

**TDK Professional Series Recording Media**

*from one pro to another*





TDK announces an all new Pro line:  
quality and reliability for every  
professional recording need.

Audio  
Video  
Optical  
Digital

TDK PRO

from one *pro* to another

Audio Cassettes  
S-VHS and VHS Video Cassettes  
Hi8 Cassettes  
Recordable CD  
DAT Cassettes

Professional Recording Media

*A pro tape line created  
especially for your project  
studio and prosumer  
customers.*



TDK high-bias analog cassettes  
are especially designed for serious  
multitracking and more.

SM-X  
dual-layer high-bias  
Sound Master-X

SM  
high-bias  
Sound Master

AM  
normal-bias  
Acoustic Master

AL  
normal-bias  
Acoustic Leaderless



analog → multitrack

studio and  
special application

Specifications

see back for Pro line at a glance



| ons  | AI                   |      |      |      |      | SM                   |      |      |    |    | SM-X                 |      |      |      |      |                      |      |      |      |      |
|--|----------------------|------|------|------|------|----------------------|------|------|----|----|----------------------|------|------|------|------|----------------------|------|------|------|------|
| Product  | 30                   | 46   | 60   | 90   | 120  | 30                   | 60   | 90   | 10 | 20 | 30                   | 60   | 90   | 10   | 20   | 30                   | 60   | 90   |      |      |
| IEC Type/Bias                                    | Type I/Normal Bias   |      |      |      |      | Type I/Normal Bias   |      |      |    |    | Type II/High Bias    |      |      |      |      | Type II/High Bias    |      |      |      |      |
| Physical Properties                              |                      |      |      |      |      |                      |      |      |    |    |                      |      |      |      |      |                      |      |      |      |      |
| Tape Color                                       | Dark Brown           |      |      |      |      | Dark Brown           |      |      |    |    | Black                |      |      |      |      | Black                |      |      |      |      |
| Base Material                                    | Tensitized Polyester |      |      |      |      | Tensitized Polyester |      |      |    |    | Tensitized Polyester |      |      |      |      | Tensitized Polyester |      |      |      |      |
| Tape Width                                       | 3.81 mm              |      |      |      |      | 3.81 mm              |      |      |    |    | 3.81 mm              |      |      |      |      | 3.81 mm              |      |      |      |      |
| Total Thickness (µm)                             | 17.0                 | 17.0 | 17.0 | 12.5 | 9.5  | 17.0                 | 17.0 | 12.5 |    |    | 16.5                 | 16.5 | 16.5 | 16.5 | 20.0 | 16.5                 | 16.5 | 16.5 | 20.0 |      |
| Base Thickness (µm)                              | 12.0                 | 12.0 | 12.0 | 7.5  | 6.0  | 12.0                 | 12.0 | 7.5  |    |    | 12.0                 | 12.0 | 12.0 | 12.0 | 7.5  | 12.0                 | 12.0 | 12.0 | 7.5  |      |
| Coating Thickness (µm)                           | 5.0                  | 5.0  | 5.0  | 5.0  | 3.5  | 5.0                  | 5.0  | 5.0  |    |    | 4.5µm                |      |      |      |      | 4.5µm                |      |      |      |      |
| Yield Strength (N)                               | 7.5                  | 7.5  | 7.5  | 6.0  | 5.0  | 7.5                  | 7.5  | 6.0  |    |    | 7.5                  | 7.5  | 7.5  | 7.5  | 6.0  | 7.5                  | 7.5  | 7.5  | 6.0  |      |
| Break Strength (N)                               | 15.0                 | 15.0 | 15.0 | 11.0 | 9.0  | 15.0                 | 15.0 | 11.0 |    |    | 15.0                 | 15.0 | 15.0 | 15.0 | 11.0 | 15.0                 | 15.0 | 15.0 | 11.0 |      |
| Tape Length (M)                                  | 45                   | 69   | 90   | 135  | 178  | 45                   | 90   | 135  |    |    | 15                   | 30   | 45   | 90   | 135  | 15                   | 30   | 45   | 90   | 135  |
| Magnetic Properties                              |                      |      |      |      |      |                      |      |      |    |    |                      |      |      |      |      |                      |      |      |      |      |
| Magnetic Particle                                | Pure-grained Ferric  |      |      |      |      | Pure-grained Ferric  |      |      |    |    | Super Avilyn™        |      |      |      |      | Super Avilyn™        |      |      |      |      |
| Coercivity                                       | 30 kA/m (380 Oe)     |      |      |      |      | 30 kA/m (380 Oe)     |      |      |    |    | 54 kA/m (680 Oe)     |      |      |      |      | 55 kA/m (690 Oe)     |      |      |      |      |
| Remanence  | 155 mT (1550 gauss)  |      |      |      |      | 155 mT (1550 gauss)  |      |      |    |    | 175 mT (1750 gauss)  |      |      |      |      | 190 mT (1900 gauss)  |      |      |      |      |
| Squareness Ratio                                 | 0.83                 |      |      |      |      | 0.83                 |      |      |    |    | 0.86                 |      |      |      |      | 0.87                 |      |      |      |      |
| Recording Characteristics                        |                      |      |      |      |      |                      |      |      |    |    |                      |      |      |      |      |                      |      |      |      |      |
| Operating Bias (dB)                              | -5.0 dB              |      |      |      |      | -5.0 dB              |      |      |    |    | 0 dB                 |      |      |      |      | +1.0 dB              |      |      |      |      |
| MOL at 315 Hz                                    | +3.5                 | +3.5 | +3.5 | +3.5 | +1.0 | +3.5                 | +3.5 | +3.5 |    |    | +5.0 dB              |      |      |      |      | +5.5 dB              |      |      |      |      |
| MOL at 10kHz                                     | -7.5 dB              |      |      |      |      | -7.5 dB              |      |      |    |    | -6.5 dB              |      |      |      |      | -5.5 dB              |      |      |      |      |
| Sensitivity at 315 Hz (dB)                       | -0.3                 | -0.3 | -0.3 | -0.3 | -1.0 | -0.3                 | -0.3 | -0.3 |    |    | +0.5 dB              |      |      |      |      | +1.3 dB              |      |      |      |      |
| Bias Noise                                       | -55.0 dB             |      |      |      |      | -55.0 dB             |      |      |    |    | -60.5 dB             |      |      |      |      | -61.0 dB             |      |      |      |      |
| Print-through (dB)                               | 56                   | 56   | 56   | 56   | 52   | 56                   | 56   | 56   |    |    | 55                   | 55   | 55   | 55   | 51   | 56                   | 56   | 56   | 52   |      |
| Erase  | 72 dB                |      |      |      |      | 72 dB                |      |      |    |    | 70 dB                |      |      |      |      | 70 dB                |      |      |      |      |
| Uniformity at 315 Hz                             | 0.3 dB               |      |      |      |      | 0.3 dB               |      |      |    |    | 0.3 dB               |      |      |      |      | 0.3 dB               |      |      |      |      |
| Uniformity at 10 kHz                             | 0.3 VU               |      |      |      |      | 0.3 VU               |      |      |    |    | 0.3 VU               |      |      |      |      | 0.3 VU               |      |      |      |      |
| Available Lengths & Recording Times (in minutes) |                      |      |      |      |      |                      |      |      |    |    |                      |      |      |      |      |                      |      |      |      |      |
| Normal Stereo Recording (Sides A+B at 1-7/8 ips) | 30                   | 46   | 60   | 90   | 120  | 30                   | 60   | 90   |    |    | 10                   | 20   | 30   | 60   | 90   | 10                   | 20   | 30   | 60   | 90   |
| Single Direction at 1-7/8 ips                    | —                    | —    | —    | —    | —    | —                    | —    | —    |    |    | 5                    | 10   | 15   | 30   | 45   | 5                    | 10   | 15   | 30   | 45   |
| Single Direction at 3-3/4 ips                    | —                    | —    | —    | —    | —    | —                    | —    | —    |    |    | 2.5                  | 5    | 7.5  | 15   | 22.5 | 2.5                  | 5    | 7.5  | 15   | 22.5 |



It's the product line that hard-  
ware manufacturers specify.

In the dynamic world of digital storage, it's important to note that the leading format for musicians and studios worldwide is still analog tape. Shorter audio cassette lengths and better sounding high-bias formulations have been engineered to address the specific quality concerns and the working needs of musicians and songwriters. Besides, with the world population of analog cassette tape recorders and players in the billions, it is always essential to hear how your digital recording will sound to your analog audience.

No one knows analog cassette technology like TDK. In the mid '70s, TDK launched its *Super Avilyn* cobalt-absorbed formulation, which quickly became the world standard in high-bias tape technology. Today, TDK is bringing the advantages of its analog know-how to the studio user, with high-bias and normal-bias cassettes that combine legendary reliability with perfectionist sound quality.

Professional Recording Media





| Specifications                                 | Product |    |    |     | Hi8MR CM                         |    |     |    | Hi8MR CM                         |    |     |                                  |
|--|---------|----|----|-----|----------------------------------|----|-----|----|----------------------------------|----|-----|----------------------------------|
|  | 30      | 60 | 90 | 120 | 30                               | 60 | 120 | VM | 30                               | 60 | 120 | VM                               |
| <b>Physical Properties</b>                     |         |    |    |     |                                  |    |     |    |                                  |    |     |                                  |
| Tape Width                                     | —       | —  | —  | —   | 8 mm                             | —  | —   | —  | 12.65 mm                         | —  | —   | 12.65 mm                         |
| Total Thickness ( $\mu\text{m}$ )              | —       | —  | —  | —   | 10.0 $\mu\text{m}$               | —  | —   | —  | 17.5 $\mu\text{m}$               | —  | —   | 17.5 $\mu\text{m}$               |
| Tape Width Fluctuation                         | —       | —  | —  | —   | —                                | —  | —   | —  | 3.0 $\mu\text{m}$                | —  | —   | 3.0 $\mu\text{m}$                |
| Magnetic Coating Thickness                     | —       | —  | —  | —   | —                                | —  | —   | —  | —                                | —  | —   | —                                |
| Residual Elongation                            | —       | —  | —  | —   | 0.13%                            | —  | —   | —  | 0.05%                            | —  | —   | 0.05%                            |
| Yield Strength (N)                             | —       | —  | —  | —   | 15 N (1.5 kg)                    | —  | —   | —  | 26 N (2.6 kg)                    | —  | —   | 26 N (2.6 kg)                    |
| Break Strength (N)                             | —       | —  | —  | —   | —                                | —  | —   | —  | —                                | —  | —   | —                                |
| Surface Electrical Resistance                  | —       | —  | —  | —   | $1 \times 10^9 \Omega/\text{sq}$ | —  | —   | —  | $5 \times 10^9 \Omega/\text{sq}$ | —  | —   | $5 \times 10^8 \Omega/\text{sq}$ |
| Transmissivity                                 | —       | —  | —  | —   | 0.02%                            | —  | —   | —  | —                                | —  | —   | —                                |
| <b>Magnetic Properties</b>                     |         |    |    |     |                                  |    |     |    |                                  |    |     |                                  |
| Magnetic Particle                              | —       | —  | —  | —   | Super Finaviv™                   | —  | —   | —  | Super Avilyn™                    | —  | —   | Super Avilyn™                    |
| Coviscosity                                    | —       | —  | —  | —   | 123.4 kA/m (1550 Oe)             | —  | —   | —  | 77.2 kA/m (970 Oe)               | —  | —   | 59.7 kA/m (750 Oe)               |
| Remanence                                      | —       | —  | —  | —   | 265 mT (2650 gauss)              | —  | —   | —  | 165 mT (1650 gauss)              | —  | —   | 135 mT (1350 gauss)              |
| Squareness Ratio                               | —       | —  | —  | —   | 0.83                             | —  | —   | —  | 0.85                             | —  | —   | 0.82                             |
| <b>Recording Characteristics</b>               |         |    |    |     |                                  |    |     |    |                                  |    |     |                                  |
| Optimum Recording Current                      | —       | —  | —  | —   | 0 dB                             | —  | —   | —  | 0 dB                             | —  | —   | 0 dB                             |
| RF Output                                      | —       | —  | —  | —   | +1.0 dB                          | —  | —   | —  | —                                | —  | —   | —                                |
| RF Frequency Response                          | —       | —  | —  | —   | +0.5 dB                          | —  | —   | —  | +0.5 dB                          | —  | —   | 0 dB                             |
| C/N  | —       | —  | —  | —   | +0.5 dB                          | —  | —   | —  | —                                | —  | —   | —                                |
| Overwrite Characteristics                      | —       | —  | —  | —   | +0 dB                            | —  | —   | —  | —                                | —  | —   | —                                |
| <b>Video Characteristics</b>                   |         |    |    |     |                                  |    |     |    |                                  |    |     |                                  |
| RF Output                                      | —       | —  | —  | —   | —                                | —  | —   | —  | +2.0 dB at 7 MHz                 | —  | —   | +1.5 dB at 4 MHz                 |
| Luminance S/N                                  | —       | —  | —  | —   | —                                | —  | —   | —  | +0.5 dB                          | —  | —   | +2.3 dB                          |
| Chrominance Output                             | —       | —  | —  | —   | —                                | —  | —   | —  | +2.0 dB                          | —  | —   | +1.0 dB                          |
| Chrominance S/N                                | —       | —  | —  | —   | —                                | —  | —   | —  | +1.0 dB                          | —  | —   | +2.0 dB                          |
| Still  | —       | —  | —  | —   | —                                | —  | —   | —  | Over 60 min.                     | —  | —   | Over 60 min.                     |
| HiFi Audio Output                              | —       | —  | —  | —   | —                                | —  | —   | —  | +3.5 dB                          | —  | —   | +3.5 dB                          |
| <b>Available Lengths &amp; Recording Times</b> |         |    |    |     |                                  |    |     |    |                                  |    |     |                                  |
| Recording Times                                | 30      | 60 | 90 | 120 | —                                | —  | —   | —  | —                                | —  | —   | —                                |
| Video SP mode                                  | —       | —  | —  | —   | —                                | —  | —   | —  | 30                               | 60 | 120 | —                                |
| DAT (f <sub>s</sub> =48kHz)                    | 25      | 50 | 75 | 100 | —                                | —  | —   | —  | —                                | —  | —   | —                                |
| ADAT (f <sub>s</sub> =48kHz)                   | —       | —  | —  | —   | —                                | —  | —   | —  | 10                               | 20 | 40  | —                                |

**Video Master** *vhs*

# Hi8 Pro



*It's the right  
product for a  
growing market.*



# Professional Recording Media

**DTRS Hi8 multitrack recorders are preferred by post-production studios where synchronization and high-speed shuttling are critical features. The recent introduction by TASCAM**

**of a lower-cost, project studio Hi8 multitrack recorder is also expected to increase the population of Hi8 recorders. Because of its superb consistency and reliability, TDK Hi8MP cassettes are recommended by TASCAM for use in its DTRS recorders.**



CD-R technology or DAI, TDK offers a variety of options to accommodate any studio recording requirement.



© TONY FRANK

**PROFESSIONAL**

CD-ROM

CD-R74

The image shows a digital scale with a black display screen showing '1550.2500' and '46.00'. The scale has a blue and white color scheme. The text 'DA-R46' is prominently displayed in a large, stylized font. Above the scale, the text 'PROFESSIONAL' is visible. The scale is a 'DA-R46' model, as indicated by the large text on the right side of the image.

|      | <b>CD-R</b>   |    |    |    |                      | <b>CD-RW</b> |     |  |
|------|---|----|----|----|----------------------|--------------|-----|--|
| ions | Product   | 16 | 30 | 46 | 60                   | 90           | 120 | Product                                    |
|      | <b>Physical Properties</b>                                  |    |    |    |                      |              |     | <b>Physical</b>                            |
|      | Tape Width  |    |    |    | 3.81 mm              |              |     | 120mm±0.3mm (4.72")                        |
|      | Total Thickness (µm)  |    |    |    | 13.0 µm              |              |     | 15.0mm ±0.1/-0mm                           |
|      | Tape Width Fluctuation                                      |    |    |    | 0.003 mm             |              |     | 1.2mm +0.3/-0.1mm                          |
|      | Magnetic Coating Thickness                                  |    |    |    | 2.0 µm               |              |     |  |
|      | Residual Elongation   |    |    |    | —                    |              |     | <b>Material</b>                            |
|      | Yield Strength (N)  |    |    |    | 4.5 N or greater     |              |     | Polycarbonate                              |
|      | Break Strength (N)  |    |    |    | 4.5 N or greater     |              |     | Organic Dye                                |
|      | Surface Electrical Resistance                               |    |    |    | 1 GΩ/sq              |              |     | Gold                                       |
|      | Transmissivity  |    |    |    | 0.02%                |              |     | UV-resin                                   |
|      | <b>Magnetic Properties</b>                                  |    |    |    |                      |              |     | <b>Optical</b>                             |
|      | Magnetic Particle   |    |    |    | Super Finavix™       |              |     | Greater than 65%                           |
|      | Coercivity  |    |    |    | 123.0 kA/m (1550 Oe) |              |     | ≥40nm (double pass)                        |
|      | Remanence   |    |    |    | 250 mT (2500 gauss)  |              |     | 6~7mW [at λ:790nm, NA:0.5]                 |
|      | Squareness Ratio  |    |    |    | 0.85                 |              |     | <b>Chemical</b>                            |
|      | <b>Recording Characteristics</b>                            |    |    |    |                      |              |     | <b>Physical</b>                            |
|      | Optimum Recording Current                                   |    |    |    | 0 dB                 |              |     | Less than 60µm (p-p)                       |
|      | RF Output   |    |    |    | 0 dB                 |              |     | Within ±0.3 degrees                        |
|      | RF Frequency Response                                       |    |    |    | 0 dB                 |              |     | <b>Record/Play</b>                         |
|      | C/N   |    |    |    | 0 dB                 |              |     | 63 min.    74 min.                         |
|      | Overwrite Characteristics                                   |    |    |    | 0 dB                 |              |     | Digital Audio Recording Time               |
|      | <b>Video Characteristics</b>                                |    |    |    |                      |              |     | Data Storage Capacity                      |
|      | RF Output   | —  | —  | —  | —                    | —            | —   | 550 MB    650MB                            |
|      | Luminance S/N   | —  | —  | —  | —                    | —            | —   | 1.4 m/s    1.2 m/s                         |
|      | Chroma Output   | —  | —  | —  | —                    | —            | —   | Less than 20 cps                           |
|      | Chrominance S/N   | —  | —  | —  | —                    | —            | —   | Greater than 1 million times               |
|      | Still   | —  | —  | —  | —                    | —            | —   | <b>Environmental</b>                       |
|      | HiFi Audio Output   | —  | —  | —  | —                    | —            | —   | -5° to +55°C                               |
|      | <b>Available Lengths &amp; Recording Times (in minutes)</b> |    |    |    |                      |              |     | 10% to 95% RH                              |
|      | Recording Times   | 16 | 30 | 46 | 60                   | 90           | 120 | -40° to +70° C                             |
|      | Video SP mode   | —  | —  | —  | —                    | —            | —   | 10% to 95% RH                              |
|      | DTR (f <sub>s</sub> =48kHz)                                 | —  | —  | —  | —                    | —            | —   | > 10 years when stored between 5° to 25°C, |
|      | ADAT (f <sub>s</sub> =48kHz)                                | —  | —  | —  | —                    | —            | —   | 8% to 60% RH, and protected from sunlight  |



*It's the right product line that pros  
have been  
demanding.*



**DAT is the defacto standard for digital stereo mixdown or two-track recording. Known for its robust, reliable performance and excellent archiving characteristics, DAT is a versatile, high performance audio storage medium. TDK DA-R series cassettes are the ultimate expression of TDK metal-particle technology, and are engineered to withstand the toughest studio use.**



analog **multitrack**



**at a glance**

Professional Recording Media

digital **multitrack**

**optical + digital**



*dual-layer high-bias*  
**Sound Master-X**

|        | Normal Stereo Recording<br>Sides A+B at 1 7/8 ips | Single Direction<br>at 1 7/8 ips | Single Direction<br>at 3 3/4 ips |
|--------|---|----------------------------------|----------------------------------|
| SM-X10 | 10 minutes  | 5 minutes                        | 2.5 minutes                      |
| SM-X20 | 20 minutes  | 10 minutes                       | 5 minutes                        |
| SM-X30 | 30 minutes  | 15 minutes                       | 7.5 minutes                      |
| SM-X60 | 60 minutes  | 30 minutes                       | 15 minutes                       |
| SM-X90 | 90 minutes  | 45 minutes                       | 22.5 minutes                     |



*high-bias*  
**Sound Master**

|      | Normal Stereo Recording<br>Sides A+B at 1 7/8 ips | Single Direction<br>at 1 7/8 ips | Single Direction<br>at 3 3/4 ips |
|------|---|----------------------------------|----------------------------------|
| SM10 | 10 minutes  | 5 minutes                        | 2.5 minutes                      |
| SM20 | 20 minutes  | 10 minutes                       | 5 minutes                        |
| SM30 | 30 minutes  | 15 minutes                       | 7.5 minutes                      |
| SM60 | 60 minutes  | 30 minutes                       | 15 minutes                       |
| SM90 | 90 minutes  | 45 minutes                       | 22.5 minutes                     |



*normal-bias*  
**Acoustic Leaderless**

|      | Total Recording Time |
|------|----------------------|
| AL30 | 30 minutes           |
| AL60 | 60 minutes           |
| AL90 | 90 minutes           |



*normal-bias*  
**Acoustic Master**

|       | Total Recording Time |
|-------|----------------------|
| AM30  | 30 minutes           |
| AM46  | 46 minutes           |
| AM60  | 60 minutes           |
| AM90  | 90 minutes           |
| AM120 | 120 minutes          |



**Hi8 Pro**

|          | Video, SP mode | DTRS (f <sub>s</sub> =48kHz) |
|----------|----------------|------------------------------|
| Hi8MP30  | 30 minutes     | 25 minutes                   |
| Hi8MP60  | 60 minutes     | 50 minutes                   |
| Hi8MP90  | 90 minutes     | 75 minutes                   |
| Hi8MP120 | 120 minutes    | 100 minutes                  |



**Visual Master**

|       | Video, SP mode |
|-------|----------------|
| VM30  | 30 minutes     |
| VM60  | 60 minutes     |
| VM120 | 120 minutes    |



**Color Master**

|       | Video, SP mode | ADAT (f <sub>s</sub> =48kHz) |
|-------|----------------|------------------------------|
| CM30  | 30 min.        | 30 minutes                   |
| CM60  | 60 min.        | 60 minutes                   |
| CM120 | 120 min.       | 120 minutes                  |



**Compact Disc Recordable**

|        | Recording Time | Data Capacity |
|--------|----------------|---------------|
| CD-R63 | 63 minutes     | 550 MB        |
| CD-R74 | 74 minutes     | 650 MB        |



**Digital Audio Tape**

|         | Total Recording Time |
|---------|----------------------|
| DA-R16  | 16 minutes           |
| DA-R30  | 30 minutes           |
| DA-R46  | 46 minutes           |
| DA-R60  | 60 minutes           |
| DA-R90  | 90 minutes           |
| DA-R120 | 120 minutes          |





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09/2011  
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