

PANSCAN



ADR- PANSCAN

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Pan effects have long been limited by the ability of the engineer to "knob twiddle". Repetition of a hand made effect has been tedious and often impossible. The PANSCAN unit automates pan effects with musical precision and adds a new dimension to your sound image.

The PANSCAN can process a mono or stereo signal. In mono, the system conventionally positions and moves the image in the stereo field; whilst a stereo signal will cross-pan repeatedly reversing the image.

The unique "beat count" can trigger the pan-action to a wide variety of rhythms, counting anything from one to ten beats to a bar (or pan). Thus your pan effect can become an integral part of the music with a pan of metronomic precision. An external feed through a $\frac{1}{4}$ inch jack enables the "beat count" circuit to be fed from a signal not necessarily part of the panned signal (eg a voice track could be panned from a bass drum or an echo return panned from the pre-reverb signal). This unique circuit can be effectively used to trigger other ancillary gear via an external feed.

Signal width can be adjusted along with the pan swing of the sound image. It is not always necessary or even desirable to pan across the extremes of the left/right range. A front panel control provides adjustment of the signal width which is indicated on the image position bargraph. These same led's also show the scan and "centre" of the pan image; it may be moved left or right of any established 'centre' within the sound picture.

The PANSCAN has a pan speed control which enables the engineer to match the pan action to the mood of the mix. The fast pan (almost instantaneous) will, when in the repetitive mode, give an amazing stereo vibrato effect or at the other extreme a super smooth soft shift. During the pan a desirable image

shape can be held with the image freeze button to that exact position; thus the engineer retains complete command of the mix at any time.

Whether the whole stereo programme or separate components of the mix are panned the PANSCAN pan effects unit will bring a totally new dimension to sound production.

The following pages offer information on both the application and the maintenance of the PANSCAN. Whilst it is not necessary to have a technical knowledge of how the PANSCAN works we feel the best can only be got from your unit by studying as much as possible of this manual.

To that end -

HAPPY READING

2.1 CONTROLS

The PANSCAN has been designed with simplicity in mind and a minimum of user adjustable controls.

Looking at the front of the unit and reading from left to right:

SYSTEM IN

Switches the PANSCAN into the system. Switchable for A-B comparison to reassure your ears.

PAN SPEED

Alters the speed at which the audio image pans across between the two channels. Continuously variable from a fast, almost instantaneous leap to a slow soft shift effect in which the image slides slowly across the channels.

PAN DEPTH

Alters the depth of the pan between the two channels. At the extreme it will mono the two channels.

IMAGE OFFSET

Will offset the centre of the stereo image either left or right again continuously variable.

AUTO/TRIGGER

Out, will pass continuously. In, will trigger from manual or beat count.

IMAGE FREEZE

Stops the pan wherever it is on depression of switch. On release the pan continues on its pan.

MAN TRIGGER

Overrides the 'beat count' circuit, if in use, or will trigger on depression of button. Also resets 'beat count' to zero.

TRIGGER INT/EXT

Selects trigger mode to operate from the main signal path or from an external source (remote trigger).

COUNT TO TRIG

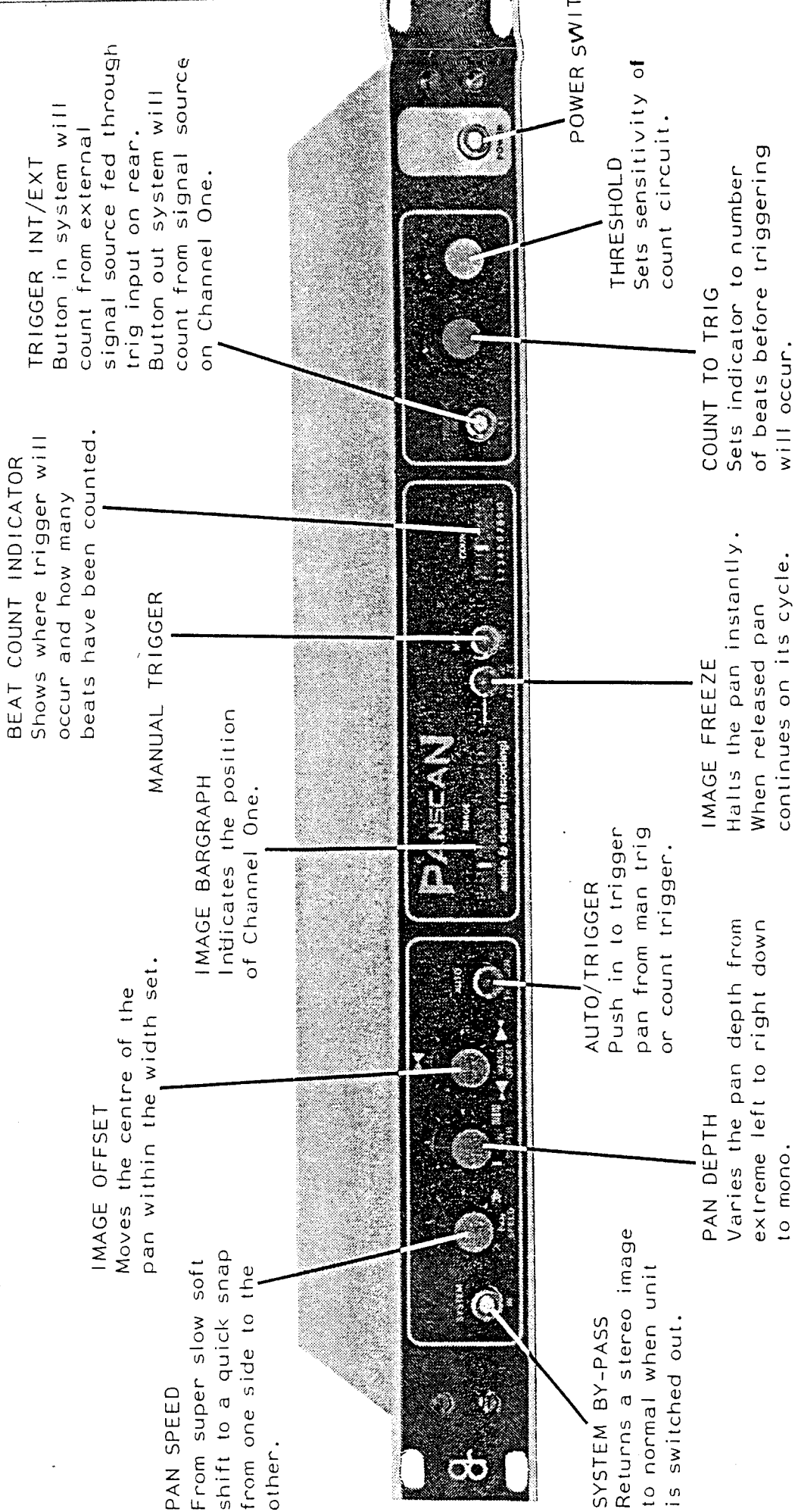
Determines at which point the trigger will pan. This is settable from one to ten and is shown on the beat count led bargraph.

COUNT THRESHOLD

Determines at which level the beat count circuit will count a beat.

POWER

Switches the unit ON/OFF.



2 OPERATIONAL SECTION

2.3 ESTABLISHMENT IN THE CHANNEL

- 1 Connect the unit to mains via the mains lead supplied.
- 2 Make the audio connections to the rear connectors taking care to ensure that left and right channels are not crossed.
- 3 It is recommended that the PANSCAN is hardwired to a patch bay to facilitate ease of insertion into desk channels.

The trigger input and output should also be brought out onto the patch bay if these are to be used.

CAUTION The system is unbalanced.

- 4 Establish a working level of a maximum of +20dBm.
- 5 Switch on unit at POWER switch.
- 6 Set PAN SPEED centre.
Set PAN DEPTH fully clockwise.
Set IMAGE OFFSET to centre.
Set AUTO TRIGGER out (black).
- 7 Signal should pan between channels.

2.3.1 Beat Count Trigger

- 1 Set TRIGGER INT/EXT Out (black).
- 2 Adjust COUNT TO TRIG to required count. Read off on led bargraph 1 to 10.
- 3 Adjust COUNT THRESHOLD to light one led per transient from signal.

4 Set AUTO TRIGGER switch in (orange).

5 PANSCAN should pan when the preset count is achieved.

6 EXTERNAL TRIGGER FEED

With the TRIGGER EXT/INT switch in the EXT mode, In (orange) the BEAT COUNT circuit will count from an external source fed through the TRIGGER INPUT jack socket on the rear panel (see section 2.3 ESTABLISHMENT IN THE CHANNEL).

2.4 APPLICATION NOTES

To provide a list of applications for the PANSCAN would be an endless task and probably a waste of your time and our paper. Some suggestions for use and some findings might help.

On mix down with the main vocal panned to centre, the stereo backing mix could be fed through the PANSCAN on automatic pan at a speed comparable to the tempo of the score. This will give the effect of the backing revolving around the vocalist.

In practice, when using the TRIGGER mode from the internal signal it will be found that the BEAT COUNT circuit counts only the left channel. This is for obvious reasons.

In rhythm mixes, panning parts of the drum kit around the left-to-centre or right-to-centre will give a 'moving' effect (use image offset).

3.1 TECHNICAL SPECIFICATION

FOR ONE CHANNEL

FREQUENCY RESPONSE	:	+0dB-1dB 20Hz to 25kHz-Ref 1kHz.
NOISE	:	-80dBm measured band limited @ 25Hz and 25kHz.
DISTORTION	:	Better than 0.1% @ +15dBm.
CLIP LEVEL	:	Output stage +20dBm into 600 ohms. Input stage +20dBm.
PANNING DEPTH	:	Adjustable from 0dB to -27dB respect to other channel.
SYSTEM GAIN	:	Unity.
INPUT/OUTPUT CONFIG	:	Unbalanced.
INPUT IMPEDANCE	:	Greater than 10K @ 1kHz.
OUTPUT IMPEDANCE	:	Less than 1 ohm @ 1kHz.
FRONT PANEL CONTROLS		
PAN SPEED	:	Increases/Decreases speed at at which sound image moves from first output to the second output.
IMAGE OFFSET	:	Determines the point from where panning occurs ie completely from left or right or anywhere between.
TRIGGER INT/EXT SWITCH	:	Selects trigger mode to operate from input or an external source (remote trigger).
AUTO/TRIGGER SWITCH	:	Selects automatic recycling panning or panning occurring by trigger mode.
IMAGE FREEZE SWITCH	:	Stops panning at the precise point the switch was depressed.
MAN TRIG SWITCH	:	Allows panning to occur while depressed overriding auto and trigger modes.

SYSTEM IN SWITCH : Returns outputs to normal input/
output relationships.

COUNT TO TRIG : Determines at which point trigger
panning will occur ie after 1
to 10 trigger counts.

COUNT THRESHOLD : Determines at what trigger level
counting will occur.

REAR PANEL JACK
SOCKETS : Trigger output from unit.
Trigger input to unit.

INPUT/OUTPUT/
EARTHING : Via 12 way barrier strip.

METERING : Image position via 20 segment
LED bargraph. Count information
via 10 segment LED bargraph.

POWER REQUIREMENTS : 230VAC $\pm 7\%$
115VAC $\pm 10\%$ 50/60Hz selectable.

POWER CONSUMPTION : 15 Watts.

SIZE : STD Rack $1\frac{3}{4}'' \times 19'' \times 7\frac{1}{2}''$
(44.45mm x 482.6mm x 190.5mm).

WEIGHT : 5.5lb (2.5kg) shipped in purpose
built export packing.