Typical problem: You need to replace an integrated circuit, or at least find some data on it. It says

DM8095N
7410 NS

and lives in a 16-pin DIP. What is it? The 7410 has a familiar sound, so you order a few. A week later they arrive, in 14-pin DIPS! Banging your head on the nearest wall (since you should have known this all along), you realize you’re back where you were a week ago, but with a handful of spare 3-input NANDs for consolation.

What’s needed is a master list of IC prefixes, from which you can quickly identify the manufacturer. This appendix is our attempt to bring some order out of chaos. We make no pretense of accuracy or completeness, especially since the list is proliferating daily. (That mystery chip is a National Semiconductor 8095 hex three-state TTL buffer, by the way, manufactured in the 10th week of 1974.)

PREFIXES

The various semiconductor manufacturers use distinctive (usually) prefixes in front of the IC number, even if it is an IC type made by many different companies. The DM in the preceding example indicates a digital monolithic IC made by National Semiconductor (also indicated by the NS logo). Here is a list of most of the prefixes now in use:

<table>
<thead>
<tr>
<th>Prefixes</th>
<th>Manufacturer</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACE, AY, GIC, GP, SPR</td>
<td>General Instrument (GI)</td>
</tr>
<tr>
<td>AD, CAV, HAS, HDM</td>
<td>Analog Devices</td>
</tr>
<tr>
<td>ADC, DM, DS, LF LFT, LH, LM, NH</td>
<td>National Semiconductor (NSC)</td>
</tr>
<tr>
<td>AH</td>
<td>Optical Semiconductor Inc.</td>
</tr>
<tr>
<td>Am</td>
<td>Advanced Micro Devices (AMD)</td>
</tr>
<tr>
<td>AM</td>
<td>Datel</td>
</tr>
<tr>
<td>AN</td>
<td>Panasonic</td>
</tr>
<tr>
<td>Bt</td>
<td>Brooktree</td>
</tr>
<tr>
<td>BX, CX</td>
<td>Sony</td>
</tr>
<tr>
<td>C, I, I</td>
<td>Intel</td>
</tr>
<tr>
<td>CA, CD, CDP</td>
<td>GE/RCA</td>
</tr>
<tr>
<td>CA, TDC, MPY, THC, TMC</td>
<td>TRW</td>
</tr>
<tr>
<td>CM, HV</td>
<td>Supertex</td>
</tr>
<tr>
<td>CLC</td>
<td>Comlinear</td>
</tr>
<tr>
<td>CMP, DAC, MAT, OP, PM, REF, SSS</td>
<td>Precision</td>
</tr>
<tr>
<td>CY</td>
<td>Monolithics</td>
</tr>
<tr>
<td>D, DF, DG, SI</td>
<td>Cypress</td>
</tr>
<tr>
<td>DS</td>
<td>Siliconix</td>
</tr>
<tr>
<td>EF, ET, MK, SFC, TDF, TS, EP, EPM, PL</td>
<td>Dallas</td>
</tr>
<tr>
<td>F, µA, µL, Unx</td>
<td>Semiconductor</td>
</tr>
<tr>
<td>FSS, ZLD</td>
<td>Thomson/Mostek</td>
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<tr>
<td>GA</td>
<td>Altera</td>
</tr>
<tr>
<td>GAL</td>
<td>Fairchild/NSC</td>
</tr>
<tr>
<td>GEL</td>
<td>Ferranti</td>
</tr>
<tr>
<td>HA, HI</td>
<td>Gazelle</td>
</tr>
<tr>
<td></td>
<td>Lattice</td>
</tr>
<tr>
<td></td>
<td>GE</td>
</tr>
<tr>
<td></td>
<td>Harris</td>
</tr>
</tbody>
</table>

Res: The Art of Electronics
<table>
<thead>
<tr>
<th>HA, HD, HG, HL, HM, HN</th>
<th>Hitachi</th>
<th>EG&amp;G Reticon</th>
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</thead>
<tbody>
<tr>
<td>HADC, HDAC</td>
<td>Honeywell</td>
<td>AMI</td>
</tr>
<tr>
<td>HEP, MC, MCC, MCM, MEC, MM, MWM</td>
<td>Motorola</td>
<td>ESMF</td>
</tr>
<tr>
<td>ICH, ICL, ICM, IM</td>
<td>GE/Intersil</td>
<td>Silicon General</td>
</tr>
<tr>
<td>IDT</td>
<td>Integrated Device Technology</td>
<td>Texas Instruments (TI)</td>
</tr>
<tr>
<td>IMS</td>
<td>Siemens</td>
<td>Silicon Systems</td>
</tr>
<tr>
<td>INA, ISO, OPA, PWR</td>
<td>Inmos</td>
<td>Toshiba</td>
</tr>
<tr>
<td>IR</td>
<td>Burr-Brown</td>
<td>AEG, Amperex, SGS, Siemens, Signetics, Telefunken</td>
</tr>
<tr>
<td>ITT, MIC</td>
<td>Sharp</td>
<td>Telmos</td>
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<tr>
<td>KA</td>
<td>ITT</td>
<td>Teledyne Philbrick</td>
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<tr>
<td>L</td>
<td>Samsung</td>
<td>Sprague</td>
</tr>
<tr>
<td>L, LD</td>
<td>SGS</td>
<td></td>
</tr>
<tr>
<td>L, UC</td>
<td>Siliconix, Siltronics</td>
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</tr>
<tr>
<td>LA, LC</td>
<td>Unitrode</td>
<td></td>
</tr>
<tr>
<td>LS</td>
<td>Sanyo</td>
<td></td>
</tr>
<tr>
<td>LT, LTC, LTZ</td>
<td>LSI Computer Systems</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>Linear Technology Corp.</td>
<td></td>
</tr>
<tr>
<td>MA</td>
<td>Mitsubishi</td>
<td></td>
</tr>
<tr>
<td>MAX</td>
<td>Analog Systems, Marconi</td>
<td></td>
</tr>
<tr>
<td>MB</td>
<td>Maxim</td>
<td></td>
</tr>
<tr>
<td>MCS</td>
<td>Fujitsu</td>
<td></td>
</tr>
<tr>
<td>MIL</td>
<td>MOS Technology</td>
<td></td>
</tr>
<tr>
<td>ML, MN, SL, SP, TAB</td>
<td>Microsystems International</td>
<td></td>
</tr>
<tr>
<td>ML, MT</td>
<td>Plessey</td>
<td></td>
</tr>
<tr>
<td>MM</td>
<td>Mitel</td>
<td></td>
</tr>
<tr>
<td>MN</td>
<td>Teledyne-Amelco, Monolithic Memories</td>
<td>Teledyne Semiconductor</td>
</tr>
<tr>
<td>MP</td>
<td>Micro Networks</td>
<td>NEC</td>
</tr>
<tr>
<td>MSM</td>
<td>Micro Power Systems</td>
<td>Amtel</td>
</tr>
<tr>
<td>N, NE, PLS, S, SE, SP</td>
<td>Oki</td>
<td>VTC</td>
</tr>
<tr>
<td>nnG</td>
<td>Signetics</td>
<td>VLSI Technology Inc. (VTI)</td>
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<tr>
<td>NC</td>
<td>Gigabit Logic</td>
<td>Xicor</td>
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<tr>
<td>PA</td>
<td>Nitron</td>
<td>Xilinx</td>
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<td>PAL</td>
<td>Apex</td>
<td>Exar</td>
</tr>
<tr>
<td>R</td>
<td>AMD/MMI</td>
<td>Zilog</td>
</tr>
<tr>
<td>R, Ray, RC, RM</td>
<td>Rockwell</td>
<td>Ferranti</td>
</tr>
<tr>
<td></td>
<td>Raytheon</td>
<td>Hewlett-Packard (HP)</td>
</tr>
</tbody>
</table>

**Suffixes**

Suffix letters indicate package type and temperature range. There are three standard temperature ranges: “Military” (−55°C to +125°C), “Industrial” (−25°C to +85°C), and “Commercial” (0°C to +70°C). Commercial is adequate for anything intended for use in normal indoor environments. As luck would have it, each manufacturer has its own set of suffixes, subject to frequent modification. Be sure to look up the correct suffix before you order, or ask the distributor for assistance.
Figure E3

**Notes:**
1. Q2 on Wakefield 421AX heat sink (18W at 600mA short circuit)
2. Adjust R5 for Vout = +15.0 ± 0.1V
3. Mates with cinch 50–10A–20

**Revisions**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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<tbody>
<tr>
<td>1</td>
<td>10-3-78 C1 was 100pF</td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
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**Drawn by:** PH 9-16-78  
**Ass'y No.:** PS-15.4  
**Checked by:** WH 9-23-78
functional and CPU (DSP core) block diagram
Support

Global support page with links to product-related tech support resources and contacts.

Product Literature

- LSI403WLP Digital Signal Processor Product Brief [PDF, 221KB, May 2005]

Related Technologies

- Enhanced Versatile Disc (EVD)

E-mail this page | Printer Friendly Format

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9/18/2005