

UHF STL TRANSMITTER



DLT-UHF TRANSMITTER SPECIFICATIONS

| | |
|------------------------------|---|
| TYPE | solid state direct FM frequency synthesised crystal referenced thermal compensated |
| FREQUENCY STABILITY | better than 4 ppm0°-----+40°C±1000Hz/year |
| FREQUENCY RANGE | 170-200MHz, 210-250MHz, 270-300MHz, 300-330MHz, 370-400MHz, 420-450MHz, 450-470MHz. Other bands are available on request. |
| FREQUENCY SETTING | in 25 kHz steps |
| INTERNAL SETTING MODE | by keys |
| RF OUTPUT PW | 0 up to 2W directly digitally programmable |
| RF OUTPUT PW (OPTION A) | 0 up to 20 W directly digitally programmable |
| PW RESOLUTION SETTING | 0.1W |
| PW CONTROL LIMIT SETTING | 0.1 to 20W |
| PW CONTROL STABILITY | <0.1dB |
| REV. OUTPUT PW CONTROL LIMIT | 2W |
| HARMONICS | <-60dBc |
| SPURIOUS EMISSION | <-90dBc |
| CARRIER REDUCTION PW | >60dB (carrier enable OFF) |
| ASYNCHRONOUS AM S/N RATIO | better than 60dB |
| SYNCHRONOUS AM S/N RATIO | better than 60dB |
| MODULATION TYPE | direct VCO frequency modulation |
| NOMINAL FREQUENCY DEVIATION | ±75kHz |
| DEVIATION LINEARITY | ±0.1dB |
| PEAK DETECTOR ERROR | <0.1dB |

MODULATION CAPABILITY

| | |
|---------------------------------------|----------------------|
| MONO (left or right) | 30Hz to 15 kHz |
| STEREO (by internal Stereo Generator) | 30Hz to 53 kHz |
| SCA (two channels) | 30Hz to 100 kHz |
| COMPOSITE | MONO or STEREO + SCA |

CHARACTERISTICS IN MONO (OPTION B)

| | |
|--|--|
| Signal input | Left + Right |
| Input connector | XLR |
| Input impedance | 600 Ω (balanced) or 10k Ω (unbalanced) |
| Unbalance rejection | >40dB |
| Input level | 0 up to +13dBm |
| Pre-emphasis | 75 or 50 μ s, selectable by a jumper |
| Audio frequency response (30 Hz to 15 kHz) | <0.1dB |
| Audio frequency response (19 kHz to 100 kHz) | <-40dB |

INTERNAL STEREO CHARACTERISTICS (OPTION B)

| | |
|--|--|
| Signal inputs | Left or Right |
| Input connector | XLR |
| Input impedance | 600 Ω (balanced) or 10k Ω (unbalanced) |
| Unbalance rejection | >40dB |
| Input level | 0 to +13dBm |
| Pre-emphasis | 75 or 50 μ s, selectable by a jumper |
| Cross-talk between left and right channel | >50dB |
| Stereo separation between left and right channel | >50dB |
| Distortion at frequency deviation of 75 kHz | <0.05% |
| Distortion at frequency deviation of 100 kHz | <0.05% |
| Suppression of 38 kHz | >70dB |
| Spurious suppression outside band | in according to ETS 300-384 |
| Pilot reference for RDS encoder (19 kHz out) | 1Vpp |

SCA CHARACTERISTICS

| | |
|-----------------------|----------------|
| Input (SCA1, SCA2) | BNC unbalanced |
| Input impedance | 10k Ω |
| Distorsion | <0.1% |
| Modulation capability | 0-10% |

COMPOSITE AMPLITUDE RESPONSE

| | | |
|----------------------|-----------------------------|----------------|
| Mono | \pm 0.15 dB - typ. 0.12dB | 30Hz-5 kHz |
| | <-40dB - typ. <-50dB | 19kHz-100 kHz |
| Int. Stereo (L/R Ch) | \pm 0.15 dB - typ. 0.12dB | 30Hz-15 kHz |
| | <-40dB | 50kHz-100 kHz |
| Ext. Stereo (MPX) | < \pm 0.15 dB | 30Hz-5 kHz |
| SCA 1, 2 | < \pm 0.1 dB | 50 kHz-100 kHz |

COMPOSITE FM S/N RATIO

(Referred to $\Delta F = \pm 75$ kHz and 50 μ s de-emph)

| | | |
|-------------------|--------|---|
| Mono | >70 dB | 30Hz-20kHz filter bandwidth |
| Int. Stereo | >70 dB | L-R, decoded, 30Hz-20kHz filter bandwidth |
| Ext. Stereo (MPX) | >70 dB | L-R, decoded. 30Hz-20kHz filter bandwidth |

TOTAL HARM. DISTORTION

(Referred to $\Delta F = \pm 75\text{kHz}$ and $50\mu\text{s}$ de-emph.)

| | | | |
|----------------------|--------|-------|----------------------|
| Mono | <0.03% | ----- | 30Hz-20kHz bandwidth |
| Int. Stereo (L/R Ch) | <0.03% | ----- | 30Hz-20kHz bandwidth |
| Ext. Stereo (MPX) | <0.03% | ----- | 30Hz-20kHz bandwidth |

AUDIO SWITCH (OPTION C)

| | | |
|-------------|-------|-------------------------|
| MPX1 / MPX2 | ----- | Local or Remote control |
|-------------|-------|-------------------------|

READOUT ON LCD DISPLAY (40x4 characters)

| | | |
|------------------------------------|-------|-------|
| Forward power resolution | ----- | 1W |
| Reverse power resolution | ----- | 0.1W |
| Modulation resolution | ----- | 1 kHz |
| Power amplifier voltage resolution | ----- | 1V |
| Heatsink temperature resolution | ----- | 1°C |

REMOTE CONTROL (OPTION C)

| | | |
|-----------------------------|-------|-------------------------------------|
| LAN for internet connection | ----- | two RJ45 with Ethernet switch |
| Local or remote BROWSER | ----- | WEB (Explorer, Mozilla ...) or SNMP |

POWER SUPPLY and TEMPERATURE RANGE

| | | |
|-----------------------------|-------|-----------------------|
| AC operating voltage | ----- | 100-250Vac $\pm 15\%$ |
| DC operating voltage | ----- | 20-26Vdc $\pm 10\%$ |
| Line power | ----- | <75VA |
| Nominal temperature range | ----- | -5° to 40° |
| Operating temperature range | ----- | -10° to 45° |
| Storage temperature range | ----- | -40° to 50° |

MECHANICAL SPECIFICATION

| | | |
|---------------|-------|--------------|
| 19" rackmount | ----- | 485x86x320mm |
| Weight | ----- | 5kg |

OPTIONS

| | | |
|----------|-------|---------------------|
| Option A | ----- | OUTPUT POWER 2 Watt |
| Option B | ----- | STEREO GENERATOR |
| Option C | ----- | REMOTE CONTROL |

UHF STL RECEIVER



DLR-UHF RECEIVER SPECIFICATIONS

| | |
|--|---|
| FREQUENCY RANGE | 170-200MHz, 210-250MHz, 270-300MHz, 300-330MHz, 370-400MHz, 420-450MHz, 450-470MHz. Other bands are available on request. |
| LOCAL OSCILLATOR TYPE | direct (Fi ± 10.7 MHz) FM frequency synthesised crystal referenced thermal compensated |
| FREQUENCY STABILITY | better than 4 ppm- ----- 0°-+40°C±1000Hz/year |
| FREQUENCY SETTING | in 25 kHz steps |
| INTERNAL SETTING MODE | by keys |
| SENSITIVITY | Stereo -66dBm or less required for 60dB SNR (left or right channel demodulated, decoded and de-emph.) Mono -86dBm or less required for 60dB SNR (20Hz-20kHz and de-emph) |
| SELECTIVITY (wide IF bandwidth) | |
| STATIC (IF bandwidth) | 3dB IF bandwidth ----- ±100kHz 50dB IF bandwidth ----- ±250kHz 60dB IF bandwidth ----- ±280kHz |
| DYNAMIC (According to ITU-BS412) | ±100kHz ----- -45dB ±200kHz ----- -10dB ±300kHz ----- -30dB ±600kHz ----- >-40dB |
| SELECTIVITY (narrow IF bandwidth) | |
| STATIC (IF bandwidth) | 3dB IF bandwidth ----- ±100kHz 50dB IF bandwidth ----- ±200kHz 60dB IF bandwidth ----- ±220kHz |
| DYNAMIC (According to ITU-BS412) | ±100kHz ----- -45dB ±200kHz ----- -20dB ±300kHz ----- -35dB ±600kHz ----- >-45dB |

| | | |
|---|---------|--|
| SQUELCH THRESHOLD | | -90dBm to -10dBm, directly digitally programmable with 1dB increment step. |
| RF INPUT SIGNAL DINAMIC | | -100 dBm to 0 dBm. |
| MODULATION OUTPUT | | MPX, two BNC connectors, 0-12dBm, bal, unbal., Zout<100Ω MONO, L&R XLR connectors, 0-12dBm, bal, Zu=<100Ω |
| FREQUENCY RESPONSE (wide IF bandwidth) | | |
| MPX OUTPUT | | ±0.1dB-----40Hz-53kHz ±0.5dB----- 53-75kHz -0.5dB ----- 75-100kHz <-60dB----- >140kHz |
| STEREO SEPARATION (wide IF bandwidth) | | |
| MPX out | | >60dB or better----- 40Hz-5 kHz >60dB or better ----- 5 kHz-15 kHz |
| L & R DECODED (OPT. A) | | >60dB or better -----40Hz-5 kHz >60dB or better ----- 5 kHz-15 kHz |
| FREQUENCY RESPONSE (narrow IF bandwidth) | | |
| MPX OUTPUT | | ±0.3dB----- 40 Hz-53 kHz ±0.5dB-----53kHz -75 kHz -50 dB -----90 kHz <-60dB----- >100 kHz |
| STEREO SEPARATION (narrow IF bandwidth) | | |
| MPX out | | >50dB or better----- 40 Hz-5 kHz >45dB or better ----- 5 kHz-15 kHz |
| L & R DECODED (OPT.A) | | >50dB or better -----40 Hz-5 kHz >45dB or better ----- 5 kHz-15 kHz |
| STEREO CROSSTALK | MPX out | >40dB or better -----40 Hz - 15 kHz |
| SIGNAL-TO-NOISE RATIO | | |
| MPX | | |
| (40Hz-15 kHz bandwidth L or R decoded & de-emph.) | | >70dB ----- Vi>-40dBm |
| (CCIR wtd, L or R decoded and de-emph.) | | >68dB----- Vi>-40dBm |
| L&R DECODED&DE-EMP. | | >70dB----- Vi>-40dBm |
| DISTORTION THD | MPX | <0.1%----- (L or R decoded & de-emph.)40 Hz-5 kHz |
| | L&R | <0.1 %-----40 Hz-5kHz |
| DE-EMPHASIS | | 50 or 75µs ON/OFF by jumpers. |
| ALARM | | carrier detect |
| (One reed contact) | | internal power supply |
| | | External power supply |
| | | Lock detects. |
| REMOTE CONTROL | | field |
| | | Frequency |
| | | External battery level |
| | | Alarms |
| | | Squelch threshold |
| | | Modulation |

REMOTE CONTROL (OPTION C)

LAN for internet connection-----two RJ45 with Ethernet switch
Local or remote BROWSER-----WEB (Explorer, Mozilla ...) or SNMP protocol

POWER SUPPLY and TEMPERATURE RANGE

AC operating voltage -----85-240Vac $\pm 15\%$ <50VA
DC operating voltage -----20-28Vdc $\pm 10\%$ <1A
Line power -----<50VA
Nominal temperature range----- -5° to 40°
Operating temperature range ----- -10° to 45°
Storage temperature range----- -40° to 50°

MECHANICAL SPECIFICATION

19" rackmount -----485x86x320mm
Weight-----4kg

OPTIONS

Option A-----REMOTE CONTROL
Option A-----STEREO DECODER
Option A-----MONO, MPX, RDS REGENERATION