = RAM  
2919  
2920 Table 8.2 - LFO/Noise Sync Sources  
2921  
2922 00h = Program  
2923 01h = Normal  
2924 02h = Whole Note  
2925 03h = Whole Triplet  
2926 04h = Half Note  
2927 05h = Half Triplet  
2928 06h = Quarter Note  
2929 07h = Quarter Triplet  
2930 08h = Eighth Note  
2931 09h = Eighth Triplet  
2932 0Ah = Sixteenth Note  
2933 0Bh = Sixteenth Triplet  
2934 0Ch = 32nd Note  
2935  
2936 Table 8.3 - Pitch Bend Up Range  
2937  
2938 F4h = 12 Down  
2939 F5h = 11 Down  
2940 F6h = 10 Down  
2941 F7h = 09 Down  
2942 F8h = 08 Down  
2943 F9h = 07 Down  
2944 FAh = 06 Down  
2945 FBh = 05 Down  
2946 FCh = 04 Down  
2947 FDh = 03 Down  
2948 FEh = 02 Down  
2949 FFh = 01 Down  
2950 00h = Program  
2951 01h = System  
2952 02h = OFF  
2953 03h = 01 Up  
2954 04h = 02 Up  
2955 05h = 03 Up  
2956 06h = 04 Up  
2957 07h = 05 Up  
2958 08h = 06 Up  
2959 09h = 07 Up  
2960 0Ah = 08 Up  
2961 0Bh = 09 Up  
2962 0Ch = 10 Up  
2963 0Dh = 11 Up  
2964 0Eh = 12 Up  
2965  
2966 Table 8.4 - Pitch Bend Down Range  
2967  
2968 F4h = 12 Up  
2969 F5h = 11 Up  
2970 F6h = 10 Up

2971 F7h = 09 Up  
2972 F8h = 08 Up  
2973 F9h = 07 Up  
2974 FAh = 06 Up  
2975 FBh = 05 Up  
2976 FCh = 04 Up  
2977 FDh = 03 Up  
2978 FEh = 02 Up  
2979 FFh = 01 Up  
2980 00h = Program  
2981 01h = System  
2982 02h = OFF  
2983 03h = 01 Down  
2984 04h = 02 Down  
2985 05h = 03 Down  
2986 06h = 04 Down  
2987 07h = 05 Down  
2988 08h = 06 Down  
2989 09h = 07 Down  
2990 0Ah = 08 Down  
2991 0Bh = 09 Down  
2992 0Ch = 10 Down  
2993 0Dh = 11 Down  
2994 0Eh = 12 Down  
2995  
2996 Table 8.5 - Part Delay Offsets  
2997  
2998 00h = +0ms  
2999 01h = +1ms  
3000 02h = +2ms  
3001 03h = +3ms  
3002 04h = +4ms  
3003 05h = +5ms  
3004 06h = +6ms  
3005 07h = +7ms  
3006 08h = +8ms  
3007 09h = +9ms  
3008 0Ah = +10ms  
3009 0Bh = +11ms  
3010 0Ch = +12ms  
3011 0Dh = +13ms  
3012 0Eh = +14ms  
3013 0Fh = +15ms  
3014 10h = +16ms  
3015 11h = +17ms  
3016 12h = +18ms  
3017 13h = +19ms  
3018 14h = +20ms  
3019 15h = +21ms  
3020 16h = +22ms  
3021 17h = +23ms  
3022 18h = +24ms  
3023 19h = +25ms  
3024 1Ah = +26ms  
3025 1Bh = +27ms

3026 1Ch = +28ms  
3027 1Dh = +29ms  
3028 1Eh = +30ms  
3029 1Fh = +31ms  
3030 20h = +32ms  
3031 21h = +33ms  
3032 22h = +34ms  
3033 23h = +35ms  
3034 24h = +36ms  
3035 25h = +37ms  
3036 26h = +38ms  
3037 27h = +39ms  
3038 28h = +40ms  
3039 29h = +41ms  
3040 2Ah = +42ms  
3041 2Bh = +43ms  
3042 2Ch = +44ms  
3043 2Dh = +45ms  
3044 2Eh = +46ms  
3045 2Fh = +47ms  
3046 30h = +48ms  
3047 31h = +49ms  
3048 32h = +50ms  
3049 33h = +55ms  
3050 34h = +60ms  
3051 35h = +65ms  
3052 36h = +70ms  
3053 37h = +75ms  
3054 38h = +80ms  
3055 39h = +85ms  
3056 3Ah = +90ms  
3057 3Bh = +95ms  
3058 3Ch = +100ms  
3059 3Dh = +105ms  
3060 3Eh = +110ms  
3061 3Fh = +115ms  
3062 40h = +120ms  
3063 41h = +125ms  
3064 42h = +130ms  
3065 43h = +135ms  
3066 44h = +140ms  
3067 45h = +145ms  
3068 46h = +150ms  
3069 47h = +155ms  
3070 48h = +160ms  
3071 49h = +165ms  
3072 4Ah = +170ms  
3073 4Bh = +175ms  
3074 4Ch = +180ms  
3075 4Dh = +185ms  
3076 4Eh = +190ms  
3077 4Fh = +195ms  
3078 50h = +200ms  
3079 51h = +205ms  
3080 52h = +210ms

3081 53h = +215ms  
3082 54h = +220ms  
3083 55h = +225ms  
3084 56h = +230ms  
3085 57h = +235ms  
3086 58h = +240ms  
3087 59h = +245ms  
3088 5Ah = +250ms  
3089 5Bh = +255ms  
3090 5Ch = +260ms  
3091 5Dh = +265ms  
3092 5Eh = +270ms  
3093 5Fh = +275ms  
3094 60h = +280ms  
3095 61h = +285ms  
3096 62h = +290ms  
3097 63h = +295ms  
3098 64h = +300ms  
3099 65h = +325ms  
3100 66h = +350ms  
3101 67h = +375ms  
3102 68h = +400ms  
3103 69h = +425ms  
3104 6Ah = +450ms  
3105 6Bh = +475ms  
3106 6Ch = +500ms  
3107 6Dh = +550ms  
3108 6Eh = +600ms  
3109 6Fh = +650ms  
3110 70h = +700ms  
3111 71h = +750ms  
3112 72h = +800ms  
3113 73h = +850ms  
3114 74h = +900ms  
3115 75h = +1000ms  
3116 76h = +1100ms  
3117 77h = +1200ms  
3118 78h = +1300ms  
3119 79h = +1400ms  
3120 7Ah = +1500ms  
3121 7Bh = +1600ms  
3122 7Ch = +1700ms  
3123 7Dh = +1800ms  
3124 7Eh = +1900ms  
3125 7Fh = +2000ms

3126  
3127 Table 8.6 - Parameter Offset Values

3128  
3129 00h = -64  
3130 01h = -63  
3131 02h = -62  
3132 03h = -61  
3133 04h = -60  
3134 05h = -59  
3135 06h = -58

3136 07h = -57  
3137 08h = -56  
3138 09h = -55  
3139 0Ah = -54  
3140 0Bh = -53  
3141 0Ch = -52  
3142 0Dh = -51  
3143 0Eh = -50  
3144 0Fh = -49  
3145 10h = -48  
3146 11h = -47  
3147 12h = -46  
3148 13h = -45  
3149 14h = -44  
3150 15h = -43  
3151 16h = -42  
3152 17h = -41  
3153 18h = -40  
3154 19h = -39  
3155 1Ah = -38  
3156 1Bh = -37  
3157 1Ch = -36  
3158 1Dh = -35  
3159 1Eh = -34  
3160 1Fh = -33  
3161 20h = -32  
3162 21h = -31  
3163 22h = -30  
3164 23h = -29  
3165 24h = -28  
3166 25h = -27  
3167 26h = -26  
3168 27h = -25  
3169 28h = -24  
3170 29h = -23  
3171 2Ah = -22  
3172 2Bh = -21  
3173 2Ch = -20  
3174 2Dh = -19  
3175 2Eh = -18  
3176 2Fh = -17  
3177 30h = -16  
3178 31h = -15  
3179 32h = -14  
3180 33h = -13  
3181 34h = -12  
3182 35h = -11  
3183 36h = -10  
3184 37h = -09  
3185 38h = -08  
3186 39h = -07  
3187 3Ah = -06  
3188 3Bh = -05  
3189 3Ch = -04  
3190 3Dh = -03

3191 3Eh = -02  
3192 3Fh = -01  
3193 40h = 00  
3194 41h = +01  
3195 42h = +02  
3196 43h = +03  
3197 44h = +04  
3198 45h = +05  
3199 46h = +06  
3200 47h = +07  
3201 48h = +08  
3202 49h = +09  
3203 4Ah = +10  
3204 4Bh = +11  
3205 4Ch = +12  
3206 4Dh = +13  
3207 4Eh = +14  
3208 4Fh = +15  
3209 50h = +16  
3210 51h = +17  
3211 52h = +18  
3212 53h = +19  
3213 54h = +20  
3214 55h = +21  
3215 56h = +22  
3216 57h = +23  
3217 58h = +24  
3218 59h = +25  
3219 5Ah = +26  
3220 5Bh = +27  
3221 5Ch = +28  
3222 5Dh = +29  
3223 5Eh = +30  
3224 5Fh = +31  
3225 60h = +32  
3226 61h = +33  
3227 62h = +34  
3228 63h = +35  
3229 64h = +36  
3230 65h = +37  
3231 66h = +38  
3232 67h = +39  
3233 68h = +40  
3234 69h = +41  
3235 6Ah = +42  
3236 6Bh = +43  
3237 6Ch = +44  
3238 6Dh = +45  
3239 6Eh = +46  
3240 6Fh = +47  
3241 70h = +48  
3242 71h = +49  
3243 72h = +50  
3244 73h = +51  
3245 74h = +52

3246 75h = +53  
 3247 76h = +54  
 3248 77h = +55  
 3249 78h = +56  
 3250 79h = +57  
 3251 7Ah = +58  
 3252 7Bh = +59  
 3253 7Ch = +60  
 3254 7Dh = +61  
 3255 7Eh = +62  
 3256 7Fh = +63

3257

3258 Table 8.7 - Insert FX Modulation Sources

3259

3260 00h = OFF  
 3261 01h = Full Mod Amount  
 3262 02h = Velocity  
 3263 03h = Vel+Pressure  
 3264 04h = +Pos MIDI Key #  
 3265 05h = -Neg MIDI Key #  
 3266 06h = Pressure  
 3267 07h = Pitchwheel  
 3268 08h = Mod Wheel  
 3269 09h = Whl+Pressure  
 3270 0Ah = Foot Pedal  
 3271 0Bh = Sustain  
 3272 0Ch = Sostenuto  
 3273 0Dh = SysCTRL1  
 3274 0Eh = SysCTRL2  
 3275 0Fh = SysCTRL3  
 3276 10h = SYSCTRL4

3277

3278 Table 8.8 - FX Algorithm Family/Member Assignments

3279

3280	Algorithm Name	Family ID	Member ID
3281			
3282	Global Reverb	0001h	0000h
3283	Global Chorus	0004h	0000h
3284	Shell Mixer	001Ah	0000h
3285	01 Parametric EQ	0012h	0005h
3286	02 Hall Reverb	0001h	0002h
3287	03 Large Room	0001h	0004h
3288	04 Small Room	0001h	0005h
3289	05 Large Plate	0001h	0006h
3290	06 Small Plate	0001h	0007h
3291	07 NonLinReverb1	0001h	0008h
3292	08 NonLinReverb2	0001h	0009h
3293	09 Gated Reverb	0001h	000Ah
3294	10 Stereo Chorus	0004h	0001h
3295	11 8-VoiceChorus	0004h	0002h
3296	12 REV(Chorus	001Eh	000Ch
3297	13 Rev(Flanger	001Eh	000Dh
3298	14 REV(Phaser	001Eh	000Eh
3299	15 Chorus(REV	001Eh	0004h
3300	16 Flanger(REV	001Eh	0005h

3301	17	Phaser (REV	001Eh	0006h
3302	18	EQ (REV	001Eh	0008h
3303	19	Spinner (Rev	001Eh	0007h
3304	20	DDL (Chorus	001Eh	0000h
3305	21	DDL (Flanger	001Eh	0002h
3306	22	DDL (Phaser	001Eh	0003h
3307	23	DDL (EQ	001Eh	0001h
3308	24	Multi-Tap DDL	0003h	0000h
3309	25	Dist (Chorus	001Eh	0009h
3310	26	Dist (Flanger	001Eh	000Ah
3311	27	Dist (Phaser	001Eh	000Bh
3312	28	Dist (AutoWah	000Eh	0000h
3313	29	ResVCF (DDL	0013h	0004h
3314	30	Dist (VCF (DDL	0013h	0001h
3315	31	Pitch Detuner	0016h	0000h
3316	32	Chatter Box	0013h	0002h
3317	33	Formant Morph	0013h	0003h
3318	34	RotarySpeaker	0010h	0000h
3319	35	Tunable Spkr	000Fh	0000h
3320	36	Guitar Amp	0011h	0003h
3321	37	Dist (DDL Trem	0011h	0001h
3322	38	Comp (Dist (DDL	0011h	0002h
3323	39	EQ (Comp (Gate	000Ah	0002h
3324	40	EQ (Chorus (DDL	0011h	0000h

3325

3326 Appendix 1 - MR Internal Waveform List

3327

3328 Waveform Class = Keyboard

3329

3330	NUMBER	CHECKSUM	WAVENAME
3331			
3332	0000h	0D8Ch	GRAND PIANO
3333	0000h	6BE6h	GRAND MED HI
3334	0000h	394Ah	GRAND MED LO
3335	0000h	2C2Ch	GRAND SOFT
3336	0154h	1B8Fh	PIANO THUD
3337	0154h	0543h	PNO HAMMER UP
3338	0001h	33CAh	PNO HARP NOIS
3339	00EDh	197Dh	TINE EPNO A
3340	00EDh	F931h	TINE EPNO B
3341	0002h	D332h	TINE EPNO C
3342	0002h	69DFh	TINE EPNO D
3343	0002h	12ABh	TINE EPNO E
3344	0002h	030Eh	TINE EPNO F
3345	0003h	313Ch	DIGI PIANO
3346	00EEh	097Ah	DIGI PNO SOFT
3347	00EEh	37C9h	FM EPNO A
3348	0003h	0069h	FM EPNO B
3349	0003h	1DDAh	FM EPNO C
3350	0003h	AED1h	FM EPNO D
3351	00EFh	411Bh	WURLIE HIVEL
3352	00E9h	2564h	WURLIE LOVEL
3353	0004h	85C6h	HARPSICHORD
3354	0005h	1BD1h	CLAVINET
3355	0005h	2D19h	FM CLAV

3356	0006h	2160h	CELESTE
3357	000Ch	38B2h	ORG-775305004
3358	000Ch	DC38h	ORG-845351402
3359	000Ch	2A58h	ORG-875434578
3360	000Ch	01B3h	ORG-875645332
3361	000Ch	12E0h	ORG-888000000
3362	000Ch	14DFh	ORG-888808008
3363	000Ch	1C14h	ORG-888856444
3364	000Ch	1AEBh	ORG-888880880
3365	000Ch	3508h	ORGAN WAVE 1
3366	000Ch	055Fh	ORGAN WAVE 2
3367	000Dh	51A1h	PERC ORGAN 1
3368	000Dh	1D38h	PERC ORGAN 2
3369	000Eh	32B8h	ROTARY ORGAN
3370	00F1h	4E71h	SYNKEY WAVE
3371	000Fh	03ABh	CHURCH ORGAN
3372	00ECh	20A5h	PIPE ORGAN
3373	0010h	3843h	REED ORGAN
3374	00F1h	0ACCh	CLINK
3375	0166h	6C44h	ORG KEYCLICK
3376	0164h	D740h	MOOG LEAD
3377	0046h	095Bh	PAD SYNTH
3378			
3379	Waveform Class = String Sound		
3380			
3381	NUMBER	CHECKSUM	WAVENAME
3382			
3383	0013h	E05Eh	NYLON GUITAR
3384	0013h	AFC3h	NYLON GTR SOFT
3385	0014h	EE14h	STEEL GUITAR
3386	0014h	49C1h	STEEL GTR SOFT
3387	003Eh	3195h	FRET NOISE
3388	0016h	2A12h	EL GUITAR 1
3389	0016h	0557h	EL GTR 1 SOFT
3390	0016h	857Eh	EL GUITAR 2
3391	0018h	009Fh	DIST GUITAR
3392	0018h	10B6h	DIST GTR LOOP
3393	0019h	8002h	FEEDBACK HARM
3394	0019h	FBA6h	GTR HARMONIC
3395	0015h	5817h	JAZZ GUITAR
3396	0017h	504Fh	MUTE GUITAR
3397	0017h	6620h	MUTE GTR SOFT
3398	0020h	34ECh	CELLO
3399	001Fh	3A29h	VIOLIN
3400	0024h	0E48h	STRING SECTION
3401	0024h	2345h	STRING SECT B
3402	0024h	198Ah	STRING SECT C
3403	00CFh	4937h	PIZZ STRINGS
3404	003Bh	1F12h	BANJO
3405	0022h	2239h	HARP
3406	00E5h	2B6Dh	GOTO
3407	003Ch	17C2h	SHAMISEN
3408	003Ah	291Eh	SITAR
3409			
3410	Waveform Class = Brass+Horns		

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3411
3412 NUMBER          CHECKSUM          WAVENAME
3413
3414 002Ah            C259h            TRUMPET
3415 002Ch            100Ch            MUTE TRUMPET
3416 00BBh           F608h            FLUGELHORN
3417 00B6h           CC0Eh            SOLO FR HORN
3418 002Bh            844Eh            TROMBONE
3419 002Dh            1D65h            POP BRASS SEC
3420 00BFh            1E04h            FR HORN SECT
3421 002Eh            34BAh            SYNTH BRASS
3422
3423 Waveform Class = Wind+Reeds
3424
3425 NUMBER          CHECKSUM          WAVENAME
3426
3427 0030h            59AAh            TENOR SAX
3428 0072h            A785h            ALTO SAX
3429 002Fh            1770h            SOPRANO SAX
3430 0137h            3FC0h            SAX AIR
3431 0077h            4D8Ah            CHIFF
3432 0037h            27E7h            CHIFFLUTE
3433 0034h            3DE1h            FLUTE
3434 0039h            0AC4h            OCARINA
3435 0036h            1646h            PAN FLUTE
3436 0031h            287Ch            OBOE
3437 00F5h            BA1Ch            ENGLISH HORN
3438 00F8h            EF32h            BASSOON
3439 0033h            230Dh            CLARINET
3440 0011h            995Bh            ACCORDION 1
3441 0011h            3665h            ACCORDION 2
3442 0012h            E376h            HARMONICA
3443 00FEh            2B8Fh            CONCH SHELL
3444 0035h            2A0Ah            RECORDER
3445
3446 Waveform Class = Vocal Sound
3447
3448 NUMBER          CHECKSUM          WAVENAME
3449
3450 0107h            41D1h            VOCAL AAHS
3451 0106h            60CAh            VOCAL OOHS
3452 0106h            95C6h            BREATHY OOH
3453 010Eh            0142h            SYNTH VOX AAH
3454 0112h            3593h            VOCAL AIR
3455 0112h            259Ch            DOO ATTACK
3456 0110h            B006h            ONE
3457 0110h            90D7h            TWO
3458 0110h            02E7h            THREE
3459 0110h            5360h            FOUR
3460
3461 Waveform Class = Bass Sound
3462
3463 NUMBER          CHECKSUM          WAVENAME
3464
3465 001Ah            A632h            STANDUP BASS

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3466	001Ah	6116h	STANDUP BS 2
3467	001Ah	38BBh	STANDUP BS 3
3468	001Ch	4112h	FRETLESS BASS
3469	001Bh	0FD1h	FINGER BASS 1
3470	001Bh	A030h	FINGER BASS 2
3471	001Bh	8867h	FINGER BASS 3
3472	006Fh	1BA4h	PICK BASS 1
3473	006Fh	503Eh	PICK BASS 2
3474	0114h	4643h	MUTED BASS
3475	001Dh	FC7Bh	SLAP BASS 1
3476	001Dh	D19Ah	SLAP BASS 2
3477	0113h	00E2h	BASS POP NOIS
3478	0117h	9B73h	BS HARMONICS
3479	0113h	3CA2h	EL BASS TAP
3480	0115h	ECACH	ANALOG BS 1
3481	0115h	6A67h	ANALOG BS 2
3482	0115h	F96Bh	ANALOG BS 3
3483	0070h	B6D4h	FM BASS 1
3484	0070h	05AFh	FM BASS 2
3485	001Ah	4E7Ah	GUITARRON
3486	0116h	7020h	TUBE BASS
3487			
3488	Waveform Class = Drum Sound		
3489			
3490	NUMBER	CHECKSUM	WAVENAME
3491			
3492	0049h	4D52h	ACOUSTC KICK
3493	013Fh	B870h	BIG KICK
3494	0139h	679Bh	BOOM KICK
3495	0049h	4A1Ah	BRIGHT KICK
3496	0139h	186Ah	DANCE KICK
3497	004Ah	CE38h	DEEP KICK A
3498	004Ah	D020h	DEEP KICK B
3499	004Ah	D021h	DEEP KICK C
3500	00A0h	50DEh	ELEC KICK
3501	0139h	29CDh	FAT KICK
3502	009Fh	429Eh	GATED KICK
3503	00B0h	719Ch	JAZZ KICK
3504	013Ch	647Fh	LOOP KICK
3505	0139h	1DB6h	MUFF KICK
3506	00A0h	F7E4h	PROCESSD KICK
3507	0049h	A1E6h	PUNCHY KICK
3508	013Ch	A3A1h	RAP KICK
3509	0049h	435Bh	REAL KICK
3510	009Fh	21B0h	RESO KICK
3511	0049h	D1E5h	ROCK KICK A
3512	0049h	D325h	ROCK KICK B
3513	00A6h	FD53h	ROOM KICK 1A
3514	00A6h	FF1Bh	ROOM KICK 1B
3515	00A6h	FF1Ch	ROOM KICK 1C
3516	0049h	FCE6h	ROOM KICK 2A
3517	0049h	FEA7h	ROOM KICK 2B
3518	0049h	FEA8h	ROOM KICK 2C
3519	00A2h	F8CCh	SYNTH KICK 1
3520	0141h	036Bh	SYNTH KICK 2

3521	004Ah	D907h	TIGHT KICK
3522	004Ch	1E38h	BIG SNARE A
3523	004Ch	1FF7h	BIG SNARE B
3524	004Ch	1FF8h	BIG SNARE C
3525	006Dh	EBD2h	COM/GATE SNR
3526	00AEh	5737h	CONCERT SNARE
3527	013Eh	E22Bh	CRACK SNARE
3528	013Ah	2C0Ah	DANCE SNARE
3529	004Ch	1415h	DARK SNR 1 A
3530	004Ch	156Eh	DARK SNR 1 B
3531	004Ch	11F4h	DARK SNR 2 A
3532	004Ch	1339h	DARK SNR 2 B
3533	004Ch	D6ABh	DRY SNR 1 A
3534	004Ch	D889h	DRY SNR 1 B
3535	004Ch	D88Ah	DRY SNR 1 C
3536	004Ch	2E6Ah	DRY SNR 2 A
3537	004Ch	303Ah	DRY SNR 2 B
3538	004Ch	303Bh	DRY SNR 2 C
3539	004Ch	942Fh	DYN SNR 1 A
3540	004Ch	95AFh	DYN SNR 1 B
3541	004Ch	6C32h	DYN SNR 2 A
3542	004Ch	6DB6h	DYN SNR 2 B
3543	004Ch	173Bh	DYN SNR 3 A
3544	004Ch	18B4h	DYN SNR 3 B
3545	00A1h	15F6h	ELEC SNARE
3546	004Ch	6506h	FAT SNARE A
3547	004Ch	66DFh	FAT SNARE B
3548	006Dh	2477h	GATED POP SNR
3549	004Ch	06FFh	GM SNARE 1
3550	013Bh	2E8Ch	HIPHOP SNARE
3551	004Ch	00F2h	LIVE SNR 1 A
3552	004Ch	02C9h	LIVE SNR 1 B
3553	004Ch	A13Ch	LIVE SNR 2 A
3554	004Ch	A30Dh	LIVE SNR 2 B
3555	004Ch	8474h	LIVE SNR 3 A
3556	004Ch	863Eh	LIVE SNR 3 B
3557	0078h	DCF3h	POP SNARE
3558	013Bh	06C6h	RAP SNARE
3559	004Ch	28C8h	REAL SNARE
3560	004Ch	91B8h	RING SNARE A
3561	004Ch	9311h	RING SNARE B
3562	004Ch	9312h	RING SNARE C
3563	004Ch	9313h	RING SNARE D
3564	013Eh	300Fh	RIMSHOT
3565	004Ch	04FBh	ROCK SNARE
3566	00A4h	2CE7h	SYNTH SNARE
3567	00A4h	7E42h	TECHNO SNARE
3568	0140h	1F08h	SNARE ROLL
3569	004Bh	1BA0h	SIDESTICK 1
3570	004Bh	32CBh	SIDESTICK 2
3571	004Bh	9A40h	SIDESTICK 3A
3572	004Bh	9C13h	SIDESTICK 3B
3573	009Ah	A264h	STICK CLICK
3574	00AAh	2FB6h	BRUSH HIT
3575	00ABh	1F1Ah	BRUSH SLAP

3576	00ACh	3BE3h	BRUSH SWISH
3577	00ACh	15E7h	BRUSH SWISH2
3578	00ACh	574Fh	BRUSH SWISH3
3579	00ACh	5761h	BRUSH SWISH4
3580	00AAh	18C5h	BRUSH TAP
3581	00B1h	1701h	BRUSH TOM
3582	004Eh	0782h	DRY TOM
3583	004Eh	9881h	DRY TOM HI
3584	004Eh	D6B7h	LIVE TOM 2 A
3585	004Eh	D87Dh	LIVE TOM 2 B
3586	004Eh	D87Eh	LIVE TOM 2 C
3587	004Eh	27F9h	PURE TOM A
3588	004Eh	28E2h	PURE TOM B
3589	004Eh	0AB1h	BIG TOM 1 A
3590	004Eh	28E3h	PURE TOM C
3591	004Eh	0C6Fh	BIG TOM 1 B
3592	004Eh	0C70h	BIG TOM 1 C
3593	004Eh	0C71h	BIG TOM 1 D
3594	009Eh	94DFh	BIG TOM 2 A
3595	009Eh	96A7h	BIG TOM 2 B
3596	009Eh	96A8h	BIG TOM 2 C
3597	009Eh	96A9h	BIG TOM 2 D
3598	009Eh	68F5h	BIG TOM 3 A
3599	009Eh	6AD5h	BIG TOM 3 B
3600	009Eh	6AD6h	BIG TOM 3 C
3601	009Eh	6AD7h	BIG TOM 3 D
3602	009Eh	12BDh	ROOM TOM
3603	004Eh	1CD0h	LIVE TOM 1 A
3604	004Eh	1E95h	LIVE TOM 1 B
3605	004Eh	1E96h	LIVE TOM 1 C
3606	009Eh	1F12h	ROCK TOM 1 A
3607	009Eh	20EAh	ROCK TOM 1 B
3608	009Eh	20EBh	ROCK TOM 1 C
3609	009Eh	0348h	ROCK TOM 2 A
3610	009Eh	0521h	ROCK TOM 2 B
3611	009Eh	0522h	ROCK TOM 2 C
3612	006Eh	24FBh	SYNTH DRUM
3613	00A3h	9AA2h	SYNTH RIM
3614			
3615	Waveform Class = Cymbals		
3616			
3617	NUMBER	CHECKSUM	WAVENAME
3618			
3619	004Fh	F13Fh	CLOSED HAT 1
3620	004Fh	1C11h	CLOSED HAT 2
3621	004Fh	ED63h	CLOSED HAT 3
3622	004Fh	3D1Ch	15"HAT TIGHT
3623	00A5h	F47Eh	SYN CLOSEHAT
3624	00A5h	30D4h	SYN CL HAT 2
3625	004Fh	087Ch	RAP HAT 1
3626	004Fh	04AEh	RAP HAT 2
3627	00A5h	F683h	TECHNO HAT 1
3628	00A6h	5BAFh	TECHNO HAT 2
3629	00A5h	9B4Ch	TECHNO HAT 4
3630	00A5h	4331h	TECHNO HAT 3

3631	0051h	0255h	OPEN HAT
3632	0051h	6B28h	15"HAT OPEN
3633	0051h	CBA5h	15"HAT LOOSE
3634	00A6h	12F4h	SYN OPEN HAT
3635	00A6h	74EAh	SYN OP HAT 2
3636	0050h	1CA5h	PEDAL HAT
3637	0050h	679Ah	15"HAT FOOT
3638	0052h	0C1Ch	CRASH CYMBAL
3639	015Bh	30A7h	CYM LOOP
3640	0053h	E845h	RIDE CYMBAL
3641	0053h	5F3Dh	THIN RIDE A
3642	0053h	604Ah	THIN RIDE B
3643	0055h	EE5Ch	RIDE BELL
3644	0054h	E143h	CHINA CRASH
3645	0053h	A6BFh	SYNTH CYMBAL

3646

3647 Waveform Class = Percussion

3648

3649	NUMBER	CHECKSUM	WAVENAME
3650			
3651	005Eh	2D80h	AGOGO
3652	0059h	B0ABh	BONGO
3653	005Fh	26EBh	CABASA
3654	005Fh	79ADh	EQ CABASA 1
3655	005Fh	6CA9h	EQ CABASA 2
3656	006Bh	26E8h	CASTANETS
3657	0063h	13E1h	CLAVE
3658	009Bh	0598h	CLICK
3659	005Ch	49C3h	CONGA HEEL
3660	005Bh	F4BEh	CONGA HIGH
3661	005Ch	1D9Ah	CONGA LOW
3662	005Ah	1AF0h	CONGA MUTE
3663	0057h	414Ch	COWBELL
3664	0057h	24A9h	COWBELL STICK
3665	0065h	B2CCh	CUICA
3666	011Bh	42A7h	FINGER SNAPS
3667	0062h	407Ah	GUIRO
3668	011Eh	1AC0h	HANDCLAPS
3669	0158h	1069h	JAWHARP
3670	0060h	20B3h	MARACAS
3671	0060h	6E75h	THIN MARACA
3672	006Ah	D449h	SHAKER
3673	006Ah	507Dh	SHEKERE DN
3674	006Ah	D546h	SHEKERE UP
3675	0096h	1C89h	SLEIGHBELL
3676	0158h	41B5h	SPOONS
3677	006Ch	3C21h	TAIKO
3678	0056h	31D9h	TAMBOURINE
3679	0056h	17A6h	TAMBO DOWN
3680	0056h	144Fh	TAMBO UP
3681	005Dh	227Fh	TIMBALI
3682	0127h	A67Fh	TIMBALI RIM
3683	0066h	F4B6h	TRIANGLE
3684	0058h	19E5h	VIBRASLAP
3685	0061h	28EFh	WHISTLE

3686	0064h	262Fh	WOODBLOCK
3687	004Dh	1EB9h	SYN CLAPS
3688	00A7h	B6BAh	SYN COWBELL
3689	00A8h	0B40h	SYN MARACAS
3690	00A9h	A849h	SYNTH CLAVE
3691	0098h	22A8h	SYNTH KISS
3692	012Ah	3488h	WIND CHIME
3693	0160h	2065h	CACTUS LOOP
3694	0160h	1EECh	NUT RATTLE LP
3695	0121h	3D54h	RAINSTICK

3696

3697 Waveform Class = Tuned Percussion

3698

3699	NUMBER	CHECKSUM	WAVENAME
3700			
3701	0008h	266Bh	VIBRAPHONE
3702	0009h	310Eh	MARIMBA
3703	000Ah	045Dh	XYLOPHONE
3704	015Eh	14E2h	LOG DRUM
3705	0073h	1A1Bh	KALIMBA
3706	003Dh	2D3Fh	STEEL DRUM
3707	0144h	19B9h	DOORBELL
3708	0145h	219Dh	GAMELAN BELL
3709	0007h	3493h	GLOCKENSPIEL
3710	015Fh	2F53h	HANDBELLS
3711	015Ch	0B2Ah	SM TUNED GONG
3712	000Bh	267Ah	TUBULAR
3713	0023h	B913h	TYMPANI
3714	0143h	45C3h	DANCE HIT
3715	0143h	1773h	ORCH HIT

3716

3717 Waveform Class = Sound Effect

3718

3719	NUMBER	CHECKSUM	WAVENAME
3720			
3721	0042h	2E6Fh	APPLAUSE
3722	003Fh	4581h	BIRD SONG
3723	0075h	3BEDh	GUNSHOT
3724	0041h	025Ch	HELICOPTER
3725	0040h	1F9Fh	TELEPHONE
3726	0068h	85C2h	WIND CHIMES
3727	0156h	BCEDh	SURFACE NOISE
3728	0156h	0C45h	TAPE LOOP

3729

3730 Waveform Class = Waveform

3731

3732	NUMBER	CHECKSUM	WAVENAME
3733			
3734	014Eh	6018h	TEST SINE 44.
3735	0043h	FC25h	SAWTOOTH
3736	0045h	52EFh	SINE WAVE
3737	0044h	CF15h	SQUARE WAVE
3738	0134h	06CFh	TRIANGLE WAVE
3739	012Dh	A2FDh	ANALOG WV 1
3740	012Dh	22BBh	ANALOG WV 2

3741	012Dh	3B13h	ANALOG WV 3
3742	012Dh	28EBh	ANALOG WV 4
3743	012Dh	2595h	ANALOG WV 5
3744	012Dh	3202h	ANALOG WV 6
3745	012Dh	DC0Fh	ANALOG WV 7
3746	012Dh	D633h	ANALOG WV 8
3747	0131h	2F9Dh	DIGITAL WV 1
3748	0131h	1B76h	DIGITAL WV 2
3749	0130h	EE67h	BELL WAVE 1
3750	0130h	1826h	BELL WAVE 2
3751	0130h	391Ah	BELL WAVE 3
3752	0130h	3048h	BELL WAVE 4
3753	0130h	DE49h	BELL WAVE 5
3754	0130h	C3FDh	BELL WAVE 6
3755	0130h	AB47h	BELL WAVE 7
3756	0130h	95D7h	BIG BELL WF
3757	0130h	21A2h	SYNTH BELL
3758	0135h	6C7Bh	VOCAL WF 1
3759	0135h	6134h	VOCAL WF 2
3760	0135h	5775h	VOCAL WF 3
3761	0135h	65E2h	VOCAL WF 4
3762	0135h	68BFh	VOCAL WF 5
3763	0135h	CD2Fh	VOCAL WF 6
3764	0032h	BA92h	DOUBLE REED
3765	0074h	C06Eh	REED WF
3766	0074h	3EF0h	SINGLE REED
3767	0146h	1E7Fh	PIANO BS WF
3768	0146h	1E1Dh	PIANO WF
3769	0162h	0D6Eh	E-BASS WF 1
3770	0162h	CD69h	E-BASS WF 2
3771			
3772	Waveform Class = Inharmonic		
3773			
3774	NUMBER	CHECKSUM	WAVENAME
3775			
3776	0047h	1D5Eh	NOISE
3777	0076h	2BCAh	SPECTRUM
3778	0147h	20C6h	AIR LOOP
3779	0148h	32D0h	BIG BELL
3780	0048h	AA7Eh	CRYSTAL
3781	0076h	2056h	TEXTURE
3782			
3783	Waveform Class = Transwave		
3784			
3785	NUMBER	CHECKSUM	WAVENAME
3786			
3787	014Ch	27AAh	AAH OOH XW
3788	0166h	03C5h	ANA BS XWAVE
3789	016Ah	3D81h	ANA VOX-X
3790	016Ah	3241h	ANALOG PAD X
3791	014Ah	9F6Eh	BELL XWAVE 1
3792	014Ah	61C8h	BELL XWAVE 2
3793	014Ah	9C2Ch	BELL XWAVE 3
3794	014Ah	0BC3h	BELL XWAVE 4
3795	016Ah	E909h	DRAWBAR XW

3796	016Ah	D55Eh	MELLOW SWEEP
3797	014Ah	FC92h	MULTI BELL
3798	016Ah	31C7h	ORGAN XWAVE
3799	014Dh	8F30h	OSC SYNC XW 1
3800	014Dh	8B5Bh	OSC SYNC XW 2
3801	014Bh	54F7h	PHASE SYNC
3802	016Ah	D517h	PULSE X
3803	0166h	3E56h	RAP BS XWAVE
3804	014Bh	BFC7h	RESONANCE
3805	0166h	EADAh	REZ BS XWAVE
3806	014Bh	F286h	REZ SWEEP
3807	014Bh	CE32h	REZO-X 4
3808	014Bh	74B9h	REZO-X 3
3809	014Bh	61A5h	REZO-X 2
3810	014Bh	D42Dh	REZO-X 1
3811	0167h	F911h	SCRATCH WAVE
3812	016Ah	A97Bh	SOFT ANALOG
3813	0166h	ED2Bh	TECHNO BASS
3814	014Bh	B382h	TINE XWAVE
3815	014Ch	9052h	TRANSWAVE AA
3816	014Ch	F35Dh	TRANSWAVE AH
3817	014Ch	6E0Ah	TRANSWAVE EE
3818	014Ch	0B5Fh	TRANSWAVE OO
3819	014Bh	EA17h	TRANSWAVE Z
3820	016Ah	F231h	TRI SWEEP
3821	0167h	E9F9h	WAKKA WAKKA

3822

3823 The following is a list of additional internal waveforms found only in the

3824

3825 Waveform Class = Vocal Sound

3826

3827 NUMBER CHECKSUM WAVENAME

3828

3829 0110h b006h ONE

3830 0110h 90d7h TWO

3831 0110h 02e7h THREE

3832 0110h 5360h FOUR

3833

3834 Waveform Class = Drum Sound

3835

3836 NUMBER CHECKSUM WAVENAME

3837

3838 004ah ce38h DEEP KICK A

3839 004ah d020h DEEP KICK B

3840 004ah d021h DEEP KICK C

3841 0049h d1e5h ROCK KICK A

3842 0049h d325h ROCK KICK B

3843 0049h fce6h ROOM KICK 2A

3844 0049h fea7h ROOM KICK 2B

3845 0049h fea8h ROOM KICK 2C

3846 004ch 1e38h BIG SNARE A

3847 004ch 1ff7h BIG SNARE B

3848 004ch 1ff8h BIG SNARE C

3849 004ch 1415h DARK SNR 1 A

3850 004ch 156eh DARK SNR 1 B

3851	004ch	11f4h	DARK SNR 2 A
3852	004ch	1339h	DARK SNR 2 B
3853	004ch	d6abh	DRY SNR 1 A
3854	004ch	d889h	DRY SNR 1 B
3855	004ch	d88ah	DRY SNR 1 C
3856	004ch	2e6ah	DRY SNR 2 A
3857	004ch	303ah	DRY SNR 2 B
3858	004ch	303bh	DRY SNR 2 C
3859	004ch	942fh	DYN SNR 1 A
3860	004ch	95afh	DYN SNR 1 B
3861	004ch	6c32h	DYN SNR 2 A
3862	004ch	6db6h	DYN SNR 2 B
3863	004ch	173bh	DYN SNR 3 A
3864	004ch	18b4h	DYN SNR 3 B
3865	004ch	6506h	FAT SNARE A
3866	004ch	66dfh	FAT SNARE B
3867	004ch	00f2h	LIVE SNR 1 A
3868	004ch	02c9h	LIVE SNR 1 B
3869	004ch	a13ch	LIVE SNR 2 A
3870	004ch	a30dh	LIVE SNR 2 B
3871	004ch	8474h	LIVE SNR 3 A
3872	004ch	863eh	LIVE SNR 3 B
3873	004ch	91b8h	RING SNARE A
3874	004ch	9311h	RING SNARE B
3875	004ch	9312h	RING SNARE C
3876	004ch	9313h	RING SNARE D
3877	00a4h	7e42h	TECHNO SNARE
3878	004bh	9a40h	SIDESTICK 3A
3879	004bh	9c13h	SIDESTICK 3B
3880	00ach	15e7h	BRUSH SWISH2
3881	00ach	574fh	BRUSH SWISH3
3882	00ach	5761h	BRUSH SWISH4
3883	004eh	9881h	DRY TOM HI
3884	004eh	d6b7h	LIVE TOM 2 A
3885	004eh	d87dh	LIVE TOM 2 B
3886	004eh	d87eh	LIVE TOM 2 C
3887	004eh	27f9h	PURE TOM A
3888	004eh	28e2h	PURE TOM B
3889	004eh	0ab1h	BIG TOM 1 A
3890	004eh	28e3h	PURE TOM C
3891	004eh	0c6fh	BIG TOM 1 B
3892	004eh	0c70h	BIG TOM 1 C
3893	004eh	0c71h	BIG TOM 1 D
3894	009eh	94dfh	BIG TOM 2 A
3895	009eh	96a7h	BIG TOM 2 B
3896	009eh	96a8h	BIG TOM 2 C
3897	009eh	96a9h	BIG TOM 2 D
3898	009eh	68f5h	BIG TOM 3 A
3899	009eh	6ad5h	BIG TOM 3 B
3900	009eh	6ad6h	BIG TOM 3 C
3901	009eh	6ad7h	BIG TOM 3 D
3902	004eh	1cd0h	LIVE TOM 1 A
3903	004eh	1e95h	LIVE TOM 1 B
3904	004eh	1e96h	LIVE TOM 1 C
3905	009eh	1f12h	ROCK TOM 1 A

3906	009eh	20eah	ROCK TOM 1 B
3907	009eh	20ebh	ROCK TOM 1 C
3908	009eh	0348h	ROCK TOM 2 A
3909	009eh	0521h	ROCK TOM 2 B
3910	009eh	0522h	ROCK TOM 2 C

3911

3912 Waveform Class = Cymbals

3913

3914	NUMBER	CHECKSUM	WAVENAME
3915			
3916	004fh	3d1ch	15"HAT TIGHT
3917	00a5h	30d4h	SYN CL HAT 2
3918	00a5h	f683h	TECHNO HAT 1
3919	00a6h	5bafh	TECHNO HAT 2
3920	00a5h	9b4ch	TECHNO HAT 4
3921	00a5h	4331h	TECHNO HAT 3
3922	0051h	6b28h	15"HAT OPEN
3923	0051h	cba5h	15"HAT LOOSE
3924	00a6h	74eah	SYN OP HAT 2
3925	0050h	679ah	15"HAT FOOT
3926	015bh	30a7h	CYM LOOP
3927	00a6h	fd53h	ROOM KICK 1A
3928	0053h	5f3dh	THIN RIDE A
3929	00a6h	ff1bh	ROOM KICK 1B
3930	00a6h	ff1ch	ROOM KICK 1C
3931	0053h	604ah	THIN RIDE B
3932	0053h	a6bfh	SYNTH CYMBAL

3933

3934 Waveform Class = Percussion

3935

3936	NUMBER	CHECKSUM	WAVENAME
3937			
3938	005fh	79adh	EQ CABASA 1
3939	005fh	6ca9h	EQ CABASA 2
3940	005ch	49c3h	CONGA HEEL
3941	0060h	6e75h	THIN MARACA
3942	006ah	507dh	SHEKERE DN
3943	006ah	d546h	SHEKERE UP
3944	0056h	17a6h	TAMBO DOWN
3945	0056h	144fh	TAMBO UP
3946	0127h	a67fh	TIMBALI RIM

3947

3948 Waveform Class = Sound Effect

3949

3950	NUMBER	CHECKSUM	WAVENAME
3951			
3952	0156h	0c45h	TAPE LOOP

3953

3954 Appendix 2 - EXP1 World Expansion Board Waveform List

3955

3956 Waveform Class = String Sound

3957

3958	NUMBER	CHECKSUM	WAVENAME
3959			
3960	00e7h	3795h	BANDOLIN

3961	00e7h	37bbh	BANDOLIN LP
3962	0176h	417eh	BANHU
3963	003bh	0984h	BANJO 2
3964	0175h	227bh	BERIMBAU LP
3965	0175h	fc7ah	BERIMBAU WAH
3966	0175h	3e1eh	BERIMBAU WF
3967	00e4h	5ad2h	BIWA 2
3968	00e4h	5b01h	BIWA 2 SOFT
3969	017dh	0402h	BOWED PSALTRY
3970	017dh	4337h	BOWED PSALTWF
3971	0177h	44d6h	CHARANGO
3972	0177h	456fh	CHARANGO SFT
3973	0014h	9be9h	DOBRO
3974	00e6h	b3efh	DULCIMER LP
3975	0176h	b942h	ERHU
3976	003bh	dd3fh	FRTLS B BANJO
3977	0176h	b600h	GAOHU
3978	0176h	e143h	GAYAGUM
3979	0176h	9e1dh	GOPECHAN
3980	0176h	6758h	GOPECHAN STRM
3981	0176h	2578h	GU QIN
3982	0176h	2628h	GU QIN SOFT
3983	00e6h	b34eh	H DULCIMER
3984	0176h	c4b7h	HAEGUM
3985	0176h	f829h	HYUNGUM HARD
3986	0176h	841ah	HYUNGUM SOFT
3987	0176h	b6c1h	JINGHU
3988	0171h	ed5ch	JURDA SAZ
3989	0171h	ee0ch	JURDA SAZ FST
3990	00e6h	5bafh	KANTELE
3991	00e6h	5c56h	KANTELE LP
3992	0153h	faffh	KOTO 2
3993	0153h	fb48h	KOTO 2 SOFT
3994	0177h	bde2h	MOUTH BOW
3995	0175h	618dh	MVET
3996	0171h	ea15h	LOUD
3997	0171h	ceb4h	LOUD FRT NZ 1
3998	0171h	05fdh	LOUD FRT NZ 2
3999	0171h	49a3h	LOUD FRT NZ 3
4000	0171h	ea58h	LOUD SOFT
4001	0176h	2cfbh	PIPA
4002	0176h	2da0h	PIPA SOFT
4003	017dh	9da7h	REBAB
4004	0176h	01c4h	RUAN
4005	0176h	afb2h	SANXION
4006	0176h	aff8h	SANXION SOFT
4007	0176h	526ah	SANXION TREMS
4008	0171h	ae81h	SAROD
4009	0171h	0ccfh	SAZ DRONE
4010	0171h	0d0eh	SAZ DRONE LP
4011	0175h	df08h	SENEGALESE
4012	003ch	bc75h	SHAMISEN 2
4013	003ch	bd19h	SHAMISEN 2SFT
4014	003ah	f3b4h	SITAR 2
4015	003ah	f551h	SITAR 2 LP

4016	003ah	f3c2h	SITAR 2 SOFT
4017	003ah	2ae5h	SITAR 3
4018	003ah	2b56h	SITAR 3 LP
4019	003ah	a1b7h	SITAR CHIKARI
4020	0176h	3d05h	TAISHO KOTO
4021	0174h	b627h	TAMBOURA 1
4022	0174h	f59fh	TAMBOURA 2
4023	0173h	8f10h	UKELELE
4024	0173h	8f50h	UKELELE SOFT
4025	0079h	745fh	VIHUELA STRM
4026	0176h	a41bh	YANGKEUM
4027	0176h	2d3ah	YUET CHIN
4028	0176h	2dfch	YUET CHIN SFT
4029	0176h	13b4h	ZHENG LOOP
4030	0176h	c796h	ZHENG STR LP
4031	0176h	c6ddh	ZHENG STRUM
4032	0176h	5e2fh	ZHONGHU
4033			
4034	Waveform Class = Brass+Horns		
4035			
4036	NUMBER	CHECKSUM	WAVENAME
4037			
4038	0100h	ba5dh	NABAL
4039			
4040	Waveform Class = Wind+Reeds		
4041			
4042	NUMBER	CHECKSUM	WAVENAME
4043			
4044	0011h	4dbch	BANDO KEYCLIK
4045	0011h	b93dh	BANDONEON FST
4046	0011h	b8dah	BANDONEON LP
4047	0011h	b8c5h	BANDONEON MED
4048	0011h	b8bbh	BANDONEON SLO
4049	0179h	1627h	CHI BEND
4050	0179h	5e8eh	CHI LOOP
4051	0179h	2960h	CHOK
4052	017bh	a0fah	CONCH SHELL
4053	017bh	ddd6h	CONCH TRUMP 1
4054	0185h	bd39h	CRUMHORN
4055	0185h	8b75h	DBL FLUTE DRN
4056	0039h	a247h	DBL OCARINADR
4057	0039h	f4d3h	DBLE OCARINA
4058	0179h	3c48h	DI
4059	0172h	6deah	DIDJE RHYTHM1
4060	0172h	23b0h	DIDJE RHYTHM2
4061	0172h	57f0h	DIDJE RHYTHM3
4062	0179h	5c41h	HICHIRIKI
4063	0039h	a761h	HUN
4064	0185h	2c46h	HYANG PIRI
4065	0179h	68b3h	KAGURABUE
4066	0185h	83beh	KHAEN
4067	017ah	ff98h	MOXENIO PHRS1
4068	017ah	0cf6h	MOXENIO PHRS2
4069	017ah	0d67h	MOXENIO PHRS3
4070	017bh	34c3h	NAGAK

4071	0178h	4dc3h	NOSE FLUTE
4072	017ah	624ch	PINCUYO PHRS
4073	017ah	8adeh	QUENA 1
4074	017ah	fedah	QUENA 2
4075	0035h	bb5dh	RECORDER 2
4076	0179h	876ch	RYUTEKI
4077	0179h	dba2h	SAENG HWANG
4078	0038h	901eh	SHAK ORNAMNT1
4079	0038h	9085h	SHAK ORNAMNT2
4080	0038h	3310h	SHAKUHACHI 2
4081	0038h	8134h	SHAKUHACHI CH
4082	0185h	bd96h	SHAWM
4083	0185h	dfb1h	SHO
4084	0185h	8bcdh	SHUAN GUAN
4085	017ah	7714h	SIKUS
4086	017ah	8ebbh	SIKUS CHIFF
4087	017ah	77c9h	SIKUS LP
4088	0179h	b8bbh	SO
4089	0179h	d537h	SOGEUM
4090	0185h	4304h	SUONA
4091	0179h	a6bdh	TAEGUM
4092	0185h	fb7h	TAEPYUNGSO
4093	0185h	fc4eh	TAEPYUNGSO FST
4094	0185h	9837h	TANG PIRI
4095	0185h	98ceh	TANG PIRI FST
4096	0179h	f456h	TANSO
4097	017ah	5a18h	TINAMU FLUTE
4098	0011h	f0f8h	UILEANN PIPES
4099			
4100	Waveform Class = Vocal Sound		
4101			
4102	NUMBER	CHECKSUM	WAVENAME
4103			
4104	0182h	a033h	AHA 1
4105	0182h	a0ceh	AHA 2
4106	0182h	25a1h	ARAH MIO
4107	0182h	8b51h	GO !!
4108	0182h	3e8ch	HA !!
4109	0182h	9978h	IJOWA
4110	0111h	42cbh	KOREAN VOX 1
4111	0111h	44bch	KOREAN VOX 2
4112	0111h	44bdh	KOREAN VOX 3
4113	0182h	39edh	MONKS
4114	0182h	9c13h	NATIVE VOX 1
4115	0182h	dd6dh	OH 1
4116	0182h	d1ffh	OH 2
4117	0182h	0588h	OH 3
4118	0182h	a395h	SALSA VOX 1
4119	0182h	a409h	SALSA VOX 2
4120	0182h	a40ah	SALSA VOX 3
4121	0182h	a40bh	SALSA VOX 4
4122	0182h	b304h	SALSA VOX 5
4123	0182h	907dh	SHOUT
4124	0182h	7849h	SO
4125	0182h	08e6h	WELLE WELLE

4126 0111h ec7fh YO !!  
4127  
4128 Waveform Class = Drum Sound  
4129  
4130 NUMBER CHECKSUM WAVENAME  
4131  
4132 016eh 3e67h ADONDO DOWN  
4133 016eh ff1dh ADONDO OPEN  
4134 016eh 414dh ADONDO UP  
4135 016fh 681ah AM INDIAN DRM  
4136 016eh 4af0h BATA HIT  
4137 016eh 2627h BATA MUTE  
4138 016eh 4947h BATA SLAP  
4139 016eh a5a7h BATA TAP  
4140 016eh 5617h BLEKEDE 1  
4141 016eh 625dh BLEKEDE 2  
4142 016fh 5206h BODRHAN  
4143 016fh 7c45h BOMBO HIT  
4144 016fh a463h BOMBO RIMSHOT  
4145 016Dh 46ech BUK HIT  
4146 016fh 0d24h CAJA  
4147 016fh 0b01h CAJON FLAM  
4148 016fh f633h CAJON HIT 1  
4149 016fh 0ac9h CAJON HIT 2  
4150 016fh 94e9h CAJON MUTE 1  
4151 016fh 0c75h CAJON MUTE 2  
4152 016fh 22cch CAJON SLAP 1  
4153 016fh a2a8h CAJON SLAP 3  
4154 016Dh 131fh CHALGO  
4155 016Dh 05c4h CHANGO HIT 1  
4156 016Dh 37aeh CHANGO HIT2  
4157 016Dh 78d2h CHANGO RIMSHT  
4158 016Dh 6eb5h CHANGO TAPROL  
4159 016Dh 1bcch CHINGO  
4160 016Dh bf6dh CHWAGO  
4161 016eh 9282h CLAY DRUM HT1  
4162 016eh a342h CLAY DRUM HT2  
4163 016eh 1de5h CLAY DRUM MT  
4164 016eh 8306h CLAY DRUM SP1  
4165 016eh 113dh CLAY DRUM SP2  
4166 016eh bef6h CLAY DRUM TAP  
4167 0181h 5381h DJEMBE FLAM  
4168 0181h 0e02h DJEMBE HEEL  
4169 0181h f325h DJEMBE MUTE  
4170 0181h 3a46h DJEMBE OPEN 1  
4171 0181h c980h DJEMBE OPEN 2  
4172 0181h 7397h DJEMBE SLAP  
4173 0181h 40b8h DJEMBE TAP  
4174 016eh fd96h DJUN DJUN  
4175 017Eh 77f5h DUMBEK F ROLL  
4176 017Eh 788fh DUMBEK F SNG  
4177 017Eh 3f9fh DUMBEK MUTE  
4178 017Eh 6426h DUMBEK OPEN  
4179 017Eh 4c53h DUmBEK SLAP  
4180 017Eh 1c9ah DUMBEK SWISH1

4181	017Eh	0cf0h	DUMBEK SWISH2
4182	017Eh	8973h	DUMBEK TAP 1
4183	017Eh	b463h	DUMBEK TAP 2
4184	016fh	4e6dh	FRAME DRUM 1
4185	016Dh	9aeeh	GU 1
4186	016Dh	ffd9h	GU 2
4187	016Dh	1524h	GU 3
4188	016Dh	fd09h	GU 3
4189	016Dh	cafbh	GU 4
4190	016Dh	22d9h	HIRADAIKO HIT
4191	016Dh	71ach	HIRADAIKO RIM
4192	016Dh	fefch	KO TZUMI HIT
4193	016Dh	613dh	KO TZUMI SLP
4194	016Dh	0446h	KYOBANGO
4195	016eh	0b82h	MADAH L DRUM
4196	016Dh	3450h	NOGO
4197	016eh	a869h	RIQ HIT
4198	016eh	3c90h	RIQ SHAKE
4199	016eh	8da7h	RIQ SLAP
4200	016eh	60f1h	RIQ TAP
4201	016eh	0325h	SAKARA HIT
4202	016eh	b62dh	SAKARA MUTE
4203	016Dh	f3c9h	SHIME DAIKO
4204	016fh	11a5h	SM INDIAN TOM
4205	016eh	0f29h	TAMBORIM HIT
4206	016eh	7ee5h	TAMBORIM TAP1
4207	016eh	b539h	TAMBORIM TAP2
4208	016Dh	eb40h	TSURI HIT
4209	016Dh	429bh	TSURI RIM 1
4210	016Dh	79d8h	TSURI RIM 2
4211	017Fh	3f5eh	UDU HARD HIT
4212	017Fh	cbe5h	UDU LO HIT 1
4213	017Fh	6f28h	UDU LO HIT 2
4214	017Fh	4139h	UDU MIX
4215	017Fh	6723h	UDU POP HIT
4216	017Fh	f215h	UDU SLAP 1
4217	017Fh	39c0h	UDU SLAP 2
4218	017Fh	e8feh	UDU SLAP 3
4219	017Fh	8a3eh	UDU SOFT HT 1
4220	017Fh	c888h	UDU SOFT HT 2
4221	017Fh	324ch	UDU SOFT HT 3
4222	017Fh	e469h	UDU TAP
4223	016Dh	252ah	UNGO HIT
4224	016Dh	eac3h	YUNNGO
4225			
4226	Waveform Class = Cymbals		
4227			
4228	NUMBER	CHECKSUM	WAVENAME
4229			
4230	0159h	22d1h	CHA 1
4231	0159h	3b9dh	CHA 1 MUTE
4232	0159h	c721h	CHA 1 MUTE
4233	0159h	a456h	CHABARA
4234	015ah	1427h	CHAU GONG
4235	015ah	c107h	JING 1

4236	0159h	66d5h	JING 2
4237	0159h	1381h	KOENKARI HT1
4238	0159h	12e3h	KOENKARI HT2
4239	015ah	3f04h	LUO 1 HARD
4240	015ah	3f7eh	LUO 1 LOOP
4241	015ah	cf1dh	LUO 1 SOFT
4242	015ah	31a0h	LUO 4
4243	015ah	1f97h	LUO 4 SOFT
4244	0159h	1f2bh	PENG ZHONG
4245	015ah	44afh	WADORA HT
4246	015ah	1cebh	WADORA RIM
4247	015ah	e4bdh	WOHAN GONG
4248			
4249	Waveform Class = Percussion		
4250			
4251	NUMBER	CHECKSUM	WAVENAME
4252			
4253	0063h	1b86h	AFRICAN CLAVE
4254	0160h	cee4h	AFRICAN LOOP
4255	006ah	0e3ah	AFUCHE
4256	0160h	0bafh	AFUCHE LOOP
4257	005eh	3487h	AGOGO 2
4258	0170h	1265h	BAN GU ROLL
4259	0157h	1d95h	BLACK BLACKS
4260	0061h	02d1h	BOBBY WHISTLE
4261	0157h	1d4ah	BONES 1
4262	0059h	6270h	BONGO HI FLAM
4263	0059h	f526h	BONGO HI HIT1
4264	0059h	e449h	BONGO HI HIT2
4265	0059h	6541h	BONGO HI HIT3
4266	0059h	86c8h	BONGO HI ROLL
4267	0119h	fb7dh	BONGO LO SLP
4268	0119h	afa8h	BONGO LO TP 2
4269	0119h	9e7ch	BONGO LOW HIT
4270	0119h	9581h	BONGO LOW SGL
4271	0119h	f9cch	BONGO LOW TP1
4272	0119h	5870h	BONGO LOW TP3
4273	0119h	f46dh	BONGO LOWMUTE
4274	0119h	9550h	BONGO LOWROLL
4275	0059h	876ah	BONGOHI SINGL
4276	0157h	b79eh	CAJON SLAP 2
4277	006bh	22f9h	CASTANET ROLL
4278	006bh	234bh	CASTANETS 2
4279	006bh	97f5h	CASTANETS 3
4280	006ah	f47ah	CHAJCHAS 1
4281	006ah	197dh	CHAJCHAS 2
4282	0160h	1877h	CHAJCHAS LOOP
4283	0170h	4c6ah	CHAUN LING
4284	0170h	de1ch	CHUK HIT
4285	0157h	34d3h	CLICK STICK 1
4286	0157h	3380h	CLICK STICK 2
4287	0160h	c97bh	CLICK STIK LP
4288	0160h	0a49h	COCO RATL LP
4289	005ch	49c1h	CONGA HEEL
4290	005ch	d30eh	CONGA HIT

4291	005ch	5e97h	CONGA SLAP
4292	005ch	f932h	CONGA TAP
4293	0057h	8517h	COWBELL 2 MT
4294	0057h	5458h	COWBELL 2 OPN
4295	0057h	b352h	COWBELL 2 STK
4296	0057h	1feah	COWBELL 3
4297	0158h	21d6h	CRICKET 1
4298	0158h	2537h	CRICKET 2
4299	0158h	c0b7h	CRICKET 3
4300	0065h	279bh	CUICA 2
4301	0065h	6f1ah	CUICA 3
4302	0065h	e81ah	CUICA 4
4303	0157h	a7e4h	DEWCLAW RATTL
4304	0157h	2d93h	DODOMPO
4305	0160h	cd71h	FESTEJO LP
4306	0161h	2b56h	GANKOQUI
4307	0061h	1839h	GRIO
4308	0157h	d27dh	GU 5
4309	0062h	3339h	GUIRO MIX
4310	0170h	1154h	HYSHIGI
4311	0158h	312dh	JAW HARP DOWN
4312	0158h	734bh	JAW HARP UP
4313	0158h	99b8h	JAW HARP WF 1
4314	0158h	9087h	JAW HARP WF 2
4315	0158h	8a86h	JAW HRP BOING
4316	0170h	2e05h	KASHISHI
4317	0170h	2b5ah	KAUI BAN 1
4318	0170h	31a6h	KAUI BAN 2
4319	0170h	26cfh	KAUI BAN 3
4320	0160h	2b8ch	KAYAMBA LOOP
4321	006ah	3b6ch	KSENG KSENG
4322	006ah	7066h	LG SHEKERE TP
4323	006ah	2bf4h	LG SHEKERESHK
4324	0126h	2de7h	MOKUGYO
4325	0170h	3788h	MOKUSHO 1
4326	0170h	7b63h	MOKUSHO 2
4327	0126h	1f22h	MUYU
4328	0170h	13cah	NAN BANG ROLL
4329	0170h	1451h	NAN BANG SGL
4330	0160h	df86h	NATIVE BELLS
4331	0161h	ffbhh	NDJUKA STICK
4332	0121h	21b1h	NUT CLUSTER
4333	0121h	1cd4h	NUT RATTLE
4334	0160h	d9a7h	NUT SHAKER LP
4335	0170h	23bfh	O STRUCK
4336	0160h	e157h	OKEDO LOOP
4337	006ah	42f1h	PENZUNAS
4338	0158h	2bc2h	PERC MIX 1
4339	0158h	1c35h	PERC MIX 2
4340	0157h	d9ech	PUILI STICKS
4341	0157h	065dh	QUIJADA HIT
4342	0157h	4f91h	QUIJADA SCP 1
4343	0157h	6100h	QUIJADA SCP 2
4344	0157h	eac3h	QUIJADA SCP 3
4345	005bh	6035h	QUINTO HIT

4346	005bh	9c4fh	QUINTO SLAP
4347	005bh	c159h	QUINTO TAP
4348	006ah	28f8h	RAINSTICK 2
4349	0157h	2e33h	RATTLE
4350	005ch	9f82h	SACHA TUM HT1
4351	005bh	48eeh	SACHA TUM HT2
4352	005ah	4d97h	SACHA TUM MT1
4353	005ah	bfb2h	SACHA TUM MT2
4354	005ah	d44ah	SACHA TUM MT3
4355	011eh	ce7fh	SALSA CLAP
4356	0061h	895ch	SAMBA WHISTLE
4357	0121h	1f2fh	SANZA RATL LP
4358	0121h	1ef4h	SANZA RATTLE
4359	0170h	280ah	SASSARU FAST
4360	0170h	2196h	SASSARU SLOW
4361	0160h	3b32h	SHAKER LOOP
4362	006ah	0a01h	SHAKESTICK 1
4363	006ah	23bfh	SHAKESTICK 2
4364	0157h	2d6bh	SISTRUM
4365	006ah	388bh	SM SHEKERE TP
4366	006ah	fb1bh	SM SHEKERESHK
4367	0158h	13d1h	STICKS 1
4368	0158h	d492h	STICKS 2
4369	0157h	b5b1h	STOMP STICK
4370	0122h	c336h	TABLA BEND UP
4371	0122h	563ah	TABLA HIT 1
4372	0122h	2ddch	TABLA HIT 2
4373	0122h	c3c7h	TABLA MIX
4374	0122h	41f6h	TABLA MUTE 1
4375	0122h	3180h	TABLA MUTE 2
4376	0122h	dd01h	TABLA MUTE 3
4377	0122h	9e1eh	TABLA OPEN 1
4378	0122h	6379h	TABLA OPEN 2
4379	0122h	8d03h	TABLA POP HIT
4380	0124h	121bh	TABLA S ROLL
4381	0122h	496dh	TABLA SLAP 1
4382	0122h	b3a5h	TABLA SLAP 2
4383	0122h	3ba9h	TABLA SOFTHT1
4384	005dh	4289h	TIMBALE RIM 2
4385	005dh	3c7dh	TIMBALE RIM 3
4386	0127h	1018h	TIMBALE RIM 4
4387	0127h	6739h	TIMBALE RIM 5
4388	005dh	6d9ch	TIMBALE SHELL
4389	005dh	d3f6h	TIMBALEHI HIT
4390	0127h	b6d9h	TIMBALELO HIT
4391	005ch	657dh	TUMBA HIT
4392	005ch	03bbh	TUMBA MT 1
4393	005ch	eaf7h	TUMBA MT 2
4394	005ch	4fd9h	TUMBA SLAP
4395	0170h	31bah	YOTSU 1 SGL
4396	0170h	3003h	YOTSUDAKE 1
4397	0170h	162dh	YOTSUDAKE 2
4398			
4399	Waveform Class = Tuned Percussion		
4400			

NUMBER	CHECKSUM	WAVENAME
4401		
4402		
4403	016bh	1709h
4404	000ah	6a52h
4405	000ah	3af6h
4406	000ah	982eh
4407	016bh	041eh
4408	016bh	c3a8h
4409	016bh	0f99h
4410	016bh	0842h
4411	0073h	05eah
4412	0073h	061dh
4413	016bh	2398h
4414	015dh	2ba2h
4415	015dh	1e9eh
4416	015dh	8bc6h
4417	015dh	bc99h
4418	016bh	800fh
4419	016bh	7dbeh
4420	016bh	9355h
4421	016bh	6478h
4422	0183h	2fc2h
4423	016bh	f5e3h
4424	016bh	8c4dh
4425	016bh	8c0ah
4426	016bh	4bf4h
4427	003dh	4a48h
4428	003dh	499fh
4429	016bh	faf4h
4430	016bh	e914h
4431	016bh	44dbh
4432	016bh	095ch

4433

4434 Waveform Class = Inharmonic

4435

NUMBER	CHECKSUM	WAVENAME
4436		
4437		
4438	0147h	f5aeh
4439	0184h	1753h
4440	0184h	2f92h
4441	0147h	d1ceh

4437

4438 0147h f5aeh BREATHING

4439 0184h 1753h BULLROARER 1

4440 0184h 2f92h BULLROARER 2

4441 0147h d1ceh CHOK AIR LP

4442

4443 Appendix 3 - EXP2 Drum Expansion Board Waveform List

4444

4445 Waveform Class = Vocal Sound

4446

NUMBER	CHECKSUM	WAVENAME
4447		
4448		
4449	0110h	b006h
4450	0110h	90d7h
4451	0110h	02e7h
4452	0110h	5360h

4447

4448

4449 0110h b006h ONE

4450 0110h 90d7h TWO

4451 0110h 02e7h THREE

4452 0110h 5360h FOUR

4453

4454 Waveform Class = Drum Sound

4455

4456	NUMBER	CHECKSUM	WAVENAME
4457			
4458	004ah	ce38h	DEEP KICK A
4459	004ah	d020h	DEEP KICK B
4460	004ah	d021h	DEEP KICK C
4461	0049h	d1e5h	ROCK KICK A
4462	0049h	d325h	ROCK KICK B
4463	0049h	fce6h	ROOM KICK 2A
4464	0049h	fea7h	ROOM KICK 2B
4465	0049h	fea8h	ROOM KICK 2C
4466	004ch	1e38h	BIG SNARE A
4467	004ch	1ff7h	BIG SNARE B
4468	004ch	1ff8h	BIG SNARE C
4469	004ch	1415h	DARK SNR 1 A
4470	004ch	156eh	DARK SNR 1 B
4471	004ch	11f4h	DARK SNR 2 A
4472	004ch	1339h	DARK SNR 2 B
4473	004ch	d6abh	DRY SNR 1 A
4474	004ch	d889h	DRY SNR 1 B
4475	004ch	d88ah	DRY SNR 1 C
4476	004ch	2e6ah	DRY SNR 2 A
4477	004ch	303ah	DRY SNR 2 B
4478	004ch	303bh	DRY SNR 2 C
4479	004ch	942fh	DYN SNR 1 A
4480	004ch	95afh	DYN SNR 1 B
4481	004ch	6c32h	DYN SNR 2 A
4482	004ch	6db6h	DYN SNR 2 B
4483	004ch	173bh	DYN SNR 3 A
4484	004ch	18b4h	DYN SNR 3 B
4485	004ch	6506h	FAT SNARE A
4486	004ch	66dfh	FAT SNARE B
4487	004ch	00f2h	LIVE SNR 1 A
4488	004ch	02c9h	LIVE SNR 1 B
4489	004ch	a13ch	LIVE SNR 2 A
4490	004ch	a30dh	LIVE SNR 2 B
4491	004ch	8474h	LIVE SNR 3 A
4492	004ch	863eh	LIVE SNR 3 B
4493	004ch	91b8h	RING SNARE A
4494	004ch	9311h	RING SNARE B
4495	004ch	9312h	RING SNARE C
4496	004ch	9313h	RING SNARE D
4497	00a4h	7e42h	TECHNO SNARE
4498	004bh	9a40h	SIDESTICK 3A
4499	004bh	9c13h	SIDESTICK 3B
4500	00ach	15e7h	BRUSH SWISH2
4501	00ach	574fh	BRUSH SWISH3
4502	00ach	5761h	BRUSH SWISH4
4503	004eh	9881h	DRY TOM HI
4504	004eh	d6b7h	LIVE TOM 2 A
4505	004eh	d87dh	LIVE TOM 2 B
4506	004eh	d87eh	LIVE TOM 2 C
4507	004eh	27f9h	PURE TOM A
4508	004eh	28e2h	PURE TOM B
4509	004eh	0ab1h	BIG TOM 1 A
4510	004eh	28e3h	PURE TOM C

4511	004eh	0c6fh	BIG TOM 1 B
4512	004eh	0c70h	BIG TOM 1 C
4513	004eh	0c71h	BIG TOM 1 D
4514	009eh	94dfh	BIG TOM 2 A
4515	009eh	96a7h	BIG TOM 2 B
4516	009eh	96a8h	BIG TOM 2 C
4517	009eh	96a9h	BIG TOM 2 D
4518	009eh	68f5h	BIG TOM 3 A
4519	009eh	6ad5h	BIG TOM 3 B
4520	009eh	6ad6h	BIG TOM 3 C
4521	009eh	6ad7h	BIG TOM 3 D
4522	004eh	1cd0h	LIVE TOM 1 A
4523	004eh	1e95h	LIVE TOM 1 B
4524	004eh	1e96h	LIVE TOM 1 C
4525	009eh	1f12h	ROCK TOM 1 A
4526	009eh	20eah	ROCK TOM 1 B
4527	009eh	20ebh	ROCK TOM 1 C
4528	009eh	0348h	ROCK TOM 2 A
4529	009eh	0521h	ROCK TOM 2 B
4530	009eh	0522h	ROCK TOM 2 C

4531

4532 Waveform Class = Cymbals

4533

4534	NUMBER	CHECKSUM	WAVENAME
4535			
4536	004fh	3d1ch	15"HAT TIGHT
4537	00a5h	30d4h	SYN CL HAT 2
4538	00a5h	f683h	TECHNO HAT 1
4539	00a6h	5bafh	TECHNO HAT 2
4540	00a5h	9b4ch	TECHNO HAT 4
4541	00a5h	4331h	TECHNO HAT 3
4542	0051h	6b28h	15"HAT OPEN
4543	0051h	cba5h	15"HAT LOOSE
4544	00a6h	74eah	SYN OP HAT 2
4545	0050h	679ah	15"HAT FOOT
4546	015bh	30a7h	CYM LOOP
4547	00a6h	fd53h	ROOM KICK 1A
4548	0053h	5f3dh	THIN RIDE A
4549	00a6h	ff1bh	ROOM KICK 1B
4550	00a6h	ff1ch	ROOM KICK 1C
4551	0053h	604ah	THIN RIDE B
4552	0053h	a6bfh	SYNTH CYMBAL

4553

4554 Waveform Class = Percussion

4555

4556	NUMBER	CHECKSUM	WAVENAME
4557			
4558	005fh	79adh	EQ CABASA 1
4559	005fh	6ca9h	EQ CABASA 2
4560	005ch	49c3h	CONGA HEEL
4561	0060h	6e75h	THIN MARACA
4562	006ah	507dh	SHEKERE DN
4563	006ah	d546h	SHEKERE UP
4564	0056h	17a6h	TAMBO DOWN
4565	0056h	144fh	TAMBO UP

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4566 0127h          a67fh          TIMBALI RIM
4567
4568 Waveform Class = Sound Effect
4569
4570 NUMBER          CHECKSUM          WAVENAME
4571
4572 0156h          0c45h          TAPE LOOP
4573
4574 Appendix 4 - EXP3 Urban Dance Project Expansion Board Waveform List
4575
4576 Waveform Class = Keyboard
4577
4578 NUMBER          CHECKSUM          WAVENAME
4579
4580 0000h          abech          DANCE PIANO
4581 000dh          63dch          PERC PLUS ORG
4582 000dh          234ch          PERQABEE
4583 000dh          83b6h          USED ORGAN
4584
4585 Waveform Class = String Sound
4586
4587 NUMBER          CHECKSUM          WAVENAME
4588
4589 0025h          ef81h          ANALOG STRING
4590 0024h          760ah          LO FI STRINGS
4591 0025h          c851h          16 OSC.STRING
4592 0025h          c8f9h          SYN STRING LP
4593 0024h          1518h          STRING CHORD
4594 0024h          cdb4h          SECTION FALL
4595 0024h          4fceh          SECTION LICK
4596 0024h          ce3fh          SECTION RUN
4597 0016h          5cd7h          FUNK GTR MAP1
4598 0016h          1eeah          FUNK GTR MAP2
4599 0016h          5626h          FUNK GTR MAP3
4600 0016h          85c9h          FUNK GTR MAP4
4601 0016h          f9edh          FUNKGT SLIDES
4602
4603 Waveform Class = Brass+Horns
4604
4605 NUMBER          CHECKSUM          WAVENAME
4606
4607 0188h          132eh          BRASS HIT 01
4608 0188h          f174h          BRASS HIT 02
4609 0188h          9a3bh          BRASS HIT 03
4610 0188h          4bddh          BRASS HIT 04
4611 0188h          c416h          BRASS HIT 05
4612 0188h          0d07h          BRASS HIT 06
4613 0188h          fddbh          BRASS HIT 07
4614 0188h          02a7h          BRASS HIT 08
4615 0188h          4132h          BRASS HIT 09
4616 0188h          ea4eh          BRASS HIT 10
4617 0188h          120dh          BRASS HIT 11
4618 0188h          c589h          BRASS HIT 12
4619 0188h          4e01h          DISS HORN HIT
4620 0188h          d20bh          HORN HIT

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4621	0188h	f604h	HORN RIFF
4622	0188h	05f7h	TRUMPET HIT 1
4623	0188h	9862h	TRUMPET HIT 2
4624	0189h	148ch	SQUEALS MAP 1
4625	0189h	7cb7h	SQUEALS MAP 2
4626	0189h	a53ch	SQUEALS MAP 3
4627	0188h	6318h	TRUMPET HIT 3
4628	0189h	b5cfh	TRUMPETSQUEAL
4629			
4630	Waveform Class = Wind+Reeds		
4631			
4632	NUMBER	CHECKSUM	WAVENAME
4633			
4634	00f2h	6f51h	FLUTE LOOP
4635	00f2h	43d2h	FLUTE MAP 1
4636	00f2h	a292h	FLUTE MAP 2
4637			
4638	Waveform Class = Vocal Sound		
4639			
4640	NUMBER	CHECKSUM	WAVENAME
4641			
4642	0111h	96ddh	VOCAL MAP 01
4643	0111h	3ff7h	VOCAL MAP 02
4644	0111h	b802h	VOCAL MAP 03
4645	0111h	d60dh	VOCAL MAP 04
4646	0111h	c047h	VOCAL MAP 05
4647	0111h	eeaaah	VOCAL MAP 06
4648	0111h	1a8bh	VOCAL MAP 07
4649	0111h	e2dbh	VOCAL MAP 08
4650	0111h	cd4ah	VOCAL MAP 09
4651	0111h	100ah	VOCAL MAP 10
4652	0111h	ff73h	VOCAL MAP 11
4653	0111h	c678h	VOCAL MAP 12
4654	0111h	cb7bh	VOCAL MAP 13
4655	0111h	f429h	VOCAL MAP 14
4656			
4657	Waveform Class = Bass Sound		
4658			
4659	NUMBER	CHECKSUM	WAVENAME
4660			
4661	001ah	1359h	AC. BASS 2
4662	001ah	63a0h	AC. BASS 3
4663	001ch	ec22h	JAZZ BASS
4664	001ah	640ah	AC BS FRET NZ
4665	0115h	15f2h	CLICK BASS
4666	0115h	cf85h	DEEP BASS
4667	0115h	7965h	DOPE BASS 1
4668	0115h	b03ah	GLO SINE BASS
4669	0115h	b8fch	DANCE BASS 1
4670	0115h	ea81h	DANCE BASS 2
4671	0115h	b99ah	DANCE BASS 3
4672	0070h	b3cbh	ESQ 1 BASS 2
4673	0115h	672dh	GEN X BASS
4674	0115h	1be7h	JAMM BASS
4675	0115h	3bb4h	JUP BASS SOFT

4676	0115h	29d1h	JUP BASS MED
4677	0115h	22beh	JUP BASS HARD
4678	0115h	51dch	MMM BASS
4679	0115h	5865h	SAWZ BASS
4680	0115h	c628h	SPACE BASS 1
4681	0115h	63e5h	SPACE BASS 2
4682	0115h	7abbh	THICK BASS
4683			
4684	Waveform Class = Drum Sound		
4685			
4686	NUMBER	CHECKSUM	WAVENAME
4687			
4688	0139h	aa69h	DA POWER KICK
4689	0139h	489eh	KICKS MAP 01
4690	0139h	b853h	KICKS MAP 02
4691	0139h	dde6h	KICKS MAP 03
4692	0139h	5ebbh	KICKS MAP 04
4693	0139h	8bfbh	KICKS MAP 05
4694	0139h	787bh	KICKS MAP 06
4695	0139h	cfe0h	KICKS MAP 07
4696	0139h	3f54h	KICKS MAP 08
4697	0139h	8533h	KICKS MAP 09
4698	0139h	b4c6h	KICKS MAP 10
4699	0139h	832bh	KICKS MAP 11
4700	0139h	00cah	KICKS MAP 12
4701	0139h	3c1eh	KICKS MAP 13
4702	0139h	6c48h	KICKS MAP 14
4703	0139h	d7bdh	KICKS MAP 16
4704	0139h	b1b4h	KICKS MAP 17
4705	0139h	e611h	KICKS MAP 18
4706	0139h	987dh	KICKS MAP 19
4707	0139h	ebebh	KICKS MAP 20
4708	0139h	18deh	KICKS MAP 21
4709	0139h	3c8fh	KICKS MAP 22
4710	0139h	f2ech	KICKS MAP 23
4711	0139h	c73eh	KICKS MAP 24
4712	0139h	d2f7h	KICKS MAP 25
4713	0139h	57bfh	KICKS MAP 26
4714	0139h	cf53h	KICKS MAP 27
4715	013Ah	8423h	SNARE MAP 01
4716	013Ah	491fh	SNARE MAP 02
4717	013Ah	bc01h	SNARE MAP 03
4718	013Ah	6f98h	SNARE MAP 04
4719	013Ah	3e5fh	SNARE MAP 05
4720	013Ah	32f5h	SNARE MAP 06
4721	013Ah	8defh	SNARE MAP 07
4722	013Ah	3a9ch	SNARE MAP 08
4723	013Ah	2888h	SNARE MAP 09
4724	013Ah	243eh	SNARE MAP 10
4725	013Ah	2234h	SNARE MAP 11
4726	013Ah	1a99h	SNARE MAP 12
4727	013Ah	3eb4h	SNARE MAP 13
4728	013Ah	09f2h	SNARE MAP 14
4729	013Ah	842dh	SNARE MAP 15
4730	013Ah	4e84h	SNARE MAP 16

4731	013Ah	7805h	SNARE MAP 17
4732	013Ah	203dh	SNARE MAP 18
4733	013Ah	0218h	SNARE MAP 19
4734	013Ah	d9d6h	SNARE MAP 20
4735	013Ah	3ab9h	SNARE MAP 21
4736	013Ah	7314h	SNARE MAP 22
4737	013Ah	0fbeh	SNARE MAP 23
4738	013Ah	ccfah	SNARE MAP 24
4739	013Ah	03fah	SNARE MAP 25
4740	013Ah	3843h	SNARE ROLL 2
4741	004Eh	347ah	TOMS MAP 1
4742	004Eh	ce94h	TOMS MAP 2
4743			
4744	Waveform Class = Cymbals		
4745			
4746	NUMBER	CHECKSUM	WAVENAME
4747			
4748	004Fh	dba0h	CLOZD HAT MP1
4749	004Fh	2e6eh	CLOZD HAT MP2
4750	004Fh	f9b5h	CLOZD HAT MP3
4751	004Fh	6fd2h	CLOZD HAT MP4
4752	004Fh	c0a1h	CLOZD HAT MP5
4753	004Fh	9bf7h	CLOZD HAT MP6
4754	004Fh	d63ch	CLOZD HAT MP7
4755	004Fh	f91ch	CLOZD HAT MP8
4756	0051h	f6afh	OPEN HAT MP01
4757	0051h	23adh	OPEN HAT MP02
4758	0051h	c59bh	OPEN HAT MP03
4759	0051h	a752h	OPEN HAT MP04
4760	0051h	a41ah	OPEN HAT MP05
4761	0051h	6f9bh	OPEN HAT MP06
4762	0051h	e033h	OPEN HAT MP07
4763	0051h	476fh	OPEN HAT MP08
4764	0051h	d875h	OPEN HAT MP09
4765	0051h	ef01h	OPEN HAT MP10
4766	0051h	13a9h	ELEC.HAT MAP
4767	0053h	666ch	DANCE RIDE 1
4768	0053h	6abah	DANCE RIDE 2
4769	0053h	bccbh	DANCE RIDE 3
4770	0053h	d6dch	DANCE RIDE 4
4771	0053h	ed2ch	DANCE RIDE 5
4772	0053h	2c8eh	CZ SYN RIDE
4773	0053h	9b94h	808 RIDE CYM
4774	0052h	7728h	DANCE CRASH 1
4775	0052h	50adh	DANCE CRASH 2
4776	0052h	70f2h	DANCE CRASH 3
4777	0052h	0784h	DANCE CRASH 4
4778	0052h	4200h	DANCE CRASH 5
4779			
4780	Waveform Class = Percussion		
4781			
4782	NUMBER	CHECKSUM	WAVENAME
4783			
4784	0160h	c408h	01-DOPE 77
4785	0160h	5f95h	02-DOPE 82

4786	0160h	fb4h	03-DOPE 85
4787	0160h	c8fbh	04-DA BOMB 86
4788	0160h	7240h	05-DOPE 89
4789	0160h	0d94h	06-BRKBEAT 90
4790	0160h	1d86h	07-HIP HOP 90
4791	0160h	1635h	08-DOPE 92
4792	0160h	6724h	09-DOPE 95
4793	0160h	b0dch	10-RATRAP 105
4794	0160h	6c22h	11-CONGA 108
4795	0160h	5ac3h	12-DOPE 123
4796	0160h	c61eh	13-TECHNO 124
4797	0160h	e623h	14-HIPHOP 124
4798	0160h	e273h	15-HIPHOP 124
4799	0160h	8764h	16-TECHNO 130
4800	0160h	48dfh	17-TECHNO 130
4801	0160h	a3afh	18-TECHNO 132
4802	0160h	59e0h	19-TECHNO 134
4803	0160h	d417h	20-TECHNO 134
4804	0160h	4e11h	21-TECHNO 134
4805	0160h	fde2h	22-TECHNO 136
4806	0160h	2230h	23-TECHNO 138
4807	0160h	7f54h	24-TECHNO 138
4808	0160h	9b37h	25-HOUSE 140
4809	0160h	d1ech	26-HOUSE 140
4810	0160h	409dh	27-TECHNO 140
4811	0160h	8e1bh	28-TECHNO 140
4812	0160h	4457h	30-BELLZ 142
4813	0160h	cfa8h	31-TRANCE 146
4814	0160h	7125h	32-ACID 150
4815	0160h	0c02h	34-ACID 154
4816	0160h	4b78h	35-RAVE 170
4817	0160h	dac8h	36-RAVE 170
4818	0160h	de63h	BOOM BIP MAP
4819	0160h	b365h	BRKBEAT MAP
4820	011Eh	8502h	CLAP CLAP
4821	011Eh	c67eh	CLAP MAP 1
4822	011Eh	01f7h	CLAP MAP 2
4823	011Eh	8427h	CLAP MAP 3
4824	011Eh	4f06h	CLAP MAP 4
4825	011Eh	7702h	CLAP MAP 5
4826	0160h	2dedh	DOPE JAZZ MAP
4827	0160h	ff6ah	DUMMDRUM MAP
4828	011Bh	68b3h	FINGERSNAP MP
4829	0158h	bf8ch	FREAKOUT PERC
4830	0160h	75b5h	FUNK OUT MAP
4831	0160h	4750h	HARDCORE MAP
4832	0160h	1addh	HEAVY MAP
4833	0160h	2849h	IT HERTZ MAP
4834	0160h	2ae7h	KIK IT MAP
4835	0160h	6cedh	OL SKOOL MAP
4836	0160h	255ah	RAT RAP MAP
4837	0056h	8e1ah	TAMBO MAP 1
4838	0056h	e852h	TAMBO MAP 2
4839	0160h	ca4dh	THE RIOT MAP
4840	0160h	6dc2h	WAK PAK MAP

4841	0056h	a68ch	BAD TAMBO
4842	0160h	c8b2h	JAZZ RIDE LP
4843	0066h	f8ech	DANCE TRIANGL
4844	0160h	f711h	CLOZD HAT LP

4845

4846 Waveform Class = Tuned Percussion

4847

4848	NUMBER	CHECKSUM	WAVENAME
4849			
4850	0143h	d1a2h	1970'S HIT
4851	0143h	6e14h	BUZZ BASS
4852	0143h	37ddh	CHORD VOX
4853	0187h	ac69h	CHORDS HMM
4854	0187h	f09ah	DIRTY HIT
4855	0143h	9117h	ESQ 1 BASS 1
4856	0187h	a66ah	EURO HIT 1
4857	0187h	0a27h	EURO HIT 2
4858	0187h	f231h	EURO HIT 3
4859	0143h	f103h	GIT STAB
4860	0143h	c92ch	HIT ME HARD
4861	0187h	7f91h	HIT STAB
4862	0143h	da55h	HOP HIT
4863	0143h	fbfch	HOUSE NATION
4864	0143h	7b92h	HOUSE STAB
4865	0143h	e6deh	OLD CLASSIC
4866	0187h	941fh	ORGAN HIT
4867	0187h	60d8h	RAVE ORG HIT
4868	0143h	7bf0h	RECORD STOP
4869	0143h	d672h	SMACK HIT
4870	0143h	e0dah	SNAP SYNTH
4871	0143h	96a8h	STAB HIT 1
4872	0143h	4321h	STAB HIT 2
4873	0143h	d30fh	TECHNO CHORD
4874	0143h	2115h	VOX HIT

4875

4876 Waveform Class = Sound Effect

4877

4878	NUMBER	CHECKSUM	WAVENAME
4879			
4880	0082h	6489h	BEEP MAP 1
4881	0082h	c0afh	BEEP MAP 2
4882	0156h	6a5eh	BLAST
4883	0156h	d04ah	CABLE'S OUT
4884	0156h	fe17h	FAST FWD TAPE
4885	0094h	1aaah	LAZER ZAP 3
4886	0156h	61f4h	METAL HIT
4887	0156h	1e6ah	NEEDLE UP
4888	0156h	ded4h	POP+CLICK MAP
4889	0156h	db3fh	RECKIT BAD
4890	0156h	d8aeh	RECORD NOISE
4891	0156h	4087h	REWIND TAPE
4892	0094h	353dh	REZ ZAPS
4893	018Ah	f915h	SCRATCH MAP 1
4894	018Ah	2c20h	SCRATCH MAP 2
4895	0156h	ebe0h	SHORT WAVE 1

4896	0156h	e80ch	SHORT WAVE 2
4897	0156h	ce8bh	SPACE LAND
4898	0156h	a344h	SPACE MAN
4899	0156h	db1dh	SPACE SYNTH 1
4900	0156h	fa66h	SPACE SYNTH 2
4901	0156h	5068h	SPACE SYNTH 3
4902	0156h	cd98h	SPACE SYNTH 4
4903	0156h	1a3ah	STATIC CLING
4904	0094h	7d94h	SUPER ZAP
4905	0156h	ccd1h	WRONG NUMBER
4906	0094h	e197h	ZAP 1A
4907	0094h	14e4h	ZAP 1B
4908	0094h	5d27h	ZAP 2A
4909	0094h	1754h	ZAP 2B
4910			
4911	Waveform Class = Waveform		
4912			
4913	NUMBER	CHECKSUM	WAVENAME
4914			
4915	012Dh	c33bh	JOE'S LEAD
4916	012Dh	66d2h	OBEE REZ
4917	012Dh	23ebh	PW LEAD SYN
4918	012Dh	2852h	PW MOOG SYN
4919	0131h	6fdeh	RASPY SYNTH
4920	012Dh	b3f3h	RES SAW 1
4921	012Dh	3b17h	RES SAW 2
4922	012Dh	9fdeh	RES SAW 3
4923	012Dh	5c65h	RES SAW 4
4924	0043h	88dch	REZZ HIT
4925	012Dh	d529h	SOLITUDE
4926			
4927	Waveform Class = Inharmonic		
4928			
4929	NUMBER	CHECKSUM	WAVENAME
4930			
4931	0047h	c87fh	8-BIT FUNK
4932	0149h	d67ch	DIRTY BELL LP
4933	0047h	c2fch	DRONE
4934	0047h	286eh	GRANULAR
4935	0047h	ef8bh	INDUSTRIAL
4936	0076h	2982h	INHARMONIC 1
4937	0076h	0e88h	INHARMONIC 2
4938	0076h	0469h	INHARMONIC 3
4939	0148h	7126h	OLD RACKBELL
4940	0047h	723bh	REZ NOIZ MAP
4941			
4942	Waveform Class = Transwave		
4943			
4944	NUMBER	CHECKSUM	WAVENAME
4945			
4946	014Dh	64bbh	BASS REZ 2
4947	014Dh	04c9h	BLUE TRANCE
4948	016Ah	d02dh	BRAINIAC
4949	014Ah	630bh	CHIME-X
4950	016Ah	3614h	CLAVINEX

4951	014Dh	2076h	CLIX-POPS
4952	014Dh	c32dh	COLOR WHEEL
4953	014Dh	7d12h	CYBORG
4954	016Ah	3ec4h	ELVIS
4955	014Bh	ca04h	FAT SQUAREZ
4956	014Dh	7ebeh	FRANKENWAVE
4957	016Ah	ee7ah	GET EVEN
4958	014Dh	88e4h	GREEN TRANCE
4959	014Dh	17ach	HARMONIX
4960	014Ch	5611h	HEY
4961	014Dh	b153h	HIHAT-X
4962	016Ah	fc1dh	JOLT
4963	014Dh	828fh	LIGHT YEARS
4964	014Ah	0646h	LONG GONG 1
4965	014Ah	9620h	LONG GONG 2
4966	016Ah	dd09h	MERCURY BASS
4967	014Ah	0a5eh	MIRROR-X
4968	014Dh	3c5eh	OPERETTA
4969	014Dh	7e0ah	ORANGE TRANCE
4970	016Ah	dbb0h	OVERTONES
4971	016Ah	2bd5h	POLYMOD SWEEP
4972	014Dh	4b59h	PULSEWAVEMOD
4973	014Bh	8403h	QUITE ODD
4974	014Dh	0a97h	RAT BREATH X
4975	014Dh	32feh	RED TRANCE
4976	014Bh	085dh	REZ LOOPS-2
4977	014Bh	087ah	REZ POP ATAKS
4978	016Ah	fc66h	REZ SQUARE
4979	014Bh	2ab0h	ROBOT SWEEP
4980	014Dh	27b2h	SAMPLE & HOLD
4981	014Bh	dc69h	SAW REZ SWEEP
4982	016Ah	0c3ah	SKY ROCKETS
4983	014Ah	dfcah	SPARKLERS
4984	016Ah	e719h	STEP UP
4985	0168h	97d5h	STEPS
4986	014Bh	3a32h	STEPS REZ
4987	014Ch	4c58h	SYLLABLES
4988	014Dh	cf75h	SYNKING
4989	016Ah	1c23h	TABLE-4-2
4990	014Ch	340ah	THANK YOU
4991	0166h	b021h	TRAN-REZ BASS
4992	014Bh	2aceh	TRANS BLIPS
4993	014Bh	7a3fh	TRANS BOY
4994	014Dh	9799h	TRANS E.PIANO
4995	016Ah	f8ach	TRANS-FRED
4996	016Ah	e0a6h	TRANS-GRESSOR
4997	0168h	ba8eh	TRANZGRUV 01
4998	016Ah	3304h	TRANZGRUV 02
4999	0168h	2905h	TRANZGRUV 03
5000	014Dh	caa8h	TRANZGRUV 04
5001	014Dh	aa28h	TRANZGRUV 05
5002	014Dh	4d66h	TRANZGRUV 06
5003	0168h	1aceh	TRANZGRUV 07
5004	0168h	6c81h	TRANZGRUV 08
5005	0168h	23e9h	TRANZGRUV 09

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5006 0168h          3c52h          TRANZGRUV 10
5007 014Ah          e2b3h          TUBULAR-X
5008 016Ah          6b3ah          U B RANDOM
5009 014Ch          fa6ch          VODER-X
5010 014Ch          5524h          VOWELS
5011 014Dh          3bbbh          VOX SYN SWEEP
5012 014Dh          f972h          YELLOW TRANCE
5013 014Ch          1f74h          YODEL X
5014
5015 Appendix 5 - Insert Effect Parameters
5016
5017 Insert Effect 1: Parametric EQ
5018
5019 Total parameters: 12 (12 visible, 0 hidden)
5020 Visible 0 (0)  Ofs 0   EQ Input           Min    0 (Off   ) Max  124 (+24dB
5021 Visible 1 (2)  Ofs 4   LoShelf Fc       Min    0 (10Hz  ) Max  121 (20.0k
5022 Visible 2 (3)  Ofs 6   LoShelf Gain     Min    0 (Off   ) Max  124 (+24dB
5023 Visible 3 (6)  Ofs 12  Mid 1 Fc         Min    0 (10Hz  ) Max  121 (20.0k
5024 Visible 4 (7)  Ofs 14  Mid 1 Q          Min   10 (1.0  ) Max  400 (40.0
5025 Visible 5 (8)  Ofs 16  Mid 1 Gain       Min    0 (Off   ) Max  124 (+24dB
5026 Visible 6 (9)  Ofs 18  Mid 2 Fc         Min    0 (10Hz  ) Max  121 (20.0k
5027 Visible 7 (10) Ofs 20  Mid 2 Q          Min   10 (1.0  ) Max  400 (40.0
5028 Visible 8 (11) Ofs 22  Mid 2 Gain       Min    0 (Off   ) Max  124 (+24dB
5029 Visible 9 (4)  Ofs 8   HiShelf Fc       Min    0 (10Hz  ) Max  121 (20.0k
5030 Visible 10 (5) Ofs 10  HiShelf Gain     Min    0 (Off   ) Max  124 (+24dB
5031 Visible 11 (1) Ofs 2   EQ Output        Min    0 (Off   ) Max  124 (+24dB
5032
5033 Insert Effect 2: Hall Reverb
5034
5035 Total parameters: 21 (21 visible, 0 hidden)
5036 Visible 0       Ofs 0   Decay           Min    0 (0.0sec ) Max  100 (10.0s
5037 Visible 1       Ofs 2   LF Decay        Min    0 (-99%  ) Max  127 (+99%
5038 Visible 2       Ofs 4   HF Damping      Min    0 (100Hz ) Max  127 (21.2k
5039 Visible 3       Ofs 6   HF Bandwidth    Min    0 (100Hz ) Max  127 (21.2k
5040 Visible 4       Ofs 8   Primary Send    Min    0 (-99%  ) Max  127 (+99%
5041 Visible 5       Ofs 10  Diffusion 1     Min    0 (0      ) Max  100 (100
5042 Visible 6       Ofs 12  Diffusion 2     Min    0 (0      ) Max  100 (100
5043 Visible 7       Ofs 14  Definition      Min    0 (0      ) Max  100 (100
5044 Visible 8       Ofs 16  Detune Rate     Min    0 (0.00Hz) Max  154 (1.54H
5045 Visible 9       Ofs 18  Detune Depth    Min    0 (0%    ) Max  100 (100%
5046 Visible 10      Ofs 20  PreDelay        Min    0 (0ms   ) Max   36 (36ms
5047 Visible 11      Ofs 22  ER 1 Time       Min    0 (0ms   ) Max  112 (112ms
5048 Visible 12      Ofs 24  ER 1 Send       Min    0 (-99%  ) Max  127 (+99%
5049 Visible 13      Ofs 26  ER 1 Level      Min    0 (-99%  ) Max  127 (+99%
5050 Visible 14      Ofs 28  ER 2 Time       Min    0 (0ms   ) Max  112 (112ms
5051 Visible 15      Ofs 30  ER 2 Send       Min    0 (-99%  ) Max  127 (+99%
5052 Visible 16      Ofs 32  ER 2 Level      Min    0 (-99%  ) Max  127 (+99%
5053 Visible 17      Ofs 34  Position 1     Min    0 (-99%  ) Max  127 (+99%
5054 Visible 18      Ofs 36  Position 2     Min    0 (-99%  ) Max  127 (+99%
5055 Visible 19      Ofs 38  Position 3     Min    0 (-99%  ) Max  127 (+99%
5056 Visible 20      Ofs 40  Output Bal      Min    0 (Full <L) Max  127 (Full
5057
5058 Insert Effect 3: Large Room
5059
5060 Total parameters: 21 (21 visible, 0 hidden)

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5061 Visible 0      Ofs 0   Decay           Min    0 (0.0sec ) Max  100 (10.0s
5062 Visible 1      Ofs 2   LF Decay         Min    0 (-99%  ) Max  127 (+99%
5063 Visible 2      Ofs 4   HF Damping       Min    0 (100Hz ) Max  127 (21.2k
5064 Visible 3      Ofs 6   HF Bandwidth     Min    0 (100Hz ) Max  127 (21.2k
5065 Visible 4      Ofs 8   Primary Send     Min    0 (-99%  ) Max  127 (+99%
5066 Visible 5      Ofs 10  Diffusion 1     Min    0 (0      ) Max  100 (100
5067 Visible 6      Ofs 12  Diffusion 2     Min    0 (0      ) Max  100 (100
5068 Visible 7      Ofs 14  Definition       Min    0 (0      ) Max  100 (100
5069 Visible 8      Ofs 16  Detune Rate     Min    0 (0.00Hz) Max  154 (1.54H
5070 Visible 9      Ofs 18  Detune Depth    Min    0 (0%    ) Max  100 (100%
5071 Visible 10     Ofs 20  PreDelay        Min    0 (0ms   ) Max   36 (36ms
5072 Visible 11     Ofs 22  ER 1 Time       Min    0 (0ms   ) Max  112 (112ms
5073 Visible 12     Ofs 24  ER 1 Send       Min    0 (-99%  ) Max  127 (+99%
5074 Visible 13     Ofs 26  ER 1 Level      Min    0 (-99%  ) Max  127 (+99%
5075 Visible 14     Ofs 28  ER 2 Time       Min    0 (0ms   ) Max  112 (112ms
5076 Visible 15     Ofs 30  ER 2 Send       Min    0 (-99%  ) Max  127 (+99%
5077 Visible 16     Ofs 32  ER 2 Level      Min    0 (-99%  ) Max  127 (+99%
5078 Visible 17     Ofs 34  Position 1      Min    0 (-99%  ) Max  127 (+99%
5079 Visible 18     Ofs 36  Position 2      Min    0 (-99%  ) Max  127 (+99%
5080 Visible 19     Ofs 38  Position 3      Min    0 (-99%  ) Max  127 (+99%
5081 Visible 20     Ofs 40  Output Bal      Min    0 (Full <L) Max  127 (Full
5082
5083 Insert Effect 4: Small Room
5084
5085 Total parameters: 21 (21 visible, 0 hidden)
5086 Visible 0      Ofs 0   Decay           Min    0 (0.0sec ) Max  100 (10.0s
5087 Visible 1      Ofs 2   LF Decay         Min    0 (-99%  ) Max  127 (+99%
5088 Visible 2      Ofs 4   HF Damping       Min    0 (100Hz ) Max  127 (21.2k
5089 Visible 3      Ofs 6   HF Bandwidth     Min    0 (100Hz ) Max  127 (21.2k
5090 Visible 4      Ofs 8   Primary Send     Min    0 (-99%  ) Max  127 (+99%
5091 Visible 5      Ofs 10  Diffusion 1     Min    0 (0      ) Max  100 (100
5092 Visible 6      Ofs 12  Diffusion 2     Min    0 (0      ) Max  100 (100
5093 Visible 7      Ofs 14  Definition       Min    0 (0      ) Max  100 (100
5094 Visible 8      Ofs 16  Detune Rate     Min    0 (0.00Hz) Max  154 (1.54H
5095 Visible 9      Ofs 18  Detune Depth    Min    0 (0%    ) Max  100 (100%
5096 Visible 10     Ofs 20  PreDelay        Min    0 (0ms   ) Max   36 (36ms
5097 Visible 11     Ofs 22  ER 1 Time       Min    0 (0ms   ) Max  112 (112ms
5098 Visible 12     Ofs 24  ER 1 Send       Min    0 (-99%  ) Max  127 (+99%
5099 Visible 13     Ofs 26  ER 1 Level      Min    0 (-99%  ) Max  127 (+99%
5100 Visible 14     Ofs 28  ER 2 Time       Min    0 (0ms   ) Max  112 (112ms
5101 Visible 15     Ofs 30  ER 2 Send       Min    0 (-99%  ) Max  127 (+99%
5102 Visible 16     Ofs 32  ER 2 Level      Min    0 (-99%  ) Max  127 (+99%
5103 Visible 17     Ofs 34  Position 1      Min    0 (-99%  ) Max  127 (+99%
5104 Visible 18     Ofs 36  Position 2      Min    0 (-99%  ) Max  127 (+99%
5105 Visible 19     Ofs 38  Position 3      Min    0 (-99%  ) Max  127 (+99%
5106 Visible 20     Ofs 40  Output Bal      Min    0 (Full <L) Max  127 (Full
5107
5108 Insert Effect 5: Large Plate
5109
5110 Total parameters: 12 (12 visible, 0 hidden)
5111 Visible 0      Ofs 0   Decay           Min    0 (0.0sec ) Max  100 (10.0s
5112 Visible 1      Ofs 2   HF Damping       Min    0 (100Hz ) Max  127 (21.2k
5113 Visible 2      Ofs 4   HF Bandwidth     Min    0 (100Hz ) Max  127 (21.2k
5114 Visible 3      Ofs 6   Diffusion 1     Min    0 (0      ) Max  100 (100
5115 Visible 4      Ofs 8   Diffusion 2     Min    0 (0      ) Max  100 (100

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5116 Visible 5      Ofs 10 Definition      Min  0 (0      ) Max  100 (100
5117 Visible 6      Ofs 12 PreDelay       Min  0 (0ms    ) Max   36 (36ms
5118 Visible 7      Ofs 14 ER 1 Level     Min  0 (-99%   ) Max  127 (+99%
5119 Visible 8      Ofs 16 ER 2 Level     Min  0 (-99%   ) Max  127 (+99%
5120 Visible 9      Ofs 18 ER 3 Level     Min  0 (-99%   ) Max  127 (+99%
5121 Visible 10     Ofs 20 ER 4 Level     Min  0 (-99%   ) Max  127 (+99%
5122 Visible 11     Ofs 22 Output Bal    Min  0 (Full <L ) Max  127 (Full
5123
5124 Insert Effect 6: Small Plate
5125
5126 Total parameters: 12 (12 visible, 0 hidden)
5127 Visible 0      Ofs 0  Decay          Min  0 (0.0sec ) Max  100 (10.0s
5128 Visible 1      Ofs 2  HF Damping     Min  0 (100Hz  ) Max  127 (21.2k
5129 Visible 2      Ofs 4  HF Bandwidth    Min  0 (100Hz  ) Max  127 (21.2k
5130 Visible 3      Ofs 6  Diffusion 1       Min  0 (0      ) Max  100 (100
5131 Visible 4      Ofs 8  Diffusion 2       Min  0 (0      ) Max  100 (100
5132 Visible 5      Ofs 10 Definition      Min  0 (0      ) Max  100 (100
5133 Visible 6      Ofs 12 PreDelay       Min  0 (0ms    ) Max   36 (36ms
5134 Visible 7      Ofs 14 ER 1 Level     Min  0 (-99%   ) Max  127 (+99%
5135 Visible 8      Ofs 16 ER 2 Level     Min  0 (-99%   ) Max  127 (+99%
5136 Visible 9      Ofs 18 ER 3 Level     Min  0 (-99%   ) Max  127 (+99%
5137 Visible 10     Ofs 20 ER 4 Level     Min  0 (-99%   ) Max  127 (+99%
5138 Visible 11     Ofs 22 Output Bal    Min  0 (Full <L ) Max  127 (Full
5139
5140 Insert Effect 7: NonLinReverb1
5141
5142 Total parameters: 21 (21 visible, 0 hidden)
5143 Visible 0      Ofs 0  Env 1 Level        Min  0 (-99%   ) Max  127 (+99%
5144 Visible 1      Ofs 2  Env 2 Level        Min  0 (-99%   ) Max  127 (+99%
5145 Visible 2      Ofs 4  Env 3 Level        Min  0 (-99%   ) Max  127 (+99%
5146 Visible 3      Ofs 6  Env 4 Level        Min  0 (-99%   ) Max  127 (+99%
5147 Visible 4      Ofs 8  Env 5 Level        Min  0 (-99%   ) Max  127 (+99%
5148 Visible 5      Ofs 10 Env 6 Level        Min  0 (-99%   ) Max  127 (+99%
5149 Visible 6      Ofs 12 Env 7 Level        Min  0 (-99%   ) Max  127 (+99%
5150 Visible 7      Ofs 14 Env 8 Level        Min  0 (-99%   ) Max  127 (+99%
5151 Visible 8      Ofs 16 Env 9 Level        Min  0 (-99%   ) Max  127 (+99%
5152 Visible 9      Ofs 18 HF Damping     Min  0 (100Hz  ) Max  127 (21.2k
5153 Visible 10     Ofs 20 HF Bandwidth    Min  0 (100Hz  ) Max  127 (21.2k
5154 Visible 11     Ofs 22 Primary Send  Min  0 (-99%   ) Max  127 (+99%
5155 Visible 12     Ofs 24 Diffusion 1   Min  0 (0      ) Max  100 (100
5156 Visible 13     Ofs 26 Diffusion 2   Min  0 (0      ) Max  100 (100
5157 Visible 14     Ofs 28 Density 1     Min  0 (0      ) Max  100 (100
5158 Visible 15     Ofs 30 Density 2     Min  0 (0      ) Max  100 (100
5159 Visible 16     Ofs 32 ER 1 Time     Min  0 (0ms    ) Max  112 (112ms
5160 Visible 17     Ofs 34 ER 1 Send     Min  0 (-99%   ) Max  127 (+99%
5161 Visible 18     Ofs 36 ER 2 Time     Min  0 (0ms    ) Max  112 (112ms
5162 Visible 19     Ofs 38 ER 2 Send     Min  0 (-99%   ) Max  127 (+99%
5163 Visible 20     Ofs 40 Output Bal    Min  0 (Full <L ) Max  127 (Full
5164
5165 Insert Effect 8: NonLinReverb2
5166
5167 Total parameters: 21 (21 visible, 0 hidden)
5168 Visible 0      Ofs 0  Env 1 Level        Min  0 (-99%   ) Max  127 (+99%
5169 Visible 1      Ofs 2  Env 2 Level        Min  0 (-99%   ) Max  127 (+99%
5170 Visible 2      Ofs 4  Env 3 Level        Min  0 (-99%   ) Max  127 (+99%

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5171 Visible 3      Ofs 6   Env 4 Level   Min  0 (-99%  ) Max  127 (+99%
5172 Visible 4      Ofs 8   Env 5 Level   Min  0 (-99%  ) Max  127 (+99%
5173 Visible 5      Ofs 10  Env 6 Level   Min  0 (-99%  ) Max  127 (+99%
5174 Visible 6      Ofs 12  Env 7 Level   Min  0 (-99%  ) Max  127 (+99%
5175 Visible 7      Ofs 14  Env 8 Level   Min  0 (-99%  ) Max  127 (+99%
5176 Visible 8      Ofs 16  Env 9 Level   Min  0 (-99%  ) Max  127 (+99%
5177 Visible 9      Ofs 18  HF Damping   Min  0 (100Hz  ) Max  127 (21.2k
5178 Visible 10     Ofs 20  HF Bandwidth Min  0 (100Hz  ) Max  127 (21.2k
5179 Visible 11     Ofs 22  Primary Send  Min  0 (-99%  ) Max  127 (+99%
5180 Visible 12     Ofs 24  Diffusion 1  Min  0 (0      ) Max  100 (100
5181 Visible 13     Ofs 26  Diffusion 2  Min  0 (0      ) Max  100 (100
5182 Visible 14     Ofs 28  Density 1    Min  0 (0      ) Max  100 (100
5183 Visible 15     Ofs 30  Density 2    Min  0 (0      ) Max  100 (100
5184 Visible 16     Ofs 32  ER 1 Time    Min  0 (0ms    ) Max  112 (112ms
5185 Visible 17     Ofs 34  ER 1 Send    Min  0 (-99%  ) Max  127 (+99%
5186 Visible 18     Ofs 36  ER 2 Time    Min  0 (0ms    ) Max  112 (112ms
5187 Visible 19     Ofs 38  ER 2 Send    Min  0 (-99%  ) Max  127 (+99%
5188 Visible 20     Ofs 40  Output Bal   Min  0 (Full <L ) Max  127 (Full
5189
5190 Insert Effect 9: Gated Reverb
5191
5192 Total parameters: 18 (17 visible, 1 hidden)
5193 Visible 0 (6)   Ofs 12  Gate Thresh   Min  0 (-96.0dB ) Max   96 (0.0dB
5194 Visible 1 (7)   Ofs 14  Gate Hysteresis Min  0 (0dB     ) Max   48 (48dB
5195 Visible 2 (8)   Ofs 16  Gate Attack   Min  0 (50us    ) Max   58 (10.0s
5196 Visible 3 (9)   Ofs 18  Gate Release  Min  0 (50us    ) Max   58 (10.0s
5197 Visible 4 (10) Ofs 20  Gate Hold     Min  0 (50us    ) Max   58 (10.0s
5198 Visible 5 (0)   Ofs 0    Decay         Min  0 (0.0sec  ) Max  100 (10.0s
5199 Visible 6 (1)   Ofs 2    HF Damping   Min  0 (100Hz   ) Max  127 (21.2k
5200 Visible 7 (3)   Ofs 6    Diffusion 1  Min  0 (0      ) Max  100 (100
5201 Visible 8 (4)   Ofs 8    Diffusion 2  Min  0 (0      ) Max  100 (100
5202 Visible 9 (5)   Ofs 10   Definition    Min  0 (0      ) Max  100 (100
5203 Visible 10 (11) Ofs 22   Slap Time    Min  0 (0ms    ) Max  108 (108ms
5204 Visible 11 (12) Ofs 24   Slap Level   Min  0 (Off     ) Max  124 (+12.0
5205 Visible 12 (13) Ofs 26   ER 1 Level   Min  0 (-99%   ) Max  127 (+99%
5206 Visible 13 (14) Ofs 28   ER 2 Level   Min  0 (-99%   ) Max  127 (+99%
5207 Visible 14 (15) Ofs 30   ER 3 Level   Min  0 (-99%   ) Max  127 (+99%
5208 Visible 15 (16) Ofs 32   ER 4 Level   Min  0 (-99%   ) Max  127 (+99%
5209 Visible 16 (17) Ofs 34   Output Bal   Min  0 (Full <L ) Max  127 (Full
5210 Hidden 17 (17) Ofs 34   Output Bal   Min  0 (Full <L ) Max  127 (Full
5211
5212 Insert Effect 10: Stereo Chorus
5213
5214 Total parameters: 5 (5 visible, 0 hidden)
5215 Visible 0      Ofs 0    LFO Rate     Min  0 (0.0Hz   ) Max  105 (20.0H
5216 Visible 1      Ofs 2    Chorus Depth Min  0 (0.0ms   ) Max  250 (25.0m
5217 Visible 2      Ofs 4    ChorusCenter Min  0 (0.0ms   ) Max  500 (50.0m
5218 Visible 3      Ofs 6    Spread       Min  0 (L<---->R) Max   10 (R<---
5219 Visible 4      Ofs 8    Chorus Phase Min  0 (0deg    ) Max   1 (-180d
5220
5221 Insert Effect 11: 8-Voice Chorus
5222
5223 Total parameters: 14 (13 visible, 1 hidden)
5224 Visible 0 (0)   Ofs 0    EQ Input     Min  0 (Off     ) Max  124 (+24dB
5225 Visible 1 (2)   Ofs 4    Mid 1 Fc     Min  0 (10Hz    ) Max  121 (20.0k

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5226 Visible 2 (3) Ofs 6 Mid 1 Q Min 10 (1.0 ) Max 400 (40.0
5227 Visible 3 (4) Ofs 8 Mid 1 Gain Min 0 (Off ) Max 124 (+24dB
5228 Visible 4 (1) Ofs 2 EQ Output Min 0 (Off ) Max 124 (+24dB
5229 Visible 5 (13) Ofs 26 Dry Blend Min 0 (Full Dry) Max 127 (Full
5230 Visible 6 (11) Ofs 22 HPF Cutoff Min 0 (10Hz ) Max 109 (10.9k
5231 Visible 7 (5) Ofs 10 LFO Rate Min 0 (0.0Hz ) Max 70 (7.0Hz
5232 Visible 8 (6) Ofs 12 Chorus Depth Min 0 (0.0ms ) Max 3000 (300.0
5233 Visible 9 (7) Ofs 14 ChorusCenter Min 0 (0.0ms ) Max 3000 (300.0
5234 Visible 10 (12) Ofs 24 Center Offset Min 0 (0% ) Max 100 (100%
5235 Visible 11 (9) Ofs 18 Chorus Phase Min 0 (-180deg ) Max 180 (+180d
5236 Visible 12 (10) Ofs 20 Chorus Feedback Min 0 (-99% ) Max 127 (+99%
5237 Hidden 13 (13) Ofs 26 Dry Blend Min 0 (Full Dry) Max 127 (Full
5238
5239 Insert Effect 12: Rev(Chorus
5240
5241 Total parameters: 13 (13 visible, 0 hidden)
5242 Visible 0 Ofs 0 Decay Min 0 (0.0sec ) Max 100 (10.0s
5243 Visible 1 Ofs 2 HF Damping Min 0 (100Hz ) Max 127 (21.2k
5244 Visible 2 Ofs 4 HF Bandwidth Min 0 (100Hz ) Max 127 (21.2k
5245 Visible 3 Ofs 6 Diffusion 1 Min 0 (0 ) Max 100 (100
5246 Visible 4 Ofs 8 Diffusion 2 Min 0 (0 ) Max 100 (100
5247 Visible 5 Ofs 10 Definition Min 0 (0 ) Max 100 (100
5248 Visible 6 Ofs 12 Chorus Mix Min 0 (Full Dry) Max 127 (Full
5249 Visible 7 Ofs 14 LFO Rate Min 0 (1/1 Sys ) Max 116 (20.0H
5250 Visible 8 Ofs 16 LFO Shape Min 0 (Triangle) Max 7 (4-Ste
5251 Visible 9 Ofs 18 LFO Phase Min 0 (-180deg ) Max 180 (+180d
5252 Visible 10 Ofs 20 Chorus Depth Min 0 (0.0ms ) Max 250 (25.0m
5253 Visible 11 Ofs 22 Chorus Center Min 0 (0.0ms ) Max 500 (50.0m
5254 Visible 12 Ofs 24 System Feedback Min 0 (-99% ) Max 127 (+99%
5255
5256 Insert Effect 13: Rev(Flanger
5257
5258 Total parameters: 15 (15 visible, 0 hidden)
5259 Visible 0 Ofs 0 Decay Min 0 (0.0sec ) Max 100 (10.0s
5260 Visible 1 Ofs 2 HF Damping Min 0 (100Hz ) Max 127 (21.2k
5261 Visible 2 Ofs 4 HF Bandwidth Min 0 (100Hz ) Max 127 (21.2k
5262 Visible 3 Ofs 6 Diffusion 1 Min 0 (0 ) Max 100 (100
5263 Visible 4 Ofs 8 Diffusion 2 Min 0 (0 ) Max 100 (100
5264 Visible 5 Ofs 10 Definition Min 0 (0 ) Max 100 (100
5265 Visible 6 Ofs 12 FlangerMix Min 0 (Full Dry) Max 127 (Full
5266 Visible 7 Ofs 14 LFO Rate Min 0 (1/1 Sys ) Max 116 (20.0H
5267 Visible 8 Ofs 16 LFO Shape Min 0 (Triangle) Max 7 (4-Ste
5268 Visible 9 Ofs 18 LFO Phase Min 0 (-180deg ) Max 180 (+180d
5269 Visible 10 Ofs 20 Flanger Depth Min 0 (0.0ms ) Max 250 (25.0m
5270 Visible 11 Ofs 22 FlangerCenter Min 0 (0.0ms ) Max 500 (50.0m
5271 Visible 12 Ofs 24 Notch Depth Min 0 (0% ) Max 100 (100%
5272 Visible 13 Ofs 26 Feedback Min 0 (-99% ) Max 127 (+99%
5273 Visible 14 Ofs 28 System Feedback Min 0 (-99% ) Max 127 (+99%
5274
5275 Insert Effect 14: Rev(Phaser
5276
5277 Total parameters: 14 (13 visible, 1 hidden)
5278 Visible 0 (0) Ofs 0 Decay Min 0 (0.0sec ) Max 100 (10.0s
5279 Visible 1 (1) Ofs 2 HF Damping Min 0 (100Hz ) Max 127 (21.2k
5280 Visible 2 (2) Ofs 4 HF Bandwidth Min 0 (100Hz ) Max 127 (21.2k

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5281 Visible 3 (3) Ofs 6 Diffusion 1 Min 0 (0 ) Max 100 (100
5282 Visible 4 (4) Ofs 8 Diffusion 2 Min 0 (0 ) Max 100 (100
5283 Visible 5 (5) Ofs 10 Definition Min 0 (0 ) Max 100 (100
5284 Visible 6 (6) Ofs 12 Phaser Mix Min 0 (Full Dry) Max 127 (Full
5285 Visible 7 (7) Ofs 14 LFO Rate Min 0 (1/1 Sys ) Max 116 (20.0H
5286 Visible 8 (8) Ofs 16 LFO Shape Min 0 (Triangle) Max 7 (4-Ste
5287 Visible 9 (10) Ofs 20 Phaser Depth Min 0 (0 ) Max 100 (100
5288 Visible 10 (11) Ofs 22 Phaser Center Min 0 (0 ) Max 100 (100
5289 Visible 11 (12) Ofs 24 Notch Depth Min 0 (0% ) Max 100 (100%
5290 Visible 12 (13) Ofs 26 Feedback Min 0 (-99% ) Max 127 (+99%
5291 Hidden 13 (13) Ofs 26 Feedback Min 0 (-99% ) Max 127 (-99%
5292
5293 Insert Effect 15: Chorus(Rev
5294
5295 Total parameters: 12 (12 visible, 0 hidden)
5296 Visible 0 Ofs 0 LFO Rate Min 0 (1/1 Sys ) Max 116 (20.0H
5297 Visible 1 Ofs 2 LFO Shape Min 0 (Triangle) Max 7 (4-Ste
5298 Visible 2 Ofs 4 LFO Phase Min 0 (-180deg ) Max 180 (+180d
5299 Visible 3 Ofs 6 Chorus Depth Min 0 (0.0ms ) Max 250 (25.0m
5300 Visible 4 Ofs 8 Chorus Center Min 0 (0.0ms ) Max 500 (50.0m
5301 Visible 5 Ofs 10 Rev Mix Min 0 (Full Dry) Max 127 (Full
5302 Visible 6 Ofs 12 Decay Min 0 (0.0sec ) Max 100 (10.0s
5303 Visible 7 Ofs 14 HF Damping Min 0 (100Hz ) Max 127 (21.2k
5304 Visible 8 Ofs 16 HF Bandwidth Min 0 (100Hz ) Max 127 (21.2k
5305 Visible 9 Ofs 18 Diffusion 1 Min 0 (0 ) Max 100 (100
5306 Visible 10 Ofs 20 Diffusion 2 Min 0 (0 ) Max 100 (100
5307 Visible 11 Ofs 22 Definition Min 0 (0 ) Max 100 (100
5308
5309 Insert Effect 16: Flanger(Rev
5310
5311 Total parameters: 14 (14 visible, 0 hidden)
5312 Visible 0 Ofs 0 LFO Rate Min 0 (1/1 Sys ) Max 116 (20.0H
5313 Visible 1 Ofs 2 LFO Shape Min 0 (Triangle) Max 7 (4-Ste
5314 Visible 2 Ofs 4 LFO Phase Min 0 (-180deg ) Max 180 (+180d
5315 Visible 3 Ofs 6 Flanger Depth Min 0 (0.0ms ) Max 250 (25.0m
5316 Visible 4 Ofs 8 FlangerCenter Min 0 (0.0ms ) Max 500 (50.0m
5317 Visible 5 Ofs 10 Notch Depth Min 0 (0% ) Max 100 (100%
5318 Visible 6 Ofs 12 Feedback Min 0 (-99% ) Max 127 (+99%
5319 Visible 7 Ofs 14 Rev Mix Min 0 (Full Dry) Max 127 (Full
5320 Visible 8 Ofs 16 Decay Min 0 (0.0sec ) Max 100 (10.0s
5321 Visible 9 Ofs 18 HF Damping Min 0 (100Hz ) Max 127 (21.2k
5322 Visible 10 Ofs 20 HF Bandwidth Min 0 (100Hz ) Max 127 (21.2k
5323 Visible 11 Ofs 22 Diffusion 1 Min 0 (0 ) Max 100 (100
5324 Visible 12 Ofs 24 Diffusion 2 Min 0 (0 ) Max 100 (100
5325 Visible 13 Ofs 26 Definition Min 0 (0 ) Max 100 (100
5326
5327 Insert Effect 17: Phaser(Rev
5328
5329 Total parameters: 14 (13 visible, 1 hidden)
5330 Visible 0 (0) Ofs 0 LFO Rate Min 0 (1/1 Sys ) Max 116 (20.0H
5331 Visible 1 (1) Ofs 2 LFO Shape Min 0 (Triangle) Max 7 (4-Ste
5332 Visible 2 (3) Ofs 6 Phaser Depth Min 0 (0 ) Max 100 (100
5333 Visible 3 (4) Ofs 8 Phaser Center Min 0 (0 ) Max 100 (100
5334 Visible 4 (5) Ofs 10 Notch Depth Min 0 (0% ) Max 100 (100%
5335 Visible 5 (6) Ofs 12 Feedback Min 0 (-99% ) Max 127 (+99%

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5336 Visible 6 (7) Ofs 14 Rev Mix Min 0 (Full Dry) Max 127 (Full
5337 Visible 7 (8) Ofs 16 Decay Min 0 (0.0sec ) Max 100 (10.0s
5338 Visible 8 (9) Ofs 18 HF Damping Min 0 (100Hz ) Max 127 (21.2k
5339 Visible 9 (10) Ofs 20 HF Bandwidth Min 0 (100Hz ) Max 127 (21.2k
5340 Visible 10 (11) Ofs 22 Diffusion 1 Min 0 (0 ) Max 100 (100
5341 Visible 11 (12) Ofs 24 Diffusion 2 Min 0 (0 ) Max 100 (100
5342 Visible 12 (13) Ofs 26 Definition Min 0 (0 ) Max 100 (100
5343 Hidden 13 (13) Ofs 26 Definition Min 0 (0 ) Max 100 (0
5344
5345 Insert Effect 18: EQ(Reverb
5346
5347 Total parameters: 16 (16 visible, 0 hidden)
5348 Visible 0 (0) Ofs 0 EQ Input Min 0 (Off ) Max 124 (+24dB
5349 Visible 1 (2) Ofs 4 LoShelf Fc Min 0 (10Hz ) Max 121 (20.0k
5350 Visible 2 (3) Ofs 6 LoShelf Gain Min 0 (Off ) Max 124 (+24dB
5351 Visible 3 (6) Ofs 12 Mid 1 Fc Min 0 (10Hz ) Max 121 (20.0k
5352 Visible 4 (7) Ofs 14 Mid 1 Q Min 10 (1.0 ) Max 400 (40.0
5353 Visible 5 (8) Ofs 16 Mid 1 Gain Min 0 (Off ) Max 124 (+24dB
5354 Visible 6 (4) Ofs 8 HiShelf Fc Min 0 (10Hz ) Max 121 (20.0k
5355 Visible 7 (5) Ofs 10 HiShelf Gain Min 0 (Off ) Max 124 (+24dB
5356 Visible 8 (1) Ofs 2 EQ Output Min 0 (Off ) Max 124 (+24dB
5357 Visible 9 (9) Ofs 18 Rev Mix Min 0 (Full Dry) Max 127 (Full
5358 Visible 10 (10) Ofs 20 Decay Min 0 (0.0sec ) Max 100 (10.0s
5359 Visible 11 (11) Ofs 22 HF Damping Min 0 (100Hz ) Max 127 (21.2k
5360 Visible 12 (12) Ofs 24 HF Bandwidth Min 0 (100Hz ) Max 127 (21.2k
5361 Visible 13 (13) Ofs 26 Diffusion 1 Min 0 (0 ) Max 100 (100
5362 Visible 14 (14) Ofs 28 Diffusion 2 Min 0 (0 ) Max 100 (100
5363 Visible 15 (15) Ofs 30 Definition Min 0 (0 ) Max 100 (100
5364
5365 Insert Effect 19: Spinner(Rev
5366
5367 Total parameters: 16 (16 visible, 0 hidden)
5368 Visible 0 Ofs 0 LFO Rate Min 0 (1/1 Sys ) Max 116 (20.0H
5369 Visible 1 Ofs 2 LFO Shape Min 0 (Triangle) Max 7 (4-Ste
5370 Visible 2 Ofs 4 LFO Phase Min 0 (-180deg ) Max 180 (+180d
5371 Visible 3 Ofs 6 DDL Mod Depth Min 0 (0.0ms ) Max 20 (2.0ms
5372 Visible 4 Ofs 8 DDL ModCenter Min 0 (0.0ms ) Max 500 (50.0m
5373 Visible 5 Ofs 10 Level Mod Min 0 (0% ) Max 100 (100%
5374 Visible 6 Ofs 12 L-to-R Mod Min 0 (0% ) Max 100 (100%
5375 Visible 7 Ofs 14 F-to-B Mod Min 0 (0% ) Max 100 (100%
5376 Visible 8 Ofs 16 Cancellation Min 0 (-99% ) Max 127 (+99%
5377 Visible 9 Ofs 18 Rev Mix Min 0 (Full Dry) Max 127 (Full
5378 Visible 10 Ofs 20 Decay Min 0 (0.0sec ) Max 100 (10.0s
5379 Visible 11 Ofs 22 HF Damping Min 0 (100Hz ) Max 127 (21.2k
5380 Visible 12 Ofs 24 HF Bandwidth Min 0 (100Hz ) Max 127 (21.2k
5381 Visible 13 Ofs 26 Diffusion 1 Min 0 (0 ) Max 100 (100
5382 Visible 14 Ofs 28 Diffusion 2 Min 0 (0 ) Max 100 (100
5383 Visible 15 Ofs 30 Definition Min 0 (0 ) Max 100 (100
5384
5385 Insert Effect 20: DDL(Chorus
5386
5387 Total parameters: 22 (22 visible, 0 hidden)
5388 Visible 0 Ofs 0 Dly1 Time Min 0 (1/1 Sys ) Max 641 (630ms
5389 Visible 1 Ofs 2 Dly1 Level Min 0 (Off ) Max 124 (+12.0
5390 Visible 2 Ofs 4 Dly1 Feedback Min 0 (-99% ) Max 127 (+99%

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5391 Visible 3      Ofs 6   Dly1 Damping   Min  0 (100Hz  ) Max  127 (21.2k
5392 Visible 4      Ofs 8   Dly1 Pan      Min  0 (Full <L ) Max  127 (Full
5393 Visible 5      Ofs 10  Dly2 Time    Min  0 (1/1 Sys ) Max  641 (630ms
5394 Visible 6      Ofs 12  Dly2 Level   Min  0 (Off    ) Max  124 (+12.0
5395 Visible 7      Ofs 14  Dly2 Feedback Min  0 (-99%   ) Max  127 (+99%
5396 Visible 8      Ofs 16  Dly2 Damping Min  0 (100Hz  ) Max  127 (21.2k
5397 Visible 9      Ofs 18  Dly2 Pan     Min  0 (Full <L ) Max  127 (Full
5398 Visible 10     Ofs 20  Dly3 Time    Min  0 (1/1 Sys ) Max  641 (630ms
5399 Visible 11     Ofs 22  Dly3 Level   Min  0 (Off    ) Max  124 (+12.0
5400 Visible 12     Ofs 24  Dly3 Pan     Min  0 (Full <L ) Max  127 (Full
5401 Visible 13     Ofs 26  Dly4 Time    Min  0 (1/1 Sys ) Max  641 (630ms
5402 Visible 14     Ofs 28  Dly4 Level   Min  0 (Off    ) Max  124 (+12.0
5403 Visible 15     Ofs 30  Dly4 Pan     Min  0 (Full <L ) Max  127 (Full
5404 Visible 16     Ofs 32  LFO Rate    Min  0 (1/1 Sys ) Max  116 (20.0H
5405 Visible 17     Ofs 34  LFO Shape    Min  0 (Triangle) Max   7 (4-Ste
5406 Visible 18     Ofs 36  LFO Phase    Min  0 (-180deg ) Max  180 (+180d
5407 Visible 19     Ofs 38  Chorus Depth Min  0 (0.0ms  ) Max  250 (25.0m
5408 Visible 20     Ofs 40  ChorusCenter Min  0 (0.0ms  ) Max  500 (50.0m
5409 Visible 21     Ofs 42  Spread      Min  0 (L<---->R) Max   10 (R<---
5410
5411 Insert Effect 21: DDL(Flanger
5412
5413 Total parameters: 23 (23 visible, 0 hidden)
5414 Visible 0      Ofs 0   Dly1 Time    Min  0 (1/1 Sys ) Max  641 (630ms
5415 Visible 1      Ofs 2   Dly1 Level   Min  0 (Off    ) Max  124 (+12.0
5416 Visible 2      Ofs 4   Dly1 Feedback Min  0 (-99%   ) Max  127 (+99%
5417 Visible 3      Ofs 6   Dly1 Damping Min  0 (100Hz  ) Max  127 (21.2k
5418 Visible 4      Ofs 8   Dly1 Pan     Min  0 (Full <L ) Max  127 (Full
5419 Visible 5      Ofs 10  Dly2 Time    Min  0 (1/1 Sys ) Max  641 (630ms
5420 Visible 6      Ofs 12  Dly2 Level   Min  0 (Off    ) Max  124 (+12.0
5421 Visible 7      Ofs 14  Dly2 Feedback Min  0 (-99%   ) Max  127 (+99%
5422 Visible 8      Ofs 16  Dly2 Damping Min  0 (100Hz  ) Max  127 (21.2k
5423 Visible 9      Ofs 18  Dly2 Pan     Min  0 (Full <L ) Max  127 (Full
5424 Visible 10     Ofs 20  Dly3 Time    Min  0 (1/1 Sys ) Max  641 (630ms
5425 Visible 11     Ofs 22  Dly3 Level   Min  0 (Off    ) Max  124 (+12.0
5426 Visible 12     Ofs 24  Dly3 Pan     Min  0 (Full <L ) Max  127 (Full
5427 Visible 13     Ofs 26  Dly4 Time    Min  0 (1/1 Sys ) Max  641 (630ms
5428 Visible 14     Ofs 28  Dly4 Level   Min  0 (Off    ) Max  124 (+12.0
5429 Visible 15     Ofs 30  Dly4 Pan     Min  0 (Full <L ) Max  127 (Full
5430 Visible 16     Ofs 32  LFO Rate    Min  0 (1/1 Sys ) Max  116 (20.0H
5431 Visible 17     Ofs 34  LFO Shape    Min  0 (Triangle) Max   7 (4-Ste
5432 Visible 18     Ofs 36  LFO Phase    Min  0 (-180deg ) Max  180 (+180d
5433 Visible 19     Ofs 38  Flanger Depth Min  0 (0.0ms  ) Max  250 (25.0m
5434 Visible 20     Ofs 40  FlangerCenter Min  0 (0.0ms  ) Max  500 (50.0m
5435 Visible 21     Ofs 42  Notch Depth  Min  0 (0%    ) Max  100 (100%
5436 Visible 22     Ofs 44  Feedback    Min  0 (-99%   ) Max  127 (+99%
5437
5438 Insert Effect 22: DDL(Phaser
5439
5440 Total parameters: 23 (22 visible, 1 hidden)
5441 Visible 0 (0)   Ofs 0   Dly1 Time    Min  0 (1/1 Sys ) Max  641 (630ms
5442 Visible 1 (1)   Ofs 2   Dly1 Level   Min  0 (Off    ) Max  124 (+12.0
5443 Visible 2 (2)   Ofs 4   Dly1 Feedback Min  0 (-99%   ) Max  127 (+99%
5444 Visible 3 (3)   Ofs 6   Dly1 Damping Min  0 (100Hz  ) Max  127 (21.2k
5445 Visible 4 (4)   Ofs 8   Dly1 Pan     Min  0 (Full <L ) Max  127 (Full

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5446 Visible 5 (5) Ofs 10 Dly2 Time Min 0 (1/1 Sys ) Max 641 (630ms
5447 Visible 6 (6) Ofs 12 Dly2 Level Min 0 (Off ) Max 124 (+12.0
5448 Visible 7 (7) Ofs 14 Dly2 Feedback Min 0 (-99% ) Max 127 (+99%
5449 Visible 8 (8) Ofs 16 Dly2 Damping Min 0 (100Hz ) Max 127 (21.2k
5450 Visible 9 (9) Ofs 18 Dly2 Pan Min 0 (Full <L ) Max 127 (Full
5451 Visible 10 (10) Ofs 20 Dly3 Time Min 0 (1/1 Sys ) Max 641 (630ms
5452 Visible 11 (11) Ofs 22 Dly3 Level Min 0 (Off ) Max 124 (+12.0
5453 Visible 12 (12) Ofs 24 Dly3 Pan Min 0 (Full <L ) Max 127 (Full
5454 Visible 13 (13) Ofs 26 Dly4 Time Min 0 (1/1 Sys ) Max 641 (630ms
5455 Visible 14 (14) Ofs 28 Dly4 Level Min 0 (Off ) Max 124 (+12.0
5456 Visible 15 (15) Ofs 30 Dly4 Pan Min 0 (Full <L ) Max 127 (Full
5457 Visible 16 (16) Ofs 32 LFO Rate Min 0 (1/1 Sys ) Max 116 (20.0H
5458 Visible 17 (17) Ofs 34 LFO Shape Min 0 (Triangle) Max 7 (4-Ste
5459 Visible 18 (19) Ofs 38 Phaser Depth Min 0 (0 ) Max 100 (100
5460 Visible 19 (20) Ofs 40 Phaser Center Min 0 (0 ) Max 100 (100
5461 Visible 20 (21) Ofs 42 Notch Depth Min 0 (0% ) Max 100 (100%
5462 Visible 21 (22) Ofs 44 Feedback Min 0 (-99% ) Max 127 (+99%
5463 Hidden 22 (22) Ofs 44 Feedback Min 0 (-99% ) Max 127 (-99%
5464
5465 Insert Effect 23: DDL(EQ)
5466
5467 Total parameters: 25 (25 visible, 0 hidden)
5468 Visible 0 (0) Ofs 0 Dly1 Time Min 0 (1/1 Sys ) Max 641 (630ms
5469 Visible 1 (1) Ofs 2 Dly1 Level Min 0 (Off ) Max 124 (+12.0
5470 Visible 2 (2) Ofs 4 Dly1 Feedback Min 0 (-99% ) Max 127 (+99%
5471 Visible 3 (3) Ofs 6 Dly1 Damping Min 0 (100Hz ) Max 127 (21.2k
5472 Visible 4 (4) Ofs 8 Dly1 Pan Min 0 (Full <L ) Max 127 (Full
5473 Visible 5 (5) Ofs 10 Dly2 Time Min 0 (1/1 Sys ) Max 641 (630ms
5474 Visible 6 (6) Ofs 12 Dly2 Level Min 0 (Off ) Max 124 (+12.0
5475 Visible 7 (7) Ofs 14 Dly2 Feedback Min 0 (-99% ) Max 127 (+99%
5476 Visible 8 (8) Ofs 16 Dly2 Damping Min 0 (100Hz ) Max 127 (21.2k
5477 Visible 9 (9) Ofs 18 Dly2 Pan Min 0 (Full <L ) Max 127 (Full
5478 Visible 10 (10) Ofs 20 Dly3 Time Min 0 (1/1 Sys ) Max 641 (630ms
5479 Visible 11 (11) Ofs 22 Dly3 Level Min 0 (Off ) Max 124 (+12.0
5480 Visible 12 (12) Ofs 24 Dly3 Pan Min 0 (Full <L ) Max 127 (Full
5481 Visible 13 (13) Ofs 26 Dly4 Time Min 0 (1/1 Sys ) Max 641 (630ms
5482 Visible 14 (14) Ofs 28 Dly4 Level Min 0 (Off ) Max 124 (+12.0
5483 Visible 15 (15) Ofs 30 Dly4 Pan Min 0 (Full <L ) Max 127 (Full
5484 Visible 16 (16) Ofs 32 EQ Input Min 0 (Off ) Max 124 (+24dB
5485 Visible 17 (18) Ofs 36 LoShelf Fc Min 0 (10Hz ) Max 121 (20.0k
5486 Visible 18 (19) Ofs 38 LoShelf Gain Min 0 (Off ) Max 124 (+24dB
5487 Visible 19 (22) Ofs 44 Mid 1 Fc Min 0 (10Hz ) Max 121 (20.0k
5488 Visible 20 (23) Ofs 46 Mid 1 Q Min 10 (1.0 ) Max 400 (40.0
5489 Visible 21 (24) Ofs 48 Mid 1 Gain Min 0 (Off ) Max 124 (+24dB
5490 Visible 22 (20) Ofs 40 HiShelf Fc Min 0 (10Hz ) Max 121 (20.0k
5491 Visible 23 (21) Ofs 42 HiShelf Gain Min 0 (Off ) Max 124 (+24dB
5492 Visible 24 (17) Ofs 34 EQ Output Min 0 (Off ) Max 124 (+24dB
5493
5494 Insert Effect 24: Multi-Tap DDL
5495
5496 Total parameters: 23 (23 visible, 0 hidden)
5497 Visible 0 (0) Ofs 0 EQ Input Min 0 (Off ) Max 124 (+24dB
5498 Visible 1 (2) Ofs 4 Mid 1 Fc Min 0 (10Hz ) Max 121 (20.0k
5499 Visible 2 (3) Ofs 6 Mid 1 Q Min 10 (1.0 ) Max 400 (40.0
5500 Visible 3 (4) Ofs 8 Mid 1 Gain Min 0 (Off ) Max 124 (+24dB

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5501 Visible 4 (1) Ofs 2 EQ Output Min 0 (Off ) Max 124 (+24dB
5502 Visible 5 (5) Ofs 10 Diffusion 1 Min 0 (-99% ) Max 127 (+99%
5503 Visible 6 (6) Ofs 12 Diffus Time 1 Min 0 (0ms ) Max 62 (62ms
5504 Visible 7 (7) Ofs 14 Diffusion 2 Min 0 (-99% ) Max 127 (+99%
5505 Visible 8 (8) Ofs 16 Diffus Time 2 Min 0 (0ms ) Max 62 (62ms
5506 Visible 9 (9) Ofs 18 Diffusion 3 Min 0 (-99% ) Max 127 (+99%
5507 Visible 10 (10) Ofs 20 Diffus Time 3 Min 0 (0ms ) Max 62 (62ms
5508 Visible 11 (11) Ofs 22 Diffusion 4 Min 0 (-99% ) Max 127 (+99%
5509 Visible 12 (12) Ofs 24 Diffus Time 4 Min 0 (0ms ) Max 62 (62ms
5510 Visible 13 (13) Ofs 26 Dly Interval Min 0 (Uniform ) Max 5 (Rando
5511 Visible 14 (14) Ofs 28 MaxDlyTime Min 0 (1/1 Sys ) Max 511 (500ms
5512 Visible 15 (15) Ofs 30 Dly Smoothing Min 0 (50us ) Max 58 (10.0s
5513 Visible 16 (16) Ofs 32 Feedback Tap Min 1 (1 ) Max 9 (9
5514 Visible 17 (17) Ofs 34 Dly Feedback Min 0 (-99% ) Max 127 (+99%
5515 Visible 18 (18) Ofs 36 Dly Damping Min 0 (10Hz ) Max 121 (20.0k
5516 Visible 19 (19) Ofs 38 Dly Levels Min 0 (Uniform ) Max 5 (Rando
5517 Visible 20 (20) Ofs 40 Dly Max Level Min 0 (0 ) Max 100 (100
5518 Visible 21 (21) Ofs 42 Dly Pan Min 0 (Centered) Max 6 (Rando
5519 Visible 22 (22) Ofs 44 Dly Spread Min 0 (0 ) Max 100 (100
5520
5521 Insert Effect 25: Dist(Chorus
5522
5523 Total parameters: 26 (26 visible, 0 hidden)
5524 Visible 0 (2) Ofs 4 Dist LPF Fc Min 0 (10Hz ) Max 121 (20.0k
5525 Visible 1 (5) Ofs 10 Dist Offset Min 0 (-99% ) Max 127 (+99%
5526 Visible 2 (0) Ofs 0 Dist Gain Min 0 (Off ) Max 148 (+48dB
5527 Visible 3 (6) Ofs 12 Dist Curve Min 0 (Soft ) Max 4 (Buzz
5528 Visible 4 (1) Ofs 2 Dist Volume Min 0 (Off ) Max 100 (0dB
5529 Visible 5 (3) Ofs 6 Post VCF Fc Min 0 (10Hz ) Max 94 (7.10k
5530 Visible 6 (4) Ofs 8 Post VCF Q Min 10 (1.0 ) Max 400 (40.0
5531 Visible 7 (7) Ofs 14 Dist Dry Lev Min 0 (Off ) Max 100 (0.0dB
5532 Visible 8 (8) Ofs 16 EQ Input Min 0 (Off ) Max 124 (+24dB
5533 Visible 9 (10) Ofs 20 LoShelf Fc Min 0 (10Hz ) Max 121 (20.0k
5534 Visible 10 (11) Ofs 22 LoShelf Gain Min 0 (Off ) Max 124 (+24dB
5535 Visible 11 (14) Ofs 28 Mid 1 Fc Min 0 (10Hz ) Max 121 (20.0k
5536 Visible 12 (15) Ofs 30 Mid 1 Q Min 10 (1.0 ) Max 400 (40.0
5537 Visible 13 (16) Ofs 32 Mid 1 Gain Min 0 (Off ) Max 124 (+24dB
5538 Visible 14 (17) Ofs 34 Mid 2 Fc Min 0 (10Hz ) Max 121 (20.0k
5539 Visible 15 (18) Ofs 36 Mid 2 Q Min 10 (1.0 ) Max 400 (40.0
5540 Visible 16 (19) Ofs 38 Mid 2 Gain Min 0 (Off ) Max 124 (+24dB
5541 Visible 17 (12) Ofs 24 HiShelf Fc Min 0 (10Hz ) Max 121 (20.0k
5542 Visible 18 (13) Ofs 26 HiShelf Gain Min 0 (Off ) Max 124 (+24dB
5543 Visible 19 (9) Ofs 18 EQ Output Min 0 (Off ) Max 124 (+24dB
5544 Visible 20 (20) Ofs 40 LFO Rate Min 0 (1/1 Sys ) Max 116 (20.0H
5545 Visible 21 (21) Ofs 42 LFO Shape Min 0 (Triangle) Max 7 (4-Ste
5546 Visible 22 (22) Ofs 44 LFO Phase Min 0 (-180deg ) Max 180 (+180d
5547 Visible 23 (23) Ofs 46 Chorus Depth Min 0 (0.0ms ) Max 250 (25.0m
5548 Visible 24 (24) Ofs 48 ChorusCenter Min 0 (0.0ms ) Max 500 (50.0m
5549 Visible 25 (25) Ofs 50 Spread Min 0 (L<---->R) Max 10 (R<---
5550
5551 Insert Effect 26: Dist(Flanger
5552
5553 Total parameters: 27 (27 visible, 0 hidden)
5554 Visible 0 (2) Ofs 4 Dist LPF Fc Min 0 (10Hz ) Max 121 (20.0k
5555 Visible 1 (5) Ofs 10 Dist Offset Min 0 (-99% ) Max 127 (+99%

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5556 Visible 2 (0) Ofs 0 Dist Gain Min 0 (Off ) Max 148 (+48dB
5557 Visible 3 (6) Ofs 12 Dist Curve Min 0 (Soft ) Max 4 (Buzz
5558 Visible 4 (1) Ofs 2 Dist Volume Min 0 (Off ) Max 100 (0dB
5559 Visible 5 (3) Ofs 6 Post VCF Fc Min 0 (10Hz ) Max 94 (7.10k
5560 Visible 6 (4) Ofs 8 Post VCF Q Min 10 (1.0 ) Max 400 (40.0
5561 Visible 7 (7) Ofs 14 Dist Dry Lev Min 0 (Off ) Max 100 (0.0dB
5562 Visible 8 (8) Ofs 16 EQ Input Min 0 (Off ) Max 124 (+24dB
5563 Visible 9 (10) Ofs 20 LoShelf Fc Min 0 (10Hz ) Max 121 (20.0k
5564 Visible 10 (11) Ofs 22 LoShelf Gain Min 0 (Off ) Max 124 (+24dB
5565 Visible 11 (14) Ofs 28 Mid 1 Fc Min 0 (10Hz ) Max 121 (20.0k
5566 Visible 12 (15) Ofs 30 Mid 1 Q Min 10 (1.0 ) Max 400 (40.0
5567 Visible 13 (16) Ofs 32 Mid 1 Gain Min 0 (Off ) Max 124 (+24dB
5568 Visible 14 (17) Ofs 34 Mid 2 Fc Min 0 (10Hz ) Max 121 (20.0k
5569 Visible 15 (18) Ofs 36 Mid 2 Q Min 10 (1.0 ) Max 400 (40.0
5570 Visible 16 (19) Ofs 38 Mid 2 Gain Min 0 (Off ) Max 124 (+24dB
5571 Visible 17 (12) Ofs 24 HiShelf Fc Min 0 (10Hz ) Max 121 (20.0k
5572 Visible 18 (13) Ofs 26 HiShelf Gain Min 0 (Off ) Max 124 (+24dB
5573 Visible 19 (9) Ofs 18 EQ Output Min 0 (Off ) Max 124 (+24dB
5574 Visible 20 (20) Ofs 40 LFO Rate Min 0 (1/1 Sys ) Max 116 (20.0H
5575 Visible 21 (21) Ofs 42 LFO Shape Min 0 (Triangle) Max 7 (4-Ste
5576 Visible 22 (22) Ofs 44 LFO Phase Min 0 (-180deg ) Max 180 (+180d
5577 Visible 23 (23) Ofs 46 Flanger Depth Min 0 (0.0ms ) Max 250 (25.0m
5578 Visible 24 (24) Ofs 48 FlangerCenter Min 0 (0.0ms ) Max 500 (50.0m
5579 Visible 25 (25) Ofs 50 Notch Depth Min 0 (0% ) Max 100 (100%
5580 Visible 26 (26) Ofs 52 Feedback Min 0 (-99% ) Max 127 (+99%
5581
5582 Insert Effect 27: Dist(Phaser
5583
5584 Total parameters: 27 (26 visible, 1 hidden)
5585 Visible 0 (2) Ofs 4 Dist LPF Fc Min 0 (10Hz ) Max 121 (20.0k
5586 Visible 1 (5) Ofs 10 Dist Offset Min 0 (-99% ) Max 127 (+99%
5587 Visible 2 (0) Ofs 0 Dist Gain Min 0 (Off ) Max 148 (+48dB
5588 Visible 3 (6) Ofs 12 Dist Curve Min 0 (Soft ) Max 4 (Buzz
5589 Visible 4 (1) Ofs 2 Dist Volume Min 0 (Off ) Max 100 (0dB
5590 Visible 5 (3) Ofs 6 Post VCF Fc Min 0 (10Hz ) Max 94 (7.10k
5591 Visible 6 (4) Ofs 8 Post VCF Q Min 10 (1.0 ) Max 400 (40.0
5592 Visible 7 (7) Ofs 14 Dist Dry Lev Min 0 (Off ) Max 100 (0.0dB
5593 Visible 8 (8) Ofs 16 EQ Input Min 0 (Off ) Max 124 (+24dB
5594 Visible 9 (10) Ofs 20 LoShelf Fc Min 0 (10Hz ) Max 121 (20.0k
5595 Visible 10 (11) Ofs 22 LoShelf Gain Min 0 (Off ) Max 124 (+24dB
5596 Visible 11 (14) Ofs 28 Mid 1 Fc Min 0 (10Hz ) Max 121 (20.0k
5597 Visible 12 (15) Ofs 30 Mid 1 Q Min 10 (1.0 ) Max 400 (40.0
5598 Visible 13 (16) Ofs 32 Mid 1 Gain Min 0 (Off ) Max 124 (+24dB
5599 Visible 14 (17) Ofs 34 Mid 2 Fc Min 0 (10Hz ) Max 121 (20.0k
5600 Visible 15 (18) Ofs 36 Mid 2 Q Min 10 (1.0 ) Max 400 (40.0
5601 Visible 16 (19) Ofs 38 Mid 2 Gain Min 0 (Off ) Max 124 (+24dB
5602 Visible 17 (12) Ofs 24 HiShelf Fc Min 0 (10Hz ) Max 121 (20.0k
5603 Visible 18 (13) Ofs 26 HiShelf Gain Min 0 (Off ) Max 124 (+24dB
5604 Visible 19 (9) Ofs 18 EQ Output Min 0 (Off ) Max 124 (+24dB
5605 Visible 20 (20) Ofs 40 LFO Rate Min 0 (1/1 Sys ) Max 116 (20.0H
5606 Visible 21 (21) Ofs 42 LFO Shape Min 0 (Triangle) Max 7 (4-Ste
5607 Visible 22 (23) Ofs 46 Phaser Depth Min 0 (0 ) Max 100 (100
5608 Visible 23 (24) Ofs 48 Phaser Center Min 0 (0 ) Max 100 (100
5609 Visible 24 (25) Ofs 50 Notch Depth Min 0 (0% ) Max 100 (100%
5610 Visible 25 (26) Ofs 52 Feedback Min 0 (-99% ) Max 127 (+99%

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5611 Hidden 26 (26) Ofs 52 Feedback Min 0 (-99% ) Max 127 (-99%
5612
5613 Insert Effect 28: Dist(AutoWah
5614
5615 Total parameters: 13 (13 visible, 0 hidden)
5616 Visible 0 (4) Ofs 8 Pre HPF Fc Min 0 (10Hz ) Max 60 (1.50k
5617 Visible 1 (5) Ofs 10 Pre VCF Fc Min 0 (10Hz ) Max 94 (7.10k
5618 Visible 2 (6) Ofs 12 Pre VCF Q Min 10 (1.0 ) Max 400 (40.0
5619 Visible 3 (7) Ofs 14 PreVCF EnvAmt Min 0 (-99% ) Max 127 (+99%
5620 Visible 4 (0) Ofs 0 Dist Gain Min 0 (Off ) Max 148 (+48dB
5621 Visible 5 (1) Ofs 2 Dist Volume Min 0 (Off ) Max 100 (0dB
5622 Visible 6 (12) Ofs 24 Distortion Min 0 (On ) Max 1 (Off
5623 Visible 7 (9) Ofs 18 Post VCF Fc Min 0 (10Hz ) Max 94 (7.10k
5624 Visible 8 (10) Ofs 20 Post VCF Q Min 10 (1.0 ) Max 400 (40.0
5625 Visible 9 (11) Ofs 22 PostVCF EnvAmt Min 0 (-99% ) Max 127 (+99%
5626 Visible 10 (2) Ofs 4 VCF Attack Min 0 (50us ) Max 58 (10.0s
5627 Visible 11 (3) Ofs 6 VCF Release Min 0 (50us ) Max 58 (10.0s
5628 Visible 12 (8) Ofs 16 Post HPF Fc Min 0 (10Hz ) Max 60 (1.50k
5629
5630 Insert Effect 29: ResVCF(DDL
5631
5632 Total parameters: 19 (19 visible, 0 hidden)
5633 Visible 0 Ofs 0 VCF Input Min 0 (Off ) Max 100 (0.0dB
5634 Visible 1 Ofs 2 VCF Fc Min 0 (10Hz ) Max 94 (7.10k
5635 Visible 2 Ofs 4 VCF Q Min 10 (1.0 ) Max 400 (40.0
5636 Visible 3 Ofs 6 ADSR Attack Min 0 (50us ) Max 58 (10.0s
5637 Visible 4 Ofs 8 ADSR Decay Min 0 (50us ) Max 58 (10.0s
5638 Visible 5 Ofs 10 ADSR Sustain Min 0 (Off ) Max 100 (0.0dB
5639 Visible 6 Ofs 12 ADSR Release Min 0 (50us ) Max 58 (10.0s
5640 Visible 7 Ofs 14 ADSR Env Amt Min 0 (-99% ) Max 127 (+99%
5641 Visible 8 Ofs 16 ADSR TrigMode Min 0 (Single ) Max 1 (Multi
5642 Visible 9 Ofs 18 Dly1 Time Min 0 (1/1 Sys ) Max 641 (630ms
5643 Visible 10 Ofs 20 Dly1 Level Min 0 (Off ) Max 124 (+12.0
5644 Visible 11 Ofs 22 Dly1 Feedback Min 0 (-99% ) Max 127 (+99%
5645 Visible 12 Ofs 24 Dly1 Damping Min 0 (100Hz ) Max 127 (21.2k
5646 Visible 13 Ofs 26 Dly1 Pan Min 0 (Full <L ) Max 127 (Full
5647 Visible 14 Ofs 28 Dly2 Time Min 0 (1/1 Sys ) Max 641 (630ms
5648 Visible 15 Ofs 30 Dly2 Level Min 0 (Off ) Max 124 (+12.0
5649 Visible 16 Ofs 32 Dly2 Feedback Min 0 (-99% ) Max 127 (+99%
5650 Visible 17 Ofs 34 Dly2 Damping Min 0 (100Hz ) Max 127 (21.2k
5651 Visible 18 Ofs 36 Dly2 Pan Min 0 (Full <L ) Max 127 (Full
5652
5653 Insert Effect 30: Dist(VCF(DDL
5654
5655 Total parameters: 31 (31 visible, 0 hidden)
5656 Visible 0 (2) Ofs 4 Dist LPF Fc Min 0 (10Hz ) Max 121 (20.0k
5657 Visible 1 (5) Ofs 10 Dist Offset Min 0 (-99% ) Max 127 (+99%
5658 Visible 2 (0) Ofs 0 Dist Gain Min 0 (Off ) Max 148 (+48dB
5659 Visible 3 (6) Ofs 12 Dist Curve Min 0 (Soft ) Max 4 (Buzz
5660 Visible 4 (1) Ofs 2 Dist Volume Min 0 (Off ) Max 100 (0dB
5661 Visible 5 (3) Ofs 6 Post VCF Fc Min 0 (10Hz ) Max 94 (7.10k
5662 Visible 6 (4) Ofs 8 Post VCF Q Min 10 (1.0 ) Max 400 (40.0
5663 Visible 7 (7) Ofs 14 Dist Dry Lev Min 0 (Off ) Max 100 (0.0dB
5664 Visible 8 (9) Ofs 18 Mid 1 Fc Min 0 (10Hz ) Max 121 (20.0k
5665 Visible 9 (10) Ofs 20 Mid 1 Q Min 10 (1.0 ) Max 400 (40.0

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5666 Visible 10 (11) Ofs 22 Mid 1 Gain Min 0 (Off ) Max 124 (+24dB
5667 Visible 11 (8) Ofs 16 EQ Output Min 0 (Off ) Max 124 (+24dB
5668 Visible 12 (12) Ofs 24 VCF Input Min 0 (Off ) Max 100 (0.0dB
5669 Visible 13 (13) Ofs 26 VCF Fc Min 0 (10Hz ) Max 94 (7.10k
5670 Visible 14 (14) Ofs 28 VCF Q Min 10 (1.0 ) Max 400 (40.0
5671 Visible 15 (15) Ofs 30 ADSR Attack Min 0 (50us ) Max 58 (10.0s
5672 Visible 16 (16) Ofs 32 ADSR Decay Min 0 (50us ) Max 58 (10.0s
5673 Visible 17 (17) Ofs 34 ADSR Sustain Min 0 (Off ) Max 100 (0.0dB
5674 Visible 18 (18) Ofs 36 ADSR Release Min 0 (50us ) Max 58 (10.0s
5675 Visible 19 (19) Ofs 38 ADSR Env Amt Min 0 (-99% ) Max 127 (+99%
5676 Visible 20 (30) Ofs 60 ADSR TrigMode Min 0 (Single ) Max 1 (Multi
5677 Visible 21 (20) Ofs 40 Dly1 Time Min 0 (1/1 Sys ) Max 641 (630ms
5678 Visible 22 (21) Ofs 42 Dly1 Level Min 0 (Off ) Max 124 (+12.0
5679 Visible 23 (22) Ofs 44 Dly1 Feedback Min 0 (-99% ) Max 127 (+99%
5680 Visible 24 (23) Ofs 46 Dly1 Damping Min 0 (100Hz ) Max 127 (21.2k
5681 Visible 25 (24) Ofs 48 Dly1 Pan Min 0 (Full <L ) Max 127 (Full
5682 Visible 26 (25) Ofs 50 Dly2 Time Min 0 (1/1 Sys ) Max 641 (630ms
5683 Visible 27 (26) Ofs 52 Dly2 Level Min 0 (Off ) Max 124 (+12.0
5684 Visible 28 (27) Ofs 54 Dly2 Feedback Min 0 (-99% ) Max 127 (+99%
5685 Visible 29 (28) Ofs 56 Dly2 Damping Min 0 (100Hz ) Max 127 (21.2k
5686 Visible 30 (29) Ofs 58 Dly2 Pan Min 0 (Full <L ) Max 127 (Full
5687
5688 Insert Effect 31: Pitch Detuner
5689
5690 Total parameters: 16 (16 visible, 0 hidden)
5691 Visible 0 Ofs 0 Voicel Semi Min 0 (-24 semi) Max 48 (+24 s
5692 Visible 1 Ofs 2 Voicel Fine Min 0 (-100cent) Max 200 (+100c
5693 Visible 2 Ofs 4 Voicel Level Min 0 (Off ) Max 100 (0.0dB
5694 Visible 3 Ofs 6 Voicel Regen Min 0 (-99% ) Max 127 (+99%
5695 Visible 4 Ofs 8 Voicel Width Min 1 (1ms ) Max 185 (185ms
5696 Visible 5 Ofs 10 Voicel Mod Min 0 (0% ) Max 100 (100%
5697 Visible 6 Ofs 12 Voice2 Semi Min 0 (-24 semi) Max 48 (+24 s
5698 Visible 7 Ofs 14 Voice2 Fine Min 0 (-100cent) Max 200 (+100c
5699 Visible 8 Ofs 16 Voice2 Level Min 0 (Off ) Max 100 (0.0dB
5700 Visible 9 Ofs 18 Voice2 Regen Min 0 (-99% ) Max 127 (+99%
5701 Visible 10 Ofs 20 Voice2 Width Min 1 (1ms ) Max 185 (185ms
5702 Visible 11 Ofs 22 Voice2 Mod Min 0 (0% ) Max 100 (100%
5703 Visible 12 Ofs 24 LFO Rate Min 0 (1/1 Sys ) Max 116 (20.0H
5704 Visible 13 Ofs 26 LFO Shape Min 0 (Triangle) Max 7 (4-Ste
5705 Visible 14 Ofs 28 LFO Phase Min 0 (-180deg ) Max 180 (+180d
5706 Visible 15 Ofs 30 Regen Time Min 0 (1/1 Sys ) Max 196 (185ms
5707
5708 Insert Effect 32: Chatter Box
5709
5710 Total parameters: 20 (20 visible, 0 hidden)
5711 Visible 0 Ofs 0 VCF Input Min 0 (Off ) Max 100 (0.0dB
5712 Visible 1 Ofs 2 VCF Dry Amt Min 0 (Off ) Max 100 (0.0dB
5713 Visible 2 Ofs 4 Shape 1 Min 0 ('A' ) Max 29 ('Z'
5714 Visible 3 Ofs 6 Shape 2 Min 0 ('A' ) Max 29 ('Z'
5715 Visible 4 Ofs 8 Shape 3 Min 0 ('A' ) Max 29 ('Z'
5716 Visible 5 Ofs 10 Shape 4 Min 0 ('A' ) Max 29 ('Z'
5717 Visible 6 Ofs 12 FormantWarp Min 12 (-12 semi) Max 36 (+12 s
5718 Visible 7 Ofs 14 AutoPan Depth Min 0 (0% ) Max 100 (100%
5719 Visible 8 Ofs 16 LFO Rate Min 0 (1/1 Sys ) Max 116 (20.0H
5720 Visible 9 Ofs 18 LFO Shape Min 0 (Triangle) Max 7 (4-Ste

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5721 Visible 10      Ofs 20  LFO 2 Rate      Min    0 (1/1 Sys ) Max  116 (20.0H
5722 Visible 11      Ofs 22  LFO 2 Shape      Min    0 (Triangle) Max    7 (4-Ste
5723 Visible 12      Ofs 24  Dly1 Time        Min    0 (1/1 Sys ) Max  641 (630ms
5724 Visible 13      Ofs 26  Dly1 Level       Min    0 (Off      ) Max  124 (+12.0
5725 Visible 14      Ofs 28  Dly1 Feedback    Min    0 (-99%    ) Max  127 (+99%
5726 Visible 15      Ofs 30  Dly1 Damping     Min    0 (100Hz   ) Max  127 (21.2k
5727 Visible 16      Ofs 32  Dly2 Time        Min    0 (1/1 Sys ) Max  641 (630ms
5728 Visible 17      Ofs 34  Dly2 Level       Min    0 (Off      ) Max  124 (+12.0
5729 Visible 18      Ofs 36  Dly2 Feedback    Min    0 (-99%    ) Max  127 (+99%
5730 Visible 19      Ofs 38  Dly2 Damping     Min    0 (100Hz   ) Max  127 (21.2k
5731
5732 Insert Effect 33: Formant Morph
5733
5734 Total parameters: 25 (25 visible, 0 hidden)
5735 Visible  0      Ofs  0  Dist Gain        Min    0 (Off      ) Max  148 (+48dB
5736 Visible  1      Ofs  2  Dist Volume      Min    0 (Off      ) Max  100 (0dB
5737 Visible  2      Ofs  4  Dist LPF Fc      Min    0 (10Hz     ) Max  121 (20.0k
5738 Visible  3      Ofs  6  Post VCF Fc      Min    0 (10Hz     ) Max   94 (7.10k
5739 Visible  4      Ofs  8  Post VCF Q       Min   10 (1.0     ) Max  400 (40.0
5740 Visible  5      Ofs 10  Dist Offset      Min    0 (-99%    ) Max  127 (+99%
5741 Visible  6      Ofs 12  Dist Curve       Min    0 (Soft     ) Max    4 (Buzz
5742 Visible  7      Ofs 14  Dist Dry Lev     Min    0 (Off      ) Max  100 (0.0dB
5743 Visible  8      Ofs 16  VCF Input        Min    0 (Off      ) Max  100 (0.0dB
5744 Visible  9      Ofs 18  VCF Dry Amt      Min    0 (Off      ) Max  100 (0.0dB
5745 Visible 10      Ofs 20  Shape 1          Min    0 ('A'     ) Max   29 ('Z'
5746 Visible 11      Ofs 22  Shape 2          Min    0 ('A'     ) Max   29 ('Z'
5747 Visible 12      Ofs 24  FormantWarp      Min   12 (-12 semi) Max   36 (+12 s
5748 Visible 13      Ofs 26  AutoPan Depth    Min    0 (0%      ) Max  100 (100%
5749 Visible 14      Ofs 28  LFO Rate         Min    0 (1/1 Sys ) Max  116 (20.0H
5750 Visible 15      Ofs 30  LFO Shape        Min    0 (Triangle) Max    7 (4-Ste
5751 Visible 16      Ofs 32  LFO Phase        Min    0 (-180deg ) Max  180 (+180d
5752 Visible 17      Ofs 34  Dly1 Time        Min    0 (1/1 Sys ) Max  641 (630ms
5753 Visible 18      Ofs 36  Dly1 Level       Min    0 (Off      ) Max  124 (+12.0
5754 Visible 19      Ofs 38  Dly1 Feedback    Min    0 (-99%    ) Max  127 (+99%
5755 Visible 20      Ofs 40  Dly1 Damping     Min    0 (100Hz   ) Max  127 (21.2k
5756 Visible 21      Ofs 42  Dly2 Time        Min    0 (1/1 Sys ) Max  641 (630ms
5757 Visible 22      Ofs 44  Dly2 Level       Min    0 (Off      ) Max  124 (+12.0
5758 Visible 23      Ofs 46  Dly2 Feedback    Min    0 (-99%    ) Max  127 (+99%
5759 Visible 24      Ofs 48  Dly2 Damping     Min    0 (100Hz   ) Max  127 (21.2k
5760
5761 Insert Effect 34: Rotary Speaker
5762
5763 Total parameters: 32 (32 visible, 0 hidden)
5764 Visible  0 (2)   Ofs  4  Dist LPF Fc      Min    0 (10Hz     ) Max  121 (20.0k
5765 Visible  1 (5)   Ofs 10  Dist Offset      Min    0 (-99%    ) Max  127 (+99%
5766 Visible  2 (0)   Ofs  0  Dist Gain        Min    0 (Off      ) Max  148 (+48dB
5767 Visible  3 (6)   Ofs 12  Dist Curve       Min    0 (Soft     ) Max    4 (Buzz
5768 Visible  4 (1)   Ofs  2  Dist Volume      Min    0 (Off      ) Max  100 (0dB
5769 Visible  5 (3)   Ofs  6  Post VCF Fc      Min    0 (10Hz     ) Max   94 (7.10k
5770 Visible  6 (4)   Ofs  8  Post VCF Q       Min   10 (1.0     ) Max  400 (40.0
5771 Visible  7 (7)   Ofs 14  Dist Dry Lev     Min    0 (Off      ) Max  100 (0.0dB
5772 Visible  8 (9)   Ofs 18  Mid 1 Fc         Min    0 (10Hz     ) Max  121 (20.0k
5773 Visible  9 (10)  Ofs 20  Mid 1 Q          Min   10 (1.0     ) Max  400 (40.0
5774 Visible 10 (11)  Ofs 22  Mid 1 Gain       Min    0 (Off      ) Max  124 (+24dB
5775 Visible 11 (8)   Ofs 16  EQ Output        Min    0 (Off      ) Max  124 (+24dB

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5776 Visible 12 (14) Ofs 28 Speed Min 0 (Slow ) Max 1 (Fast
5777 Visible 13 (15) Ofs 30 Spread Min 0 (Stereo ) Max 1 (Mono
5778 Visible 14 (12) Ofs 24 Crossover Fc Min 0 (10Hz ) Max 121 (20.0k
5779 Visible 15 (13) Ofs 26 Lo Hi Bal Min 0 (Full <Lo) Max 127 (Full
5780 Visible 16 (30) Ofs 60 Rotor Mix Min 0 (Full Dry) Max 127 (Full
5781 Visible 17 (16) Ofs 32 Hi Inertia Min 0 (100ms ) Max 30 (10.0s
5782 Visible 18 (17) Ofs 34 Hi Slow Min 0 (0.0Hz ) Max 50 (10.0H
5783 Visible 19 (18) Ofs 36 Hi Fast Min 0 (0.0Hz ) Max 50 (10.0H
5784 Visible 20 (19) Ofs 38 Hi FM Min Min 0 (0 ) Max 100 (100
5785 Visible 21 (20) Ofs 40 Hi FM Max Min 0 (0 ) Max 100 (100
5786 Visible 22 (21) Ofs 42 Hi AM Min Min 0 (0 ) Max 100 (100
5787 Visible 23 (22) Ofs 44 Hi AM Max Min 0 (0 ) Max 100 (100
5788 Visible 24 (23) Ofs 46 Lo Inertia Min 0 (100ms ) Max 30 (10.0s
5789 Visible 25 (24) Ofs 48 Lo Slow Min 0 (0.0Hz ) Max 50 (10.0H
5790 Visible 26 (25) Ofs 50 Lo Fast Min 0 (0.0Hz ) Max 50 (10.0H
5791 Visible 27 (26) Ofs 52 Lo FM Min Min 0 (0 ) Max 100 (100
5792 Visible 28 (27) Ofs 54 Lo FM Max Min 0 (0 ) Max 100 (100
5793 Visible 29 (28) Ofs 56 Lo AM Min Min 0 (0 ) Max 100 (100
5794 Visible 30 (29) Ofs 58 Lo AM Max Min 0 (0 ) Max 100 (100
5795 Visible 31 (31) Ofs 62 Speed Control Min 0 (Normal ) Max 1 (Toggl
5796
5797 Insert Effect 35: Tunable Spkr
5798
5799 Total parameters: 14 (14 visible, 0 hidden)
5800 Visible 0 (2) Ofs 4 Pre HP Fc Min 0 (10Hz ) Max 60 (1.50k
5801 Visible 1 (0) Ofs 0 EQ Input Min 0 (Off ) Max 124 (+24dB
5802 Visible 2 (5) Ofs 10 Mid 1 Fc Min 0 (10Hz ) Max 121 (20.0k
5803 Visible 3 (6) Ofs 12 Mid 1 Q Min 10 (1.0 ) Max 400 (40.0
5804 Visible 4 (7) Ofs 14 Mid 1 Gain Min 0 (Off ) Max 124 (+24dB
5805 Visible 5 (8) Ofs 16 Mid 2 Fc Min 0 (10Hz ) Max 121 (20.0k
5806 Visible 6 (9) Ofs 18 Mid 2 Q Min 10 (1.0 ) Max 400 (40.0
5807 Visible 7 (10) Ofs 20 Mid 2 Gain Min 0 (Off ) Max 124 (+24dB
5808 Visible 8 (11) Ofs 22 Mid 3 Fc Min 0 (10Hz ) Max 121 (20.0k
5809 Visible 9 (12) Ofs 24 Mid 3 Q Min 10 (1.0 ) Max 400 (40.0
5810 Visible 10 (13) Ofs 26 Mid 3 Gain Min 0 (Off ) Max 124 (+24dB
5811 Visible 11 (1) Ofs 2 EQ Output Min 0 (Off ) Max 124 (+24dB
5812 Visible 12 (4) Ofs 8 HPF Cutoff Min 0 (10Hz ) Max 121 (20.0k
5813 Visible 13 (3) Ofs 6 LPF Cutoff Min 0 (10Hz ) Max 121 (20.0k
5814
5815 Insert Effect 36: Guitar Amp
5816
5817 Total parameters: 31 (31 visible, 0 hidden)
5818 Visible 0 (4) Ofs 8 Pre HP Fc Min 0 (10Hz ) Max 60 (1.50k
5819 Visible 1 (7) Ofs 14 Pre EQ Trim Min 0 (Off ) Max 124 (+24dB
5820 Visible 2 (8) Ofs 16 Pre EQ Fc Min 0 (10Hz ) Max 121 (20.0k
5821 Visible 3 (9) Ofs 18 Pre EQ Q Min 10 (1.0 ) Max 400 (40.0
5822 Visible 4 (10) Ofs 20 Pre EQ Gain Min 0 (Off ) Max 124 (+24dB
5823 Visible 5 (0) Ofs 0 Preamp Gain Min 0 (Off ) Max 148 (+48dB
5824 Visible 6 (1) Ofs 2 Master Level Min 0 (Off ) Max 100 (0dB
5825 Visible 7 (6) Ofs 12 Tube Bias Min 0 (0 ) Max 100 (100
5826 Visible 8 (2) Ofs 4 Bias Attack Min 0 (50us ) Max 58 (10.0s
5827 Visible 9 (3) Ofs 6 Bias Release Min 0 (50us ) Max 58 (10.0s
5828 Visible 10 (5) Ofs 10 Post HP Fc Min 0 (10Hz ) Max 60 (1.50k
5829 Visible 11 (12) Ofs 24 Amp BassGain Min 0 (Off ) Max 124 (+24dB
5830 Visible 12 (14) Ofs 28 Amp Mid1 Fc Min 0 (10Hz ) Max 121 (20.0k

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5831 Visible 13 (15) Ofs 30 Amp Mid1 Q Min 10 (1.0 ) Max 400 (40.0
5832 Visible 14 (16) Ofs 32 Amp Mid1Gain Min 0 (Off ) Max 124 (+24dB
5833 Visible 15 (17) Ofs 34 Amp Mid2 Fc Min 0 (10Hz ) Max 121 (20.0k
5834 Visible 16 (18) Ofs 36 Amp Mid2 Q Min 10 (1.0 ) Max 400 (40.0
5835 Visible 17 (19) Ofs 38 Amp Mid2Gain Min 0 (Off ) Max 124 (+24dB
5836 Visible 18 (13) Ofs 26 Amp TrebGain Min 0 (Off ) Max 124 (+24dB
5837 Visible 19 (11) Ofs 22 PostEQ Level Min 0 (Off ) Max 124 (+24dB
5838 Visible 20 (20) Ofs 40 Speaker LPF Min 0 (10Hz ) Max 121 (20.0k
5839 Visible 21 (21) Ofs 42 Gate Thresh Min 0 (-96.0dB ) Max 96 (0.0dB
5840 Visible 22 (22) Ofs 44 Gate Hysteresis Min 0 (0dB ) Max 48 (48dB
5841 Visible 23 (23) Ofs 46 Dly1 Time Min 0 (1/1 Sys ) Max 641 (630ms
5842 Visible 24 (24) Ofs 48 Dly1 Level Min 0 (Off ) Max 124 (+12.0
5843 Visible 25 (25) Ofs 50 Dly1 Feedback Min 0 (-99% ) Max 127 (+99%
5844 Visible 26 (26) Ofs 52 Dly1 Damping Min 0 (100Hz ) Max 127 (21.2k
5845 Visible 27 (27) Ofs 54 Dly1 Pan Min 0 (Full <L ) Max 127 (Full
5846 Visible 28 (28) Ofs 56 Dly2 Time Min 0 (1/1 Sys ) Max 641 (630ms
5847 Visible 29 (29) Ofs 58 Dly2 Level Min 0 (Off ) Max 124 (+12.0
5848 Visible 30 (30) Ofs 60 Dly2 Pan Min 0 (Full <L ) Max 127 (Full
5849
5850 Insert Effect 37: Dist(DDL(Trem
5851
5852 Total parameters: 31 (31 visible, 0 hidden)
5853 Visible 0 (2) Ofs 4 Dist LPF Fc Min 0 (10Hz ) Max 121 (20.0kH
5854 Visible 1 (5) Ofs 10 Dist Offset Min 0 (-99% ) Max 127 (+99%
5855 Visible 2 (0) Ofs 0 Dist Gain Min 0 (Off ) Max 148 (+48dB
5856 Visible 3 (6) Ofs 12 Dist Curve Min 0 (Soft ) Max 4 (Buzz
5857 Visible 4 (1) Ofs 2 Dist Volume Min 0 (Off ) Max 100 (0dB
5858 Visible 5 (3) Ofs 6 Post VCF Fc Min 0 (10Hz ) Max 94 (7.10kH
5859 Visible 6 (4) Ofs 8 Post VCF Q Min 10 (1.0 ) Max 400 (40.0
5860 Visible 7 (7) Ofs 14 Dist Dry Lev Min 0 (Off ) Max 100 (0.0dB
5861 Visible 8 (9) Ofs 18 LoShelf Gain Min 0 (Off ) Max 124 (+24dB
5862 Visible 9 (11) Ofs 22 Mid 1 Fc Min 0 (10Hz ) Max 121 (20.0kH
5863 Visible 10 (12) Ofs 24 Mid 1 Q Min 10 (1.0 ) Max 400 (40.0
5864 Visible 11 (13) Ofs 26 Mid 1 Gain Min 0 (Off ) Max 124 (+24dB
5865 Visible 12 (14) Ofs 28 Mid 2 Fc Min 0 (10Hz ) Max 121 (20.0kH
5866 Visible 13 (15) Ofs 30 Mid 2 Q Min 10 (1.0 ) Max 400 (40.0
5867 Visible 14 (16) Ofs 32 Mid 2 Gain Min 0 (Off ) Max 124 (+24dB
5868 Visible 15 (10) Ofs 20 HiShelf Gain Min 0 (Off ) Max 124 (+24dB
5869 Visible 16 (8) Ofs 16 EQ Output Min 0 (Off ) Max 124 (+24dB
5870 Visible 17 (17) Ofs 34 Dly1 Time Min 0 (1/1 Sys ) Max 641 (630ms
5871 Visible 18 (18) Ofs 36 Dly1 Level Min 0 (Off ) Max 124 (+12.0d
5872 Visible 19 (19) Ofs 38 Dly1 Feedback Min 0 (-99% ) Max 127 (+99%
5873 Visible 20 (20) Ofs 40 Dly1 Damping Min 0 (100Hz ) Max 127 (21.2kH
5874 Visible 21 (21) Ofs 42 Dly1 Pan Min 0 (Full <L ) Max 127 (Full >
5875 Visible 22 (22) Ofs 44 Dly2 Time Min 0 (1/1 Sys ) Max 641 (630ms
5876 Visible 23 (23) Ofs 46 Dly2 Level Min 0 (Off ) Max 124 (+12.0d
5877 Visible 24 (24) Ofs 48 Dly2 Feedback Min 0 (-99% ) Max 127 (+99%
5878 Visible 25 (25) Ofs 50 Dly2 Damping Min 0 (100Hz ) Max 127 (21.2kH
5879 Visible 26 (26) Ofs 52 Dly2 Pan Min 0 (Full <L ) Max 127 (Full >
5880 Visible 27 (27) Ofs 54 LFO Rate Min 0 (1/1 Sys ) Max 116 (20.0Hz
5881 Visible 28 (28) Ofs 56 LFO Shape Min 0 (Triangle) Max 7 (4-Step
5882 Visible 29 (29) Ofs 58 LFO Phase Min 0 (-180deg ) Max 180 (+180de
5883 Visible 30 (30) Ofs 60 LFO Depth Min 0 (Full Dry) Max 127 (Full W
5884
5885 Insert Effect 38: Comp(Dist(DDL

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5886

5887 Total parameters: 32 (32 visible, 0 hidden)

5888	Visible	0 (0)	Ofs 0	Comp Ratio	Min	0 (1.0:1 )	Max	34 (INF:1
5889	Visible	1 (1)	Ofs 2	Comp Attack	Min	0 (50us )	Max	58 (10.0s
5890	Visible	2 (2)	Ofs 4	Comp Release	Min	0 (50us )	Max	58 (10.0s
5891	Visible	3 (3)	Ofs 6	Comp Thresh	Min	0 (-96.0dB )	Max	96 (0.0dB
5892	Visible	4 (4)	Ofs 8	Comp Output	Min	0 (Off )	Max	148 (+48dB
5893	Visible	5 (5)	Ofs 10	Gate Thresh	Min	0 (-96.0dB )	Max	96 (0.0dB
5894	Visible	6 (6)	Ofs 12	Gate Hysteresis	Min	0 (0dB )	Max	48 (48dB
5895	Visible	7 (9)	Ofs 18	Dist LPF Fc	Min	0 (10Hz )	Max	121 (20.0k
5896	Visible	8 (12)	Ofs 24	Dist Offset	Min	0 (-99% )	Max	127 (+99%
5897	Visible	9 (7)	Ofs 14	Dist Gain	Min	0 (Off )	Max	148 (+48dB
5898	Visible	10 (13)	Ofs 26	Dist Curve	Min	0 (Soft )	Max	4 (Buzz
5899	Visible	11 (8)	Ofs 16	Dist Volume	Min	0 (Off )	Max	100 (0dB
5900	Visible	12 (10)	Ofs 20	Post VCF Fc	Min	0 (10Hz )	Max	94 (7.10k
5901	Visible	13 (11)	Ofs 22	Post VCF Q	Min	10 (1.0 )	Max	400 (40.0
5902	Visible	14 (14)	Ofs 28	Dist Dry Lev	Min	0 (Off )	Max	100 (0.0dB
5903	Visible	15 (16)	Ofs 32	LoShelf Gain	Min	0 (Off )	Max	124 (+24dB
5904	Visible	16 (18)	Ofs 36	Mid 1 Fc	Min	0 (10Hz )	Max	121 (20.0k
5905	Visible	17 (19)	Ofs 38	Mid 1 Q	Min	10 (1.0 )	Max	400 (40.0
5906	Visible	18 (20)	Ofs 40	Mid 1 Gain	Min	0 (Off )	Max	124 (+24dB
5907	Visible	19 (21)	Ofs 42	Mid 2 Fc	Min	0 (10Hz )	Max	121 (20.0k
5908	Visible	20 (22)	Ofs 44	Mid 2 Q	Min	10 (1.0 )	Max	400 (40.0
5909	Visible	21 (23)	Ofs 46	Mid 2 Gain	Min	0 (Off )	Max	124 (+24dB
5910	Visible	22 (17)	Ofs 34	HiShelf Gain	Min	0 (Off )	Max	124 (+24dB
5911	Visible	23 (15)	Ofs 30	EQ Output	Min	0 (Off )	Max	124 (+24dB
5912	Visible	24 (24)	Ofs 48	Dly1 Time	Min	0 (1/1 Sys )	Max	641 (630ms
5913	Visible	25 (25)	Ofs 50	Dly1 Level	Min	0 (Off )	Max	124 (+12.0
5914	Visible	26 (26)	Ofs 52	Dly1 Feedback	Min	0 (-99% )	Max	127 (+99%
5915	Visible	27 (27)	Ofs 54	Dly1 Damping	Min	0 (100Hz )	Max	127 (21.2k
5916	Visible	28 (28)	Ofs 56	Dly1 Pan	Min	0 (Full <L )	Max	127 (Full
5917	Visible	29 (29)	Ofs 58	Dly2 Time	Min	0 (1/1 Sys )	Max	641 (630ms
5918	Visible	30 (30)	Ofs 60	Dly2 Level	Min	0 (Off )	Max	124 (+12.0
5919	Visible	31 (31)	Ofs 62	Dly2 Pan	Min	0 (Full <L )	Max	127 (Full

5920

5921 Insert Effect 39: EQ(Comp(Gate

5922

5923 Total parameters: 23 (23 visible, 0 hidden)

5924	Visible	0 (0)	Ofs 0	EQ Input	Min	0 (Off )	Max	124 (+24dB
5925	Visible	1 (2)	Ofs 4	LoShelf Fc	Min	0 (10Hz )	Max	121 (20.0k
5926	Visible	2 (3)	Ofs 6	LoShelf Gain	Min	0 (Off )	Max	124 (+24dB
5927	Visible	3 (6)	Ofs 12	Mid 1 Fc	Min	0 (10Hz )	Max	121 (20.0k
5928	Visible	4 (7)	Ofs 14	Mid 1 Q	Min	10 (1.0 )	Max	400 (40.0
5929	Visible	5 (8)	Ofs 16	Mid 1 Gain	Min	0 (Off )	Max	124 (+24dB
5930	Visible	6 (9)	Ofs 18	Mid 2 Fc	Min	0 (10Hz )	Max	121 (20.0k
5931	Visible	7 (10)	Ofs 20	Mid 2 Q	Min	10 (1.0 )	Max	400 (40.0
5932	Visible	8 (11)	Ofs 22	Mid 2 Gain	Min	0 (Off )	Max	124 (+24dB
5933	Visible	9 (4)	Ofs 8	HiShelf Fc	Min	0 (10Hz )	Max	121 (20.0k
5934	Visible	10 (5)	Ofs 10	HiShelf Gain	Min	0 (Off )	Max	124 (+24dB
5935	Visible	11 (1)	Ofs 2	EQ Output	Min	0 (Off )	Max	124 (+24dB
5936	Visible	12 (12)	Ofs 24	Comp PreDelay	Min	0 (0ms )	Max	100 (100ms
5937	Visible	13 (13)	Ofs 26	Comp Ratio	Min	0 (1.0:1 )	Max	34 (INF:1
5938	Visible	14 (14)	Ofs 28	Comp Attack	Min	0 (50us )	Max	58 (10.0s
5939	Visible	15 (15)	Ofs 30	Comp Release	Min	0 (50us )	Max	58 (10.0s
5940	Visible	16 (16)	Ofs 32	Comp Thresh	Min	0 (-96.0dB )	Max	96 (0.0dB

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5941 Visible 17 (17) Ofs 34 Comp Output      Min    0 (Off      ) Max  148 (+48dB
5942 Visible 18 (21) Ofs 42 Gate Thresh    Min    0 (-96.0dB ) Max   96 (0.0dB
5943 Visible 19 (22) Ofs 44 Gate Hysteresis Min    0 (0dB      ) Max   48 (48dB
5944 Visible 20 (18) Ofs 36 Gate Attack     Min    0 (50us     ) Max   58 (10.0s
5945 Visible 21 (19) Ofs 38 Gate Release    Min    0 (50us     ) Max   58 (10.0s
5946 Visible 22 (20) Ofs 40 Gate Hold      Min    0 (50us     ) Max   58 (10.0s
5947
5948 Insert Effect 40: EQ(Chorus(DDL
5949
5950 Total parameters: 32 (32 visible, 0 hidden)
5951 Visible  0 (0)  Ofs 0   EQ Input      Min    0 (Off      ) Max  124 (+24dB
5952 Visible  1 (2)  Ofs 4   LoShelf Fc   Min    0 (10Hz     ) Max  121 (20.0k
5953 Visible  2 (3)  Ofs 6   LoShelf Gain Min    0 (Off      ) Max  124 (+24dB
5954 Visible  3 (6)  Ofs 12  Mid 1 Fc    Min    0 (10Hz     ) Max  121 (20.0k
5955 Visible  4 (7)  Ofs 14  Mid 1 Q     Min   10 (1.0      ) Max  400 (40.0
5956 Visible  5 (8)  Ofs 16  Mid 1 Gain  Min    0 (Off      ) Max  124 (+24dB
5957 Visible  6 (9)  Ofs 18  Mid 2 Fc    Min    0 (10Hz     ) Max  121 (20.0k
5958 Visible  7 (10) Ofs 20  Mid 2 Q     Min   10 (1.0      ) Max  400 (40.0
5959 Visible  8 (11) Ofs 22  Mid 2 Gain  Min    0 (Off      ) Max  124 (+24dB
5960 Visible  9 (4)  Ofs 8   HiShelf Fc  Min    0 (10Hz     ) Max  121 (20.0k
5961 Visible 10 (5)  Ofs 10  HiShelf Gain Min    0 (Off      ) Max  124 (+24dB
5962 Visible 11 (1)  Ofs 2   EQ Output   Min    0 (Off      ) Max  124 (+24dB
5963 Visible 12 (31) Ofs 62  Dry Blend   Min    0 (Full Dry) Max  127 (Full
5964 Visible 13 (12) Ofs 24  LFO Rate    Min    0 (0.0Hz    ) Max  105 (20.0H
5965 Visible 14 (13) Ofs 26  Chorus Depth Min    0 (0.0ms    ) Max  250 (25.0m
5966 Visible 15 (14) Ofs 28  Chorus Center Min    0 (0.0ms    ) Max  500 (50.0m
5967 Visible 16 (15) Ofs 30  Dly1 Time   Min    0 (1/1 Sys  ) Max  641 (630ms
5968 Visible 17 (16) Ofs 32  Dly1 Level  Min    0 (Off      ) Max  124 (+12.0
5969 Visible 18 (17) Ofs 34  Dly1 Feedback Min    0 (-99%     ) Max  127 (+99%
5970 Visible 19 (18) Ofs 36  Dly1 Damping Min    0 (100Hz    ) Max  127 (21.2k
5971 Visible 20 (19) Ofs 38  Dly1 Pan    Min    0 (Full <L) Max  127 (Full
5972 Visible 21 (20) Ofs 40  Dly2 Time   Min    0 (1/1 Sys  ) Max  641 (630ms
5973 Visible 22 (21) Ofs 42  Dly2 Level  Min    0 (Off      ) Max  124 (+12.0
5974 Visible 23 (22) Ofs 44  Dly2 Feedback Min    0 (-99%     ) Max  127 (+99%
5975 Visible 24 (23) Ofs 46  Dly2 Damping Min    0 (100Hz    ) Max  127 (21.2k
5976 Visible 25 (24) Ofs 48  Dly2 Pan    Min    0 (Full <L) Max  127 (Full
5977 Visible 26 (25) Ofs 50  Dly3 Time   Min    0 (1/1 Sys  ) Max  641 (630ms
5978 Visible 27 (26) Ofs 52  Dly3 Level  Min    0 (Off      ) Max  124 (+12.0
5979 Visible 28 (27) Ofs 54  Dly3 Pan    Min    0 (Full <L) Max  127 (Full
5980 Visible 29 (28) Ofs 56  Dly4 Time   Min    0 (1/1 Sys  ) Max  641 (630ms
5981 Visible 30 (29) Ofs 58  Dly4 Level  Min    0 (Off      ) Max  124 (+12.0
5982 Visible 31 (30) Ofs 60  Dly4 Pan    Min    0 (Full <L) Max  127 (Full
5983
5984 Display Table #1
5985
5986 00h = OFF
5987 01h = -49.5dB
5988 02h = -49.0dB
5989 03h = -48.5dB
5990 04h = -48.0dB
5991 05h = -47.5dB
5992 06h = -47.0dB
5993 07h = -46.5dB
5994 08h = -46.0dB
5995 09h = -45.5dB

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5996 0Ah = -45.0dB  
5997 0Bh = -44.5dB  
5998 0Ch = -44.0dB  
5999 0Dh = -43.5dB  
6000 0Eh = -43.0dB  
6001 0Fh = -42.5dB  
6002 10h = -42.0dB  
6003 11h = -41.5dB  
6004 12h = -41.0dB  
6005 13h = -40.5dB  
6006 14h = -40.0dB  
6007 15h = -39.5dB  
6008 16h = -39.0dB  
6009 17h = -38.5dB  
6010 18h = -38.0dB  
6011 19h = -37.5dB  
6012 1Ah = -37.0dB  
6013 1Bh = -36.5dB  
6014 1Ch = -36.0dB  
6015 1Dh = -35.5dB  
6016 1Eh = -35.0dB  
6017 1Fh = -34.5dB  
6018 20h = -34.0dB  
6019 21h = -33.5dB  
6020 22h = -33.0dB  
6021 23h = -32.5dB  
6022 24h = -32.0dB  
6023 25h = -31.5dB  
6024 26h = -31.0dB  
6025 27h = -30.5dB  
6026 28h = -30.0dB  
6027 29h = -29.5dB  
6028 2Ah = -29.0dB  
6029 2Bh = -28.5dB  
6030 2Ch = -28.0dB  
6031 2Dh = -27.5dB  
6032 2Eh = -27.0dB  
6033 2Fh = -26.5dB  
6034 30h = -26.0dB  
6035 31h = -25.5dB  
6036 32h = -25.0dB  
6037 33h = -24.5dB  
6038 34h = -24.0dB  
6039 35h = -23.5dB  
6040 36h = -23.0dB  
6041 37h = -22.5dB  
6042 38h = -22.0dB  
6043 39h = -21.5dB  
6044 3Ah = -21.0dB  
6045 3Bh = -20.5dB  
6046 3Ch = -20.0dB  
6047 3Dh = -19.5dB  
6048 3Eh = -19.0dB  
6049 3Fh = -18.5dB  
6050 40h = -18.0dB

6051 41h = -17.5dB  
6052 42h = -17.0dB  
6053 43h = -16.5dB  
6054 44h = -16.0dB  
6055 45h = -15.5dB  
6056 46h = -15.0dB  
6057 47h = -14.5dB  
6058 48h = -14.0dB  
6059 49h = -13.5dB  
6060 4Ah = -13.0dB  
6061 4Bh = -12.5dB  
6062 4Ch = -12.0dB  
6063 4Dh = -11.5dB  
6064 4Eh = -11.0dB  
6065 4Fh = -10.5dB  
6066 50h = -10.0dB  
6067 51h = -9.5dB  
6068 52h = -9.0dB  
6069 53h = -8.5dB  
6070 54h = -8.0dB  
6071 55h = -7.5dB  
6072 56h = -7.0dB  
6073 57h = -6.5dB  
6074 58h = -6.0dB  
6075 59h = -5.5dB  
6076 5Ah = -5.0dB  
6077 5Bh = -4.5dB  
6078 5Ch = -4.0dB  
6079 5Dh = -3.5dB  
6080 5Eh = -3.0dB  
6081 5Fh = -2.5dB  
6082 60h = -2.0dB  
6083 61h = -1.5dB  
6084 62h = -1.0dB  
6085 63h = -0.5dB  
6086 64h = 0.0dB  
6087 65h = +01.0dB  
6088 66h = +02.0dB  
6089 67h = +03.0dB  
6090 68h = +04.0dB  
6091 69h = +05.0dB  
6092 6Ah = +06.0dB  
6093 6Bh = +07.0dB  
6094 6Ch = +08.0dB  
6095 6Dh = +09.0dB  
6096 6Eh = +10.0dB  
6097 6Fh = +11.0dB  
6098 70h = +12.0dB  
6099 71h = +13.0dB  
6100 72h = +14.0dB  
6101 73h = +15.0dB  
6102 74h = +16.0dB  
6103 75h = +17.0dB  
6104 76h = +18.0dB  
6105 77h = +19.0dB

6106 78h = +20.0dB  
6107 79h = +21.0dB  
6108 7Ah = +22.0dB  
6109 7Bh = +23.0dB  
6110 7Ch = +24.0dB  
6111 7Dh = +25.0dB  
6112 7Eh = +26.0dB  
6113 7Fh = +27.0dB  
6114 80h = +28.0dB  
6115 81h = +29.0dB  
6116 82h = +30.0dB  
6117 83h = +31.0dB  
6118 84h = +32.0dB  
6119 85h = +33.0dB  
6120 86h = +34.0dB  
6121 87h = +35.0dB  
6122 88h = +36.0dB  
6123 89h = +37.0dB  
6124 8Ah = +38.0dB  
6125 8Bh = +39.0dB  
6126 8Ch = +40.0dB  
6127 8Dh = +41.0dB  
6128 8Eh = +42.0dB  
6129 8Fh = +43.0dB  
6130 90h = +44.0dB  
6131 91h = +45.0dB  
6132 92h = +46.0dB  
6133 93h = +47.0dB  
6134 94h = +48.0dB  
6135  
6136 Display Table #2  
6137  
6138 00h = 10Hz  
6139 01h = 11Hz  
6140 02h = 12Hz  
6141 03h = 14Hz  
6142 04h = 16Hz  
6143 05h = 18Hz  
6144 06h = 20Hz  
6145 07h = 22Hz  
6146 08h = 25Hz  
6147 09h = 28Hz  
6148 0Ah = 32Hz  
6149 0Bh = 35Hz  
6150 0Ch = 40Hz  
6151 0Dh = 45Hz  
6152 0Eh = 50Hz  
6153 0Fh = 56Hz  
6154 10h = 63Hz  
6155 11h = 71Hz  
6156 12h = 80Hz  
6157 13h = 90Hz  
6158 14h = 100Hz  
6159 15h = 112Hz  
6160 16h = 125Hz

6161 17h = 140Hz  
6162 18h = 160Hz  
6163 19h = 180Hz  
6164 1Ah = 200Hz  
6165 1Bh = 224Hz  
6166 1Ch = 250Hz  
6167 1Dh = 280Hz  
6168 1Eh = 315Hz  
6169 1Fh = 355Hz  
6170 20h = 400Hz  
6171 21h = 425Hz  
6172 22h = 450Hz  
6173 23h = 475Hz  
6174 24h = 500Hz  
6175 25h = 530Hz  
6176 26h = 560Hz  
6177 27h = 600Hz  
6178 28h = 630Hz  
6179 29h = 650Hz  
6180 2Ah = 670Hz  
6181 2Bh = 710Hz  
6182 2Ch = 750Hz  
6183 2Dh = 800Hz  
6184 2Eh = 825Hz  
6185 2Fh = 850Hz  
6186 30h = 875Hz  
6187 31h = 900Hz  
6188 32h = 925Hz  
6189 33h = 950Hz  
6190 34h = 980Hz  
6191 35h = 1.00kHz  
6192 36h = 1.06kHz  
6193 37h = 1.12kHz  
6194 38h = 1.18kHz  
6195 39h = 1.25kHz  
6196 3Ah = 1.32kHz  
6197 3Bh = 1.40kHz  
6198 3Ch = 1.50kHz  
6199 3Dh = 1.60kHz  
6200 3Eh = 1.70kHz  
6201 3Fh = 1.80kHz  
6202 40h = 1.90kHz  
6203 41h = 2.00kHz  
6204 42h = 2.12kHz  
6205 43h = 2.24kHz  
6206 44h = 2.36kHz  
6207 45h = 2.50kHz  
6208 46h = 2.65kHz  
6209 47h = 2.80kHz  
6210 48h = 3.00kHz  
6211 49h = 3.15kHz  
6212 4Ah = 3.35kHz  
6213 4Bh = 3.55kHz  
6214 4Ch = 3.75kHz  
6215 4Dh = 4.00kHz

6216 4Eh = 4.12kHz  
6217 4Fh = 4.25kHz  
6218 50h = 4.50kHz  
6219 51h = 4.75kHz  
6220 52h = 5.00kHz  
6221 53h = 5.15kHz  
6222 54h = 5.30kHz  
6223 55h = 5.45kHz  
6224 56h = 5.60kHz  
6225 57h = 5.75kHz  
6226 58h = 6.00kHz  
6227 59h = 6.15kHz  
6228 5Ah = 6.30kHz  
6229 5Bh = 6.50kHz  
6230 5Ch = 6.70kHz  
6231 5Dh = 6.90kHz  
6232 5Eh = 7.10kHz  
6233 5Fh = 7.30kHz  
6234 60h = 7.50kHz  
6235 61h = 7.75kHz  
6236 62h = 8.00kHz  
6237 63h = 8.25kHz  
6238 64h = 8.50kHz  
6239 65h = 8.75kHz  
6240 66h = 9.00kHz  
6241 67h = 9.25kHz  
6242 68h = 9.50kHz  
6243 69h = 9.80kHz  
6244 6Ah = 10.0kHz  
6245 6Bh = 10.3kHz  
6246 6Ch = 10.6kHz  
6247 6Dh = 10.9kHz  
6248 6Eh = 11.2kHz  
6249 6Fh = 11.8kHz  
6250 70h = 12.2kHz  
6251 71h = 12.6kHz  
6252 72h = 13.2kHz  
6253 73h = 14.0kHz  
6254 74h = 15.0kHz  
6255 75h = 16.0kHz  
6256 76h = 17.0kHz  
6257 77h = 18.0kHz  
6258 78h = 19.0kHz  
6259 79h = 20.0kHz  
6260  
6261 Display Table #3  
6262  
6263 00h = 0.0sec  
6264 01h = 0.1sec  
6265 02h = 0.2sec  
6266 03h = 0.3sec  
6267 04h = 0.4sec  
6268 05h = 0.5sec  
6269 06h = 0.6sec  
6270 07h = 0.7sec

6271 08h = 0.8sec  
6272 09h = 0.9sec  
6273 0Ah = 1.0sec  
6274 0Bh = 1.1sec  
6275 0Ch = 1.2sec  
6276 0Dh = 1.3sec  
6277 0Eh = 1.4sec  
6278 0Fh = 1.5sec  
6279 10h = 1.6sec  
6280 11h = 1.7sec  
6281 12h = 1.8sec  
6282 13h = 1.9sec  
6283 14h = 2.0sec  
6284 15h = 2.1sec  
6285 16h = 2.2sec  
6286 17h = 2.3sec  
6287 18h = 2.4sec  
6288 19h = 2.5sec  
6289 1Ah = 2.6sec  
6290 1Bh = 2.7sec  
6291 1Ch = 2.8sec  
6292 1Dh = 2.9sec  
6293 1Eh = 3.0sec  
6294 1Fh = 3.1sec  
6295 20h = 3.2sec  
6296 21h = 3.3sec  
6297 22h = 3.4sec  
6298 23h = 3.5sec  
6299 24h = 3.6sec  
6300 25h = 3.7sec  
6301 26h = 3.8sec  
6302 27h = 3.9sec  
6303 28h = 4.0sec  
6304 29h = 4.1sec  
6305 2Ah = 4.2sec  
6306 2Bh = 4.3sec  
6307 2Ch = 4.4sec  
6308 2Dh = 4.5sec  
6309 2Eh = 4.6sec  
6310 2Fh = 4.7sec  
6311 30h = 4.8sec  
6312 31h = 4.9sec  
6313 32h = 5.0sec  
6314 33h = 5.1sec  
6315 34h = 5.2sec  
6316 35h = 5.3sec  
6317 36h = 5.4sec  
6318 37h = 5.5sec  
6319 38h = 5.6sec  
6320 39h = 5.7sec  
6321 3Ah = 5.8sec  
6322 3Bh = 5.9sec  
6323 3Ch = 6.0sec  
6324 3Dh = 6.1sec  
6325 3Eh = 6.2sec

6326 3Fh = 6.3sec  
6327 40h = 6.4sec  
6328 41h = 6.5sec  
6329 42h = 6.6sec  
6330 43h = 6.7sec  
6331 44h = 6.8sec  
6332 45h = 6.9sec  
6333 46h = 7.0sec  
6334 47h = 7.1sec  
6335 48h = 7.2sec  
6336 49h = 7.3sec  
6337 4Ah = 7.4sec  
6338 4Bh = 7.5sec  
6339 4Ch = 7.6sec  
6340 4Dh = 7.7sec  
6341 4Eh = 7.8sec  
6342 4Fh = 7.9sec  
6343 50h = 8.0sec  
6344 51h = 8.1sec  
6345 52h = 8.2sec  
6346 53h = 8.3sec  
6347 54h = 8.4sec  
6348 55h = 8.5sec  
6349 56h = 8.6sec  
6350 57h = 8.7sec  
6351 58h = 8.8sec  
6352 59h = 8.9sec  
6353 5Ah = 9.0sec  
6354 5Bh = 9.1sec  
6355 5Ch = 9.2sec  
6356 5Dh = 9.3sec  
6357 5Eh = 9.4sec  
6358 5Fh = 9.5sec  
6359 60h = 9.6sec  
6360 61h = 9.7sec  
6361 62h = 9.8sec  
6362 63h = 9.9sec  
6363 64h = 10.0sec  
6364  
6365 Display Table #4  
6366  
6367 00h = -99%  
6368 01h = -98%  
6369 02h = -97%  
6370 03h = -96%  
6371 04h = -95%  
6372 05h = -94%  
6373 06h = -93%  
6374 07h = -92%  
6375 08h = -91%  
6376 09h = -90%  
6377 0Ah = -88%  
6378 0Bh = -86%  
6379 0Ch = -84%  
6380 0Dh = -82%

6381 0Eh = -80%  
6382 0Fh = -78%  
6383 10h = -76%  
6384 11h = -74%  
6385 12h = -72%  
6386 13h = -70%  
6387 14h = -68%  
6388 15h = -66%  
6389 16h = -64%  
6390 17h = -62%  
6391 18h = -60%  
6392 19h = -58%  
6393 1Ah = -56%  
6394 1Bh = -54%  
6395 1Ch = -52%  
6396 1Dh = -50%  
6397 1Eh = -48%  
6398 1Fh = -46%  
6399 20h = -44%  
6400 21h = -42%  
6401 22h = -40%  
6402 23h = -38%  
6403 24h = -36%  
6404 25h = -34%  
6405 26h = -32%  
6406 27h = -30%  
6407 28h = -28%  
6408 29h = -26%  
6409 2Ah = -24%  
6410 2Bh = -22%  
6411 2Ch = -20%  
6412 2Dh = -19%  
6413 2Eh = -18%  
6414 2Fh = -17%  
6415 30h = -16%  
6416 31h = -15%  
6417 32h = -14%  
6418 33h = -13%  
6419 34h = -12%  
6420 35h = -11%  
6421 36h = -10%  
6422 37h = -09%  
6423 38h = -08%  
6424 39h = -07%  
6425 3Ah = -06%  
6426 3Bh = -05%  
6427 3Ch = -04%  
6428 3Dh = -03%  
6429 3Eh = -02%  
6430 3Fh = -01%  
6431 40h = 00%  
6432 41h = +01%  
6433 42h = +02%  
6434 43h = +03%  
6435 44h = +04%

6436 45h = +05%  
6437 46h = +06%  
6438 47h = +07%  
6439 48h = +08%  
6440 49h = +09%  
6441 4Ah = +10%  
6442 4Bh = +11%  
6443 4Ch = +12%  
6444 4Dh = +13%  
6445 4Eh = +14%  
6446 4Fh = +15%  
6447 50h = +16%  
6448 51h = +17%  
6449 52h = +18%  
6450 53h = +19%  
6451 54h = +20%  
6452 55h = +22%  
6453 56h = +24%  
6454 57h = +26%  
6455 58h = +28%  
6456 59h = +30%  
6457 5Ah = +32%  
6458 5Bh = +34%  
6459 5Ch = +36%  
6460 5Dh = +38%  
6461 5Eh = +40%  
6462 5Fh = +42%  
6463 60h = +44%  
6464 61h = +46%  
6465 62h = +48%  
6466 63h = +50%  
6467 64h = +52%  
6468 65h = +54%  
6469 66h = +56%  
6470 67h = +58%  
6471 68h = +60%  
6472 69h = +62%  
6473 6Ah = +64%  
6474 6Bh = +66%  
6475 6Ch = +68%  
6476 6Dh = +70%  
6477 6Eh = +72%  
6478 6Fh = +74%  
6479 70h = +76%  
6480 71h = +78%  
6481 72h = +80%  
6482 73h = +82%  
6483 74h = +84%  
6484 75h = +86%  
6485 76h = +88%  
6486 77h = +90%  
6487 78h = +92%  
6488 79h = +93%  
6489 7Ah = +94%  
6490 7Bh = +95%

6491 7Ch = +96%  
6492 7Dh = +97%  
6493 7Eh = +98%  
6494 7Fh = +99%  
6495  
6496 Display Table #5  
6497  
6498 00h = 100Hz  
6499 01h = 200Hz  
6500 02h = 300Hz  
6501 03h = 400Hz  
6502 04h = 500Hz  
6503 05h = 600Hz  
6504 06h = 700Hz  
6505 07h = 800Hz  
6506 08h = 900Hz  
6507 09h = 1.0kHz  
6508 0Ah = 1.1kHz  
6509 0Bh = 1.2kHz  
6510 0Ch = 1.3kHz  
6511 0Dh = 1.4kHz  
6512 0Eh = 1.5kHz  
6513 0Fh = 1.6kHz  
6514 10h = 1.7kHz  
6515 11h = 1.8kHz  
6516 12h = 1.9kHz  
6517 13h = 2.0kHz  
6518 14h = 2.1kHz  
6519 15h = 2.2kHz  
6520 16h = 2.3kHz  
6521 17h = 2.4kHz  
6522 18h = 2.5kHz  
6523 19h = 2.6kHz  
6524 1Ah = 2.7kHz  
6525 1Bh = 2.8kHz  
6526 1Ch = 2.9kHz  
6527 1Dh = 3.0kHz  
6528 1Eh = 3.1kHz  
6529 1Fh = 3.2kHz  
6530 20h = 3.3kHz  
6531 21h = 3.4kHz  
6532 22h = 3.5kHz  
6533 23h = 3.6kHz  
6534 24h = 3.7kHz  
6535 25h = 3.8kHz  
6536 26h = 3.9kHz  
6537 27h = 4.0kHz  
6538 28h = 4.1kHz  
6539 29h = 4.2kHz  
6540 2Ah = 4.3kHz  
6541 2Bh = 4.4kHz  
6542 2Ch = 4.6kHz  
6543 2Dh = 4.8kHz  
6544 2Eh = 5.0kHz  
6545 2Fh = 5.2kHz

6546 30h = 5.4kHz  
6547 31h = 5.6kHz  
6548 32h = 5.8kHz  
6549 33h = 6.0kHz  
6550 34h = 6.2kHz  
6551 35h = 6.4kHz  
6552 36h = 6.6kHz  
6553 37h = 6.8kHz  
6554 38h = 7.0kHz  
6555 39h = 7.2kHz  
6556 3Ah = 7.4kHz  
6557 3Bh = 7.6kHz  
6558 3Ch = 7.8kHz  
6559 3Dh = 8.0kHz  
6560 3Eh = 8.2kHz  
6561 3Fh = 8.4kHz  
6562 40h = 8.6kHz  
6563 41h = 8.8kHz  
6564 42h = 9.0kHz  
6565 43h = 9.2kHz  
6566 44h = 9.4kHz  
6567 45h = 9.6kHz  
6568 46h = 9.8kHz  
6569 47h = 10.0kHz  
6570 48h = 10.2kHz  
6571 49h = 10.4kHz  
6572 4Ah = 10.6kHz  
6573 4Bh = 10.8kHz  
6574 4Ch = 11.0kHz  
6575 4Dh = 11.2kHz  
6576 4Eh = 11.4kHz  
6577 4Fh = 11.6kHz  
6578 50h = 11.8kHz  
6579 51h = 12.0kHz  
6580 52h = 12.2kHz  
6581 53h = 12.4kHz  
6582 54h = 12.6kHz  
6583 55h = 12.8kHz  
6584 56h = 13.0kHz  
6585 57h = 13.2kHz  
6586 58h = 13.4kHz  
6587 59h = 13.6kHz  
6588 5Ah = 13.8kHz  
6589 5Bh = 14.0kHz  
6590 5Ch = 14.2kHz  
6591 5Dh = 14.4kHz  
6592 5Eh = 14.6kHz  
6593 5Fh = 14.8kHz  
6594 60h = 15.0kHz  
6595 61h = 15.2kHz  
6596 62h = 15.4kHz  
6597 63h = 15.6kHz  
6598 64h = 15.8kHz  
6599 65h = 16.0kHz  
6600 66h = 16.2kHz

6601 67h = 16.4kHz  
6602 68h = 16.6kHz  
6603 69h = 16.8kHz  
6604 6Ah = 17.0kHz  
6605 6Bh = 17.2kHz  
6606 6Ch = 17.4kHz  
6607 6Dh = 17.6kHz  
6608 6Eh = 17.8kHz  
6609 6Fh = 18.0kHz  
6610 70h = 18.2kHz  
6611 71h = 18.4kHz  
6612 72h = 18.6kHz  
6613 73h = 18.8kHz  
6614 74h = 19.0kHz  
6615 75h = 19.2kHz  
6616 76h = 19.4kHz  
6617 77h = 19.6kHz  
6618 78h = 19.8kHz  
6619 79h = 20.0kHz  
6620 7Ah = 20.2kHz  
6621 7Bh = 20.4kHz  
6622 7Ch = 20.6kHz  
6623 7Dh = 20.8kHz  
6624 7Eh = 21.0kHz  
6625 7Fh = 21.2kHz  
6626  
6627 Display Table #6  
6628  
6629 00h = 100Hz  
6630 01h = 200Hz  
6631 02h = 300Hz  
6632 03h = 400Hz  
6633 04h = 500Hz  
6634 05h = 600Hz  
6635 06h = 700Hz  
6636 07h = 800Hz  
6637 08h = 900Hz  
6638 09h = 1.0kHz  
6639 0Ah = 1.1kHz  
6640 0Bh = 1.2kHz  
6641 0Ch = 1.3kHz  
6642 0Dh = 1.4kHz  
6643 0Eh = 1.5kHz  
6644 0Fh = 1.6kHz  
6645 10h = 1.7kHz  
6646 11h = 1.8kHz  
6647 12h = 1.9kHz  
6648 13h = 2.0kHz  
6649 14h = 2.1kHz  
6650 15h = 2.2kHz  
6651 16h = 2.3kHz  
6652 17h = 2.4kHz  
6653 18h = 2.5kHz  
6654 19h = 2.6kHz  
6655 1Ah = 2.7kHz

6656 1Bh = 2.8kHz  
6657 1Ch = 2.9kHz  
6658 1Dh = 3.0kHz  
6659 1Eh = 3.1kHz  
6660 1Fh = 3.2kHz  
6661 20h = 3.3kHz  
6662 21h = 3.4kHz  
6663 22h = 3.5kHz  
6664 23h = 3.6kHz  
6665 24h = 3.7kHz  
6666 25h = 3.8kHz  
6667 26h = 3.9kHz  
6668 27h = 4.0kHz  
6669 28h = 4.1kHz  
6670 29h = 4.2kHz  
6671 2Ah = 4.3kHz  
6672 2Bh = 4.4kHz  
6673 2Ch = 4.6kHz  
6674 2Dh = 4.8kHz  
6675 2Eh = 5.0kHz  
6676 2Fh = 5.2kHz  
6677 30h = 5.4kHz  
6678 31h = 5.6kHz  
6679 32h = 5.8kHz  
6680 33h = 6.0kHz  
6681 34h = 6.2kHz  
6682 35h = 6.4kHz  
6683 36h = 6.6kHz  
6684 37h = 6.8kHz  
6685 38h = 7.0kHz  
6686 39h = 7.2kHz  
6687 3Ah = 7.4kHz  
6688 3Bh = 7.6kHz  
6689 3Ch = 7.8kHz  
6690 3Dh = 8.0kHz  
6691 3Eh = 8.2kHz  
6692 3Fh = 8.4kHz  
6693 40h = 8.6kHz  
6694 41h = 8.8kHz  
6695 42h = 9.0kHz  
6696 43h = 9.2kHz  
6697 44h = 9.4kHz  
6698 45h = 9.6kHz  
6699 46h = 9.8kHz  
6700 47h = 10.0kHz  
6701 48h = 10.2kHz  
6702 49h = 10.4kHz  
6703 4Ah = 10.6kHz  
6704 4Bh = 10.8kHz  
6705 4Ch = 11.0kHz  
6706 4Dh = 11.2kHz  
6707 4Eh = 11.4kHz  
6708 4Fh = 11.6kHz  
6709 50h = 11.8kHz  
6710 51h = 12.0kHz

6711 52h = 12.2kHz  
6712 53h = 12.4kHz  
6713 54h = 12.6kHz  
6714 55h = 12.8kHz  
6715 56h = 13.0kHz  
6716 57h = 13.2kHz  
6717 58h = 13.4kHz  
6718 59h = 13.6kHz  
6719 5Ah = 13.8kHz  
6720 5Bh = 14.0kHz  
6721 5Ch = 14.2kHz  
6722 5Dh = 14.4kHz  
6723 5Eh = 14.6kHz  
6724 5Fh = 14.8kHz  
6725 60h = 15.0kHz  
6726 61h = 15.2kHz  
6727 62h = 15.4kHz  
6728 63h = 15.6kHz  
6729 64h = 15.8kHz  
6730 65h = 16.0kHz  
6731 66h = 16.2kHz  
6732 67h = 16.4kHz  
6733 68h = 16.6kHz  
6734 69h = 16.8kHz  
6735 6Ah = 17.0kHz  
6736 6Bh = 17.2kHz  
6737 6Ch = 17.4kHz  
6738 6Dh = 17.6kHz  
6739 6Eh = 17.8kHz  
6740 6Fh = 18.0kHz  
6741 70h = 18.2kHz  
6742 71h = 18.4kHz  
6743 72h = 18.6kHz  
6744 73h = 18.8kHz  
6745 74h = 19.0kHz  
6746 75h = 19.2kHz  
6747 76h = 19.4kHz  
6748 77h = 19.6kHz  
6749 78h = 19.8kHz  
6750 79h = 20.0kHz  
6751 7Ah = 20.2kHz  
6752 7Bh = 20.4kHz  
6753 7Ch = 20.6kHz  
6754 7Dh = 20.8kHz  
6755 7Eh = 21.0kHz  
6756 7Fh = 21.2kHz  
6757  
6758 Display Table #7  
6759  
6760 00h = 00%  
6761 01h = 01%  
6762 02h = 02%  
6763 03h = 03%  
6764 04h = 04%  
6765 05h = 05%

6766 06h = 06%  
6767 07h = 07%  
6768 08h = 08%  
6769 09h = 09%  
6770 0Ah = 10%  
6771 0Bh = 11%  
6772 0Ch = 12%  
6773 0Dh = 13%  
6774 0Eh = 14%  
6775 0Fh = 15%  
6776 10h = 16%  
6777 11h = 17%  
6778 12h = 18%  
6779 13h = 19%  
6780 14h = 20%  
6781 15h = 21%  
6782 16h = 22%  
6783 17h = 23%  
6784 18h = 24%  
6785 19h = 25%  
6786 1Ah = 26%  
6787 1Bh = 27%  
6788 1Ch = 28%  
6789 1Dh = 29%  
6790 1Eh = 30%  
6791 1Fh = 31%  
6792 20h = 32%  
6793 21h = 33%  
6794 22h = 34%  
6795 23h = 35%  
6796 24h = 36%  
6797 25h = 37%  
6798 26h = 38%  
6799 27h = 39%  
6800 28h = 40%  
6801 29h = 41%  
6802 2Ah = 42%  
6803 2Bh = 43%  
6804 2Ch = 44%  
6805 2Dh = 45%  
6806 2Eh = 46%  
6807 2Fh = 47%  
6808 30h = 48%  
6809 31h = 49%  
6810 32h = 50%  
6811 33h = 51%  
6812 34h = 52%  
6813 35h = 53%  
6814 36h = 54%  
6815 37h = 55%  
6816 38h = 56%  
6817 39h = 57%  
6818 3Ah = 58%  
6819 3Bh = 59%  
6820 3Ch = 60%

6821 3Dh = 61%  
6822 3Eh = 62%  
6823 3Fh = 63%  
6824 40h = 64%  
6825 41h = 65%  
6826 42h = 66%  
6827 43h = 67%  
6828 44h = 68%  
6829 45h = 69%  
6830 46h = 70%  
6831 47h = 71%  
6832 48h = 72%  
6833 49h = 73%  
6834 4Ah = 74%  
6835 4Bh = 75%  
6836 4Ch = 76%  
6837 4Dh = 77%  
6838 4Eh = 78%  
6839 4Fh = 79%  
6840 50h = 80%  
6841 51h = 81%  
6842 52h = 82%  
6843 53h = 83%  
6844 54h = 84%  
6845 55h = 85%  
6846 56h = 86%  
6847 57h = 87%  
6848 58h = 88%  
6849 59h = 89%  
6850 5Ah = 90%  
6851 5Bh = 91%  
6852 5Ch = 92%  
6853 5Dh = 93%  
6854 5Eh = 94%  
6855 5Fh = 95%  
6856 60h = 96%  
6857 61h = 97%  
6858 62h = 98%  
6859 63h = 99%  
6860 64h = 100%  
6861  
6862 Display Table #8  
6863  
6864 00h = Full Left  
6865 01h = 99% Left  
6866 02h = 98% Left  
6867 03h = 96% Left  
6868 04h = 94% Left  
6869 05h = 92% Left  
6870 06h = 90% Left  
6871 07h = 88% Left  
6872 08h = 86% Left  
6873 09h = 84% Left  
6874 0Ah = 82% Left  
6875 0Bh = 80% Left

6876 0Ch = 78% Left  
6877 0Dh = 76% Left  
6878 0Eh = 74% Left  
6879 0Fh = 72% Left  
6880 10h = 70% Left  
6881 11h = 68% Left  
6882 12h = 66% Left  
6883 13h = 64% Left  
6884 14h = 62% Left  
6885 15h = 60% Left  
6886 16h = 58% Left  
6887 17h = 56% Left  
6888 18h = 54% Left  
6889 19h = 52% Left  
6890 1Ah = 50% Left  
6891 1Bh = 48% Left  
6892 1Ch = 46% Left  
6893 1Dh = 44% Left  
6894 1Eh = 42% Left  
6895 1Fh = 40% Left  
6896 20h = 38% Left  
6897 21h = 36% Left  
6898 22h = 34% Left  
6899 23h = 32% Left  
6900 24h = 30% Left  
6901 25h = 28% Left  
6902 26h = 26% Left  
6903 27h = 25% Left  
6904 28h = 24% Left  
6905 29h = 23% Left  
6906 2Ah = 22% Left  
6907 2Bh = 21% Left  
6908 2Ch = 20% Left  
6909 2Dh = 29% Left  
6910 2Eh = 18% Left  
6911 2Fh = 17% Left  
6912 30h = 16% Left  
6913 31h = 15% Left  
6914 32h = 14% Left  
6915 33h = 13% Left  
6916 34h = 12% Left  
6917 35h = 11% Left  
6918 36h = 10% Left  
6919 37h = 09% Left  
6920 38h = 08% Left  
6921 39h = 07% Left  
6922 3Ah = 06% Left  
6923 3Bh = 05% Left  
6924 3Ch = 04% Left  
6925 3Dh = 03% Left  
6926 3Eh = 02% Left  
6927 3Fh = 01% Left  
6928 40h = Center  
6929 41h = 01% Right  
6930 42h = 02% Right

6931 43h = 03% Right  
6932 44h = 04% Right  
6933 45h = 05% Right  
6934 46h = 06% Right  
6935 47h = 07% Right  
6936 48h = 08% Right  
6937 49h = 09% Right  
6938 4Ah = 10% Right  
6939 4Bh = 11% Right  
6940 4Ch = 12% Right  
6941 4Dh = 13% Right  
6942 4Eh = 14% Right  
6943 4Fh = 15% Right  
6944 50h = 16% Right  
6945 51h = 17% Right  
6946 52h = 18% Right  
6947 53h = 19% Right  
6948 54h = 20% Right  
6949 55h = 21% Right  
6950 56h = 22% Right  
6951 57h = 23% Right  
6952 58h = 24% Right  
6953 59h = 25% Right  
6954 5Ah = 26% Right  
6955 5Bh = 28% Right  
6956 5Ch = 30% Right  
6957 5Dh = 32% Right  
6958 5Eh = 34% Right  
6959 5Fh = 36% Right  
6960 60h = 38% Right  
6961 61h = 40% Right  
6962 62h = 42% Right  
6963 63h = 44% Right  
6964 64h = 46% Right  
6965 65h = 48% Right  
6966 66h = 50% Right  
6967 67h = 52% Right  
6968 68h = 54% Right  
6969 69h = 56% Right  
6970 6Ah = 58% Right  
6971 6Bh = 60% Right  
6972 6Ch = 62% Right  
6973 6Dh = 64% Right  
6974 6Eh = 66% Right  
6975 6Fh = 68% Right  
6976 70h = 70% Right  
6977 71h = 72% Right  
6978 72h = 74% Right  
6979 73h = 76% Right  
6980 74h = 78% Right  
6981 75h = 80% Right  
6982 76h = 82% Right  
6983 77h = 84% Right  
6984 78h = 86% Right  
6985 79h = 88% Right

6986 7Ah = 90% Right  
6987 7Bh = 92% Right  
6988 7Ch = 94% Right  
6989 7Dh = 96% Right  
6990 7Eh = 98% Right  
6991 7Fh = Full Right  
6992  
6993 Display Table #9  
6994  
6995 00h = -96.0dB  
6996 01h = -95.0dB  
6997 02h = -94.0dB  
6998 03h = -93.0dB  
6999 04h = -92.0dB  
7000 05h = -91.0dB  
7001 06h = -90.0dB  
7002 07h = -89.0dB  
7003 08h = -88.0dB  
7004 09h = -87.0dB  
7005 0Ah = -86.0dB  
7006 0Bh = -85.0dB  
7007 0Ch = -84.0dB  
7008 0Dh = -83.0dB  
7009 0Eh = -82.0dB  
7010 0Fh = -81.0dB  
7011 10h = -80.0dB  
7012 11h = -79.0dB  
7013 12h = -78.0dB  
7014 13h = -77.0dB  
7015 14h = -76.0dB  
7016 15h = -75.0dB  
7017 16h = -74.0dB  
7018 17h = -73.0dB  
7019 18h = -72.0dB  
7020 19h = -71.0dB  
7021 1Ah = -70.0dB  
7022 1Bh = -69.0dB  
7023 1Ch = -68.0dB  
7024 1Dh = -67.0dB  
7025 1Eh = -66.0dB  
7026 1Fh = -65.0dB  
7027 20h = -64.0dB  
7028 21h = -63.0dB  
7029 22h = -62.0dB  
7030 23h = -61.0dB  
7031 24h = -60.0dB  
7032 25h = -59.0dB  
7033 26h = -58.0dB  
7034 27h = -57.0dB  
7035 28h = -56.0dB  
7036 29h = -55.0dB  
7037 2Ah = -54.0dB  
7038 2Bh = -53.0dB  
7039 2Ch = -52.0dB  
7040 2Dh = -51.0dB

7041 2Eh = -50.0dB  
7042 2Fh = -49.0dB  
7043 30h = -48.0dB  
7044 31h = -47.0dB  
7045 32h = -46.0dB  
7046 33h = -45.0dB  
7047 34h = -44.0dB  
7048 35h = -43.0dB  
7049 36h = -42.0dB  
7050 37h = -41.0dB  
7051 38h = -40.0dB  
7052 39h = -39.0dB  
7053 3Ah = -38.0dB  
7054 3Bh = -37.0dB  
7055 3Ch = -36.0dB  
7056 3Dh = -35.0dB  
7057 3Eh = -34.0dB  
7058 3Fh = -33.0dB  
7059 40h = -32.0dB  
7060 41h = -31.0dB  
7061 42h = -30.0dB  
7062 43h = -29.0dB  
7063 44h = -28.0dB  
7064 45h = -27.0dB  
7065 46h = -26.0dB  
7066 47h = -25.0dB  
7067 48h = -24.0dB  
7068 49h = -23.0dB  
7069 4Ah = -22.0dB  
7070 4Bh = -21.0dB  
7071 4Ch = -20.0dB  
7072 4Dh = -19.0dB  
7073 4Eh = -18.0dB  
7074 4Fh = -17.0dB  
7075 50h = -16.0dB  
7076 51h = -15.0dB  
7077 52h = -14.0dB  
7078 53h = -13.0dB  
7079 54h = -12.0dB  
7080 55h = -11.0dB  
7081 56h = -10.0dB  
7082 57h = -09.0dB  
7083 58h = -08.0dB  
7084 59h = -07.0dB  
7085 5Ah = -06.0dB  
7086 5Bh = -05.0dB  
7087 5Ch = -04.0dB  
7088 5Dh = -03.0dB  
7089 5Eh = -02.0dB  
7090 5Fh = -01.0dB  
7091 60h = 00.0dB  
7092  
7093 Display Table #10  
7094  
7095 00h = 50us

7096 01h = 100us  
7097 02h = 200us  
7098 03h = 400us  
7099 04h = 800us  
7100 05h = 1ms  
7101 06h = 2ms  
7102 07h = 3ms  
7103 08h = 4ms  
7104 09h = 5ms  
7105 0Ah = 6ms  
7106 0Bh = 7ms  
7107 0Ch = 8ms  
7108 0Dh = 9ms  
7109 0Eh = 10ms  
7110 0Fh = 11ms  
7111 10h = 12ms  
7112 11h = 13ms  
7113 12h = 14ms  
7114 13h = 15ms  
7115 14h = 20ms  
7116 15h = 30ms  
7117 16h = 40ms  
7118 17h = 50ms  
7119 18h = 60ms  
7120 19h = 70ms  
7121 1Ah = 80ms  
7122 1Bh = 90ms  
7123 1Ch = 100ms  
7124 1Dh = 200ms  
7125 1Eh = 300ms  
7126 1Fh = 400ms  
7127 20h = 500ms  
7128 21h = 600ms  
7129 22h = 700ms  
7130 23h = 800ms  
7131 24h = 900ms  
7132 25h = 1.0s  
7133 26h = 1.1s  
7134 27h = 1.2s  
7135 28h = 1.3s  
7136 29h = 1.4s  
7137 2Ah = 1.5s  
7138 2Bh = 1.6s  
7139 2Ch = 1.7s  
7140 2Dh = 1.8s  
7141 2Eh = 1.9s  
7142 2Fh = 2.0s  
7143 30h = 2.5s  
7144 31h = 3.0s  
7145 32h = 3.5s  
7146 33h = 4.0s  
7147 34h = 4.5s  
7148 35h = 5.0s  
7149 36h = 6.0s  
7150 37h = 7.0s

7151 38h = 8.0s  
7152 39h = 9.0s  
7153 3Ah = 10.0s  
7154  
7155 Display Table #11  
7156  
7157 00h = OFF  
7158 01h = -49.5dB  
7159 02h = -49.0dB  
7160 03h = -48.5dB  
7161 04h = -48.0dB  
7162 05h = -47.5dB  
7163 06h = -47.0dB  
7164 07h = -46.5dB  
7165 08h = -46.0dB  
7166 09h = -45.5dB  
7167 0Ah = -45.0dB  
7168 0Bh = -44.5dB  
7169 0Ch = -44.0dB  
7170 0Dh = -43.5dB  
7171 0Eh = -43.0dB  
7172 0Fh = -42.5dB  
7173 10h = -42.0dB  
7174 11h = -41.5dB  
7175 12h = -41.0dB  
7176 13h = -40.5dB  
7177 14h = -40.0dB  
7178 15h = -39.5dB  
7179 16h = -39.0dB  
7180 17h = -38.5dB  
7181 18h = -38.0dB  
7182 19h = -37.5dB  
7183 1Ah = -37.0dB  
7184 1Bh = -36.5dB  
7185 1Ch = -36.0dB  
7186 1Dh = -35.5dB  
7187 1Eh = -35.0dB  
7188 1Fh = -34.5dB  
7189 20h = -34.0dB  
7190 21h = -33.5dB  
7191 22h = -33.0dB  
7192 23h = -32.5dB  
7193 24h = -32.0dB  
7194 25h = -31.5dB  
7195 26h = -31.0dB  
7196 27h = -30.5dB  
7197 28h = -30.0dB  
7198 29h = -29.5dB  
7199 2Ah = -29.0dB  
7200 2Bh = -28.5dB  
7201 2Ch = -28.0dB  
7202 2Dh = -27.5dB  
7203 2Eh = -27.0dB  
7204 2Fh = -26.5dB  
7205 30h = -26.0dB

7206 31h = -25.5dB  
7207 32h = -25.0dB  
7208 33h = -24.5dB  
7209 34h = -24.0dB  
7210 35h = -23.5dB  
7211 36h = -23.0dB  
7212 37h = -22.5dB  
7213 38h = -22.0dB  
7214 39h = -21.5dB  
7215 3Ah = -21.0dB  
7216 3Bh = -20.5dB  
7217 3Ch = -20.0dB  
7218 3Dh = -19.5dB  
7219 3Eh = -19.0dB  
7220 3Fh = -18.5dB  
7221 40h = -18.0dB  
7222 41h = -17.5dB  
7223 42h = -17.0dB  
7224 43h = -16.5dB  
7225 44h = -16.0dB  
7226 45h = -15.5dB  
7227 46h = -15.0dB  
7228 47h = -14.5dB  
7229 48h = -14.0dB  
7230 49h = -13.5dB  
7231 4Ah = -13.0dB  
7232 4Bh = -12.5dB  
7233 4Ch = -12.0dB  
7234 4Dh = -11.5dB  
7235 4Eh = -11.0dB  
7236 4Fh = -10.5dB  
7237 50h = -10.0dB  
7238 51h = -09.5dB  
7239 52h = -09.0dB  
7240 53h = -08.5dB  
7241 54h = -08.0dB  
7242 55h = -07.5dB  
7243 56h = -07.0dB  
7244 57h = -06.5dB  
7245 58h = -06.0dB  
7246 59h = -05.5dB  
7247 5Ah = -05.0dB  
7248 5Bh = -04.5dB  
7249 5Ch = -04.0dB  
7250 5Dh = -03.5dB  
7251 5Eh = -03.0dB  
7252 5Fh = -02.5dB  
7253 60h = -02.0dB  
7254 61h = -01.5dB  
7255 62h = -01.0dB  
7256 63h = -00.5dB  
7257 64h = 00.0dB  
7258 65h = +00.5dB  
7259 66h = +01.0dB  
7260 67h = +01.5dB

7261 68h = +02.0dB  
7262 69h = +02.5dB  
7263 6Ah = +03.0dB  
7264 6Bh = +03.5dB  
7265 6Ch = +04.0dB  
7266 6Dh = +04.5dB  
7267 6Eh = +05.0dB  
7268 6Fh = +05.5dB  
7269 70h = +06.0dB  
7270 71h = +06.5dB  
7271 72h = +07.0dB  
7272 73h = +07.5dB  
7273 74h = +08.0dB  
7274 75h = +08.5dB  
7275 76h = +09.0dB  
7276 77h = +09.5dB  
7277 78h = +10.0dB  
7278 79h = +10.5dB  
7279 7Ah = +11.0dB  
7280 7Bh = +11.5dB  
7281 7Ch = +12.0dB  
7282 7Dh = +12.5dB  
7283 7Eh = +13.0dB  
7284 7Fh = +13.5dB  
7285  
7286 Display Table #12  
7287  
7288 00h = 0.0Hz  
7289 01h = 0.1Hz  
7290 02h = 0.2Hz  
7291 03h = 0.3Hz  
7292 04h = 0.4Hz  
7293 05h = 0.5Hz  
7294 06h = 0.6Hz  
7295 07h = 0.7Hz  
7296 08h = 0.8Hz  
7297 09h = 0.9Hz  
7298 0Ah = 1.0Hz  
7299 0Bh = 1.1Hz  
7300 0Ch = 1.2Hz  
7301 0Dh = 1.3Hz  
7302 0Eh = 1.4Hz  
7303 0Fh = 1.5Hz  
7304 10h = 1.6Hz  
7305 11h = 1.7Hz  
7306 12h = 1.8Hz  
7307 13h = 1.9Hz  
7308 14h = 2.0Hz  
7309 15h = 2.1Hz  
7310 16h = 2.2Hz  
7311 17h = 2.3Hz  
7312 18h = 2.4Hz  
7313 19h = 2.5Hz  
7314 1Ah = 2.6Hz  
7315 1Bh = 2.7Hz

7316 1Ch = 2.8Hz  
7317 1Dh = 2.9Hz  
7318 1Eh = 3.0Hz  
7319 1Fh = 3.1Hz  
7320 20h = 3.2Hz  
7321 21h = 3.3Hz  
7322 22h = 3.4Hz  
7323 23h = 3.5Hz  
7324 24h = 3.6Hz  
7325 25h = 3.7Hz  
7326 26h = 3.8Hz  
7327 27h = 3.9Hz  
7328 28h = 4.0Hz  
7329 29h = 4.1Hz  
7330 2Ah = 4.2Hz  
7331 2Bh = 4.3Hz  
7332 2Ch = 4.4Hz  
7333 2Dh = 4.5Hz  
7334 2Eh = 4.6Hz  
7335 2Fh = 4.7Hz  
7336 30h = 4.8Hz  
7337 31h = 4.9Hz  
7338 32h = 5.0Hz  
7339 33h = 5.1Hz  
7340 34h = 5.2Hz  
7341 35h = 5.3Hz  
7342 36h = 5.4Hz  
7343 37h = 5.5Hz  
7344 38h = 5.6Hz  
7345 39h = 5.7Hz  
7346 3Ah = 5.8Hz  
7347 3Bh = 5.9Hz  
7348 3Ch = 6.0Hz  
7349 3Dh = 6.1Hz  
7350 3Eh = 6.2Hz  
7351 3Fh = 6.3Hz  
7352 40h = 6.4Hz  
7353 41h = 6.5Hz  
7354 42h = 6.6Hz  
7355 43h = 6.7Hz  
7356 44h = 6.8Hz  
7357 45h = 6.9Hz  
7358 46h = 7.0Hz  
7359 47h = 7.1Hz  
7360 48h = 7.2Hz  
7361 49h = 7.3Hz  
7362 4Ah = 7.4Hz  
7363 4Bh = 7.5Hz  
7364 4Ch = 7.6Hz  
7365 4Dh = 7.7Hz  
7366 4Eh = 7.8Hz  
7367 4Fh = 7.9Hz  
7368 50h = 8.0Hz  
7369 51h = 8.1Hz  
7370 52h = 8.2Hz

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7371 53h = 8.3Hz
7372 54h = 8.4Hz
7373 55h = 8.5Hz
7374 56h = 8.6Hz
7375 57h = 8.7Hz
7376 58h = 8.8Hz
7377 59h = 8.9Hz
7378 5Ah = 9.0Hz
7379 5Bh = 9.1Hz
7380 5Ch = 9.2Hz
7381 5Dh = 9.3Hz
7382 5Eh = 9.4Hz
7383 5Fh = 9.5Hz
7384 60h = 9.6Hz
7385 61h = 9.7Hz
7386 62h = 9.8Hz
7387 63h = 9.9Hz
7388 64h = 10.0Hz
7389 65h = 12.0Hz
7390 66h = 14.0Hz
7391 67h = 16.0Hz
7392 68h = 18.0Hz
7393 69h = 20.0Hz
7394
7395 Display Table #13
7396
7397 00h = L----|----R
7398 01h = -L---|---R-
7399 02h = --L--|--R--
7400 03h = ---L-|-R---
7401 04h = ----L|R----
7402 05h = -----M-----
7403 06h = ----R|L----
7404 07h = ---R-|-L---
7405 08h = --R--|--L--
7406 09h = -R---|---L-
7407 0Ah = R----|----L
7408
7409 Display Table #14
7410
7411 00h = 0deg
7412 01h = -180deg
7413
7414 Display Table #15
7415
7416 00h = Full Dry
7417 01h = 00.5% Wet
7418 02h = 01.0% Wet
7419 03h = 01.5% Wet
7420 04h = 02.0% Wet
7421 05h = 02.8% Wet
7422 06h = 03.6% Wet
7423 07h = 04.4% Wet
7424 08h = 05.2% Wet
7425 09h = 06.0% Wet
```

7426 0Ah = 06.8% Wet  
7427 0Bh = 07.6% Wet  
7428 0Ch = 08.4% Wet  
7429 0Dh = 09.2% Wet  
7430 0Eh = 10.0% Wet  
7431 0Fh = 10.8% Wet  
7432 10h = 11.6% Wet  
7433 11h = 12.4% Wet  
7434 12h = 13.2% Wet  
7435 13h = 14.0% Wet  
7436 14h = 14.8% Wet  
7437 15h = 15.6% Wet  
7438 16h = 16.4% Wet  
7439 17h = 17.2% Wet  
7440 18h = 18.0% Wet  
7441 19h = 18.8% Wet  
7442 1Ah = 19.6% Wet  
7443 1Bh = 20.4% Wet  
7444 1Ch = 21.2% Wet  
7445 1Dh = 22.0% Wet  
7446 1Eh = 22.8% Wet  
7447 1Fh = 23.6% Wet  
7448 20h = 24.4% Wet  
7449 21h = 25.2% Wet  
7450 22h = 26.0% Wet  
7451 23h = 26.8% Wet  
7452 24h = 27.6% Wet  
7453 25h = 28.4% Wet  
7454 26h = 29.2% Wet  
7455 27h = 30.0% Wet  
7456 28h = 30.8% Wet  
7457 29h = 31.6% Wet  
7458 2Ah = 32.4% Wet  
7459 2Bh = 33.2% Wet  
7460 2Ch = 34.0% Wet  
7461 2Dh = 34.8% Wet  
7462 2Eh = 35.6% Wet  
7463 2Fh = 36.4% Wet  
7464 30h = 37.2% Wet  
7465 31h = 38.0% Wet  
7466 32h = 38.8% Wet  
7467 33h = 39.6% Wet  
7468 34h = 40.4% Wet  
7469 35h = 41.2% Wet  
7470 36h = 42.0% Wet  
7471 37h = 42.8% Wet  
7472 38h = 43.6% Wet  
7473 39h = 44.4% Wet  
7474 3Ah = 45.2% Wet  
7475 3Bh = 46.0% Wet  
7476 3Ch = 46.8% Wet  
7477 3Dh = 47.6% Wet  
7478 3Eh = 48.4% Wet  
7479 3Fh = 49.2% Wet  
7480 40h = 50.0% Wet

7481 41h = 50.8% Wet  
7482 42h = 51.6% Wet  
7483 43h = 52.4% Wet  
7484 44h = 53.2% Wet  
7485 45h = 54.0% Wet  
7486 46h = 54.8% Wet  
7487 47h = 55.6% Wet  
7488 48h = 56.4% Wet  
7489 49h = 57.2% Wet  
7490 4Ah = 58.0% Wet  
7491 4Bh = 58.8% Wet  
7492 4Ch = 59.6% Wet  
7493 4Dh = 60.4% Wet  
7494 4Eh = 61.2% Wet  
7495 4Fh = 62.0% Wet  
7496 50h = 62.8% Wet  
7497 51h = 63.6% Wet  
7498 52h = 64.4% Wet  
7499 53h = 65.2% Wet  
7500 54h = 66.0% Wet  
7501 55h = 66.8% Wet  
7502 56h = 67.6% Wet  
7503 57h = 68.4% Wet  
7504 58h = 69.2% Wet  
7505 59h = 70.0% Wet  
7506 5Ah = 70.8% Wet  
7507 5Bh = 71.6% Wet  
7508 5Ch = 72.4% Wet  
7509 5Dh = 73.2% Wet  
7510 5Eh = 74.0% Wet  
7511 5Fh = 74.8% Wet  
7512 60h = 75.6% Wet  
7513 61h = 76.4% Wet  
7514 62h = 77.2% Wet  
7515 63h = 78.0% Wet  
7516 64h = 78.8% Wet  
7517 65h = 79.6% Wet  
7518 66h = 80.4% Wet  
7519 67h = 81.2% Wet  
7520 68h = 82.0% Wet  
7521 69h = 82.8% Wet  
7522 6Ah = 83.6% Wet  
7523 6Bh = 84.4% Wet  
7524 6Ch = 85.2% Wet  
7525 6Dh = 86.0% Wet  
7526 6Eh = 86.8% Wet  
7527 6Fh = 87.6% Wet  
7528 70h = 88.4% Wet  
7529 71h = 89.2% Wet  
7530 72h = 90.0% Wet  
7531 73h = 90.8% Wet  
7532 74h = 91.6% Wet  
7533 75h = 92.4% Wet  
7534 76h = 93.2% Wet  
7535 77h = 94.0% Wet

7536 78h = 94.8% Wet  
7537 79h = 95.6% Wet  
7538 7Ah = 96.4% Wet  
7539 7Bh = 97.2% Wet  
7540 7Ch = 98.0% Wet  
7541 7Dh = 98.8% Wet  
7542 7Eh = 99.6% Wet  
7543 7Fh = Full Wet  
7544  
7545 Display Table #16  
7546  
7547 00h = -180deg  
7548 01h = -178deg  
7549 02h = -176deg  
7550 03h = -174deg  
7551 04h = -172deg  
7552 05h = -170deg  
7553 06h = -168deg  
7554 07h = -166deg  
7555 08h = -164deg  
7556 09h = -162deg  
7557 0Ah = -160deg  
7558 0Bh = -158deg  
7559 0Ch = -156deg  
7560 0Dh = -154deg  
7561 0Eh = -152deg  
7562 0Fh = -150deg  
7563 10h = -148deg  
7564 11h = -146deg  
7565 12h = -144deg  
7566 13h = -142deg  
7567 14h = -140deg  
7568 15h = -138deg  
7569 16h = -136deg  
7570 17h = -134deg  
7571 18h = -132deg  
7572 19h = -130deg  
7573 1Ah = -128deg  
7574 1Bh = -126deg  
7575 1Ch = -124deg  
7576 1Dh = -122deg  
7577 1Eh = -120deg  
7578 1Fh = -118deg  
7579 20h = -116deg  
7580 21h = -114deg  
7581 22h = -112deg  
7582 23h = -110deg  
7583 24h = -108deg  
7584 25h = -106deg  
7585 26h = -104deg  
7586 27h = -102deg  
7587 28h = -100deg  
7588 29h = -98deg  
7589 2Ah = -96deg  
7590 2Bh = -94deg

7591 2Ch = -92deg  
7592 2Dh = -90deg  
7593 2Eh = -88deg  
7594 2Fh = -86deg  
7595 30h = -84deg  
7596 31h = -82deg  
7597 32h = -80deg  
7598 33h = -78deg  
7599 34h = -76deg  
7600 35h = -74deg  
7601 36h = -72deg  
7602 37h = -70deg  
7603 38h = -68deg  
7604 39h = -66deg  
7605 3Ah = -64deg  
7606 3Bh = -62deg  
7607 3Ch = -60deg  
7608 3Dh = -58deg  
7609 3Eh = -56deg  
7610 3Fh = -54deg  
7611 40h = -52deg  
7612 41h = -50deg  
7613 42h = -48deg  
7614 43h = -46deg  
7615 44h = -44deg  
7616 45h = -42deg  
7617 46h = -40deg  
7618 47h = -38deg  
7619 48h = -36deg  
7620 49h = -34deg  
7621 4Ah = -32deg  
7622 4Bh = -30deg  
7623 4Ch = -28deg  
7624 4Dh = -26deg  
7625 4Eh = -24deg  
7626 4Fh = -22deg  
7627 50h = -20deg  
7628 51h = -18deg  
7629 52h = -16deg  
7630 53h = -14deg  
7631 54h = -12deg  
7632 55h = -10deg  
7633 56h = -08deg  
7634 57h = -06deg  
7635 58h = -04deg  
7636 59h = -02deg  
7637 5Ah = 00deg  
7638 5Bh = +02deg  
7639 5Ch = +04deg  
7640 5Dh = +06deg  
7641 5Eh = +08deg  
7642 5Fh = +10deg  
7643 60h = +12deg  
7644 61h = +14deg  
7645 62h = +16deg

7646 63h = +18deg  
7647 64h = +20deg  
7648 65h = +22deg  
7649 66h = +24deg  
7650 67h = +26deg  
7651 68h = +28deg  
7652 69h = +30deg  
7653 6Ah = +32deg  
7654 6Bh = +34deg  
7655 6Ch = +36deg  
7656 6Dh = +38deg  
7657 6Eh = +40deg  
7658 6Fh = +42deg  
7659 70h = +44deg  
7660 71h = +46deg  
7661 72h = +48deg  
7662 73h = +50deg  
7663 74h = +52deg  
7664 75h = +54deg  
7665 76h = +56deg  
7666 77h = +58deg  
7667 78h = +60deg  
7668 79h = +62deg  
7669 7Ah = +64deg  
7670 7Bh = +66deg  
7671 7Ch = +68deg  
7672 7Dh = +70deg  
7673 7Eh = +72deg  
7674 7Fh = +74deg  
7675 80h = +76deg  
7676 81h = +78deg  
7677 82h = +80deg  
7678 83h = +82deg  
7679 84h = +84deg  
7680 85h = +86deg  
7681 86h = +88deg  
7682 87h = +90deg  
7683 88h = +92deg  
7684 89h = +94deg  
7685 8Ah = +96deg  
7686 8Bh = +98deg  
7687 8Ch = +100deg  
7688 8Dh = +102deg  
7689 8Eh = +104deg  
7690 8Fh = +106deg  
7691 90h = +108deg  
7692 91h = +110deg  
7693 92h = +112deg  
7694 93h = +114deg  
7695 94h = +116deg  
7696 95h = +118deg  
7697 96h = +120deg  
7698 97h = +122deg  
7699 98h = +124deg  
7700 99h = +126deg

7701 9Ah = +128deg  
7702 9Bh = +130deg  
7703 9Ch = +132deg  
7704 9Dh = +134deg  
7705 9Eh = +136deg  
7706 9Fh = +138deg  
7707 A0h = +140deg  
7708 A1h = +142deg  
7709 A2h = +144deg  
7710 A3h = +146deg  
7711 A4h = +148deg  
7712 A5h = +150deg  
7713 A6h = +152deg  
7714 A7h = +154deg  
7715 A8h = +156deg  
7716 A9h = +158deg  
7717 AAh = +160deg  
7718 ABh = +162deg  
7719 ACh = +164deg  
7720 ADh = +166deg  
7721 AEh = +168deg  
7722 AFh = +170deg  
7723 B0h = +172deg  
7724 B1h = +174deg  
7725 B2h = +176deg  
7726 B3h = +178deg  
7727 B4h = +180deg  
7728  
7729 Display Table #17  
7730  
7731 00h = 1/1 Sys  
7732 01h = 1/1T Sys  
7733 02h = 1/2 Sys  
7734 03h = 1/2T Sys  
7735 04h = 1/4 Sys  
7736 05h = 1/4T Sys  
7737 06h = 1/8 Sys  
7738 07h = 1/8T Sys  
7739 08h = 1/16 Sys  
7740 09h = 1/16T Sys  
7741 0Ah = 1/32 Sys  
7742 0Bh = 0.0Hz  
7743 0Ch = 0.1Hz  
7744 0Dh = 0.2Hz  
7745 0Eh = 0.3Hz  
7746 0Fh = 0.4Hz  
7747 10h = 0.5Hz  
7748 11h = 0.6Hz  
7749 12h = 0.7Hz  
7750 13h = 0.8Hz  
7751 14h = 0.9Hz  
7752 15h = 1.0Hz  
7753 16h = 1.1Hz  
7754 17h = 1.2Hz  
7755 18h = 1.3Hz

7756 19h = 1.4Hz  
7757 1Ah = 1.5Hz  
7758 1Bh = 1.6Hz  
7759 1Ch = 1.7Hz  
7760 1Dh = 1.8Hz  
7761 1Eh = 1.9Hz  
7762 1Fh = 2.0Hz  
7763 20h = 2.1Hz  
7764 21h = 2.2Hz  
7765 22h = 2.3Hz  
7766 23h = 2.4Hz  
7767 24h = 2.5Hz  
7768 25h = 2.6Hz  
7769 26h = 2.7Hz  
7770 27h = 2.8Hz  
7771 28h = 2.9Hz  
7772 29h = 3.0Hz  
7773 2Ah = 3.1Hz  
7774 2Bh = 3.2Hz  
7775 2Ch = 3.3Hz  
7776 2Dh = 3.4Hz  
7777 2Eh = 3.5Hz  
7778 2Fh = 3.6Hz  
7779 30h = 3.7Hz  
7780 31h = 3.8Hz  
7781 32h = 3.9Hz  
7782 33h = 4.0Hz  
7783 34h = 4.1Hz  
7784 35h = 4.2Hz  
7785 36h = 4.3Hz  
7786 37h = 4.4Hz  
7787 38h = 4.5Hz  
7788 39h = 4.6Hz  
7789 3Ah = 4.7Hz  
7790 3Bh = 4.8Hz  
7791 3Ch = 4.9Hz  
7792 3Dh = 5.0Hz  
7793 3Eh = 5.1Hz  
7794 3Fh = 5.2Hz  
7795 40h = 5.3Hz  
7796 41h = 5.4Hz  
7797 42h = 5.5Hz  
7798 43h = 5.6Hz  
7799 44h = 5.7Hz  
7800 45h = 5.8Hz  
7801 46h = 5.9Hz  
7802 47h = 6.0Hz  
7803 48h = 6.1Hz  
7804 49h = 6.2Hz  
7805 4Ah = 6.3Hz  
7806 4Bh = 6.4Hz  
7807 4Ch = 6.5Hz  
7808 4Dh = 6.6Hz  
7809 4Eh = 6.7Hz  
7810 4Fh = 6.8Hz

7811 50h = 6.9Hz  
7812 51h = 7.0Hz  
7813 52h = 7.1Hz  
7814 53h = 7.2Hz  
7815 54h = 7.3Hz  
7816 55h = 7.4Hz  
7817 56h = 7.5Hz  
7818 57h = 7.6Hz  
7819 58h = 7.7Hz  
7820 59h = 7.8Hz  
7821 5Ah = 7.9Hz  
7822 5Bh = 8.0Hz  
7823 5Ch = 8.1Hz  
7824 5Dh = 8.2Hz  
7825 5Eh = 8.3Hz  
7826 5Fh = 8.4Hz  
7827 60h = 8.5Hz  
7828 61h = 8.6Hz  
7829 62h = 8.7Hz  
7830 63h = 8.8Hz  
7831 64h = 8.9Hz  
7832 65h = 9.0Hz  
7833 66h = 9.1Hz  
7834 67h = 9.2Hz  
7835 68h = 9.3Hz  
7836 69h = 9.4Hz  
7837 6Ah = 9.5Hz  
7838 6Bh = 9.6Hz  
7839 6Ch = 9.7Hz  
7840 6Dh = 9.8Hz  
7841 6Eh = 9.9Hz  
7842 6Fh = 10.0Hz  
7843 70h = 12.0Hz  
7844 71h = 14.0Hz  
7845 72h = 16.0Hz  
7846 73h = 18.0Hz  
7847 74h = 20.0Hz  
7848  
7849 Display Table #18  
7850  
7851 00h = Triangle  
7852 01h = Sine  
7853 02h = Sawtooth  
7854 03h = Square  
7855 04h = Asymm  
7856 05h = 16-Step  
7857 06h = 8-Step  
7858 07h = 4-Step  
7859  
7860 Display Table #19  
7861  
7862 00h = Uniform  
7863 01h = Linear+  
7864 02h = Linear-  
7865 03h = Exponential+

7866 04h = Exponential-  
7867 05h = Random  
7868  
7869 Display Table #20  
7870  
7871 00h = Centered  
7872 01h = Alternating  
7873 02h = L->R  
7874 03h = R->L  
7875 04h = Center->Out  
7876 05h = Out->Center  
7877 06h = Random  
7878  
7879 Display Table #21  
7880  
7881 00h = Soft  
7882 01h = Medium 1  
7883 02h = Medium 2  
7884 03h = Hard  
7885 04h = Buzz  
7886  
7887 Display Table #22  
7888  
7889 00h = OFF  
7890 01h = -99dB  
7891 02h = -98dB  
7892 03h = -97dB  
7893 04h = -96dB  
7894 05h = -95dB  
7895 06h = -94dB  
7896 07h = -93dB  
7897 08h = -92dB  
7898 09h = -91dB  
7899 0Ah = -90dB  
7900 0Bh = -89dB  
7901 0Ch = -88dB  
7902 0Dh = -87dB  
7903 0Eh = -86dB  
7904 0Fh = -85dB  
7905 10h = -84dB  
7906 11h = -83dB  
7907 12h = -82dB  
7908 13h = -81dB  
7909 14h = -80dB  
7910 15h = -79dB  
7911 16h = -78dB  
7912 17h = -77dB  
7913 18h = -76dB  
7914 19h = -75dB  
7915 1Ah = -74dB  
7916 1Bh = -73dB  
7917 1Ch = -72dB  
7918 1Dh = -71dB  
7919 1Eh = -70dB  
7920 1Fh = -69dB

7921 20h = -68dB  
7922 21h = -67dB  
7923 22h = -66dB  
7924 23h = -65dB  
7925 24h = -64dB  
7926 25h = -63dB  
7927 26h = -62dB  
7928 27h = -61dB  
7929 28h = -60dB  
7930 29h = -59dB  
7931 2Ah = -58dB  
7932 2Bh = -57dB  
7933 2Ch = -56dB  
7934 2Dh = -55dB  
7935 2Eh = -54dB  
7936 2Fh = -53dB  
7937 30h = -52dB  
7938 31h = -51dB  
7939 32h = -50dB  
7940 33h = -49dB  
7941 34h = -48dB  
7942 35h = -47dB  
7943 36h = -46dB  
7944 37h = -45dB  
7945 38h = -44dB  
7946 39h = -43dB  
7947 3Ah = -42dB  
7948 3Bh = -41dB  
7949 3Ch = -40dB  
7950 3Dh = -39dB  
7951 3Eh = -38dB  
7952 3Fh = -37dB  
7953 40h = -36dB  
7954 41h = -35dB  
7955 42h = -34dB  
7956 43h = -33dB  
7957 44h = -32dB  
7958 45h = -31dB  
7959 46h = -30dB  
7960 47h = -29dB  
7961 48h = -28dB  
7962 49h = -27dB  
7963 4Ah = -26dB  
7964 4Bh = -25dB  
7965 4Ch = -24dB  
7966 4Dh = -23dB  
7967 4Eh = -22dB  
7968 4Fh = -21dB  
7969 50h = -20dB  
7970 51h = -19dB  
7971 52h = -18dB  
7972 53h = -17dB  
7973 54h = -16dB  
7974 55h = -15dB  
7975 56h = -14dB

7976 57h = -13dB  
7977 58h = -12dB  
7978 59h = -11dB  
7979 5Ah = -10dB  
7980 5Bh = -09dB  
7981 5Ch = -08dB  
7982 5Dh = -07dB  
7983 5Eh = -06dB  
7984 5Fh = -05dB  
7985 60h = -04dB  
7986 61h = -03dB  
7987 62h = -02dB  
7988 63h = -01dB  
7989 64h = 00dB  
7990  
7991 Display Table #23  
7992  
7993 00h = ON  
7994 01h = OFF  
7995  
7996 Display Table #24  
7997  
7998 00h = Single  
7999 01h = Multi  
8000  
8001 Display Table #25  
8002  
8003 00h = -24 Semi  
8004 01h = -23 Semi  
8005 02h = -22 Semi  
8006 03h = -21 Semi  
8007 04h = -20 Semi  
8008 05h = -19 Semi  
8009 06h = -18 Semi  
8010 07h = -17 Semi  
8011 08h = -16 Semi  
8012 09h = -15 Semi  
8013 0Ah = -14 Semi  
8014 0Bh = -13 Semi  
8015 0Ch = -12 Semi  
8016 0Dh = -11 Semi  
8017 0Eh = -10 Semi  
8018 0Fh = -09 Semi  
8019 10h = -08 Semi  
8020 11h = -07 Semi  
8021 12h = -06 Semi  
8022 13h = -05 Semi  
8023 14h = -04 Semi  
8024 15h = -03 Semi  
8025 16h = -02 Semi  
8026 17h = -01 Semi  
8027 18h = 00 Semi  
8028 19h = +01 Semi  
8029 1Ah = +02 Semi  
8030 1Bh = +03 Semi

8031 1Ch = +04 Semi  
8032 1Dh = +05 Semi  
8033 1Eh = +06 Semi  
8034 1Fh = +07 Semi  
8035 20h = +08 Semi  
8036 21h = +09 Semi  
8037 22h = +10 Semi  
8038 23h = +11 Semi  
8039 24h = +12 Semi  
8040 25h = +13 Semi  
8041 26h = +14 Semi  
8042 27h = +15 Semi  
8043 28h = +16 Semi  
8044 29h = +17 Semi  
8045 2Ah = +18 Semi  
8046 2Bh = +19 Semi  
8047 2Ch = +20 Semi  
8048 2Dh = +21 Semi  
8049 2Eh = +22 Semi  
8050 2Fh = +23 Semi  
8051 30h = +24 Semi  
8052  
8053 Display Table #26  
8054  
8055 00h = -100Cent  
8056 01h = -99 Cent  
8057 02h = -98 Cent  
8058 03h = -97 Cent  
8059 04h = -96 Cent  
8060 05h = -95 Cent  
8061 06h = -94 Cent  
8062 07h = -93 Cent  
8063 08h = -92 Cent  
8064 09h = -91 Cent  
8065 0Ah = -90 Cent  
8066 0Bh = -89 Cent  
8067 0Ch = -88 Cent  
8068 0Dh = -87 Cent  
8069 0Eh = -86 Cent  
8070 0Fh = -85 Cent  
8071 10h = -84 Cent  
8072 11h = -83 Cent  
8073 12h = -82 Cent  
8074 13h = -81 Cent  
8075 14h = -80 Cent  
8076 15h = -79 Cent  
8077 16h = -78 Cent  
8078 17h = -77 Cent  
8079 18h = -76 Cent  
8080 19h = -75 Cent  
8081 1Ah = -74 Cent  
8082 1Bh = -73 Cent  
8083 1Ch = -72 Cent  
8084 1Dh = -71 Cent  
8085 1Eh = -70 Cent

8086 1Fh = -69 Cent  
8087 20h = -68 Cent  
8088 21h = -67 Cent  
8089 22h = -66 Cent  
8090 23h = -65 Cent  
8091 24h = -64 Cent  
8092 25h = -63 Cent  
8093 26h = -62 Cent  
8094 27h = -61 Cent  
8095 28h = -60 Cent  
8096 29h = -59 Cent  
8097 2Ah = -58 Cent  
8098 2Bh = -57 Cent  
8099 2Ch = -56 Cent  
8100 2Dh = -55 Cent  
8101 2Eh = -54 Cent  
8102 2Fh = -53 Cent  
8103 30h = -52 Cent  
8104 31h = -51 Cent  
8105 32h = -50 Cent  
8106 33h = -49 Cent  
8107 34h = -48 Cent  
8108 35h = -47 Cent  
8109 36h = -46 Cent  
8110 37h = -45 Cent  
8111 38h = -44 Cent  
8112 39h = -43 Cent  
8113 3Ah = -42 Cent  
8114 3Bh = -41 Cent  
8115 3Ch = -40 Cent  
8116 3Dh = -39 Cent  
8117 3Eh = -38 Cent  
8118 3Fh = -37 Cent  
8119 40h = -36 Cent  
8120 41h = -35 Cent  
8121 42h = -34 Cent  
8122 43h = -33 Cent  
8123 44h = -32 Cent  
8124 45h = -31 Cent  
8125 46h = -30 Cent  
8126 47h = -29 Cent  
8127 48h = -28 Cent  
8128 49h = -27 Cent  
8129 4Ah = -26 Cent  
8130 4Bh = -25 Cent  
8131 4Ch = -24 Cent  
8132 4Dh = -23 Cent  
8133 4Eh = -22 Cent  
8134 4Fh = -21 Cent  
8135 50h = -20 Cent  
8136 51h = -19 Cent  
8137 52h = -18 Cent  
8138 53h = -17 Cent  
8139 54h = -16 Cent  
8140 55h = -15 Cent

8141 56h = -14 Cent  
8142 57h = -13 Cent  
8143 58h = -12 Cent  
8144 59h = -11 Cent  
8145 5Ah = -10 Cent  
8146 5Bh = -09 Cent  
8147 5Ch = -08 Cent  
8148 5Dh = -07 Cent  
8149 5Eh = -06 Cent  
8150 5Fh = -05 Cent  
8151 60h = -04 Cent  
8152 61h = -03 Cent  
8153 62h = -02 Cent  
8154 63h = -01 Cent  
8155 64h = 00 Cent  
8156 65h = +01 Cent  
8157 66h = +02 Cent  
8158 67h = +03 Cent  
8159 68h = +04 Cent  
8160 69h = +05 Cent  
8161 6Ah = +06 Cent  
8162 6Bh = +07 Cent  
8163 6Ch = +08 Cent  
8164 6Dh = +09 Cent  
8165 6Eh = +10 Cent  
8166 6Fh = +11 Cent  
8167 70h = +12 Cent  
8168 71h = +13 Cent  
8169 72h = +14 Cent  
8170 73h = +15 Cent  
8171 74h = +16 Cent  
8172 75h = +17 Cent  
8173 76h = +18 Cent  
8174 77h = +19 Cent  
8175 78h = +20 Cent  
8176 79h = +21 Cent  
8177 7Ah = +22 Cent  
8178 7Bh = +23 Cent  
8179 7Ch = +24 Cent  
8180 7Dh = +25 Cent  
8181 7Eh = +26 Cent  
8182 7Fh = +27 Cent  
8183 80h = +28 Cent  
8184 81h = +29 Cent  
8185 82h = +30 Cent  
8186 83h = +31 Cent  
8187 84h = +32 Cent  
8188 85h = +33 Cent  
8189 86h = +34 Cent  
8190 87h = +35 Cent  
8191 88h = +36 Cent  
8192 89h = +37 Cent  
8193 8Ah = +38 Cent  
8194 8Bh = +39 Cent  
8195 8Ch = +40 Cent

8196 8Dh = +41 Cent  
8197 8Eh = +42 Cent  
8198 8Fh = +43 Cent  
8199 90h = +44 Cent  
8200 91h = +45 Cent  
8201 92h = +46 Cent  
8202 93h = +47 Cent  
8203 94h = +48 Cent  
8204 95h = +49 Cent  
8205 96h = +50 Cent  
8206 97h = +51 Cent  
8207 98h = +52 Cent  
8208 99h = +53 Cent  
8209 9Ah = +54 Cent  
8210 9Bh = +55 Cent  
8211 9Ch = +56 Cent  
8212 9Dh = +57 Cent  
8213 9Eh = +58 Cent  
8214 9Fh = +59 Cent  
8215 A0h = +60 Cent  
8216 A1h = +61 Cent  
8217 A2h = +62 Cent  
8218 A3h = +63 Cent  
8219 A4h = +64 Cent  
8220 A5h = +65 Cent  
8221 A6h = +66 Cent  
8222 A7h = +67 Cent  
8223 A8h = +68 Cent  
8224 A9h = +69 Cent  
8225 AAh = +70 Cent  
8226 ABh = +71 Cent  
8227 ACh = +72 Cent  
8228 ADh = +73 Cent  
8229 AEh = +74 Cent  
8230 AFh = +75 Cent  
8231 B0h = +76 Cent  
8232 B1h = +77 Cent  
8233 B2h = +78 Cent  
8234 B3h = +79 Cent  
8235 B4h = +80 Cent  
8236 B5h = +81 Cent  
8237 B6h = +82 Cent  
8238 B7h = +83 Cent  
8239 B8h = +84 Cent  
8240 B9h = +85 Cent  
8241 BAh = +86 Cent  
8242 BBh = +87 Cent  
8243 BCh = +88 Cent  
8244 BDh = +89 Cent  
8245 BEh = +90 Cent  
8246 BFh = +91 Cent  
8247 C0h = +92 Cent  
8248 C1h = +93 Cent  
8249 C2h = +94 Cent  
8250 C3h = +95 Cent

8251 C4h = +96 Cent  
8252 C5h = +97 Cent  
8253 C6h = +98 Cent  
8254 C7h = +99 Cent  
8255 C8h = +100Cent  
8256  
8257 Display Table #27  
8258  
8259 00h = 'A'  
8260 01h = 'E'  
8261 02h = 'I'  
8262 03h = 'O'  
8263 04h = 'U'  
8264 05h = 'AA'  
8265 06h = 'AE'  
8266 07h = 'AH'  
8267 08h = 'AO'  
8268 09h = 'EH'  
8269 0Ah = 'ER'  
8270 0Bh = 'IH'  
8271 0Ch = 'IY'  
8272 0Dh = 'UH'  
8273 0Eh = 'UW'  
8274 0Fh = 'B'  
8275 10h = 'D'  
8276 11h = 'F'  
8277 12h = 'G'  
8278 13h = 'J'  
8279 14h = 'K'  
8280 15h = 'L'  
8281 16h = 'M'  
8282 17h = 'N'  
8283 18h = 'P'  
8284 19h = 'R'  
8285 1Ah = 'S'  
8286 1Bh = 'T'  
8287 1Ch = 'V'  
8288 1Dh = 'Z'  
8289  
8290 Display Table #28  
8291  
8292 00h = Slow  
8293 01h = Fast  
8294  
8295 Display Table #29  
8296  
8297 00h = Stereo  
8298 01h = Mono  
8299  
8300 Display Table #30  
8301  
8302 00h = Full <Lo  
8303 01h = 99% <Lo  
8304 02h = 98% <Lo  
8305 03h = 96% <Lo

8306 04h = 94% <Lo  
8307 05h = 92% <Lo  
8308 06h = 90% <Lo  
8309 07h = 88% <Lo  
8310 08h = 86% <Lo  
8311 09h = 84% <Lo  
8312 0Ah = 82% <Lo  
8313 0Bh = 80% <Lo  
8314 0Ch = 78% <Lo  
8315 0Dh = 76% <Lo  
8316 0Eh = 74% <Lo  
8317 0Fh = 72% <Lo  
8318 10h = 70% <Lo  
8319 11h = 68% <Lo  
8320 12h = 66% <Lo  
8321 13h = 64% <Lo  
8322 14h = 62% <Lo  
8323 15h = 60% <Lo  
8324 16h = 58% <Lo  
8325 17h = 56% <Lo  
8326 18h = 54% <Lo  
8327 19h = 52% <Lo  
8328 1Ah = 50% <Lo  
8329 1Bh = 48% <Lo  
8330 1Ch = 46% <Lo  
8331 1Dh = 44% <Lo  
8332 1Eh = 42% <Lo  
8333 1Fh = 40% <Lo  
8334 20h = 38% <Lo  
8335 21h = 36% <Lo  
8336 22h = 34% <Lo  
8337 23h = 32% <Lo  
8338 24h = 30% <Lo  
8339 25h = 28% <Lo  
8340 26h = 26% <Lo  
8341 27h = 25% <Lo  
8342 28h = 24% <Lo  
8343 29h = 23% <Lo  
8344 2Ah = 22% <Lo  
8345 2Bh = 21% <Lo  
8346 2Ch = 20% <Lo  
8347 2Dh = 19% <Lo  
8348 2Eh = 18% <Lo  
8349 2Fh = 17% <Lo  
8350 30h = 16% <Lo  
8351 31h = 15% <Lo  
8352 32h = 14% <Lo  
8353 33h = 13% <Lo  
8354 34h = 12% <Lo  
8355 35h = 11% <Lo  
8356 36h = 10% <Lo  
8357 37h = 09% <Lo  
8358 38h = 08% <Lo  
8359 39h = 07% <Lo  
8360 3Ah = 06% <Lo

8361 3Bh = 05% <Lo  
8362 3Ch = 04% <Lo  
8363 3Dh = 03% <Lo  
8364 3Eh = 02% <Lo  
8365 3Fh = 01% <Lo  
8366 40h = Lo-Hi  
8367 41h = 01% >Hi  
8368 42h = 02% >Hi  
8369 43h = 03% >Hi  
8370 44h = 04% >Hi  
8371 45h = 05% >Hi  
8372 46h = 06% >Hi  
8373 47h = 07% >Hi  
8374 48h = 08% >Hi  
8375 49h = 09% >Hi  
8376 4Ah = 10% >Hi  
8377 4Bh = 11% >Hi  
8378 4Ch = 12% >Hi  
8379 4Dh = 13% >Hi  
8380 4Eh = 14% >Hi  
8381 4Fh = 15% >Hi  
8382 50h = 16% >Hi  
8383 51h = 17% >Hi  
8384 52h = 18% >Hi  
8385 53h = 19% >Hi  
8386 54h = 20% >Hi  
8387 55h = 21% >Hi  
8388 56h = 22% >Hi  
8389 57h = 23% >Hi  
8390 58h = 24% >Hi  
8391 59h = 25% >Hi  
8392 5Ah = 26% >Hi  
8393 5Bh = 28% >Hi  
8394 5Ch = 30% >Hi  
8395 5Dh = 32% >Hi  
8396 5Eh = 34% >Hi  
8397 5Fh = 36% >Hi  
8398 60h = 38% >Hi  
8399 61h = 40% >Hi  
8400 62h = 42% >Hi  
8401 63h = 44% >Hi  
8402 64h = 46% >Hi  
8403 65h = 48% >Hi  
8404 66h = 50% >Hi  
8405 67h = 52% >Hi  
8406 68h = 54% >Hi  
8407 69h = 56% >Hi  
8408 6Ah = 58% >Hi  
8409 6Bh = 60% >Hi  
8410 6Ch = 62% >Hi  
8411 6Dh = 64% >Hi  
8412 6Eh = 66% >Hi  
8413 6Fh = 68% >Hi  
8414 70h = 70% >Hi  
8415 71h = 72% >Hi

8416 72h = 74% >Hi  
8417 73h = 76% >Hi  
8418 74h = 78% >Hi  
8419 75h = 80% >Hi  
8420 76h = 82% >Hi  
8421 77h = 84% >Hi  
8422 78h = 86% >Hi  
8423 79h = 88% >Hi  
8424 7Ah = 90% >Hi  
8425 7Bh = 92% >Hi  
8426 7Ch = 94% >Hi  
8427 7Dh = 96% >Hi  
8428 7Eh = 98% >Hi  
8429 7Fh = Full >Hi  
8430  
8431 Display Table #31  
8432  
8433 00h = 100ms  
8434 01h = 200ms  
8435 02h = 300ms  
8436 03h = 400ms  
8437 04h = 500ms  
8438 05h = 600ms  
8439 06h = 700ms  
8440 07h = 800ms  
8441 08h = 900ms  
8442 09h = 1.0s  
8443 0Ah = 1.1s  
8444 0Bh = 1.2s  
8445 0Ch = 1.3s  
8446 0Dh = 1.4s  
8447 0Eh = 1.5s  
8448 0Fh = 1.6s  
8449 10h = 1.7s  
8450 11h = 1.8s  
8451 12h = 1.9s  
8452 13h = 2.0s  
8453 14h = 2.5s  
8454 15h = 3.0s  
8455 16h = 3.5s  
8456 17h = 4.0s  
8457 18h = 4.5s  
8458 19h = 5.0s  
8459 1Ah = 6.0s  
8460 1Bh = 7.0s  
8461 1Ch = 8.0s  
8462 1Dh = 9.0s  
8463 1Eh = 10.0s  
8464  
8465 Display Table #32  
8466  
8467 00h = 0.0Hz  
8468 01h = 0.2Hz  
8469 02h = 0.4Hz  
8470 03h = 0.6Hz

8471 04h = 0.8Hz  
8472 05h = 1.0Hz  
8473 06h = 1.2Hz  
8474 07h = 1.4Hz  
8475 08h = 1.6Hz  
8476 09h = 1.8Hz  
8477 0Ah = 2.0Hz  
8478 0Bh = 2.2Hz  
8479 0Ch = 2.4Hz  
8480 0Dh = 2.6Hz  
8481 0Eh = 2.8Hz  
8482 0Fh = 3.0Hz  
8483 10h = 3.2Hz  
8484 11h = 3.4Hz  
8485 12h = 3.6Hz  
8486 13h = 3.8Hz  
8487 14h = 4.0Hz  
8488 15h = 4.2Hz  
8489 16h = 4.4Hz  
8490 17h = 4.6Hz  
8491 18h = 4.8Hz  
8492 19h = 5.0Hz  
8493 1Ah = 5.2Hz  
8494 1Bh = 5.4Hz  
8495 1Ch = 5.6Hz  
8496 1Dh = 5.8Hz  
8497 1Eh = 6.0Hz  
8498 1Fh = 6.2Hz  
8499 20h = 6.4Hz  
8500 21h = 6.6Hz  
8501 22h = 6.8Hz  
8502 23h = 7.0Hz  
8503 24h = 7.2Hz  
8504 25h = 7.4Hz  
8505 26h = 7.6Hz  
8506 27h = 7.8Hz  
8507 28h = 8.0Hz  
8508 29h = 8.2Hz  
8509 2Ah = 8.4Hz  
8510 2Bh = 8.6Hz  
8511 2Ch = 8.8Hz  
8512 2Dh = 9.0Hz  
8513 2Eh = 9.2Hz  
8514 2Fh = 9.4Hz  
8515 30h = 9.6Hz  
8516 31h = 9.8Hz  
8517 32h = 10.0Hz  
8518  
8519 Display Table #33  
8520  
8521 00h = Normal  
8522 01h = Toggle  
8523  
8524 Display Table #34  
8525

8526 00h = 1.0:1  
 8527 01h = 1.1:1  
 8528 02h = 1.2:1  
 8529 03h = 1.3:1  
 8530 04h = 1.4:1  
 8531 05h = 1.5:1  
 8532 06h = 1.6:1  
 8533 07h = 1.7:1  
 8534 08h = 1.8:1  
 8535 09h = 1.9:1  
 8536 0Ah = 2.0:1  
 8537 0Bh = 2.1:1  
 8538 0Ch = 2.2:1  
 8539 0Dh = 2.3:1  
 8540 0Eh = 2.4:1  
 8541 0Fh = 2.5:1  
 8542 10h = 2.6:1  
 8543 11h = 2.7:1  
 8544 12h = 2.8:1  
 8545 13h = 2.9:1  
 8546 14h = 3.0:1  
 8547 15h = 4.0:1  
 8548 16h = 5.0:1  
 8549 17h = 6.0:1  
 8550 18h = 7.0:1  
 8551 19h = 8.0:1  
 8552 1Ah = 9.0:1  
 8553 1Bh = 10:1  
 8554 1Ch = 15:1  
 8555 1Dh = 20:1  
 8556 1Eh = 25:1  
 8557 1Fh = 30:1  
 8558 20h = 35:1  
 8559 21h = 40:1  
 8560 22h = INF:1  
 8561

8562 Appendix 6 - Breakdown of an Example Single Sound Program SysEx Dump

8563

8564 The following Single Sound Program Transmit Request message (See Section 3.

8565

8566	SysEx Data Bytes	Internal Data Bytes	Description
8567			
8568	F0		System Exclusive St
8569	0F		Ensoniq Manufacture
8570	09		MR Family ID Code
8571	00		MR-Rack Model ID Co
8572	00		Device ID Number =
8573	03		Transmit Request Co
8574	01		Single Sound Progra
8575	7F		Program Number = 12
8576	01		Bank Number = 1
8577	F7		End of System Exclu
8578			

8579 will elicit the following response from the MR assuming that the factory pa  
8580

8581	SysEx Data Bytes	Internal Data Bytes	Description
8582			
8583	F0		System Exclusive St
8584	0F		Ensoniq Manufacture
8585	09		MR Family ID Code
8586	00		MR-Rack Model ID Co
8587	00		Device ID = 0
8588	43		Transmit Request Re
8589	01		Single Sound Progra
8590	7F		Program Number = 12
8591	01		Bank Number = 1
8592	2A 03 00 00 00	00 00 01 AA	Data Block Size
8593	2A 03 00 00 00	00 00 01 AA	Sound Program Size
8594	31 0E 49 02 05	50 52 47 31	'PRG1' in ASCII
8595	18 00 00 00 00	00 00 00 18	Size of Table Of Co
8596	54 26 19 7A 04	4F 46 54 54	'OFTT' in ASCII
8597	40 02 00 00 00	00 00 01 40	Effects Offset
8598	20 00 00 00 00	00 00 00 20	Program Parameters
8599	44 00 00 00 00	00 00 00 44	Layer Offset Table
8600	00 00 00 00 00	00 00 00 00	Reserved
8601	24 00 00 00 00	00 00 00 24	Sound Program Param
8602	31 20 1D 02 05	50 47 50 31	'PGP1' in ASCII
8603	73 72 11 7B 04	4F 64 79 73	'Odys' in ASCII
8604	4C 72 15 1B 07	73 65 79 4C	'seyL' in ASCII
8605	00 48 05 2B 06	65 61 64 00	'ead ' in ASCII
8606	00 00 00 00 00	00 00 00 00	' ' in ASCII
8607	00 04 08 00 00	00	Pitch Table = Equal
8608		02	Pitch Bend Up Range
8609		02	Pitch Bend Down Ran
8610		00	Reserved
8611	00 00 0C 00 00	00	Reserved
8612		03	FX Bus = Medium Rev
8613		00 00	Reserved
8614	08 00 00 38 05	57	GM Alias = Bass & L
8615		00	Program Enables: He
8616		00	Restrike Limit = De
8617		08	Sound Finder Catago
8618	48 00 00 00 00	00 00 00 48	Layer Offset Table
8619	54 26 19 7A 04	4F 46 53 54	'OFST' in ASCII
8620	0C 01 00 00 00	00 00 00 8C	Layer #01 Offset
8621	00 00 00 00 00	00 00 00 00	Layer #02 Offset
8622	00 00 00 00 00	00 00 00 00	Layer #03 Offset
8623	00 00 00 00 00	00 00 00 00	Layer #04 Offset
8624	00 00 00 00 00	00 00 00 00	Layer #05 Offset
8625	00 00 00 00 00	00 00 00 00	Layer #06 Offset
8626	00 00 00 00 00	00 00 00 00	Layer #07 Offset
8627	00 00 00 00 00	00 00 00 00	Layer #08 Offset
8628	00 00 00 00 00	00 00 00 00	Layer #09 Offset
8629	00 00 00 00 00	00 00 00 00	Layer #10 Offset
8630	00 00 00 00 00	00 00 00 00	Layer #11 Offset
8631	00 00 00 00 00	00 00 00 00	Layer #12 Offset
8632	00 00 00 00 00	00 00 00 00	Layer #13 Offset
8633	00 00 00 00 00	00 00 00 00	Layer #14 Offset
8634	00 00 00 00 00	00 00 00 00	Layer #15 Offset
8635	00 00 00 00 00	00 00 00 00	Layer #16 Offset

8636	34 01 00 00 00	00 00 00 B4	Layer #1 Parameter
8637	31 24 65 62 04	4C 59 52 31	'LYR1' in ASCII
8638	00 02 00 00 00	00 00	Use Layer Number =
8639		01	Layer Control = Ena
8640		00	Trigger Control = 0
8641	6C 20 02 78 07	7F	Controller High Thr
8642		00	Controller Low Thre
8643		90	Trigger Mode = Key
8644		6C	High Keyboard Key T
8645	00 00 7C 2B 01	15	Low Keyboard Key Th
8646		7F	High Note-On Veloci
8647		00	Low Note-On Velocit
8648		00	Layer Delay MSB = 0
8649	00 00 14 00 00	00	Layer Delay LSB = 0
8650		05	Volume = 5
8651		00	Pan = 0
8652		00	SemiTune = 0
8653	03 00 04 00 00	00	Fine Tune = 0
8654		01	Voice Mode = Mono
8655		00	Glide Mode = OFF
8656		03	Glide Time = 3
8657	00 00 00 00 00	00	Key Group = OFF
8658		00 00 00	Reserved
8659	74 52 39 4B 04	49 6E 69 74	'Init' in ASCII
8660	65 72 05 63 04	4C 61 79 65	'Laye' in ASCII
8661	00 40 00 11 07	72 20 20 00	'r ' in ASCII
8662	00 00 00 00 00	00 00 00 00	' ' in ASCII
8663	00 22 28 00 00	00	ENV1 Mod Amount = 0
8664		0A	LFO Mod Amount = 10
8665		11	Key Track = Pitch T
8666		00	Pitch Mod Source =
8667	01 00 00 00 00	00	Pitch Mod Amount =
8668		00	Pitch Mod Range = 0
8669		00	Reserved
8670		01	Filter Mode = 3LP/1
8671	42 00 14 00 00	00	Filter 1+2 Link = 0
8672		05	Filter 1 Cutoff = 5
8673		00	Reserved
8674		42	Filter 1 ENV2 Mod A
8675	3C 00 54 7B 00	0F	Filter 1 Cutoff Mod
8676		75	Filter 1 Cutoff Mod
8677		00	Filter 1 Cutoff Key
8678		3C	Filter 1 Cutoff Key
8679	00 14 00 00 00	00 00	Reserved
8680		0A	Filter 2 Cutoff = 1
8681		00	Reserved
8682	00 2E 3D 00 04	40	Filter 2 ENV2 Mod A
8683		0F	Filter 2 Cutoff Mod
8684		57	Filter 2 Cutoff Mod
8685		00	Filter 2 Cutoff Key
8686	00 00 00 60 03	3C	Filter 2 Cutoff Key
8687		00 00 00	Reserved
8688	7C 4B 0C 02 00	00	Waveform Number (MS
8689		43	Waveform Number (LS
8690		25	Waveform Checksum (

8691						FC			Waveform Checksum (	
8692	00	00	00	00	00	00			Playback Direction	
8693						00			Shift Amount = 0	
8694						00			Shift Mode = OFF	
8695						00			Start Index = 0	
8696	00	00	00	00	00	00			Waveform Mod Source	
8697						00			Waveform Mod Amount	
8698						00	00		Reserved	
8699	00	00	00	00	00	00			Amplitude Mod Sourc	
8700						00			Amplitude Mod Amoun	
8701						00			Panning Mod Source	
8702						00			Panning Mod Amount	
8703	00	00	70	01	00	00			Rolloff Slope = 0	
8704						3C			Rolloff Key Number	
8705						00			Rolloff Mode = OFF	
8706						00			Reserved	
8707	00	00	00	02	00	00			Reserved	
8708						40			Noise Rate = 64	
8709						00	00		Reserved	
8710	00	00	7C	07	00	00			Reserved	
8711						FF			MIDI Enables:	
8712									Pitch Bend = ON	
8713									Sustain = ON	
8714						00			Reserved	
8715						00			Noise Sync = Normal	
8716	31	2C	39	2A	04	45	4E	56	31	'ENV1' in ASCII
8717	00	7E	01	00	00	00				Release Mod Amount
8718						00				Attack Time = 0
8719						7F				Attack Peak Level =
8720						00				Decay 1 Time = 0
8721	00	7E	01	78	07	7F				Decay 1 Break Level
8722						00				Decay 2 Time = 0
8723						7F				Decay 2 Break Level
8724						00				Decay 3 Time = 0
8725	00	32	50	78	07	7F				Sustain Level = 127
8726						14				Release Time = 20
8727						19				Level Velocity = 25
8728						00				Attack Velocity = 0
8729	00	08	00	00	00	00				Key Scale = 0
8730						00				Envelope Mode = Nor
8731						04				Velocity Curve = Li
8732						00				Reserved
8733	31	2C	39	2A	04	45	4E	56	31	'ENV1' in ASCII
8734	07	7E	0D	00	00	00				Release Mod Amount
8735						03				Attack Time = 3
8736						7F				Attack Peak Level =
8737						07				Decay 1 Time = 7
8738	4F	5A	41	29	06	65				Decay 1 Break Level
8739						30				Decay 2 Time = 48
8740						6D				Decay 2 Break Level
8741						4F				Decay 3 Time = 79
8742	00	00	50	78	07	7F				Sustain Level = 127
8743						14				Release Time = 20
8744						00				Level Velocity = 0
8745						00				Attack Velocity = 0

8746	00 08 00 00 00	00	Key Scale = 0
8747		00	Envelope Mode = Nor
8748		04	Velocity Curve = Li
8749		00	Reserved
8750	31 2C 39 2A 04	45 4E 56 31	'ENV1' in ASCII
8751	00 7E 01 00 00	00	Release Mod Amount
8752		00	Attack Time = 0
8753		7F	Attack Peak Level =
8754		00	Decay 1 Time = 0
8755	4F 6A 19 19 07	73	Decay 1 Break Level
8756		26	Decay 2 Time = 38
8757		75	Decay 2 Break Level
8758		4F	Decay 3 Time = 79
8759	00 00 50 78 07	7F	Sustain Level = 127
8760		14	Release Time = 20
8761		00	Level Velocity = 0
8762		00	Attack Velocity = 0
8763	00 08 00 00 00	00	Key Scale = 0
8764		00	Envelope Mode = Nor
8765		04	Velocity Curve = Li
8766		00	Reserved
8767	31 1E 19 62 04	4C 46 4F 31	'LFO1' in ASCII
8768	1C 02 01 00 00	00	Waveshape = Triangl
8769		00	LFO Depth = 0
8770		41	LFO Rate = 65
8771		1C	LFO Delay = 28
8772	0F 7E 39 00 00	00	LFO Phase = 0
8773		0E	LFO Depth Mod Sourc
8774		7F	LFO Depth Mod Amoun
8775		0F	LFO Rate Mod Source
8776	00 00 00 38 0F	F7	LFO Rate Mod Amount
8777		00	LFO Retrigger = OFF
8778		00	LFO Timebase = Norm
8779		00	Reserved
8780	46 00 00 00 00	00 00 00 46	Insert Effect Struc
8781	31 30 19 4A 04	49 46 58 31	'IFX1' in ASCII
8782	00 00 00 00 00	00	Insert Mod Source =
8783		00	Insert Mod Dest = E
8784		00 00	Mod Source Min = 0
8785	00 00 7C 03 00	00 7F	Mod Source Max = 12
8786		00 00	Mod Dest Min = OFF
8787	00 00 70 03 00	00 7C	Mod Dest Max = +24d
8788		00	Chorus Mix = Full D
8789		00	Reverb Send = 0
8790	04 00 38 78 07	7F	Insert Mix = Full W
8791		0E	Parameter Count = 1
8792		00 04	Algorithm Family =
8793	2D 70 08 00 00	00 02	Algorithm Member =
8794		38 2D	'8-' in ASCII
8795	63 52 3D 33 05	56 6F 69 63	'Voic' in ASCII
8796	6F 50 0D 2A 06	65 43 68 6F	'eCho' in ASCII
8797	00 66 55 13 07	72 75 73 00	'rus ' in ASCII
8798	64 00 00 00 00	00 00	' ' in ASCII
8799		00 64	EQ Input = 0.0db
8800	56 00 00 03 00	00 60	EQ Output = -2.0dB

8801		00 56	Mid 1 Fc = 5.60kHz
8802	6D 00 28 00 00	00 0A	Mid 1 Q = 1.0
8803		00 6D	Mid 1 Gain = +9db
8804	28 00 30 00 00	00 0C	LFO Rate = 1.2Hz
8805		00 28	Chorus Depth = 4.0m
8806	00 00 38 00 00	00 0E	Chorus Center = 1.4
8807		00 00	Unused FX Parm #08
8808	40 00 1C 04 00	00 87	Chorus Phase = +90d
8809		00 40	Chorus Feedback = 0
8810	64 00 00 00 00	00 00	HPF Cutoff = 10Hz
8811		00 64	Center Offset = 100
8812	00 00 04 02 00	00 41	Dry Blend = 50.8% W
8813		00 00	Unused FX Parm #14
8814	00 00 00 00 00	00 00	Unused FX Parm #15
8815		00 00	Unused FX Parm #16
8816	00 00 00 00 00	00 00	Unused FX Parm #17
8817		00 00	Unused FX Parm #18
8818	00 00 00 00 00	00 00	Unused FX Parm #19
8819		00 00	Unused FX Parm #20
8820	00 00 00 00 00	00 00	Unused FX Parm #21
8821		00 00	Unused FX Parm #22
8822	00 00 00 00 00	00 00	Unused FX Parm #23
8823		00 00	Unused FX Parm #24
8824	00 00 00 00 00	00 00	Unused FX Parm #25
8825		00 00	Unused FX Parm #26
8826	00 00 00 00 00	00 00	Unused FX Parm #27
8827		00 00	Unused FX Parm #28
8828	00 00 00 00 00	00 00	Unused FX Parm #29
8829		00 00	Unused FX Parm #30
8830	00 00 00 00 00	00 00	Unused FX Parm #31
8831		00 00	4-to-5 Format Zero
8832	59 4D	n/a	Checksum = 4D59h
8833	F7	n/a	End of System Exclu
8834			
8835	Part # 9311007101	Model # MM-132	
8836			