NMII-0004 RS-232 TO RS-422/485
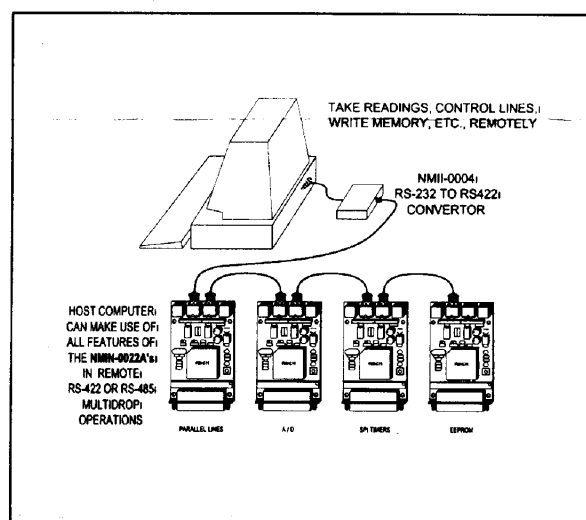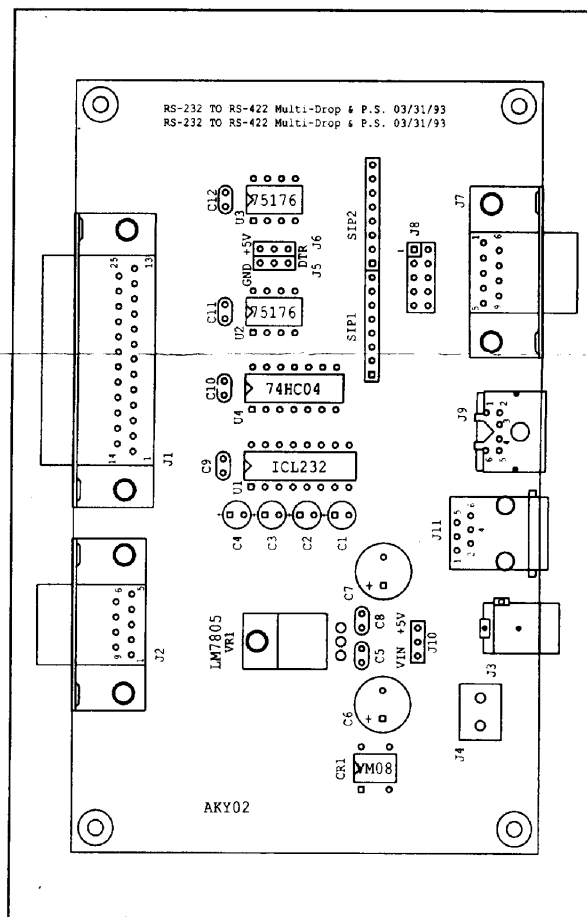
The NMII-0004 provides RS-232 to RS-422, or RS-485, converstion, and has a built-in power supply. It can also suppy power to a network of RS-422 multidrop boards.

FEATURES

- RS-232 to RS-422 or RS-485 serial conversion

- RS-232 connectors:

  DB25F Standard
  DB9F Standard

- RS-232 connectors configurable as DTE or DSE

- RS-422/485 connectors:

  Mini-DIN 6-pin
  DB9M
  RJ-11
  Dual Row .1" header

- RS-422/485 cable lengths up to 4000 feet

- Power Connector:

  Barrel jack 3.5mm
  Screw terminals

- Built in power supply

  7805 5VDC Voltage Regulator
  VM08 Bridge Rectifier

- Can accept external 7-20 VAC or 7 to 28 VDC

- Can source 5VDC @ 950mA, or pass through unrectified, unregulated A.C.

- DC/DC conversion for +/-9VDC RS-232 levels

The NMII-0004 is a converter board, allowing an RS-232 system to interface to a RS-422, or RS-485, system, or network of systems. The converter can accomodate RS-422, and RS-422 modified for multidrop, and RS-485 multidrop. An RS-232 based terminal, or personal computer can access RS-422/485 networks using the NMII-0004. On the RS-232 side, both DB25 and DB9 connections are provided. One, or the other, may be used at one time. A level shifter converts the RS-232 serial in and serial out to TTL levels. These signals are then converted to RS-422/485 levels for connections to systems operating at that level. On the RS-422/485 side, Mini-DIN-6 and RJ11's are provided for Easy-A interface, and also DB-9 and 3M10 connectors.
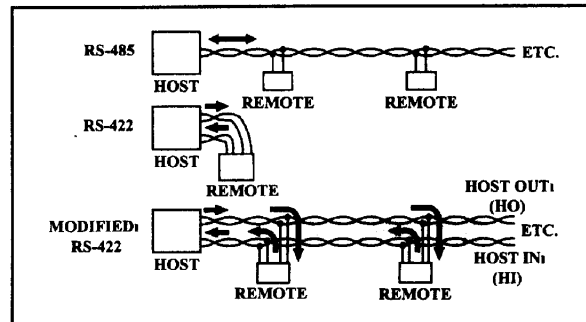

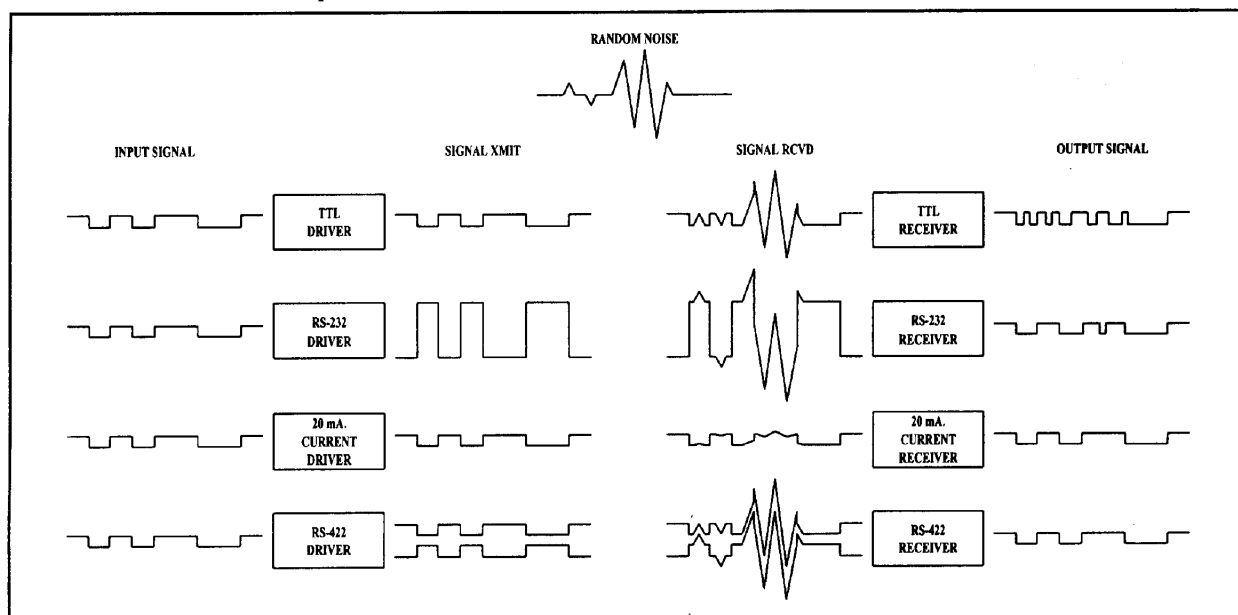**Application**

NMII-0004 RS-232 TO RS-422/485 CONVERTER

RS-232 is a single ended transmission standard (single wire and ground reference) based on voltage levels , generally between -15V and +15V. RS-422/485 standard is a differencial interface (two wires and ground reference). RS-422/485 voltage levels are between 0V and 5V, but since they are differential, or relative to each other rather than the ground reference, The RS-422/485 interface is more immune to noise. RS-232 cable lengths should be limited to 25 feet. RS-422/485 can run with cable lengths of 4000 feet, and further using repeaters.

RS-422 systems use two twisted pairs, one pair for serial in and one pair for serial out, plus a signal return reference (shield or ground). RS-485 interfaces use only one twisted pair and a signal return reference. Both serial in and serial out on the RS-485 pass on the same line, so it is necessary to have a half-duplex control signal to turn the RS-485 drivers around when listening or talking. This talk/listen function is controlled by the DTR line from the RS-232 side.

RS-485, RS-422 and Modified RS-422

Single-ended and Differential Drives